



Virtual Meeting
Mequon, WI 53092
Phone: 262-236-2904
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development
Taped and Televised

PLANNING COMMISSION
Regular Meeting
Monday, December 14, 2020
6:00 PM
Virtual Meeting
AGENDA

ELECTRONIC MEETING NOTICE: Pursuant to the current recommendation of the CDC limiting the size of public gatherings and the various federal and state orders implementing that recommendation, and to help protect our community from the Coronavirus (COVID-19) pandemic, this meeting will be held virtually through the GoToMeeting platform with each member accessing the meeting remotely. Citizens may join the meeting online or by phone. Please go to <https://global.gotomeeting.com/join/116424117> to join the meeting online or call into the meeting by dialing 1.877.309.2073 and enter access code 116-424-117.

WRITTEN PUBLIC COMMENTS may be made in writing in advance of the meeting. Written comments should be directed to the Department of Community Development at least 2 hours prior to the meeting by email at DCD1@ci.mequon.wi.us addressed to the intended committee. Written public comment may also be deposited in the drop box at City Hall on 11333 N. Cedarburg Road, Mequon at least 2 hours prior to the meeting. Comments received timely will be forwarded to all members of the body for their consideration.

VERBAL PUBLIC COMMENTS will be accepted only from members of the public who register in advance. Registration shall be made by sending an email to Planner Pa Phouala Vang at DCD1@ci.mequon.wi.us or by leaving a message at 262.236.2904 no later than 2 hours prior to the meeting.

1) Call to Order, Roll Call

- a) Approval of Minutes from November 23, 2020

2) Public Hearing/Consent

- a) St. John's Properties, Inc. for Mequon Joint Venture. The applicant is seeking conditional use grant approval to allow for a fitness center for the property located at 6140 West Executive Drive, Suite I (Sanfilippo Baseball).
- b) Rock of Ages Milwaukee Memorials for Lumen Christi. The applicant is seeking conditional use and building and site plan approval to allow for a proposed 10' x 10' private mausoleum for the property located at 2723 W. Mequon Road (Balistreri Mausoleum).

3) Regular Business/Consent

- a) The Victory Companies. The applicant is seeking certified survey map approval to allow for a 2-lot land division for the property located immediately east of 4000 W. Scenic Avenue.
- b) Mequon I, LLC/VH Mequon II, LLC. The applicant is seeking final plat and street tree approval for Phase I of The Enclave II subdivision. The first phase includes 14 single-family lots for the property located at 10565 N. Wauwatosa Road.

- c) Kapur and Associates for Mequon Thiensville School District. The applicant is seeking building and site amendment plan, electronic sign and fill permit approval to allow for 2,800 C.Y. of fill for a 2,800 sq. ft. addition for the property located at 11036 N. Range Line Court (Lake Shore Middle School).
- d) Kapur and Associates for Mequon Thiensville School District. The applicant is seeking building and site plan amendment, electronic sign and fill permit approval to allow for 9,800 C.Y. of fill for a 3,000 sq. ft. addition for the property located at 6633 Steffen Drive (Steffen Middle School).

4) Regular Business

- a) John Mikkleson. The applicant is seeking an approval for a waiver to the Standard Specifications for Land Development to allow for the construction of a shared driveway instead of the required private road for the property located at 12501 N. Lake Shore Drive.
- b) Wagner Excavating. The applicant is seeking minor request approval for fill in excess of 1,000 cubic yards for a bluff revetment project for 11 properties located between 1000-10120 N. Sheridan Drive.
- c) Mequon Medical. The applicant is seeking building plan approval for a 29,000 sq. ft. +/- outpatient medical clinic for the property located at 1310 W. Highland Road. Based upon updated information regarding the relocation of the Sugar Maple tree, this has been added to the agenda for possible reconsideration (REMOVE FROM TABLE).
- d) Lakeside Development Company for RDC Investments. The applicant is seeking a consultation for a proposed 13,500 sq. ft. addition to the existing building for the property located at 10235 N. Port Washington Road.
- e) Anderson Ashton Design/Build for 10448 N. Port Washington Road. The applicant is seeking a consultation to convert an existing 62,00 sq. ft. industrial building into self-storage for the property located at 10448 N. Port Washington Road.

5) Announcements

- a) 2021 Meeting Calendar

6) Adjourn

Dated: December 11, 2020

/s/ John Wirth, Chair

Notice is hereby given that a quorum of other governmental bodies may be present at this meeting to present, discuss and/or gather information about a subject over which they have decision-making responsibility, although they will not take formal action thereto at this meeting.

Persons with disabilities requiring accommodations for attendance at this meeting should contact the City Clerk's Office at 262-236-2914, twenty-four (24) hours in advance of the meeting.

Any questions regarding this agenda may be directed to the Department of Community Development's Office at 262-236-2904, Monday through Friday, 8:00 AM – 4:30 PM



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Department of Community Development
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PLANNING COMMISSION
Regular Meeting
Monday, November 23, 2020
6:00 PM
Virtual Meeting

Minutes

1) Call to Order, Roll Call

Present:

Chair John Wirth
 Alderman Andrew Nerbun
 Commissioner Martin Choren
 Commissioner Dan Gentges
 Commissioner Rick Lemke
 Commissioner Rebecca Schaefer
 Commissioner James Schaefer
 Commissioner John Stoker
 Alternate Greg Bach
 Alternate Stephanie Hawley - **Absent**

Mayor Wirth called the meeting to order at 6:00 p.m. and he reviewed the teleconference protocols.

a) Approval of Minutes from October 26, 2020

Action

Commissioner Stoker made a motion to approve the October 26, 2020 minutes.
 Commissioner Becky Schaefer seconded the motion.
A voice vote was taken; vote passed (8-0)

2) Public Hearing

- a) Terrence & Gina Wright for Korner-Q's. The applicant is seeking conditional use grant and sign waiver approval to allow for a projecting sign for a proposed 2,344 sq. ft. eatery bar and grill for the property located at 10631 W. Freistadt Road (Korner-Q's).

Attachment: DRAFT_11.23.2020 (5782 : Meeting Minutes from November 23, 2020)

Action

Commissioner Stoker made a motion to open a public hearing

Commissioner Becky Schaefer seconded the motion.

A voice vote was taken; vote passed (8-0)

No one registered to speak.

Action

Commissioner Stoker made a motion to close the public hearing

Commissioner Becky Schaefer seconded the motion.

A voice vote was taken; vote passed (8-0)

Mayor Wirth stated that staff received an email from a resident questioning the sign waiver request and he explained that the request is to reformat the existing projecting sign, it is not a request for a new type of sign to be installed.

Action

Commissioner Stoker made a motion to approve the conditional use grant.

Commissioner Lemke seconded the motion.

A voice vote was taken; vote passed (8-0)

Planner Vang stated that there is a correction regarding the operating hours, and the hours should reflect 11:00 a.m. – 11:00 p.m. Sunday-Thursday and 11:00 a.m. – 2:00 a.m. on Friday and Saturday.

Commissioner Stoker accepted this change as a friendly amendment.

Commissioner Lemke seconded the friendly amendment.

Mayor Wirth made a friendly amendment to include language to include “odors and smoke” to 9(e) of the conditions listed in the conditional use grant.

Commissioner Stoker accepted this change as a friendly amendment.

Commissioner Lemke seconded the friendly amendment.

The Commissioner voted on the motion to approve the conditional use grant including the change to the operating hours and the friendly amendment.

RESULT:	APPROVED WITH CONDITIONS [8 TO 0]
MOVER:	John Stoker, Commissioner
SECONDER:	Rick Lemke, Commissioner
AYES:	Wirth, Nerbun, Choren, Gentges, Lemke, J. Schaefer, R. Schaefer, Stoker

3) Regular Business

- a) Mequon Medical. The applicant is seeking building and site plan and specimen tree removal approval for a 29,500 sq. ft. +/- outpatient medical clinic for the property located at the northwest corner of Highland Road and Port Washington Road.

Asst. Dir. Zader stated that there have been some changes made to the site plan since it was last in front of the Commission in July. The Common Council did approve the rezoning request in November, so the applicant is back for building and site plan approvals. There will be one more approval request for the Development Agreement at a later date.

Asst. Dir. Zader stated that the changes to the site plan include:

- The access points have flipped; now there is a full access off Port Washington Road and a right in/right out on Highland Road. This is what the county will allow.
- Berms and landscaping have been added along the outer edge of the development to protect from future residential development to the west.

The site has 131 parking stalls which complies with the code for a medical office building. The plan meets all the requirements of the Neighbor Commercial zoning district; which are included in the report, except the dumpster enclosure. Because it is considered a structure, it must have a 30-foot offset from the property line. Staff will work with the applicant to find a new location for the dumpster that meets the setback requirement. There is an outlot located in the front of the site which the city and applicant are working to partner together to determine what will go in that area. The plan shows the proposed path, which runs from property line to property line, which was a condition of the PUD. There is an alternative landscaping plan which the city would like to see; this item will be addressed in the development agreement. Due to feedback from the Council that the building should be more traditional looking with a residential feel; the proposed 1-story building; includes more earth tones, brick and gable roof elements. Staff is supportive of the design.

The landscape consultant recommends additional street trees along both Port Washington Road and Highland Road. This requirement will be included in the development agreement along with the lighting requirements. Staff is also requesting additional year-round plantings along the west side of the development to help screen any lighting from traffic for the neighbors across the street. The lighting plan proposed is compliant with the code. If wall packs or additional lighting is requested, it will need to be approved by staff as a conditional of approval.

There are two specimen trees on site. Resident Dan Abendroth sent correspondence regarding this issue. There is a 14" Sugar Maple and a 16" White Pine. The City Forester recommendation is to remove both trees. There has been discussion regarding the Sugar Maple, but due to the tree reaching the overhead power lines and being topped off several times already, he feels that it has lost its natural shape and that it is worthy of being removed. His recommendation is to allow removal of the two specimen trees in accordance with the Tree Preservation Guidelines.

Asst. Dir. Zader stated that staff recommends approval of the requests in accordance with the conditions in the staff report.

The applicant, John Ford from Mequon Medical, stated that the design was modified to better match the surrounding residential architecture. The proposed building includes all masonry

features of brick, stone, roof gables and is a four-sided architecture overall. Due to feedback in July regarding additional landscaping buffering on the north and west property lines; the plan was modified to include not only those two elevations but also modifications along Port Washington and Highland Roads; including the addition of approximately 67 trees and over 600 shrubs and perennials.

Mr. Ford explained that the out lot is approximately 0.4-acres and it will be donated to the city. The out lot requires an 8-foot wide asphalt pathway which will be installed as part of the development along with the landscaping. The landowner has also offered the city the opportunity to install a sign wall in the future if desired.

He also stated that the access on Highland Road has been relocated to the east based on feedback from the July meeting over concern about headlights affecting the residential home to the west of the Highland House.

Once the access points were swapped out, the applicant had TADI conduct another traffic analysis which was recently submitted to city staff for review.

It was discussed that the paths will be extended to each of the property lines for future connectivity. Per the policy discussions about the Ulao Creek neighborhood, the ability to have interconnectivity and a path at least on one side of the public roads is required. There was also some discussion regarding the access points.

There was mixed feedback from the Commission regarding the design of the building. Some are supportive of it while others commented that they are disappointed in the architecture; the gables feel too heavy; especially on the small wing on the east side of the building. There was clarification about the masonry proposed. It was suggested that this portion be tabled and that the two Commission architects have the opportunity to meet with staff and the applicant to discuss possible architectural changes.

Feedback regarding the specimen trees is that the White Pine should be removed but many Commissioners commented that they feel the Sugar Maple is a beautiful tree and it adds beauty to that corner and they wish to preserve the Sugar Maple. It was suggested that the tree be moved to the north and west of its current location in an effort to save the tree.

Action

Commissioner Choren made a motion to table the building plan to allow the Commission architects time to meet with staff and the applicant. The site plan, lighting plan, landscape plan, specimen tree removal requests should be approved subject to conditions in the staff report. Commissioner Jim Schaefer seconded the motion.

Commissioner Becky Schaefer made a friendly amendment to preserve or relocate the Sugar Maple.

Commissioner Choren and Commissioner Jim Schaefer accepted the friendly amendment.

Discussion regarding the Sugar Maple concluded that the preference is to relocate the tree to an unobstructed location.

Action

Commissioner Choren restated his motion to table the building plan to allow the Commission architects time to meet with staff and the applicant. The site plan, lighting plan and landscape plan to be approved subject to conditions in the staff report. The Sugar Maple specimen tree is to remain where it is and if it does not survive, it will be removed as originally recommended. Commissioner Jim Schaefer seconded the motion.

Action

Ald. Nerbun made an amendment to relocate the Sugar Maple to the north and west portion of the corner; exact location to be approved by staff.

Commissioner Choren seconded the amendment.

A roll call was taken, vote passed (8-0)

The Commission then voted on the original motion made by Commissioner Choren with the accepted and approved motion regarding the relocation of the Sugar Maple specimen tree.

A roll vote was taken, vote passed (8-0)

RESULT:	APPROVED WITH CONDITIONS [9 TO 0]
MOVER:	Martin Choren, Commissioner
SECONDER:	James Schaefer, Commissioner
AYES:	Wirth, Nerbun, Bach, Choren, Gentges, Lemke, J. Schaefer, R. Schaefer, Stoker

4) Announcements

The next meeting is Monday, December 14, 2020 at 6:00 p.m.

5) Adjourn**Action**

Commissioner Stoker made a motion adjourn.

Commissioner Lemke seconded the motion.

A voice vote was taken; vote passed (8-0)

The meeting concluded at 6:42 p.m.

Respectfully Submitted,

Jac Zader



11333 N. Cedarburg Rd
Mequon, WI 53092-1930
Phone: 262-236-2902
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development

TO: Planning Commission
FROM: PA PHOUALA VANG, PLANNER
DATE: December 14, 2020
SUBJECT: St. John's Properties, Inc. for Mequon Joint Venture. The applicant is seeking conditional use grant approval to allow for a fitness center for the property located at 6140 West Executive Drive, Suite I (Sanfilippo Baseball).

Applicant:	St. John's Properties, Inc.
Status of Applicant:	Agent
Requested:	Conditional Use Grant
Proposed Use:	Fitness Center
Existing Zoning:	B-5 (Light Industrial)
Land Use Plan:	Business Park
Lot size:	12.03 acres
Location:	[6140 West Executive Drive, Suite I
Tax Key:	#14-027-16-009.00
District:	#6

Background:

The applicant requests conditional use grant approval for a fitness center located at 6140 W Executive Drive. The proposed baseball training facility will occupy 6,753 square feet in the former YMCA tenant space in the Business Park. The property is zoned B-5 (Light Industrial), which allows fitness centers as a conditional use.

According to Section 3.05(1)(b) of the Zoning Code, the following findings shall be considered when analyzing a conditional use grant application:

1. The proposed use should not endanger the public health, safety or general welfare of the city and the immediate neighborhood.

The proposed use should not endanger the surrounding area; all of the activities will take place within the building and will be monitored at all times by staff. The floor plan shows an open floor plan training room and changing and rest rooms.

2. The proposed use should not injure the value of adjoining or abutting property.

The Land Use Plan designates the site as Business Park. Surrounding properties are zoned B-5. A fitness center can be considered compatible with the Land Use Plan designation and expected uses in the area. In the past, the Planning Commission has approved other similar uses (Splash + Swim, Moro Performance, Pure Fitness, HYPE Fitness, Superb Health, YMCA) in industrial areas.

The proposed use shall be harmonious or compatibility with the area in which it is located.

The proposed activities of the fitness center fit the character of the surrounding area. The hours of operation are Monday-Friday 3:00 PM – 10:00 PM and Saturday and Sunday from 8:00 AM – 8:00 PM. The applicant indicated that there will be between 20-25 players and coaches at any given time.

The property is part of a multi-tenant property with 75 parking spaces to accommodate all customers and employees of the multi-tenant building. Staff calculated a total parking requirement of 25 stalls for the building. Staff believes the parking is adequate to accommodate the proposed use.

Staff anticipates a majority of traffic to the site will come from Executive Drive and Baehr Road which has adequate ingress/egress facilities to accommodate the increased traffic. Planning staff believes the proposed use and activities should be harmonious with the surrounding uses.

Staff Recommendation:

Planning staff recommends approval the conditional use grant based on the following criteria:

1. The applicant shall submit final plans within 60 days of Planning Commission action. Such final plans shall be subject to staff review and approval prior to issuance of permits. Approval shall be based on consistency with applicant's application and the requirements of the Planning Commission's approval. If final plans are not submitted within such time period, or the plans are not approved by staff, the plan(s) shall be submitted to Planning Commission for additional review and action and applicant shall be responsible for all city-imposed fees associated with such additional review.

Attachments:

Packet Docs_Sanfilippo (PDF)

Sanfilippo Baseball

AC Arrival Corridor
A-1 Agricultural Preserve
A-2 General Agricultural
B-1 Neighborhood Business
B-2 Community Business
B-3 Office & Service Business
B-4 Business Park
B-5 Light Industrial
B-6 Rural Industrial
B-7 Rural Business
C-1 Shoreland/Wetland Conservancy
C-2 General Conservancy
CGO Central Growth Overlay
FFO Flood Fringe Overlay
FW Floodway
IPS Institutional & Public Service

LTD Limited Use
OA Agricultural Overlay
PUD Planned Unit Development Overlay
P-1 Park & Recreation
R-1 Single-Family Residential (5 Ac. Min.)
R-1B Single-Family Residential (2.5 Ac. Min.)
R-2 Single-Family Residential (2.0 Ac. Min.)
R-2B Single-Family Residential (1.5 Ac. Min.)
R-3 Single-Family Residential (1.0 Ac. Min.)
R-4 Single-Family Residential (3/4 Ac. Min.)
R-5 Single-Family Residential (1/2 Ac. Min.)
R-6 Single-Family Residential (4 du/Ac)
RM Multi-Family Residential
TC Town Center
TDR Transfer of Development Rights

2.a.a

INDUSTRIAL DRIVE 62W

B-5

C-2

EXECUTIVE DRIVE 105N

BAEHR ROAD 60W

Attachment: Packet Docs_Sanfilippo (5746 : St. John's Properties, Inc. for Mequon Joint Venture)



Sanfilippo Baseball LLC. is an indoor baseball facility that has been supporting the Northshore area for the last 12 years. It has always been my goal to provide top baseball instruction to help grow individual players along with local traveling teams. Sanfilippo Baseball LLC. is a family owned business operated by Steve and Leah Sanfilippo that has their team of subcontracted coaches to assist in lessons and camps. We have been subleasing space across the Northshore area for the last 10 years and have built up enough support to start our own location. Sanfilippo Baseball coaching instruction has been servicing teams like Mequon Heat both baseball and softball, Cedarburg Mercks, Whitefish Bay Junior Dukes, along with many other local teams.

The goal is to lease a facility in Mequon to continue to grow Sanfilippo Baseball. In recent years I have found there are many travel baseball and softball teams looking for space to practice indoors. I have also found that those same teams are looking for professional instruction. My background as an Assistant Athletic Director at Milwaukee School Engineering and Head Baseball Coach for the last nine years has given me the opportunity to service these teams. It has also made me realize that there is a need for an indoor facility that can be shared by local teams. My plan is to have the facility hours of operation be Monday-Friday 3pm-10pm and Saturday and Sunday 8am-8pm. With the idea of having Mequon teams using the facility six out of the seven days a week. It is important to Sanfilippo Baseball to build strong baseball and softball relationships in the community while creating life skills for the youth.

I completely understand the current situations with COVID-19 and the safety measures that it brings. I have put together guidelines for the facility and understand the importance of following the guidelines of the Northshore. Within the facility we will have cleaning stations along with a certain number of participants at a time. With the space we have, there will be between 20-25 players and coaches (broken up into smaller groups of 4 to 6) that will be able to use the facility, while wearing masks.

I continue to pride myself and my business with offering high level baseball and softball instruction while bringing enthusiasm and excitement for the game. I am excited to grow as a baseball community and look forward to educating all age groups of the importance of respecting the game as it brings life lessons and unforgettable memories.

Thank you,

A handwritten signature in black ink, appearing to read "Steve Sanfilippo".

Steve Sanfilippo
Owner of Sanfilippo Baseball LLC.

11/24/2020

Attachment: Packet Docs_Sanfilippo (5746 : St. John's Properties, Inc. for Mequon Joint Venture)



Sanfilippo Baseball COVID-19 Guidelines

Sanfilippo Baseball LLC. wants to be on the same page with all participants regarding extra precautions dealing with COVID-19. We are all experiencing COVID fatigue one way or the other. No doubt COVID guidelines are a hot topic. Big picture, wearing masks, hand sanitizer and the parents being smart about their kid's health should get us through these trying times.

COVID-19 Indoor Practice Guidelines: Plans can be altered at any time due to the current state of the virus

Please approach upcoming community and family events with the utmost caution and care. Our individual actions have large implications. Disregarding the recommended safety measures may jeopardize the current plan in place. Please be safe and stay healthy.

REQUIRED and MANDATORY:

Masks required for all coaches and kids. If a child is not following the mask mandate the coach can have the child sit for the remainder of the session and/or have their parents pick them up early.

If a child (or an immediate family member) has shown or is showing any COVID related symptoms they are not allowed at practice. Quarantine, symptom checks, testing, and monitoring should mirror those done for school. If you aren't allowed at school, you aren't allowed at the facility.

If a child tests positive at any point, that team will be quarantined for a minimum of 14 days. Symptom checks, testing, and monitoring should mirror those done for school.

Each player must have their own equipment. No sharing of bats, gloves, hats, helmets, catchers gear, etc.

Coaches are required to document who is in the facility and should always keep 6 feet of distance between kids. Sanfilippo Baseball will have signs posted on social distancing.

Parents will need to wear a mask while in the facility but asking parents to only be present at drop off and pick up. Sanfilippo Baseball doesn't want parents in the facility during the COVID crisis.

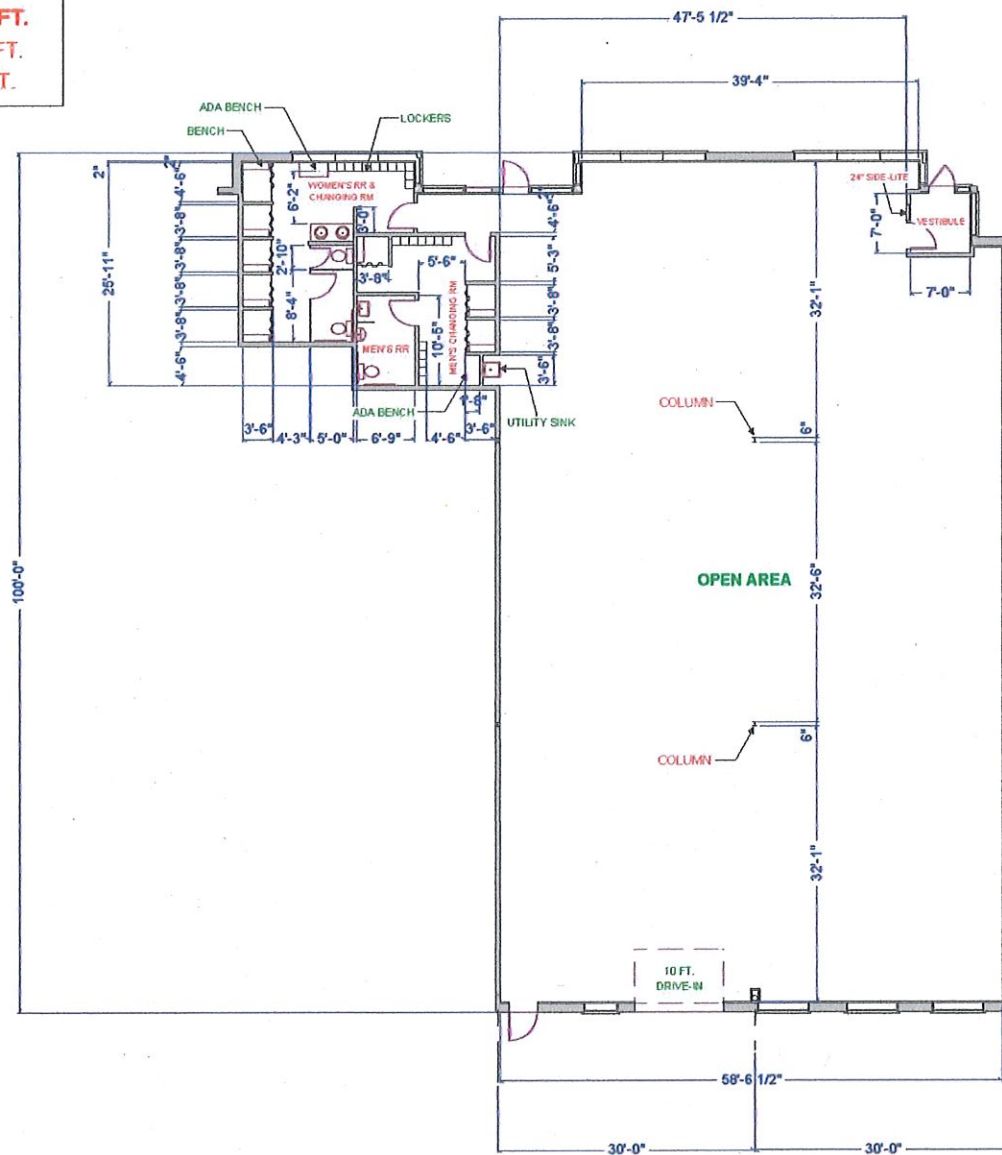
Each player should have a supply of hand sanitizer in their bag. Please apply before and after practice. Sanfilippo Baseball will also have hand sanitizer stations at the facility. We will also make sure to clean hands periodically through out practice times.

Coach's should leave at least 5 minutes at the end of each session to wrap up and get kids out of the facility to minimize the number of kids in the lobby area. Sanfilippo Baseball will have an enter and exit doors labeled so there is clean follow of participants.

Parents will need to pick up their children on time to ensure they aren't waiting in a lobby with a larger number of kids.

Exhibit B

TOTAL: 6,753 SQ.FT.
OFFICE: 753 SQ.FT.
W/H: 6,000 SQ.FT.



DESIGNED BY: FAITH HILE
 DRAWN BY: FAITH HILE
 CHECKED BY:
 APPROVED BY:

ST. JOHN PROPERTIES, INC.
 1020 JAMES DR., SUITE G
 HARTLAND, WI 53029

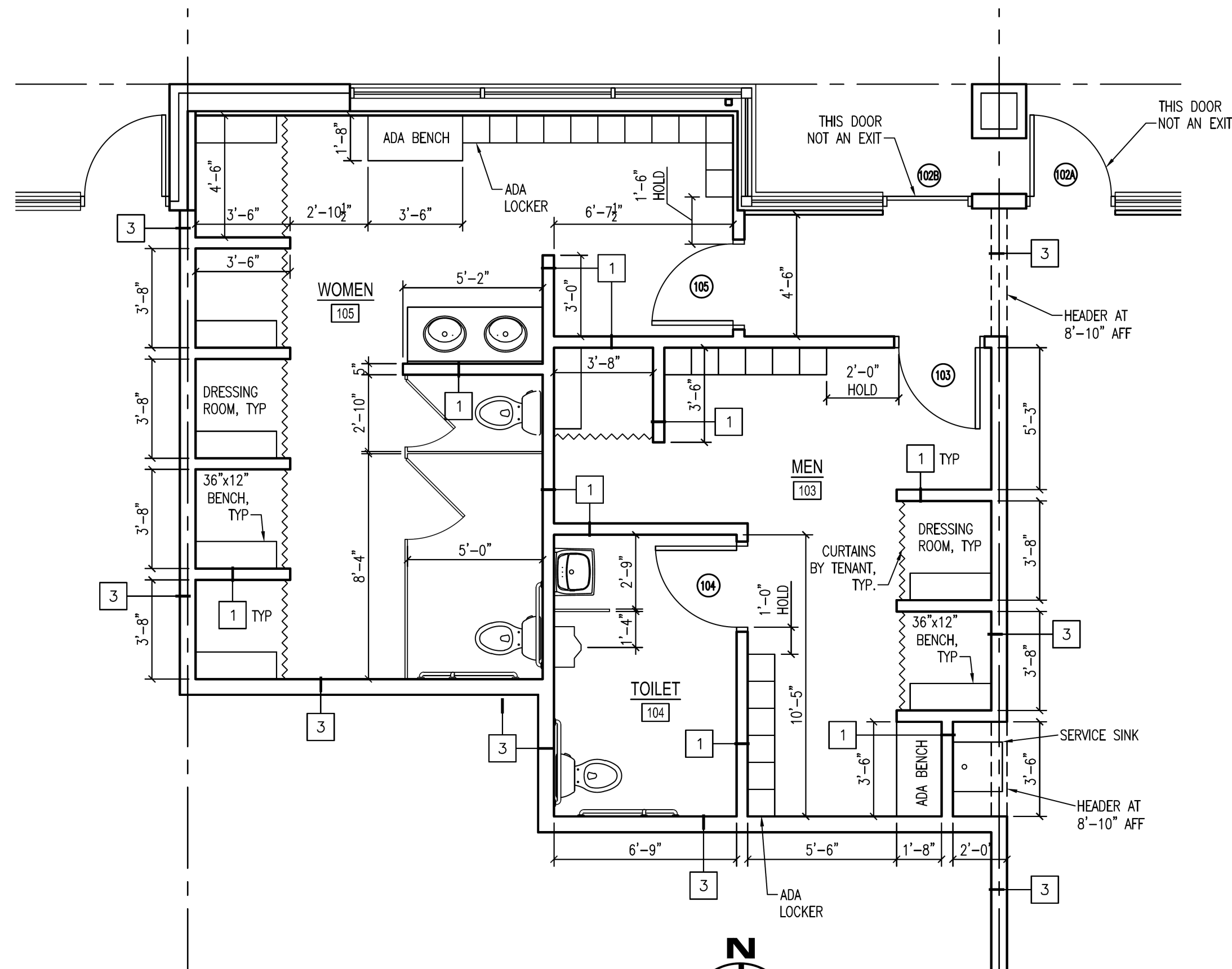
FLOOR PLAN / TENANT BUILDOUT FOR:
YMCA GYMNASIAC
 6140 W. EXECUTIVE DRIVE., SUITES I (F) - K
 MEQUON, WI 53092

PROJECT NO.
 DRAWING NO.

DATE
 10-17-11

ME6140(F)-K

Attachment: Packet Docs_Sanfilippo (5746 : St. John's Properties, Inc. for Mequon Joint Venture)



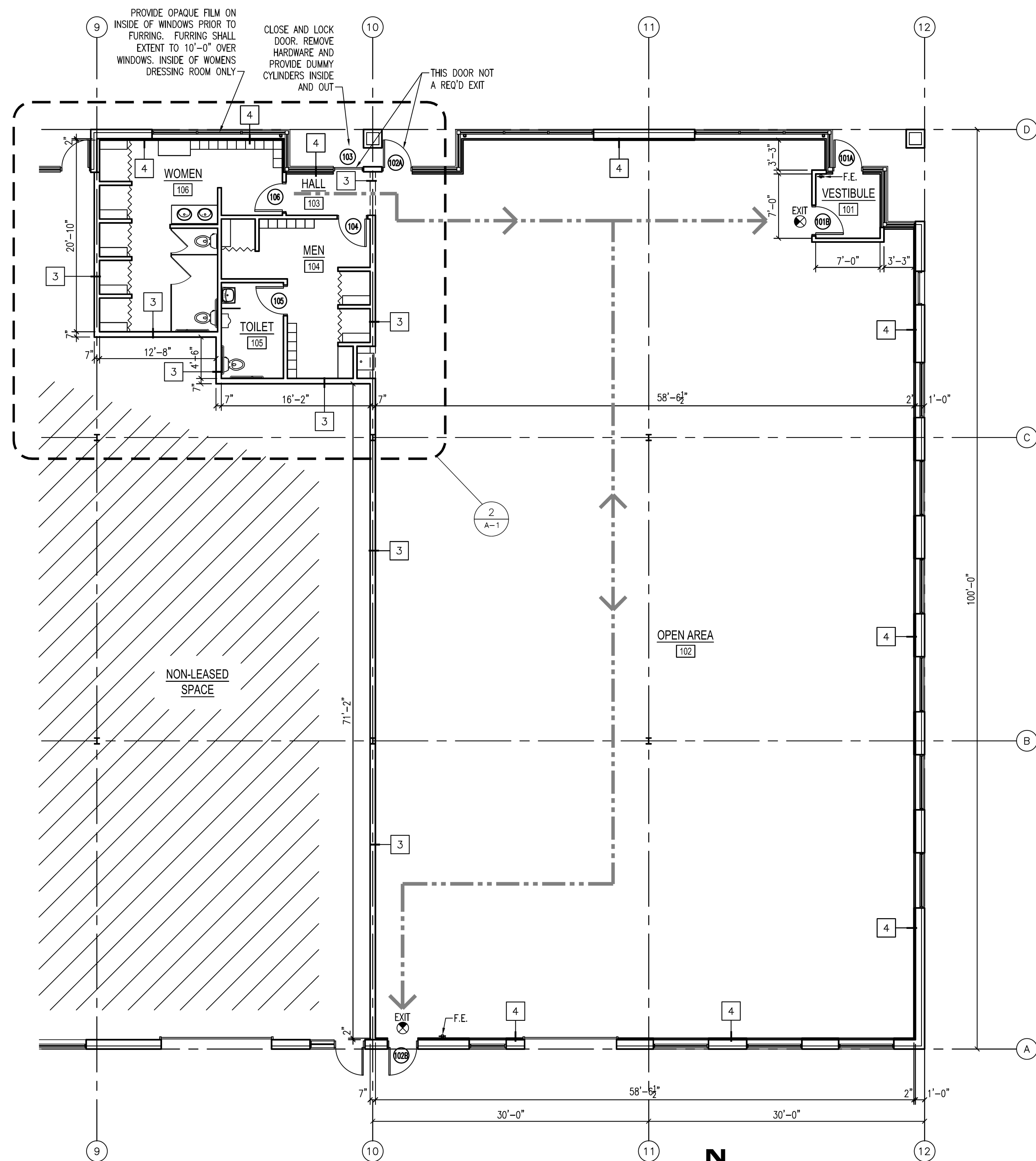
1 ENLARGED PLAN
1/4" = 1'-0"

WALL CONSTRUCTION:

- 1 — TYPICAL WALL: 3/8" 25 GAGE METAL STUD AT 24" O.C. 5/8" GYPSUM WALL BOARD ON BOTH SIDES TO 10'-0" A.F.F. AT TOILET ROOMS AND OTHER PLUMBING WALLS USE WATER-RESISTANT GYPSUM WALLBOARD PLUS 3/2" ACOUSTIC BATT INSULATION.
- 3 — DEMISING WALL: 1-HOUR RATED (UL#U456). 6" 25 GAGE METAL STUDS AT 16" O.C. CONNECT WALL TO ROOF DECK WITH SLIP JOINT ALLOWING FOR BOTH SIDES ROOF DEFLECTION. 5/8" TYPE "X" GYPSUM WALLBOARD BOTH SIDES WITH 5 1/2" ACOUSTIC BATT INSULATION, FULL HEIGHT. PROVIDE FIRE SAFING AS REQUIRED TO MAINTAIN 1-HOUR RATING. FIRE TAPED AND FINISHED READY FOR PAINTING.
- 4 — EXISTING MASONRY IN FINISHED AREAS:
-EXTERIOR WALLS: 2" FURRING WITH 1-1/2" RIGID INSULATION (EPS). WITH 5/8" GYPSUM WALLBOARD TO 10'-0" AFF.

WALL CONSTRUCTION NOTES:

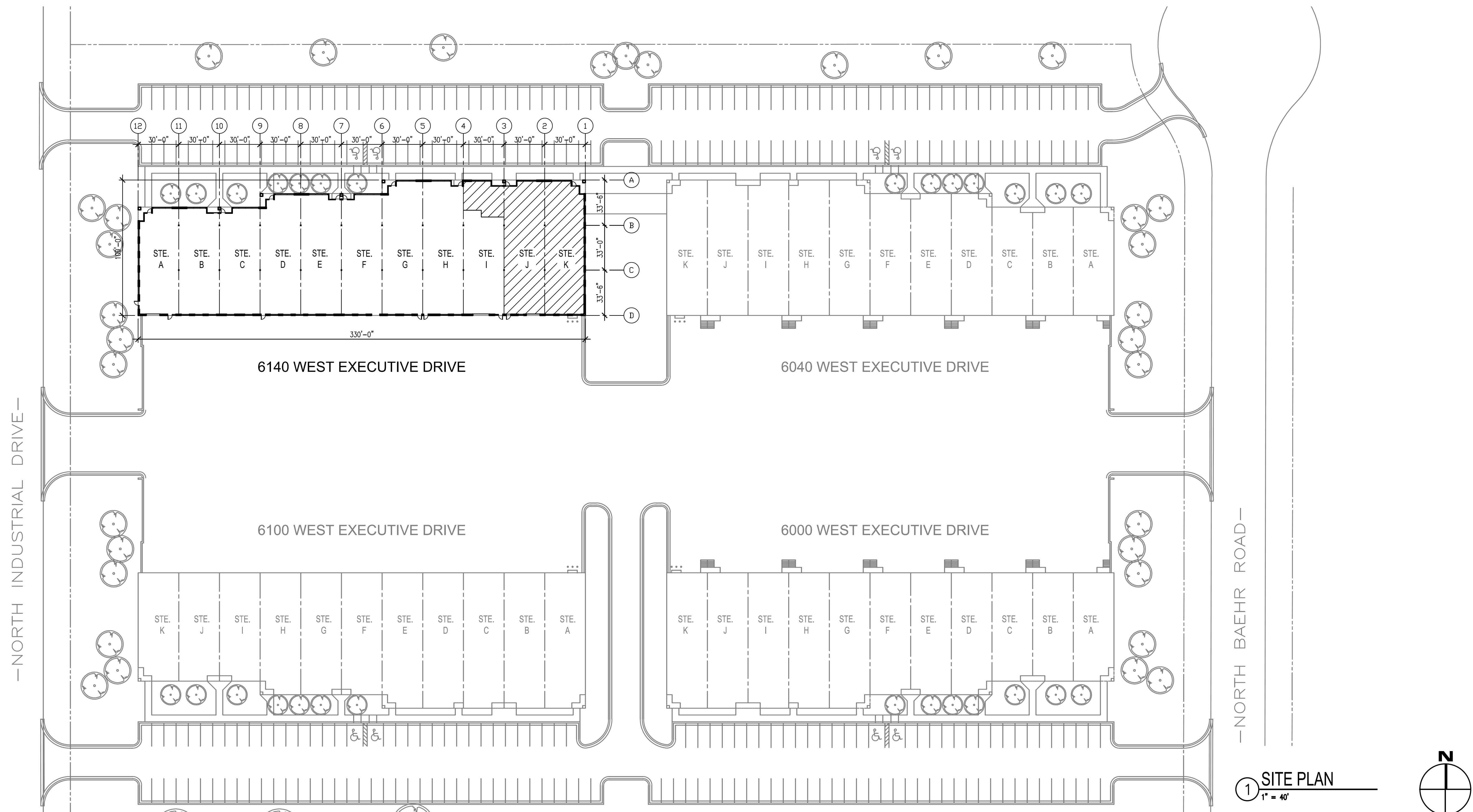
1. ALL WALLS ARE TYPE 1 UNLESS INDICATED OTHERWISE.



1 FLOOR PLAN
1/8" = 1'-0"

SYMBOL LEGEND:

- | | |
|---|-------------|
|  | ROOM TAG |
|  | DOOR TAG |
|  | WALL TAG |
|  | EGRESS PATH |



Address	Tenant	SF	Occupancy Load	
6040 W. Executive Dr. Suite A-B	GemEx Systems	4,800	6	GemEx scientifically measures the play of light in each diamond to certify its Light Performance
6040 W. Executive Dr. Suite C-H	Closest By Design Inc.	16,500	8	Custom Closet Designer and Maker
6040 W. Executive Dr. Suite I (rear)&J	Guthrie & Frey Water	4,200	2	Water softening equipment supplier
6040 W. Executive Dr Suite I (front)	Hunt Management	1,500	1	Project Management Company
6040 W. Executive Dr Suite K	Altrapure, LLC	3,300	4	Manufacturing company providing ultrasonic based products for disinfection and sterilization
6100 W. Executive Dr. Suite ABCD (r)	Ecker Envelope Inc	9,985	3	Commercial printer in Mequon
6100 W. Executive Dr. Suite C-D(F)	Vacant	-	-	-
6100 W. Executive Dr. Suite E(f)	T.A Novak Blinds, LLC	1,300	1	Commercial Blinds
6100 W. Executive Dr. Suite E(r) F-H	Siteone Landscapes, LLC	9,800	2	Landscape material and equipment supplier
6100 W. Executive Dr. Suite I-K	Mullaly Furniture Finishing	7,200	2	Interior Decorating company
6140 W. Executive Dr. Suite A-H	Titan Spine, LLC	21,301	9	Medical Equipment Supplier
6140 W. Executive Dr. Suite I (r)	Milwaukee Personal Training	2,246	2	Gym
6140 W. Executive Dr. Suite I (r)	Sanfilippo Baseball Academy	6,753		
6000 W. Executive Dr. Suite A-B	Lakeshore Electrical Sales	4,800	2	Electrical Sales Company
6000 W. Executive Dr. Suite C	Wavy Bones, LLC	2,400	2	Gym
6000 W. Executive Dr. Suite D-E	Jemmco	5,400	2	Distribution service in Mequon
6000 W. Executive Dr. Suite F	Vacant	-	-	-
6000 W. Executive Dr. Suite G	Inspier, LLC	3,000	2	Interior decoration in Mequon
6000 W. Executive Dr. Suite H-I	Vacant	-	-	-
6000 W. Executive Dr. Suite J & K	ULT, LLC	6,000	12	Air technologies, fume extraction systems for air purification

CODE DATA - OVERALL BUILDING	
WISCONSIN COMMERCIAL BUILDING CODE (IBC 2009)	
CODE DATA	ALLOWABLE PER CODE
POSSIBLE USES W/O FIREWALL (S-302)	A, B, F1, F2, S1, S2
CONSTRUCTION TYPE (T-601)	IIB
FIRE SUPPRESSION (CH. 9)	SPRINKLERED
ALLOWABLE AREA W/ INCREASE FOR FRONTAGE (S-506)	45125 SF ('A' OCC MOST RESTRICTIVE)
HEIGHT/STORIES (T-503)	55'-0"/2 STORIES
ZONING	B-5 LIGHT INDUSTRIAL DISTRICT CITY OF MEQUON

PARKING CALCULATION FOR SANFILIPPO BASEBALL

ZONING CODE	
Use	Health and athletic clubs.
Parking Requirement	<i>One space per three persons that can be accommodated at the same time and one space per employee.</i>

PROPOSED FITNESS CENTER	
Max. Employees and Clients	20 clients
Total square footage	6,753 square feet
Max. employees on one shift	3 employees

PARKING CALCULATION	
Parking Required for Proposed Use	10 stalls based on code requirement
Parking requirement for entire site	25 based on code requirement
Parking on Site	75 stalls - part of multi-tenant development with shared parking
Code Compliance	Parking on site meets code requirement

		2.a.a
CONDITIONAL USE GRANT Articles of Agreement made and entered into this 14th day of December, 2020 by and between Mequon Joint Venture, owner of the property located at 6140 W Executive Drive, Suite I, and the City of Mequon Planning Commission. Before the Planning Commission of the City of Mequon, Ozaukee County, Wisconsin, in regard to the premise located in Section 27, Range 21 East, in Township 9 North, Ozaukee County, State of Wisconsin, further described as follows: LEGAL DESCRIPTION Exhibit A WHEREAS, the Zoning Code and Zoning District Map of the above named municipality, pursuant to State Statues, provide that the premises may not be used of right for the purpose hereinafter described but that upon petition such use may be approved by the municipality as a Conditional Use Grant in particular circumstances as defined by the standards in the Zoning Ordinance; and Petition therefore having been made, and public hearing held thereon, and the Planning Commission of the <u>City of Mequon</u> having determined that by reason of the particular nature, character, and circumstances of the proposed use, grant of such use upon the terms and conditions hereinafter prescribed would be consistent with the requirements of the Zoning Ordinance. Now, therefore, IT IS GRANTED, subject to compliance with the terms and conditions hereinafter stated that the Premises may be used for the purpose of <u>fitness center</u>. GRANTED by action of the Planning Commission of the City of Mequon this 14th day of December 2020. ----- John Wirth, Mayor, Planning Commission Chairperson Acknowledgment: STATE OF WISCONSIN))SS OZAUKEE COUNTY) Personally came before me, this ____ day of _____, 2020, the above named John Wirth, Mayor, to me known to be the person who executed the foregoing instrument and acknowledged the same. _____ Notary Public, Ozaukee County, Wisconsin My Commission (expires) _____ ----- Planning Commission Secretary Acknowledgment: STATE OF WISCONSIN))SS OZAUKEE COUNTY) Personally came before me, this ____ day of _____, 2020, the above named _____, Planning Commission Secretary, to me known to be the person who executed the foregoing instrument and acknowledged the same. _____ Notary Public, Ozaukee County, Wisconsin My Commission (expires) _____ RETURN TO: City of Mequon 11333 North Cedarburg Road 60W Mequon, WI 53092 PARCEL NO.: 14-027-16-009.00 Attachment: Packet Docs_Sanfilippo (5746 : St. John's Properties, Inc. for Mequon Joint Venture) Packet Pg. 17		

The **CONDITIONS** of this Grant are:

1. This grant shall become effective upon the execution and recording by the owners and operators of the Premises of an acceptance hereof in such form as to constitute an effective covenant running with the land.
2. This grant shall expire and become void unless, pursuant to the building and zoning codes of the City, the approved use is commenced or the building permit is obtained within twelve (12) months of the date of Planning Commission approval noted above, or actual construction is commenced within twelve (12) months of the date on which the building permit was issued.
3. This grant is subject to amendment and termination in accordance with the provisions of the Zoning Code of this municipality.
4. Construction and operation of the use granted shall be in strict conformity to the approved site, building, and operations plans filed in connection with the Petition for this Grant, and annexed hereto.
5. Any of the conditions of this Grant which would normally be the responsibility of tenants of the Premises shall be made a part of their lease by the Owner, which lease shall contain provisions for posting of the pertinent conditions to notify employees thereof.
6. This grant shall automatically be null and void if this use is discontinued for a period of twelve (12) months.
7. The Grantee and its successors in interest shall hold the City of Mequon harmless from any claims or losses to the City or its residents including reasonable attorney fees arising from or related to use of the facilities.
8. Any change to the approved use or change to the building or site plan will require an amendment to the Conditional Use. Minor changes to the building and site plan shall be approved by the Department of Community Development.
9. **Conditions on the Operations:**
 - a. Hours of operation: Monday-Friday: 3:00 PM – 10:00 PM
Saturday and Sunday: 8:00 AM – 8:00 PM
 - b. Performance standards relating to parking, noise, vibration, odor, smoke, dust, and light: As per City ordinance and as further designated under letter (e.) below.
 - c. Water supply requirements:
Public
 - d. Provisions for sewage disposal:
Public
 - e. Other:
 - If the conditional use shall become hazardous, harmful, noxious, offensive or a nuisance to the surrounding neighborhood, or if material problems shall arise with respect to noise, traffic circulation, ingress and egress, parking, unenclosed storage, lighting, maintenance, or any other condition which shall materially threaten health or safety or to become a nuisance condition, the Grantee shall correct or improve such condition, and toward that end, the Planning Commission, after public hearing, may alter, amend or add reasonable additional Conditional User Grant conditions in order to ameliorate such effects, or in the case of violation of the Conditional Use Permit, may revoke the Conditional Use Grant.
 - If, despite efforts to prescribe conditions which render the conditional use harmonious in the surrounding neighborhood, problems shall arise with respect to noise, traffic circulation, ingress and egress, parking, unenclosed storage, lighting, maintenance, or any other condition which shall materially threaten the peace and enjoyment of neighboring properties, or shall become hazardous, harmful, noxious, offensive or a nuisance to the surrounding neighborhood, or shall threaten health or safety, the Grantee shall correct or improve such condition, and toward that end, the Planning Commission, after public hearing, may alter, amend or add reasonable additional Conditional User Grant conditions in order to ameliorate such effects, and in the case of violation of the Conditional Use Permit, may revoke the Conditional Use Grant.
- a. **Conditions of the structures:**
 - a. Site Plan: As on file with Community Development Department, City of Mequon
 - b. Landscaping Plan: N/A
 - c. Elevations: As on file with Community Development Department, City of Mequon
 - d. Sign: As on file with Community Development Department, City of Mequon
 - e. Floor Plan: Exhibit B
 - f. Exterior lighting of the site and building: As on file with Community Development Department, City of Mequon
 - g. Fence / Wall / Dumpster plan details: As on file with Community Development Department, City of Mequon
 - h. The building shall comply with the building code.

- a. Street access (number, location, design: As on file with Community Development Department, City of Mequon
- b. Off-Street Parking (location and design including screening thereof): As on file with Community Development Department, City of Mequon
- c. Outside storage of materials, products or refuse (location and screening thereof): As on file with Community Development Department, City of Mequon
- d. Parking, exterior lighting of the site, location design and power: Any changes subject to Planning Commission approval.
- e. Other:

Notary Public, Ozaukee County, Wisconsin

Document drafted by: City of Mequon



TO: Planning Commission
FROM: PA PHOUALA VANG, PLANNER
DATE: December 14, 2020
SUBJECT: Rock of Ages Milwaukee Memorials for Lumen Christi. The applicant is seeking conditional use and building and site plan approval to allow for a proposed 10' x 10' private mausoleum for the property located at 2723 W. Mequon Road (Balistreri Mausoleum).

Applicant:	Rock of Ages Milwaukee Memorials Mike Miller
Status of Applicant:	Agent
Requested:	Conditional Use Grant Building and Site Plan
Existing Zoning:	IPS (Institutional and Public Service) C-2 (General Conservancy)
Existing Land Use:	Institutional
Lot size:	.75 Acres
Location:	2723 W. Mequon Road
Tax Key:	#14-025-01-002.00
District:	#6

Background:

The applicant is seeking conditional use grant approval for the property located 2723 W Mequon Road. The applicant is proposing a private mausoleum for the Balistreri family within the Lumen Christi cemetery. The 109 square foot mausoleum is proposed in the rear of the cemetery on ten of the southwestern most plots. The zoning code allows mausoleums as a conditional use in the IPS district and does not differentiate between private or public mausoleums.

Site Plan

The mausoleum is 10.4 feet by 10.5 feet and will be in the rear at the south end of the cemetery. The site does have wetlands and the mausoleum shall adhere to wetland setbacks. The structure shall meet the 20-foot offset requirement. If the Planning Commission approves the Conditional Use Grant, a site plan/survey that shows distances from the property lines to the mausoleum shall be submitted to staff for review and approval.

Building Plan

The proposed structure will be 11'-4" in height. The structure exterior will be barre gray granite. The front elevation featuring a proposed bronze door will be on the east elevation. The west elevation will feature a stained-glass window.

According to Section 3.05(1)(b) of the Zoning Code, the following findings shall be considered when analyzing a conditional use grant application:

1. The proposed use should not endanger the public health, safety or general welfare of the city and the immediate neighborhood.

The proposed use should not endanger the surrounding area. A private mausoleum can be considered compatible with the cemetery use and will be located in the rear of the cemetery.

2. The proposed use should not injure the value of adjoining or abutting property.

The Land Use Plan designates the property as Institutional. Adjacent properties are zoned R-3 and IPS. A mausoleum within a cemetery can be considered compatible with the Land Use Plan designation and other institutional uses in the area. The private mausoleum will be 11.5 feet in height and located approximately 120 feet away from the nearest single-family residential dwelling. The site has existing landscaping that will help screen the mausoleum from the east, west and south property lines.

3. The proposed use shall be harmonious or compatibility with the area in which it is located.

The proposed use fits the character of the surrounding area. With the current cemetery use and the existing landscape screening, Planning staff believes the proposed use should be harmonious with the surrounding uses. A condition will be added that any service on the property shall occur within the hours of 8:00 AM –7:00 PM to be consistent with the hours approved for the cemetery.

Staff Recommendation:

Planning staff recommends approval of the Conditional Use Grant based on the following conditions:

1. The applicant shall submit final plans within 60 days of Planning Commission action. Such final plans shall be subject to staff review and approval prior to issuance of permits. Approval shall be based on consistency with applicant's application and the requirements of the Planning Commission's approval. If final plans are not submitted within such time period, or the plans are not approved by staff, the plan(s) shall be submitted to Planning Commission for additional review and action and applicant shall be responsible for all city-imposed fees associated with such additional review.
2. All structures must adhere to the wetland setback.
3. A site plan/survey shall be submitted to staff for review and approval that shows the distance from the property line to the mausoleum.
4. Any service on the property shall occur within the hours of 8:00 AM –7:00 PM.

Attachments:

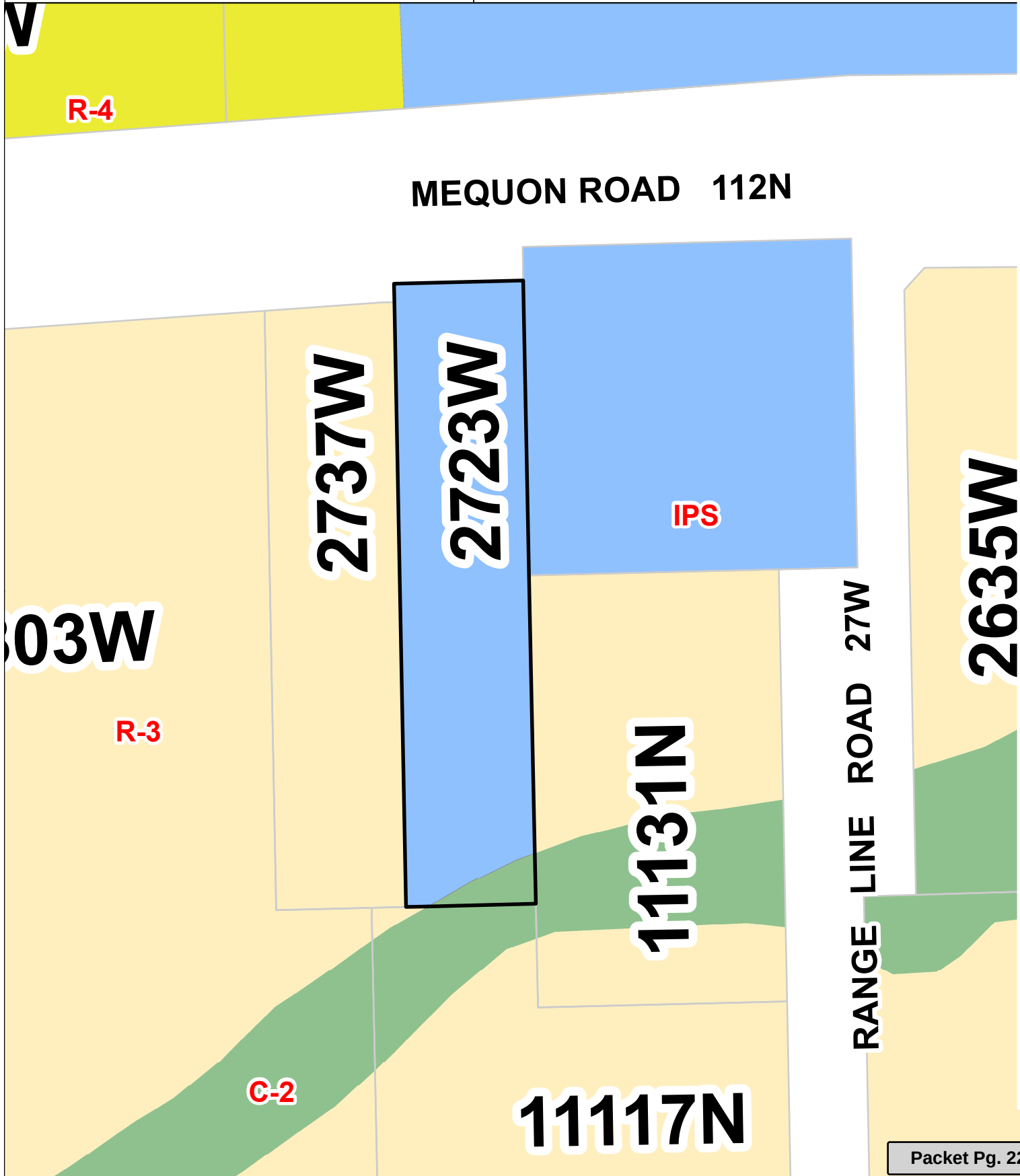
Packet Docs_Lumen Christi (PDF)

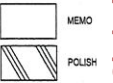
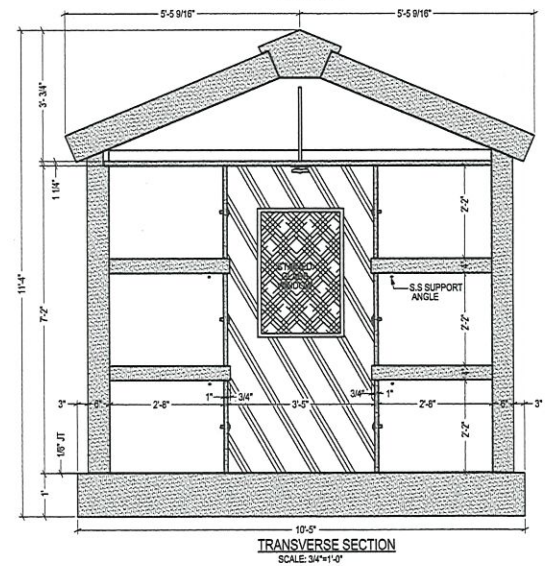
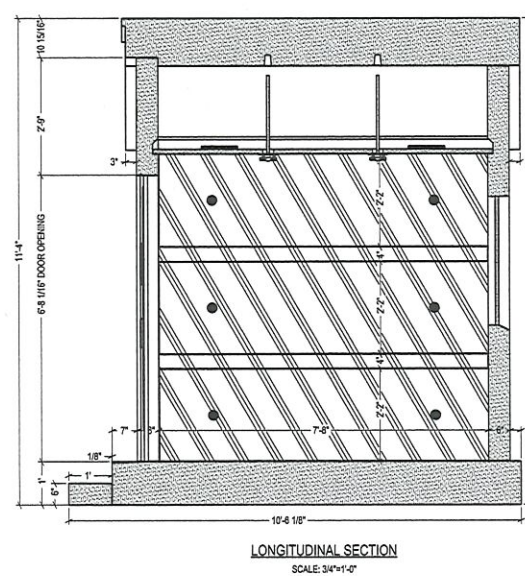
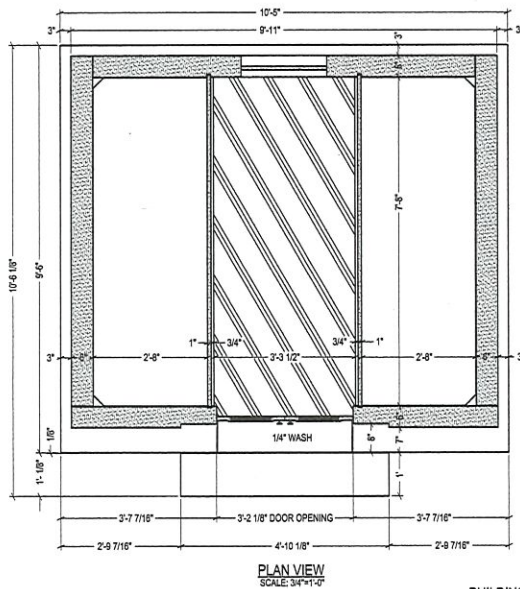
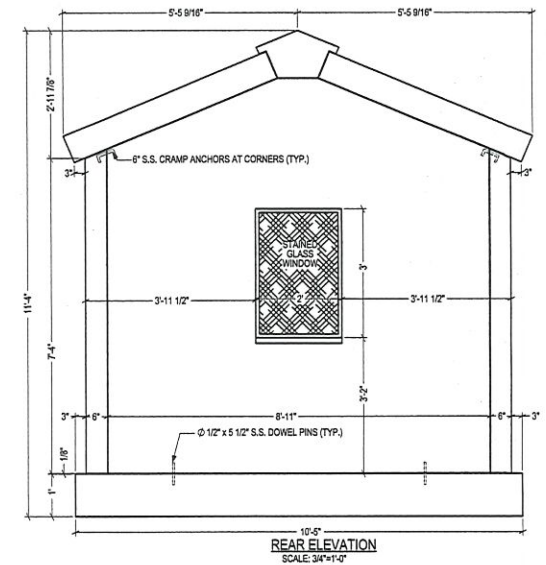
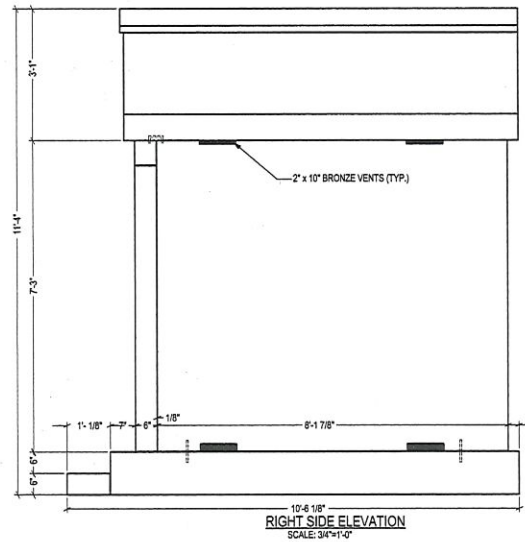
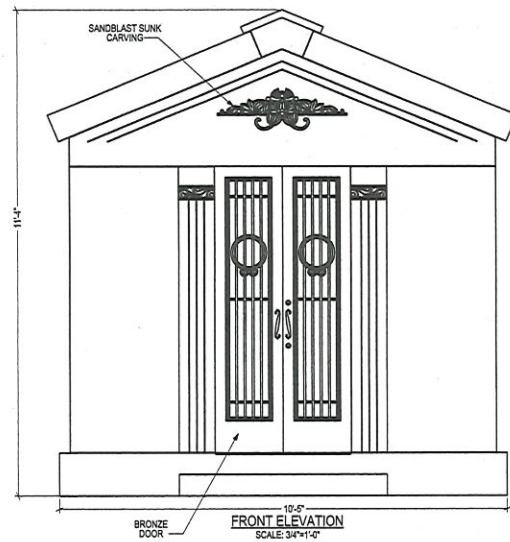
Balistreri Family Mausoleum

AC Arrival Corridor
A-1 Agricultural Preserve
A-2 General Agricultural
B-1 Neighborhood Business
B-2 Community Business
B-3 Office & Service Business
B-4 Business Park
B-5 Light Industrial
B-6 Rural Industrial
B-7 Rural Business
C-1 Shoreland/Wetland Conservancy
C-2 General Conservancy
CGO Central Growth Overlay
FFO Flood Fringe Overlay
FW Floodway
IPS Institutional & Public Service

LTD Limited Use
OA Agricultural Overlay
PUD Planned Unit Development Overlay
P-1 Park & Recreation
R-1 Single-Family Residential (5 Ac. Min.)
R-1B Single-Family Residential (2.5 Ac. Min.)
R-2 Single-Family Residential (2.0 Ac. Min.)
R-2B Single-Family Residential (1.5 Ac. Min.)
R-3 Single-Family Residential (1.0 Ac. Min.)
R-4 Single-Family Residential (3/4 Ac. Min.)
R-5 Single-Family Residential (1/2 Ac. Min.)
R-6 Single-Family Residential (4 du/Ac.)
RM Multi-Family Residential
TC Town Center
TDR Transfer of Development Rights

2.b.a

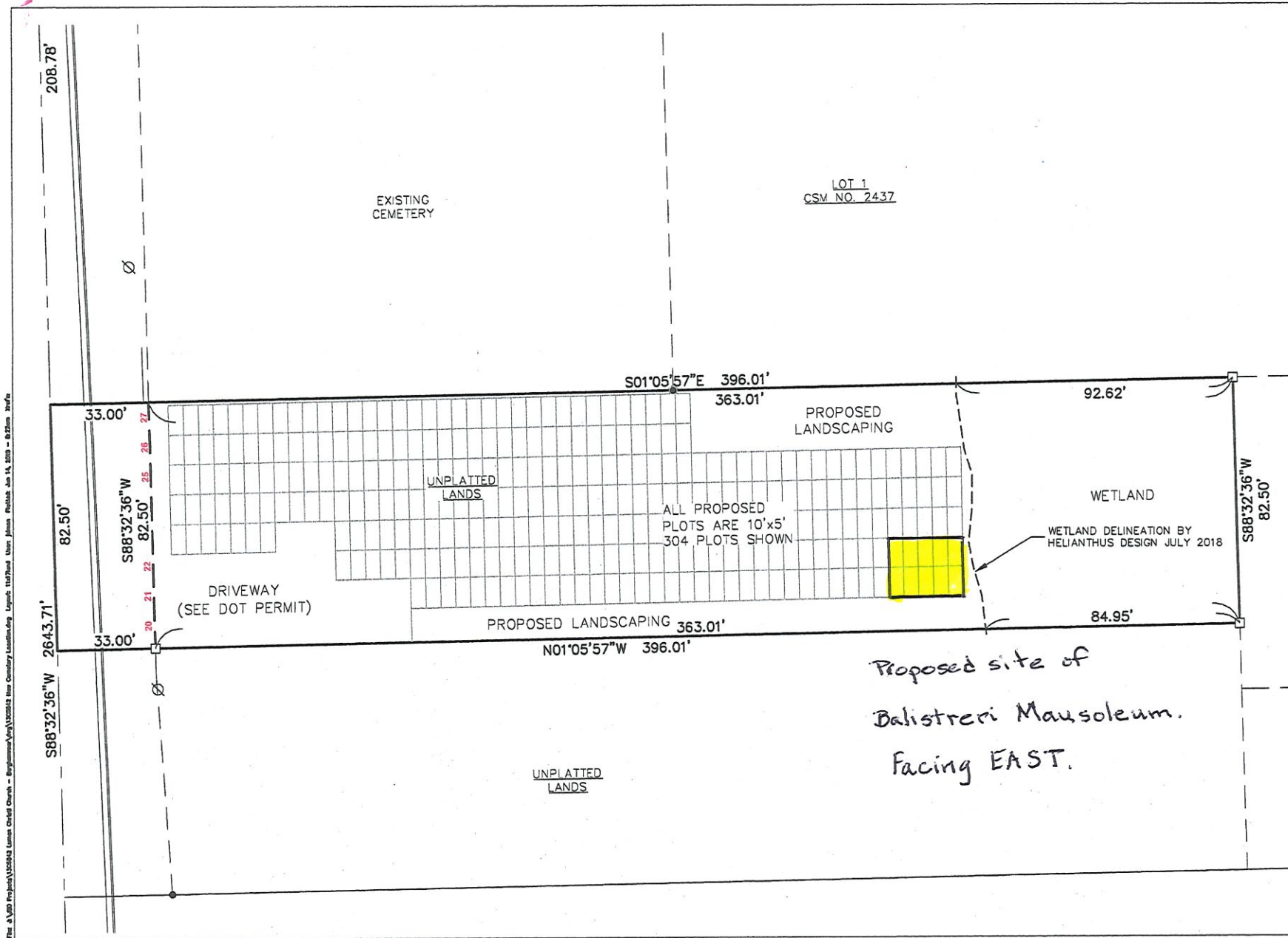




BUILDING WILL BE BARRE GRAY GRANITE
ALL EXTERIOR SURFACES WILL HAVE A MEMO FINISH
THE INTERIOR FLOOR, CEILING, BENCH AND SHUTTERS WILL BE POLISHED

6- Crypt Mausoleum		11/10/2022
DESIGNED	BY	AS NOTED
CHECKED	BY	AS NOTED
DATE	1	OF





JSD
Professional Services, Inc.
Engineers • Surveyors • Planners

CREATE THE VISION TELL THE STORY

MADISON | MILWAUKEE
KENOSHA | APPLETON | WAUSAU

MILWAUKEE REGIONAL OFFICE
409 WYTHSBURG ROAD, SUITE 100
WAUKESHA, WISCONSIN 53186
P. 262.513.9666

CLIENT:
LUMEN CHRISTI
CONGREGATION

CLIENT ADDRESS:
11300 N ST. JAMES LN.
MEQUON, WI 53092

PROJECT:
PROPOSED CEMETERY
2723 W. MEQUON RD.
MEQUON, WI 53092

PROJECT LOCATION:
TAX PARCEL ID
14-025-01-002.00

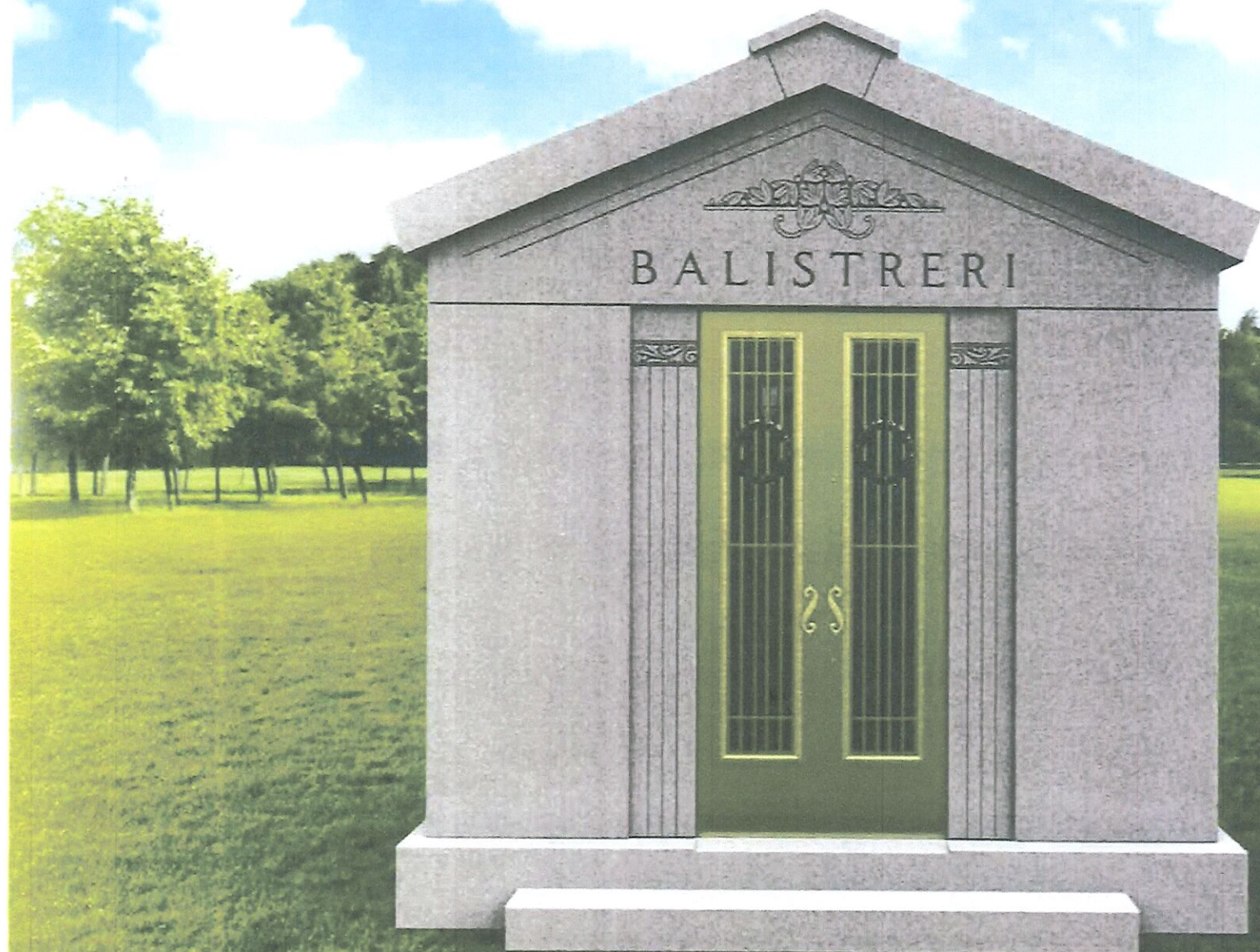
North arrow and scale: 1"=30'

DESIGN/CLIENT: MJP
APPROVED: CWR

SHEET TITLE:
NEW
CEMETERY
LAYOUT

SHEET NUMBER:
1 OF 1

200 PROJECT NO. 13-06



		2.b.a
CONDITIONAL USE GRANT Articles of Agreement made and entered into this 14th day of December, 2020 by and between Lumen Christi Congregation, owner of the property located at 2723 W Mequon Road, and the City of Mequon Planning Commission. Before the Planning Commission of the City of Mequon, Ozaukee County, Wisconsin, in regard to the premise located in Section 25, Range 21 East, in Township 9 North, Ozaukee County, State of Wisconsin, further described as follows: LEGAL DESCRIPTION Exhibit A-1 WHEREAS, the Zoning Code and Zoning District Map of the above named municipality, pursuant to State Statues, provide that the premises may not be used of right for the purpose hereinafter described but that upon petition such use may be approved by the municipality as a Conditional Use Grant in particular circumstances as defined by the standards in the Zoning Ordinance; and Petition therefore having been made, and public hearing held thereon, and the Planning Commission of the <u>City of Mequon</u> having determined that by reason of the particular nature, character, and circumstances of the proposed use, grant of such use upon the terms and conditions hereinafter prescribed would be consistent with the requirements of the Zoning Ordinance. Now, therefore, IT IS GRANTED, subject to compliance with the terms and conditions hereinafter stated that the Premises may be used for the purpose of <u>mausoleum</u>. GRANTED by action of the Planning Commission of the City of Mequon this 14th day of December 2020. John Wirth, Mayor, Planning Commission Chairperson Acknowledgment: STATE OF WISCONSIN))SS OZAUKEE COUNTY) Personally came before me, this ____ day of _____, 2020, the above named John Wirth, Mayor, to me known to be the person who executed the foregoing instrument and acknowledged the same. Notary Public, Ozaukee County, Wisconsin My Commission (expires) _____ Planning Commission Secretary Acknowledgment: STATE OF WISCONSIN))SS OZAUKEE COUNTY) Personally came before me, this ____ day of _____, 2020, the above named _____, Planning Commission Secretary, to me known to be the person who executed the foregoing instrument and acknowledged the same. Notary Public, Ozaukee County, Wisconsin My Commission (expires) _____		RETURN TO: City of Mequon 11333 North Cedarburg Road 60W Mequon, WI 53092 PARCEL NO.: 14-025-01-002.00
		Attachment: Packet Docs_Lumen Christi (5747 : Rock of Ages Milwaukee Memorials for Lumen Christi)
		Packet Pg. 26

The **CONDITIONS** of this Grant are:

1. This grant shall become effective upon the execution and recording by the owners and operators of the Premises of an acceptance hereof in such form as to constitute an effective covenant running with the land.
2. This grant shall expire and become void unless, pursuant to the building and zoning codes of the City, the approved use is commenced or the building permit is obtained within twelve (12) months of the date of Planning Commission approval noted above, or actual construction is commenced within twelve (12) months of the date on which the building permit was issued.
3. This grant is subject to amendment and termination in accordance with the provisions of the Zoning Code of this municipality.
4. Construction and operation of the use granted shall be in strict conformity to the approved site, building, and operations plans filed in connection with the Petition for this Grant, and annexed hereto.
5. Any of the conditions of this Grant which would normally be the responsibility of tenants of the Premises shall be made a part of their lease by the Owner, which lease shall contain provisions for posting of the pertinent conditions to notify employees thereof.
6. This grant shall automatically be null and void if this use is discontinued for a period of twelve (12) months.
7. The Grantee and its successors in interest shall hold the City of Mequon harmless from any claims or losses to the City or its residents including reasonable attorney fees arising from or related to use of the facilities.
8. Any change to the approved use or change to the building or site plan will require an amendment to the Conditional Use. Minor changes to the building and site plan shall be approved by the Department of Community Development.
9. **Conditions on the Operations:**
 - a. Hours of operation: Any service on the property shall occur within the hours of 8:00 AM – 7:00 PM.
 - b. Performance standards relating to parking, noise, vibration, odor, smoke, dust, and light: As per City ordinance and as further designated under letter (e.) below.
 - c. Water supply requirements:
N/A
 - d. Provisions for sewage disposal:
N/A
 - e. Other:
 - If the conditional use shall become hazardous, harmful, noxious, offensive or a nuisance to the surrounding neighborhood, or if material problems shall arise with respect to noise, traffic circulation, ingress and egress, parking, unenclosed storage, lighting, maintenance, or any other condition which shall materially threaten health or safety or to become a nuisance condition, the Grantee shall correct or improve such condition, and toward that end, the Planning Commission, after public hearing, may alter, amend or add reasonable additional Conditional User Grant conditions in order to ameliorate such effects, or in the case of violation of the Conditional Use Permit, may revoke the Conditional Use Grant.
 - If, despite efforts to prescribe conditions which render the conditional use harmonious in the surrounding neighborhood, problems shall arise with respect to noise, traffic circulation, ingress and egress, parking, unenclosed storage, lighting, maintenance, or any other condition which shall materially threaten the peace and enjoyment of neighboring properties, or shall become hazardous, harmful, noxious, offensive or a nuisance to the surrounding neighborhood, or shall threaten health or safety, the Grantee shall correct or improve such condition, and toward that end, the Planning Commission, after public hearing, may alter, amend or add reasonable additional Conditional User Grant conditions in order to ameliorate such effects, and in the case of violation of the Conditional Use Permit, may revoke the Conditional Use Grant.
10. **Conditions of the Structures:**
 - a. Site Plan: Exhibit B
 - b. Landscaping Plan: As on file with Community Development Department, City of Mequon
 - c. Elevations: Exhibit C
 - d. Signs: As on file with Community Development Department, City of Mequon
 - e. Floor Plan: Exhibit C
 - f. Exterior lighting of the site and building: As on file with Community Development Department, City of Mequon
 - g. Fence / Wall / Dumpster plan details: As on file with Community Development Department, City of Mequon
 - h. The building shall comply with the building code.

11. **Conditions on the site:**
- a. Street access (number, location, design): As per attached Exhibit B

b. Off-Street Parking (location and design including screening thereof): As on file with Community Development Department, City of Mequon

c. Outside storage of materials, products or refuse (location and screening thereof): As on file with Community Development Department, City of Mequon

d. Parking, exterior lighting of the site, location design and power: Any changes subject to Planning Commission approval.

e. Other:

1. The applicant shall submit final plans within 60 days of Planning Commission action. Such final plans shall be subject to staff review and approval prior to issuance of permits. Approval shall be based on consistency with applicant’s application and the requirements of the Planning Commission’s approval. If final plans are not submitted within such time period, or the plans are not approved by staff, the plan(s) shall be submitted to Planning Commission for additional review and action and applicant shall be responsible for all city-imposed fees associated with such additional review.

2. All structures must adhere to the wetland setback.

Owner

Acknowledgment:

STATE OF WISCONSIN))SS
OZAUKEE COUNTY)
Personally came before me, this ____ day of _____, 2020, the above named _____, Owner, to me known to be the person who executed the foregoing instrument and acknowledged the same.

Notary Public, Ozaukee County, Wisconsin

Receipt of a true Copy of this instrument
on behalf of the petitioner acknowledged
the _____ day of _____, 2020

Document drafted by: The City of Mequon, Wisconsin

Attachment: Packet Docs_Lumen Christi (5747 : Rock of Ages Milwaukee Memorials for Lumen Christi)

TO: Planning Commission
FROM: PA PHOUALA VANG, PLANNER
DATE: December 14, 2020
SUBJECT: The Victory Company. The applicant is seeking certified survey map approval to allow for a 2-lot land division for the property located immediately east of 4000 W. Scenic Avenue.

Applicant:	The Victory Company
Status of Applicant:	Owner
Requested:	Final Land Division Approval
Existing Zoning:	R-3 (Single Family 1-acre)
Land Use Plan:	Residential 1-1.5 Acres
Lot size:	2.78 Acres
Location:	Property east of 4000 W. Scenic Avenue
Tax Key:	#14-083-06-06.000
District:	#6

Background:

The applicant requests 2-lot certified survey map approval for the property located east of 4000 W Scenic Drive. The property is currently zoned R-3 (1 acre minimum).

Zoning District Standards and Site Conditions:

The Land Use Plan map designates the property as Residential 1-1.5 Acres. The proposed certified survey map is consistent with the current zoning designation of R-3, requiring one (1) acre minimum lot size and 150 minimum average lot width and depth.

Site Conditions:

Proposed Lot 1 and Lot 2 are each 1.39 acres with access of Scenic Avenue. The lot is currently vacant and does not contain any wetlands. The City Forester will be out to the site to inspect for any specimen trees on the property.

Other Technical Corrections:

The Engineering Division will provide a full technical review of the CSM.

Staff Recommendation:

Planning staff recommends approval of the land division subject to the following conditions:

1. Final staff review and approval of CSM.
2. The applicant shall make any technical corrections to the final CSM.
3. Compliance with the Tree Preservation Ordinance.
4. No certified survey map shall be offered for recording or recorded after 180 days from the date of approval by the Planning Commission.

5. The applicant shall submit an electronic file for the proposed certified survey map in a format compatible with AutoCAD 2015 dwg or dxf in Wisconsin State Plane Coordinate system, South Zone (NAD 83).

Attachments:

Packet Docs_Victory Co (PDF)

The Victory Companies

AC Arrival Corridor
A-1 Agricultural Preserve
A-2 General Agricultural
B-1 Neighborhood Business
B-2 Community Business
B-3 Office & Service Business
B-4 Business Park
B-5 Light Industrial
B-6 Rural Industrial
B-7 Rural Business
C-1 Shoreland/Wetland Conservancy
C-2 General Conservancy
CGO Central Growth Overlay
FFO Flood Fringe Overlay
FW Floodway
IPS Institutional & Public Service

LTD Limited Use
OA Agricultural Overlay
PUD Planned Unit Development Overlay
P-1 Park & Recreation
R-1 Single-Family Residential (5 Ac. Min.)
R-1B Single-Family Residential (2.5 Ac. Min.)
R-2 Single-Family Residential (2.0 Ac. Min.)
R-2B Single-Family Residential (1.5 Ac. Min.)
R-3 Single-Family Residential (1.0 Ac. Min.)
R-4 Single-Family Residential (3/4 Ac. Min.)
R-5 Single-Family Residential (1/2 Ac. Min.)
R-6 Single-Family Residential (4 du/Ac)
RM Multi-Family Residential
TC Town Center
TDR Transfer of Development Rights

3.a.a

R-4

IPS

R-4/PUD

MEQUON ROAD 112N

57

167

4023W

4001W

3955W

3903W

3827W

11149N

4104W

4018W

4000W

R-3

11125N

11101N

CRESTLINE ROAD 38W

SCENIC AVENUE 111N

11054N

3907W

11048N

11036N

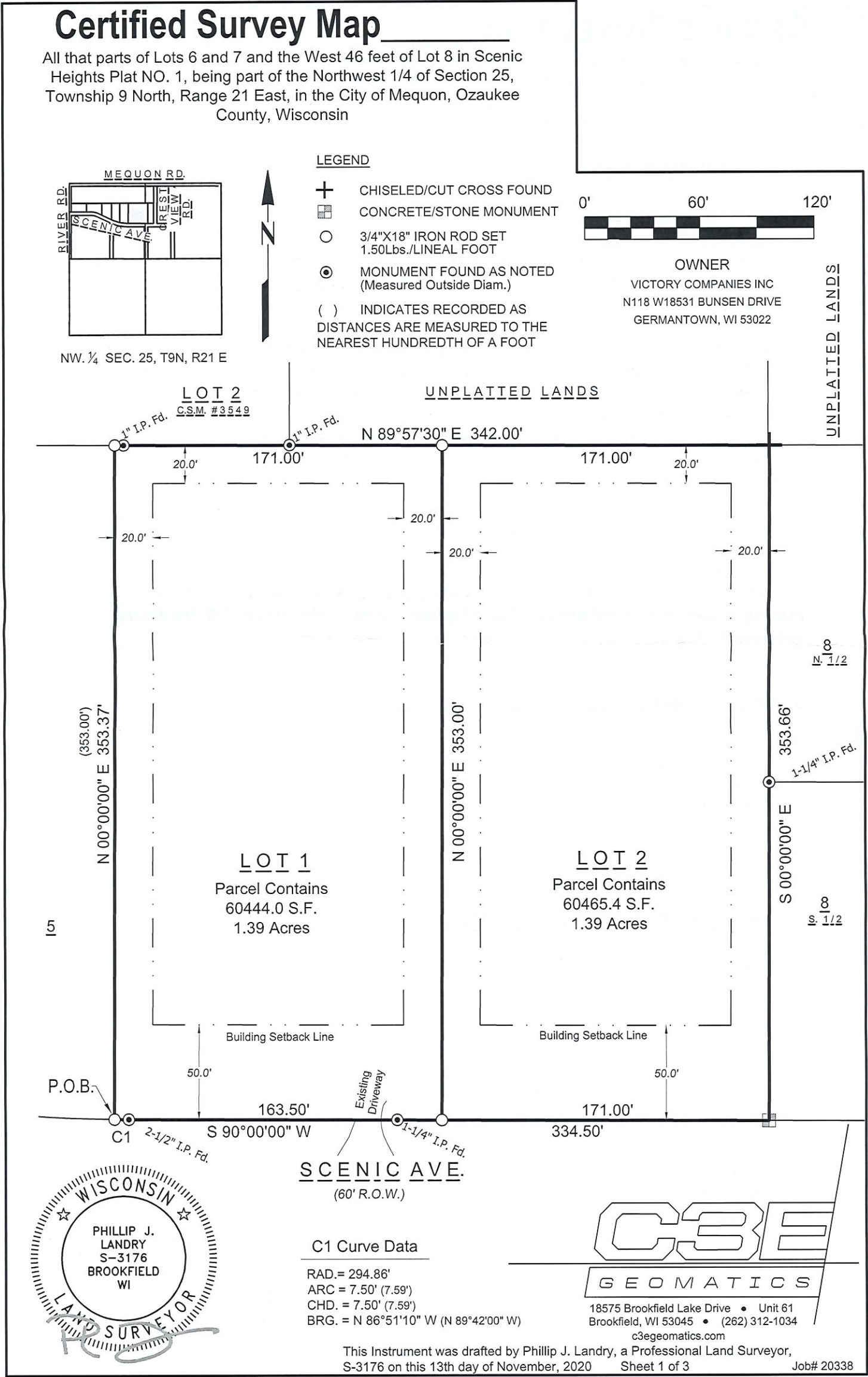
11033N

11030N

11018N

11019N

11016N



Attachment: Packet Docs_Victory Co (5773 : The Victory Company)

Certified Survey Map_____

All that parts of Lots 6 and 7 and the West 46 feet of Lot 8 in Scenic Heights Plat NO. 1, being part of the Northwest 1/4 of Section 25, Township 9 North, Range 21 East, in the City of Mequon, Ozaukee County, Wisconsin

SURVEYOR'S CERTIFICATE:

I Phillip J. Landry, Professional Land Surveyor, do hereby certify:

That I have surveyed, Divided and mapped a parcel of land located in a part of the Northwest 1/4 of Section 25, Township 9 North, Range 21 East, in the City of Mequon, Ozaukee County, Wisconsin, now being more particularly bounded and described and follows:

Point of Beginning at the Southwest Corner of Lot 6, Scenic Heights Plat NO. 1; thence N 00°00'00" E along the west line of said Lot 6, 353.37 feet to the Northwest Corner of said Lot 6; thence N 89°57'30" E along the north line of Scenic Heights Plat NO. 1, 342.00 feet to a point on the said north line, said point being 46.00 feet east of the Northwest Corner of Lot 8 of the aforementioned subdivision; thence S 00°00'00" E along a line parallel to the west line of said Lot 8, 353.66 feet to a the south line of said Lot 8 and being the north right of way line of Scenic Ave.; thence S 90°00'00" W, along said north right of way line, 334.50 feet to a point of curve, thence 7.50 feet along the arc of the curve, with a radius of 29.86 curve to the north, Chord Bears N 86°51'10" W, 7.50 feet to the Point of Beginning.

The gross area of said parcel contains 120,902.4 Square feet or 2.78 Acres of land more or less.

That I have made such survey, land division and map by the direction of VICTORY COMPANIES INC, owner of said land. That such map is a correct representation of all exterior boundaries of land surveyed and land division made thereof. That I have fully complied with Town of Mequon Land Division Regulations and the provision of Chapter 236 of the Wisconsin Statutes and the Platting ordinance of the Town of Mequon in surveying, dividing and mapping same.

Dated this_____ day of _____, 20_____.

Phillip J. Landry PLS
Professional Land Surveyor S-3176

CITY OF MEQUON PLAN COMMISSION APPROVAL:

Approved by the Plan Commission of the City of Mequon on this_____ day of _____, 20_____.

John Wirth Plan Commission Chairman / Mayor

Kimberly Tollefson, Plan Commission Secretary



This Instrument was drafted by Phillip J. Landry, a Professional Land Surveyor, S-3176 on this 13th day of November, 2020 Sheet 2 of 3 Job# 20338

Attachment: Packet Docs_Victory Co (5773 : The Victory Company)

Certified Survey Map

All that parts of Lots 6 and 7 and the West 46 feet of Lot 8 in Scenic Heights Plat NO. 1, being part of the Northwest 1/4 of Section 25, Township 9 North, Range 21 East, in the City of Mequon, Ozaukee County, Wisconsin

CORPORATE OWNER'S CERTIFICATE:

VICTORY COMPANIES INC, a corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, certifies that said corporation caused the land described on this map to be surveyed, divided and mapped, as represented on this Certified survey Map.

VICTORY COMPANIES INC, does further certify that this Certified Survey Map is mapped as represented on this map in accordance with the provisions of Chapter 236 of the Wisconsin State Statutes and requirements and ordinances of the Town of Mequon, this 16th day of November, 2020.

BRUCE MORAN - VP
{First name, Last Name} {Title}

{First name Last Name} {Title}

In the presence of:
VICTORY COMPANIES INC

David H. Plum Treasurer
{First name Last Name} {Title}

STATE OF WISCONSIN)
Washington ss.
County of (County))
Personally came before me this 16th day of November, 2020, {First Name Last Name} {Title} and {First Name Last Name} {Title} of the above named corporation, to me known as the person(s) who executed the foregoing instrument, and to me known to be the {Title and Title respectively} of the corporation, and acknowledged that {they, he, or she} executed the foregoing instrument and acknowledged the same.

Antoinette L. Dunst
Print Name Antoinette L. Dunst
Notary Public, Washington County, WI.
My Commission Expires: 09/25/2021





11333 N. Cedarburg Rd
Mequon, WI 53092-1930
Phone: 262-236-2902
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development

TO: Planning Commission
FROM: JAC ZADER, ASSISTANT DIRECTOR COMMUNITY DEVELOPMENT
DATE: December 14, 2020
SUBJECT: Mequon I, LLC/VH Mequon II, LLC. The applicant is seeking final plat and street tree approval for Phase I of The Enclave II subdivision. The first phase includes 14 single-family lots for the property located at 10565 N. Wauwatosa Road.

Applicant: Veridian Homes
Status of Applicant: Owner
Requested: Street Tree Plan
Final Plat Phase I
Existing Zoning: R-3 (Single Family 1-Acre)
PUD (Planned Unit Development)
TDR (Transfer of Development Rights)
Lot size: 68 Acres
Location: 10565 N. Wauwatosa Road
Tax Key: 14-028-16-011.00
District: #4

Background:

The applicant is requesting final plat approval for the first phase of The Enclave II subdivision located at 10565 N Wauwatosa Road. The first phase consists of 14 of the 82 lots that make up the conservation subdivision. The development includes the use of 14 TDR credits which will need to be extinguished by the city. The City Attorney is working on a legal document that will be executed prior to recording of the final plat.

Street Tree Plan:

The street tree plan was approved by the Tree Board on June 17, 2020. Installation of the trees will be completed prior to Common Council action on the Final Plat in December.

Final Plat:

The developer requests final plat approval for this subdivision, which includes 14 single-family lots with outlots that contain open space and storm water detention facilities. The final plat is consistent with the approved preliminary plat. All of the improvements associated with the first phase are installed with the exception of the landscaping along Wauwatosa Road. Since a majority of the plantings are evergreen trees, it was recommended that planting was deferred until spring. As a condition on approval, staff will require a letter of credit or escrow for 125% of the cost of the landscaping. Staff will require the planting be completed by June 15, 2021.

Engineering Report:

Kristen Lundeen, Director of Public Works and City Engineer reviewed the final plat and has the following comments:

The Public Improvements were installed and inspected. As of the date of this report, punchlist items remain which must be completed prior to the execution of the final plat. That includes the approval of the required as built plans for the Public Improvements, grading and storm water facilities. All legal documents and record drawings must be approved and on file prior to the execution of the final plat.

Planning Staff Recommendation:

Planning Staff recommends **approval** of the final plat subject to the following conditions:

1. Any technical corrections identified by staff shall be made to the final plat.
2. The remaining landscaping shall be installed prior to June 15, 2021.
3. Final legal documents include a dissolution of the TDR credits, an Open Space Agreement, Storm Water Maintenance and Easement Agreement and Public Access Easement for the bike paths are subject to City Attorney review and approval prior to recording.
4. Acceptance of the proof of payment for the installed utilities, including lien waivers from all contractors associated with the public improvements.
5. Submittal of the lot pipe certification.
6. Completion of all punchlist items.
7. Engineering review and approval of the water main, sanitary sewer and grading record drawings in accordance with the approved construction plans.
8. Engineering review and acceptance of the storm water facility compliance reports.
9. Prior to releasing the drainage financial guarantee as associated with the compliance reports, staff will establish an amount of retainage required until the site is vegetated.
10. Compliance with Ord. 2019-1560
11. Payment of all necessary fees and or escrows, including L.O.C. for landscaping requirements.
12. Architectural design of residential buildings shall comply with the Architectural Board's publication entitled "Guidelines for Residential Structures" and are subject to the Architectural Review Board.

Attachments:

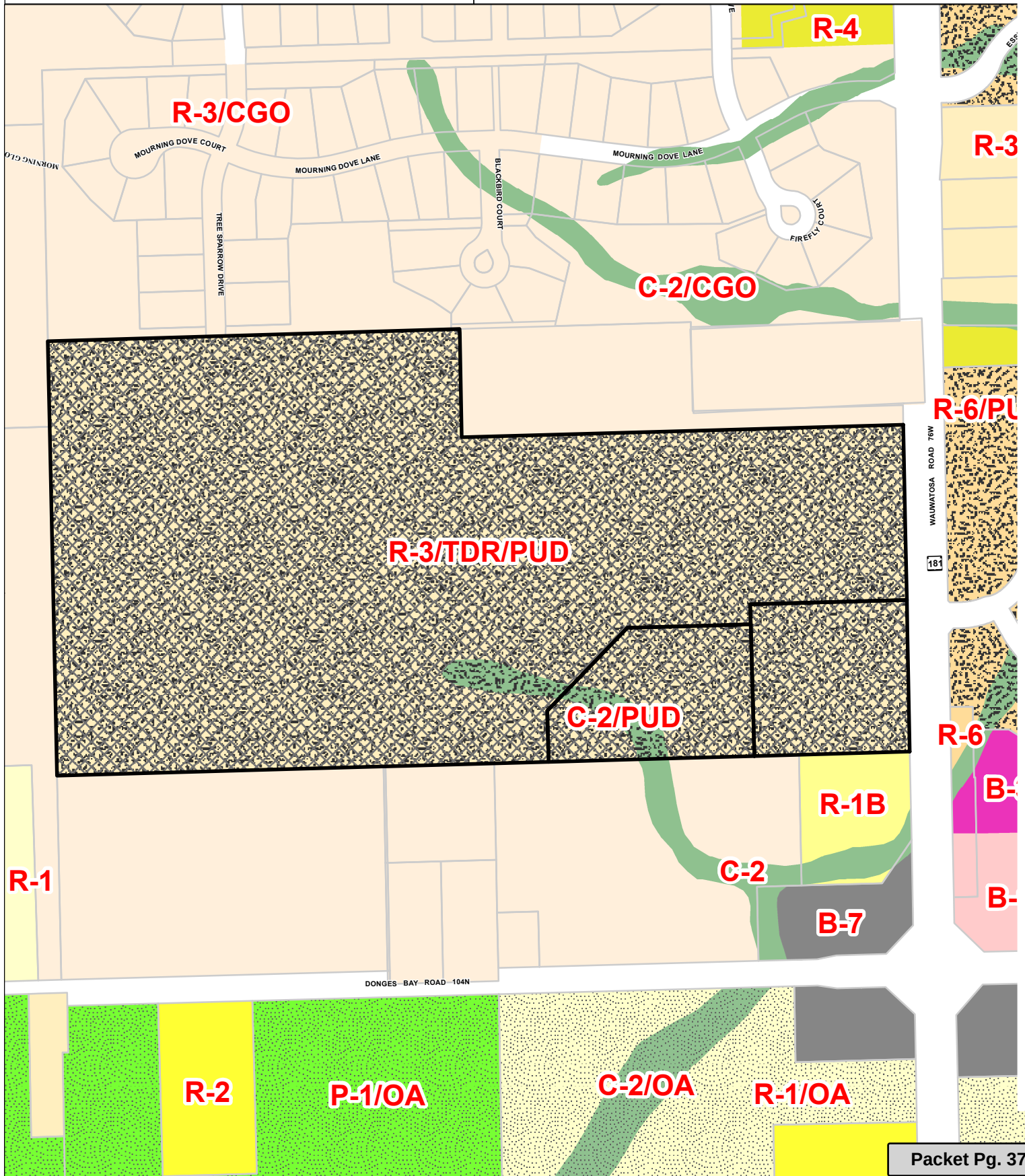
Packet Docs_Enclave II (PDF)

Enclave II

AC Arrival Corridor
A-1 Agricultural Preserve
A-2 General Agricultural
B-1 Neighborhood Business
B-2 Community Business
B-3 Office & Service Business
B-4 Business Park
B-5 Light Industrial
B-6 Rural Industrial
B-7 Rural Business
C-1 Shoreland/Wetland Conservancy
C-2 General Conservancy
CGO Central Growth Overlay
FFO Flood Fringe Overlay
FW Floodway
IPS Institutional & Public Service

LTD Limited Use
OA Agricultural Overlay
PUD Planned Unit Development Overlay
P-1 Park & Recreation
R-1 Single-Family Residential (5 Ac. Min.)
R-1B Single-Family Residential (2.5 Ac. Min.)
R-2 Single-Family Residential (2.0 Ac. Min.)
R-2B Single-Family Residential (1.5 Ac. Min.)
R-3 Single-Family Residential (1.0 Ac. Min.)
R-4 Single-Family Residential (3/4 Ac. Min.)
R-5 Single-Family Residential (1/2 Ac. Min.)
R-6 Single-Family Residential (4 du/Ac)
RM Multi-Family Residential
TC Town Center
TDR Transfer of Development Rights

3.b.a



Attachment: Packet Docs Enclave II (5792 : Mequon I, LLC/VH Mequon II, LLC)

THE ENCLAVE AT MEQUON PRESERVE IV

SHEET 1 OF 3 SHEETS

VOL.

PG.

There are no objections to this plat with respect to Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2), Wis Stats. as provided by s. 236.12, Wis. Stats.

Certified _____, 20____

Department of Administration



ISSUED DATE: OCTOBER 15, 2020

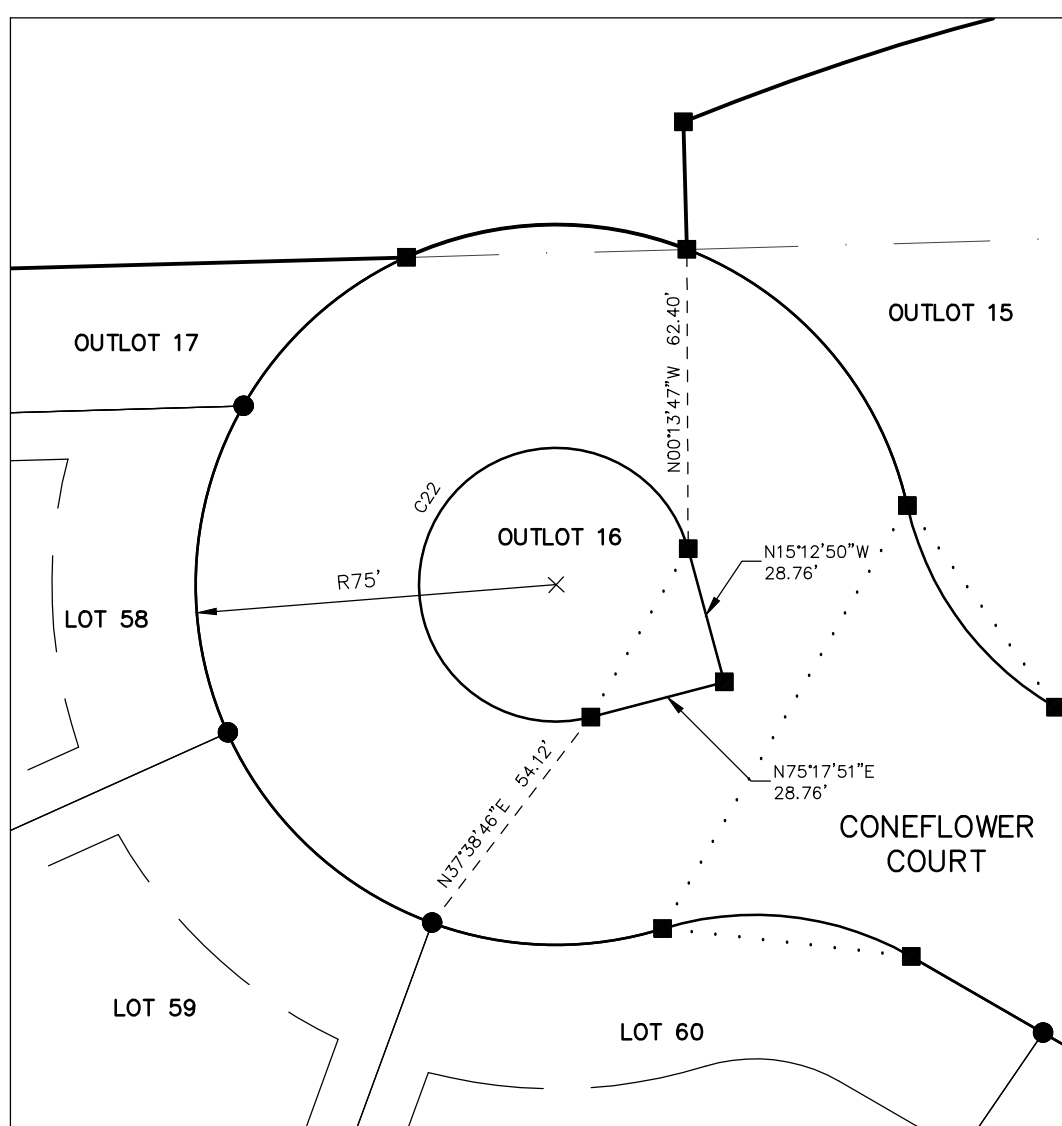
ZONING NOTES:

Existing Zoning:
R-3 Rural Residential Detached
CGO Central Growth Area Overlay
TDR Transfer of development rights
PUD Planned Unit Development

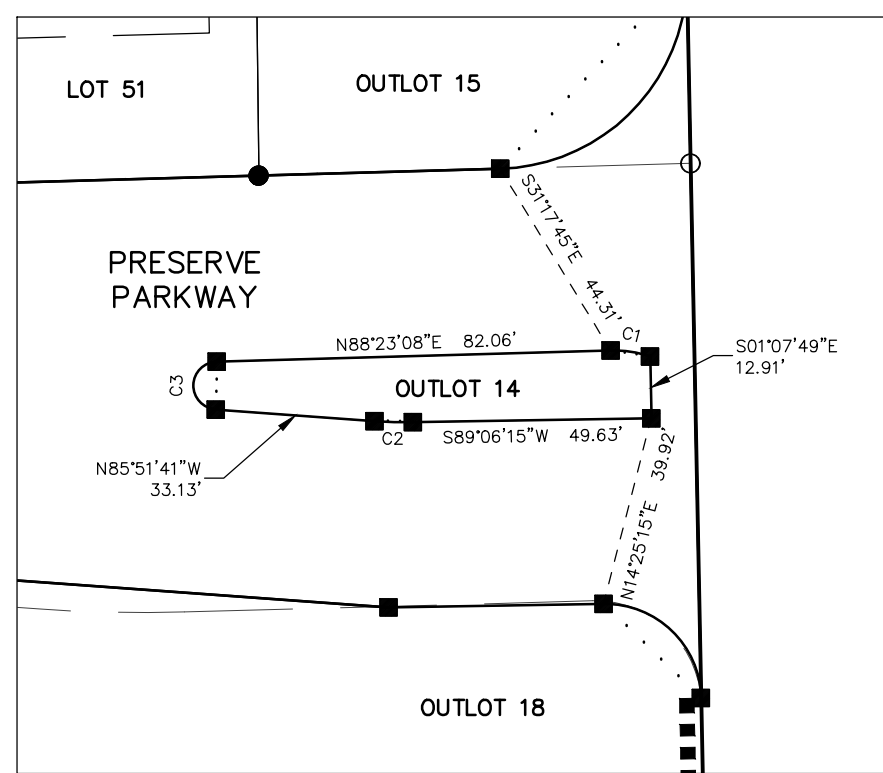
Minimum Building Setbacks:

R-3/CGO
Front: 30 feet
Side: 15 feet
Rear: 20 feet

TOTAL AREA
673,668 sq. ft.
15.465 acres



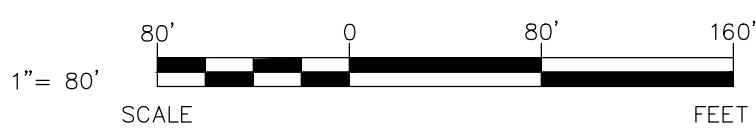
DETAIL "A"
1"=40'



DETAIL "B"
1"=40'

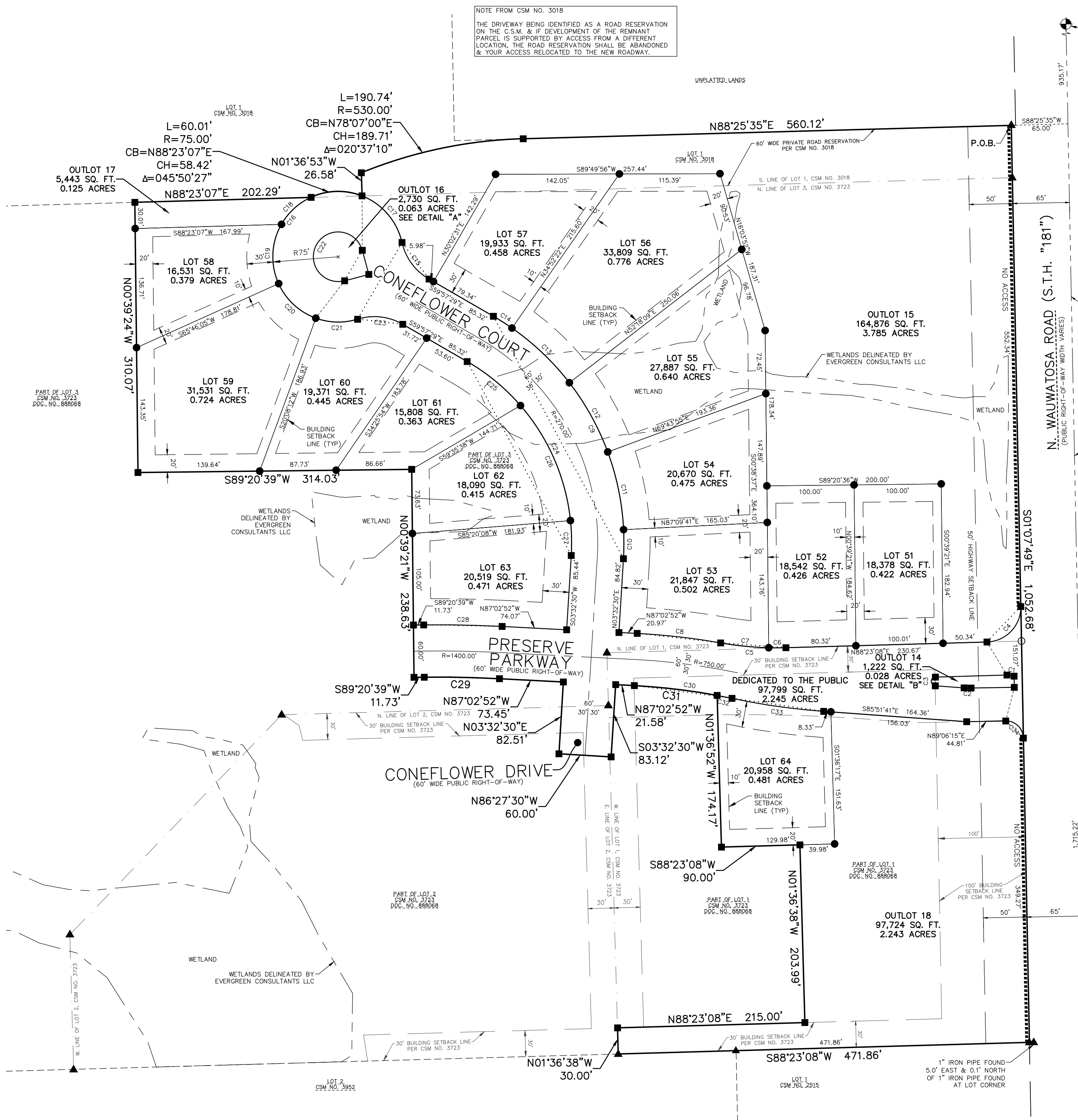
LEGEND:

- 2-3/8" X 18" IRON PIPE SET WEIGHING 3.65 LB/FT.
- 3/4" X 18" REBAR SET WEIGHING 1.50 LB/FT.
- 1" IRON PIPE FOUND
- SECTION CORNER MONUMENT FOUND
- NO ACCESS LINE

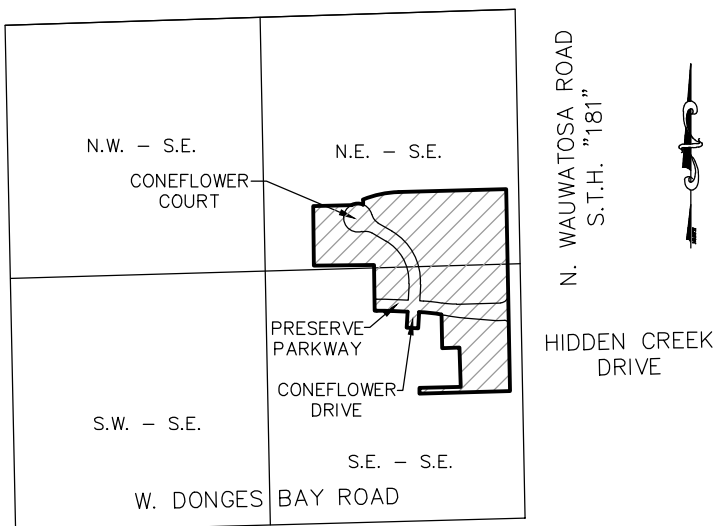


NORTH POINT REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD1927). THE EAST LINE OF THE SOUTHEAST 1/4 OF SECTION 28-9-21 HAS A BEARING OF SOUTH 01°-07'-49" EAST.

ALL LINEAR MEASUREMENTS HAVE BEEN MADE TO THE NEAREST ONE HUNDREDTH OF A FOOT. ALL ANGULAR MEASUREMENTS HAVE BEEN MADE TO THE NEAREST SECOND AND COMPUTED TO HALF-SECONDS.



LOCATION MAP



SE 1/4 OF SECTION 28, TOWNSHIP 9 NORTH, RANGE 21 EAST, CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN

SCALE: 1" = 1000'

THE ENCLAVE AT MEQUON PRESERVE IV SUBDIVISION

D.O.T. HIGHWAY RESTRICTIONS

Setback Notes:

There shall be no improvements or structures placed between the highway and the setback line.

Access Notes:

As owner I hereby restrict all lots, in that no owner, possessor, user, nor licensee, nor other person shall have any right of direct vehicular ingress or egress with STH "181," as shown on the plat; it being expressly intended that this restriction shall constitute a restriction for the benefit of the public according to §236.293, Stats., and shall be enforceable by the Department of Transportation.

Noise Notes:

The lots of this land division may experience noise at the levels exceeding the levels in §Trans 405.04, Table I. These levels are based on federal standards. The Department of Transportation is not responsible for abating noise from existing state trunk highways or connecting highways, in the absence of any increase by the Department to the highway's through-lane capacity.

Vision Corners:

No structure or improvement of any kind is permitted within the vision corner. No vegetation within the vision corner may exceed 30 inches in height.

Curve Table									
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH	CENTRAL ANGLE	TANGENT IN	TANGENT OUT		
C1	8.34'	23.50'	S81°26'53"E	8.30'	02°01'58"	N88°23'08"E	S71°16'55"E		
C2	8.04'	91.50'	N88°22'43"W	8.04'	00°02'04"	S89°06'15"W	N85°51'41"W		
C3	15.21'	5.00'	N01°15'43"E	9.99'	174°14'50"	N85°51'41"W	N88°23'08"E		
C4	62.49'	40.00'	S43°37'40"W	56.33'	089°30'57"	S88°23'08"W	S01°07'49"E		
C5	75.24'	370.00'	N85°47'19"W	75.11'	01°13'04"	S88°23'08"W	N79°57'47"W		
C6	19.70'	370.00'	S89°54'39"W	19.70'	00°03'02"	N88°23'08"W	S88°23'08"W		
C7	55.54'	370.00'	N84°15'49"W	55.49'	008°36'02"	N79°57'47"W	N88°23'50"W		
C8	96.45'	780.00'	N83°30'20"W	96.39'	007°05'05"	N87°02'52"W	N79°57'47"W		
C9	332.48'	300.00'	N28°12'30"W	315.73'	063°29'59"	N03°32'30"E	N59°57'29"W		
C10	33.41'	300.00'	N00°21'05"E	33.39'	006°22'49"	N02°50'19"W	N03°32'30"E		
C11	91.26'	300.00'	N11°33'12"W	90.91'	017°25'46"	N20°16'05"W	N02°50'19"W		
C12	91.26'	300.00'	N28°58'58"W	90.91'	017°25'46"	N37°41'51"W	N20°16'05"W		
C13	91.26'	300.00'	N46°24'45"W	90.91'	017°25'46"	N55°07'38"W	N37°41'51"W		
C14	25.29'	300.00'	N57°32'33"W	25.29'	004°49'52"	N59°57'29"W	N55°07'38"W		
C15	53.62'	65.01'	N36°19'27"W	52.12'	047°15'25"	N12°41'45"W	N59°57'09"W		
C16	359.37'	75.00'	S30°02'31"W	101.79'	274°32'09"	N12°41'45"W	N72°46'26"E		
C17	73.31'	75.00'	N40°41'32"W	70.43'	056°00'14"	N68°41'38"W	N12°41'25"W		
C18	46.70'	75.00'	S47°37'35"W	45.95'	035°40'37"	S65°27'54"W	S29°47'16"W		
C19	70.71'	75.00'	S02°46'41"W	68.12'	054°01'11"	S24°13'55"E	S29°47'16"W		
C20	59.73'	75.00'	S47°02'51"E	58.17'	045°37'53"	S69°51'48"E	S24°13'55"E		
C21	48.91'	75.00'	S88°32'41"E	48.05'	037°21'46"	N72°46'26"E	S69°51'48"E		
C22	134.05'	28.50'	S30°02'31"W	40.48'	269°29'19"	N15°12'50"W	N75°17'51"E		
C23	53.62'	65.00'	S83°35'31"E	52.12'	047°16'04"	S59°57'29"E	N72°46'26"E		
C24	265.99'	240.00'	S28°12'30"E	252.58'	063°29'59"	S59°57'29"E	S03°32'30"W		
C25	79.68'	240.00'	S50°26'44"E	79.33'	019°01'31"	S40°55'59"E	S59°57'29"E		
C26	146.24'	240.00'	S23°28'36"E	143.99'	034°54'45"	S06°01'14"E	S40°55'59"E		
C27	40.05'	240.00'	S01°14'22"E	40.01'	009°33'44"	S03°32'30"W	S06°01'14"E		
C28	90.05'	1,430.00'	N88°51'07"W	90.03'	003°36'28"	S89°20'39"W	N87°02'52"W		
C29	86.27'	1,370.00'	N88°51'07"W	86.25'	003°36'28"	N87°02'52"W	S89°20'39"W		
C30	113.04'	720.00'	S82°33'01"E	112.92'	008°59'44"	S87°02'52"E	S78°03'09"E		
C31	95.60'	720.00'	N83°14'38"W	95.53'	007°36'28"	N79°26'24"W	N87°02'52"W		
C32	17.44'	720.00'	S78°44'42"E	17.44'	001°23'16"	S78°03'09"E	S79°26'24"E		
C33	106.31'	780.00'	S81°57'25"E	106.23'	007°48'33"	S85°51'41"E	S78°03'09"E		
C34	31.33'	20.00'	S46°00'47"E	28.23'	089°45'57"	S01°07'49"E	N89°06'15"E		

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JOB NO. 1936580

There are no objections to this plat with respect to Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2), Wis Stats. as provided by s. 236.12, Wis. Stats.

Certified _____, 20____



Department of Administration

ISSUED DATE: OCTOBER 15, 2020

D.O.T. HIGHWAY RESTRICTIONS

Setback Notes:

There shall be no improvements or structures placed between the highway and the setback line.

Access Notes:

As owner I hereby restrict all lots, in that no owner, possessor, user, nor licensee, nor other person shall have any right of direct vehicular ingress or egress with STH "181," as shown on the plat; it being expressly intended that this restriction shall constitute a restriction for the benefit of the public according to §236.293, Stats., and shall be enforceable by the Department of Transportation.

Noise Notes:

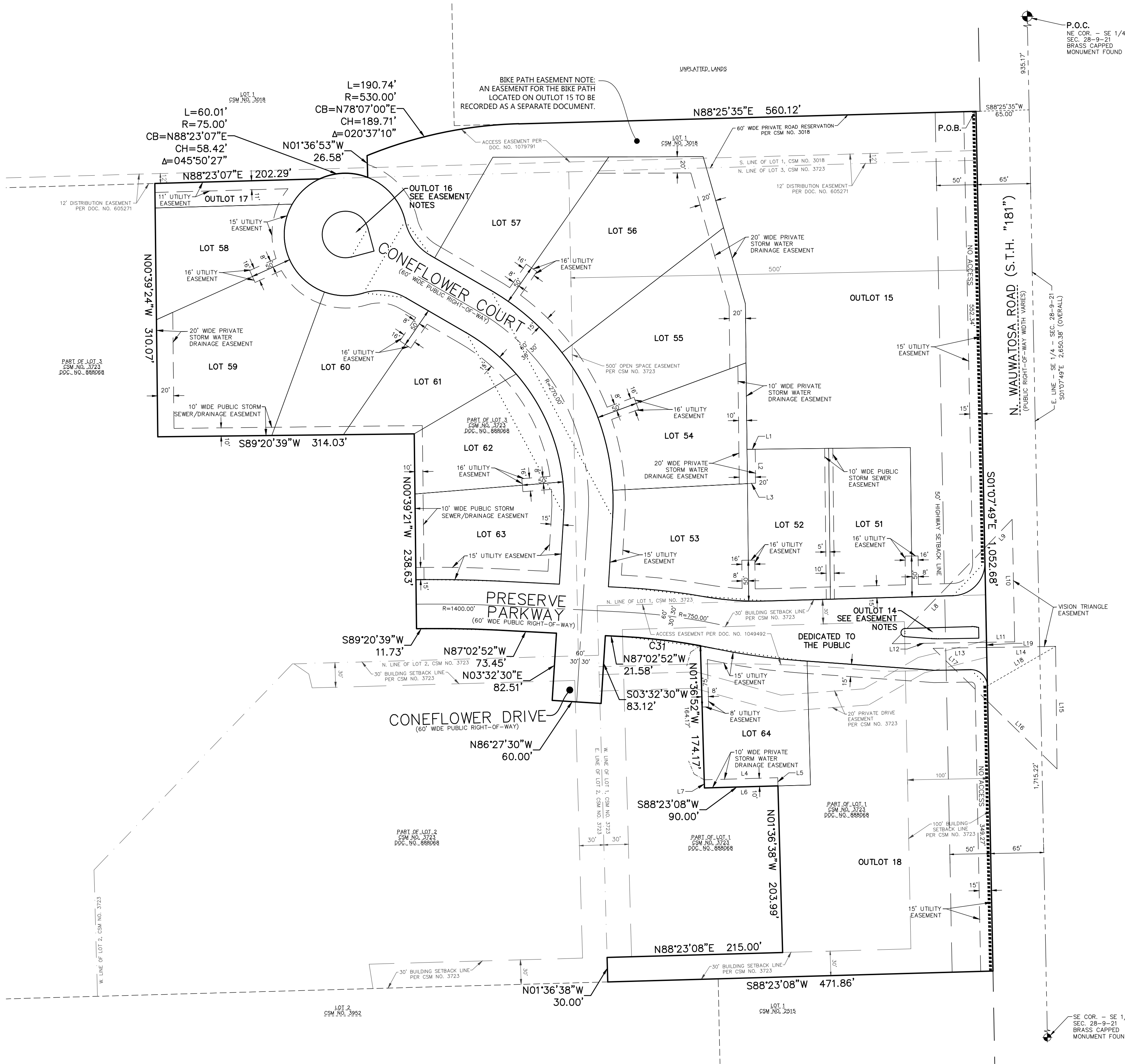
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Vision Corners:

No structure or improvement of any kind is permitted within the vision corner. No vegetation within the vision corner may exceed 30 inches in height.

THE ENCLAVE AT MEQUON PRESERVE IV

PART OF LOT 1, PART OF LOT 2 AND PART OF LOT 3 OF CERTIFIED SURVEY MAP NO. 3723, PART OF LOT 1 OF CERTIFIED SURVEY MAP NO. 3018, ALL BEING PART OF THE NORTHEAST 1/4 AND SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 28, TOWNSHIP 9 NORTH, RANGE 21 EAST CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN.



Line Table		
LINE	BEARING	LENGTH
L1	S89°20'39\"W	10.00'
L2	N00°39'21\"W	41.62'
L3	N87°09'41\"E	10.01'
L4	S88°23'08\"W	90.00'
L5	N01°36'52\"W	10.00'
L6	N88°23'08\"E	90.00'
L7	S01°36'52\"E	10.00'
L8	S43°58'14\"W	162.98'
L9	S43°58'14\"W	48.62'
L10	N01°10'20\"W	149.98'
L11	N89°06'15\"E	34.55'
L12	N89°06'15\"E	115.45'
L13	N89°06'15\"E	65.42'
L14	N89°05'37\"E	84.58'
L15	S00°37'08\"E	149.98'
L16	N45°45'45\"W	118.49'
L17	N45°45'45\"W	93.12'
L18	N60°01'57\"E	96.55'
L19	N01°07'49\"W	6.33'

Bike Path Easement Note:

An easement for the bike path located on Outlots 15 & 17 to be recorded as a separate document.

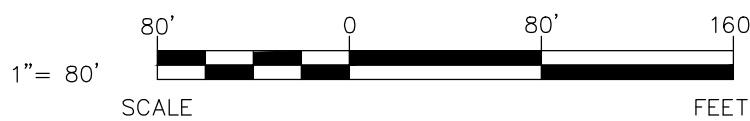
Outlot Easement Note

A Public Utility Easement for sanitary sewer, storm sewer and water main blankets the overall limits of Outlot 14 & Outlot 16.

Stormwater Management Maintenance Notes
See Sheet 3 for Stormwater Management Notes

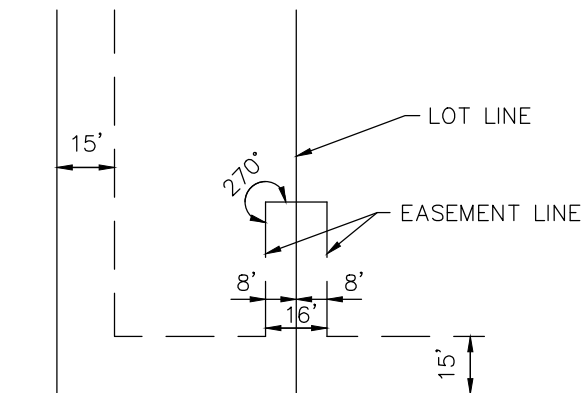
LEGEND:

- 2-3/8" X 18" IRON PIPE SET WEIGHING 3.65 LB/FT.
- 3/4" X 18" REBAR SET WEIGHING 1.50 LB/FT.
- 1" IRON PIPE FOUND
- SECTION CORNER MONUMENT FOUND
- NO ACCESS LINE



NORTH POINT REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD1927). THE EAST LINE OF THE SOUTHEAST 1/4 OF SECTION 28-9-21 HAS A BEARING OF SOUTH 01°-07'-49" EAST.

ALL LINEAR MEASUREMENTS HAVE BEEN MADE TO THE NEAREST ONE HUNDREDTH OF A FOOT. ALL ANGULAR MEASUREMENTS HAVE BEEN MADE TO THE NEAREST SECOND AND COMPUTED TO HALF-SECONDS.



TYPICAL UTILITY EASEMENT DETAIL
NO SCALE



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Fond Du Lac, WI 54935
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JOB NO. 1936580

THE ENCLAVE AT MEQUON PRESERVE IV

SHEET 3 OF 3 SHEETS

VOL.

PG.

PART OF LOT 1, PART OF LOT 2 AND PART OF LOT 3 OF CERTIFIED SURVEY MAP NO. 3723, PART OF LOT 1 OF CERTIFIED SURVEY MAP NO. 3018, ALL BEING PART OF THE NORTHEAST 1/4 AND SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 28, TOWNSHIP 9 NORTH, RANGE 21 EAST CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN.

SURVEYOR'S CERTIFICATE

I, Ryan J. Wilgreen, Professional Land Surveyor, hereby certify that under the direction of Mequon I, LLC, I have surveyed, divided and mapped a parcel of land described hereon, part of Lot 1, part of Lot 2 and part of Lot 3 of Certified Survey Map No. 3723, recorded in the Ozaukee County Register of Deeds office as Document No. 888068 and part of Lot 1 of Certified Survey Map No. 3018, recorded in Volume 21, Page 257 in the Ozaukee County Register of Deeds office as Document No. 587363, all being a part of the Northeast 1/4 and Southeast 1/4 of the Southeast 1/4 of Section 28, Township 9 North, Range 21 East, City of Mequon, Ozaukee County, Wisconsin, being more particularly described as follows:

Commencing at the Northeast corner of the Southeast 1/4 of said Section 28; thence South 01°-07'-49" East along the East line of said Southeast 1/4, a distance of 935.17 feet; thence South 88°-25'-35" West, a distance of 65.00 feet to the West right-of-way line of North Wauwatosa Road (State Trunk Highway "181"), said point being the point of beginning; thence South 01°-07'-49" East along said West line, a distance of 1,052.68 feet to the Southeast corner of Lot 1 of said Certified Survey Map No. 3723; thence South 88°-23'-08" West along the South line of Lot 1 of said Certified Survey Map No. 3723, a distance of 471.86 feet to the Southwest corner of said Lot 1; thence North 01°-36'-38" West along said West line, a distance of 30.00 feet; thence North 88°-23'-08" East, a distance of 215.00 feet; thence North 01°-36'-38" West, a distance of 203.99 feet; thence South 88°-23'-08" West, a distance of 90.00 feet; thence North 01°-36'-52" West, a distance of 174.17 feet; thence Northwesterly 95.60 feet on a curve to the left having a radius of 720.00 feet, the chord of said curve bears North 83°-14'-38" West, a chord distance of 95.53 feet; thence North 87°-02'-52" West, a distance 21.58 feet; thence South 03°-32'-30" West, a distance of 83.12 feet; thence North 86°-27'-30" West, a distance of 60.00 feet; thence North 03°-32'-30" East, a distance of 82.51 feet; thence North 87°-02'-52" West, a distance of 73.45 feet; thence Northwesterly 86.27 feet on a curve to the left having a radius of 1,370.00 feet, the chord of said curve bears North 88°-51'-07" West, a chord distance of 86.25 feet; thence South 89°-20'-39" West, a distance of 11.73 feet; thence North 00°-39'-21" West, a distance of 238.63 feet; thence South 89°-20'-39" West, a distance of 314.03 feet; thence North 00°-39'-24" West, a distance of 310.07 feet to the North line of Lot 3 of said Certified Survey Map No. 3723; thence North 88°-23'-07" East along said North line, a distance of 202.29 feet; thence Northeasterly 60.01 feet on a curve to the right having a radius of 75.00 feet, the chord of said curve bears North 88°-23'-07" East, a chord distance of 58.42 feet to the North line of Lot 3 of said Certified Survey Map No. 3723; thence North 01°-36'-53" West, a distance of 26.58 feet; thence Northeasterly 190.74 feet on a curve to the right having a radius of 530.00 feet, the chord of said curve bears North 78°-07'-00" East, a chord distance of 189.71 feet; thence North 88°-25'-35" East, a distance of 560.12 feet to the point of beginning and containing 15.465 acres (673,668 sq. ft.) of land more or less.

That such is a correct representation of all the exterior boundaries of the land surveyed and the subdivision thereof made.

That I have fully complied with the provisions of Chapter 236 of the Wisconsin Statutes and the Subdivision Ordinance of the City of Mequon in surveying, dividing, and mapping the same.

Ryan J. Wilgreen, P.L.S. No. S-2647
ryan.w@excengineer.com
Excel Engineering, Inc.
Fond du Lac, Wisconsin 54935
ISSUED DATE: OCTOBER 15, 2020

UTILITY EASEMENT PROVISIONS (PUBLIC)

An easement for electric, natural gas, and communications service is hereby granted by MEQUON I, LLC, Grantor, to

WISCONSIN ELECTRIC POWER COMPANY and WISCONSIN GAS, LLC, Wisconsin corporations doing business as We Energies, Grantee,
_____, Grantee, and
_____, Grantee

their respective successors and assigns, to construct, install, operate, repair, maintain and replace from time to time, facilities used in connection with overhead and underground transmission and distribution of electricity and electric energy, natural gas, telephone and cable TV facilities for such purposes as the same is now or may hereafter be used, all in, over, under, across, along and upon the property shown within those areas on the plat designated as "Utility Easement Areas" and the property designated on the plat for streets and alleys, whether public or private, together with the right to install service connections upon, across within and beneath the surface of each lot to serve improvements, thereon, or on adjacent lots; also the right to trim or cut down trees, brush and roots as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. The Grantees agree to restore or cause to have restored, the property, as nearly as is reasonably possible, to the condition existing prior to such entry by the Grantees or their agents. This restoration, however, does not apply to the initial installation of said underground and/or above ground electric facilities, natural gas facilities, or telephone and cable TV facilities or to any trees, brush or roots which may be removed at any time pursuant to the rights herein granted. Buildings shall not be placed over Grantees' facilities or in, upon or over the property within the lines marked "Utility Easement Areas" without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered by more than four inches without written consent of grantees.

The grant of easement shall be binding upon and inure to the benefit of the heirs, successors and assigns of all parties hereto.

Stormwater Management Maintenance Agreement

- Outlots 15 and 18 are to be used for Stormwater Management purposes.
- The lot owner(s) or their successors and/or assigns (herein after referred to as the responsible parties) shall be responsible for maintenance of the stormwater management measures.
- The responsible parties shall maintain the stormwater management measures in accordance with the approved stormwater management plan on file in the offices of the City as required by the City construction, site erosion control and stormwater management ordinance.
- In the event that the stormwater management facilities located on Outlots 15 and 18 are not being maintained per the approved stormwater management plan, the City is hereby granted an easement to access the property to complete stormwater management maintenance measures.

OWNER'S CERTIFICATE OF DEDICATION

Mequon I, LLC, a limited liability company duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, does hereby certify that said limited liability company caused the land described on this plat to be surveyed, divided, mapped and dedicated as represented on this plat.

Mequon I, LLC, does further certify that this plat is required by S236.10 or S236.12 Wisconsin Statutes to be submitted to the following agencies for approval or objection:

- Department of Administration
- Department of Transportation
- City of Mequon

In witness whereof, Mequon I, LLC, has caused these presents to be signed by its official officer(s) of said limited liability company at

_____, this _____ day of _____, 20____.

Mequon I, LLC
By: VH Mequon, LLC, Member and Project Manager*

By: _____
David Simon or Jeff Rosenberg or Karen Simon Dreyer

STATE OF _____)

COUNTY OF _____) S.S

Personally came before me this _____ day of _____, 20____, the above named officer(s) of the above named Mequon I, LLC to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

Notary Public, _____ County, _____
My Commission Expires: _____

CONSENT OF CORPORATE MORTGAGEE

Associated Bank N.A., a Corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, mortgagee of the above described land, does hereby consent to the surveying, dividing and mapping of the land described on this plat, and does hereby consent to the above Owner's Certificate.

In witness whereof, the said Associated Bank N.A. has caused these presents to be signed by Stephen L. Sosnowski, its Senior Vice President, at _____, Wisconsin this _____ day of _____, 20____.

Associated Bank N.A.

Stephen L. Sosnowski, Senior Vice President

STATE OF WISCONSIN)

COUNTY OF _____) S.S

Personally came before me this _____ day of _____, 20____, Stephen L. Sosnowski of the above named banking association to me known to be the person who executed the foregoing instrument, and to me know to be such Senior Vice President of said banking association, and acknowledged that they executed the foregoing instrument as such officer as the deed of said banking association, by its authority.

Notary Public, _____ County, WI
My Commission Expires: _____

COMMON COUNCIL APPROVAL CERTIFICATE:

Resolved, that the plat of THE ENCLAVE AT MEQUON PRESERVE IV SUBDIVISION in the City of Mequon, is hereby approved by the Common Council.

All conditions have been met as of this _____ day of _____, 20____.

John Wirth, Mayor

I hereby certify that the foregoing is true and correct copy of a resolution adopted by the Common Council of the City of Mequon on this _____ day of _____, 20____.

William Jones, City Administrator

COUNTY TREASURER'S CERTIFICATE

I, Joshua Morrison, being the duly elected, qualified, and acting Treasurer of the County of Ozaukee, do hereby certify that in accordance with the records in my office, there are no unpaid taxes or special assessments as of this _____ day of _____, 20____ affecting the land included in the plat of THE ENCLAVE AT MEQUON PRESERVE IV SUBDIVISION.

Joshua Morrison, Treasurer, Ozaukee County, Wisconsin

CITY TREASURER'S CERTIFICATE

I, Kaitlyn Krueger, being the duly appointed, qualified, and acting Director of Finance of the City of Mequon, do hereby certify that, in accordance with the records in my office, there are no unpaid taxes or unpaid special assessments as of this _____ day of _____, 20____ on any of the lands included in the plat of THE ENCLAVE AT MEQUON PRESERVE IV SUBDIVISION.

Kaitlyn Krueger, Director of Finance, City of Mequon

There are no objections to this plat with respect to Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2), Wis Stats. as provided by s. 236.12, Wis. Stats.

Certified _____, 20____

Department of Administration



OWNER / DEVELOPER:
MEQUON I, LLC
6801 S. TOWNE DR.
MADISON, WI 53713

SURVEYOR:
RYAN WILGREEN
EXCEL ENGINEERING, INC.
100 CAMELOT DR.
FOND DU LAC, WI 54935
920.926.9800



100 Camelot Drive
Fond Du Lac, WI 54935
Phone: (920) 926-9800
www.EXCELENGINEER.com
JOB NO. 1936580

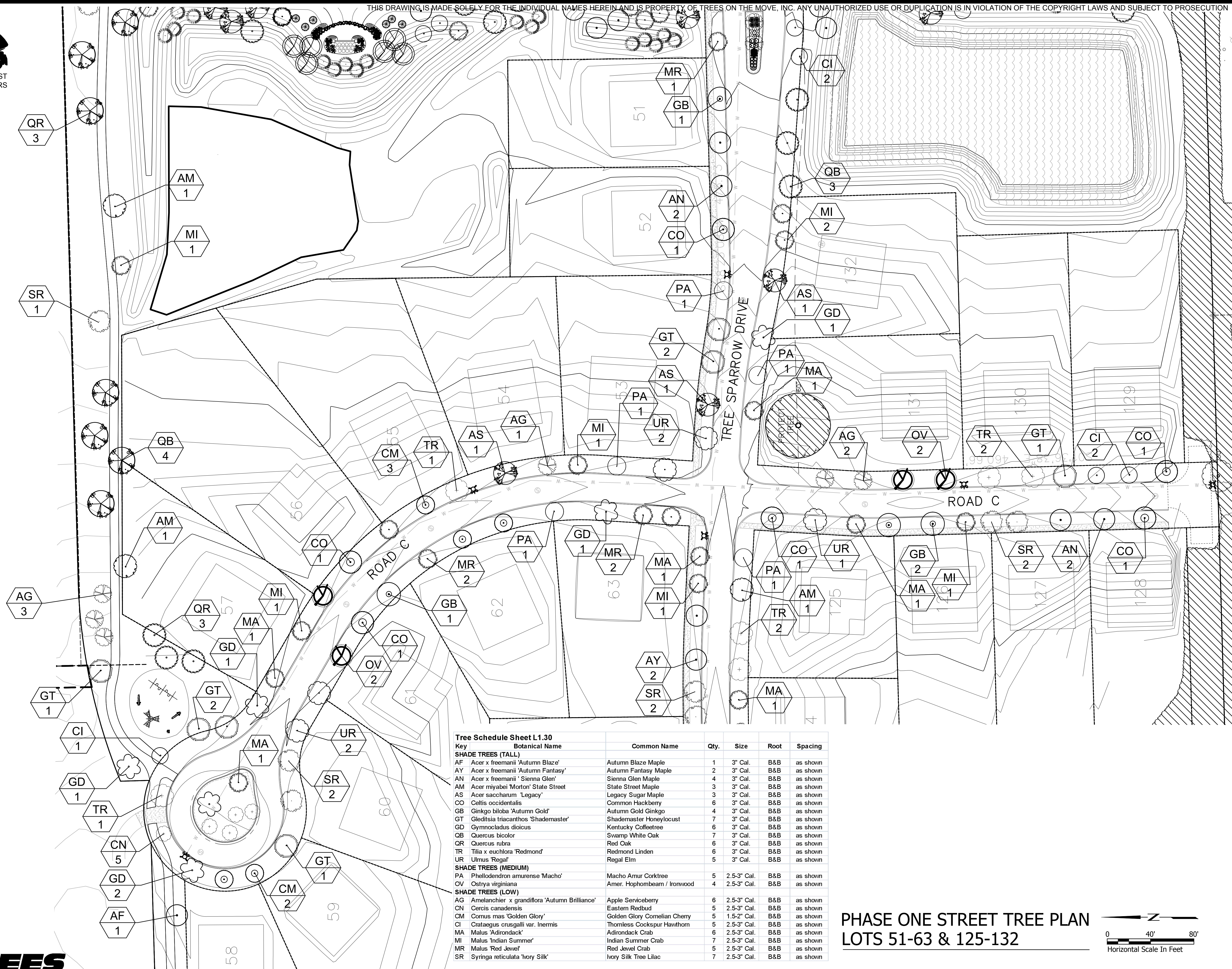


ENTRANCE LANDSCAPE PLAN

MONUMENT SIGN LANDSCAPE PLAN

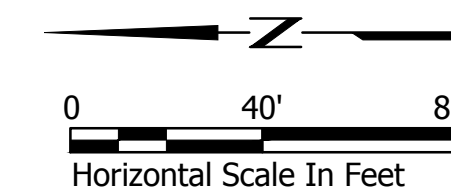


WISCONSIN'S LARGEST TREE TRANSPLANTERS



PHASE ONE STREET TREE PLAN

LOTS 51-63 & 125-132



PLANTINGS, STRUCTURES AND OTHER REPRESENTATIONS SHOWN ON THIS PLAN ARE FOR THE PURPOSE OF CONVEYING LANDSCAPE DESIGN FEATURES. REFER TO PREPARED CONTRACT DOCUMENTS FOR SPECIFIC ITEMS INCLUDED IN ANY PARTICULAR PHASE OF LANDSCAPE CONSTRUCTION.



Premier Landscapes

LANDSCAPE DEVELOPMENT FOR
THE ENCLAVE II AT MEQUON PRESERVE
N. WAUWATOSA ROAD
MEQUON, WISCONSIN

LANDSCAPE
ARCHITECTURE

DESIGN BY: GAR

DRAWN BY: GAR

DATE: 12/09/2019

1/15/2020

SCALE: 1"=40'-0"

SHEET: L1.30

TREES
ON THE MOVE

5611 S. Calhoun Road
New Berlin, WI 53151
Phone: (262) 679-5200
treesonthemove.com



WISCONSIN'S LARGEST
TREE TRANSPLANTERS



Tree Schedule Sheet L1.31						
Key	Botanical Name	Common Name	Qty.	Size	Root	Spacing
SHADE TREES (TALL)						
AF	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	1	3" Cal.	B&B	as shown
AY	Acer x freemanii 'Autumn Fantasy'	Autumn Fantasy Maple	2	3" Cal.	B&B	as shown
AN	Acer x freemanii 'Sienna Glen'	Sienna Glen Maple	2	3" Cal.	B&B	as shown
AS	Acer saccharum 'Legacy'	Legacy Sugar Maple	2	3" Cal.	B&B	as shown
CO	Celtis occidentalis	Common Hackberry	1	3" Cal.	B&B	as shown
GT	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	1	3" Cal.	B&B	as shown
QM	Quercus macrocarpa	Bur Oak	3	3" Cal.	B&B	as shown
TR	Tilia x euchlora 'Redmond'	Redmond Linden	4	3" Cal.	B&B	as shown
UR	Ulmus 'Regal'	Regal Elm	3	3" Cal.	B&B	as shown
SHADE TREES (MEDIUM)						
PA	Phellodendron amurense 'Macho'	Macho Amur Corktree	2	2.5-3" Cal.	B&B	as shown
SHADE TREES (LOW)						
AG	Amelanchier x grandiflora 'Autumn Brilliance'	Apple Serviceberry	1	2.5-3" Cal.	B&B	as shown
CI	Crataegus crusgalli var. Inermis	Thornless Cockspur Hawthorn	1	2.5-3" Cal.	B&B	as shown
MA	Malus 'Adirondack'	Adirondack Crab	1	2.5-3" Cal.	B&B	as shown
MI	Malus 'Indian Summer'	Indian Summer Crab	1	2.5-3" Cal.	B&B	as shown
SR	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	4	2.5-3" Cal.	B&B	as shown

PHASE ONE STREET TREE PLAN
LOTS 64-67 & 123-124



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Premier Landscapes

LANDSCAPE DEVELOPMENT FOR
THE ENCLAVE II AT MEQUON PRESERVE
N. WAUWATOSA ROAD
MEQUON, WISCONSIN

LANDSCAPE
ARCHITECTURE

DESIGN BY: GAR

DRAWN BY: GAR

DATE: 12/09/2019
1/15/2020
REVISED: 2/17/2020

SCALE: 1"=40'-0"

SHEET: L1.31

TREES
ON THE MOVE

5611 S. Calhoun Road
New Berlin, WI 53151
Phone: (262) 679-5200
treesonthemove.com

EMP IV Street Tree Breakdown

Tree Name	# of trees	% of Total
Autumn Blaze Maple	5	2.78%
Autumn Fantasy Maple	4	2.22%
Sienna Glen Maple	9	5.00%
Common Hackberry	7	3.89%
Autumn Gold Ginko	4	2.22%
Swamp White Oak	11	6.11%
Redmond Linden	10	5.56%
State Street Maple	3	1.67%
Legacy Sugar Maple	10	5.56%
Shademaster Honeylocust	8	4.44%
Kentucky Coffeetree	6	3.33%
Red Oak	9	5.00%
Regal Elm	8	4.44%
Heritage River Birch	7	3.89%
Macho Amur Corktree	7	3.89%
Ironwood	4	2.22%
Apple Serviceberry	7	3.89%
Eastern Redbud	5	2.78%
Thornless Cockspur Hawthorn	11	6.11%
Indian Summer Crab	11	6.11%
Golden Glory Cornelian Cherry	5	2.78%
Adirondak Crab	7	3.89%
Bur Oak	3	1.67%
Red Jewel Crab	8	4.44%
Ivory Silt Tree Lilac	11	6.11%
TOTAL	180	100.00%



11333 N. Cedarburg Rd
Mequon, WI 53092-1930
Phone: 262-236-2902
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development

TO: Planning Commission
FROM: JAC ZADER, ASSISTANT DIRECTOR COMMUNITY DEVELOPMENT
DATE: December 14, 2020
SUBJECT: Kapur and Associates for Mequon Thiensville School District. The applicant is seeking building and site amendment plan and fill permit approval to allow for 2,800 C.Y. of fill for a 2,800 sq. ft. addition for the property located at 11036 N. Range Line Court (Lake Shore Middle School).

Applicant:	Kapur and Associates
Status of Applicant:	Agent
Requested:	Building and Site Plan Amendment Electronic Message Sign Fill Permit in excess of 1,000 C.Y.
Existing Zoning:	IPS (Institutional)
Lot size:	23 Acres
Location:	11036 N. Range Line Road
Tax Key:	#15-030-06-008.00
District:	#6

Background:

The applicant is requesting building and site plan amendment approval for an addition to Lake Shore School at 11036 N Range Line Road. The addition will include space for a larger cafeteria and a storage room. The addition is approximately 3,500 square feet in area. As part of the site plan amendment, the applicant is looking to reconfigure the parent drop off/pick up location and relocate it to the west side of the building. The parcel is zoned IPS (Institutional).

Site Plan:

The proposed addition is located on the northeast end of the existing building approximately 600 feet from the closest property line. With the addition, the overall FAR for the site is 8.3 percent and the green space ratio is 71.2%. The proposed plan shows the reconfiguration of the drop off at the former Range Line School and at the entrance to Lakeshore Middle School. The design is intended to segregate the two uses and to make safety enhancements for parent pick up and drop offs. A Traffic Impact Analysis was completed by TADi as part of this project (see attached). See Engineering comments regarding the study below.

Building Plan:

The addition is shown to be clad with a brick, aluminum store front windows and precast panels that is consistent with the design of the existing building. The plan also shows a metal wall panel on the roof to screen the mechanical equipment. Staff has no issues with the proposed building design.

Landscaping Plan:

The landscaping plan shows new trees along the front of the building, adjacent to the new addition and in the new parking lot islands. Since the current parking lot currently has very few trees or parking islands, the additional landscaping will be an improvement to the existing conditions. Staff has no issues with the proposed landscaping.

Signage:

The applicant is requesting to replace the two existing freestanding signs (Range Line and Lakeshore) with electronic message boards. The sign code allows certain uses including schools and public service buildings to have an electronic message sign. The signs appear to meet the size and dimension requirements of the code but fail to meet the 10-foot setback to the property line and the 100-foot setback requirement from residential properties. The signs are both located in the Range Line Load ultimate right of way and approximately 82 feet from the residential parcel across the street (see map). The Range Line sign can be relocated to the east to comply with the 10-foot setback and 100-foot setback. The Lakeshore sign cannot be relocated to comply with the setback requirement without significant reconfiguration of the parking lot. Staff recommends the sign remain in the same location as the existing sign. The sign will be located at least 300 feet from the nearest residential structure. At this distance, there should be no negative impact to the adjacent residential properties. The applicant will also need to agree to a right of way waiver which will require relocation of the sign when Range Line Road is expanded.

The sign design is shown with a pre-cast concrete base. The code states that the base of the sign shall be consistent with the architectural style of the building. Staff recommends that the base of each sign include brick to match the existing buildings. The applicant is also proposing a similar sign at Steffen School which is also on the agenda. In order to have a consistent look among all signs, staff will make the same recommendation for that item.

Engineering Report:

Kristen Lundeen, Director of Public Works/City Engineer reviewed the plan and has the following comments:

The number of driveways for the project remain the same. Staff is generally supportive of the reconfiguration to provide additional safety to all users of the site. In review of the Traffic Impact Analysis (TIA), staff is supportive of the majority of the recommendations. In addition to the modifications shown and incorporated into the plan:

- As shown on the proposed plan, the south driveway should be for ingress only. As such, both northbound and southbound motorists may want to turn into the site simultaneously and/or utilize the bus lane. Given the short transition from two lanes to three lanes and the lanes designated for specific movements, staff recommends the use of both pavement striping and physical barriers. Physical barriers could include flexible delineators that simply fold down when hit, without causing vehicle damage. Physical barriers are a larger deterrent for motorists seeking a short cut that could lead to additional accidents.
- While the construction of the middle driveway with both left-turn and right-turn movements is appropriate given the reconfiguration, staff recommends that the school district continue to monitor the operation. The left-turn movement has the potential to encounter a conflict with the south driveway at peak pick-up/drop-off times. Therefore the school district may consider restricting motorists to right-turn only during those hours. That would remove the conflict between ingress and egress traffic on Range Line Road.

A Filling and Excavation permit is required. The total amount of filling and excavation is anticipated to be greater than 1,000 cubic yards and requires Planning Commission review. Haul

route approval and a haul route bond are included with the development agreement and are intended to protect City streets from the increase in the amount of hauled material.

The site proposes land disturbance, but it is difficult to discern if it is in excess of one acre. A City erosion control permit appears to be required. Evidence of the WDNR required WRAPP permit, if applicable, shall also be provided for the site.

The increase in impervious surface was not provided. If in excess of one half acre and/or site disturbance of greater than an acre therefore requires a stormwater management plan (SWMP). The proposed site will be required to provide additional stormwater management to meet the current City of Mequon, WDNR and MMSD criteria.

Planning Staff Recommendation:

Planning Staff recommends approval of the building and site plan amendment and minor request for fill in excess of 1,000 cubic yards subject to the following conditions:

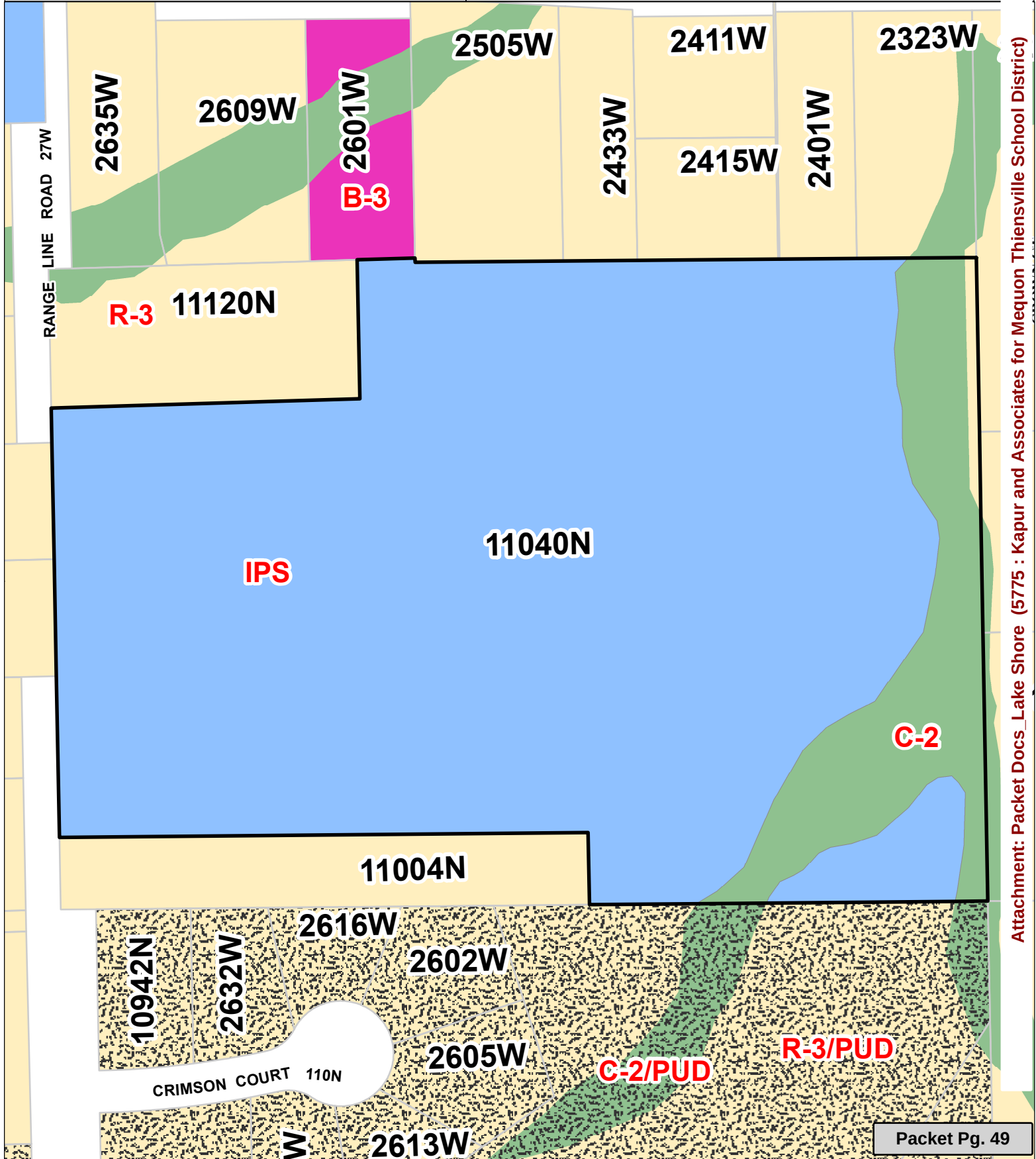
1. Staff review and approval of final site, elevation and landscaping plans.
2. Building lighting shall be reviewed and approved by staff.
3. The Range Line School sign shall comply with the 10-foot setback from the ultimate road right of way.
4. The Lakeshore Sign will require a right of way waiver that holds the city harmless if Range Line Road is expanded.
5. Staff review and approval of landscaping along the west property line.
6. Staff review and approval of final site, building and lighting prior to issuance of permits. The applicant shall submit such plan within 30 days of Planning Commission action, or the required plan(s) shall be submitted to Planning Commission for additional review and action and subject to all necessary fees.
7. A landscaping escrow equal to 125% of the improvement costs for installation of landscaping by a licensed contractor and an escrow equal to 25% of the landscape contract cost to insure that landscaping that dies within three (3) years of installation will be replaced by the applicant.
8. All ground-level and roof top mechanical equipment shall be well screened from public view.
9. Submittal of a right-of-way permit for the review of the drainage and road modifications within the public right-of-way.
10. Application for and approval of a City erosion control permit, subject to applicable fees and conditioned upon WDNR issuance of a WRAPP permit.
11. Application for and approval of a City Filling and Excavation Permit. The application shall include a proposed haul route, which will be used to determine whether a road bond is required and the associated amount. Construction traffic shall utilize Mequon Road to Range Line Road and not continue south on Range Line Road.
12. Approval of a storm water management plan for the site in conformance to City ordinances, WDNR and MMSD Chapter 13, including execution of a Storm Water Facilities Maintenance and Easement Agreement.
13. As a condition of approval and issuance of the permit, the city engineer will require in accordance with City ordinance 58-677(b) that the applicant deposit an escrow or letter of credit to guarantee a good faith execution of the approved control plan and any permit conditions. The escrow / letter of credit shall be in an amount equal to 125% of the estimated cost of construction and maintenance of the storm water management practices and the City will release the portion of the Financial Guarantee less any costs incurred by the city to complete installation of practices, upon submission of a certification in accordance with 58-678(h).

Attachments:

Packet Docs_Lake Shore (PDF)

Lake Shore Middle School

AC	Arrival Corridor	LD	Limited Use	3.c.a
A-1	Agricultural Preserve	OA	Agricultural Overlay	
A-2	General Agricultural	PUD	Planned Unit Development Overlay	
B-1	Neighborhood Business	P-1	Park & Recreation	
B-2	Community Business	R-1	Single-Family Residential (5 Ac. Min.)	
B-3	Office & Service Business	R-1B	Single-Family Residential (2.5 Ac. Min.)	
B-4	Business Park	R-2	Single-Family Residential (2.0 Ac. Min.)	
B-5	Light Industrial	R-2B	Single-Family Residential (1.5 Ac. Min.)	
B-6	Rural Industrial	R-3	Single-Family Residential (1.0 Ac. Min.)	
B-7	Rural Business	R-4	Single-Family Residential (3/4 Ac. Min.)	
C-1	Shoreland/Wetland Conservancy	R-5	Single-Family Residential (1/2 Ac. Min.)	
C-2	General Conservancy	R-6	Single-Family Residential (4 du/Ac)	
CGO	Central Growth Overlay	RM	Multi-Family Residential	
FFO	Flood Fringe Overlay	TC	Town Center	
FW	Floodway	TDR	Transfer of Development Rights	
IPS	Institutional & Public Service			





December 2nd, 2020

Jac Zader

Assistant Director of Community Development
11333 North Cedarburg Road
Mequon, WI 53092

Re: Lake Shore Middle School Site/Architectural Plan Commission Review

Dear Mr. Zader,

I am writing this letter to serve as a summary for the proposed project named MTSD - Lake Shore Middle School.

An approximately 3500 square foot single story addition is being provided on the first floor of the northeast corner of the building to increase the size and capacity of the existing cafeteria. The interior improvements include toilet room, music department, and cafeteria renovations and updates. The toilet rooms are being altered and updated to be code compliant with the currently adopted state building codes. They will also be updated with new interior surface finishes and new plumbing fixtures. The existing music department is being extensively remodeled to provide a new configuration of the practice rooms and choir room to better accommodate staff and student operations. The existing cafeteria is scheduled to receive updated finishes to complement the finishes of the new cafeteria addition.

The exterior improvements include updates to the pickup and drop off area to the west of Lake Shore Middle School. Two pickup and drop lanes are proposed to improve the efficiency during peak times to reduce backups onto North Range Line Road. The pickup and drop off area west of Range Line School is also be reconfigured to make an onsite loop and eliminate any potential conflicts with the Lake Shore Middle School operation. The parking lot west of Lake Shore Middle School is intended to remain with the addition of landscape islands while being restriped per the submitted plans. The bus loop on the east side of the school is being reconfigured such that it does not conflict with the new building addition. The overall parking stall count onsite is 114 where code requires 101 per staff and classrooms. We are exceeding code by 13 parking stalls. New monument signs are being proposed for both Lake Shore and Range Line with the locations shown on the site plan. Figures of the signs are included with this submittal. Please note, all improvements shown on the site plan were directed by the recommendations of the Traffic Impact Analysis provided by TADI which is included with this submittal.

Storm water management is being proposed in the form of two bio-retention basins shown on the plans. Storm water management is being designed to meet City of Mequon and MMSD code. A storm water management plan will be submitted to City for final review upon completion of the plans. A proposed water lateral for both domestic and fire protection is shown to connect to the existing water main located in North Range Line Road.



We are respectfully requesting a waiver on the parking lot shading requirement of 30%. Based on the current landscape plan and using the new paving as required to be shaded, our overall parking lot shading totals 11.43%. We feel as if we are providing dense landscaping with various species of trees to try and shade the new paving as best as possible. No other waivers are being requested.

Please let me know if there are any questions or if additional information is needed.

Thanks,

Ryan Birschbach
Kapur



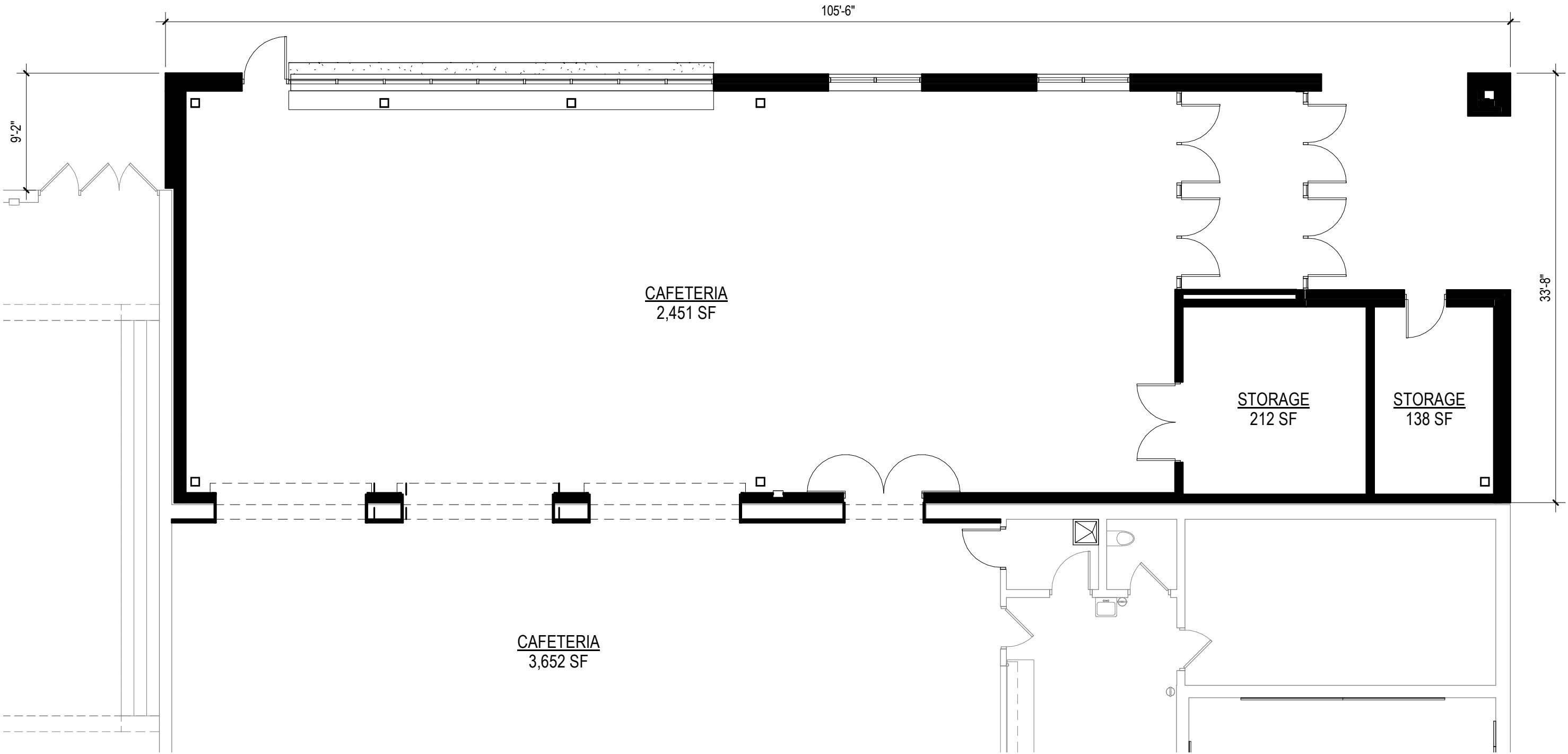
NOTE: SEE EXTERIOR ELEVATIONS FOR EXTERIOR WALL MOUNTED LIGHT FIXTURE LOCATIONS

PERSPECTIVE RENDER



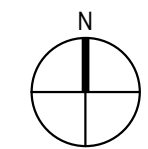
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PERSPECTIVE RENDER



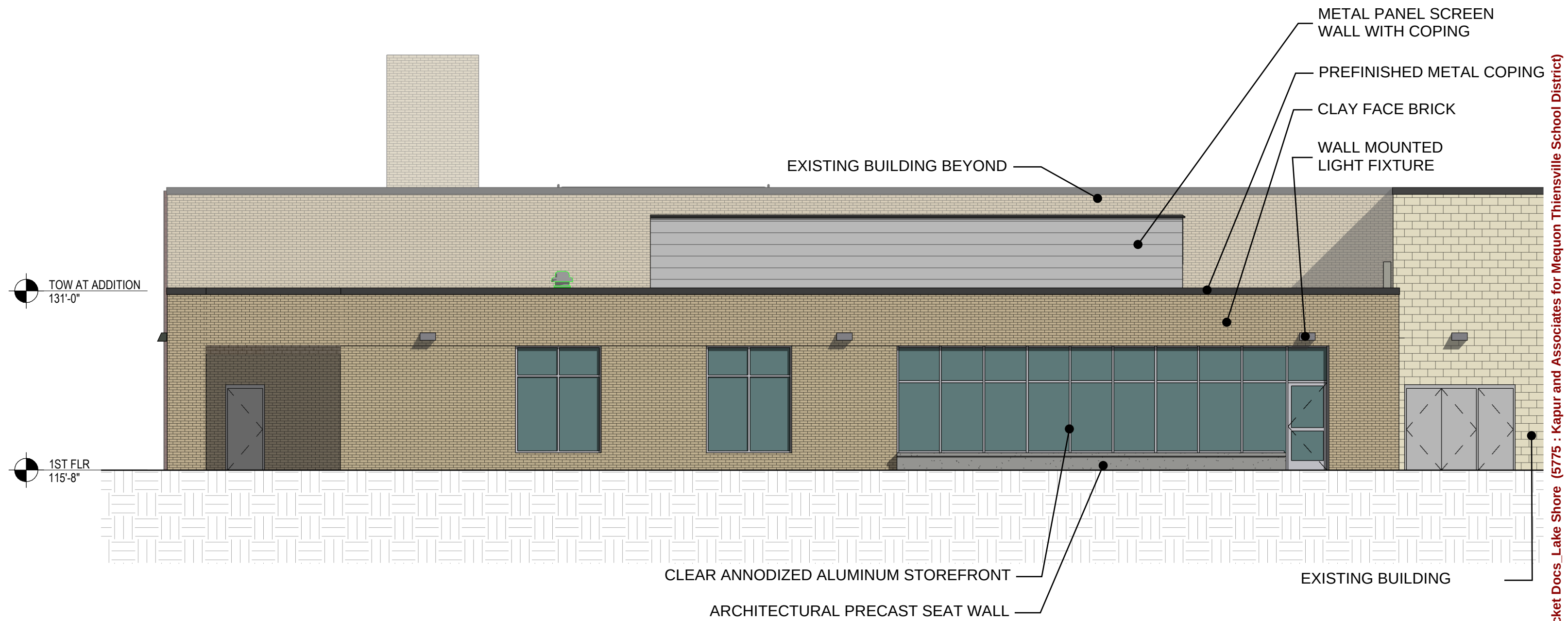
1ST FLR PLAN

1/8" = 1'-0"



FLOOR PLAN





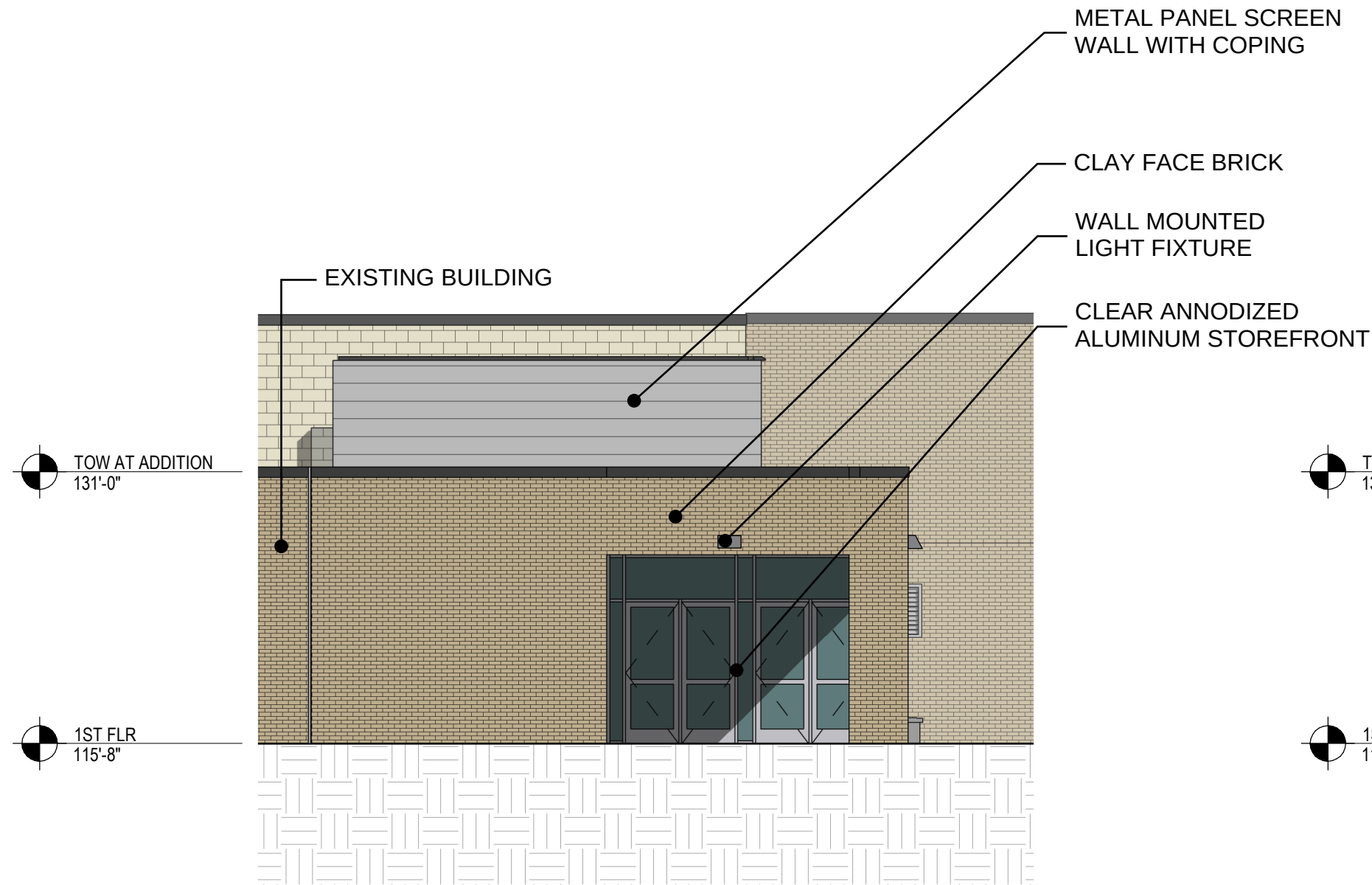
Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)

NORTH BLDG ELEVATION

1/8" = 1'-0"

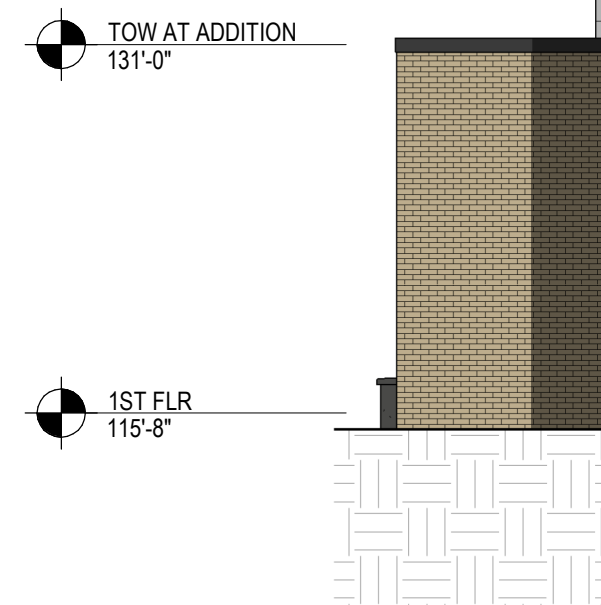
EXTERIOR ELEVATIONS





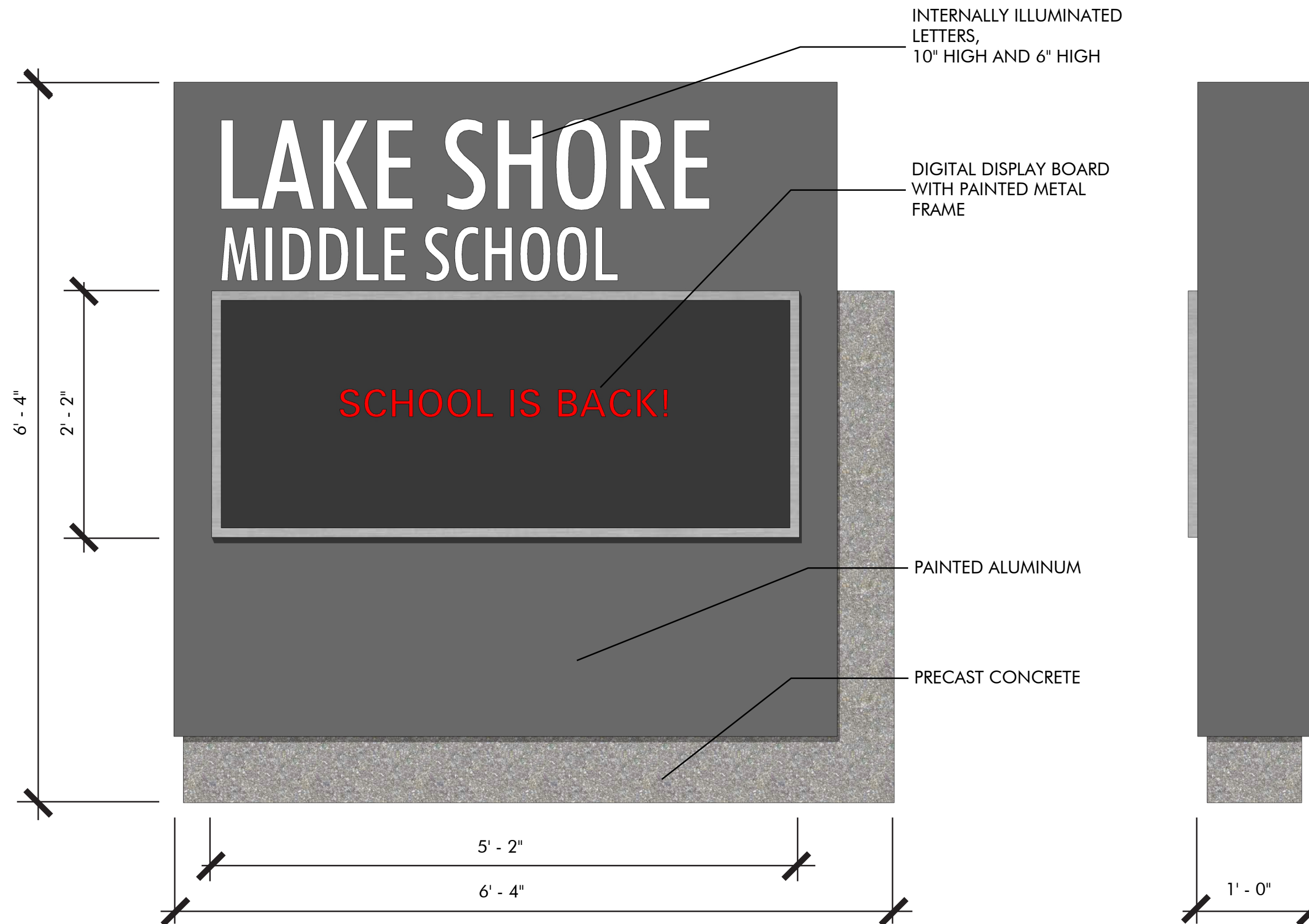
EAST BLDG ELEVATION

1/8" = 1'-0"



WEST BLDG ELEVATION

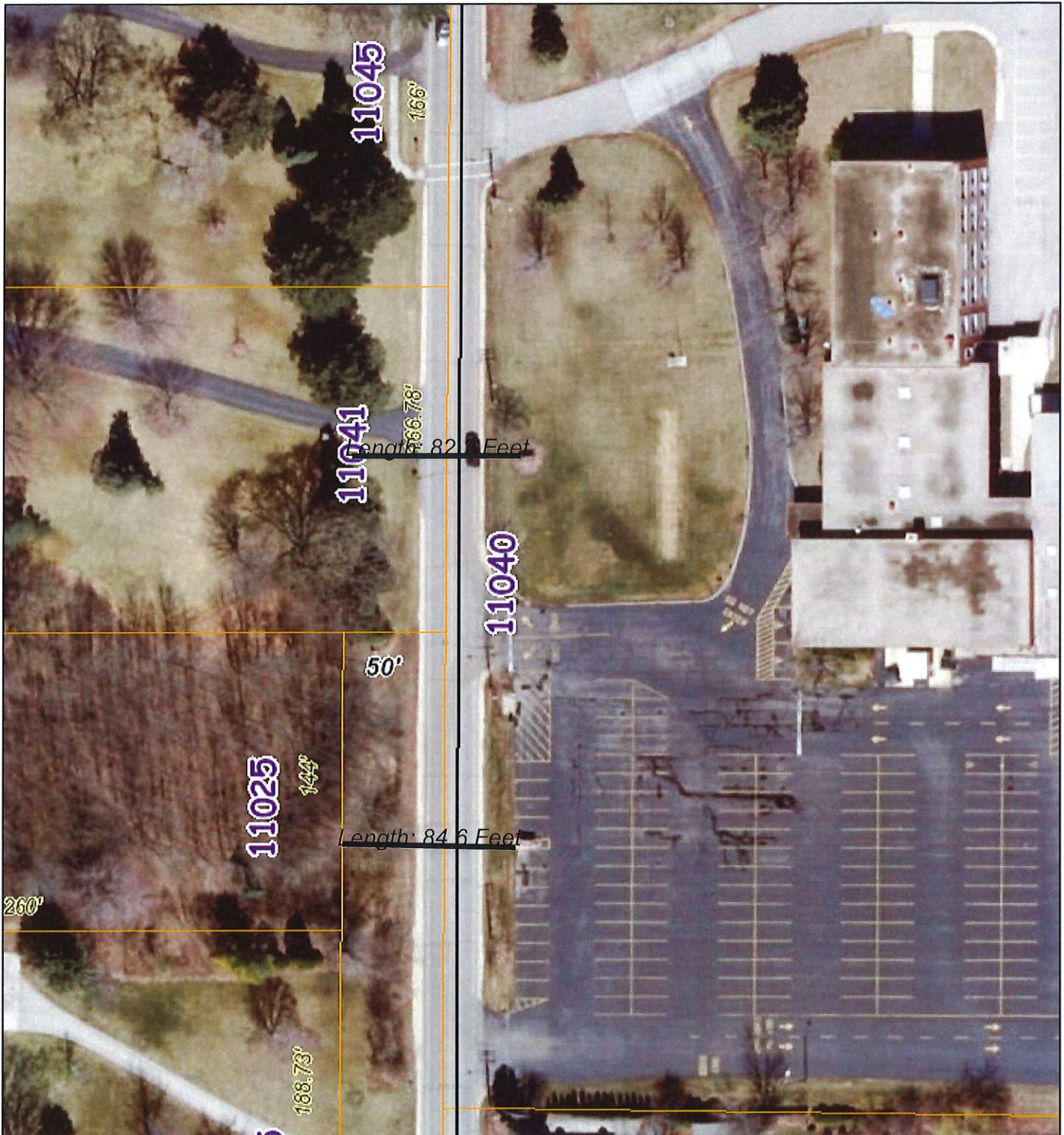
1/8" = 1'-0"



MONUMENT SIGN WITH DIGITAL DISPLAY

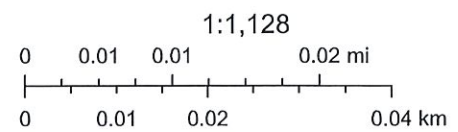
Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)

City of Mequon



12/3/2020, 3:58:52 PM

- | | | |
|-------------------|-------------------------|---------------------|
| Parcels | Tax Parcel | Highways |
| Road Reservation | Historical Parcel Lines | US Highway |
| Road Right-of-Way | Local Roads | State Highway |
| Condominium | Private Road | County Road |
| Gap | Town/Public Road | Ramp |
| Overlap | | Railroad Centerline |



Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)

LEGAL DESCRIPTION

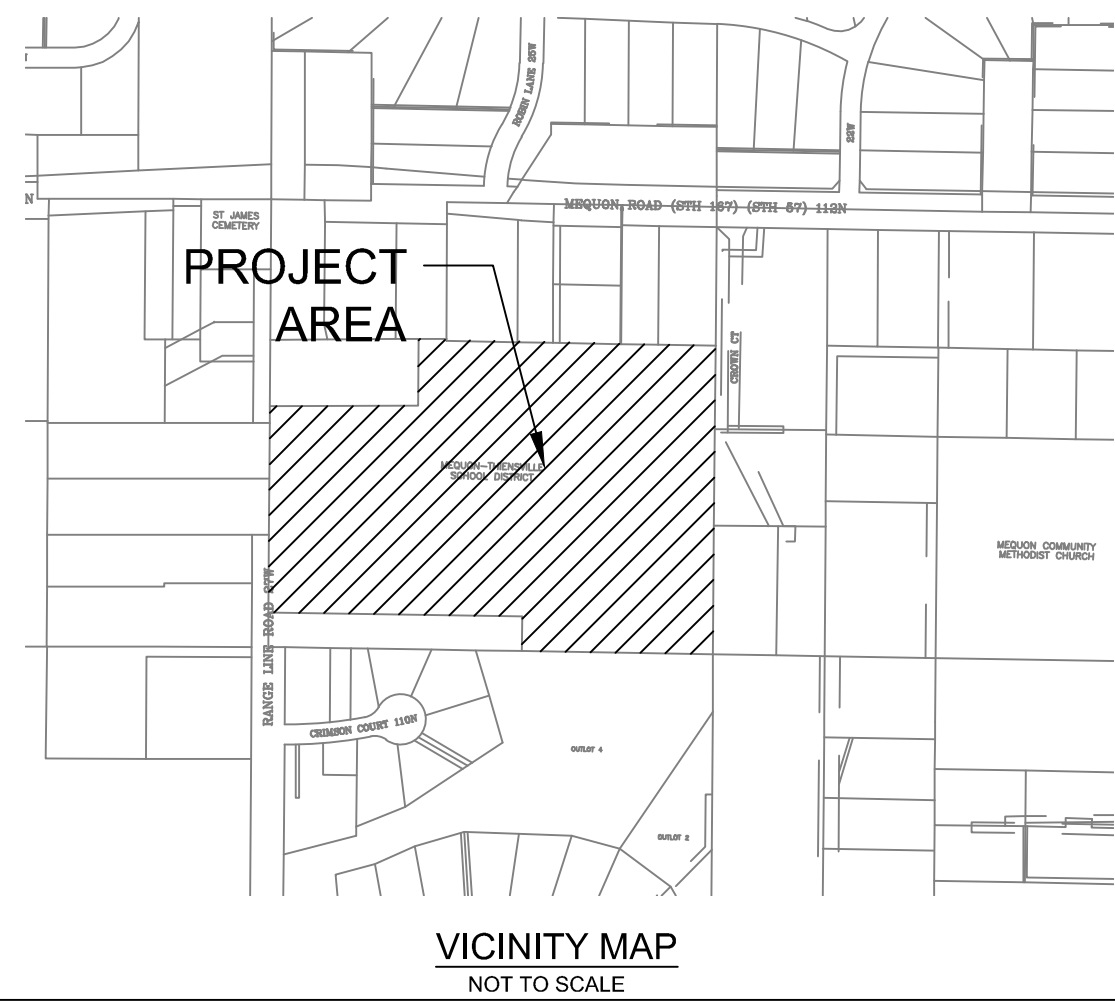
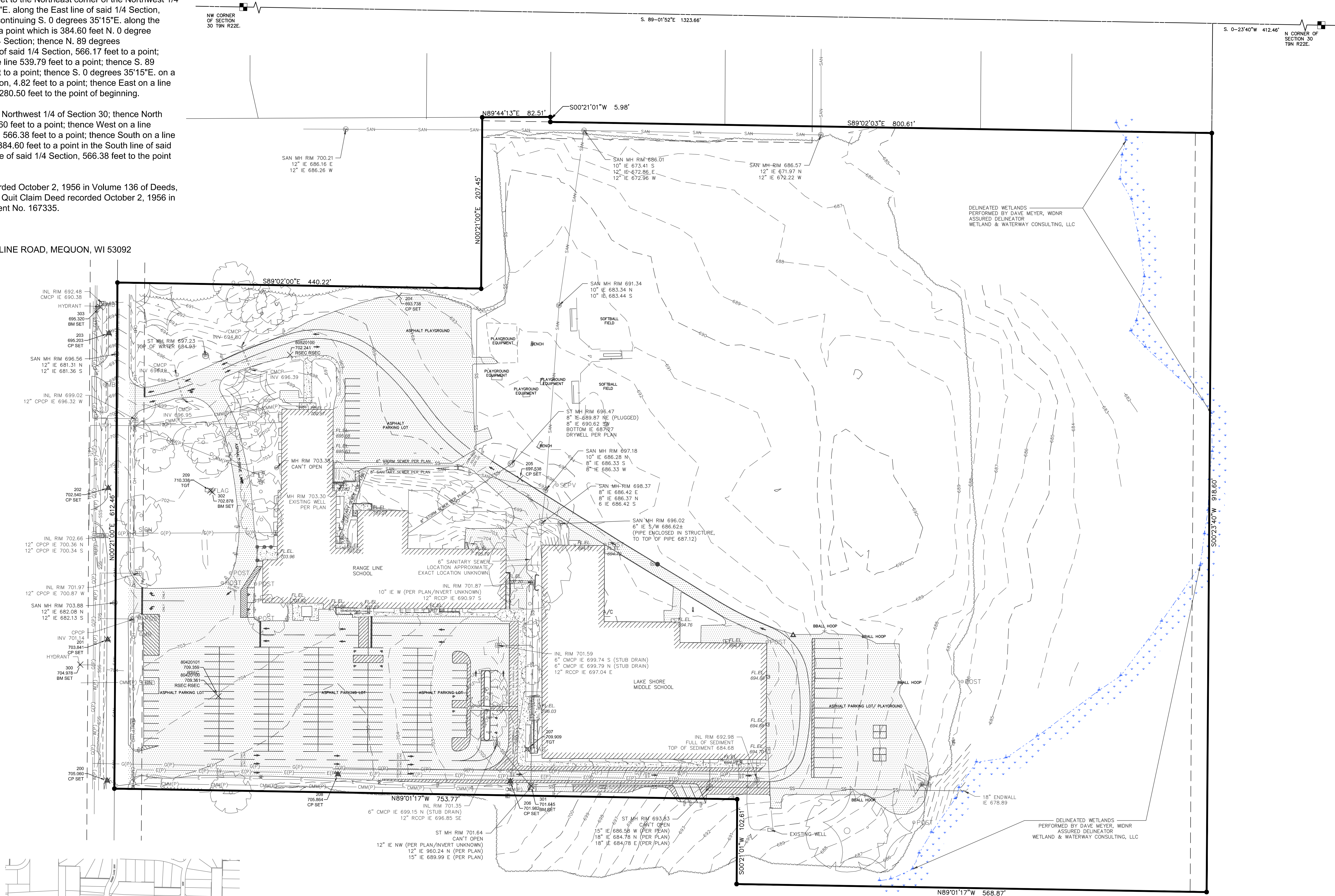
That part of the Northwest 1/4 of the Northwest 1/4 of Section 30, Township 9 North, Range 22 East, in the City of Mequon, Ozaukee County, Wisconsin, described as follows: A certain piece of parcel of land bounded by a line commencing at a point which is 9.33 chains South from the Northwest corner of the Northwest 1/4 of Section 30, Township 9 North, Range 22 East, and running from there East 6.67 chains; thence North 3 chains; thence East 4.75 chains; thence South 12.28 chains; thence West 11.42 chains to the range line; thence North along said range line 9.28 chains to the point of commencement. AND Commencing at the Northwest corner of the Northwest 1/4 Section 30; thence East along the North line of said 1/4 Section 1323.66 feet to the Northeast corner of the Northwest 1/4 said 1/4 Section; thence S. 0 degrees 35'15"E. along the East line of said 1/4 Section, 412.50 feet to a point of beginning; thence continuing S. 0 degrees 35'15"E. along the East line of said 1/4 Section, 534.18 feet to a point which is 384.60 feet N. 0 degree 35'15"W. of the Southeast corner of said 1/4 Section; thence N. 89 degrees 59'10"W. on a line parallel to the South line of said 1/4 Section, 566.17 feet to a point; thence N. 0 degrees 32'32"W. along a fence line 539.79 feet to a point; thence S. 89 degrees 49'E. along a fence line 285.25 feet to a point; thence S. 0 degrees 35'15"E. on a line parallel to the East line of said 1/4 Section, 4.82 feet to a point; thence East on a line parallel to the North line of said 1/4 Section 280.50 feet to the point of beginning. AND ALSO Commencing at the Southeast corner of the Northwest 1/4 of Section 30; thence North along the East line of said 1/4 Section, 384.60 feet to a point; thence West on a line parallel to the South line of said 1/4 Section, 566.38 feet to a point; thence South on a line parallel to the East line of said 1/4 Section, 384.60 feet to a point in the South line of said 1/4 Section; thence East along the South line of said 1/4 Section, 566.38 feet to the point of commencement. AND ALSO All lands conveyed in Quit Claim Deed recorded October 2, 1956 in Volume 136 of Deeds, page 525 as Document No. 167333; and by Quit Claim Deed recorded October 2, 1956 in Volume 136 of Deeds, page 527 as Document No. 167335.

FOR INFORMATIONAL PURPOSES ONLY

PROPERTY ADDRESS: 11040 N. RANGE LINE ROAD, MEQUON, WI 53092
TAX KEY NO.: 15-030-06-008.00

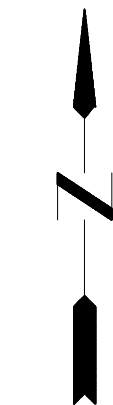
LEGEND

- ⬢ = BENCH MARK
- ▲ = CONTROL POINT
- = 1 1/4" IRON PIPE O.D. FOUND OR AS NOTED
- = 1-1/4" O.D. x 18' LONG IRON PIPE SET, WEIGHING 1.68 LBS./FT.
- = SECTION CORNER MON.
- (R.A.) = RECORDED AS
- O.D. = OUTSIDE DIAMETER
- ⊗ = WATER VALVE
- ⊕ = FIRE HYDRANT
- 970.90 = SPOT ELEVATION
- ⊙ = BUSH, SHRUB
- ⊙ = POLE/POST/BOLLARD
- = BOULDER
- = PULLBOX
- (M) = MANHOLE TYPE NOTED
- (SA) = SANITARY SEWER MANHOLE
- (ST) = STORM SEWER MANHOLE
- (E) = ELECTRIC MANHOLE
- (T) = TELEPHONE MANHOLE
- (W) = WATER MANHOLE
- ⊕ = UTILITY WETER
- ⊙ = GUY WIRE POLE
- ⊕ = LIGHT POLE
- ⊕ = PEDESTAL
- ⊕ = POWER POLE
- ⊕ = INLET
- ⊕ = CURB INLET
- ⊕ = GAS VALVE
- ⊕ = LIGHT POLE WITH MAST
- ⊕ = TREE (CONIFEROUS) DRIP LINE SCALABLE
- ⊕ = TREE (DECIDUOUS) DRIP LINE SCALABLE
- ⊕ = CLEANOUT
- ⊕ = FLAG POLE
- ⊕ = UTILITY MARKER POST
- ⊕ = SIGN ON POST
- ⊕ = UTILITY CONTROL BOX
- ⊕ = UNKNOWN UTILITY VALVE
- FL. EL. = FIRST FLOOR ELEVATION
- = BUILDING OUTLINE
- 3 = MINOR CONTOUR
- 5 = MAJOR CONTOUR
- = FENCE
- = BEAM GUARD
- = CHAINLINK FENCE
- = WOODED AREA/SHRUB EDGE
- W = WATER MAIN
- ST = STORM SEWER
- SAN = SANITARY SEWER
- G = NATURAL GAS MAIN
- T = UNDERGROUND TELEPHONE
- E = UNDERGROUND ELECTRIC
- OH = OVERHEAD UTILITY LINES
- FO = UNDERGROUND FIBER OPTIC
- TV = UNDERGROUND CABLE TV
- C = COMMUNICATION CONDUIT
- ▨ = ASPHALT SURFACE
- ▨ = CONCRETE SURFACE
- ▨ = CRUSHED AGGREGATE



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20201714533, 20201714538, 20201715102, 20201715108

ALTHOUGH DIGGERS' HOTLINE WAS NOTIFIED THIS SURVEY DOES NOT GUARANTEE THAT ALL UTILITIES HAVE BEEN LOCATED ON SITE. SOME OF THE UTILITIES MAY HAVE BEEN DRAWN IN PER PLAN BASED ON MAPS RECEIVED FROM MEMBERS NOTIFIED LACKING EXCAVATION THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.



BEARINGS ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE. (NAD 27 VERTICAL DATUM IS BASED ON NGVD 29)

SURVEYOR'S CERTIFICATE:

I, Brian Sandberg do hereby certify that that under My direction and control the the above described property was surveyed on 3/24/2020 in accordance with AE-7 of the Wisconsin Administrative Code and is correct to the best of my knowledge and belief.

Brian Sandberg
Brian E. Sandberg
AUGUST 24, 2020
S-2500

PROJECT:

MEQUON -
THIENSVILLE
SCHOOL DISTRICT

LOCATION:

11040 N. RANGE
LINE ROAD,
MEQUON, WI 53092

CLIENT:

MEQUON -
THIENSVILLE
SCHOOL DISTRICT

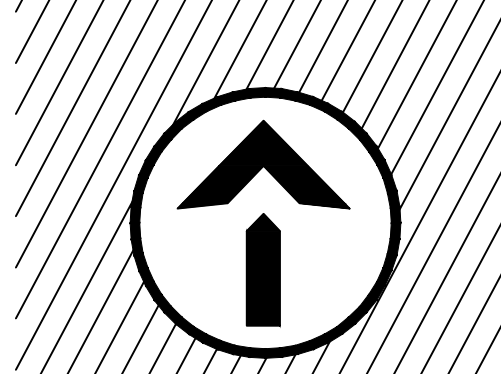
RELEASE:

PRELIMINARY

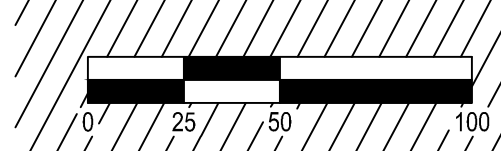
REVISIONS:

#	DATE	DESCRIPTION

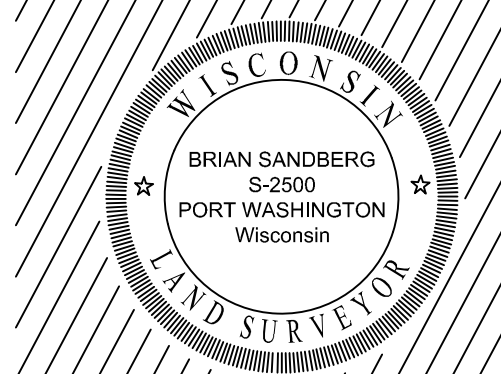
NORTH ARROW:



SCALE:



SEAL:



all in

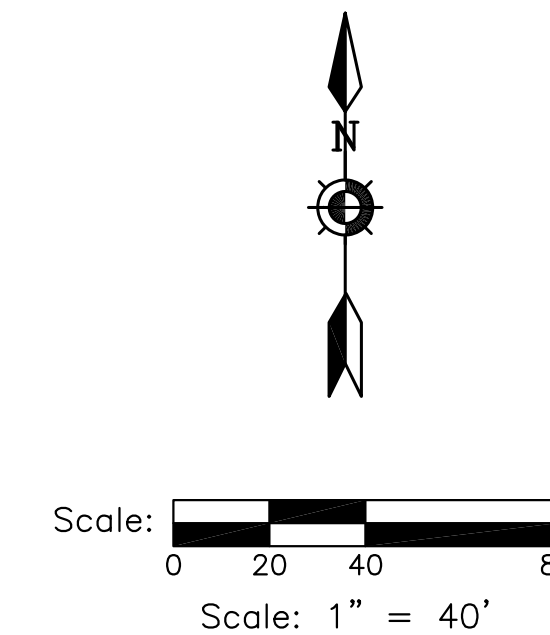
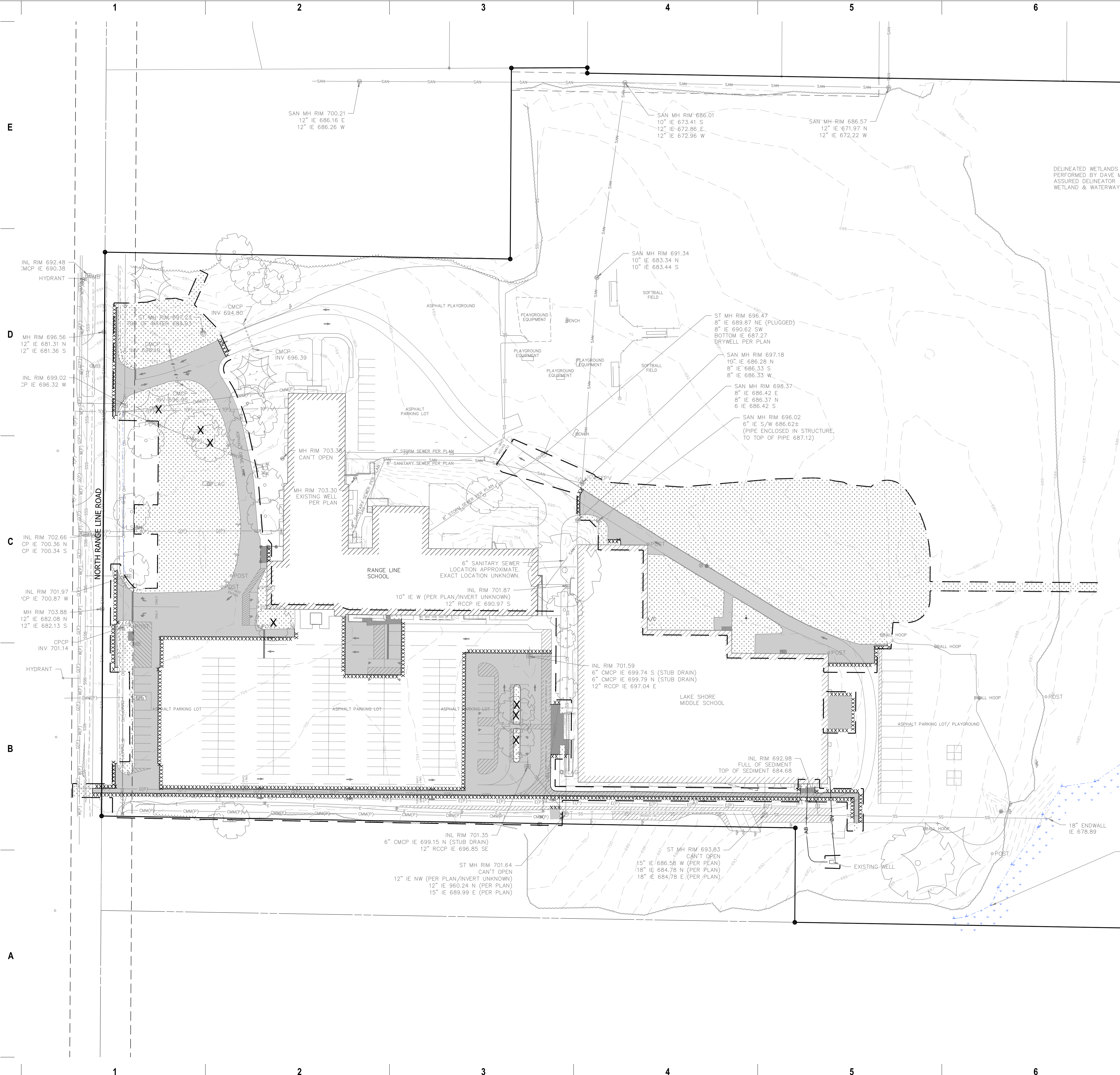
SHEET:

PLAT OF
SURVEY

PROJECT MANAGER: BES
PROJECT NUMBER: 200521.01
DATE: 9/15/2020

SHEET NUMBER:

1 of 1



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madison 309 West Johnson Street, Suite 202
Madison, Wisconsin 53703
608.442.5550
denver 1899 Wynkoop Street, Suite 300
Denver, Colorado 80202
303.595.4500

PROJECT INFORMATION

**MTSD - LAKE SHORE
MIDDLE SCHOOL**

**11036 N Range Line
Rd #4930, Mequon, WI
53092**

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



**7711 N. Port Washington Road
Milwaukee, Wisconsin 53217**

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SHEET INFORMATION

PROGRESS DOCUMENTS NOT FOR CONSTRUCTION

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PROJECT MANAGER CR
PROJECT NUMBER 318480-01

**OVERALL SITE
DEMOLITION PLAN**

C101

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madison 309 West Johnson Street, Suite 202
Madison, Wisconsin 53703
608.442.2550

denver 1899 Wynkoop Street, Suite 300
Denver, Colorado 80202
303.595.4500

PROJECT INFORMATION

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MIDDLE SCHOOL**

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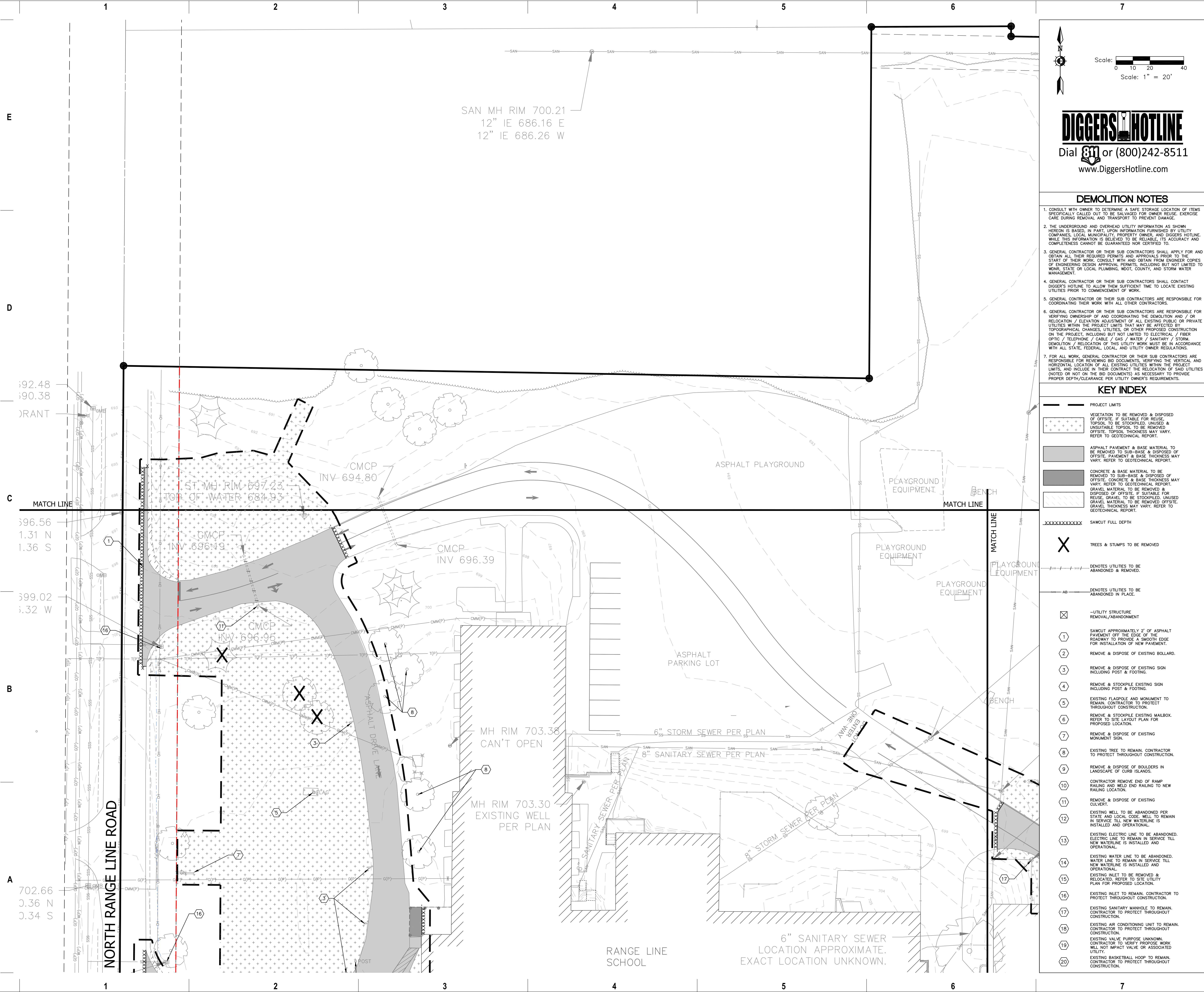
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PROJECT MANAGER CR

PROJECT NUMBER 318480-01

**SITE DEMOLITION
PLAN**

C101A



Scale: 0 10 20 40
Scale: 1" = 20'

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DEMOLITION NOTES

1. CONSULT WITH OWNER TO DETERMINE A SAFE STORAGE LOCATION OF ITEMS SPECIFICALLY CALLED OUT TO BE SALVAGED FOR OWNER REUSE. EXERCISE CARE DURING REMOVAL AND TRANSPORT TO PREVENT DAMAGE.

2. THE UNDERGROUND AND OVERHEAD UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES, LOCAL MUNICIPALITY PROPERTY OWNER, AND DIGGERS HOTLINE. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

3. GENERAL CONTRACTOR OR THEIR SUB CONTRACTORS SHALL APPLY FOR AND OBTAIN ALL THEIR REQUIRED PERMITS AND APPROVALS PRIOR TO THE START OF THEIR WORK. CONSULT WITH AND OBTAIN FROM ENGINEER COPIES OF ENGINEERING DESIGN APPROVAL PERMITS, INCLUDING BUT NOT LIMITED TO WORK, STATE OR LOCAL PLUMBING, WDOT, COUNTY, AND STORM WATER MANAGEMENT.

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5. GENERAL CONTRACTOR OR THEIR SUB CONTRACTORS ARE RESPONSIBLE FOR COORDINATING THEIR WORK WITH ALL OTHER CONTRACTORS.

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XXXXXXXXXXXX SAWCUT FULL DEPTH

X TREES & STUMPS TO BE REMOVED

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AB DENOTES UTILITIES TO BE ABANDONED IN PLACE.

UTILITY STRUCTURE REMOVAL/ABANDONMENT

SAWCUT APPROXIMATELY 2' OF ASPHALT PAVEMENT OFF THE EDGE OF THE ROADWAY TO PROVIDE A SMOOTH EDGE FOR INSTALLATION OF NEW PAVEMENT.

REMOVE & DISPOSE OF EXISTING BOLLARD.

REMOVE & DISPOSE OF EXISTING SIGN INCLUDING POST & FOOTING.

REMOVE & STOCKPILE EXISTING SIGN INCLUDING POST & FOOTING.

EXISTING FLAGPOLE AND MONUMENT TO REMAIN. CONTRACTOR TO PROTECT THROUGHOUT CONSTRUCTION.

REMOVE & STOCKPILE EXISTING MAILBOX. REFER TO SITE LAYOUT PLAN FOR PROPOSED LOCATION.

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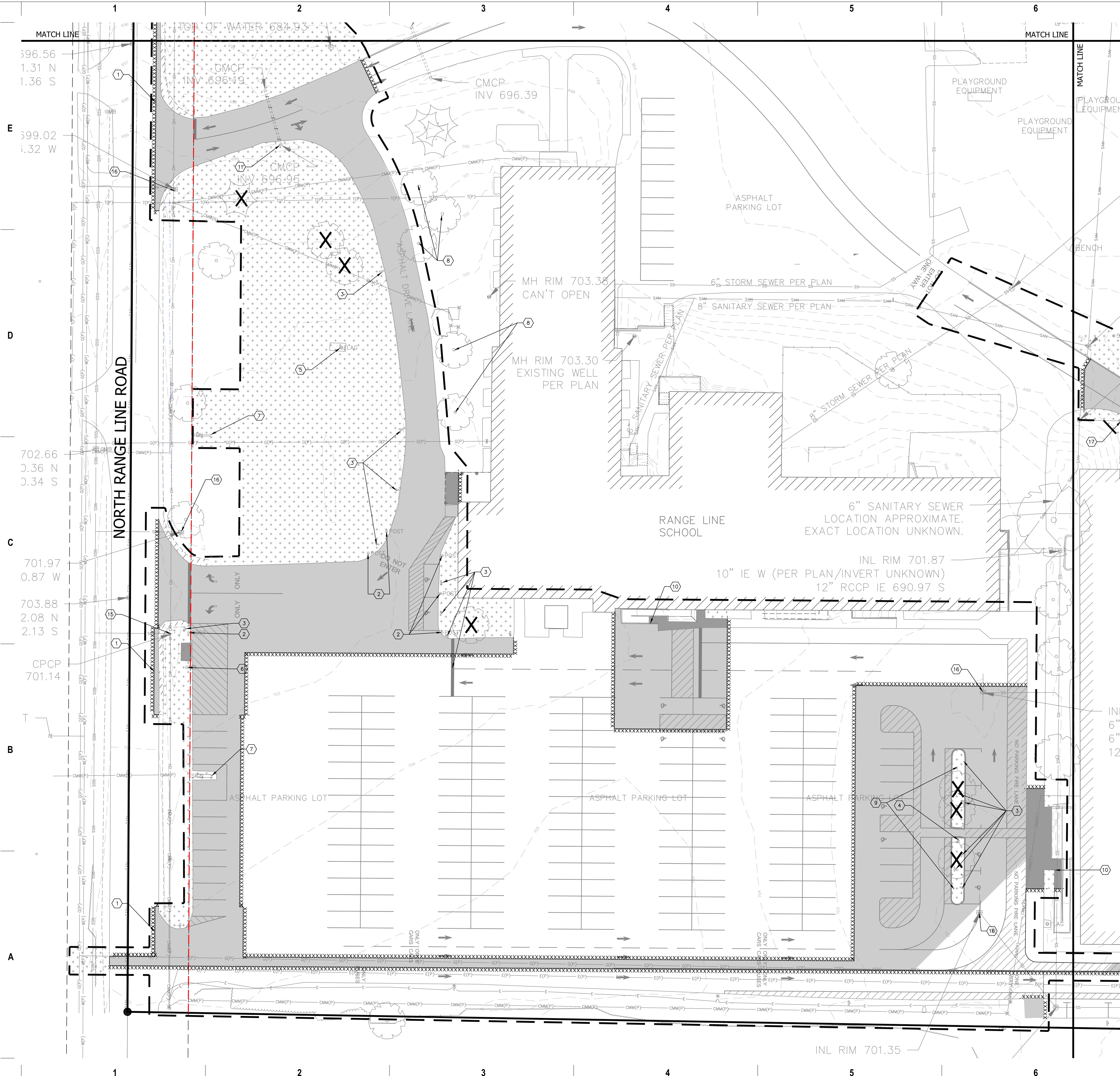
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EXISTING VALVE PURPOSE UNKNOWN. CONTRACTOR TO VERIFY PROPOSE WORK WILL NOT IMPACT VALVE OR ASSOCIATED UTILITY.

EXISTING BASKETBALL HOOP TO REMAIN. CONTRACTOR TO PROTECT THROUGHOUT CONSTRUCTION.



Scale: 0 10 20 40
Scale: 1" = 20'

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PROJECT INFORMATION

MTSD - LAKE SHORE MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



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SHEET INFORMATION

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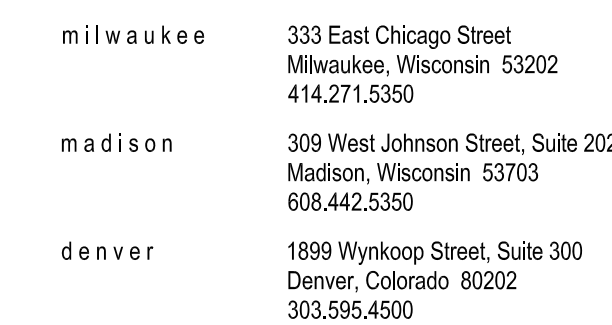
PROJECT MANAGER CR

PROJECT NUMBER 318480-01

SITE DEMOLITION PLAN

C101B

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MTSD - LAKE SHORE
MIDDLE SCHOOL

D 11036 N Range Line
Rd #4930, Mequon, W
53092

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

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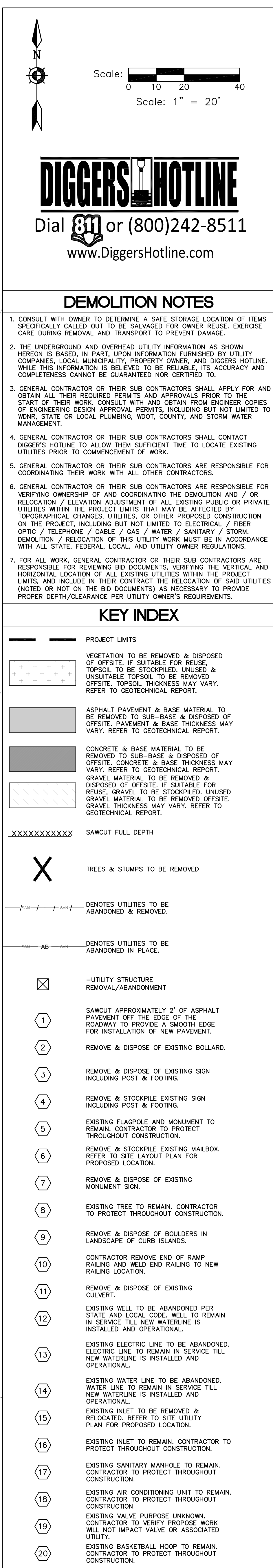
PROJECT MANAGER CE

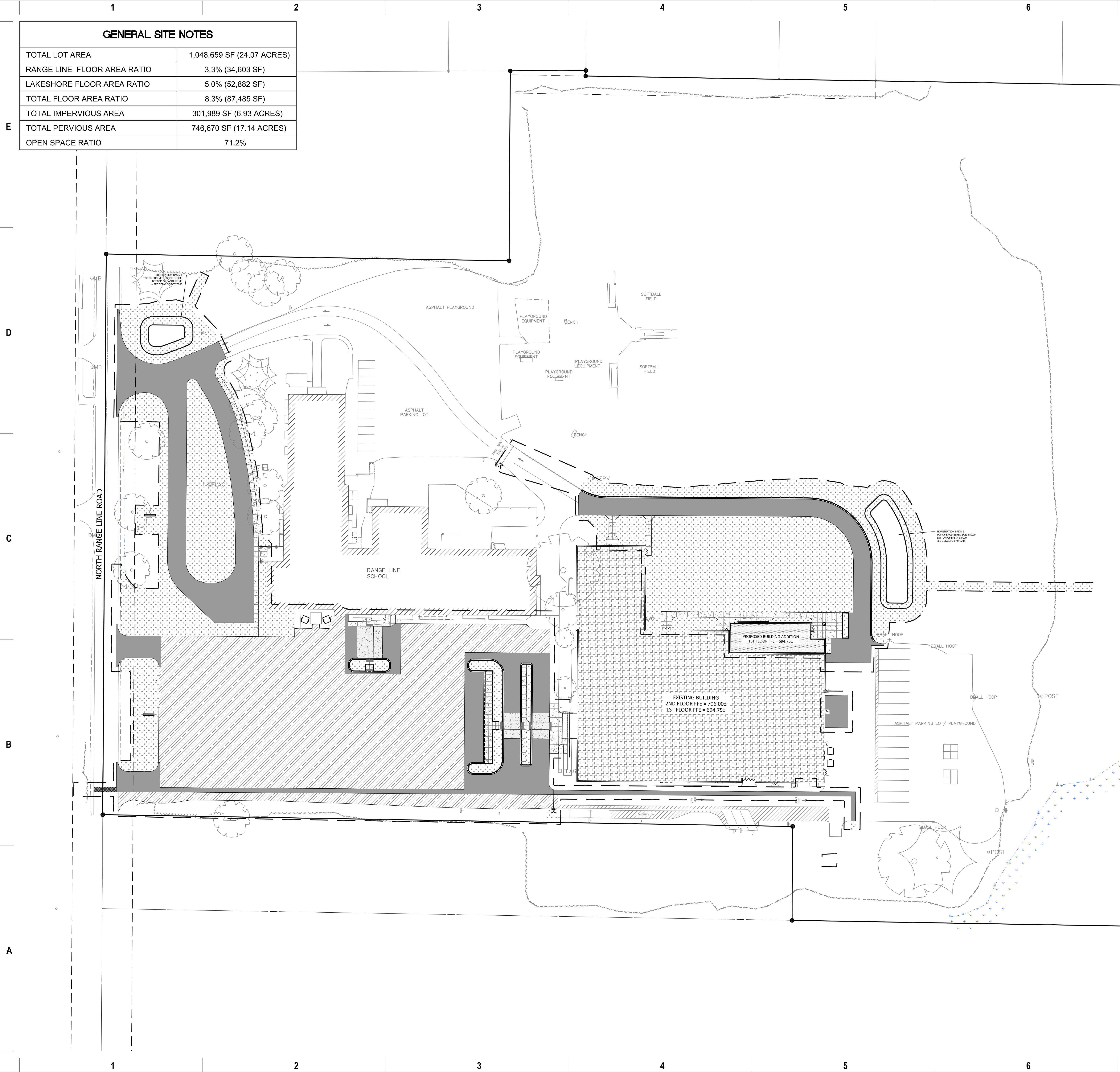
PROJECT NUMBER 318480-0

SITE DEMOLITION PLAN

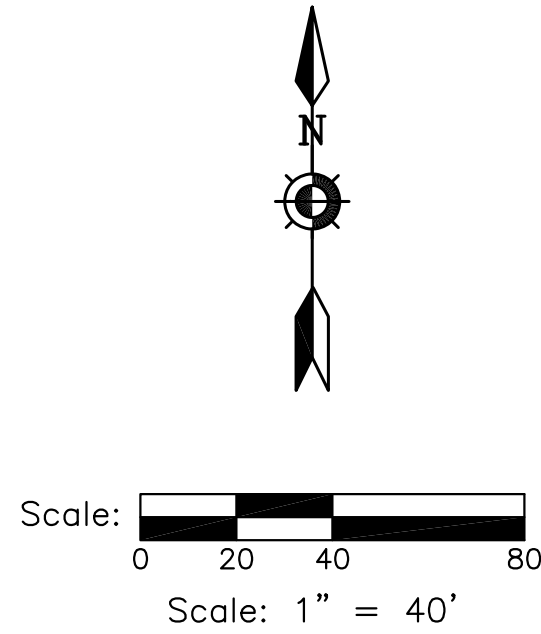
C101C

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GENERAL SITE NOTES	
TOTAL LOT AREA	1,048,659 SF (24.07 ACRES)
RANGE LINE FLOOR AREA RATIO	3.3% (34,603 SF)
LAKESHORE FLOOR AREA RATIO	5.0% (52,882 SF)
TOTAL FLOOR AREA RATIO	8.3% (87,485 SF)
TOTAL IMPERVIOUS AREA	301,989 SF (6.93 ACRES)
TOTAL PERVIOUS AREA	746,670 SF (17.14 ACRES)
OPEN SPACE RATIO	71.2%



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PROJECT INFORMATION
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KEY PLAN
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KEY INDEX	
	PROJECT LIMITS
	AREAS DISTURBED BY CONSTRUCTION (NOT SPECIFICALLY CALLED OUT ON THE LANDSCAPE PLANS) TO BE RESTORED WITH MINIMUM 4" TOPSOIL, SEED, FERTILIZER, AND MULCH (TYP). USE SALVAGED TOPSOIL OR IMPORT TOPSOIL IF REQUIRED.
	NEW ASPHALTIC CONCRETE (LIGHT DUTY)
	NEW ASPHALTIC CONCRETE (HEAVY DUTY)
	MATCH EXISTING ROADWAY PAVEMENT
	BASE BID: BLACK OUT EXISTING STRIPING ONLY ALTERNATE BID: RESEAL/RESTRIPE EXISTING ASPHALTIC CONCRETE
	NEW CONCRETE SLAB
	NEW HEAVY DUTY CONCRETE SLAB
	HIGH-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED
	LOW-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED
	DEPRESSED CONCRETE CURB & GUTTER 18" DEPRESSED UNLESS OTHERWISE NOTED

SHEET INFORMATION
**PROGRESS DOCUMENTS
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PROJECT MANAGER CR
PROJECT NUMBER 318480-01
**OVERALL SITE
LAYOUT PLAN**

C102



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608.442.2550

denver 1899 Wynkoop Street, Suite 300
Denver, Colorado 80202
303.595.4500

PROJECT INFORMATION

MTSD - LAKE SHORE
MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217

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SHEET INFORMATION

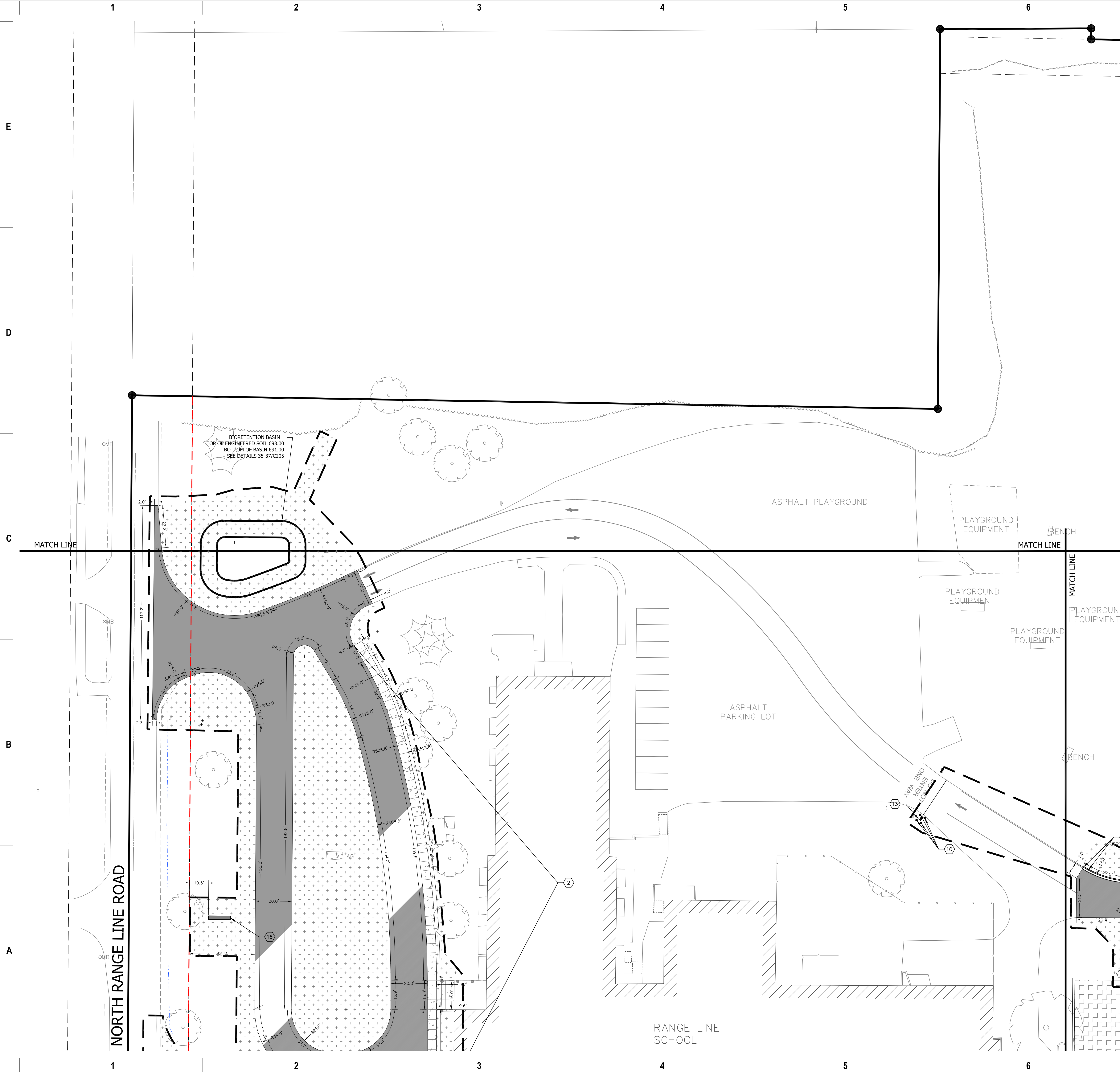
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PROJECT NUMBER 318480-01

SITE LAYOUT PLAN

C102A

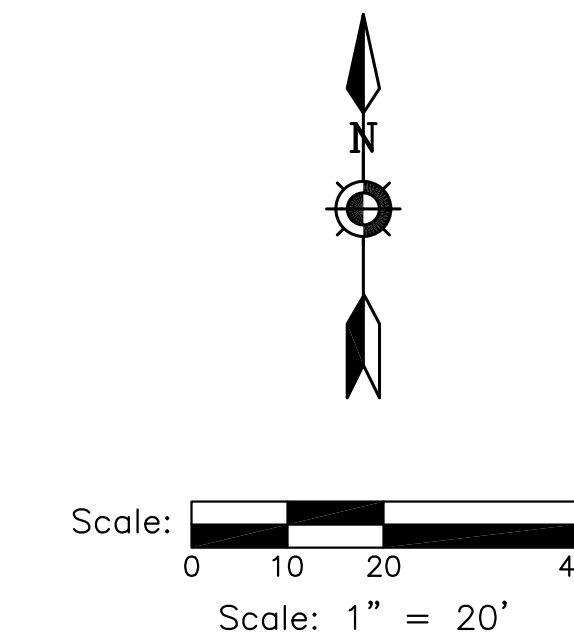
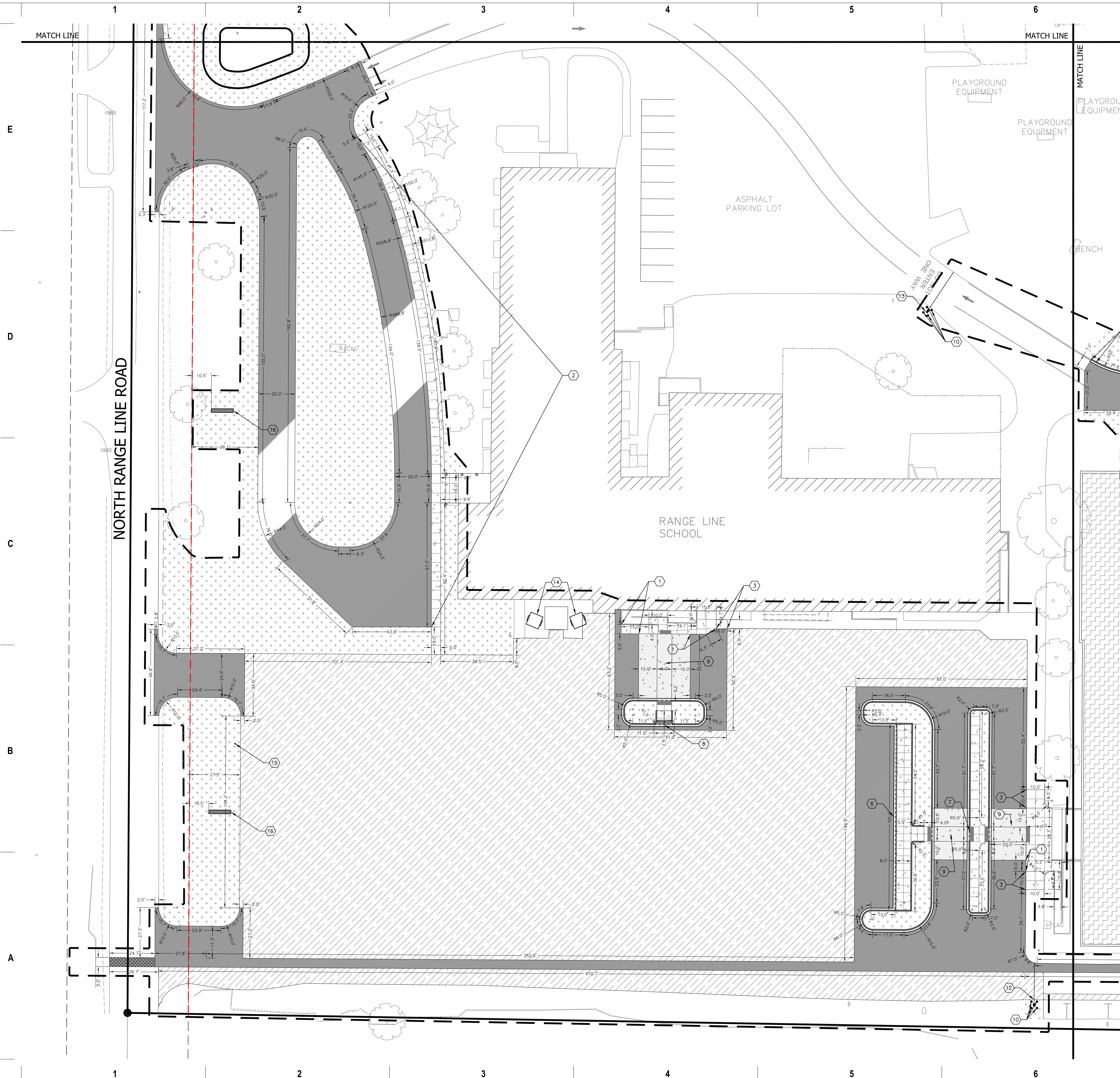


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Scale: 1" = 20'

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KEY INDEX

PROJECT LIMITS	
AREAS DISTURBED BY CONSTRUCTION (NOT SPECIFICALLY CALLED OUT ON THE LANDSCAPE PLANS) TO BE RESTORED WITH MINIMUM 4" TOPSOIL, SEED, FERTILIZER, AND MULCH (TYP). USE SALVAGED TOPSOIL OR IMPORT TOPSOIL IF REQUIRED.	
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BASE BID: BLACK OUT EXISTING STRIPING ONLY ALTERNATE BID: RESEAL/RESTRIPE EXISTING ASPHALTIC CONCRETE	
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NEW HEAVY DUTY CONCRETE SLAB	6 C202
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LOW-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED	8 C202
DEPRESSED CONCRETE CURB & GUTTER 18" DEPRESSED UNLESS OTHERWISE NOTED	9 C202
6" INTEGRAL CURB	10 C202
6" DEPRESSED INTEGRAL CURB	10 C202
10" TRANSITION FROM INTEGRAL CURB TO ZERO FACE CURB	
3" TRANSITION FROM 18" BARRIER CURB & GUTTER TO ZERO FACE GUTTER	11 C202
6" CONCRETE PLANTER CURB	12 C202
NEW ACCESSIBILITY RAMP WITH TRUNCATED DOME DETECTABLE WARNING FIELDS	13 C202
NEW ACCESSIBILITY RAMP WITH TRUNCATED DOME DETECTABLE WARNING FIELDS	14 C202
NEW ACCESSIBILITY RAMP WITH TRUNCATED DOME DETECTABLE WARNING FIELDS	15 C202
SPEED TABLE	17 C203
STEEL BALLARDS	23 C203
4" WIDE CURB CUT	24 C203
NEW "FAAC MODEL B680H" SINGLE ARM LIFT GATE. ARM LENGTH TO BE 22'. INSTALL PER MANUFACTURER SPECIFICATION AND DETAILS. REFER TO SITE ELECTRICAL PLAN FOR MORE INFORMATION.	
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EXISTING TRASH CONTAINERS TO REMAIN.	
NEW LOCATION FOR SALVAGED MAILBOX.	
NEW MONUMENT SIGN. REFER TO ARCHITECTURAL PLAN FOR MORE INFORMATION.	



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PROJECT INFORMATION

**MTSD - LAKE SHORE
MIDDLE SCHOOL**

**11036 N Range Line
Rd #4930, Mequon, WI
53092**

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PROJECT MANAGER CR

PROJECT NUMBER 318480-01

SITE LAYOUT PLAN

C102B

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SITE LAYOUT PLAN

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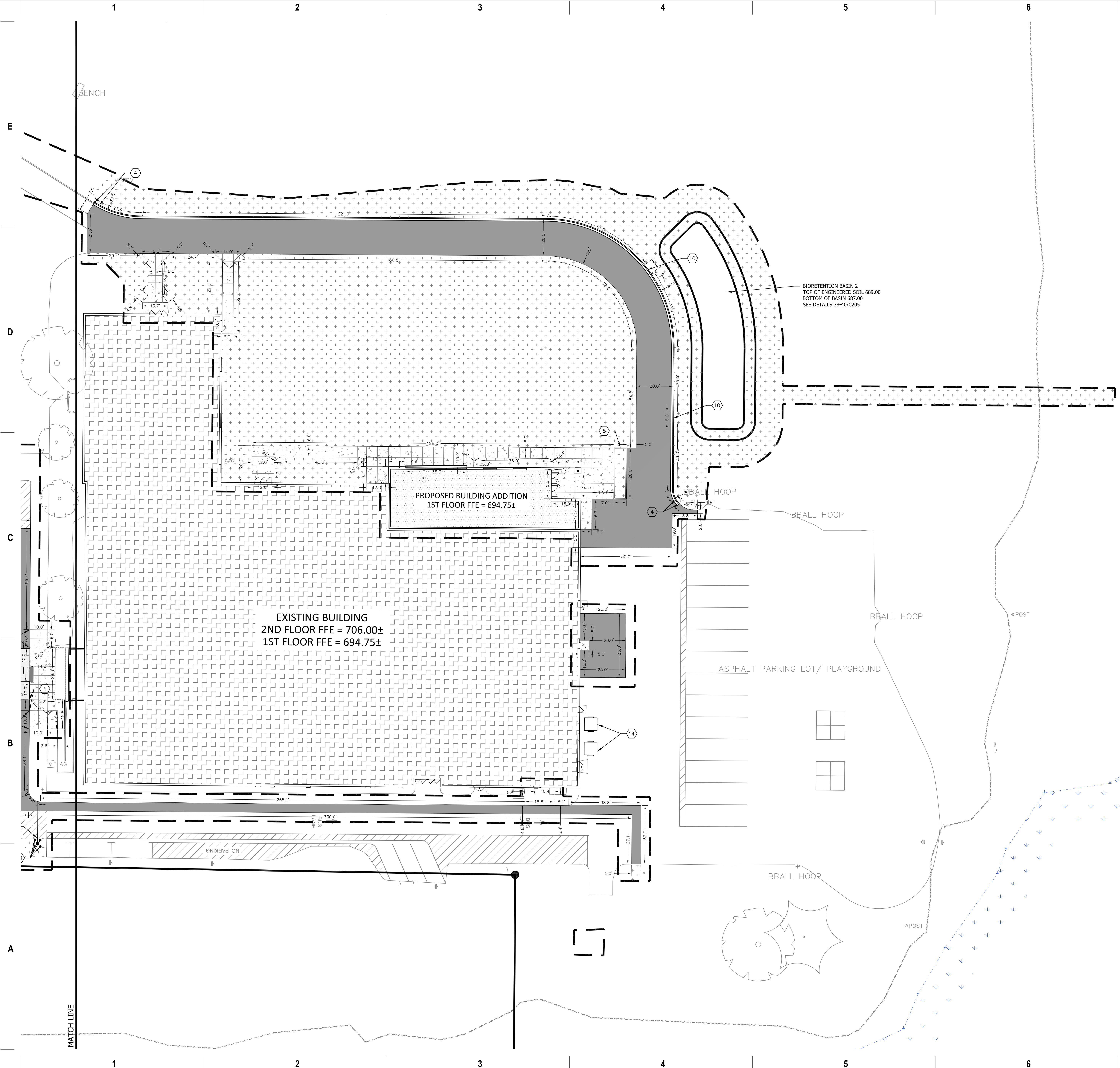
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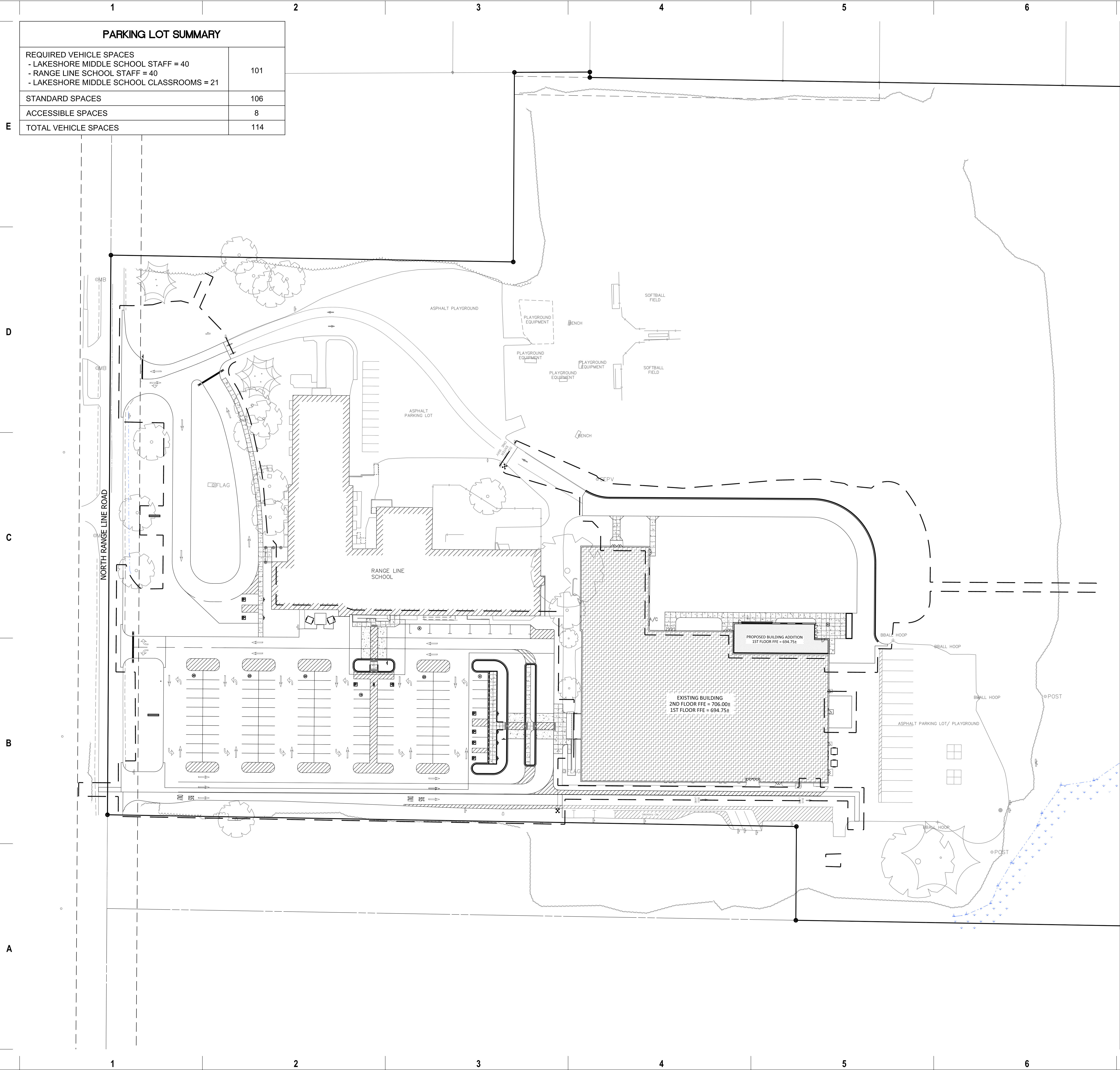


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EXISTING TRASH CONTAINERS TO REMAIN.	
NEW LOCATION FOR SALVAGED MAILBOX.	
NEW MONUMENT SIGN. REFER TO ARCHITECTURAL PLAN FOR MORE INFORMATION.	





PARKING LOT SUMMARY	
REQUIRED VEHICLE SPACES - LAKESHORE MIDDLE SCHOOL STAFF = 40 - RANGE LINE SCHOOL STAFF = 40 - LAKESHORE MIDDLE SCHOOL CLASSROOMS = 21	101
STANDARD SPACES	106
ACCESSIBLE SPACES	8
TOTAL VEHICLE SPACES	114



Scale: 0 20 40 80
Scale: 1" = 40'



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PROJECT INFORMATION

MTSD - LAKE SHORE
MIDDLE SCHOOL

11036 N Range Line
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53092

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PROJECT MANAGER CR

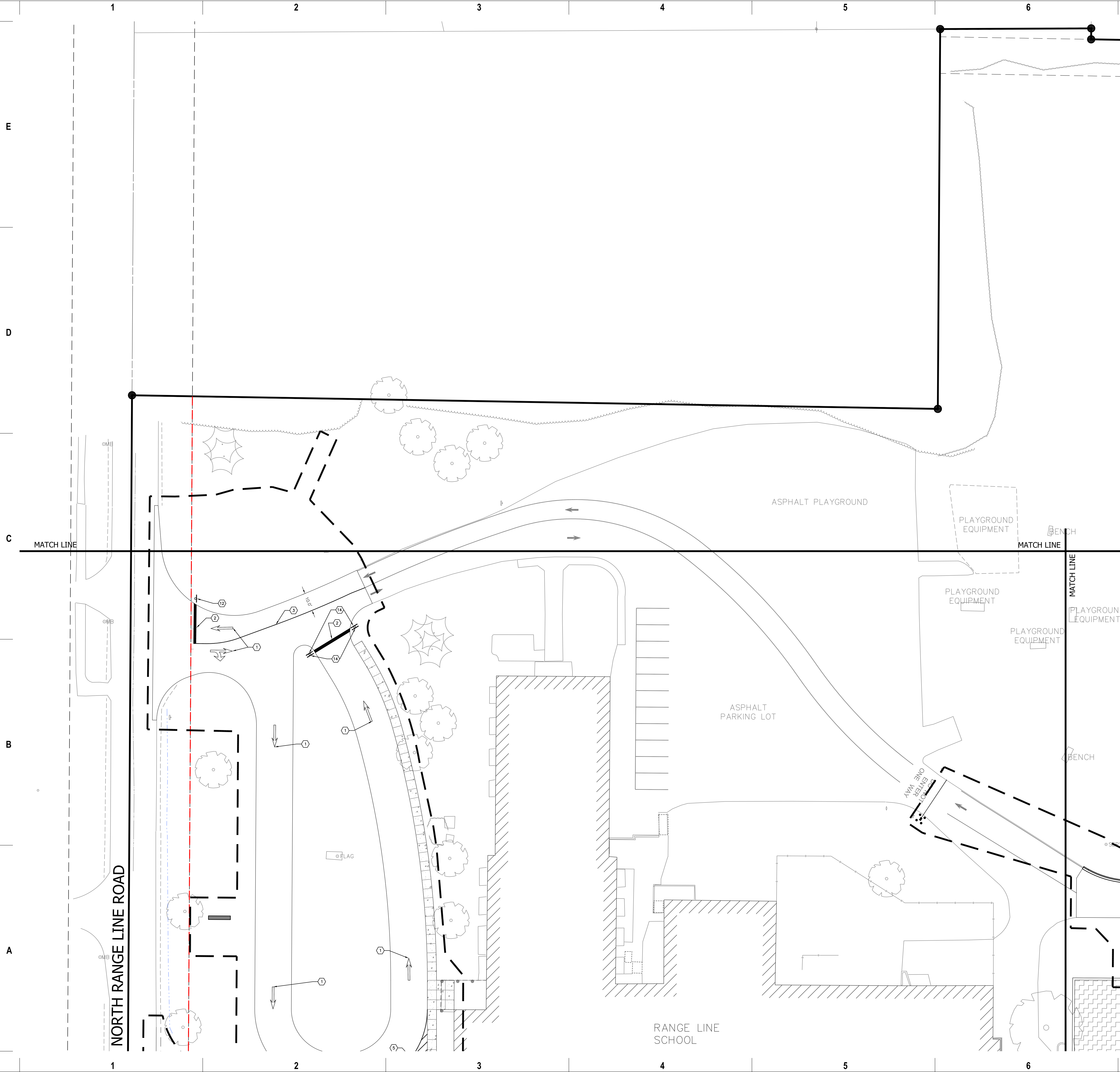
PROJECT NUMBER 318480-01

OVERALL SITE
GEOMETRIC & TRAFFIC
CONTROL PLAN

C103

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Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)



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Scale: 1" = 20'

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KEY INDEX

PROJECT LIMITS

1	PAVEMENT MARKING ARROWS, LATEX PAVEMENT MARKING PAINT, YELLOW (SEE WDOT PAVEMENT MARKING S.D.D.)	18	NEW 4" WHITE PAINT 36" O.C. FOR DIAGONALS
2	PAVEMENT MARKING STOP LINE, LATEX PAVEMENT MARKING PAINT, WHITE (SEE WDOT PAVEMENT MARKING S.D.D.)	19	NEW 4" WHITE PAINT 36" O.C. FOR DIAGONALS
3	PAVEMENT MARKING MAINLINE, LATEX PAVEMENT MARKING PAINT, SOLID 4" YELLOW (SEE WDOT PAVEMENT MARKING S.D.D.)	20	NEW 4" WHITE PAINT 36" O.C. FOR DIAGONALS
4	PAVEMENT MARKING MAINLINE, LATEX PAVEMENT MARKING PAINT, DASHED 4" YELLOW (SEE WDOT PAVEMENT MARKING S.D.D.)	21	NEW ACCESSIBLE PARKING SYMBOL
5	PAVEMENT MARKING CROSSWALK, LATEX PAVEMENT MARKING PAINT, YELLOW, 4-INCH WIDE DIAGONAL STRIPING, 3' O.C. SPACING	22	NEW ACCESSIBLE SIGNS
6	PAVEMENT MARKING WORDS, LATEX PAVEMENT MARKING PAINT, YELLOW (SEE WDOT PAVEMENT MARKING S.D.D.)		

SIGN INDEX

12	 R1-1 30" X 30"	13	 R5-1 30" X 30"
14	 W11-2 30" X 30"		



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PROJECT INFORMATION

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MIDDLE SCHOOL**

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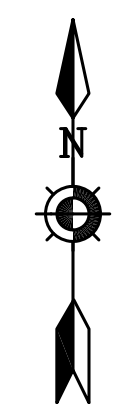
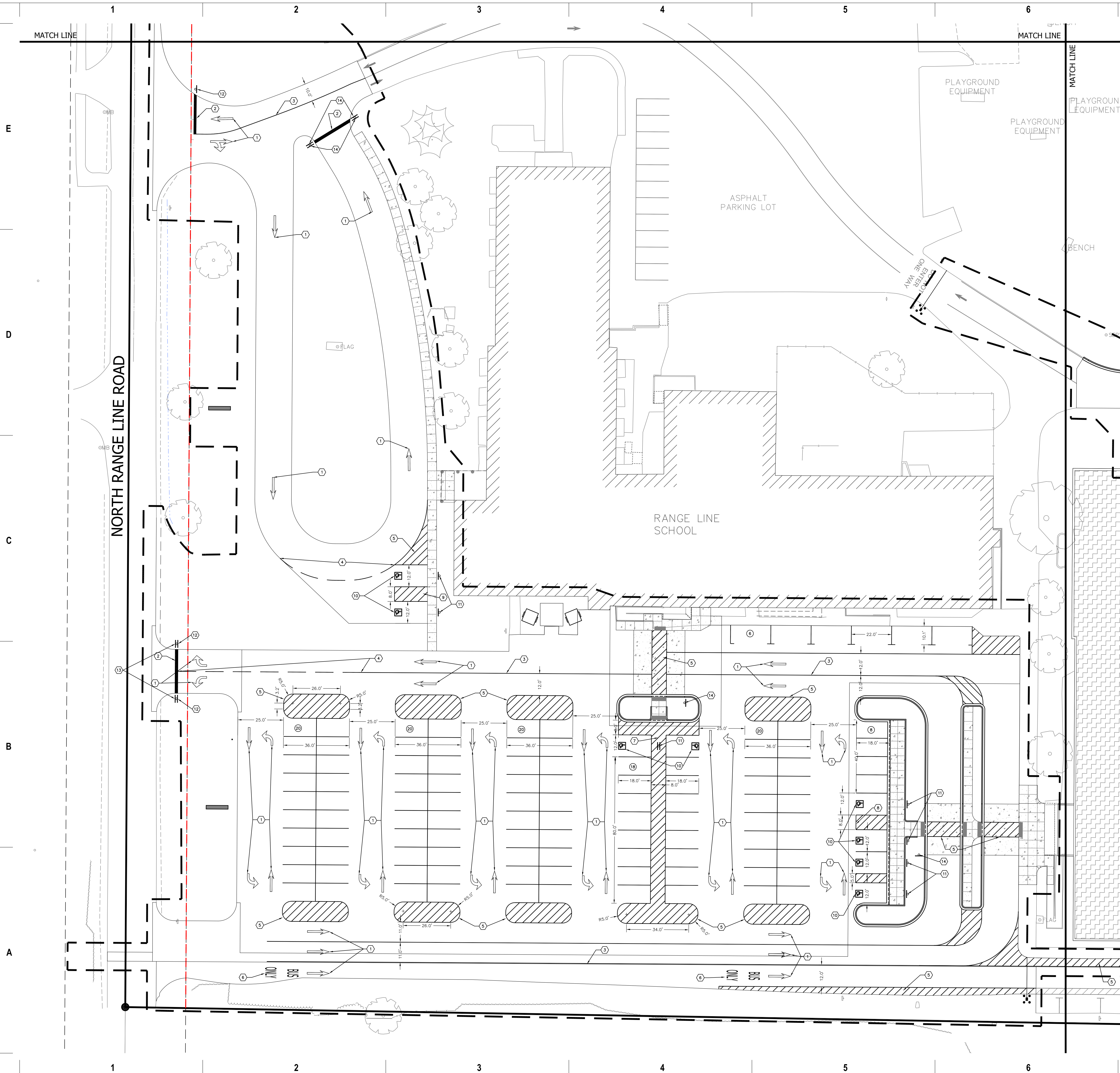
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PROJECT NUMBER 318480-01

**SITE GEOMETRIC &
TRAFFIC CONTROL
PLAN**

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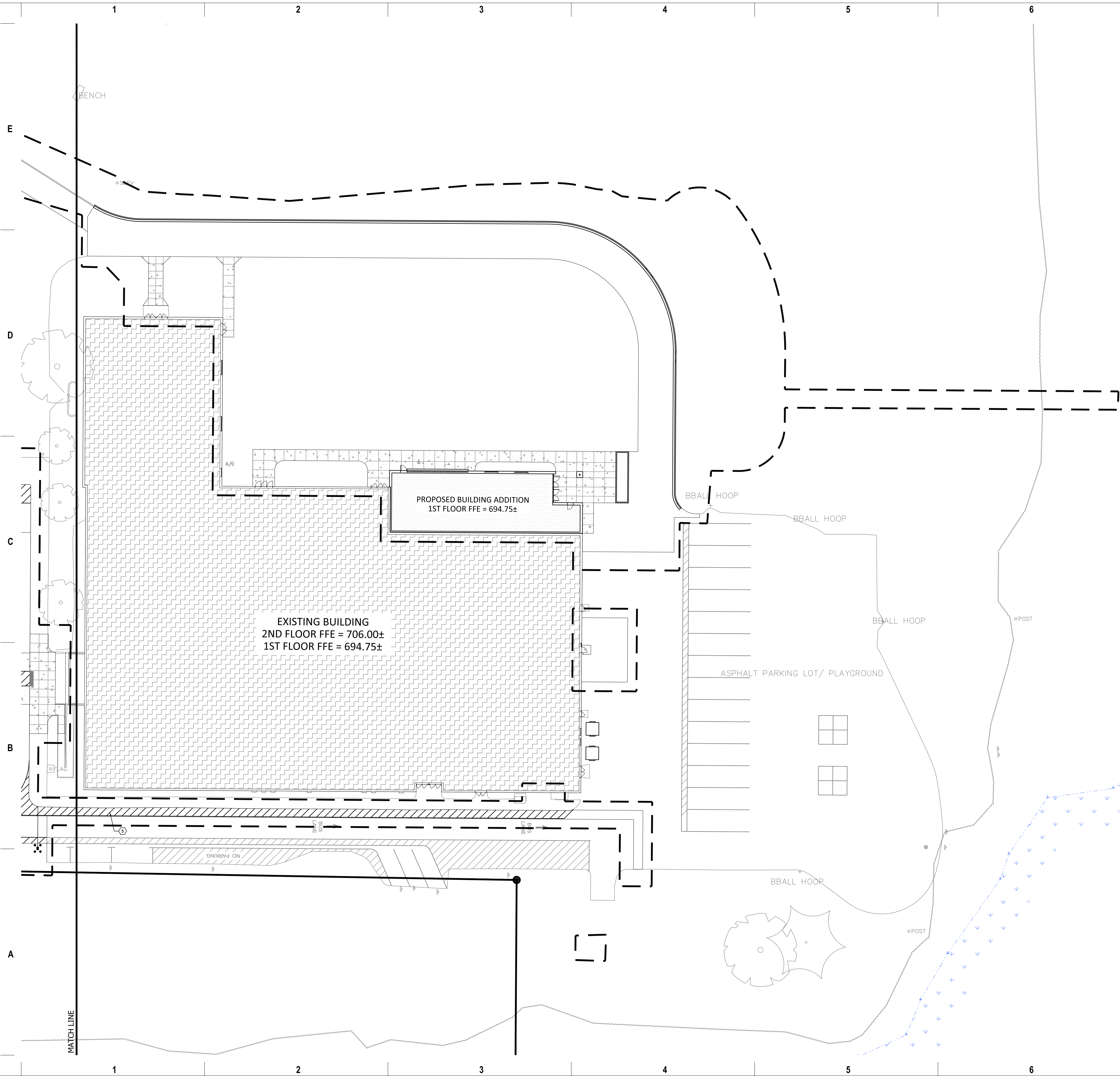
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C103C

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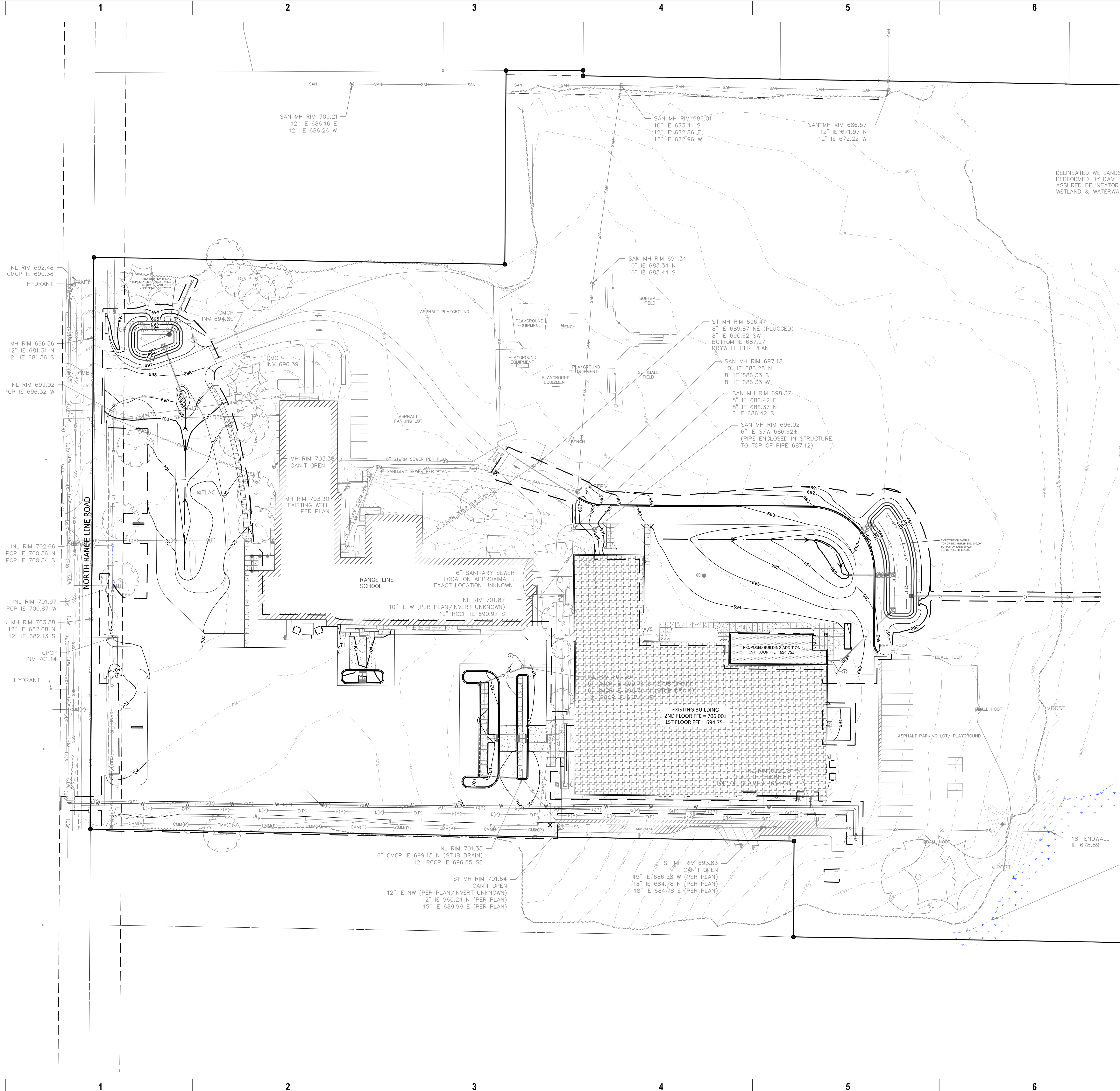
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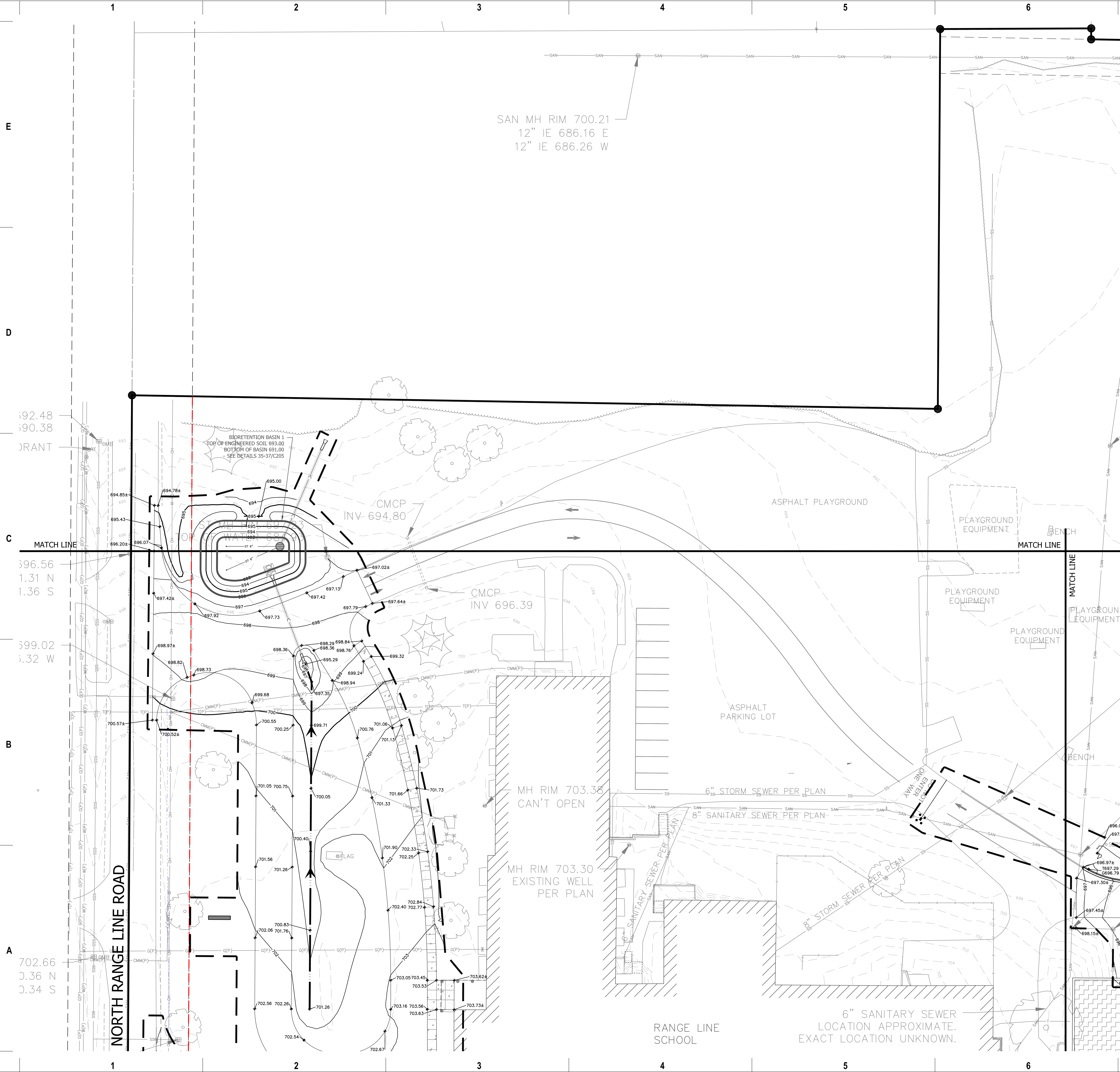
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**OVERALL SITE
GRADING PLAN**

C104

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GRADING NOTES

GENERAL CONTRACTOR OR THEIR SUB CONTRACTORS ARE RESPONSIBLE FOR VERIFYING OWNERSHIP OF AND COORDINATING THE DEMOLITION AND / OR RELOCATION / ELEVATION ADJUSTMENT OF ALL EXISTING PUBLIC OR PRIVATE UTILITIES WITHIN THE PROJECT LIMITS THAT MAY BE AFFECTED BY TOPOGRAPHICAL CHANGES, UTILITIES, OR OTHER PROPOSED CONSTRUCTION ON THE PROJECT, INCLUDING BUT NOT LIMITED TO ELECTRICAL / FIBER OPTIC / TELEPHONE / CABLE / GAS / WATER / SANITARY / STORM. DEMOLITION / RELOCATION OF THIS UTILITY WORK MUST BE IN ACCORDANCE WITH ALL STATE, FEDERAL, LOCAL, AND UTILITY OWNER REGULATIONS.

KEY INDEX

---	PROJECT LIMITS
---	EXISTING CONTOUR MINOR
---	EXISTING CONTOUR MAJOR
---	PROPOSED CONTOUR MINOR
---	PROPOSED CONTOUR MAJOR
+	PROPOSED SPOT GRADE
+	MATCH EXISTING GRADE
+	PROPOSED TOP OF CURB
+	PROPOSED BOTTOM OF CURB
+	MATCH EXISTING TOP OF CURB
+	MATCH EXISTING BOTTOM OF CURB
+	PROPOSED TOP OF WALL
+	PROPOSED BOTTOM OF WALL
+	MATCH EXISTING TOP OF WALL
+	MATCH EXISTING BOTTOM OF WALL
+	DRAINAGE SWALE



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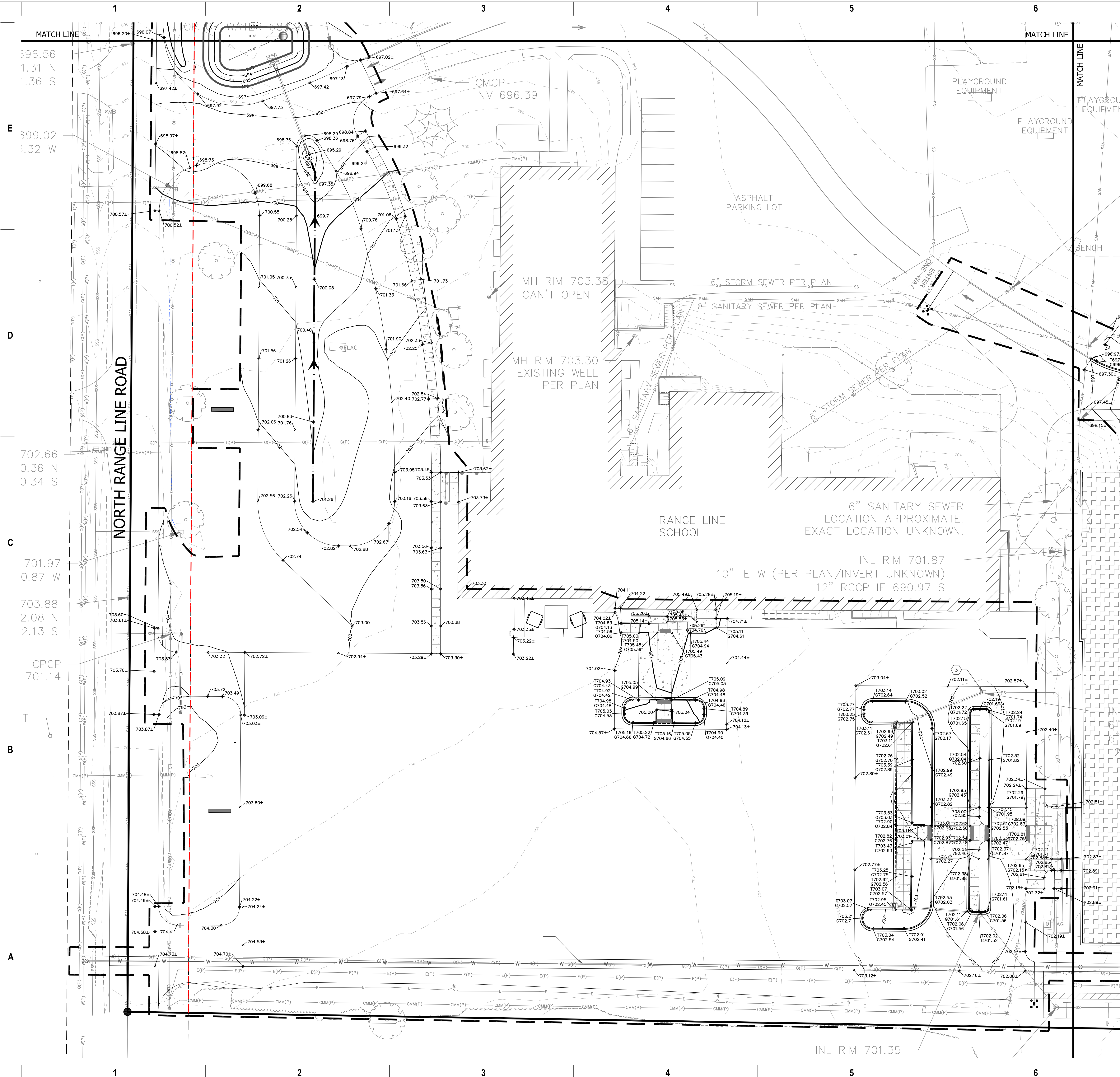
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11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



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SHEET INFORMATION

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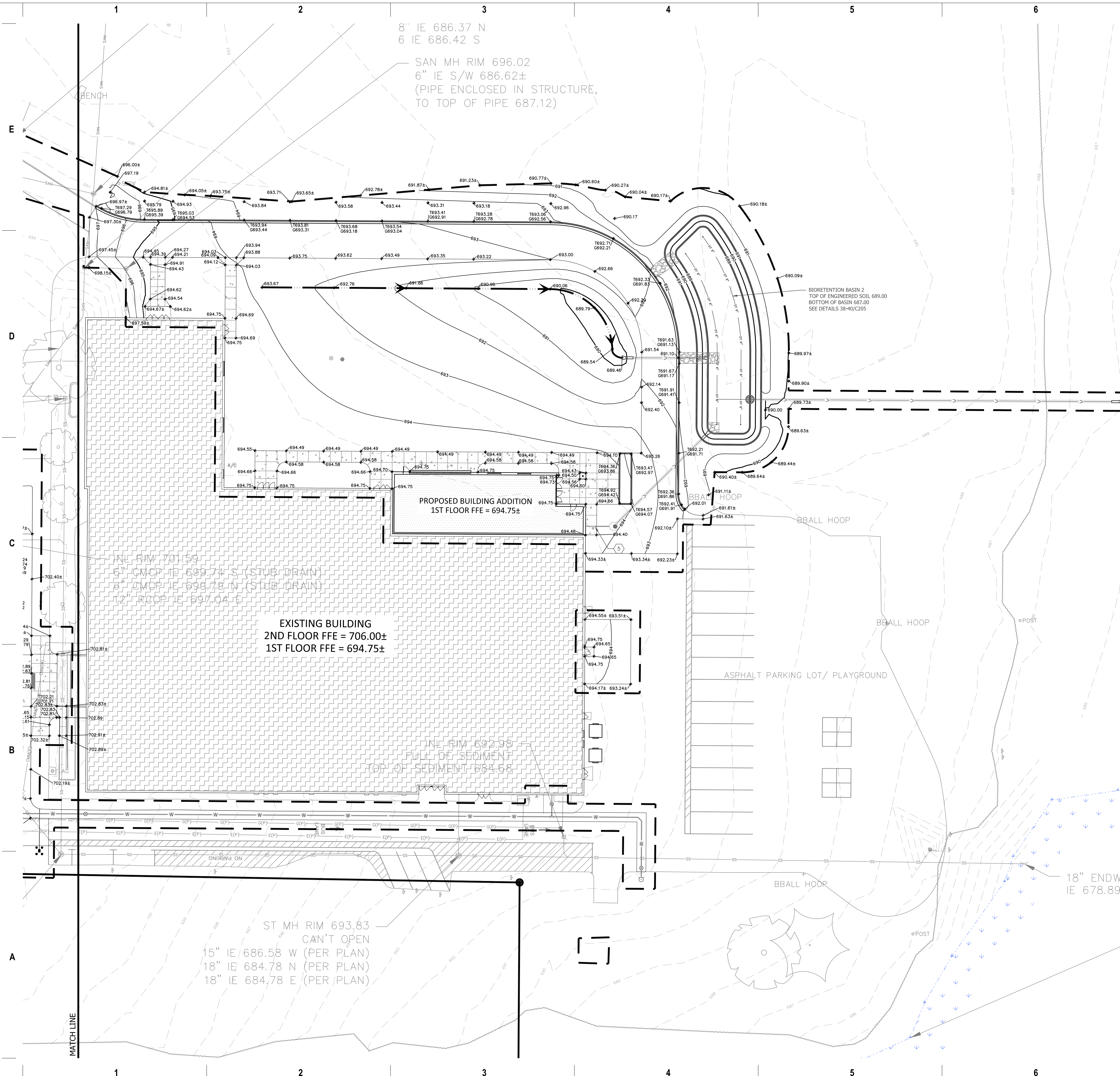
PROJECT MANAGER CR

PROJECT NUMBER 318480-01

SITE GRADING PLAN

C104B

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PROJECT INFORMATION

**MTSD - LAKE SHORE
MIDDLE SCHOOL**

**11036 N Range Line
Rd #4930, Mequon, WI
53092**

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C104C

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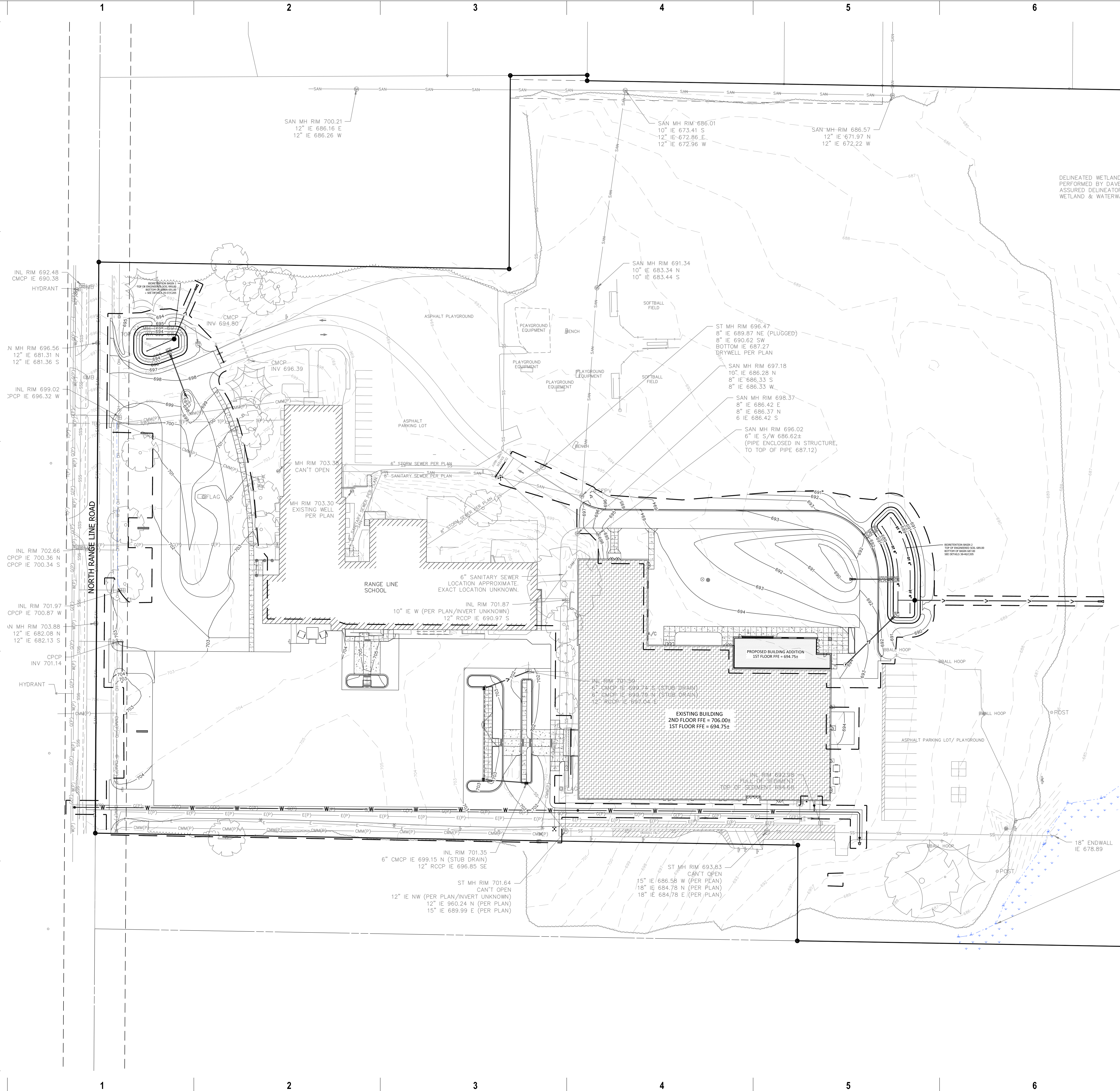
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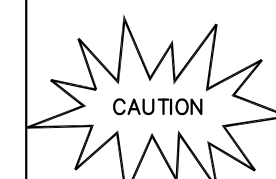
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PERFORMED BY DAVE M
ASSURED DELINEATOR
WETLAND & WATERWAY

UTILITY NOTES

PROJECT LIMITS



KNOWN UTILITY AND POTENTIAL CONFLICT EXIST WITH EXISTING UNDERGROUND UTILITIES. PRIOR TO UTILITY INSTALLATION, CONTRACTOR TO EXCAVATE AND EXPOSE EXISTING UTILITIES, VERIFY LOCATIONS AND ELEVATIONS, AND CONTACT ENGINEER IF CONFLICTS EXIST WITH PROPOSED CONSTRUCTION AND EXISTING UNDERGROUND UTILITIES.

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KEY INDEX

- PROJECT LIMITS**
- STORM MANHOLE**
- STORM CATCH BASIN WITH CURB BOX FRAME & GRATE**
- RCP APRON ENDWALL**
- RIP RAP**
- WATER MAIN TEE**
- WATER MAIN VALVE**
- HYDRANT**
- STORM SEWER**
- WATER MAIN**



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PROJECT MANAGER CR

PROJECT NUMBER 318480-01

**OVERALL SITE
UTILITY PLAN**

C105

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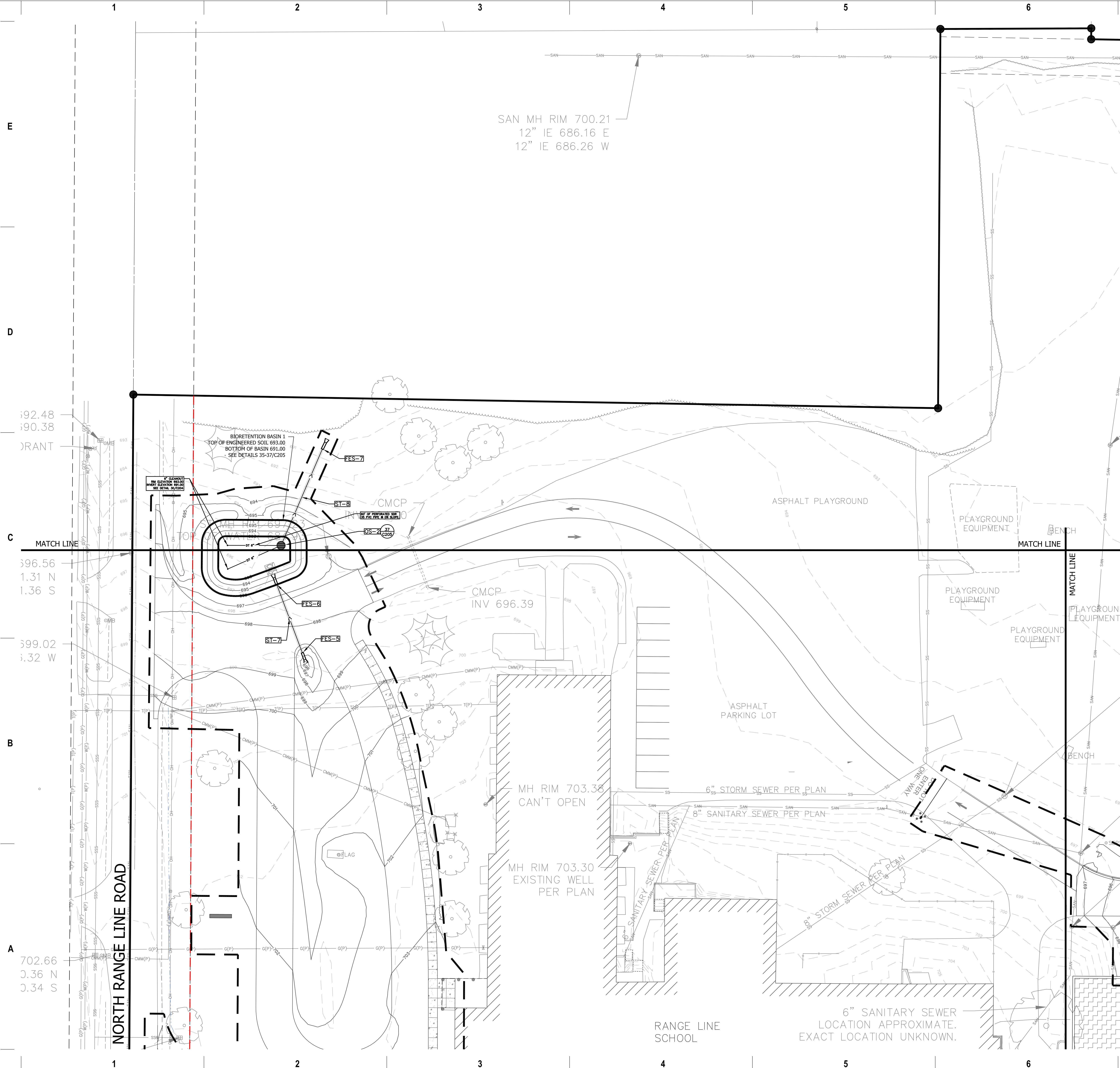
PROJECT MANAGER CR

PROJECT NUMBER 318480-01

SITE UTILITY PLAN

C105A

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UTILITY NOTES

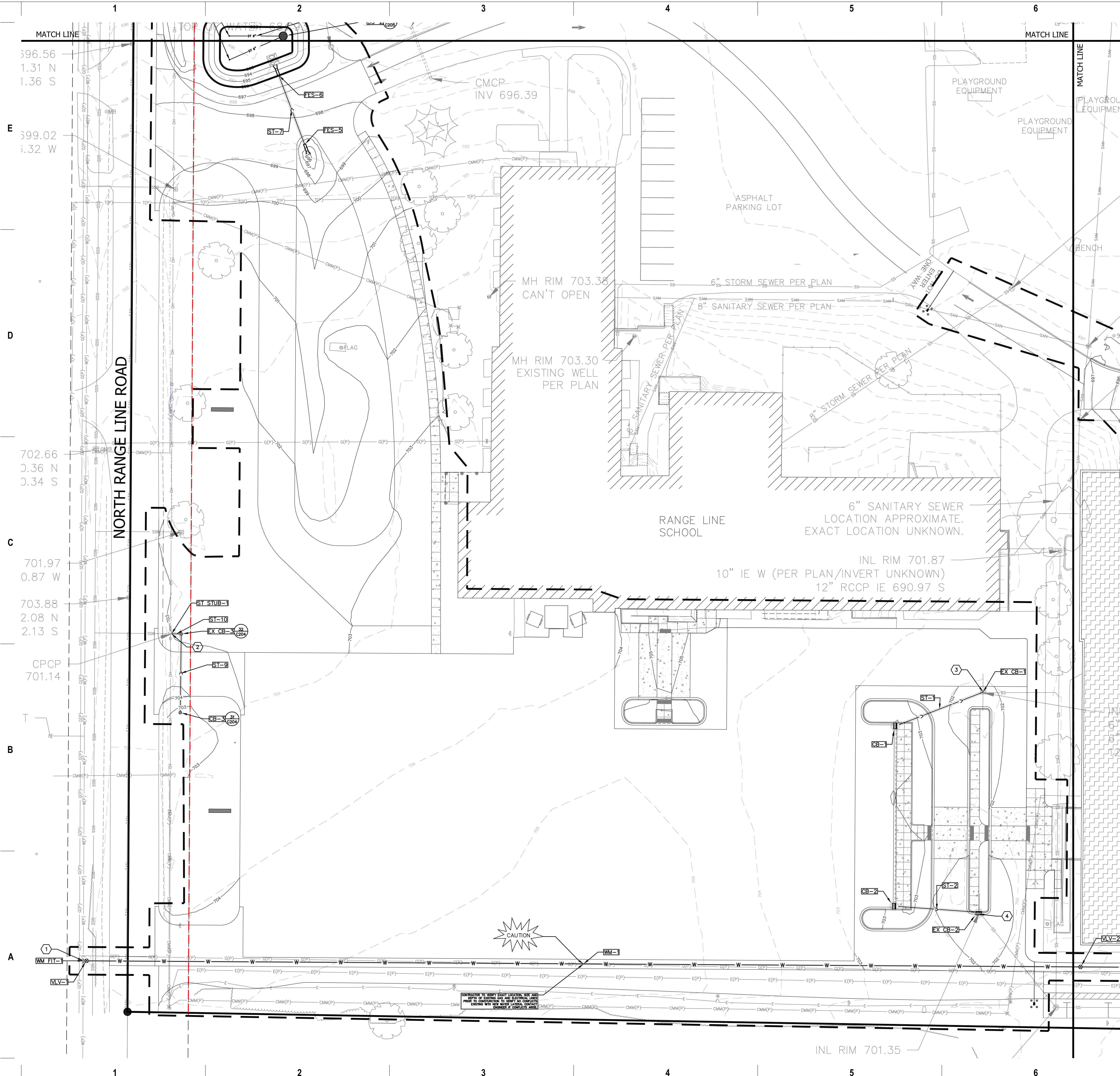
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 - HYDRANT
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- 2 SITE UTILITY CONTRACTOR TO MOVE EXISTING INLET TO PROPOSED LOCATION AND EXTEND EXISTING PIPE TO INLET. VERIFY EXACT LOCATION AND INVERT IN FIELD.
- 3 SITE UTILITY CONTRACTOR TO ADJUST EXISTING RIM ELEVATION TO MATCH PROPOSED GRADE AS NEEDED. VERIFY EXACT LOCATION, INVERTS, AND RIM ELEVATION IN FIELD.
- 4 SITE UTILITY CONTRACTOR TO REPLACE EXISTING GRATE WITH NEW R-300T GRATE. CONTRACTOR TO ADJUST RIM ELEVATION TO PROPOSED GRADE AS NECESSARY. VERIFY EXACT LOCATION, INVERT AND RIM ELEVATION IN FIELD.
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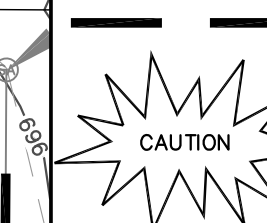


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UTILITY NOTES



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 - STORM CATCH BASIN WITH CURB BOX FRAME & GRATE (29, 2204)
 - RCP APRON ENDWALL (33, 2204) (34, 2204)
 - RIP RAP (24, 2204) (33, 2204)
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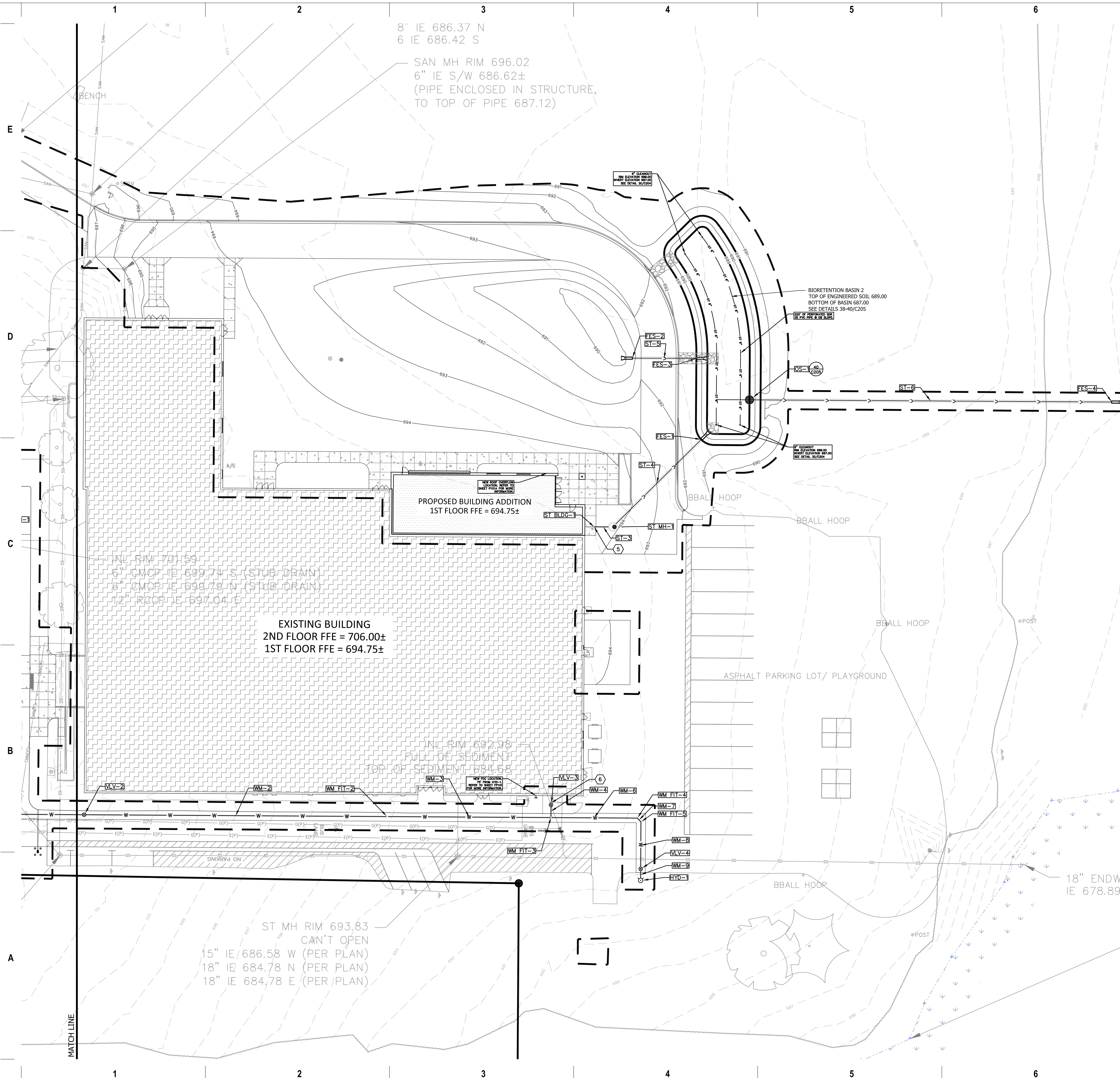
PROJECT MANAGER CR

PROJECT NUMBER 318480-01

SITE UTILITY PLAN

C105B

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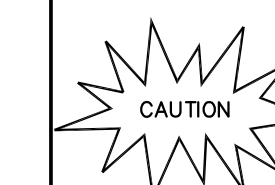
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STORM MANHOLE

STORM CATCH BASIN WITH CURB BOX FRAME & GRATE

RCP APRON ENDWALL

RIP RAP

WATER MAIN TEE

WATER MAIN VALVE

HYDRANT

STORM SEWER

WATER MAIN

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PROJECT INFORMATION

MTSD - LAKE SHORE
MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217

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SHEET INFORMATION

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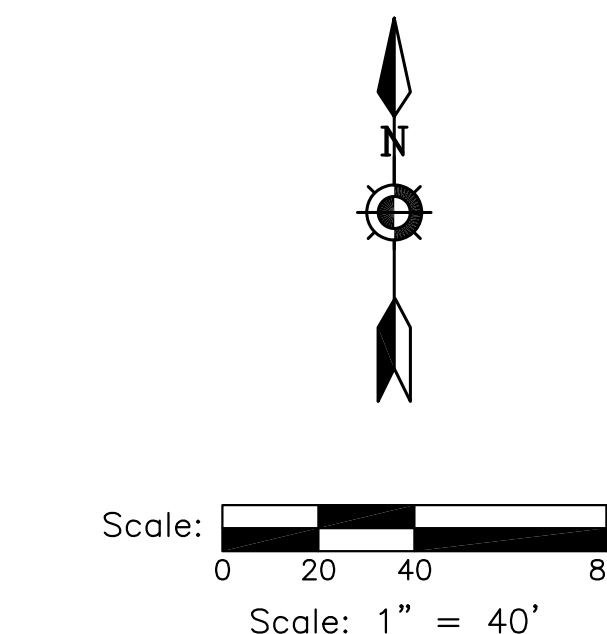
PROJECT MANAGER CR

PROJECT NUMBER 318480-01

SITE UTILITY TABLES

C105D

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PROJECT INFORMATION

**MTSD - LAKE SHORE
MIDDLE SCHOOL**

**11036 N Range Line
Rd #4930, Mequon, WI
53092**

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OVERALL SITE EROSION CONTROL PLAN

C106

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MTSD - LAKE SHORE
MIDDLE SCHOOL

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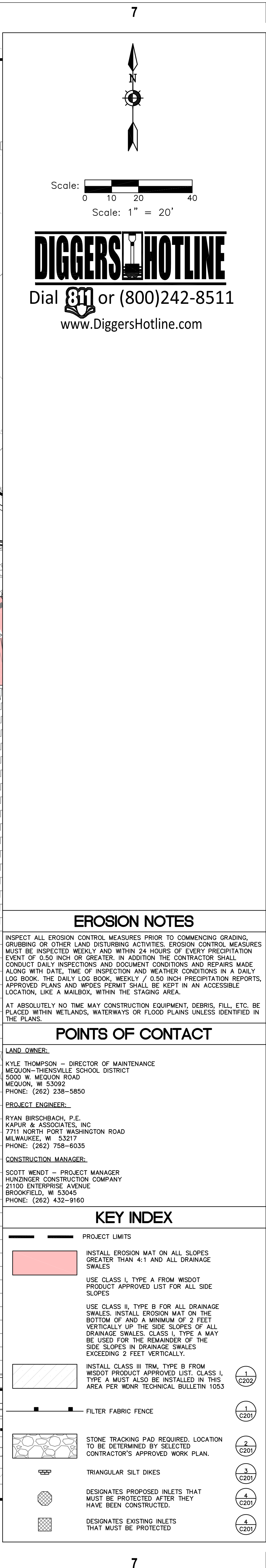
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SITE EROSION CONTROL PLAN

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PROJECT INFORMATION

MTSD - LAKE SHORE
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ISSUANCE AND REVISIONS

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PROJECT MANAGER OR

PROJECT NUMBER 318480-01

EROSION CONTROL
DETAILS

C201

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EROSION CONTROL MEASURES

- CONTRACTOR TO INSTALL AND MAINTAIN EROSION CONTROL MEASURES AS INDICATED ON THIS PLAN AND PER THE LATEST MNR TECHNICAL STANDARDS. TECHNICAL STANDARDS MAY BE VIEWED ONLINE AT: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html
- INLETS AND CATCH BASINS SHALL BE PROTECTED WITH INLET FILTERS THAT ARE PHASED IN WITH CONSTRUCTION TO REDUCE SEDIMENT FROM ENTERING THESE AREAS PER MNR TECHNICAL STANDARD 1050 AS FOLLOWS:
ALL FABRIC BARRIERS SELECTED FOR INLET/CATCH BASIN PROTECTION DEVICES SHALL BE SELECTED FROM THE LIST OF APPROVED FABRICS CERTIFIED FOR INLET PROTECTION, GEOTEXTILE FABRIC, TYPE FF IN THE CURRENT EDITION OF THE WisDOT PRODUCT ACCEPTABILITY LIST, TO OBTAIN THE PAL, PLEASE REFER TO THIS WEBSITE: <http://wisconsindot.gov/Documents/dcmg-bus/eng-consultants/consult-rccrces/1005a/pal/pal-7-14.pdf>
A. INLET PROTECTION SHALL BE AT A MINIMUM INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT OF 1/8 INCH OR GREATER DURING A 24-HOUR PERIOD.
B. PLACEMENT OF SPOIL MATERIAL, DEBRIS, SOLS, ETC. ON TOP OF INLETS/CATCH BASINS, EVEN IF TEMPORARY, IS STRICTLY DISCOURAGED AND PROHIBITED.
C. SEDIMENT DEPOSITS SHALL BE REMOVED AND THE INLET PROTECTION DEVICE RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED BETWEEN 1/3 TO 1/2 THE DESIGN DEPTH OF THE DEVICE FOR TYPES A-C, WHEN SEDIMENT IS WITHIN 6" OF THE BOTTOM OF THE OVERFLOW HOLE FOR TYPE D, OR WHEN THE DEVICE IS NO LONGER FUNCTIONING PER MANUFACTURER'S SPECIFICATIONS. ALL SEDIMENT COLLECTED SHALL BE PROPERLY DISPOSED OF TO PREVENT DISCHARGE INTO AREA WATERWAYS AND WETLANDS.
D. DUE CARE SHALL BE TAKEN TO ENSURE SEDIMENT DOES NOT FALL INTO THE INLETS/CATCH BASINS AND IMPIDE THE INTENDED FUNCTION OF THE DEVICE. ANY MATERIAL FALLING INTO THE INLET/CATCH BASIN SHALL BE REMOVED AND PROPERLY DISPOSED OF IN A DAILY LOG BOOK.
E. INLET FILTERS MAY BE REMOVED AND PROPERLY DISPOSED OF UPON COMPLETION OF CONSTRUCTION. HAULING OR MOVEMENT OF CONSTRUCTION EQUIPMENT THROUGHOUT THE SITE, AND ONCE THE SITE IS ADEQUATELY STABILIZED, UNLESS AS OTHERWISE NOTIFIED BY THE MNR.
- A TRACKING PAD SHALL BE INSTALLED AS SHOWN ON THE PLAN SHEET PRIOR TO THE START OF CONSTRUCTION TO REDUCE OFF-SITE SEDIMENTATION BY ELIMINATING THE TRACKING OF SEDIMENT FROM THE SITE PER MNR TECHNICAL STANDARD 1057 AS FOLLOWS:
A. AGGREGATE USED FOR TRACKING PADS SHALL BE 3 TO 3.0 INCH CLEAR OR WASHED STONE, ALL MATERIAL TO BE RETAINED BY 3 INCH SIEVE.
B. THE AGGREGATE SHALL BE PLACED IN A LAYER OF AT LEAST 12 INCHES THICK, ON SITES WITH A HIGH WATER TABLE, OR WHERE SATURATED CONDITIONS ARE EXPECTED, TRACKING PADS WILL BE UNDERLAIN WITH WISDOT TYPE R GEOTEXTILE FABRIC.
C. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT (MIN. 15 FEET WIDE) AND BE AT LEAST 50 FEET LONG.
D. VEHICLES TRAVELING ACROSS THE TRACKING PAD SHALL MAINTAIN A SLOW CONSTANT SPEED.
E. ANY SEDIMENT OR ROCK ACCUMULATION ONTO LOCAL ROADWAYS SHALL BE REMOVED BY STREET CLEANING, NOT FLUSHING BEFORE THE END OF EACH WORKING DAY.
F. THE TRACKING PAD SHALL, AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT OF 1/8 INCH OF RAIN OR MORE DURING A 24-HOUR PERIOD.
G. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED AT A MINIMUM OF 12" BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
- THE CONSTRUCTION SITE PERIMETER AND TOPSOIL MEASURES AS SHOWN ON THIS PLAN SHALL BE PROTECTED WITH SILT FENCE. FENCE IS SHOWN ON THE PLAN SHEET PRIOR TO THE START OF CONSTRUCTION. LAND-DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 CALENDAR DAYS, REQUIRING VEGETATIVE COVER FOR LESS THAN ONE YEAR. SEED AND MULCH SHALL BE UTILIZED THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH TEMPORARY VEGETATION TO HELP REDUCE EROSION PER MNR TECHNICAL STANDARDS 1059 AND 1058 RESPECTIVELY AS FOLLOWS:
A. TEMPORARY SEEDING REQUIRES A SEEDBED OF LOOSE SOIL TO A MINIMUM DEPTH OF 2 INCHES.
B. FERTILIZER APPLICATION IS NOT GENERALLY REQUIRED FOR TEMPORARY SEEDING. HOWEVER, ANY APPLICATION OF FERTILIZER OR LIME SHALL BE BASED ON SOIL TESTING.
C. THE SOIL SHALL HAVE A PH RANGE OF 5.5 TO 8.0.
D. ALL SEED SHALL CONFORM TO THE REQUIREMENTS OF THE WISCONSIN STATE STATUTES AND OF THE ADMINISTRATIVE CODE CHAPTER ATP 20.01 REGARDING NOXIOUS WEED SEED CONTENT AND LABELING.
E. SEED SHALL NOT BE USED LATER THAN ONE YEAR AFTER THE TEST DATE ON THE LABEL.
F. IN THE SUMMER-SPRING, CONTRACTOR SHALL USE OATS APPLIED AT 131 LBS./ACRE FOR TEMPORARY SEEDING PURPOSES. IN THE FALL, THE CONTRACTOR SHALL USE ANNUAL REGRASS APPLIED AT 80 LBS./ACRE OR WINTER WHEAT OR CEREAL RYE APPLIED AT 131 LBS./ACRE. THE CONTRACTOR SHALL USE STRAW MULCH APPLIED AT 1.5 TONS/ACRE. DORMANT SEED SHALL BE USED WHEN SOIL TEMPERATURE IS CONSISTENTLY BELOW 53 DEGREES FAHRENHEIT (TYPICALLY NOV. 1 UNTIL SNOW COVER ANNUALLY). NEVER PLACE SEED ON TOP OF SNOW. IF COVER IS NEEDED AFTER SNOW FALL, CONTRACTOR MAY CHOOSE TO USE A DRY, NONTOXIC TYPE B SOIL STABILIZER PER MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY THE MNR.
G. SEEDING SHALL NOT TAKE PLACE WHEN THE SOIL IS TOO WET.
H. CONTRACTOR MAY CONSIDER WATERING TO HELP ESTABLISH THE SEED. WATER APPLICATION RATES SHALL BE CONTROLLED TO HELP PREVENT RUNOFF AND EROSION.
I. DURING CONSTRUCTION, AREAS THAT HAVE BEEN SEEDING AND MULCHED SHALL AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 1/8 INCH OF RAIN OR MORE DURING A 24 HOUR PERIOD. INSPECT WEEKLY DURING THE GROWING SEASON UNTIL VEGETATION IS DENSELY ESTABLISHED OR THE SOIL IS LAID, REPAIR AND RESEED AREAS THAT HAVE EROSION DAMAGE AS NECESSARY.
J. CONTRACTOR IS TO LIMIT VEHICLE TRAFFIC AND OTHER FORMS OF COMPACTION IN AREAS THAT ARE SEEDING AS MUCH AS POSSIBLE. RE-SEED DRIVEN OVER AREAS AS NEEDED.
K. MULCH SHOULD BE PLACED WITHIN 24 HOURS OF SEEDING.
L. MULCHING OPERATIONS SHALL NOT TAKE PLACE DURING PERIODS OF EXCESSIVELY HIGH WINDS THAT WOULD PRECLUDE THE PROPER PLACEMENT OF MULCH.
M. MULCH THAT IS DISPLACED SHALL BE REAPPLIED AND PROPERLY ANCHORED. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION TO SITE CONDITIONS.
N. WHEN CHANNEL EROSION MAT IS USED WITHIN CONSTRUCTION SITE PERIMETER AREAS, TECHNICAL STANDARDS 1055 AND 1056 SHALL BE FOLLOWED.
O. WHEN NON-CHANNEL EROSION MAT IS USED TECHNICAL STANDARD 1052 SHALL BE FOLLOWED.
P. DEPENDING ON DURATION OF CONSTRUCTION, THE CONTRACTOR MAY NEED TO RE-SEED AND RE-STABILIZE THE TOPSOIL STOCKPILE AS NECESSARY TO DISCOURAGE SEDIMENT AND EROSION.
6. A COPY OF EROSION CONTROL INSPECTION REPORTS AND THE APPROVED EROSION CONTROL PLANS SHALL BE KEPT ON SITE.
7. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL PRACTICES BY THE END OF EACH WORKDAY.
8. LOCAL ROADS SHALL BE CLEAN BY THE END OF EACH WORKDAY. CONTRACTOR SHALL HAVE LOCAL ROADS SWEEP WHERE SEDIMENT ACCUMULATES.
- SILT FENCE ENDS SHALL BE EXTENDED UPSLOPE TO PREVENT WATER FROM FLOWING AROUND THE ENDS OF THE FENCE AS SHOWN ON THE PLAN SHEET.
B. INSTALLED SILT FENCE SHALL BE A MINIMUM 14 INCHES HIGH AND SHALL NOT EXCEED 28 INCHES IN HEIGHT MEASURED FROM THE INSTALLED GROUND ELEVATION.
C. SILT FENCE SHALL BE SUPPORTED BY EITHER STEEL OR WOOD SUPPORT POSTS.
D. THE MAXIMUM SPACING OF POSTS FOR NONWOVEN SILT FENCE SHALL BE 3 FEET OR FOR WOVEN FABRIC 8 FEET.
E. SILT FENCE SHALL HAVE A SUPPORT CORD AT THE TOP OF THE FENCE.
F. WHERE JOINTS ARE NEEDED, EACH END OF THE FABRIC SHALL BE SECURELY FASTENED TO A POST. THE POSTS SHALL BE WRAPPED AROUND EACH OTHER TO PRODUCE A STABLE AND SECURE JOINT OR SHALL BE OVERLAPPED THE DISTANCE BETWEEN TWO POSTS.
G. A MINIMUM OF 20 INCHES OF THE POSTS SHALL EXTEND INTO THE GROUND AFTER INSTALLATION.
H. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8 INCHES OF THE FABRIC IN A 4 INCH WIDE BY 8 INCH DEEP TRENCH, OR 6 INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. THE TRENCH SHALL BE BACKFILLED AND COMPACTED. TRENCHES SHALL NOT BE EXCAVATED ANY WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
I. ON THE TERMINAL ENDS OF THE SILT FENCE THE FABRIC SHALL BE WRAPPED AROUND THE POST SUCH THAT THE STAPLES ARE NOT VISIBLE.
J. GEOTEXTILE FABRIC SPECIFICATIONS SHALL MEET VALUES ESTABLISHED IN TECHNICAL STANDARD 1056.
K. SILT FENCE SHALL BE REMOVED ONCE THE SITE IS ADEQUATELY STABILIZED.
L. WHEN PLACING SILT FENCE NEAR TREES, CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO THE ROOT SYSTEM BY AVOIDING COMPACTION AND ROOT CUTTING WITHIN A RADIUS OF 1.5 FEET MULTIPLIED BY THE INCH DIAMETER OF THE TREE.
M. THE CONTRACTOR MAY FURTHER STRENGTHEN THE SILT FENCE BY USING HAY BALES ON THE DOWN SLOPE SIDE AS NEEDED.
N. SILT FENCE SHALL AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 1/8 INCH OF RAIN OR MORE DURING A 24 HOUR PERIOD.
O. DAMAGED OR DECOMPOSED SILT FENCE, UNDERCUTTING, OR FLOW CHANNELS AROUND THE END OF BARRIERS SHALL BE REPAIRED OR CORRECTED.
P. SEDIMENT SHALL BE PROPERLY DISPOSED OF ONCE THE DEPOSITS REACH 1/3 THE HEIGHT OF THE FENCE TO PREVENT DISCHARGE INTO AREA WATERWAYS AND WETLANDS.

EROSION CONTROL OPERATION SEQUENCE + SCHEDULE

AFTER BIDS ARE RECEIVED AND A MASS GRADING CONTRACTOR IS SELECTED, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE WITH ALL PARTICIPATING PARTIES IN ATTENDANCE.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL SILT FENCES, SEEDING, EROSION MATTING, AND OTHER EROSION CONTROL MEASURES. GENERAL CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PRIOR TO COMMENCING GRADING, GRUBBING, OR OTHER LAND DISTURBING ACTIVITIES. EROSION CONTROL MEASURES MUST BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF EVERY PRECIPITATION EVENT OF 1/8 INCH OR GREATER. IN ADDITION, THE ACTIVE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS AND DOCUMENT CONDITIONS AND REPAIRS MADE, ALONG WITH DATE, TIME OF INSPECTION, AND WEATHER CONDITIONS IN A DAILY LOG BOOK.

ALL REGULATORY PERMITS, PROJECT PLANS, AND INSPECTION LOGS SHALL BE KEPT ON SITE IN AN ACCESSIBLE LOCATION, SUCH AS A MAILBOX, AVAILABLE TO REGULATORY AGENCIES UPON REQUEST.

CONTRACTORS ARE TO MAINTAIN THE CONSTRUCTION SITE IN A NEAT AND TIDY MANNER FOR THE DURATION OF THE PROJECT.

THE TIMING AND SEQUENCE OF CONSTRUCTION IS SCHEDULED AS FOLLOWS:

- OBTAIN PLAN APPROVAL FROM THE CITY OF MEQUON, AND ALL APPLICABLE PERMITS, INCLUDING EROSION CONTROL PERMIT.
- CONSTRUCTION IS SCHEDULED TO BEGIN IN SPRING 2021, DEPENDING ON WEATHER & GROUND CONDITIONS.
- A GRAVEL TRACKING PAD UNDERLAIN WITH WISDOT TYPE R GEOTEXTILE FABRIC, ALONG WITH A TEMPORARY CULVERT IF NECESSARY, SHALL BE INSTALLED AS SHOWN ON THE PLANS. RE-GRADE EXISTING ROADWAY DITCH AS NECESSARY. REMOVE THE TEMPORARY CULVERT AFTER CONSTRUCTION ACTIVITIES. IF INDICATED ON PLANS, INSTALL CONSTRUCTION FENCE AND ANY TEMPORARY TRAFFIC CONTROL.
- SILT FENCE, INLET FILTER PROTECTION, AND TRIANGULAR SILT DIKES SHALL BE INSTALLED AS SHOWN ON THE PLANS, AND INSPECTED PRIOR TO COMMENCING ANY OF LAND DISTURBING ACTIVITIES PER PROJECT PLANS AND DETAILS. SEDIMENT DEPOSITS MUST BE REMOVED FROM BEHIND THE SILT FENCE WHEN THEY REACH A DEPTH OF 1/2 FENCE HEIGHT.
- FOLLOWING INSTALLATION OF THE EROSION CONTROL MEASURES, CONSTRUCT THE BIO-RETENTION BASINS TO FINISH GRADES WITH GLAY LINER PER PROJECT PLANS AND DETAILS. CONTRACTOR SHALL CONSTRUCT BASINS INLETS AND OUTLET STRUCTURES FOR USE DURING CONSTRUCTION (REFER TO DETAILS 36 & 39 ON SHEET C205 FOR ADDITIONAL INFORMATION). CONTRACTOR SHALL IMMEDIATELY STABILIZE THE BASINS BANKS, INLETS, AND OUTLET STRUCTURE.
- BIO-RETENTION BASINS SHALL, AT A MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 1/8 INCH OF RAIN OR MORE DURING A 24-HOUR PERIOD. SEDIMENT SHALL BE REMOVED, IF THE OUTLET BECOMES CLOGGED IT SHALL BE CLEARED TO RESTORE FLOW CAPACITY. SEDIMENT TO BE REMOVED AFTER CONSTRUCTION & SITE STABILIZATION IS COMPLETE.
- SITE DEMOLITION OF PAVEMENT, ETC. WILL OCCUR AFTER ALL EROSION CONTROL MEASURES ARE IN PLACE.
- CONSTRUCTION OF THE BUILDING, STARTING WITH THE FOUNDATION, WILL BEGIN IMMEDIATELY AFTER THE SITE DEMOLITION IS COMPLETE IN THE BUILDING PAD AREA.
- TOPSOIL STRIPPING AND ROUGH GRADING WILL FOLLOW. TOPSOIL STOCKPILES WILL BE LOCATED AS SHOWN ON THE PLANS AND BE STABILIZED WITHIN 7 DAYS OF LAY UP. STOCKPILES WILL BE USED FOR FINAL LANDSCAPING. REMAINING STOCKPILES WILL BE REMOVED FROM THE SITE.
- UTILITY INSTALLATION WILL OCCUR NEXT AND CONTINUE UNTIL ALL THE UTILITIES ARE INSTALLED.
- AFTER ROUGH GRADING IS COMPLETE IN HARD SURFACE AREAS SUCH AS ROADWAYS, PARKING LOTS, AND BUILDINGS, THE REQUIRED THICKNESS OF DENSE GRADED BASE COURSE, PER THE PROJECT PLANS AND DETAILS WILL BE APPLIED FOR STABILIZATION. AFTER ROUGH GRADING IS COMPLETE OUTSIDE OF HARD SURFACE AREAS, THE TOPSOIL WILL BE REAPPLIED AND THE LANDSCAPE CONTRACTOR WILL COMPLETE SEEDING/SODDING/FERTILIZING/MULCHING AND INSTALL EROSION MATTING AS PER APPROVED PLANS AND SPECIFICATIONS.
- FINAL SITE STABILIZATION IS ANTICIPATED FOLLOWING THE COMPLETION OF GRADING ACTIVITIES PER MNR TECHNICAL STANDARD 1059. IF SITE STABILIZATION CANNOT BE COMPLETED BY OCTOBER 15, THEN THE USE OF ANONIC POLYAMIDIC CONFORMING TO MNR TECHNICAL STANDARD 1050 SHALL BE USED. IN ADDITION, ALL SLOPES OF GREATER THAN 20% MUST ADHERE TO THE SCHEDULE IN TABLE 1 BELOW.
- AFTER ALL TOPSOIL HAS BEEN REAPPLIED AND STABILIZATION IS UNDERWAY, ROADWAY, PARKING LOT, AND SIDEWALK BASE MATERIAL WILL BE APPLIED PER PROJECT SPECIFICATIONS.
- THE GENERAL CONTRACTOR WILL REQUEST A FINAL INSPECTION BY THE CITY. UPON APPROVAL, ALL SILT FENCES, INLET FILTER PROTECTION, AND TRIANGULAR SILT DIKES SHALL BE REMOVED, AND ACCUMULATED SEDIMENT IN THE SEDIMENT BASINS AND BIO RETENTION BASINS SHALL BE DREDGED AND PROPERLY DISPOSED OF. IN ADDITION, THE CONTRACTOR MUST ENSURE THAT THE STORM WATER POND IS RETURNED TO THE SLOPES AND GRADES SHOWN ON THE PROJECT PLANS AND DETAILS.
- IF REQUIRED, FINAL "AS-BUILT" SURVEYS ARE TO BE CONDUCTED BY THE OWNER AND FINAL DOCUMENTS FORWARDED TO THE CITY.
- BARE SOIL LEFT UNDISTURBED FOR 14 CALENDAR DAYS MUST BE TEMPORARILY STABILIZED PER MNR TECHNICAL STANDARD 1059. BY OCTOBER 15, THE SITE SHALL BE STABILIZED PER NOTE 12 ABOVE.
- WE DO NOT ANTICIPATE THE NEED FOR WATERING WITH THIS CONSTRUCTION SCHEDULE, HOWEVER, IF ADEQUATE RAIN IS NOT EXPERIENCED WITHIN ONE WEEK AFTER INITIAL SEED GERMINATION AT ANY POINT DURING THE CONSTRUCTION PROCESS, WATER SHALL BE TRUCKED IN AND APPLIED ONCE PER WEEK.

IF CONSTRUCTION SCHEDULES SHOULD CHANGE SIGNIFICANTLY, THIS PLAN NARRATIVE WILL BE UPDATED AND RESUBMITTED BY THE GENERAL CONTRACTOR TO THE CITY AND MNR.

TABLE 1 - MAXIMUM PERIOD OF BARE SOIL FOR SLOPES GREATER THAN 20%		
SLOPE AREA DRAINS TO SEDIMENT BASIN?	LAND DISTURBANCE BETWEEN SEPT. 16 AND MAY 1	LAND DISTURBANCE BETWEEN MAY 2 AND SEPT. 15
YES	90 DAYS	90 DAYS
NO	60 DAYS	30 DAYS

TABLE FROM WI DNR GUIDANCE DOC # 3800-2015-06

DEWATERING PLAN

TO FACILITATE CONSTRUCTION AT THE PROJECT SITE, DEWATERING MAY TAKE PLACE BY THE SELECTED CONTRACTOR FOLLOWING THESE INSTRUCTIONS WHILE PERFORMING DEWATERING ACTIVITIES ON-SITE. IF DEWATERING IS TO TAKE PLACE AT THE SITE, IT WILL OCCUR BETWEEN STEPS 3 AND 14 OF THE EROSION CONTROL OPERATION SEQUENCE.

NOTE: THESE INSTRUCTIONS DO NOT APPLY TO WATER BEING DISCHARGED DIRECTLY TO GROUNDWATER OR KARST FEATURES OR WELL DEWATERING SYSTEMS. CONTRACTOR SHALL COORDINATE ACCORDINGLY FOR OTHER DEWATERING ACTIVITIES AS DEEMED NECESSARY WITH THE MNR.

- THE CONTRACTOR SHALL ENSURE THAT THE DEWATERING PRACTICES CARRIED OUT MEET OR EXCEED MNR TECHNICAL STANDARD NUMBER 1061.
- A PAN OR OTHER CONTAINMENT DEVICE SHALL BE PLACED UNDERNEATH THE PUMP TO CAPTURE ANY SPILLS. OILS, GASOLINE, ETC. SHALL NOT BE STORED WITHIN WETLANDS, NEAR THE STORMWATER POND, OR OTHER ON-SITE WATER AREAS.
- A TYPE 2 GEOTEXTILE BAG THAT IS NO SMALLER THAN 100 SQUARE FEET; HAS A MAXIMUM APPARENT OPENING SIZE OF 0.212 mm; HAS A GRAB TENSILE STRENGTH OF 300 LBS; MULLER BURST OF 180 PSI; PERMEABILITY OF 0.2 CM/SEC; FABRIC WEIGHT OF 12 OZ SHALL BE USED. THE GEOTEXTILE BAG AREA AND DOWNGRADE FLOW AREA SHALL CONSIST OF VEGETATED AND UNDISTURBED SOILS.

- POLYMER APPROVED BY THE MNR MEETING MNR TECHNICAL STANDARD 1051 MAY BE USED IN COMBINATION WITH THE DEWATERING BAG. IF THE DEWATERING BAG IS NOT DONE AN ADEQUATE JOB ALONE OF FILTERING SEDIMENTS, THE CONTRACTOR SHALL SUPPLY TOXICITY TESTING DATA TO THE MNR BEFORE USE ON-SITE FOR MNR APPROVAL. POLYMER SHALL NOT BE DIRECTLY APPLIED TO SURFACE WATER. CONTRACTOR SHALL OBTAIN THE MATERIAL SAFETY DATA SHEETS (MSDS) FOR THE SELECTED POLYMER, MANUFACTURER'S INFORMATION AND MNR USE RESTRICTIONS (SEE TECHNICAL STANDARD 1051) AND KEEP ALL THIS INFORMATION ON-SITE. CONTRACTOR SHALL ADHERE TO MANUFACTURER AND MNR'S APPLICATION RATES FOR THE POLYMER WITH THE MNR'S RATE TAKING PRECEDENCE. THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT THE POLYMER IS NOT SPILLED. SPILL KITS SHALL BE KEPT ON SITE. THE MANUFACTURER'S RECOMMENDED CLEANUP PROCEDURES SHALL BE FOLLOWED IN THE EVENT OF A SPILL.
- A TARP MAY BE UTILIZED UNDERNEATH THE TYPE 2 GEOTEXTILE BAG AND JUST DOWN SLOPE OF THE BAG TO DISCOURAGE EROSION AND SCOUR.
- A FLOATING SUCTION HOSE OR OTHER FLOTATION METHOD SHALL BE UTILIZED WHEN PUMPING FROM AN AREA WITH STANDING WATER TO AVOID SUCKING SEDIMENT FROM GRADE.
- IF TURBID WATER IS LEAVING THE GEOTEXTILE BAG, THE CONTRACTOR SHALL SHUT OFF THE PUMP TO ALLOW SEDIMENTS TO SETTLE INTO THE BAG. CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S SPECIFICATIONS FOR DETERMINING THE SEDIMENT CAPACITY OF THE GEOTEXTILE BAG USING GOOD COMMON SENSE. SEDIMENT LEVELS CONTAINED IN THE BAG SHALL BE MONITORED TO MEASURE THE LOSS OF STORAGE CAPACITY OVER TIME. THE CONTRACTOR SHALL PROPERLY DISPOSE OF THE GEOTEXTILE BAG IN A WASTE RECEPTACLE ONCE IT IS NO LONGER USED.

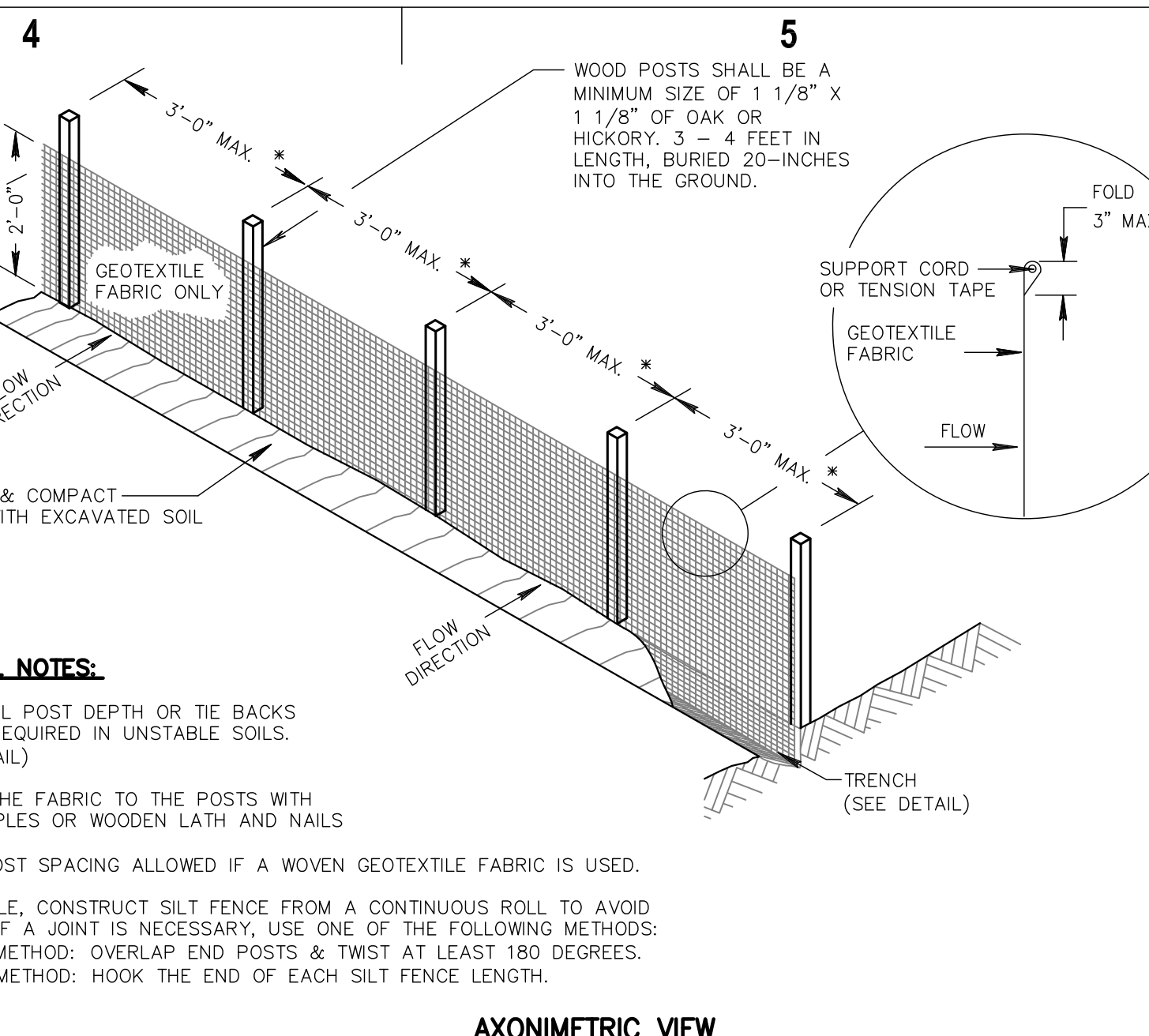
- DURING DEWATERING ACTIVITIES THE CONTRACTOR SHALL MONITOR DEWATERING PRACTICES AND KEEP A LOG OF THE FOLLOWING:
A. DISCHARGE DURATION AND SPECIFIED PUMPING RATE.
B. OBSERVED WATER TABLE AT TIME OF DEWATERING.
C. MAINTENANCE ACTIVITIES.
D. NAME AND QUANTITY OF POLYMER USED. PRODUCT TYPE, APPLICATION RATE OF POLYMER IN POUNDS/ACRE FEET OF WATER, DATE AND TIME APPLIED, WEATHER CONDITIONS DURING APPLICATION, METHOD OF APPLICATION.

THIS LOG NEEDS TO BE KEPT ON SITE FOR MNR REGULATORY REVIEW. COPIES OF THIS DOCUMENTATION SHOULD BE KEPT IN THE CONTRACTOR'S MONITORING LOG AND MADE AVAILABLE UPON REQUEST.

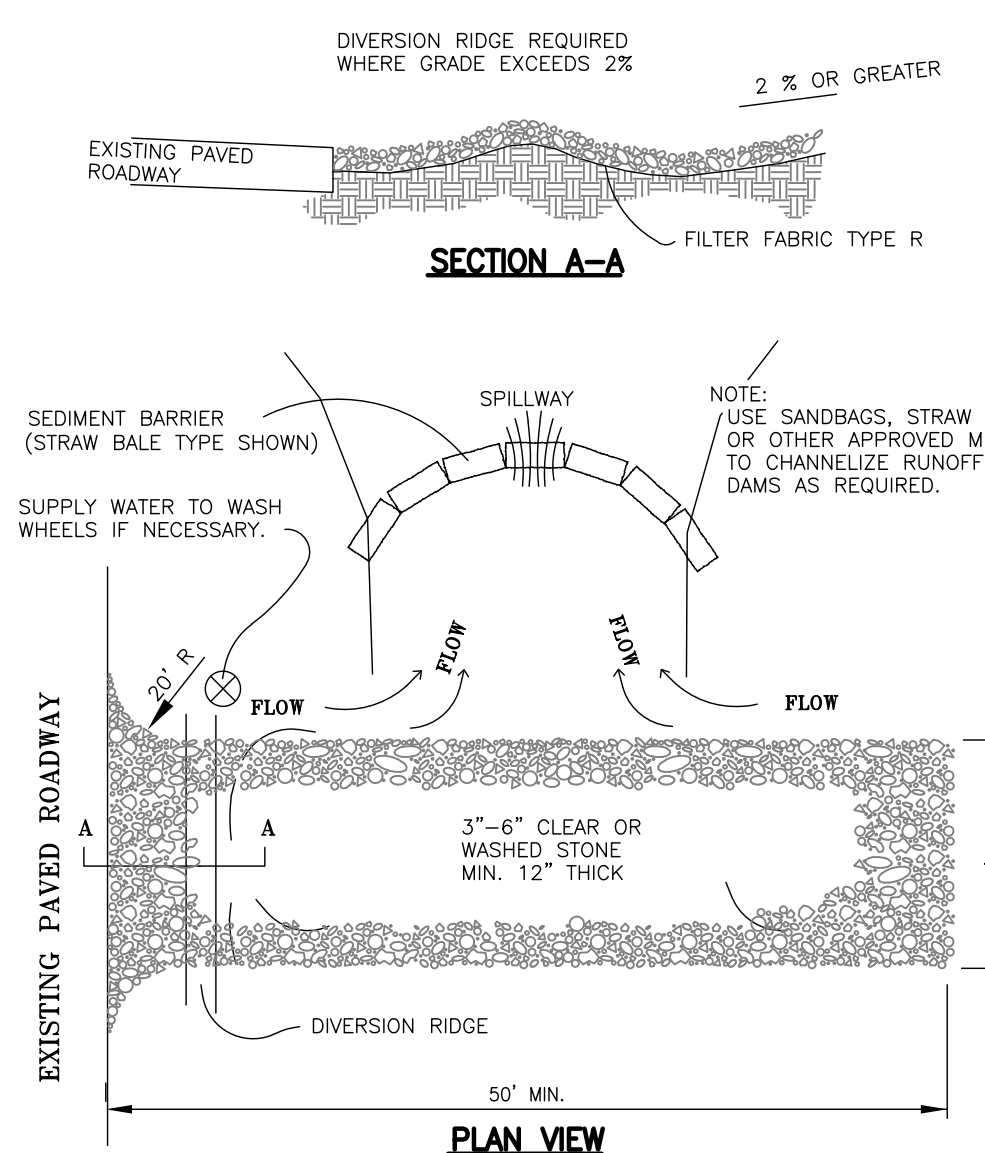
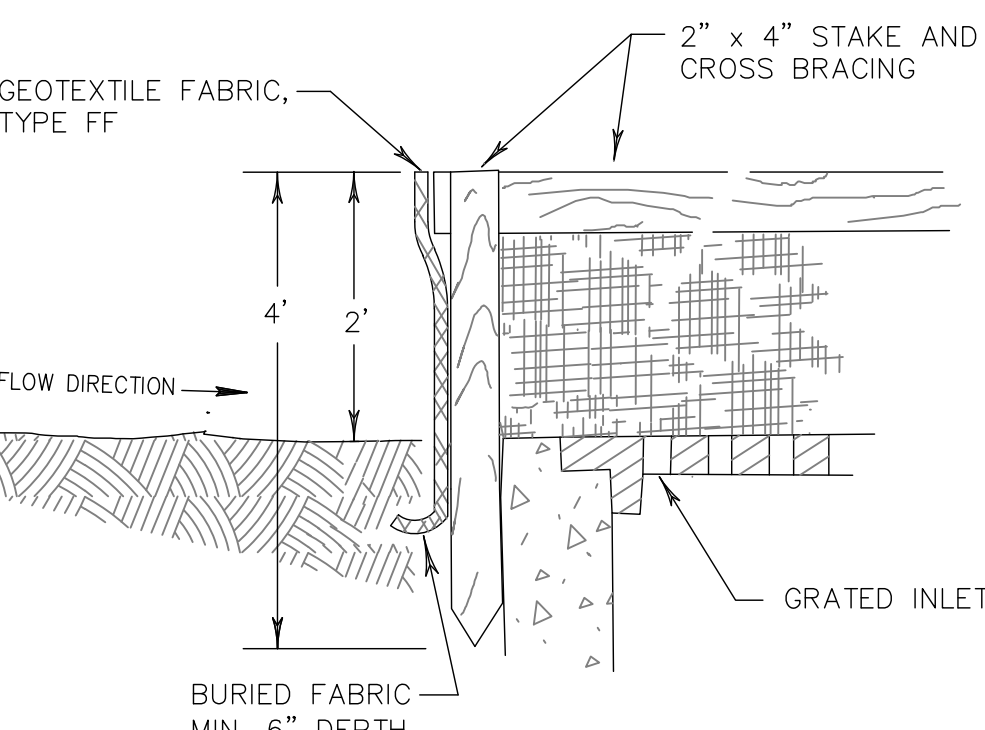
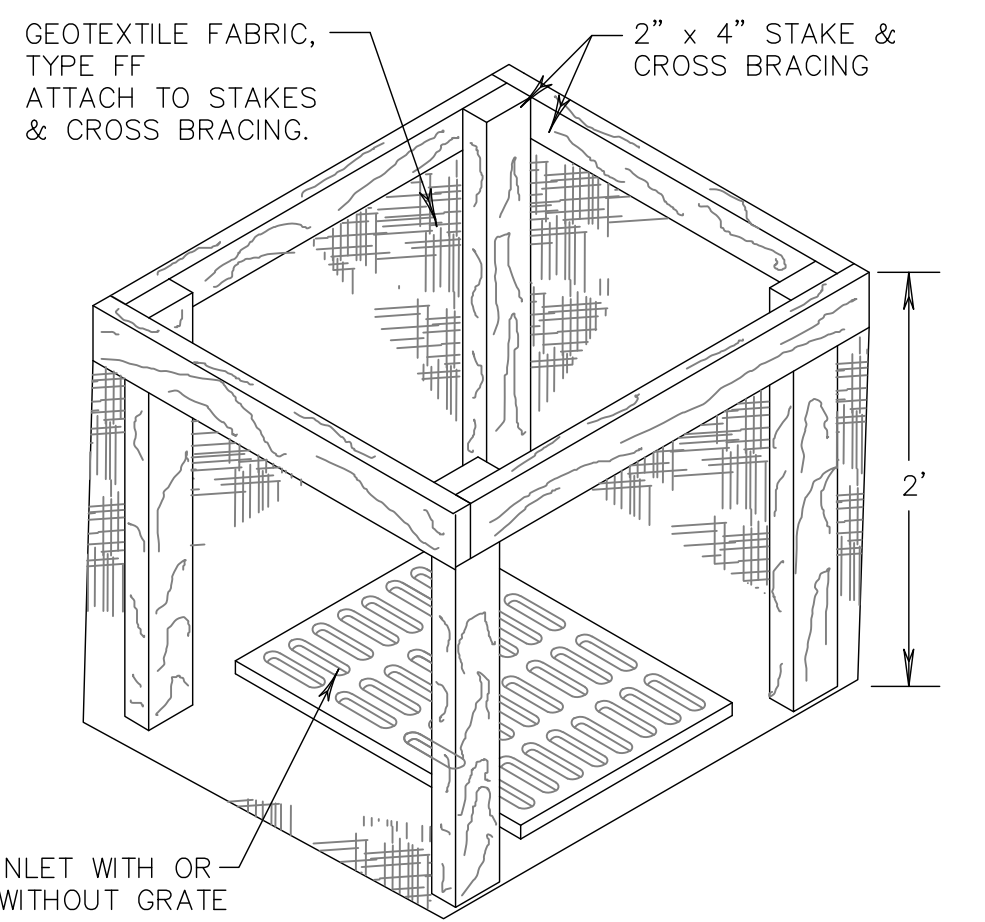
REVIEW THE FOLLOWING FOR MORE INFORMATION:
MNR TECHNICAL STANDARD 1061 FOR DEWATERING - <http://dnr.wi.gov/topic/stormwater/documents/dewatering-1061.pdf>
MNR TECHNICAL STANDARD 1051 FOR POLYMER - <http://dnr.wi.gov/topic/stormwater/documents/dnr1051.pdf>

INSPECT ALL EROSION CONTROL MEASURES PRIOR TO COMMENCING GRADING, GRUBBING OR OTHER LAND DISTURBING ACTIVITIES. EROSION CONTROL MEASURES MUST BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF EVERY PRECIPITATION EVENT OF 0.50 INCH OR GREATER. IN ADDITION, THE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS AND DOCUMENT CONDITIONS AND REPAIRS MADE, ALONG WITH DATE, TIME OF INSPECTION AND WEATHER CONDITIONS IN A DAILY LOG BOOK. THE DAILY LOG BOOK, WEEKLY 0.50 INCH PRECIPITATION REPORTS, APPROVED PLANS W/DES PERMIT & CHAPTER 30 PERMIT SHALL BE KEPT IN AN ACCESSIBLE LOCATION, SUCH AS A MAILBOX, WITHIN THE STAGING AREA.

AT ABSOLUTELY NO TIME MAY CONSTRUCTION EQUIPMENT, DEBRIS, FILL, ETC. BE PLACED WITHIN WETLANDS, WATERWAYS OR FLOODPLAINS UNLESS IDENTIFIED IN THE PLANS & APPROVED BY DNR/USACE.



AXONOMETRIC VIEW

1 FILTER FABRIC SILT FENCE DETAIL
N.T.S.2 STONE TRACKING CONSTRUCTION ENTRANCE
N.T.S.3 TRIANGULAR SILT DIKE
N.T.S.

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C WITH CURB BOX

GENERAL NOTES

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- FINISHED SIDE SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL. SIDE FLAPS, WHEN REQUIRED SHALL BE A MIN. OF TWO INCHES LONG. FOLD THE FABRIC OVER AND REINFORCE WITH MULTIPLE STITCHES.
- FOR INLET PROTECTION, TYPE C (WITH CURB BOX), FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2"x4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE FLAP AND NOT BLOCK THE TOP HALF OF THE CURB BOX OPENING.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC A MINIMUM OF 10" AROUND GRATE FOR MAINTENANCE OR REMOVAL. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

UTILIZE INLET PROTECTION TYPE D IN INLETS DEEPER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR MAY PINCH THE BAG, USING PLASTIC ZIP TIES, TO FIT INLETS LESS THAN 30" DEPTH. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

4 INLET PROTECTION DETAIL
N.T.S.

INSTALLATION NOTES

TRIM EXCESS FABRIC A MINIMUM OF 10" AROUND GRATE FOR MAINTENANCE OR REMOVAL. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

UTILIZE INLET PROTECTION TYPE D IN INLETS DEEPER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR MAY PINCH THE BAG, USING PLASTIC ZIP TIES, TO FIT INLETS LESS THAN 30" DEPTH. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



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303.595.4500

PROJECT INFORMATION

MTSD - LAKE SHORE MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217

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SHEET INFORMATION

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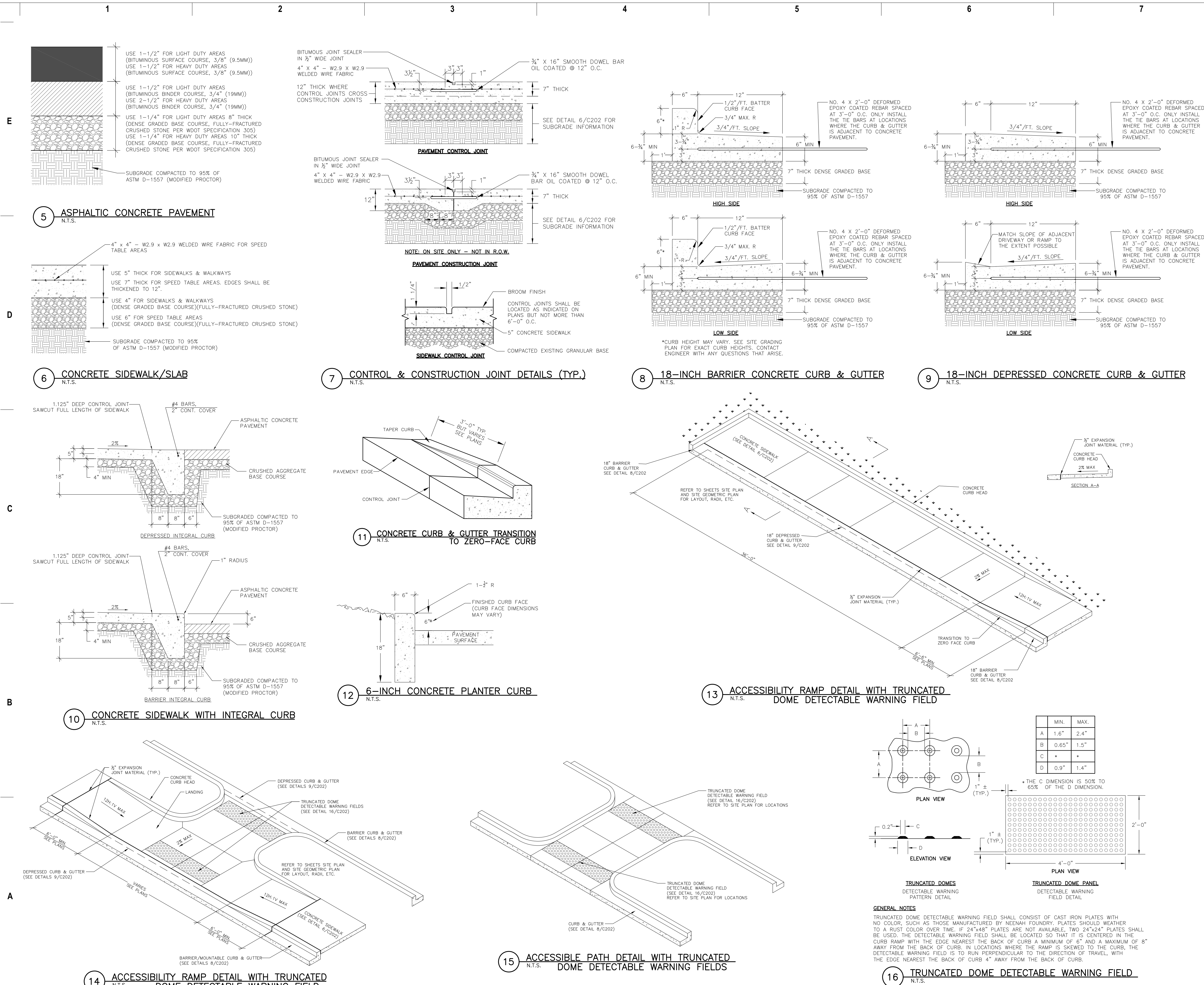
PROJECT MANAGER CR

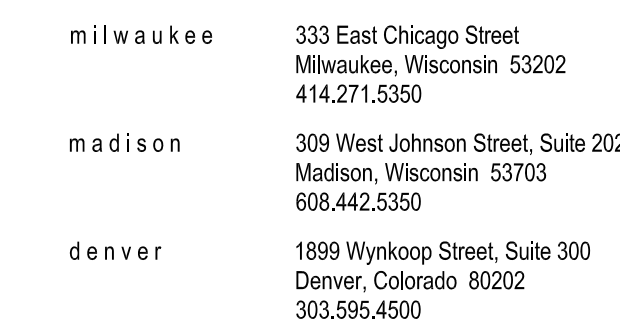
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SITE DETAILS

C202

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MTSD - LAKE SHORE
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Rd #4930, Mequon, W
53092

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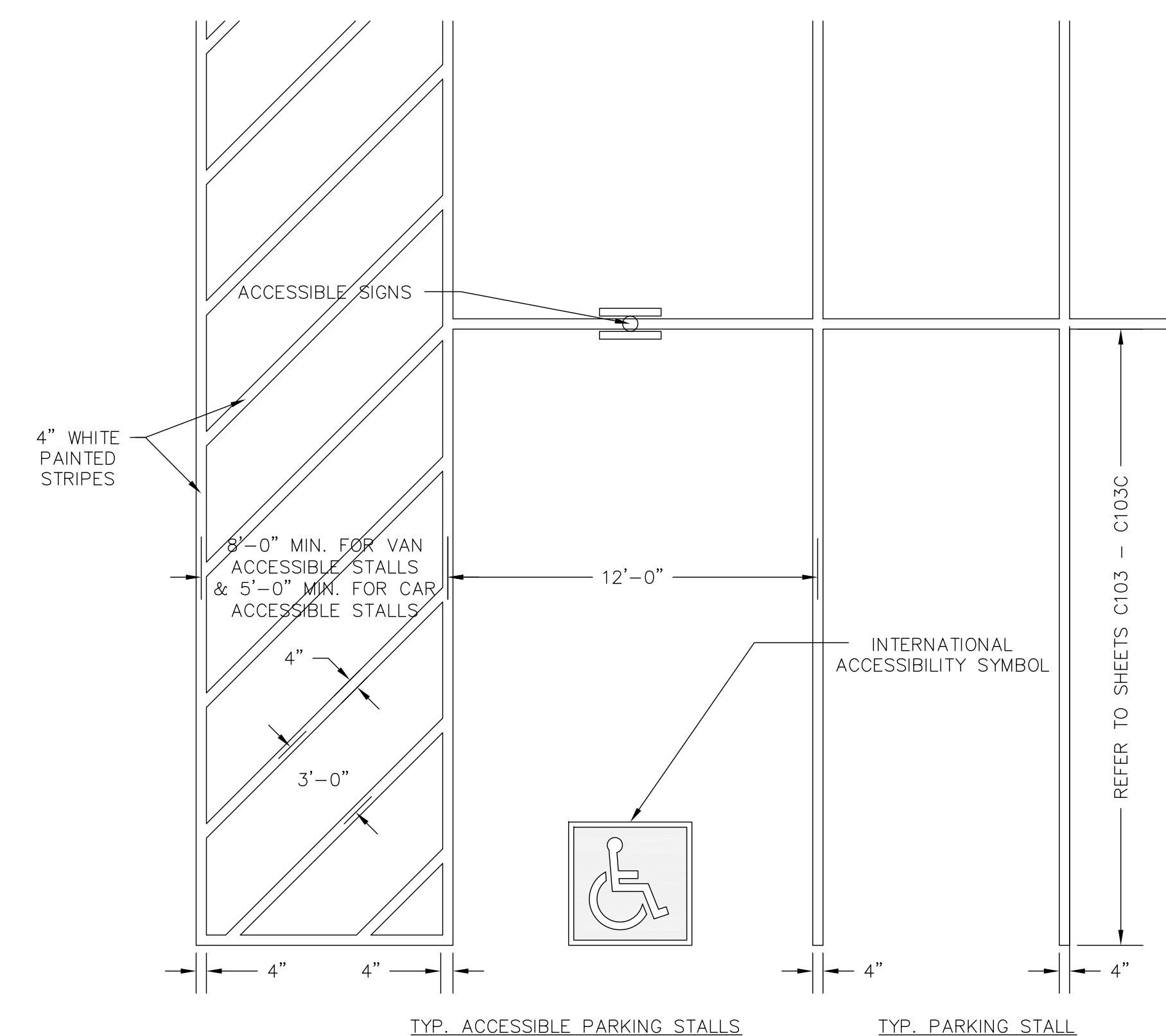
PROJECT MANAGER CF

PROJECT NUMBER 318480-0

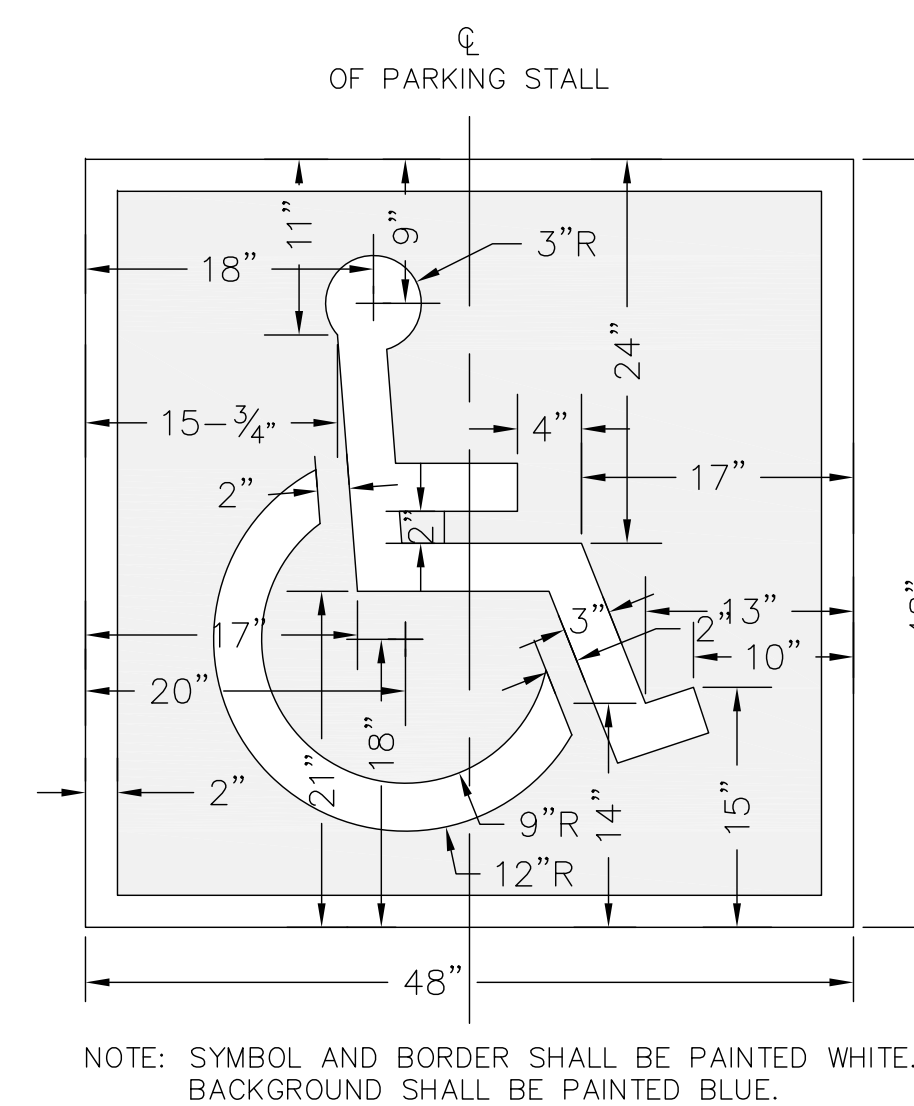
SITE DETAILS

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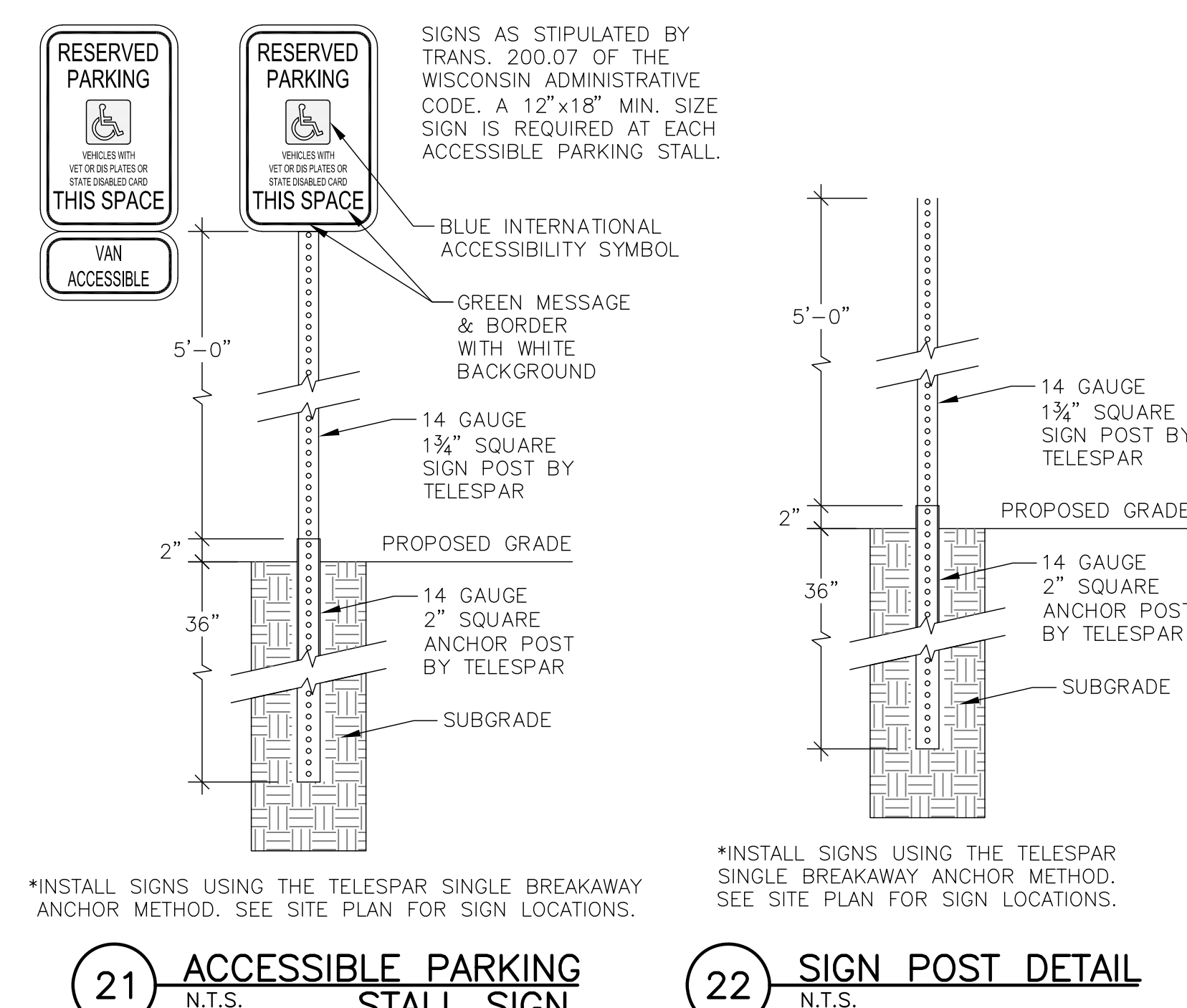
Packet Pg. 87



18 ACCESSIBLE PARKING STALL MARKING
N.T.S.



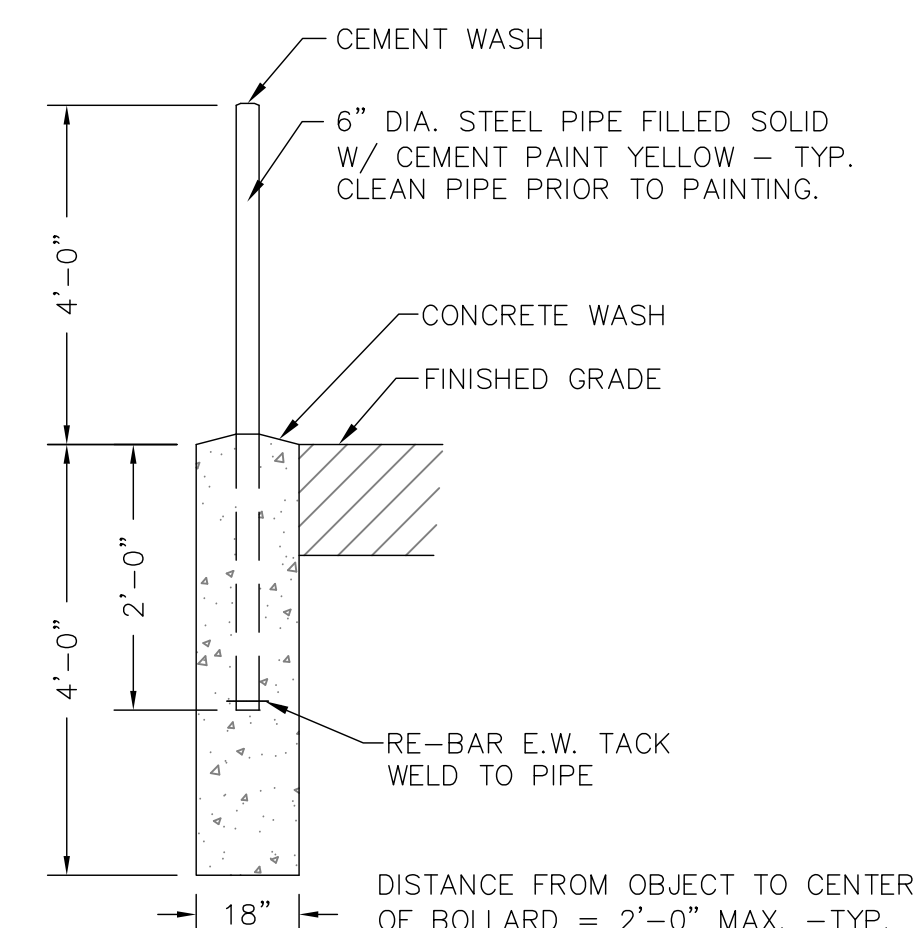
20 ACCESSIBLE PARKING STALL SYMBOL
N.T.S.



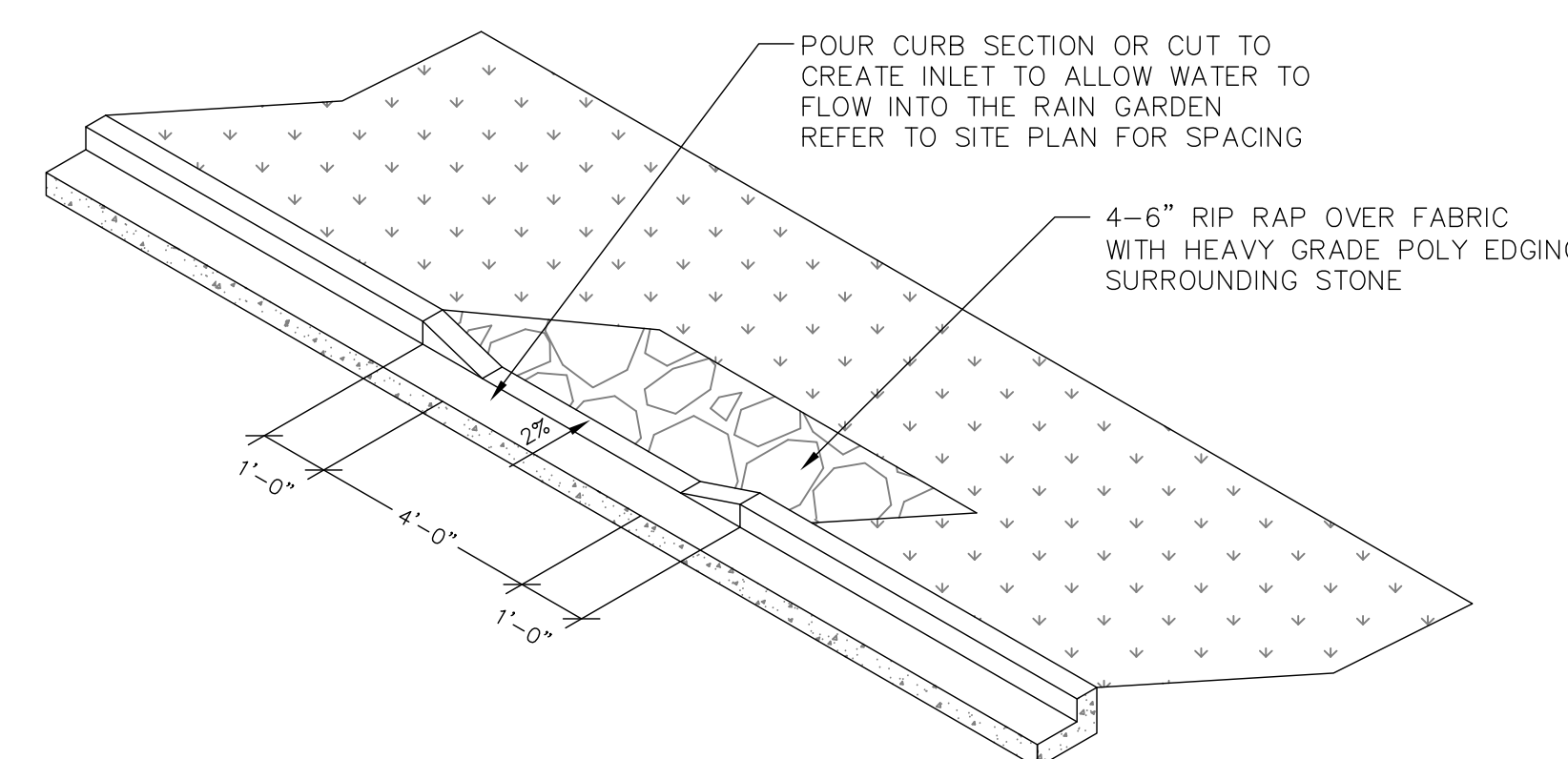
21 ACCESSIBLE PARKING
N.T.S. STALL SIGN

22 SIGN POST DETAIL
N.T.S.

19	ACCESSIBLE PARKING STALL MARKING
	N.T.S.



23 STEEL BOLLARD
N.T.S.



24 CURB CUT DETAIL WITH RIPRAP



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PROJECT INFORMATION

MTSD - LAKE SHORE MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
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ISSUANCE AND REVISIONS

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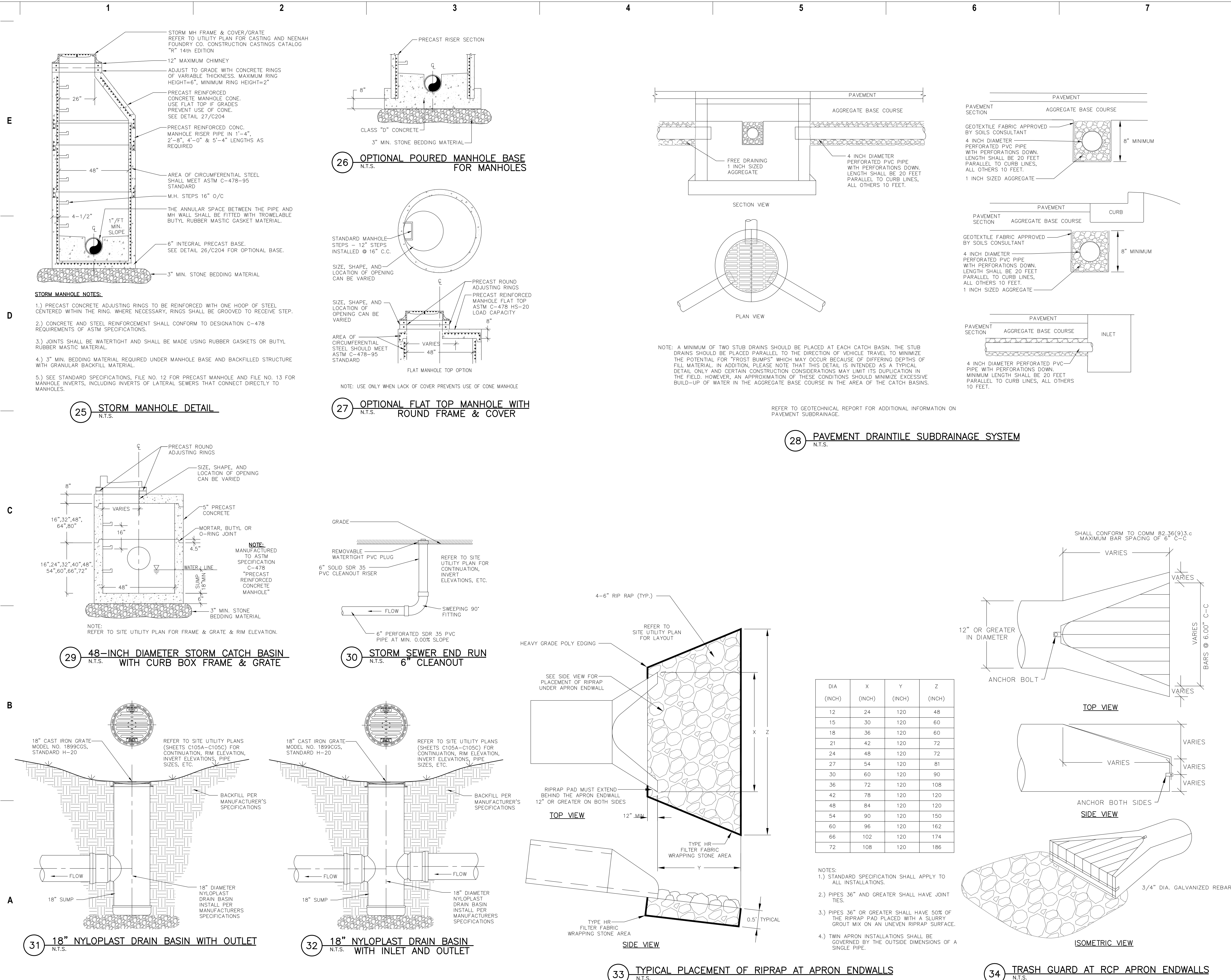
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PROJECT MANAGER CR
PROJECT NUMBER 318480-01

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PROJECT INFORMATION

MTSD - LAKE SHORE MIDDLE SCHOOL

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Rd #4930, Mequon, WI
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DATE	DESCRIPTION
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11/16/2020	PLAN COMMISSION

KEY PLAN



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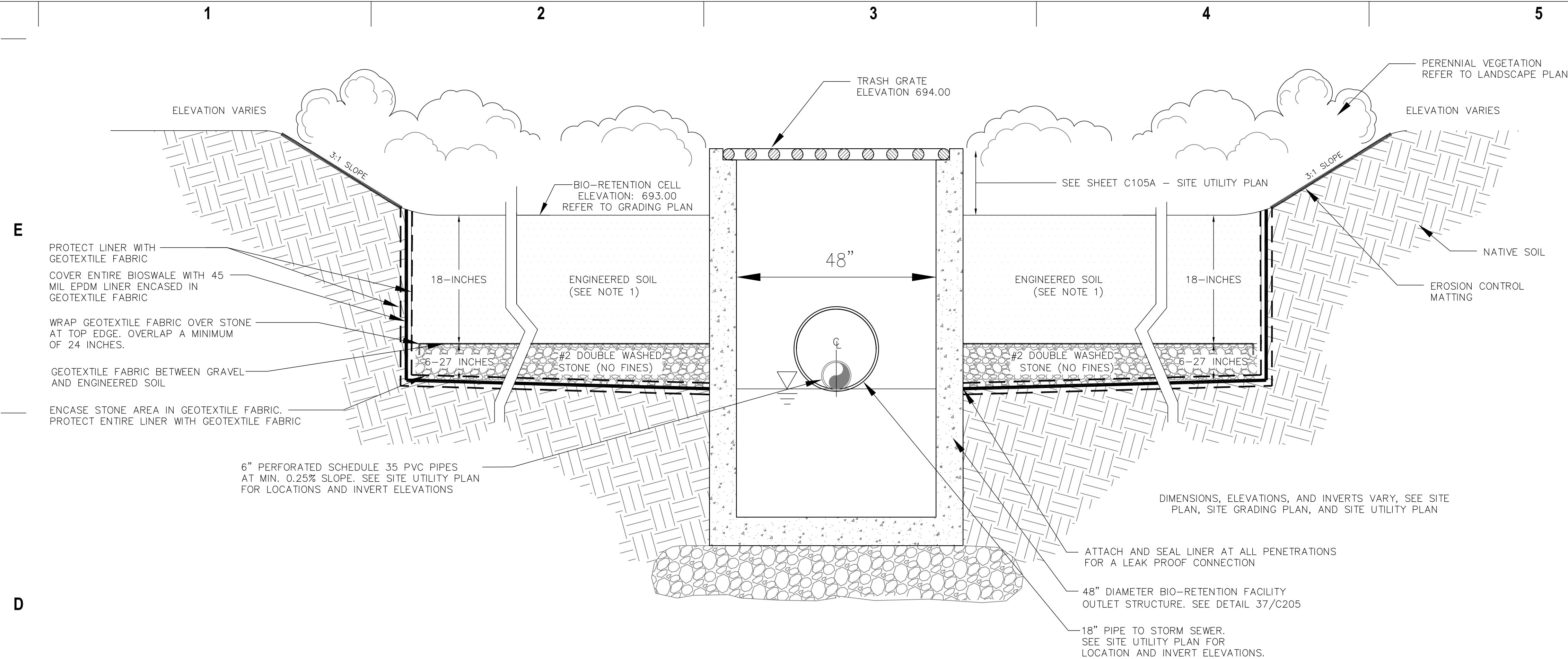
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PROJECT NUMBER 318480-01

SITE DETAILS

C205

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NOTE 1: THE BIO-RETENTION BASIN WILL FUNCTION AS A TEMPORARY SEDIMENT BASIN DURING LAND DISTURBING CONSTRUCTION ACTIVITIES. THE SEDIMENT BASIN SHALL BE CONSTRUCTED WITHIN THE FOOTPRINT OF THE FUTURE BIO-RETENTION BASIN AND EXCAVATED TO A DEPTH OF 3 FEET BELOW THE TOP ELEVATION OF THE ENGINEERED SOIL TO ALLOW FOR 3 FEET OF PONDING. ALL HEAVY EQUIPMENT AND CONSTRUCTION TRAFFIC IS PROHIBITED WITHIN THE FOOTPRINT OF THE BIO-RETENTION BASIN/SEDIMENT BASIN. THE SEDIMENT BASIN SHALL BE CONSTRUCTED IN ACCORDANCE TO WISCONSIN DNR TECHNICAL STANDARD 1064 UNLESS SHOWN OTHERWISE IN PLANS OR SPECIFICATIONS. IF SEDIMENT BASIN NEEDS TO BE DEWATERED IT SHALL BE DONE IN ACCORDANCE TO WISCONSIN DNR TECHNICAL STANDARD 1061.

NOTE 2: FOLLOWING SITE STABILIZATION, THE SEDIMENT BASIN SHALL BE DEWATERED AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND PROPERLY DISPOSED. FOLLOWING SEDIMENT REMOVAL, THE BASIN WILL NO LONGER ACT AS A TEMPORARY SEDIMENT BASIN AND THEREFORE NO SEDIMENT LADEN WATER FROM CONSTRUCTION ACTIVITIES SHALL BE ALLOWED TO DISCHARGE INTO THE BASIN.

NOTE 3: CONSTRUCTION OF THE BIO-RETENTION BASIN SHALL BEGIN ONLY AFTER THE SITE HAS BEEN FULLY DEVELOPED AND STABILIZED FROM EROSION AND ANY ACCUMULATED SEDIMENT WITHIN THE BASIN HAS BEEN DISPOSED.

NOTE 4: ONCE CONSTRUCTION OF THE BIO-RETENTION BASIN BEGINS, ALL HEAVY EQUIPMENT AND CONSTRUCTION TRAFFIC IS STILL PROHIBITED WITHIN THE FOOTPRINT OF THE BIO-RETENTION BASIN. INSTALL CONSTRUCTION FENCING TO PREVENT TRAFFIC AS NEEDED. PLACEMENT OF THE ENGINEERED SOIL LAYERS SHALL BE COMPLETED WITH A BACKHOE FROM THE SIDE SLOPES OF THE BASIN. EVERY EFFORT SHALL BE MADE TO AVOID THE COMPACTION OF THE ENGINEERED SOIL WITHIN THE BASIN DURING AND AFTER CONSTRUCTION. IF COMPACTION OCCURS, REFER TO DNR TECHNICAL STANDARD 1004 FOR COMPACTION REMEDIATION.

NOTE 5: BASIN CONSTRUCTION SHALL BE SUSPENDED DURING PERIODS OF RAINFALL OR SNOWMELT. CONSTRUCTION SHALL REMAIN SUSPENDED IF PONDING WATER IS PRESENT OR IF RESIDUAL SOIL MOISTURE CONTRIBUTES SIGNIFICANTLY TO THE POTENTIAL FOR SOIL SMEARING, CLUMPING, OR OTHER FORMS OF COMPACTION.

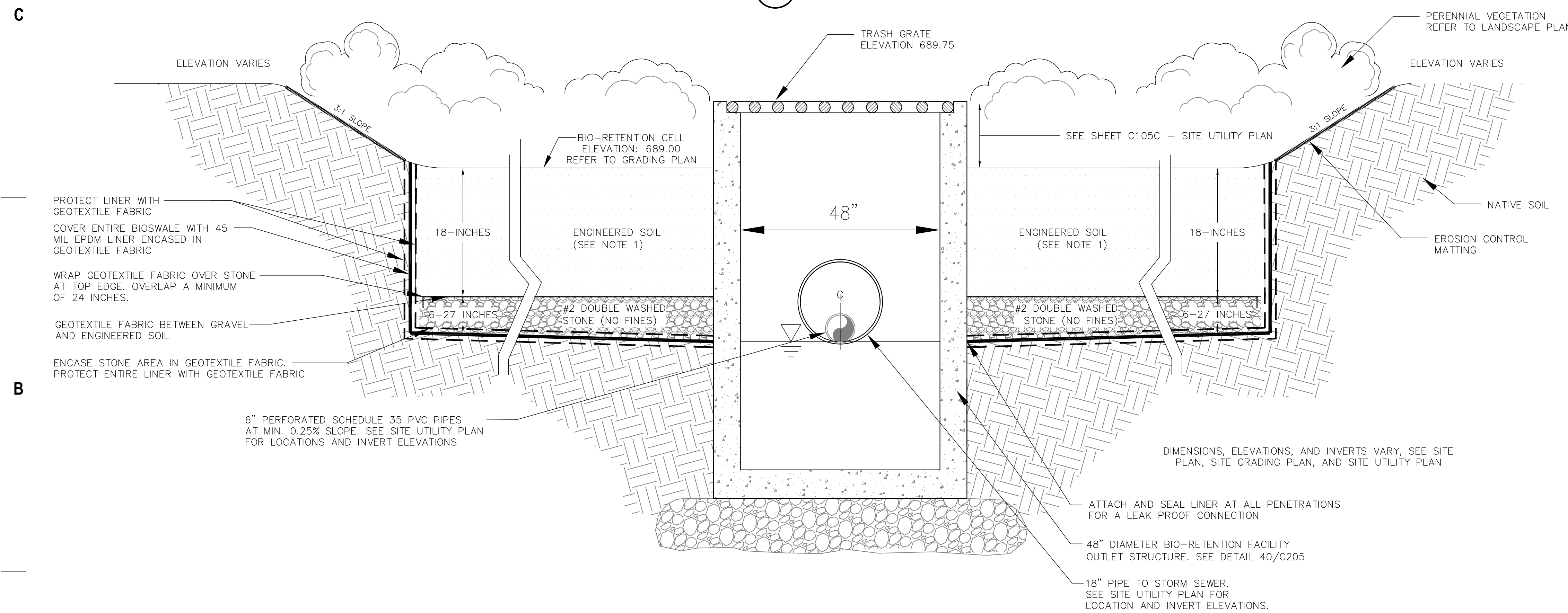
NOTE 6: ENGINEERED SOIL CONSIST OF: 70% PRE-WASHED, COARSE DOLOMITIC SAND AND 30% COMPOST (SHALL MEET DNR SPECIFICATION 100; AVAILABLE AT S & R COMPOST, WAUKESHA, WI OR PURPLE COW ORGANICS, OCONOMOWOC, WI)

NOTE 7: CONSTRUCT PER WISCONSIN DNR TECHNICAL STANDARD 1004 BIORETENTION FOR INFILTRATION UNLESS INDICATED IN SPECIFICATIONS AND DETAILS.

NOTE 8: REFER TO SPECIFICATION 32 92 00 PLANTS FOR ADDITIONAL INFORMATION.

NOTE 9: DIMENSIONS, ELEVATIONS, AND INVERTS VARY. SEE SITE PLAN, SITE GRADING PLAN, AND SITE UTILITY PLAN

35 BIO-RETENTION 1 N.T.S.



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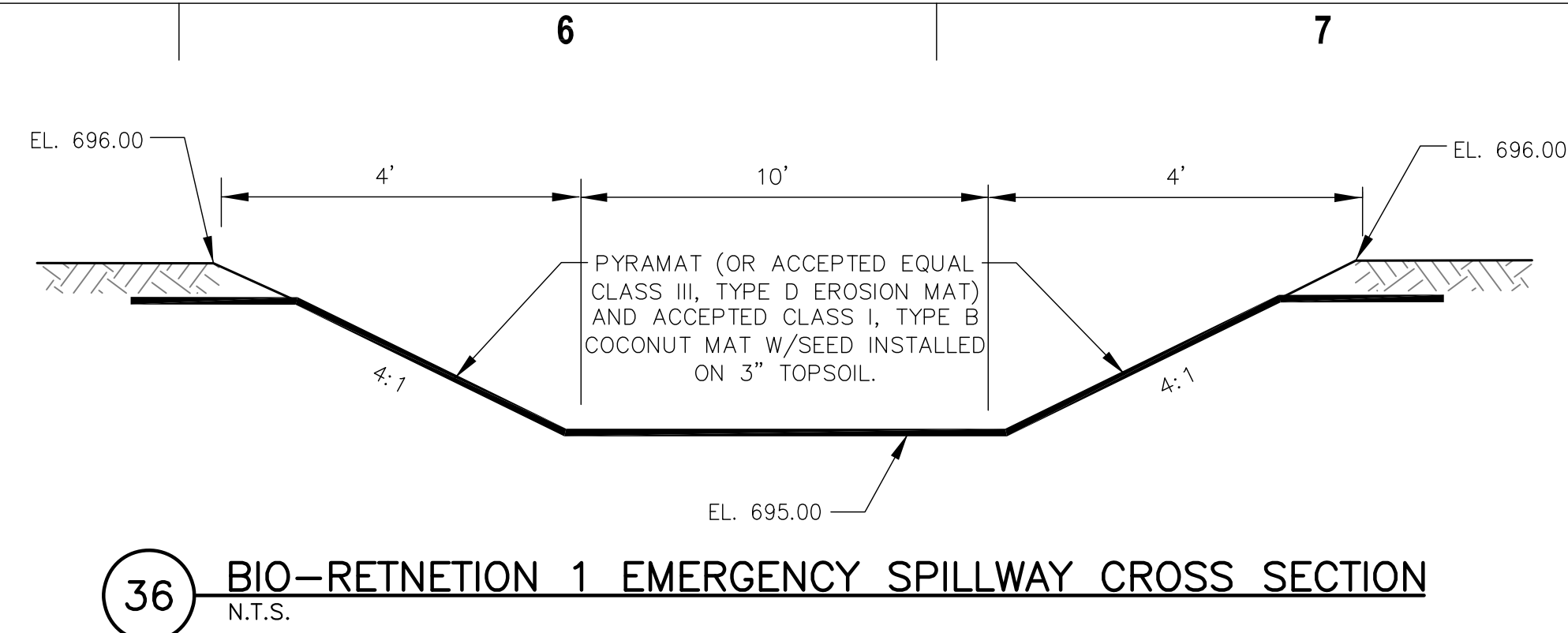
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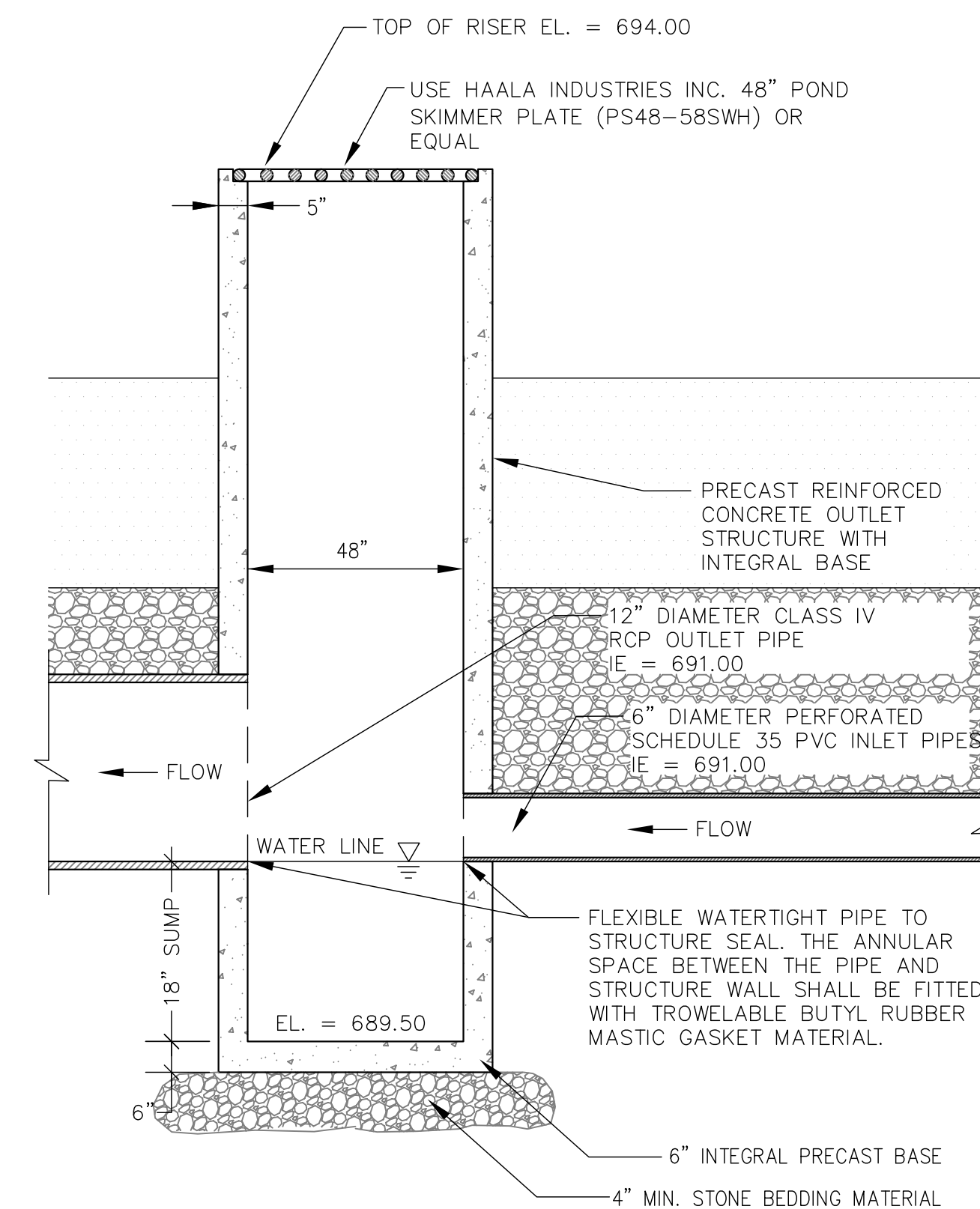
NOTE 8: REFER TO SPECIFICATION 32 92 00 PLANTS FOR ADDITIONAL INFORMATION.

NOTE 9: DIMENSIONS, ELEVATIONS, AND INVERTS VARY. SEE SITE PLAN, SITE GRADING PLAN, AND SITE UTILITY PLAN

38 BIO-RETENTION 2 N.T.S.



36 BIO-RETENTION 1 EMERGENCY SPILLWAY CROSS SECTION N.T.S.



OUTLET STRUCTURE NOTES:

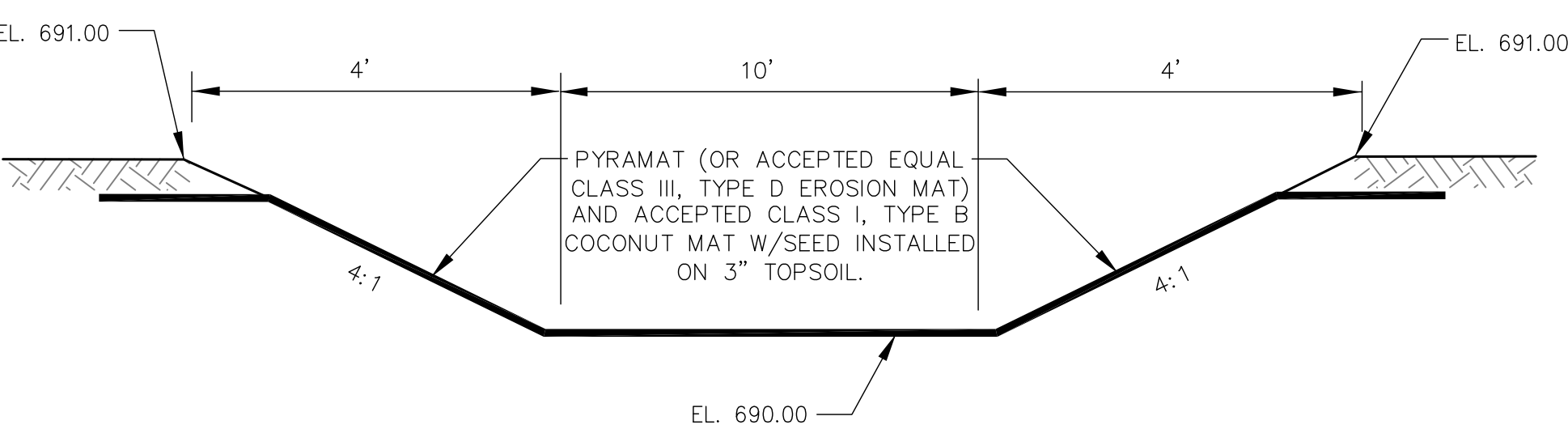
1. PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP.

2. CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.

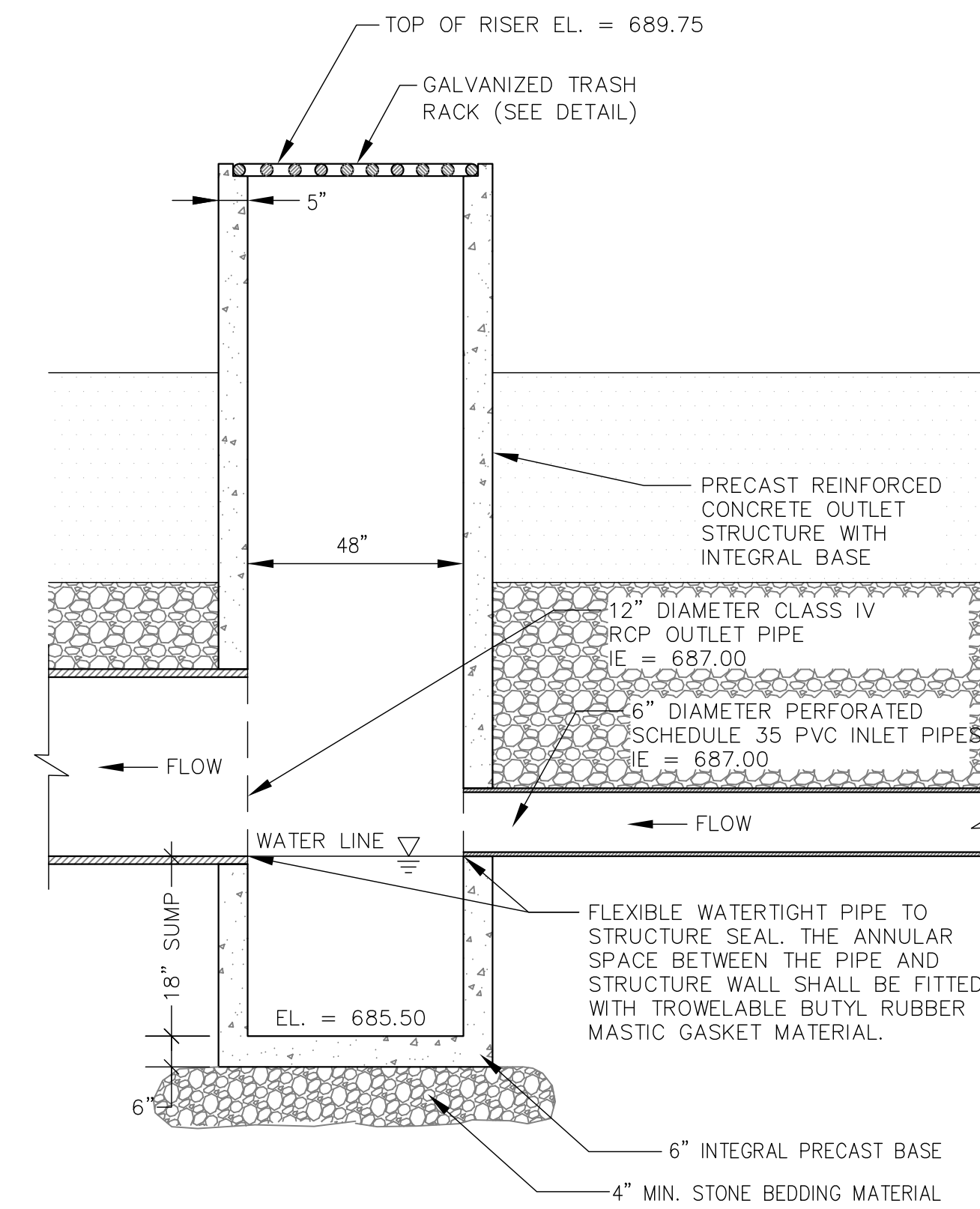
3. JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.

4. 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE. BACKFILL STRUCTURE WITH GRANULAR BACKFILL MATERIAL.

37 48-INCH DIAMETER BIO-RETENTION 1 OUTLET STRUCTURE N.T.S.



39 BIO-RETENTION 2 EMERGENCY SPILLWAY CROSS SECTION N.T.S.



OUTLET STRUCTURE NOTES:

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4. 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE. BACKFILL STRUCTURE WITH GRANULAR BACKFILL MATERIAL.

40 48-INCH DIAMETER BIO-RETENTION 2 OUTLET STRUCTURE N.T.S.



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PROJECT INFORMATION

MTSD - LAKE SHORE
MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN

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PROJECT MANAGER CR

PROJECT NUMBER 318480-01

OVERALL SITE
LANDSCAPE PLAN

L101

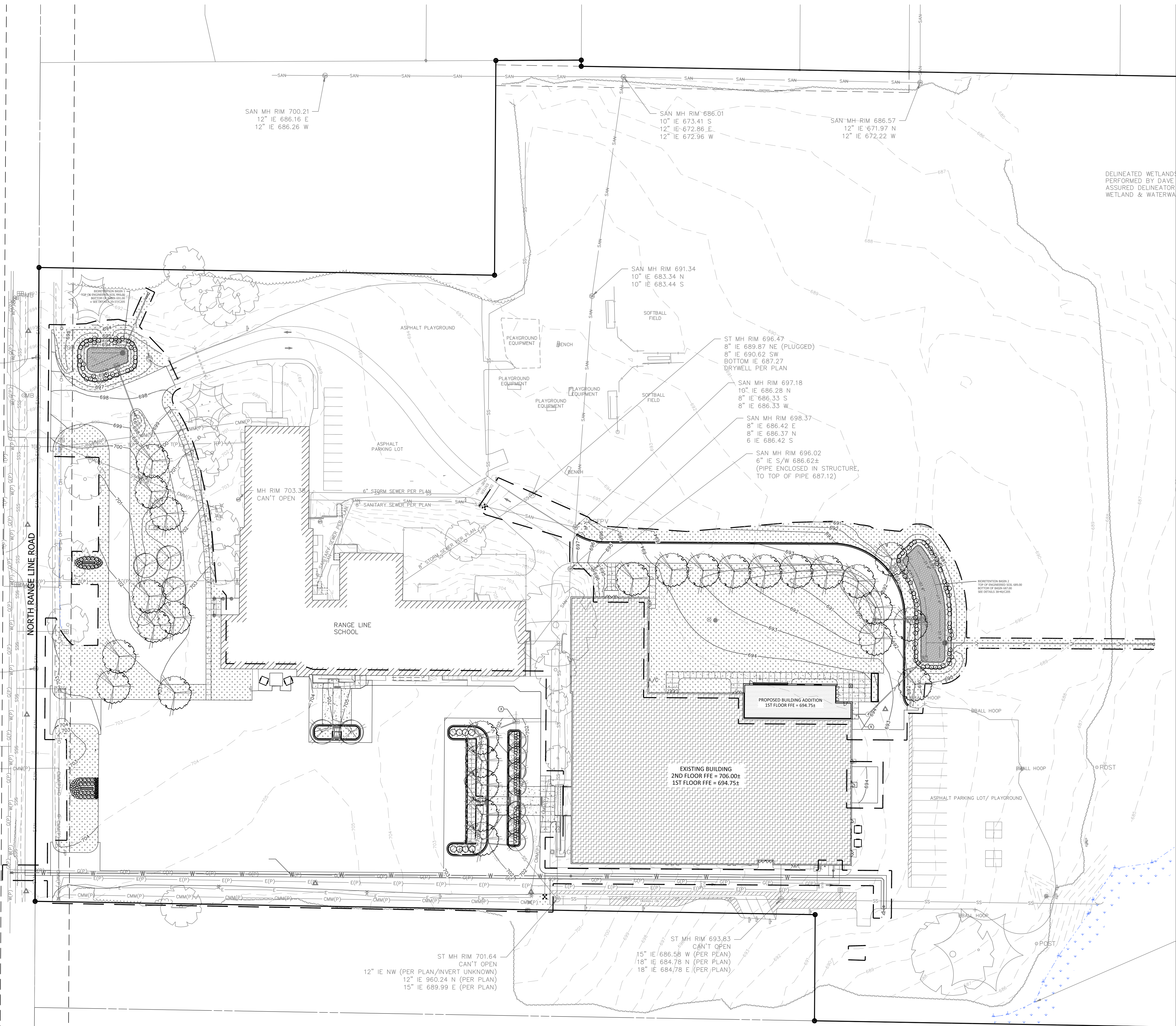


Scale: 0 20 40 80
Scale: 1" = 40'



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DELINEATED WETLANDS
PERFORMED BY DAVE
ASSURED DELINEATOR
WETLAND & WATERWAY



HATCH LEGEND

- AREAS DISTURBED BY CONSTRUCTION
TO BE RESTORED WITH MINIMUM 4" TOPSOIL,
KENTUCKY BLUE GRASS SEED, FERTILIZER,
AND MULCH (TYP). USE SALVAGED TOPSOIL
OR IMPORT TOPSOIL IF REQUIRED.
- AREAS DISTURBED BY CONSTRUCTION
TO BE RESTORED WITH MINIMUM 4" TOPSOIL, NO
MOW FESCUE WITH ANNUAL RYE GRASS SEED,
FERTILIZER, AND MULCH (TYP). USE SALVAGED
TOPSOIL OR IMPORT TOPSOIL IF REQUIRED.
- MIX 1: 3" PLUG PLANTINGS IN BIORETENTION
AREA. REFER TO CIVIL AND LANDSCAPE
DETAILS. PLUGS TO BE PLANTED 12-INCHES O.C.

SHADE COVERAGE STUDY:
NEW NW TURN AROUND DRIVE: 7.47% SHADE COVERAGE
NEW CENTER LOT CROSSING: 5.57% SHADE COVERAGE
NEW EAST LOT CROSSING: 11.1% SHADE COVERAGE
NEW NE ACCESS DRIVE: 20.3% SHADE COVERAGE
OVERALL NEW PAVEMENT SHADE COVERAGE: 11.43%

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PROJECT INFORMATION

MTSD - LAKE SHORE
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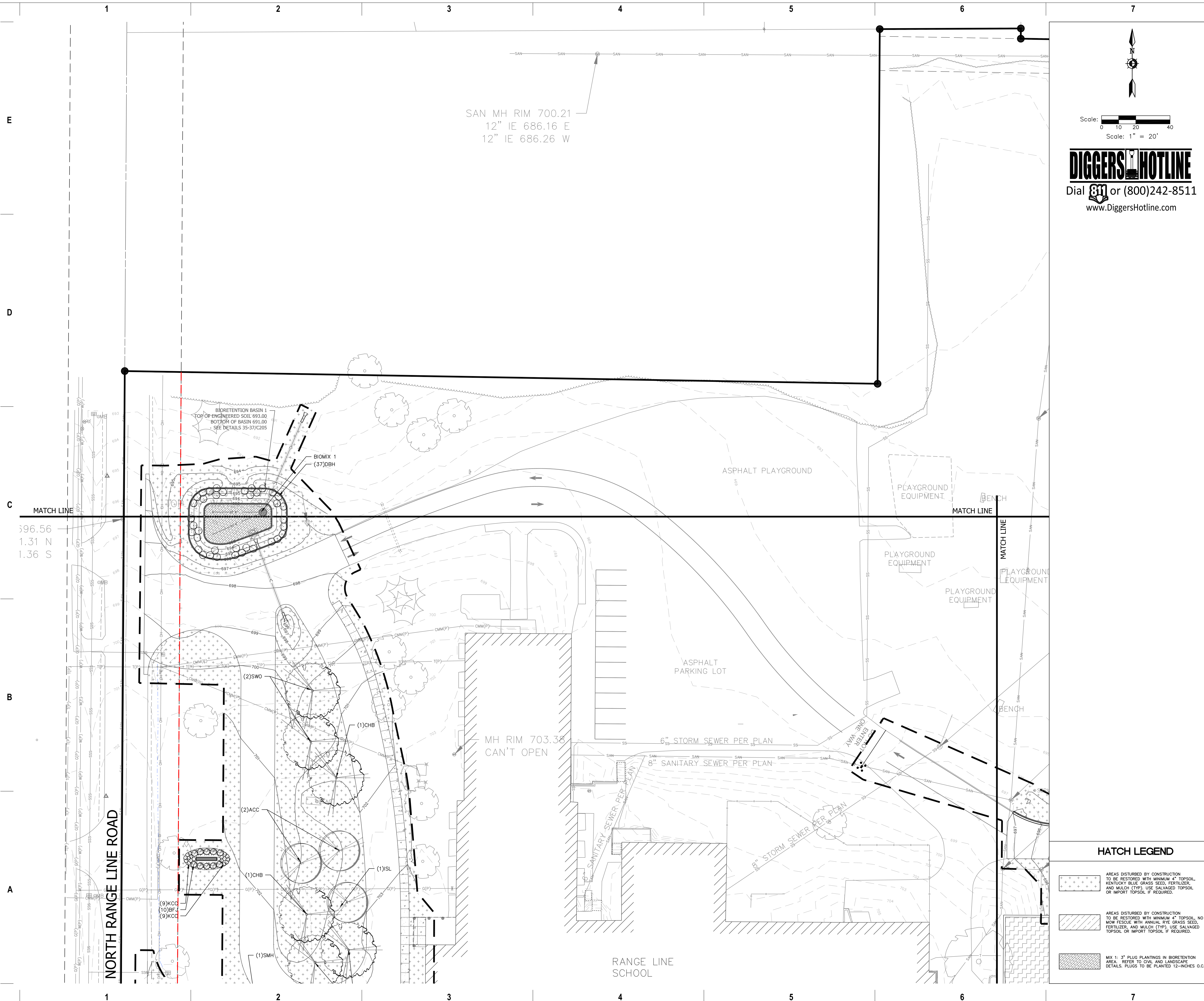
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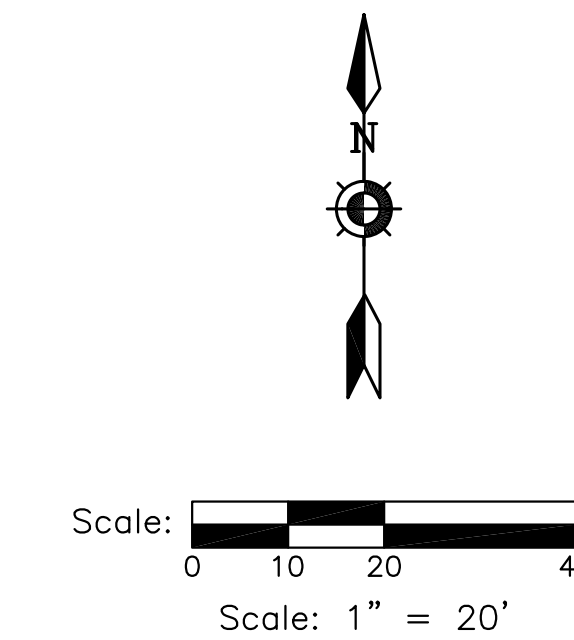
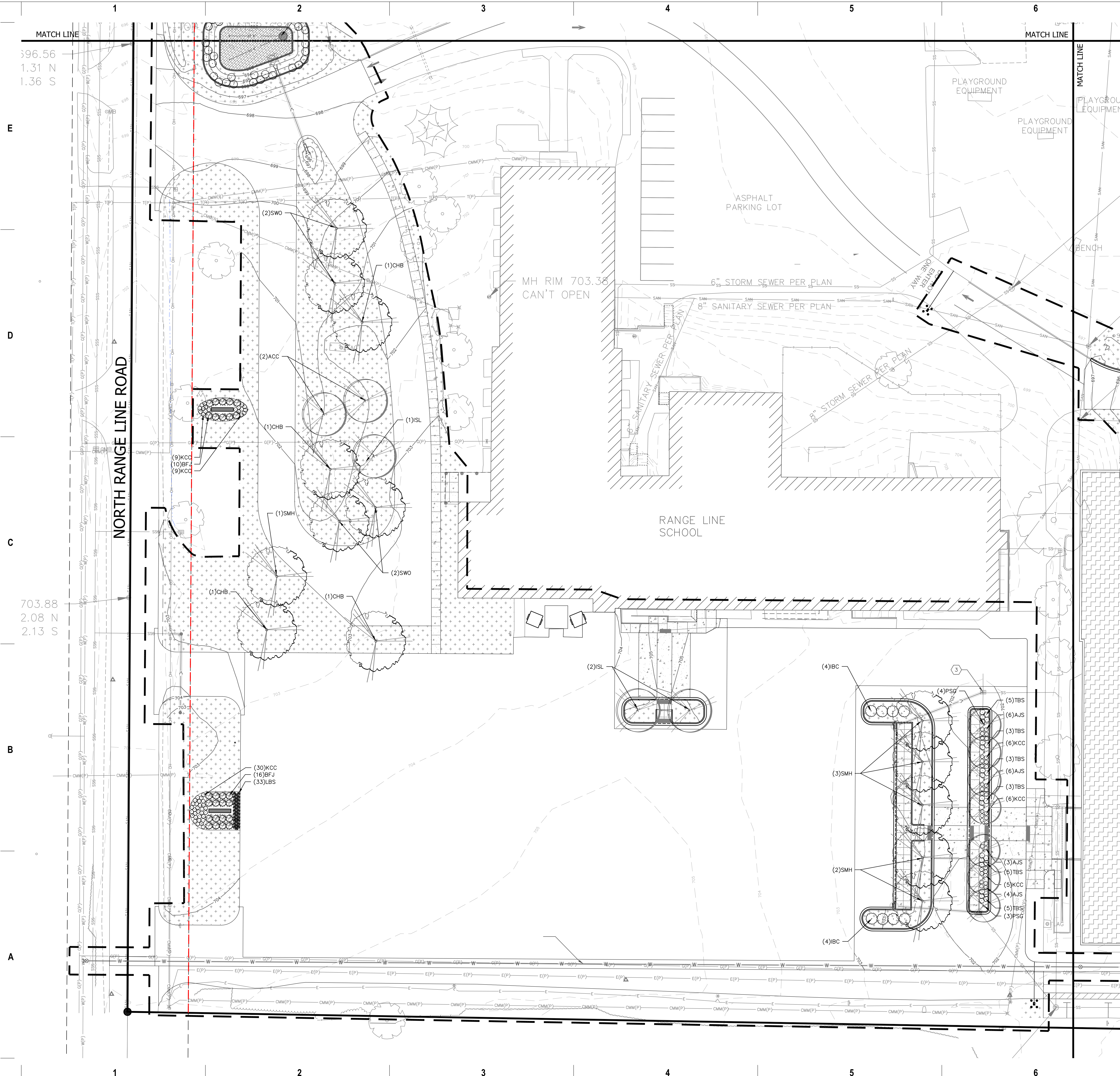
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SITE LANDSCAPE PLAN

L101A

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PROJECT INFORMATION

**MTSD - LAKE SHORE
MIDDLE SCHOOL**

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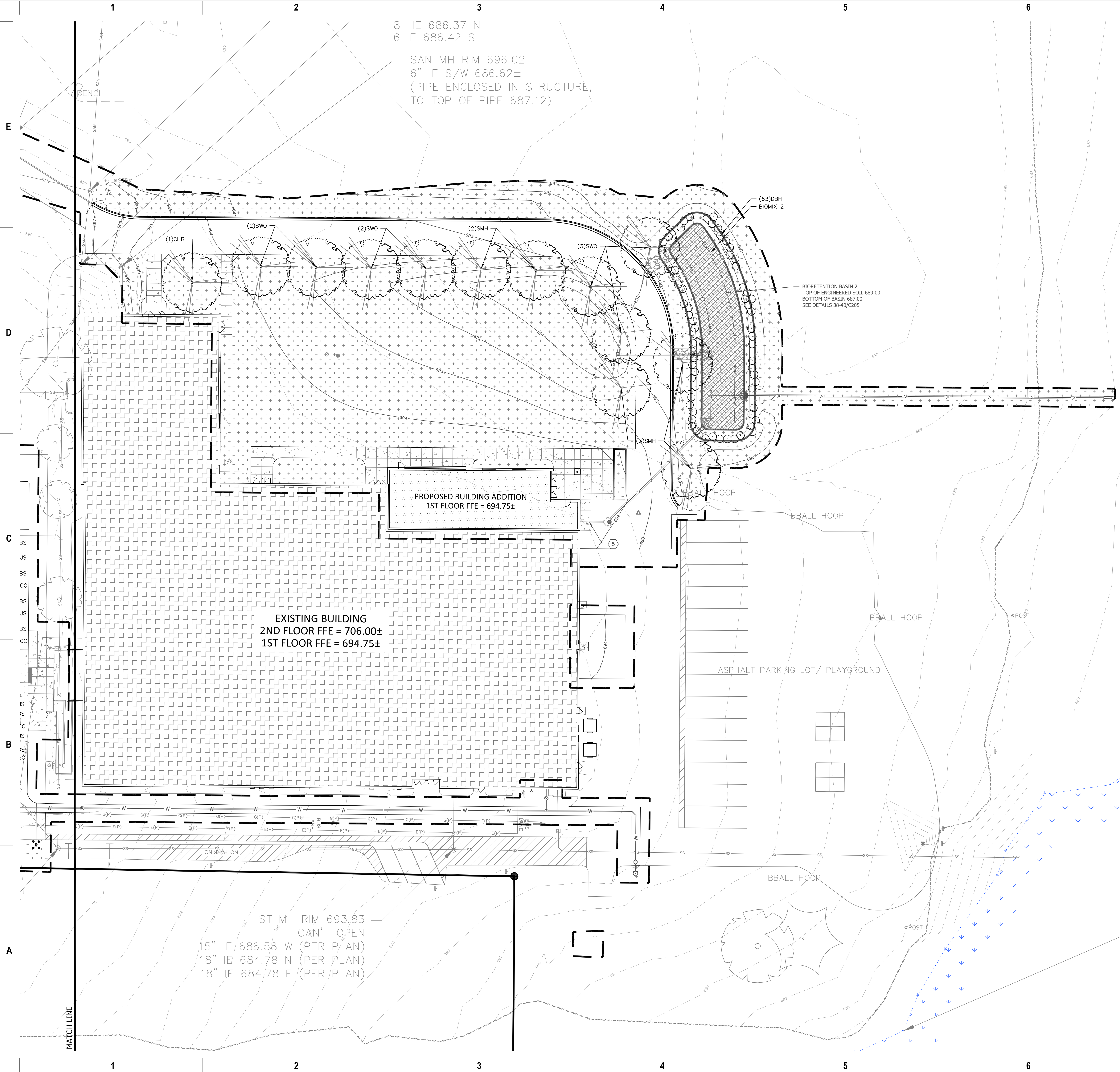
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PROJECT NUMBER 318480-01

**SITE LANDSCAPE
PLAN**

L101B

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Scale: 0 10 20 40
Scale: 1" = 20'



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Denver, Colorado 80202
303.595.4500

PROJECT INFORMATION
MTSD - LAKE SHORE
MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS	
DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN

7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

SHEET INFORMATION

PROGRESS DOCUMENTS
NOT FOR CONSTRUCTION

These documents reflect progress and intent and may be subject to change, including additional detail. These are not final construction documents and shall not be used for final bidding or construction-related purposes.

PROJECT MANAGER CR
PROJECT NUMBER 318480-01

SITE LANDSCAPE
PLAN

L101C

E

D

C

B

A

Plant Schedule						
Symbol	Scientific Name	Common Name	Quantity	Spacing	Install Size	Size
Maturity in ft. (Height/Spread)						
Deciduous Trees:						
ACC	Prunus maackii	Amur Chokecherry	2	Per Plan	2.5" caliper B&B	20-30'/20-30'
CHB	Celtis occidentalis	Common Hackberry	5	Per Plan	3" caliper B&B	60-80'/40-60'
ISL	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	3	Per Plan	2.5" caliper B&B	25'/15'
PSG	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	7	Per Plan	3" caliper B&B	40'/15'
SMH	Gleditsia tricanthos 'Shademaster' PP1,515	Shademaster Honeylocust	11	Per Plan	3" caliper B&B	60'/35'
SWO	Quercus bicolor	Swamp White Oak	11	Per Plan	3" caliper B&B	75'/65'
Evergreen Shrubs:						
BFJ	Juniperus sabina 'Buffalo'	Buffalo Juniper	26	Per Plan	#5 cont.	12"/4-6'
Deciduous Shrubs:						
DBH	Diervilla lonicera	Dwarf Bush Honeysuckle	100	Per Plan	#5 cont.	3-4'/4-5'
IBC	Aronia melanocarpa 'Morton'	Iroquois Beauty Chokecherry	8	Per Plan	#5 cont.	2-3'/4-5'
TBS	Spirea betulifolia 'Tor'	Tor Birchleaf Spirea	24	Per Plan	#5 cont.	2-3'/3'
Perennials						
AJS	Sedum x Autumn Joy	Autumn Joy Sedum	19	Per Plan	1 gal.	12"/24"
KCC	Nepeta x Kit Cat	Kit Cat Catmint	65	Per Plan	1 gal.	15-18"/18-24"
LBS	Schizachyrium scoparium	Little Bluestem Grass	33	Per Plan	1 gal.	24-48"/12-18"
BIOMIX 1	Aster ericoides	Heath Aster	40	12" o.c.	3" plug	
BIOMIX 1	Aster novae-angliae	New England Aster	40	12" o.c.	3" plug	
BIOMIX 1	Baptisia leucantha	Wild White Indigo	40	12" o.c.	3" plug	
BIOMIX 1	Eupatorium maculatum	Spotted Joe Pye Weed	40	12" o.c.	3" plug	
BIOMIX 1	Liatris spicata	Marsh Blazing Star	40	12" o.c.	3" plug	
BIOMIX 1	Monarda fistulosa	Wild Bergamot	40	12" o.c.	3" plug	
BIOMIX 1	Ratibida hirta	Black-eyed Susan	40	12" o.c.	3" plug	
BIOMIX 1	Solidago rugosa 'Fireworks'	Fireworks Goldenrod	40	12" o.c.	3" plug	
BIOMIX 1	Tradescantia ohiensis	Spiderwort	40	12" o.c.	3" plug	
BIOMIX 1	Ratibida pinnata	Yellow Coneflower	40	12" o.c.	3" plug	
BIOMIX 1	Carex bebbi	Bebb's Sedge	120	12" o.c.	3" plug	
BIOMIX 1	Bromus ciliatus	Fringed Brome Grass	40	12" o.c.	3" plug	
BIOMIX 1	Panicum virgatum	Switch Grass	40	12" o.c.	3" plug	
BIOMIX 1	Elymus canadensis	Canada Wild Rye	40	12" o.c.	3" plug	
BIOMIX 1	Elymus virginius	Virginia Wild Rye	40	12" o.c.	3" plug	
BIOMIX 1	Carex stipata	Common Fox Sedge	110	12" o.c.	3" plug	
BIOMIX 2	Aster ericoides	Heath Aster	140	12" o.c.	3" plug	
BIOMIX 2	Aster novae-angliae	New England Aster	140	12" o.c.	3" plug	
BIOMIX 2	Baptisia leucantha	Wild White Indigo	140	12" o.c.	3" plug	
BIOMIX 2	Eupatorium maculatum	Spotted Joe Pye Weed	140	12" o.c.	3" plug	
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BIOMIX 2	Carex stipata	Common Fox Sedge	300	12" o.c.	3" plug	

NOTE: Installation contractor is responsible for verifying plant count from plan. Plan quantities take precedence over list.

1 LANDSCAPE SCHEDULE

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

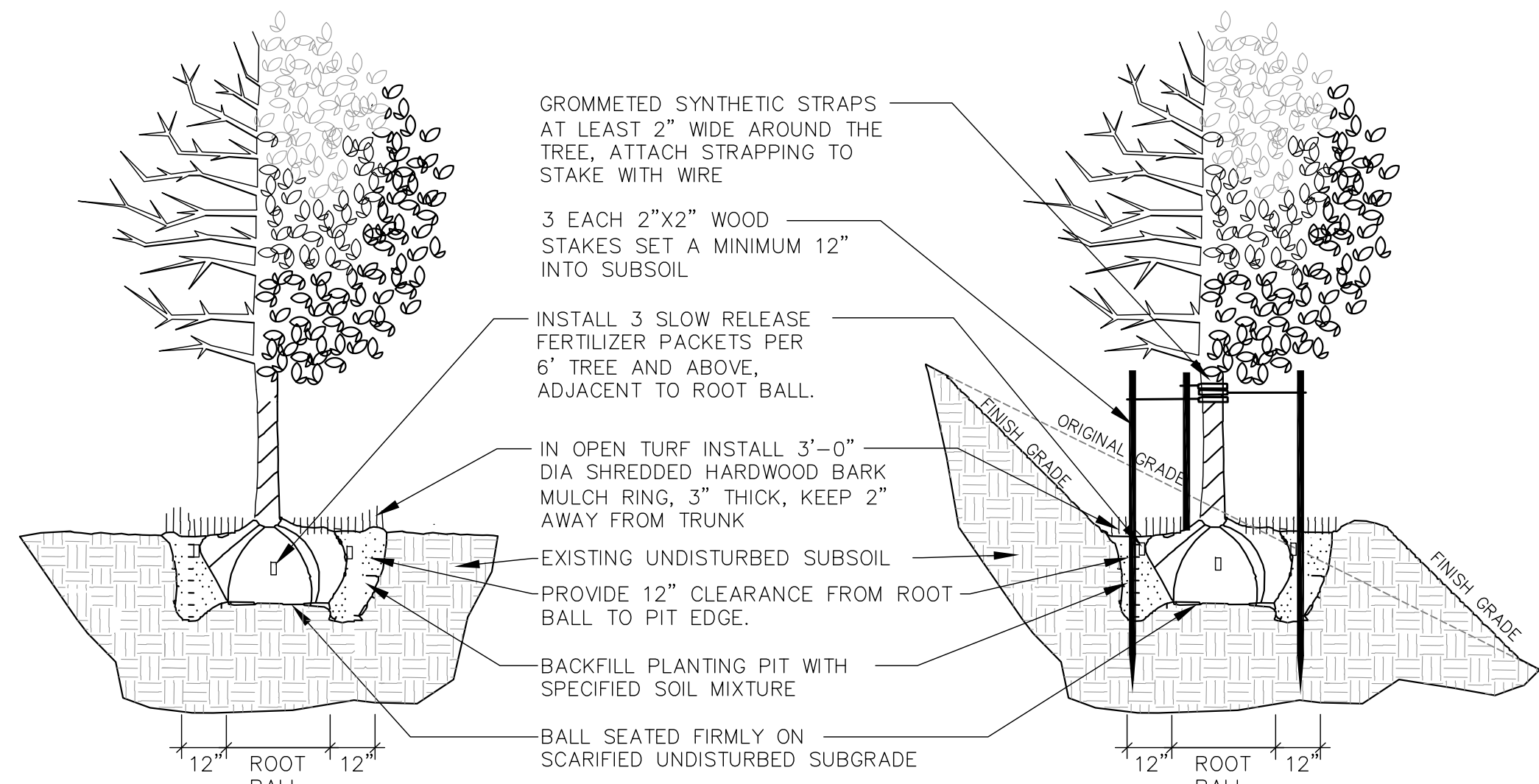
- ALL PLANT MATERIAL SHALL BE OBTAINED FROM A NURSERY LOCATED IN ZONE 5, CONFORM TO APPLICABLE REQUIREMENTS OF THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AND BOTANICAL NAMES SHALL BE ACCORDING TO THE CURRENT EDITION OF "STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURE NOMENCLATURE.
- CONTRACTOR TO PROVIDE TO THE LANDSCAPE ARCHITECT SAMPLES OF ALL BARK AND MINERAL/STONE MULCHES, DECORATIVE GRAVELS, MAINTENANCE STRIP STONE, OR OTHER GROUND COVER MATERIALS FOR APPROVAL PRIOR TO INSTALLATION.
- BARK MULCH TO BE FRESHLY ACQUIRED HARDWOOD SHREDDED BARK MULCH. NOT DOUBLE MILLED, EXCESSIVE DIRT AND DUST LIKE MATERIAL OR OLD MATERIAL IS NOT ACCEPTABLE.
- LANDSCAPE EDGING TO BE ALUMINUM EDGING. REFER TO SPECIFICATION 32 93 00 PLANTS FOR ADDITIONAL INFORMATION.
- ALL PLANTING AREAS TO RECEIVE A 3-INCH THICK LAYER OF HARDWOOD SHREDDED BARK MULCH OVER TYPAR WEED FABRIC WITH EDGING. EDGING TO BE INSTALLED BETWEEN DIFFERENT TYPES OF MULCHES, BETWEEN MULCHES AND TURF, AND/OR WHERE SPECIFICALLY NOTED ON THE PLAN. REFER TO SPECIFICATION 32 93 00 PLANTS FOR ADDITIONAL INFORMATION.
- INSTALL SHOVEL CUT EDGE AROUND ALL INDIVIDUAL TREES AND SHRUBS IN LAWN AREAS AND ALONG PAVEMENT WHERE PLANTING AREAS ABUT TO PREVENT HARDWOOD SHREDDED BARK MULCH FROM SPILLING OUT OF PLANTING AREA.
- CONTRACTOR RESPONSIBLE FOR MAINTENANCE OF PLANT MATERIAL FOR 90 DAYS FROM INSTALLATION, INCLUDING WATERING, WEEDING, ETC. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF SEEDED AREAS FOR 60 DAYS FROM INSTALLATION, INCLUDING WATERING, WEEDING, ETC. CONTRACTOR TO PROVIDE AND REVIEW MAINTENANCE INSTRUCTIONS WITH THE OWNER PRIOR TO THE COMPLETION OF THESE MAINTENANCE PERIODS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- CLEANLY PRUNE AND REMOVE DAMAGED BRANCHES, DEAD WOOD, AND ROOTS IMMEDIATELY PRIOR TO PLANTING. DO NOT CUT LEADERS OR LEAVE "V" CROTCHES OR DOUBLE LEADERS UNLESS A MULTI-STEM TREE IS SPECIFIED.
- REMOVE BURLAP, WIRE BASKET, ROPE, TWINE, AND ALL SYNTHETIC MATERIAL FROM THE ROOTS, TRUNK, OR CROWN OF PLANT.
- REMOVE EXCESS SOIL ABOVE ROOT COLLAR.
- PLANT TREES AND SHRUBS SO THAT THE ROOT COLLAR IS 2" ABOVE FINISHED GRADE OR SEVERAL INCHES ABOVE GRADE IF PLANT IS INSTALLED IN POOR SOILS.
- PLANT TREES AND SHRUBS WITH SAME ORIENTATION AS WHEN HARVESTED FROM THE NURSERY OR TO SHOWCASE THE MOST AESTHETIC VIEW.
- PLANT ALL TREES WITH THREE SLOW RELEASE FERTILIZER PACKETS, SPACED EQUIDISTANT AROUND THE EDGE OF THE ROOT BALL.
- PLANT ALL SHRUBS WITH ONE SLOW RELEASE FERTILIZER PACKET, PLACED BELOW THE ROOTING SYSTEM.
- WATER AND TAMP BACKFILL AND ROOTS OF ALL NEWLY SET PLANT MATERIAL SO THE SOIL AND ROOTS ARE THOROUGHLY SOAKED AND AIR POCKETS ARE REMOVED.
- FOR INDIVIDUAL TREES & SHRUBS PLANTED IN TURF AREAS, PROVIDE CONTINUOUS 3" SOIL SAUCER TO CONTAIN WATER & MULCH (TREES ON SLOPES SHALL BE SAUCERED ON THE DOWNHILL SIDE)
- INSTALL 3" THICK SHREDDED HARDWOOD BARK MULCH RING 3'-0" DIA. FOR DECIDUOUS TREES AND ALL INDIVIDUAL SHRUBS IN LAWN AREAS, 5'-0" DIA. FOR EVERGREEN TREES. KEEP MULCH 2" AWAY FROM TRUNKS.
- STAKING - ONLY STAKE EVERGREEN TREES 5'-0" OR GREATER IN HEIGHT OR TREES THAT ARE UNABLE TO REMAIN UPRIGHT AFTER PLANTING. TREES WILL BECOME STRONGER FASTER WHEN THE TOP 2/3 OF THE TREE IS FREE TO SWAY. DO NOT ATTACH WIRE DIRECTLY TO TREES OR THROUGH HOSES - UTILIZE GROMMETED, SYNTHETIC STRAPS AT LEAST 2" WIDE AROUND THE TREE, ATTACH STRAPPING TO STAKE WITH WIRE. STAKE ONLY WHEN NECESSARY. STAKES SHOULD BE DRIVEN DEEPLY INTO THE GROUND TO PREVENT DISLODGING. CHECK AT LEAST EVERY THREE MONTHS FOR BINDING OR OTHER PROBLEMS. STAKES AND TIES SHOULD BE REMOVED SIX MONTHS TO ONE YEAR AFTER PLANTING.
- STONE CHIP MAINTENANCE STRIP TO BE 3-INCHES DEEP OVER WEED FABRIC WITH ALUMINUM EDGING. CONTRACTOR TO INSTALL MAINTENANCE STRIP 2-FOOT WIDE ALONG BUILDING EDGE, WHERE INDICATED ON L101 SITE LANDSCAPE PLAN.
- STONE CHIP TO BE ¾-INCH RAVENS BLACK DECORATIVE STONE CHIP FROM HALQUIST STONE. CONTRACTOR TO CONTACT HALQUIST STONE N51 W23563 LISBON ROAD SUSSEX, WI 53089 TELEPHONE (262)246-9000 EMAIL: INFO@HALQUISTSTONE.COM.
- NO MOW TO BE NO MOW FESCUE SEED MIX WITH ANNUAL RYE NURSE CROP FROM PRAIRIE NURSERY, INC. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. PRAIRIE NURSERY ADDRESS: PO BOX 306 WESTFIELD, WI 53964. TELEPHONE: 1-800-476-9453 FAX: 608-296-2741.
- NATIVE SEED MIX TO BE SHORT GRASS PRAIRIE FOR MESIC SOILS SEED MIX WITH ANNUAL RYE NURSE CROP FROM AGRECOL, LLC. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. AGRECOL, LLC ADDRESS: 10101 NORTH CASEY ROAD EVANSVILLE, WI 53536. TELEPHONE: 608-223-3571 FAX: 608-884-4640 EMAIL: ECOSOLUTIONS@AGRECOL.COM.
- REFER TO SPECIFICATIONS 32 93 00 PLANTS AND 32 92 00 TURF AND GRASSES FOR ADDITIONAL INFORMATION.

2 LANDSCAPE NOTES

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

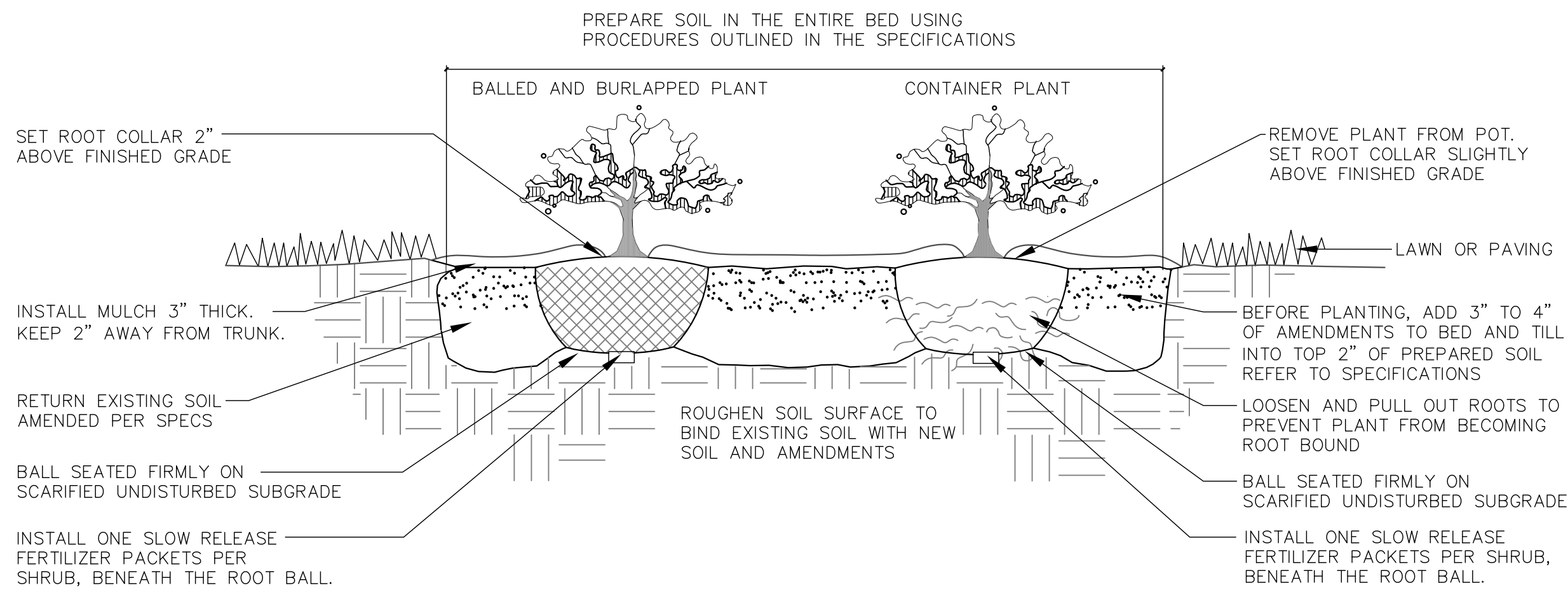
3 DECIDUOUS TREE PLANTING, STAKING, & PLANTING ON A SLOPE

N.T.S.



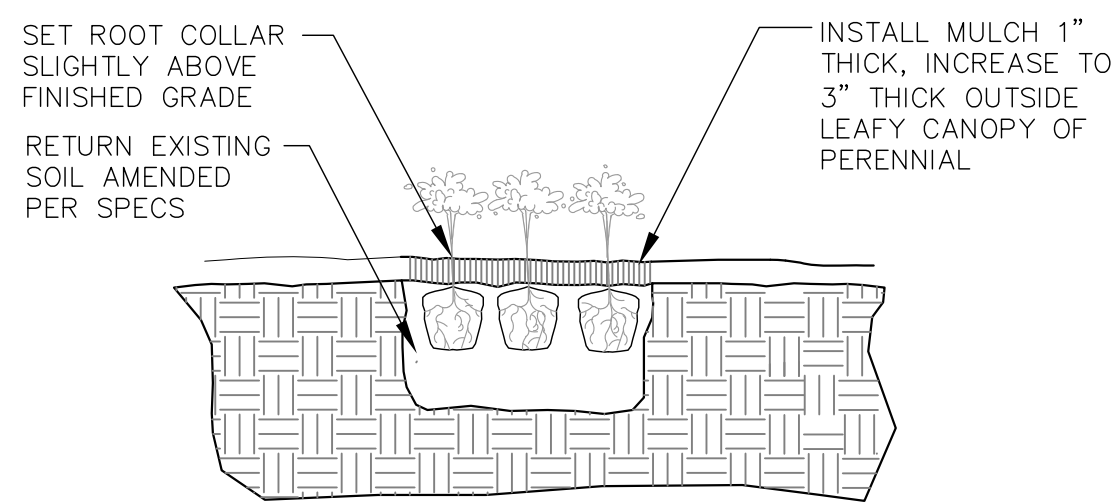
5 DECIDUOUS & EVERGREEN SHRUB PLANTING

N.T.S.



6 PERENNIAL PLANTING

N.T.S.



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denver	1899 Wynkoop Street, Suite 300 Denver, Colorado 80202 303.586.4500

PROJECT INFORMATION

MTSD - LAKE SHORE MIDDLE SCHOOL

11036 N Range Line
Rd #4930, Mequon, WI
53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
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kapurinc.com

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PROJECT MANAGER	CR
PROJECT NUMBER	318480-01

SITE LANDSCAPE DETAILS

L201

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Lake Shore Middle School Traffic Impact Analysis

City of Mequon
Ozaukee County, Wisconsin

December 1, 2020



TRAFFIC IMPACT ANALYSIS FOR:

LAKE SHORE MIDDLE SCHOOL

CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN

DATE SUBMITTED: December 1, 2020

PREPARED FOR:

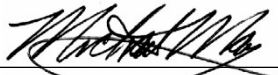
Mequon-Thiensville School District
 5000 West Mequon Road
 Mequon, WI 53092
 Phone: (262) 238-8509
 Contact Person: Sarah Viera, Executive Director of Business Services

PREPARED BY:

TADI
 P.O. Box 128
 Cedarburg, WI 53012
 Phone: (800) 605-3091
 Contact Persons: Michael May, P.E., PTOE
 John Bieberitz, P.E., PTOE



"I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering."


 Michael May, P.E., PTOE
 Wisconsin Registration #37622-006
 TADI

**Lake Shore Middle School
Traffic Impact Analysis
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- Exhibit 1-2Lake Shore Middle School Conceptual Recommendations
-
- Exhibit 2-1Study Area Aerial
- Exhibit 2-2Existing Transportation Detail
-
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- Exhibit 3-2COVID-Based Traffic Volumes
- Exhibit 3-3Existing & Additional Trip Generation Tables
- Exhibit 3-4COVID-Based Trip Generation Table
- Exhibit 3-5Additional New Trips
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- Exhibit 3-7COVID-Based Site Observation Photos
- Exhibit 3-8Existing & Growth Traffic Operations
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Appendix A.....Traffic Counts

Existing Traffic Counts (March 2020)

Existing Traffic Counts (September 2020)

Appendix BPeak Hour Analysis Outputs

Existing Traffic

Growth Traffic

COVID-Based Traffic

Appendix CPeak Hour Analysis Outputs – *With Recommendations*

Existing Traffic – With Recommendations

Growth Traffic – With Recommendations

Appendix D....Range Line Crash Data

CHAPTER I – INTRODUCTION & EXECUTIVE SUMMARY

PART A – PURPOSE OF REPORT AND STUDY OBJECTIVES

The Mequon-Thiensville School District retained TADI to analyze existing and future growth traffic operations at Lake Shore Middle School located on the east side of Range Line Road between Mequon Road and Crimson Court in the City of Mequon. Range Line Preschool shares the property with Lake Shore Middle School.

This traffic impact analysis (TIA) documents the procedures, findings, and conclusions of the analysis. The analysis identifies recommended modifications based on existing roadway and site conditions, existing and future growth traffic volumes, and observations of traffic operations during the morning school arrival and afternoon school dismissal peak hours.

PART B – EXECUTIVE SUMMARY

The executive summary includes a description of the study area, description of the development and conclusions based on the findings of the TIA.

B1. Study Area

A study area aerial for Lake Shore Middle School is shown in [Exhibit 1-1](#).

The study area includes the following existing intersections. The intersection control for each intersection is shown in parentheses.

- Range Line Road & North Driveway (one-way stop)
- Range Line Road & Middle Driveway (egress only, one-way stop)
- Range Line Road & South Driveway (ingress only, no control)

B2. Student Growth

Lake Shore Middle School had a 2019-2020 enrollment of 374 students and has a projected future enrollment of 389 students. This represents a potential future increase in enrollment of 15 students.

B3. Site Generated Traffic

During the 2019-2020 school year, Lake Shore Middle School was in session from 7:55am to 3:20pm with an early arrival time of 7:45am. TADI performed peak hour traffic counts for Lake Shore Middle School from 7:00 to 8:00am and from 2:50 to 3:50pm. These counts were taken in early March of 2020 before COVID Safer-At-Home orders (“normal” conditions). Counts were taken again in late September/early October of 2020 with COVID procedures.

B3.1 Trip Generation – Normal Conditions

The March of 2020 counts show that Lake Shore Middle School generates approximately 445 trips (225 in/220 out) during the morning arrival peak hour and 265 trips (125 in/140 out) during the afternoon dismissal peak hour.

The addition of 15 students is expected to result in an additional 20 trips (10 in/10 out) during the morning arrival peak hour and an additional 10 trips (5 in/5 out) during the afternoon dismissal peak hour.

That is, under full projected future enrollment under normal conditions, Lake Shore Middle School is expected to generate 465 total trips (235 in/230 out) during the morning arrival peak hour and 275 total trips (130 in/145 out) during the afternoon dismissal peak hour.

B3.2 Trip Generation – COVID Conditions

The September/October 2020 counts show that Lake Shore Middle School generates approximately 395 trips (220 in/175 out) during the morning arrival peak hour and 285 trips (120 in/165 out) during the afternoon dismissal peak hour. That is, during COVID conditions, Lake Shore Middle School generates approximately 50 fewer trips (5 fewer in/45 fewer out) during the morning arrival peak hour and 20 additional trips (5 fewer in/25 additional out) during the afternoon dismissal peak hour. This represents an 11% reduction in morning arrival peak hour traffic trips and an 8% increase in afternoon dismissal peak hour trips.

B4. Summary of Operations Without Recommended Modifications

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). 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 purpose of this study, and as is standard for use in the WisDOT Southeast Region, LOS D or better was used to define desirable peak hour operating conditions. Due to the surge of traffic that occurs to/from schools, LOS E and low-delay LOS F conditions are acceptable for movements exiting the school during those surge periods. The delay associated with the various levels of service are as follows.

LOS	Description	Average Delay
A	Intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	<10 sec/veh
B	Stable operation.	10 – 15 sec/veh
C	Stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so.	15 – 25 sec/veh
D	Increasing traffic restrictions as movements approach instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs.	25 – 35 sec/veh
E	Capacity of the intersection.	35 – 50 sec/veh
F	Jammed conditions where a movement is over capacity and acceptable gaps in the mainline traffic flow are minimal.	≥ 50 sec/veh

B4.1 Existing Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the 2019-2020 school year site layout, the Middle Driveway approach to Range Line Road was expected to operate at LOS F with long queues during the morning arrival peak hour.

Note that TADI engineers were unable to make internal site observations during the 2019-2020 school year under “normal” conditions with the existing site layout at the time. TADI had planned to collect these observations during the week of March 16th. However, schools were shut down that week in response to COVID and have not yet opened again under “normal” conditions.

B4.2 Growth Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the existing site layout, and under growth traffic volumes (with projected enrollment), the Middle Driveway approach to Range Line Road is expected to continue to operate at LOS F with long queues during the morning arrival peak hour.

B4.3 Existing Traffic Operations – COVID Conditions, Existing Site Layout

Under the existing site layout, and under COVID procedures, all movements are expected to operate at LOS D or better. Short queues are expected for motorists exiting the Middle Driveway.

The following is a summary of site observations taken during COVID procedures.

- The peak surges in traffic occurred 7:35 to 7:55am and 2:50 to 3:10pm.
- Staff operated two pick-up/drop-off lanes. The operations included two staff holding hand-held sign boards – on one side of each board was a red “STOP” sign and on the other was a green “GO” sign. One staff member stood at the existing marked crosswalk, and the other staff member stood at the north end of the median dividing the two lanes. If a child was passing across the lane closest to the school, the staff member would turn the sign to “STOP”. When safe for vehicles to proceed, the staff member would turn the sign to “GO”.
- Staff were observed to operate the pick-up/drop-off zone quickly and efficiently, with approximately four to five vehicles serviced in each lane (eight to ten total within the zone) during peak surges in traffic. A few students were observed walking to their parents waiting in line during the afternoon dismissal peak hour. When this occurred, the motorist would cut out of line and through the parking lot to leave the site.
- Traffic entering the site was contained on site without back-ups onto Range Line Road. However, the back-ups came within 100-feet of the street during the afternoon dismissal peak hour. Had two pick-up/drop-off lanes not existed, waiting traffic would have backed up onto Range Line Road.
- Buses unloaded/loaded on the east side of the school. A handful of preschool buses were observed on the circle drive located on the west side of the preschool.
- Very few middle school parents parked in the parking lot for pick-up/drop-off. It is understood that this was by design specifically for COVID procedures. Under “normal” conditions it can be anticipated that some parents will park in the lot for student pick-up/drop-off.
- Range Line Preschool was operational under COVID procedures. Preschool parents parked and walked their children to/from the preschool, making use of a few parking stalls along the preschool as well as within the main parking lot.

B5. Range Line Road Crash Analysis

TADI obtained crash data and crash reports for Range Line Road, from south of Mequon Road to north of Crimson Court, using WisTransportal. The data included all reportable crashes from January 2015 through December 2019 – a five-year (60 month) period. Based on the analysis, four crashes occurred within the five-year study period. No crash pattern was identified. The crash data is summarized in Chapter III.

B6. Recommended Modifications

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back onto the public roadway network.

Recommended modifications are for jurisdictional consideration and are not legally binding. The City of Mequon and the Mequon-Thiensville School District reserve the right to determine alternative solutions.

B6.1 Recommendations for Lake Shore Middle School

A conceptual drawing for Lake Shore Middle School is shown in [Exhibit 1-2](#).

- Maintain the South Driveway for ingress only, including two ingress only lanes that widen to three eastbound lanes internal to the site. The two northernmost lanes are recommended for motorists waiting to enter the pick-up/drop-off zone while the southernmost lane is recommended for buses to efficiently move to the lot on the east side of the school.
- Maintain the Middle Driveway for egress only with two exit lanes (one left-turn lane, one right-turn lane).
- Maintain two-way traffic at the North Driveway. Modify the curb radii such that buses exiting the driveway to head north on Range Line Road no longer need to encroach into the southbound lane on Range Line Road.
- Modify the existing “circle drive” on the west side of Range Line Preschool to a full counterclockwise loop drive with access to/from the North Driveway only. In addition to eliminating conflicts internal to the main Lake Shore Middle School parking lot, this modification allows buses that may use the drive to open their doors directly to the school, thereby reducing pedestrian-vehicle conflicts (pedestrians don’t need to cross between vehicles). This drive is also used for pick-up/drop-off for Ozaukee County senior dining site patrons.
- Redesign the pick-up/drop-off area at the front of the school to include two lanes separated by a raised median. Though two lanes currently exist, the existing lanes are very wide. Narrow each lane to approximately 18-feet wide to minimize pedestrian crossing distances and improve safety. The 18-foot wide lanes are expected to be sufficiently wide for 7- to 8-foot wide pick-up/drop-off parking lanes and 10- to 11-foot wide through lanes. The raised median is conceptually shown as fully concrete for easier maintenance. Maintain the same number of vehicle positions, or more, for parents to pick-up/drop-off students within the pick-up/drop-off zone.
- Include a raised landscape area between the pick-up/drop-off lanes and the parking lot to provide channelization of the pick-up/drop-off zone. Include a sidewalk across the raised landscape area to the parking lot.
- Include a raised crosswalk across both pick-up/drop-off lanes in front of Lake Shore Middle School to bring greater attention to the area where pedestrians cross and to the area where cars should and should not be loading.
- Include a raised crosswalk to/from Range Line Preschool to bring greater attention to the area where pedestrians cross. A pedestrian walkway is recommended between the parking stalls on the south side of this raised crosswalk to provide a safer location for preschool families to access their vehicles.
- Restripe the area along the north side of the parking lot with two westbound lanes. Additional space is created between the parking lot and the school building as a result of this restriping. With this additional space, provide protected parking stalls east of the

Range Line Preschool door and stripe “NO PARKING” west of the Range Line Preschool door.

B6.2 Other Considerations

Other considerations that may be given consideration are summarized below.

- Consider reducing the westernmost parking aisle width and increasing the depth of landscaping that currently exists along Range Line Road between the Middle Driveway and the South Driveway, if possible. If possible, this additional landscaping serves to provide additional throat length/definition at the two driveways.
- Consider providing additional pedestrian accommodations to and across Range Line Road. Note that a crossing of Range Line Road exists on the south leg of the Range Line Road & North Driveway intersection.
- Consider providing bicycle racks at the school to accommodate students and staff who may wish to bike to/from school.
- The westbound left-turn movement from the Middle Driveway to Range Line Road may be expected to continue to operate at LOS F with a traffic queue that exceeds 300-feet within the parking lot during the weekday morning peak hour under growth traffic volumes. The average vehicle delay expected for this movement is 115-seconds per vehicle, or 80-seconds per vehicle beyond the LOS D/E threshold. This level of delay and queuing may occur during the peak 15 to 20-minute surge of the morning arrival peak hour. Operations are expected to improve outside of this period. It is recommended to observe operations. Should the level of delay and queuing become problematic, consideration may be given in the future to constructing a southbound bypass lane on Range Line Road from at least 150-feet north of the Middle Driveway centerline to at least 100-feet south of the South Driveway centerline. Such an improvement may be expected to reduce average delays to LOS D with traffic queues of approximately 150-feet.

To further improve traffic operations, the District may also consider implementing strategies that help spread traffic arrival/discharge over a longer period or that help reduce vehicle demands. Examples of demand-management strategies for Lake Shore Middle School are included below.

- Consider if there may be strategies to make bus transportation more desirable and/or convenient for parents and students. If practical, implement those strategies to reduce vehicle demands at the school.
- Consider administering a “SchoolPool” ride-matching program. Such a program provides parents with information on neighborhood students who are interested in carpooling to/from school and facilitate the matching of students to encourage that carpooling (for parent drop-off/pick-up and student parking). Such a program may reduce vehicle demands at the school.

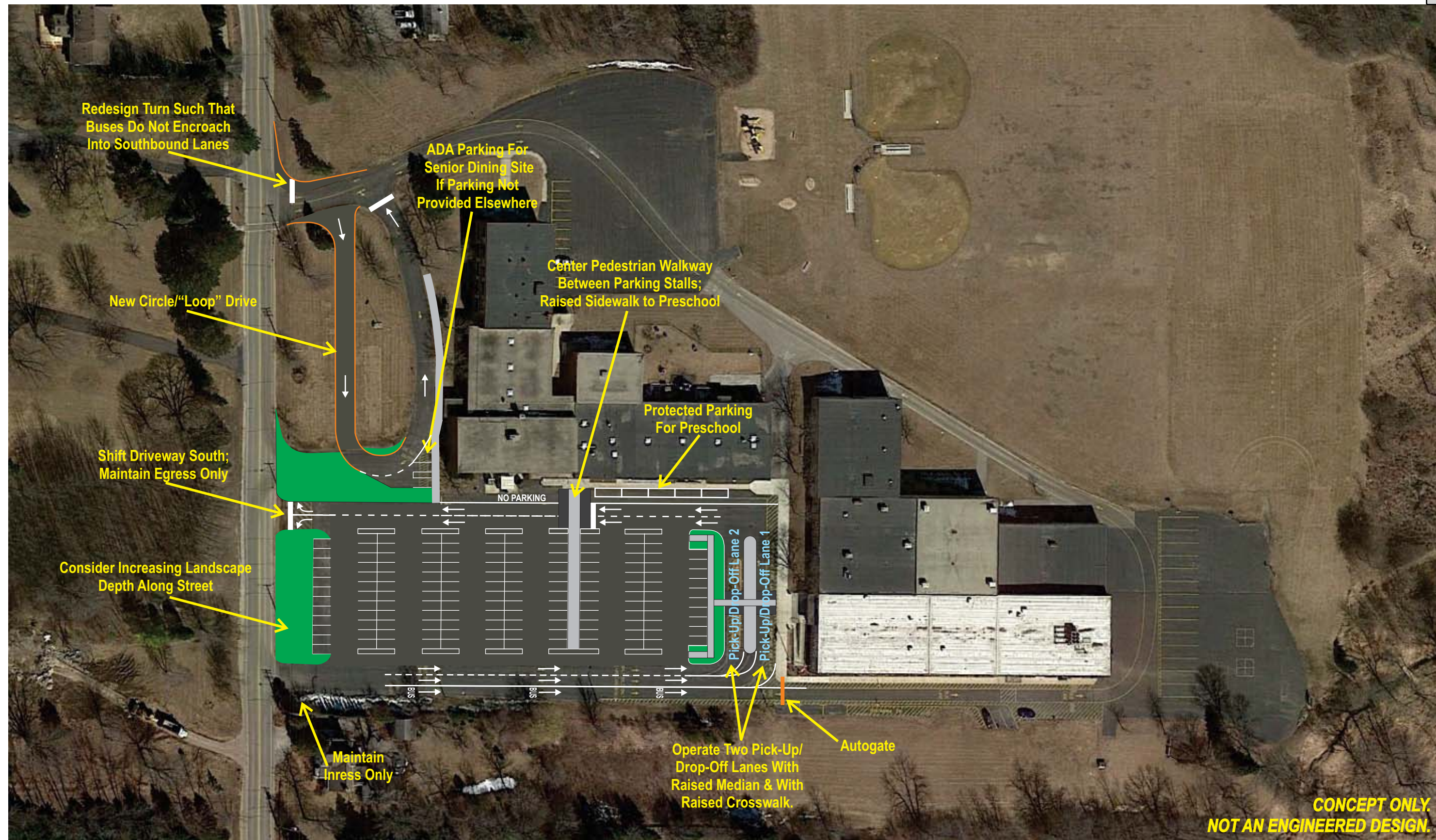
B7. Conclusion

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back to the public roadway network.

The recommendations outlined in this study are expected to result in safer and more efficient operations for Lake Shore Middle School and Range Line Preschool if properly designed and implemented.



Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)



CHAPTER II – STUDY AREA

PART A – STUDY AREA INTERSECTIONS

A study area aerial for Lake Shore Middle School is shown in [Exhibit 2-1](#).

The study area includes the following existing intersections. The intersection control for each intersection is shown in parentheses.

- Range Line Road & North Driveway (one-way stop)
- Range Line Road & Middle Driveway (egress only, one-way stop)
- Range Line Road & South Driveway (ingress only, no control)

An existing transportation detail, showing lane configurations, traffic controls, speed limits, and approximate intersection spacing, is included in [Exhibit 2-2](#).

PART B – STUDY AREA ROADWAYS

Range Line Road is a two-lane undivided north-south street with a posted speed limit of 30 mph. A school zone with a speed limit of 15 mph is posted in the vicinity of Lake Shore Middle School. The Year 2019 annual average daily traffic (AADT) volume on Range Line Road was 3,500 vehicles per day (vpd).

An asphalt pedestrian path exists along the west side of Range Line Road from Mequon Road to the North Driveway. The path ends with a crosswalk across the south leg of the Range Line Road & North Driveway intersection. The path does not appear to be ADA compliant.

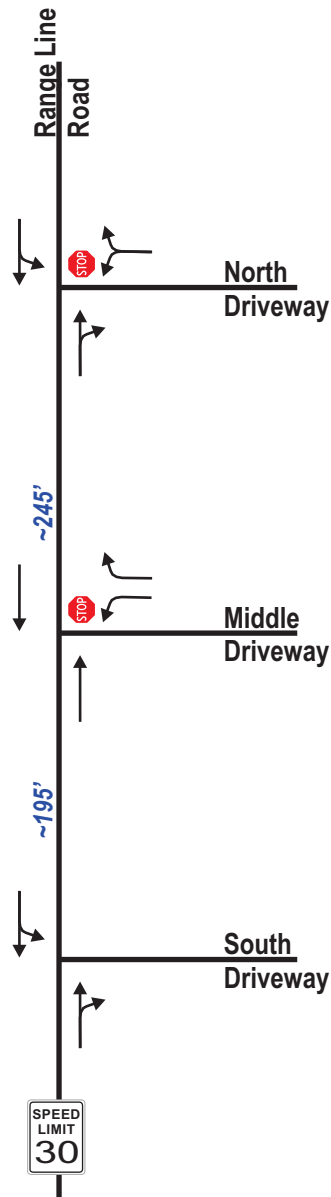


Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)



LEGEND

-  Stop Sign
-  Existing Lane Configuration
-  ~XX' Approximate Centerline-to-Centerline Spacing (In Feet)



Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)

EXHIBIT 2-2 EXISTING TRANSPORTATION DETAIL



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CHAPTER III – LAKE SHORE MIDDLE SCHOOL OPERATIONS

PART A – EXISTING TRAFFIC VOLUMES

During the 2019-2020 school year, Lake Shore Middle School was in session from 7:55am to 3:20pm with an early arrival time of 7:45am. TADI performed peak hour traffic counts for Lake Shore Middle School from 7:00 to 8:00am and from 2:50 to 3:50pm. These counts were taken in early March of 2020 before COVID Safer-At-Home orders (“normal” conditions). Counts were taken again in late September/early October of 2020 with COVID procedures. The following table outlines the dates of the traffic counts for Lake Shore Middle School.

Lake Shore Middle School Turning Movement Count Dates

Intersection	AM Arrival	PM Dismissal
Range Line Road & North Driveway	<i>Mon 3-9-2020 Tue 9-22-2020</i>	<i>Wed 3-4-2020 Thur 10-1-2020</i>
Range Line Road & Middle Driveway	<i>Mon 3-9-2020 Tue 9-22-2020</i>	<i>Wed 3-4-2020 Thur 10-1-2020</i>
Range Line Road & South Driveway	<i>Mon 3-9-2020 Tue 9-22-2020</i>	<i>Wed 3-4-2020 Thur 10-1-2020</i>

The existing traffic volumes under “normal” conditions and the existing site layout as it existed during the 2019-2020 school year are shown in [Exhibit 3-1](#).

The existing traffic volumes under COVID, with the existing site layout, are shown in [Exhibit 3-2](#).

PART B – TRIP GENERATION & DISTRIBUTION

To address potential future traffic impacts at the study area intersections, it is necessary to identify the hourly volume of traffic generated by Lake Shore Middle School.

B1. Trip Generation, Distribution & Assignment – Normal Conditions

[Exhibit 3-3](#) shows the existing and additional growth trip generation and distribution for Lake Shore Middle School. The existing trip generation and distribution are based on existing traffic volumes at the school driveways as collected during the 2019-2020 school year. The additional growth uses the same trip rates, in/out splits, and distribution as the existing traffic volumes.

The March of 2020 counts show that Lake Shore Middle School generates approximately 445 trips (225 in/220 out) during the morning arrival peak hour and 265 trips (125 in/140 out) during the afternoon dismissal peak hour.

The addition of 15 students is expected to result in an additional 20 trips (10 in/10 out) during the morning arrival peak hour and an additional 10 trips (5 in/5 out) during the afternoon dismissal peak hour.

That is, under full projected future enrollment under normal conditions, Lake Shore Middle School is expected to generate 465 total trips (235 in/230 out) during the morning arrival peak hour and 275 total trips (130 in/145 out) during the afternoon dismissal peak hour.

B2. Trip Generation – COVID Conditions

[Exhibit 3-4](#) shows the existing trip generation for Lake Shore Middle School based on counts collected during COVID procedures.

The September/October 2020 counts show that Lake Shore Middle School generates approximately 395 trips (220 in/175 out) during the morning arrival peak hour and 285 trips (120

in/165 out) during the afternoon dismissal peak hour. That is, during COVID conditions, Lake Shore Middle School generates approximately 50 fewer trips (5 fewer in/45 fewer out) during the morning arrival peak hour and 20 additional trips (5 fewer in/25 additional out) during the afternoon dismissal peak hour. This represents an 11% reduction in morning arrival peak hour traffic trips and an 8% increase in afternoon dismissal peak hour trips.

PART C – GROWTH TRAFFIC VOLUMES

The Lake Shore Middle School additional new trips, shown in [Exhibit 3-5](#), were determined based on the existing trip distribution and revised site layout.

The growth traffic volumes under existing site layout, shown in [Exhibit 3-6](#), were determined by summing the existing traffic volumes under “normal” conditions ([Exhibit 3-1](#)) and Lake Shore Middle School additional new trips ([Exhibit 3-5](#)).

PART D – FIELD OBSERVATIONS

TADI engineers were unable to make internal site observations during the 2019-2020 school year under “normal” conditions with the existing site layout at the time. TADI had planned to collect these observations during the week of March 16th. However, schools were shut down that week in response to COVID and have not yet opened again under “normal” conditions.

The following is a summary of site observations taken during COVID procedures. [Exhibit 3-7](#) includes photographs of select observations.

The following is a summary of site observations taken during COVID procedures.

- The peak surges in traffic occurred 7:35 to 7:55am and 2:50 to 3:10pm.
- Staff operated two pick-up/drop-off lanes. The operations included two staff holding hand-held sign boards – on one side of each board was a red “STOP” sign and on the other was a green “GO” sign. One staff member stood at the existing marked crosswalk, and the other staff member stood at the north end of the median dividing the two lanes. If a child was passing across the lane closest to the school, the staff member would turn the sign to “STOP”. When safe for vehicles to proceed, the staff member would turn the sign to “GO”.
- Staff were observed to operate the pick-up/drop-off zone quickly and efficiently, with approximately four to five vehicles serviced in each lane (eight to ten total within the zone) during peak surges in traffic. A few students were observed walking to their parents waiting in line during the afternoon dismissal peak hour. When this occurred, the motorist would cut out of line and through the parking lot to leave the site.
- Traffic entering the site was contained on site without back-ups onto Range Line Road. However, the back-ups came within 100-feet of the street during the afternoon dismissal peak hour. Had two pick-up/drop-off lanes not existed, waiting traffic would have backed up onto Range Line Road.
- Buses unloaded/loaded on the east side of the school. A handful of preschool buses were observed on the circle drive located on the west side of the preschool.
- Very few middle school parents parked in the parking lot for pick-up/drop-off. It is understood that this was by design specifically for COVID procedures. Under “normal” conditions it can be anticipated that some parents will park in the lot for student pick-up/drop-off.

- Range Line Preschool was operational under COVID procedures. Preschool parents parked and walked their children to/from the preschool, making use of a few parking stalls along the preschool as well as within the main parking lot.

PART E – TRAFFIC OPERATIONS

E1. Level of Service Definitions

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). 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 purpose of this study, and as is standard for use in the WisDOT Southeast Region, LOS D or better was used to define desirable peak hour operating conditions. Due to the surge of traffic that occurs to/from schools, LOS E and low-delay LOS F conditions are acceptable for movements exiting the school during those surge periods. The delay associated with the various levels of service are as follows.

LOS	Description	Average Delay
A	Intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	<10 sec/veh
B	Stable operation.	10 – 15 sec/veh
C	Stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so.	15 – 25 sec/veh
D	Increasing traffic restrictions as movements approach instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs.	25 – 35 sec/veh
E	Capacity of the intersection.	35 – 50 sec/veh
F	Jammed conditions where a movement is over capacity and acceptable gaps in the mainline traffic flow are minimal.	≥ 50 sec/veh

E2. Traffic Operations – Without Recommended Modifications

E2.1 Existing Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the 2019-2020 school year site layout, the Middle Driveway approach to Range Line Road was expected to operate at LOS F with long queues during the morning arrival peak hour ([Exhibit 3-8](#)).

E2.3 Growth Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the existing site layout, and under growth traffic volumes (with projected enrollment), the Middle Driveway approach to Range Line Road is expected to continue to operate at LOS F with long queues during the morning arrival peak hour ([Exhibit 3-8](#)).

E2.3 Existing Traffic Operations – COVID Conditions, Revised Site Layout

Under the existing site layout, and under COVID procedures, all movements are expected to operate at LOS D or better. Short queues are expected for motorists exiting the Middle Driveway ([Exhibit 3-9](#)).

E3. Traffic Operations – With Recommended Modifications

Recommendations to accommodate Lake Shore Middle School are outlined in Chapter IV. [Exhibit 3-10](#) shows the peak hour operating conditions and expected maximum queues at the study area intersections with recommendations.

As shown, the westbound left-turn movement from the Middle Driveway to Range Line Road may be expected to continue to operate at LOS F with a traffic queue that exceeds 300-feet within the parking lot during the weekday morning peak hour under growth traffic volumes. The average vehicle delay expected for this movement is 115-seconds per vehicle, or 80-seconds per vehicle beyond the LOS D/E threshold. This level of delay and queuing may occur during the peak 15 to 20-minute surge of the morning arrival peak hour. Operations are expected to improve outside of this period. It is recommended to observe operations. Should the level of delay and queuing become problematic, consideration may be given in the future to constructing a southbound bypass lane on Range Line Road from at least 150-feet north of the Middle Driveway centerline to at least 100-feet south of the South Driveway centerline. Such an improvement may be expected to reduce average delays to LOS D with traffic queues of approximately 150-feet. Other considerations may include staggered start times for students to flatten surge demand at the school.

PART F – RANGE LINE CRASH ANALYSIS

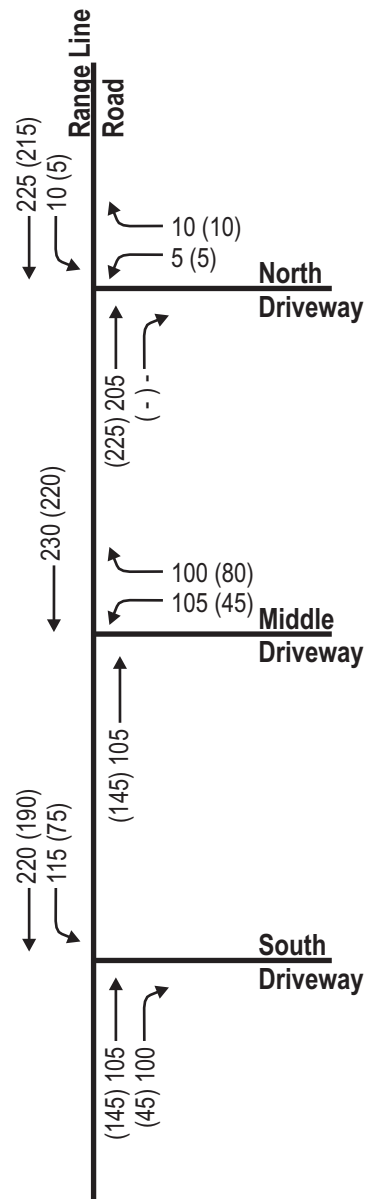
TADI obtained crash data and crash reports for Range Line Road, from south of Mequon Road to north of Crimson Court, using WisTransportal. The data included all reportable crashes from January 2015 through December 2019 – a five-year (60 month) period. A crash diagram and related statistics are included in [Appendix D](#).

Based on the analysis, four crashes occurred within the five-year study period. No crash pattern was identified. The following is a summary of the four crashes.

- A rear-end crash occurred on northbound Range Line Road between the South Driveway and Middle Driveway. The report states that a vehicle northbound on Range Line Road was stopped in traffic behind a group of other vehicles and was rear-ended.
- An out-of-control crash occurred on northbound Range Line Road between the Middle Driveway and the North Driveway. The report states that the motorist of the vehicle was unsure of how or why he went off the road. The pavement was dry, and it occurred on a cloudy day.
- A left-turn angle crash occurred involving a bus exiting the North Driveway. The bus was following a line of other buses exiting and did not yield the right-of-way to a motorist on Range Line Road. The pavement was wet at the time of the crash.
- A four-vehicle rear-end crash occurred north of the school property when vehicles were stopping for the traffic signal at Mequon Road. A vehicle did not stop in time and crashed into a vehicle, which then lurched forward and crashed into a third vehicle, which then struck a fourth vehicle. The crash occurred in the evening.

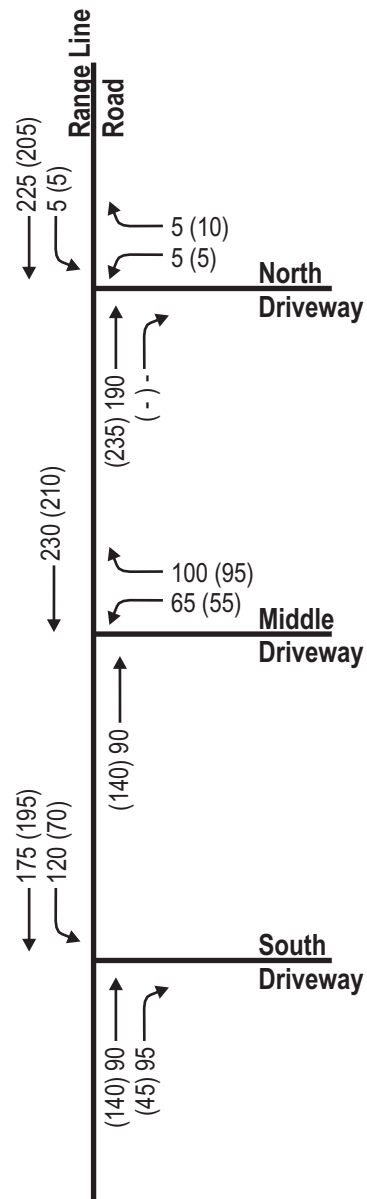
**LEGEND**

- XX AM Peak Hour Volumes (7:00-8:00 AM)
- (XX) PM Peak Hour Volumes (2:50-3:50 PM)
- Negligible Traffic Volumes (Fewer than 3 vph)



**LEGEND**

- XX AM Peak Hour Volumes (7:00-8:00 AM)
- (XX) PM Peak Hour Volumes (2:50-3:50 PM)
- Negligible Traffic Volumes (Fewer than 3 vph)



Lake Shore Middle School - Existing Trip Generation

Land Use	ITE Code	Proposed Size	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Lake Shore Middle School	TADI	374 Students	225 (51%)	220 (49%)	445 (1.19)	125 (47%)	140 (53%)	265 (0.71)
Total New Trips			225	220	445	125	140	265

Based on counts from early March, 2020 before COVID Safer-At-Home

TRIP DISTRIBUTION

North on Range Line, In AM	55%	125		
North on Range Line, Out AM	50%		110	
South on Range Line, In AM	45%	100		
South on Range Line, Out AM	50%		110	
North on Range Line, In PM	65%			80
North on Range Line, Out PM	65%			90
South on Range Line, In PM	35%			45
South on Range Line, Out PM	35%			50
	100%	225	220	125 140

Lake Shore Middle School - Additional Growth Trip Generation

Land Use	ITE Code	Proposed Size	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Lake Shore Middle School (Existing)	TADI	15 Students	10 (51%)	10 (49%)	20 (1.19)	5 (47%)	5 (53%)	10 (0.71)
Total New Trips			10	10	20	5	5	10

Based on counts from early March, 2020 before COVID Safer-At-Home

TRIP DISTRIBUTION

North on Range Line, In AM	55%	5		
North on Range Line, Out AM	50%		5	
South on Range Line, In AM	45%	5		
South on Range Line, Out AM	50%		5	
North on Range Line, In PM	65%			5
North on Range Line, Out PM	65%			5
South on Range Line, In PM	35%			0
South on Range Line, Out PM	35%			0
	100%	10	10	5 5



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EXHIBIT 3-3 EXISTING & ADDITIONAL GROWTH TRIP GENERATION TABLES (BASED ON MARCH 2020 COUNTS)

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Lake Shore Middle School - COVID-Based Trip Generation

Land Use	ITE Code	Proposed Size	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Lake Shore Middle School	TADI	Unknown	220 (56%)	175 (44%)	395	120 (42%)	165 (58%)	285
Total New Trips			220	175	395	120	165	285

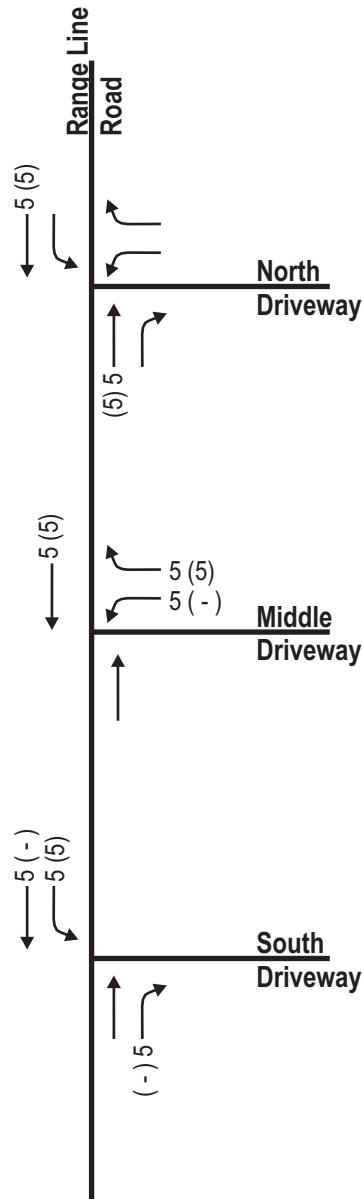
Based on counts from mid-September, 2020 during COVID





LEGEND

- XX AM Peak Hour Volumes (7:00-8:00 AM)
- (XX) PM Peak Hour Volumes (2:50-3:50 PM)
- Negligible Traffic Volumes (Fewer than 3 vph)



Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)



2505-C: 12-01-2020

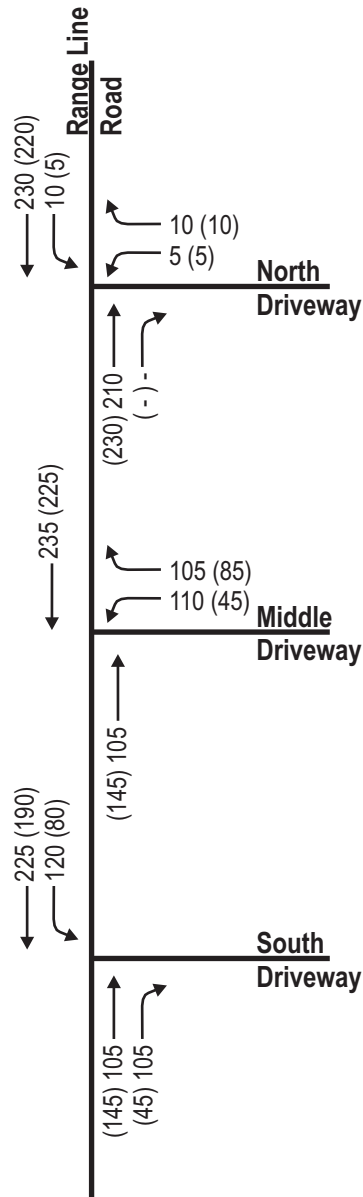
**EXHIBIT 3-5
ADDITIONAL NEW TRIPS**

MEQUON, WISCONSIN



LEGEND

- XX AM Peak Hour Volumes (7:00-8:00 AM)
- (XX) PM Peak Hour Volumes (2:50-3:50 PM)
- Negligible Traffic Volumes (Fewer than 3 vph)

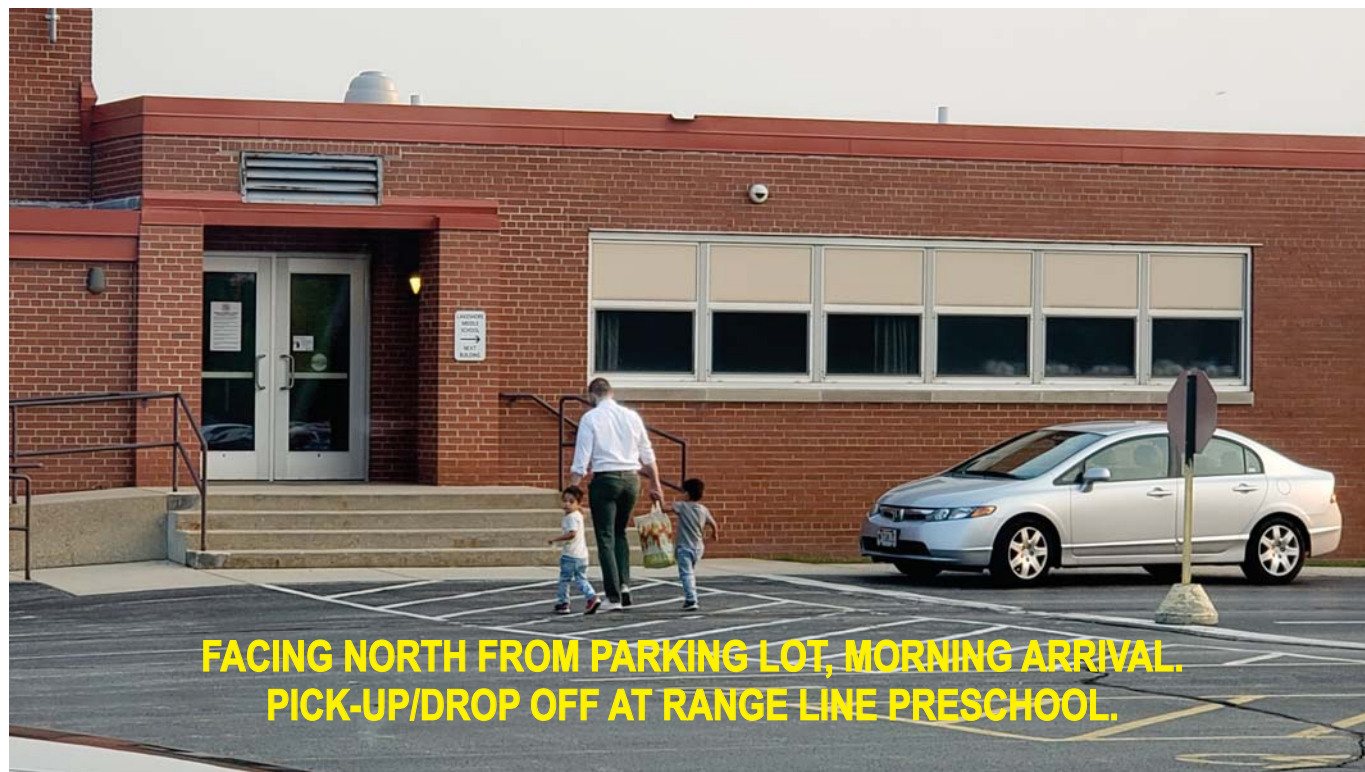




**FACING SOUTH TOWARDS PICK-UP/DROP-OFF LANES, MORNING ARRIVAL.
STAFF OPERATE TWO LANES USING STOP/GO SIGNS.**



**FACING EAST ON SOUTH SIDE OF SCHOOL SITE, MORNING ARRIVAL.
PARENTS UTILIZE TWO PICK-UP/DROP-OFF LANES, BUSES USE THIRD LANE.**



**FACING NORTH FROM PARKING LOT, MORNING ARRIVAL.
PICK-UP/DROP OFF AT RANGE LINE PRESCHOOL.**



**FACING NORTHEAST TOWARDS BUS PARKING LOT AT EAST SIDE OF
SCHOOL, AFTERNOON DISMISSAL.**

Existing Traffic - Operations & Queues
With Existing Site Layout

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Range Line Road & North Driveway (One-Way Stop)	AM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
	PM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
Range Line Road & Middle Driveway (One-Way Stop)	AM	LOS	-	-	-	F	-	B	-	*	-	-	*	-
		Queue	-	-	-	275	-	45	-	*	-	-	*	-
	PM	LOS	-	-	-	C	-	B	-	*	-	-	*	-
		Queue	-	-	-	25	-	20	-	*	-	-	*	-
Range Line Road & South Driveway (No Control)	AM	LOS	-	-	-	-	-	-	-	*			B	-
		Queue	-	-	-	-	-	-	-	*			35	-
	PM	LOS	-	-	-	-	-	-	-	*			A	-
		Queue	-	-	-	-	-	-	-	*			20	-

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.

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

Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

Growth Traffic - Operations & Queues
With Existing Site Layout

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Range Line Road & North Driveway (One-Way Stop)	AM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
	PM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
Range Line Road & Middle Driveway (One-Way Stop)	AM	LOS	-	-	-	F	-	B	-	*	-	-	*	-
		Queue	-	-	-	310	-	50	-	*	-	-	*	-
	PM	LOS	-	-	-	C	-	B	-	*	-	-	*	-
		Queue	-	-	-	25	-	20	-	*	-	-	*	-
Range Line Road & South Driveway (No Control)	AM	LOS	-	-	-	-	-	-	-	*			B	-
		Queue	-	-	-	-	-	-	-	*			35	-
	PM	LOS	-	-	-	-	-	-	-	*			A	-
		Queue	-	-	-	-	-	-	-	*			20	-

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.

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

Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

COVID-Based Traffic Operations & Queues
With Existing Site Layout

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Range Line Road & North Driveway (One-Way Stop)	AM	LOS	-	-	-	C			-	*			A	
		Queue	-	-	-	20			-	*			20	
	PM	LOS	-	-	-	C			-	*			A	
		Queue	-	-	-	20			-	*			20	
Range Line Road & Middle Driveway (One-Way Stop)	AM	LOS	-	-	-	D	-	B	-	*	-	-	*	-
		Queue	-	-	-	75	-	40	-	*	-	-	*	-
	PM	LOS	-	-	-	C	-	B	-	*	-	-	*	-
		Queue	-	-	-	30	-	25	-	*	-	-	*	-
Range Line Road & South Driveway (No Control)	AM	LOS	-	-	-	-	-	-	-	*	-	A		-
		Queue	-	-	-	-	-	-	-	*	-	35		-
	PM	LOS	-	-	-	-	-	-	-	*	-	A		-
		Queue	-	-	-	-	-	-	-	*	-	20		-

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.

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

Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

Existing Traffic - Operations & Queues
With Recommended Modifications

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Range Line Road & North Driveway (One-Way Stop)	AM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
	PM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
Range Line Road & Middle Driveway (One-Way Stop)	AM	LOS	-	-	-	F	-	B	-	*	-	-	*	-
		Queue	-	-	-	275	-	45	-	*	-	-	*	-
	PM	LOS	-	-	-	C	-	B	-	*	-	-	*	-
		Queue	-	-	-	25	-	20	-	*	-	-	*	-
Range Line Road & South Driveway (No Control)	AM	LOS	-	-	-	-	-	-	-	*			B	-
		Queue	-	-	-	-	-	-	-	*			35	-
	PM	LOS	-	-	-	-	-	-	-	*			A	-
		Queue	-	-	-	-	-	-	-	*			20	-

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.

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

Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

Growth Traffic - Operations & Queues
With Recommended Modifications

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Range Line Road & North Driveway (One-Way Stop)	AM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
	PM	LOS	-	-	-	C			-	*			A	-
		Queue	-	-	-	20			-	*			20	-
Range Line Road & Middle Driveway (One-Way Stop)	AM	LOS	-	-	-	F	-	B	-	*	-	-	*	-
		Queue	-	-	-	310	-	45	-	*	-	-	*	-
	PM	LOS	-	-	-	C	-	B	-	*	-	-	*	-
		Queue	-	-	-	25	-	20	-	*	-	-	*	-
Range Line Road & South Driveway (No Control)	AM	LOS	-	-	-	-	-	-	-	*			B	-
		Queue	-	-	-	-	-	-	-	*			35	-
	PM	LOS	-	-	-	-	-	-	-	*			A	-
		Queue	-	-	-	-	-	-	-	*			20	-

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.

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

Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.



2505-C: 12-01-2020

EXHIBIT 3-10
EXISTING & GROWTH TRAFFIC OPERATIONS
WITH RECOMMENDATIONS

MEQUON, WISCONSIN

CHAPTER IV – RECOMMENDATIONS AND CONCLUSION

PART A – RECOMMENDED MODIFICATIONS

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back onto the public roadway network.

Recommended modifications are for jurisdictional consideration and are not legally binding. The City of Mequon and the Mequon-Thiensville School District reserve the right to determine alternative solutions.

A1. Recommendations for Lake Shore Middle School

A conceptual drawing for Lake Shore Middle School is shown in [Exhibit 1-2](#).

- Maintain the South Driveway for ingress only, including two ingress only lanes that widen to three eastbound lanes internal to the site. The two northernmost lanes are recommended for motorists waiting to enter the pick-up/drop-off zone while the southernmost lane is recommended for buses to efficiently move to the lot on the east side of the school.
- Maintain the Middle Driveway for egress only with two exit lanes (one left-turn lane, one right-turn lane).
- Maintain two-way traffic at the North Driveway. Modify the curb radii such that buses exiting the driveway to head north on Range Line Road no longer need to encroach into the southbound lane on Range Line Road.
- Modify the existing “circle drive” on the west side of Range Line Preschool to a full counterclockwise loop drive with access to/from the North Driveway only. In addition to eliminating conflicts internal to the main Lake Shore Middle School parking lot, this modification allows buses that may use the drive to open their doors directly to the school, thereby reducing pedestrian-vehicle conflicts (pedestrians don’t need to cross between vehicles). This drive is also used for pick-up/drop-off for Ozaukee County senior dining site patrons.
- Redesign the pick-up/drop-off area at the front of the school to include two lanes separated by a raised median. Though two lanes currently exist, the existing lanes are very wide. Narrow each lane to approximately 18-feet wide to minimize pedestrian crossing distances and improve safety. The 18-foot wide lanes are expected to be sufficiently wide for 7- to 8-foot wide pick-up/drop-off parking lanes and 10- to 11-foot wide through lanes. The raised median is conceptually shown as fully concrete for easier maintenance. Maintain the same number of vehicle positions, or more, for parents to pick-up/drop-off students within the pick-up/drop-off zone.
- Include a raised landscape area between the pick-up/drop-off lanes and the parking lot to provide channelization of the pick-up/drop-off zone. Include a sidewalk across the raised landscape area to the parking lot.
- Include a raised crosswalk across both pick-up/drop-off lanes in front of Lake Shore Middle School to bring greater attention to the area where pedestrians cross and to the area where cars should and should not be loading.
- Include a raised crosswalk to/from Range Line Preschool to bring greater attention to the area where pedestrians cross. A pedestrian walkway is recommended between the

parking stalls on the south side of this raised crosswalk to provide a safer location for preschool families to access their vehicles.

- Restripe the area along the north side of the parking lot with two westbound lanes. Additional space is created between the parking lot and the school building as a result of this restriping. With this additional space, provide protected parking stalls east of the Range Line Preschool door and stripe “NO PARKING” west of the Range Line Preschool door.

A2. Other Considerations

Other considerations that may be given consideration are summarized below.

- Consider reducing the westernmost parking aisle width and increasing the depth of landscaping that currently exists along Range Line Road between the Middle Driveway and the South Driveway, if possible. If possible, this additional landscaping serves to provide additional throat length/definition at the two driveways.
- Consider providing additional pedestrian accommodations to and across Range Line Road. Note that a crossing of Range Line Road exists on the south leg of the Range Line Road & North Driveway intersection.
- Consider providing bicycle racks at the school to accommodate students and staff who may wish to bike to/from school.
- The westbound left-turn movement from the Middle Driveway to Range Line Road may be expected to continue to operate at LOS F with a traffic queue that exceeds 300-feet within the parking lot during the weekday morning peak hour under growth traffic volumes. The average vehicle delay expected for this movement is 115-seconds per vehicle, or 80-seconds per vehicle beyond the LOS D/E threshold. This level of delay and queuing may occur during the peak 15 to 20-minute surge of the morning arrival peak hour. Operations are expected to improve outside of this period. It is recommended to observe operations. Should the level of delay and queuing become problematic, consideration may be given in the future to constructing a southbound bypass lane on Range Line Road from at least 150-feet north of the Middle Driveway centerline to at least 100-feet south of the South Driveway centerline. Such an improvement may be expected to reduce average delays to LOS D with traffic queues of approximately 150-feet.

To further improve traffic operations, the District may also consider implementing strategies that help spread traffic arrival/discharge over a longer period or that help reduce vehicle demands. Examples of demand-management strategies for Lake Shore Middle School are included below.

- Consider if there may be strategies to make bus transportation more desirable and/or convenient for parents and students. If practical, implement those strategies to reduce vehicle demands at the school.
- Consider administering a “SchoolPool” ride-matching program. Such a program provides parents with information on neighborhood students who are interested in carpooling to/from school and facilitate the matching of students to encourage that carpooling (for parent drop-off/pick-up and student parking). Such a program may reduce vehicle demands at the school.

PART B – CONCLUSION

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back to the public roadway network.

The recommendations outlined in this study are expected to result in safer and more efficient operations for Lake Shore Middle School and Range Line Preschool if properly designed and implemented.

APPENDIX A

TRAFFIC COUNTS

APPENDIX A

Existing Traffic Counts (March 2020)

File Name: 2505 Mequon\Range Line Rd & Lake Shore North DW AM

Start Date: 3/9/2020

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: TOTAL VEHICLES

Comment 4: LO

	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:00:00 AM	0	9	0	0	0	0	0	0	0	14	0	0	0	0	0	0	23
7:05:00 AM	0	10	0	0	0	0	0	0	0	12	0	0	0	0	0	0	22
7:10:00 AM	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0	0	17
7:15:00 AM	0	13	0	0	0	0	0	0	0	7	1	0	0	0	0	0	21
7:20:00 AM	0	24	0	0	0	0	0	0	0	7	0	0	0	0	0	0	31
7:25:00 AM	0	22	0	0	0	0	0	0	0	7	0	0	0	0	0	0	29
7:30:00 AM	0	9	0	0	0	0	0	0	0	13	0	0	0	0	0	0	22
7:35:00 AM	1	30	0	0	0	0	1	0	0	15	0	0	0	0	0	0	47
7:40:00 AM	2	43	0	0	1	0	4	0	0	42	0	0	0	0	0	0	92
7:45:00 AM	2	31	0	0	0	0	2	0	0	39	0	0	0	0	0	0	74
7:50:00 AM	3	17	0	0	1	0	3	0	0	21	0	0	0	0	0	0	45
7:55:00 AM	1	14	0	0	0	0	2	0	0	16	0	0	0	0	0	0	33
TOTAL:	9	227	0	0	2	0	12	0	0	205	1	0	0	0	0	0	0

Peak Hour: 7:00-8:00AM

PHF: 0.41

%HV: 6.8%

57.1%

2.4%

#DIV/0!

File Name: 2505 Mequon\Range Line Rd & Lake Shore North DW AM

Start Date: 3/9/2020

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: LO

	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:00:00 AM	0	9	0	0	0	0	0	0	0	14	0	0	0	0	0	0	23
7:05:00 AM	0	10	0	0	0	0	0	0	0	12	0	0	0	0	0	0	22
7:10:00 AM	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0	0	17
7:15:00 AM	0	13	0	0	0	0	0	0	0	6	1	0	0	0	0	0	20
7:20:00 AM	0	20	0	0	0	0	0	0	0	7	0	0	0	0	0	0	27
7:25:00 AM	0	20	0	0	0	0	0	0	0	7	0	0	0	0	0	0	27
7:30:00 AM	0	7	0	0	0	0	0	0	0	13	0	0	0	0	0	0	20
7:35:00 AM	1	28	0	0	0	0	1	0	0	14	0	0	0	0	0	0	44
7:40:00 AM	2	41	0	0	0	0	0	0	0	42	0	0	0	0	0	0	85
7:45:00 AM	2	29	0	0	0	0	1	0	0	37	0	0	0	0	0	0	69
7:50:00 AM	2	16	0	0	1	0	2	0	0	21	0	0	0	0	0	0	42
7:55:00 AM	1	14	0	0	0	0	1	0	0	15	0	0	0	0	0	0	31
TOTAL:	8	212	0	0	1	0	5	0	0	200	1	0	0	0	0	0	

File Name: 2505 Mequon\Range Line Rd & Lake Shore North DW AM

Start Date: 3/9/2020

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: LO

Start Time	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Lake Shore North DW AM

Start Date: 3/9/2020

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: LO

Start Time	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:20:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:25:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:35:00 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
7:40:00 AM	0	2	0	0	1	0	4	0	0	0	0	0	0	0	0	0	7
7:45:00 AM	0	2	0	0	0	0	1	0	0	2	0	0	0	0	0	0	5
7:50:00 AM	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3
7:55:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
TOTAL:	1	14	0	0	1	0	7	0	0	5	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS North DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: TOTAL VEHICLES

Comment 4: AS

	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	11	0	0	0	0	0	0	0	7	0	0	0	0	0	0	18
2:55:00 PM	0	11	0	0	0	0	0	0	0	7	0	0	0	0	0	0	18
3:00:00 PM	0	17	0	0	0	0	0	0	0	11	0	0	0	0	0	0	28
3:05:00 PM	0	14	0	0	1	0	1	0	0	19	0	0	0	0	0	0	35
3:10:00 PM	0	24	0	0	0	0	1	0	0	12	0	0	0	0	0	0	37
3:15:00 PM	0	35	0	0	0	0	0	0	0	17	0	0	0	0	0	0	52
3:20:00 PM	0	21	0	0	0	0	0	0	0	32	0	1	0	0	0	1	55
3:25:00 PM	0	15	0	0	5	0	8	0	0	46	1	0	0	0	0	1	76
3:30:00 PM	1	10	0	0	0	0	0	0	0	16	0	2	0	0	0	2	31
3:35:00 PM	1	15	0	0	0	0	0	0	0	26	0	0	0	0	0	0	42
3:40:00 PM	0	18	0	0	0	0	0	0	0	16	0	0	0	0	0	0	34
3:45:00 PM	0	23	0	0	1	0	1	0	0	14	0	0	0	0	0	0	39
TOTAL:	2	214	0	0	7	0	11	0	0	223	1	3	0	0	0	4	

Peak Hour: 2:50-3:50pm

PHF: **0.51**

%HV: **6.9%**

72.2%

3.1%

#DIV/0!

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS North DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: AS

Start Time	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	10	0	0	0	0	0	0	0	7	0	0	0	0	0	0	17
2:55:00 PM	0	11	0	0	0	0	0	0	0	7	0	0	0	0	0	0	18
3:00:00 PM	0	14	0	0	0	0	0	0	0	11	0	0	0	0	0	0	25
3:05:00 PM	0	13	0	0	1	0	1	0	0	17	0	0	0	0	0	0	32
3:10:00 PM	0	21	0	0	0	0	1	0	0	12	0	0	0	0	0	0	34
3:15:00 PM	0	32	0	0	0	0	0	0	0	15	0	0	0	0	0	0	47
3:20:00 PM	0	19	0	0	0	0	0	0	0	30	0	1	0	0	0	1	51
3:25:00 PM	0	15	0	0	0	0	0	0	0	46	1	0	0	0	0	1	63
3:30:00 PM	1	10	0	0	0	0	0	0	0	16	0	2	0	0	0	2	31
3:35:00 PM	1	14	0	0	0	0	0	0	0	25	0	0	0	0	0	0	40
3:40:00 PM	0	18	0	0	0	0	0	0	0	16	0	0	0	0	0	0	34
3:45:00 PM	0	22	0	0	1	0	1	0	0	14	0	0	0	0	0	0	38
TOTAL:	2	199	0	0	2	0	3	0	0	216	1	3	0	0	0	4	

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS North DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS

Start Time	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:05:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
3:10:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:15:00 PM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
3:20:00 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
3:25:00 PM	0	0	0	0	5	0	8	0	0	0	0	0	0	0	0	0	13
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	15	0	0	5	0	8	0	0	7	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS North DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS

Start Time	RANGE LINE RD From North				LAKE SHORE NORTH DR From East				RANGE LINE RD From South				LAKE SHORE NORTH DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Middle Driveway AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: TOTAL VEHICLES

Comment 4: KB

	RANGE LINE RD From North					MIDDLE DRIVEWAY From East					RANGE LINE RD From South					MIDDLE DRIVEWAY From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	0	11	0	0	0	0	0	2	0	0	0	13	0	0	0	0	0	0	0	26	
7:10:00 AM	0	10	0	0	0	1	0	2	0	0	0	10	0	0	0	0	0	0	0	23	
7:15:00 AM	0	5	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	16	
7:20:00 AM	0	13	0	0	0	1	0	2	0	0	0	6	0	0	0	0	0	0	0	22	
7:25:00 AM	0	23	0	0	0	0	0	2	0	0	0	5	0	0	0	0	0	0	0	30	
7:30:00 AM	0	22	0	0	0	2	0	4	0	0	0	4	0	0	0	0	0	0	0	32	
7:35:00 AM	0	9	0	0	0	2	0	2	0	0	0	11	0	0	0	0	0	0	0	24	
7:40:00 AM	0	28	0	0	0	1	0	6	0	0	0	9	0	0	0	0	0	0	0	44	
7:45:00 AM	0	55	0	0	0	27	0	38	0	0	0	8	0	0	0	0	0	0	0	128	
7:50:00 AM	0	32	0	0	0	43	1	26	0	0	0	8	0	0	0	0	0	0	0	110	
7:55:00 AM	0	14	0	0	0	21	0	14	1	0	0	8	0	0	0	0	0	0	1	59	
8:00:00 AM	0	14	0	0	0	4	0	4	0	0	0	12	0	0	0	0	0	0	0	34	
TOTAL:	0	236	0	0	0	102	1	102	1	0	0	105	0	0	0	0	0	0	1		

Peak Hour: 7:05-8:05AM

PHF: **0.36**

%HV: **6.8%**

2.0%

1.0%

#DIV/0!

File Name: 2505 Mequon\Range Line Rd & Middle Driveway AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: KB

	RANGE LINE RD From North					MIDDLE DRIVEWAY From East					RANGE LINE RD From South					MIDDLE DRIVEWAY From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	0	11	0	0		0	0	2	0		0	13	0	0		0	0	0	0		26
7:10:00 AM	0	10	0	0		1	0	2	0		0	10	0	0		0	0	0	0		23
7:15:00 AM	0	5	0	0		0	0	0	0		0	11	0	0		0	0	0	0		16
7:20:00 AM	0	13	0	0		1	0	2	0		0	5	0	0		0	0	0	0		21
7:25:00 AM	0	19	0	0		0	0	2	0		0	5	0	0		0	0	0	0		26
7:30:00 AM	0	20	0	0		2	0	4	0		0	4	0	0		0	0	0	0		30
7:35:00 AM	0	7	0	0		2	0	2	0		0	11	0	0		0	0	0	0		22
7:40:00 AM	0	26	0	0		1	0	5	0		0	9	0	0		0	0	0	0		41
7:45:00 AM	0	52	0	0		27	0	38	0		0	8	0	0		0	0	0	0		125
7:50:00 AM	0	30	0	0		43	1	24	0		0	8	0	0		0	0	0	0		106
7:55:00 AM	0	13	0	0		21	0	14	1		0	8	0	0		0	0	0	1		58
8:00:00 AM	0	14	0	0		4	0	3	0		0	12	0	0		0	0	0	0		33
TOTAL:	0	220	0	0		102	1	98	1		0	104	0	0		0	0	0	1		

File Name: 2505 Mequon\Range Line Rd & Middle Driveway AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: KB

Start Time	RANGE LINE RD From North				MIDDLE DRIVEWAY From East				RANGE LINE RD From South				MIDDLE DRIVEWAY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:25:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:35:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:40:00 AM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3
7:45:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:50:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4
7:55:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	15	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Middle Driveway AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: KB

Start Time	RANGE LINE RD From North				MIDDLE DRIVEWAY From East				RANGE LINE RD From South				MIDDLE DRIVEWAY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Middle Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: TOTAL VEHICLES

Comment 4: KB

Start Time	RANGE LINE RD From North				MIDDLE DRIVEWAY From East				RANGE LINE RD From South				MIDDLE DRIVEWAY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	11	0	0	3	0	0	0	0	7	0	0	0	0	0	0	21
2:55:00 PM	0	12	0	0	2	0	1	0	0	5	0	0	0	0	0	0	20
3:00:00 PM	0	16	0	0	1	0	0	0	0	11	0	0	0	0	0	0	28
3:05:00 PM	0	15	0	0	2	0	3	0	0	16	0	0	0	0	0	0	36
3:10:00 PM	0	24	0	0	2	0	3	0	0	9	0	0	0	0	0	0	38
3:15:00 PM	0	35	0	0	1	0	3	0	0	14	0	0	0	0	0	0	53
3:20:00 PM	0	21	0	0	12	0	21	0	0	13	0	0	0	0	0	0	67
3:25:00 PM	0	17	0	0	17	0	31	0	0	15	0	0	0	0	0	0	80
3:30:00 PM	0	11	0	0	3	0	6	0	0	7	0	0	0	0	0	0	27
3:35:00 PM	0	15	0	0	2	0	6	0	0	20	0	0	0	0	0	0	43
3:40:00 PM	0	18	0	0	0	0	5	0	0	11	0	0	0	0	0	0	34
3:45:00 PM	0	24	0	0	0	0	1	0	0	13	0	0	0	0	0	0	38
TOTAL:	0	219	0	0	45	0	80	0	0	141	0	0	0	0	0	0	

Peak Hour: 2:50-3:50pm

PHF: **0.51**

%HV: **9.1%**

0.8%

5.7%

#DIV/0!

File Name: 2505 Mequon\Range Line Rd & Middle Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: KB

	RANGE LINE RD From North				MIDDLE DRIVEWAY From East				RANGE LINE RD From South				MIDDLE DRIVEWAY From West				TOTAL
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	11	0	0	3	0	0	0	0	7	0	0	0	0	0	0	21
2:55:00 PM	0	11	0	0	2	0	1	0	0	5	0	0	0	0	0	0	19
3:00:00 PM	0	13	0	0	1	0	0	0	0	11	0	0	0	0	0	0	25
3:05:00 PM	0	14	0	0	2	0	3	0	0	14	0	0	0	0	0	0	33
3:10:00 PM	0	22	0	0	2	0	3	0	0	9	0	0	0	0	0	0	36
3:15:00 PM	0	31	0	0	1	0	3	0	0	12	0	0	0	0	0	0	47
3:20:00 PM	0	19	0	0	12	0	20	0	0	11	0	0	0	0	0	0	62
3:25:00 PM	0	12	0	0	17	0	31	0	0	14	0	0	0	0	0	0	74
3:30:00 PM	0	11	0	0	3	0	6	0	0	7	0	0	0	0	0	0	27
3:35:00 PM	0	14	0	0	2	0	6	0	0	19	0	0	0	0	0	0	41
3:40:00 PM	0	18	0	0	0	0	5	0	0	11	0	0	0	0	0	0	34
3:45:00 PM	0	23	0	0	0	0	1	0	0	13	0	0	0	0	0	0	37
TOTAL:	0	199	0	0	45	0	79	0	0	133	0	0	0	0	0	0	

File Name: 2505 Mequon\Range Line Rd & Middle Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: KB

Start Time	RANGE LINE RD From North				MIDDLE DRIVEWAY From East				RANGE LINE RD From South				MIDDLE DRIVEWAY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:05:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
3:10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15:00 PM	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	6
3:20:00 PM	0	2	0	0	0	0	1	0	0	2	0	0	0	0	0	0	5
3:25:00 PM	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	20	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Rd & Middle Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: KB

Start Time	RANGE LINE RD From North				MIDDLE DRIVEWAY From East				RANGE LINE RD From South				MIDDLE DRIVEWAY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: 2505 Mequon\Range Line Rd, Lake Shore Middle School South Drive, AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday AM

Comment 3: TOTAL VEHICLES

Comment 4: AS.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	5	7	0	0	0	0	0	0	0	14	1	0	0	0	0	0	27
7:10:00 AM	3	6	0	0	0	0	0	0	0	10	1	0	0	0	0	0	20
7:15:00 AM	1	4	0	0	0	0	0	0	0	12	2	0	0	0	0	0	19
7:20:00 AM	7	8	0	0	0	0	0	0	0	6	1	0	0	0	0	0	22
7:25:00 AM	12	11	0	0	0	0	0	0	0	5	1	0	0	0	0	0	29
7:30:00 AM	9	14	0	0	0	0	0	0	0	3	4	0	0	0	0	0	30
7:35:00 AM	6	7	0	0	0	0	0	0	0	12	3	0	0	0	0	0	28
7:40:00 AM	20	7	0	0	0	0	0	0	0	9	12	0	0	0	0	1	49
7:45:00 AM	24	34	0	0	0	0	0	0	0	10	46	0	0	0	0	0	114
7:50:00 AM	23	41	0	0	0	0	0	0	0	6	14	0	0	0	0	0	84
7:55:00 AM	5	34	0	0	0	0	0	0	0	7	12	0	0	0	0	0	58
8:00:00 AM	2	17	0	0	0	0	0	0	0	12	1	0	0	0	0	0	32
TOTAL:	117	190	0	0	0	0	0	0	0	106	98	0	0	0	0	1	

Peak Hour: 7:05-8:05AM

PHF: 0.37

%HV: 5.5%

0.0%

2.0%

0.0%

File Name: 2505 Mequon\Range Line Rd, Lake Shore Middle School South Drive, AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday AM

Comment 3: CARS & PEDS

Comment 4: AS.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	5	6	0	0	0	0	0	0	0	14	1	0	0	0	0	0	26
7:10:00 AM	3	6	0	0	0	0	0	0	0	10	1	0	0	0	0	0	20
7:15:00 AM	1	4	0	0	0	0	0	0	0	12	2	0	0	0	0	0	19
7:20:00 AM	7	8	0	0	0	0	0	0	0	5	1	0	0	0	0	0	21
7:25:00 AM	10	10	0	0	0	0	0	0	0	5	1	0	0	0	0	0	26
7:30:00 AM	7	14	0	0	0	0	0	0	0	3	3	0	0	0	0	0	27
7:35:00 AM	4	7	0	0	0	0	0	0	0	12	1	0	0	0	0	0	24
7:40:00 AM	17	7	0	0	0	0	0	0	0	9	12	0	0	0	0	1	46
7:45:00 AM	23	33	0	0	0	0	0	0	0	10	46	0	0	0	0	0	112
7:50:00 AM	22	39	0	0	0	0	0	0	0	6	14	0	0	0	0	0	81
7:55:00 AM	4	34	0	0	0	0	0	0	0	7	12	0	0	0	0	0	57
8:00:00 AM	2	17	0	0	0	0	0	0	0	12	1	0	0	0	0	0	32
TOTAL:	105	185	0	0	0	0	0	0	0	105	95	0	0	0	0	1	

0%

0%

File Name: 2505 Mequon\Range Line Rd, Lake Shore Middle School South Drive, AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:25:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30:00 AM	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
7:35:00 AM	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4
7:40:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:50:00 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:55:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	12	4	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0

0%

0%

File Name: 2505 Mequon\Range Line Rd, Lake Shore Middle School South Drive, AM

Start Date: 3/9/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0%

0%

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS South DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday Afternoon

Comment 3: TOTAL VEHICLES

Comment 4: WP.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	14	0	0	0	0	0	0	0	7	1	0	0	0	0	0	22
2:55:00 PM	4	10	0	0	0	0	0	0	0	6	2	0	0	0	0	0	22
3:00:00 PM	6	10	0	0	0	0	0	0	0	11	4	0	0	0	0	0	31
3:05:00 PM	7	10	0	0	0	0	0	0	0	16	0	0	0	0	0	0	33
3:10:00 PM	9	18	0	0	0	0	0	0	0	9	5	0	0	0	0	0	41
3:15:00 PM	17	18	0	0	0	0	0	0	0	15	8	0	0	0	0	0	58
3:20:00 PM	12	23	0	0	0	0	0	0	0	12	10	0	0	0	0	0	57
3:25:00 PM	3	34	0	0	0	0	0	0	0	17	4	0	0	0	0	1	59
3:30:00 PM	3	12	0	0	0	0	0	0	0	8	6	0	0	0	0	0	29
3:35:00 PM	3	14	0	0	0	0	0	0	0	19	1	0	0	0	0	0	37
3:40:00 PM	5	13	0	0	0	0	0	0	0	11	1	0	0	0	0	0	30
3:45:00 PM	7	16	0	0	0	0	0	0	0	13	5	0	0	0	0	0	41
TOTAL:	76	192	0	0	0	0	0	0	0	144	47	0	0	0	0	1	

Peak Hour: 2:50-3:50pm

PHF: **0.65**

%HV: **7.8%**

0.0%

4.2%

0.0%

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS South DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday Afternoon

Comment 3: CARS & PEDS

Comment 4: WP.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	14	0	0	0	0	0	0	0	7	1	0	0	0	0	0	22
2:55:00 PM	4	9	0	0	0	0	0	0	0	6	2	0	0	0	0	0	21
3:00:00 PM	3	10	0	0	0	0	0	0	0	11	4	0	0	0	0	0	28
3:05:00 PM	6	10	0	0	0	0	0	0	0	14	0	0	0	0	0	0	30
3:10:00 PM	6	18	0	0	0	0	0	0	0	9	4	0	0	0	0	0	37
3:15:00 PM	13	18	0	0	0	0	0	0	0	13	8	0	0	0	0	0	52
3:20:00 PM	10	23	0	0	0	0	0	0	0	10	10	0	0	0	0	0	53
3:25:00 PM	3	29	0	0	0	0	0	0	0	17	4	0	0	0	0	1	54
3:30:00 PM	3	12	0	0	0	0	0	0	0	8	6	0	0	0	0	0	29
3:35:00 PM	2	14	0	0	0	0	0	0	0	18	1	0	0	0	0	0	35
3:40:00 PM	5	13	0	0	0	0	0	0	0	11	1	0	0	0	0	0	30
3:45:00 PM	7	15	0	0	0	0	0	0	0	13	5	0	0	0	0	0	40
TOTAL:	62	185	0	0	0	0	0	0	0	137	46	0	0	0	0	1	

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS South DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday Afternoon

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: WP.

	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00:00 PM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:05:00 PM	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
3:10:00 PM	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
3:15:00 PM	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	6
3:20:00 PM	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
3:25:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	14	7	0	0	0	0	0	0	0	7	1	0	0	0	0	0	

File Name: 2505 Mequon\Range Line Rd & Lake Shore MS South DW PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday Afternoon

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: WP.

Start Time	RANGE LINE From North				LAKE SHORE S DRWY From East				RANGE LINE From South				LAKE SHORE S DRWY From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway AM

Start Date: 3/10/2020

Start Time: 7:15:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: TOTAL VEHICLES

Comment 4: KB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:10:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:50:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
7:55:00 AM	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	4
8:00:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	3	2	0	0	5	0	5	0	0	0	0	0	0	0	0	0

Peak Hour: 7:05-8:05am

PHF: **0.31**

%HV: **100.0%**

0.0%

0.0%

0.0%

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway AM

Start Date: 3/10/2020

Start Time: 7:15:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: KB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:10:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
7:55:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	

0%

0%

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway AM

Start Date: 3/10/2020

Start Time: 7:15:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: KB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:50:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:55:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0%

0%

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway AM

Start Date: 3/10/2020

Start Time: 7:15:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: KB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	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	0	0	0	0

0%

0%

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: TOTAL VEHICLES

Comment 4: JB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	4
2:55:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
3:05:00 PM	0	0	0	0	0	3	1	3	0	0	0	0	0	0	0	0	7
3:10:00 PM	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	0	7
3:15:00 PM	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
3:20:00 PM	0	0	0	0	0	33	0	1	0	0	0	0	0	0	0	0	34
3:25:00 PM	0	0	0	2	0	43	0	1	0	0	0	0	0	0	0	1	47
3:30:00 PM	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	9
3:35:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7
3:40:00 PM	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	4
3:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	0	0	2	0	107	1	15	0	0	0	0	0	0	0	1	

Peak Hour: 2:50-3:50pm

PHF: 0.22

%HV: 0.0%

0.9%

0.0%

0.0%

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: JB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	4
2:55:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
3:05:00 PM	0	0	0	0	0	3	1	3	0	0	0	0	0	0	0	0	7
3:10:00 PM	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	0	7
3:15:00 PM	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
3:20:00 PM	0	0	0	0	0	32	0	1	0	0	0	0	0	0	0	0	33
3:25:00 PM	0	0	0	2	0	43	0	1	0	0	0	0	0	0	0	1	47
3:30:00 PM	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	9
3:35:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7
3:40:00 PM	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	4
3:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL:	0	0	0	2	0	106	1	15	0	0	0	0	0	0	0	1	

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: JB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

File Name: 2505 Mequon\Range Line Internal DW\Range Line Rd & Middle Internal Driveway PM

Start Date: 3/4/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: JB

Start Time	INTERNAL INTERSECTIO From North				RANGE LINE SCHOOL From East				INTERNAL INTERSECTIO From South				RANGE LINE SCHOOL From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

APPENDIX A

Existing Traffic Counts (September 2020)

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & North DW AM - LO.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: Total Volumes

Comment 4: LO

	RANGE LINE RD From North					NORTH DRIVEWAY From East					RANGE LINE RD From South					NORTH DRIVEWAY From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	0	12	0	0		0	0	0	0		0	5	0	0		0	0	0	0		17
7:10:00 AM	0	4	0	0		0	0	0	0		0	3	0	0		0	0	0	0		7
7:15:00 AM	0	9	0	0		0	0	0	0		0	4	0	0		0	0	0	0		13
7:20:00 AM	0	5	0	0		0	0	0	0		0	6	0	0		0	0	0	0		11
7:25:00 AM	1	11	0	0		0	0	1	0		0	4	0	0		0	0	0	0		17
7:30:00 AM	0	15	0	0		0	0	0	0		0	8	0	0		0	0	0	0		23
7:35:00 AM	0	19	0	0		0	0	0	0		0	13	0	0		0	0	0	0		32
7:40:00 AM	0	36	0	0		0	0	2	0		0	32	0	0		0	0	0	0		70
7:45:00 AM	0	45	0	0		0	0	1	0		0	37	0	0		0	0	0	0		83
7:50:00 AM	0	29	0	0		1	0	1	0		0	38	0	0		0	0	0	0		69
7:55:00 AM	1	24	0	0		0	0	1	1		0	25	0	0		0	0	0	0		51
8:00:00 AM	1	15	0	0		1	0	1	0		0	10	0	0		0	0	0	0		28
	3	224	0	0		2	0	7	1		0	185	0	0		0	0	0	0		

Peak Hour: 7:05-8:05AM

PHF: **0.42**

%HV: **6.6%**

77.8%

2.2%

0.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & North DW AM - LO.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: LO

	RANGE LINE RD From North				NORTH DRIVEWAY From East				RANGE LINE RD From South				NORTH DRIVEWAY From West					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:05:00 AM	0	12	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	
7:10:00 AM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
7:15:00 AM	0	8	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	
7:20:00 AM	0	5	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	
7:25:00 AM	1	11	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	
7:30:00 AM	0	14	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	
7:35:00 AM	0	14	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	
7:40:00 AM	0	32	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	
7:45:00 AM	0	43	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	
7:50:00 AM	0	29	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	
7:55:00 AM	1	24	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	
8:00:00 AM	1	14	0	0	0	0	1	0	0	9	0	0	0	0	0	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & North DW AM - LO.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: LO

Start Time	RANGE LINE RD From North				NORTH DRIVEWAY From East				RANGE LINE RD From South				NORTH DRIVEWAY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:35:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	4	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0
8:00:00 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & North DW AM - LO.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: LO

Start Time	RANGE LINE RD From North				NORTH DRIVEWAY From East				RANGE LINE RD From South				NORTH DRIVEWAY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School North DV

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: Total Volumes

Comment 4: RA.

	RANGE LINE RD From North					NORTH DRIVEWAY From East					RANGE LINE RD From South					NORTH DRIVEWAY From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
2:50:00 PM	1	14	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	26	
2:55:00 PM	1	23	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	33	
3:00:00 PM	0	17	0	0	0	0	0	0	0	0	0	22	1	0	0	0	0	0	0	40	
3:05:00 PM	0	15	0	1	0	0	0	1	0	0	0	41	1	5	1	0	1	1	0	60	
3:10:00 PM	0	31	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	66	
3:15:00 PM	0	11	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	24	
3:20:00 PM	0	18	0	0	5	0	0	9	0	0	0	12	0	0	0	0	0	0	0	44	
3:25:00 PM	1	19	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	40	
3:30:00 PM	0	19	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	43	
3:35:00 PM	0	4	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	18	
3:40:00 PM	0	17	0	0	0	0	0	1	0	0	0	12	0	0	0	0	0	0	0	30	
3:45:00 PM	0	12	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	30	
	3	200	0	1	5	0	0	11	0	0	0	231	2	5	1	0	0	1	0	454	

Peak Hour: 2:50-3:50PM

PHF: 0.57

%HV: 8.9%

87.5%

5.2%

50.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School North D

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: CARS & PEDS

Comment 4: RA.

	RANGE LINE RD From North				NORTH DRIVEWAY From East				RANGE LINE RD From South				NORTH DRIVEWAY From West					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
2:50:00 PM	1	12	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	
2:55:00 PM	0	21	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	
3:00:00 PM	0	16	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	
3:05:00 PM	0	14	0	1	0	0	1	0	0	41	1	5	1	0	0	0	0	
3:10:00 PM	0	24	0	0	0	0	0	0	0	33	0	0	0	0	0	0	0	
3:15:00 PM	0	11	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	
3:20:00 PM	0	16	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	
3:25:00 PM	1	19	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	
3:30:00 PM	0	19	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	
3:35:00 PM	0	4	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	
3:40:00 PM	0	15	0	0	0	0	1	0	0	11	0	0	0	0	0	0	0	
3:45:00 PM	0	12	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School North D

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: RA.

Start Time	RANGE LINE RD From North				NORTH DRIVEWAY From East				RANGE LINE RD From South				NORTH DRIVEWAY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:00:00 PM	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
3:05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3:10:00 PM	0	7	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:20:00 PM	0	2	0	0	5	0	9	0	0	2	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School North D

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: RA.

Start Time	RANGE LINE RD From North				NORTH DRIVEWAY From East				RANGE LINE RD From South				NORTH DRIVEWAY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd &MS Middle DW AM - AS.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: Total Volumes

Comment 4: AS

	RANGE LINE RD From North					MS MIDDLE DRWY From East					RANGE LINE RD From South					MS MIDDLE DRWY From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	0	12	0	0		0	0	0	0		0	5	0	0		0	0	0	0		17
7:10:00 AM	0	4	0	0		0	0	0	0		0	3	0	0		0	0	0	0		7
7:15:00 AM	0	9	0	0		0	0	1	0		0	4	0	0		0	0	0	0		14
7:20:00 AM	0	5	0	0		0	0	2	0		0	3	0	0		0	0	0	0		10
7:25:00 AM	0	11	0	0		0	0	0	0		0	5	0	0		0	0	0	0		16
7:30:00 AM	0	15	0	0		0	0	0	0		0	8	0	0		0	0	0	0		23
7:35:00 AM	0	19	0	0		1	0	3	0		0	11	0	0		0	0	0	0		34
7:40:00 AM	0	36	0	0		9	0	22	0		0	11	0	0		0	0	0	0		78
7:45:00 AM	0	46	0	0		20	0	29	0		0	8	0	0		0	0	0	0		103
7:50:00 AM	0	28	0	0		21	0	33	0		0	6	0	0		0	0	0	0		88
7:55:00 AM	0	27	0	0		13	0	8	1		0	15	0	0		0	0	0	0		63
8:00:00 AM	0	16	0	0		2	0	1	0		0	9	0	0		0	0	0	0		28
	0	228	0	0		66	0	99	1		0	88	0	0		0	0	0	0		

Peak Hour: 7:05-8:05AM

PHF: **0.39**

%HV: **7.5%**

1.2%

3.4%

0.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd &MS Middle DW AM - AS.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: AS

	RANGE LINE RD From North				MS MIDDLE DRWY From East				RANGE LINE RD From South				MS MIDDLE DRWY From West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	12	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
7:10:00 AM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
7:15:00 AM	0	8	0	0	0	0	1	0	0	4	0	0	0	0	0	0	0
7:20:00 AM	0	5	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0
7:25:00 AM	0	11	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
7:30:00 AM	0	14	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
7:35:00 AM	0	14	0	0	0	0	3	0	0	11	0	0	0	0	0	0	0
7:40:00 AM	0	32	0	0	9	0	22	0	0	11	0	0	0	0	0	0	0
7:45:00 AM	0	44	0	0	20	0	29	0	0	8	0	0	0	0	0	0	0
7:50:00 AM	0	27	0	0	21	0	33	0	0	6	0	0	0	0	0	0	0
7:55:00 AM	0	27	0	0	13	0	7	0	0	15	0	0	0	0	0	0	0
8:00:00 AM	0	14	0	0	2	0	1	0	0	8	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd &MS Middle DW AM - AS.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS

Start Time	RANGE LINE RD From North				MS MIDDLE DRWY From East				RANGE LINE RD From South				MS MIDDLE DRWY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:35:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd &MS Middle DW AM - AS.ppd

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS

Start Time	RANGE LINE RD From North				MS MIDDLE DRWY From East				RANGE LINE RD From South				MS MIDDLE DRWY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School Middle I

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: Total Volumes

Comment 4: WP

	RANGE LINE RD From North					MS MIDDLE DRWY From East					RANGE LINE RD From South					MS MIDDLE DRWY From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
2:50:00 PM	0	15	0	0		0	0	1	0		0	11	0	0		0	0	0	0		27
2:55:00 PM	0	24	0	0		1	0	1	0		0	7	0	0		0	0	0	0		33
3:00:00 PM	1	16	0	0		7	0	11	0		0	12	1	0		0	0	0	0		48
3:05:00 PM	0	16	0	0		19	0	28	0		0	14	0	0		0	0	0	0		77
3:10:00 PM	0	31	0	0		21	0	25	0		0	9	0	0		0	0	0	0		86
3:15:00 PM	0	10	0	0		4	0	1	0		0	14	0	0		0	0	0	0		29
3:20:00 PM	0	25	0	0		0	0	2	0		0	10	0	0		0	0	0	0		37
3:25:00 PM	0	19	0	0		2	0	5	0		0	13	0	0		0	0	0	0		39
3:30:00 PM	0	19	0	0		0	0	9	0		0	17	0	0		0	0	0	0		45
3:35:00 PM	0	4	0	0		0	0	7	0		0	8	0	0		0	0	0	0		19
3:40:00 PM	0	17	0	0		0	0	3	0		0	10	0	0		0	0	0	0		30
3:45:00 PM	0	12	0	0		3	0	3	0		0	15	0	0		0	0	0	0		33
	1	208	0	0		57	0	96	0		0	140	1	0		0	0	0	0		

Peak Hour: 2:50-3:50PM

PHF: **0.49**

%HV: **11.5%**

0.7%

9.2%

0.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School Middle I

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: WP

	RANGE LINE RD From North				MS MIDDLE DRWY From East				RANGE LINE RD From South				MS MIDDLE DRWY From West					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
2:50:00 PM	0	14	0	0	0	0	1	0	0	11	0	0	0	0	0	0	0	
2:55:00 PM	0	21	0	0	1	0	1	0	0	6	0	0	0	0	0	0	0	
3:00:00 PM	1	14	0	0	7	0	11	0	0	10	1	0	0	0	0	0	0	
3:05:00 PM	0	15	0	0	19	0	27	0	0	13	0	0	0	0	0	0	0	
3:10:00 PM	0	24	0	0	21	0	25	0	0	7	0	0	0	0	0	0	0	
3:15:00 PM	0	9	0	0	4	0	1	0	0	13	0	0	0	0	0	0	0	
3:20:00 PM	0	18	0	0	0	0	2	0	0	8	0	0	0	0	0	0	0	
3:25:00 PM	0	19	0	0	2	0	5	0	0	13	0	0	0	0	0	0	0	
3:30:00 PM	0	19	0	0	0	0	9	0	0	16	0	0	0	0	0	0	0	
3:35:00 PM	0	4	0	0	0	0	7	0	0	8	0	0	0	0	0	0	0	
3:40:00 PM	0	15	0	0	0	0	3	0	0	9	0	0	0	0	0	0	0	
3:45:00 PM	0	12	0	0	3	0	3	0	0	13	0	0	0	0	0	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School Middle I

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: WP

Start Time	RANGE LINE RD From North				MS MIDDLE DRWY From East				RANGE LINE RD From South				MS MIDDLE DRWY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:00:00 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:05:00 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
3:10:00 PM	0	7	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:15:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:20:00 PM	0	7	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School Middle I

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: WP

Start Time	RANGE LINE RD From North				MS MIDDLE DRWY From East				RANGE LINE RD From South				MS MIDDLE DRWY From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore South DW AM - RA.pp

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: Total Volumes

Comment 4: RA

	RANGE LINE ROAD From North					LAKESHORE MS S DRIVE From East					RANGE LINE ROAD From South					LAKESHORE MS S DRIVE From West					TOTAL
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	6	7	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	18
7:10:00 AM	1	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	7
7:15:00 AM	6	3	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	14
7:20:00 AM	4	1	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	9
7:25:00 AM	8	3	0	0	0	0	0	0	1	0	0	5	4	0	0	0	0	0	0	0	20
7:30:00 AM	7	8	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	23
7:35:00 AM	16	3	0	0	0	0	0	0	0	0	0	11	9	0	0	0	0	0	0	0	39
7:40:00 AM	21	25	0	0	0	0	0	0	0	0	0	11	16	0	0	0	0	0	0	0	73
7:45:00 AM	30	34	0	0	0	0	0	0	0	0	0	8	33	0	0	0	0	0	0	0	105
7:50:00 AM	14	39	0	0	0	0	0	0	0	0	0	6	20	0	0	0	0	0	0	0	79
7:55:00 AM	6	32	0	0	0	0	0	0	1	0	0	15	7	0	0	0	0	0	0	0	60
8:00:00 AM	1	15	0	0	0	0	0	0	0	0	0	10	3	0	0	0	0	0	0	0	29
	120	173	0	0	0	0	0	0	2	0	0	89	94	0	0	0	0	0	0	0	

Peak Hour: 7:05-8:05AM

PHF: **0.38**

%HV: **6.1%**

0.0%

3.3%

0.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore South DW AM - RA.pp

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: RA

	RANGE LINE ROAD From North					LAKESHORE MS S DRIVE From East					RANGE LINE ROAD From South					LAKESHORE MS S DRIVE From West					
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	6	7	0	0		0	0	0	0		0	5	0	0		0	0	0	0		
7:10:00 AM	1	2	0	0		0	0	0	0		0	3	0	0		0	0	0	0		
7:15:00 AM	6	2	0	0		0	0	0	0		0	5	0	0		0	0	0	0		
7:20:00 AM	4	1	0	0		0	0	0	0		0	2	2	0		0	0	0	0		
7:25:00 AM	8	3	0	0		0	0	0	1		0	4	2	0		0	0	0	0		
7:30:00 AM	6	8	0	0		0	0	0	0		0	7	0	0		0	0	0	0		
7:35:00 AM	12	2	0	0		0	0	0	0		0	11	8	0		0	0	0	0		
7:40:00 AM	17	24	0	0		0	0	0	0		0	11	16	0		0	0	0	0		
7:45:00 AM	28	34	0	0		0	0	0	0		0	8	33	0		0	0	0	0		
7:50:00 AM	14	38	0	0		0	0	0	0		0	6	20	0		0	0	0	0		
7:55:00 AM	6	32	0	0		0	0	0	0		0	15	7	0		0	0	0	0		
8:00:00 AM	1	13	0	0		0	0	0	0		0	9	3	0		0	0	0	0		

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore South DW AM - RA.pp

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: RA

Start Time	RANGE LINE ROAD From North				LAKESHORE MS S DRIVE From East				RANGE LINE ROAD From South				LAKESHORE MS S DRIVE From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
7:30:00 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:35:00 AM	4	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7:40:00 AM	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore South DW AM - RA.pp

Start Date: 9/22/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: RA

Start Time	RANGE LINE ROAD From North				LAKESHORE MS S DRIVE From East				RANGE LINE ROAD From South				LAKESHORE MS S DRIVE From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School South C

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: Total Volumes

Comment 4: LN.

Start Time	RANGE LINE ROAD From North				LAKESHORE MS S DRIVE From East				RANGE LINE ROAD From South				LAKESHORE MS S DRIVE From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	9	7	0	0	0	0	0	0	0	11	8	0	0	0	0	0	35
2:55:00 PM	16	9	0	0	0	0	0	0	0	7	10	0	0	0	0	0	42
3:00:00 PM	9	14	0	0	0	0	0	0	0	13	10	0	0	0	0	0	46
3:05:00 PM	9	25	0	0	0	0	0	0	0	14	7	0	0	0	0	0	55
3:10:00 PM	11	42	0	0	0	0	0	0	0	11	6	0	0	0	0	0	70
3:15:00 PM	1	13	0	0	0	0	0	0	0	11	1	0	0	0	0	0	26
3:20:00 PM	3	21	0	0	0	0	0	0	0	10	0	0	0	0	0	0	34
3:25:00 PM	3	18	0	0	0	0	0	0	0	14	2	0	0	0	0	0	37
3:30:00 PM	4	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	34
3:35:00 PM	2	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0	12
3:40:00 PM	3	14	0	0	0	0	0	0	0	10	1	0	0	0	0	0	28
3:45:00 PM	2	13	0	0	0	0	0	0	0	15	0	0	0	0	0	0	30
	72	193	0	0	0	0	0	0	0	139	45	0	0	0	0	0	

Peak Hour: 2:50-3:50PM

PHF: **0.53**

%HV: **9.1%**

0.0%

8.7%

0.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School South C

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: CARS & PEDS

Comment 4: LN.

	RANGE LINE ROAD From North				LAKESHORE MS S DRIVE From East				RANGE LINE ROAD From South				LAKESHORE MS S DRIVE From West					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
2:50:00 PM	9	6	0	0	0	0	0	0	0	11	8	0	0	0	0	0	0	
2:55:00 PM	14	8	0	0	0	0	0	0	0	6	10	0	0	0	0	0	0	
3:00:00 PM	8	13	0	0	0	0	0	0	0	11	10	0	0	0	0	0	0	
3:05:00 PM	9	24	0	0	0	0	0	0	0	13	7	0	0	0	0	0	0	
3:10:00 PM	5	41	0	0	0	0	0	0	0	9	4	0	0	0	0	0	0	
3:15:00 PM	1	12	0	0	0	0	0	0	0	10	1	0	0	0	0	0	0	
3:20:00 PM	2	15	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	
3:25:00 PM	3	18	0	0	0	0	0	0	0	14	2	0	0	0	0	0	0	
3:30:00 PM	4	15	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	
3:35:00 PM	2	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	
3:40:00 PM	3	12	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	
3:45:00 PM	2	13	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School South C

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: LN.

Start Time	RANGE LINE ROAD From North				LAKESHORE MS S DRIVE From East				RANGE LINE ROAD From South				LAKESHORE MS S DRIVE From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:00:00 PM	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:05:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:10:00 PM	6	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
3:15:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:20:00 PM	1	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Lake Shore Middle School\Range Line Rd & Lake Shore Middle School South C

Start Date: 10/1/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: LN.

Start Time	RANGE LINE ROAD From North				LAKESHORE MS S DRIVE From East				RANGE LINE ROAD From South				LAKESHORE MS S DRIVE From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B

PEAK HOUR ANALYSIS OUTPUTS

APPENDIX B

Existing Traffic Analysis Outputs

Lanes, Volumes, Timings

300: Range Line Road & North Driveway

10/08/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W			W
Traffic Volume (vph)	5	10	205	1	10	225
Future Volume (vph)	5	10	205	1	10	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910		0.999			
Flt Protected	0.984					0.998
Satd. Flow (prot)	1084	0	1861	0	0	1772
Flt Permitted	0.984					0.998
Satd. Flow (perm)	1084	0	1861	0	0	1772
Link Speed (mph)	25		30			30
Link Distance (ft)	112		260			384
Travel Time (s)	3.1		5.9			8.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.41	0.41	0.41	0.41	0.41	0.41
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	57%	57%	2%	2%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	12	24	500	2	24	549
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	502	0	0	573
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

300: Range Line Road & North Driveway

10/08/2020

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W			W
Traffic Vol, veh/h	5	10	205	1	10	225
Future Vol, veh/h	5	10	205	1	10	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	41	41	41	41	41	41
Heavy Vehicles, %	57	57	2	2	7	7
Mvmt Flow	12	24	500	2	24	549
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	1098	501	0	0	502	0
Stage 1	501	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Critical Hdwy	6.97	6.77	-	-	4.17	-
Critical Hdwy Stg 1	5.97	-	-	-	-	-
Critical Hdwy Stg 2	5.97	-	-	-	-	-
Follow-up Hdwy	4.013	3.813	-	-	2.263	-
Pot Cap-1 Maneuver	186	474	-	-	1037	-
Stage 1	510	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	180	474	-	-	1037	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	510	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	18.3	0	0.4			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBT	NBRWBLn1	SBL	SBT			
Capacity (veh/h)	-	-	307	1037	-	-
HCM Lane V/C Ratio	-	-	0.119	0.024	-	-
HCM Control Delay (s)	-	-	18.3	8.6	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

10/08/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	105	100	105	0	0	230
Future Volume (vph)	105	100	105	0	0	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1881	0	0	1776
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1881	0	0	1776
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.35	0.35	0.36	0.36	0.36	0.36
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	1%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	300	286	292	0	0	639
Shared Lane Traffic (%)						
Lane Group Flow (vph)	300	286	292	0	0	639
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

10/08/2020

Intersection						
Int Delay, s/veh	21.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖			↗
Traffic Vol, veh/h	105	100	105	0	0	230
Future Vol, veh/h	105	100	105	0	0	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	35	35	36	36	36	36
Heavy Vehicles, %	2	2	1	1	7	7
Mvmt Flow	300	286	292	0	0	639
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	931	292	0	-	-	-
Stage 1	292	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 296	747	-	0	0	-
Stage 1	758	-	-	0	0	-
Stage 2	526	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 296	747	-	-	-	-
Mov Cap-2 Maneuver	~ 296	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	54.7		0		0	
HCM LOS	F					
Minor Lane/Major Mvmt						
NBTWBLn1WBLn2	SBT					
Capacity (veh/h)	-	296	747	-	-	-
HCM Lane V/C Ratio	-	1.014	0.382	-	-	-
HCM Control Delay (s)	-	94.7	12.8	-	-	-
HCM Lane LOS	-	F	B	-	-	-
HCM 95th %tile Q(veh)	-	10.9	1.8	-	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s *: Computation Not Defined *: All major volume in platoon						

Lanes, Volumes, Timings

320: Range Line Road & South Driveway

10/08/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	105	100	115	220
Future Volume (vph)	0	0	105	100	115	220
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	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.934			
Flt Protected						0.983
Satd. Flow (prot)	0	1863	1740	0	0	1762
Flt Permitted						0.983
Satd. Flow (perm)	0	1863	1740	0	0	1762
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.37	0.37	0.37	0.37	0.37	0.37
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	284	270	311	595
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	554	0	0	906
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

320: Range Line Road & South Driveway

10/08/2020

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	105	100	115	220
Future Vol, veh/h	0	0	105	100	115	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	37	37	37	37	37	37
Heavy Vehicles, %	2	2	2	2	6	6
Mvmt Flow	0	0	284	270	311	595
Major/Minor						
	Minor1		Major1		Major2	
Conflicting Flow All	-	419	0	0	554	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.254	-
Pot Cap-1 Maneuver	0	634	-	-	996	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	634	-	-	996	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB		NB		SB	
HCM Control Delay, s	0		0		3.5	
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	996	-	-
HCM Lane V/C Ratio	-	-	-	0.312	-	-
HCM Control Delay (s)	-	-	-	0	10.2	0
HCM Lane LOS	-	-	A	B	A	
HCM 95th %tile Q(veh)	-	-	-	1.3	-	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

10/08/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	45	80	145	0	0	220
Future Volume (vph)	45	80	145	0	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1792	0	0	1743
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1792	0	0	1743
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.50	0.50	0.51	0.51	0.51	0.51
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	6%	6%	9%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	90	160	284	0	0	431
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	160	284	0	0	431
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

HCM 6th TWSC

310: Range Line Road & Middle Driveway

10/08/2020

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	45	80	145	0	0	220
Future Vol, veh/h	45	80	145	0	0	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	51	51	51	51
Heavy Vehicles, %	1	1	6	6	9	9
Mvmt Flow	90	160	284	0	0	431

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	715	284	0	-	-	-
Stage 1	284	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	-	-
Pot Cap-1 Maneuver	399	757	-	0	0	-
Stage 1	766	-	-	0	0	-
Stage 2	657	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	399	757	-	-	-	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 399 757	-
HCM Lane V/C Ratio	- 0.226 0.211	-
HCM Control Delay (s)	- 16.6 11	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 0.9 0.8	-

TADI

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Synchro 11 Report

TADI

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Synchro 11 Report

Lanes, Volumes, Timings

320: Range Line Road & South Driveway

10/08/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	145	45	75	190
Future Volume (vph)	0	0	145	45	75	190
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	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.968			
Flt Protected						0.986
Satd. Flow (prot)	0	1881	1768	0	0	1735
Flt Permitted						0.986
Satd. Flow (perm)	0	1881	1768	0	0	1735
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	4%	4%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	223	69	115	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	292	0	0	407
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

320: Range Line Road & South Driveway

10/08/2020

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	145	45	75	190
Future Vol, veh/h	0	0	145	45	75	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	1	1	4	4	8	8
Mvmt Flow	0	0	223	69	115	292
Major/Minor						
	Minor1		Major1		Major2	
Conflicting Flow All	-	258	0	0	292	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	-	-	4.18	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	-	-	2.272	-
Pot Cap-1 Maneuver	0	783	-	-	1236	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	783	-	-	1236	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB		NB		SB	
HCM Control Delay, s	0		0		2.3	
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1236	-	-
HCM Lane V/C Ratio	-	-	-	0.093	-	-
HCM Control Delay (s)	-	-	0	8.2	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-

APPENDIX B

Growth Traffic Analysis Outputs

Lanes, Volumes, Timings

300: Range Line Road & North Driveway

10/15/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W			W
Traffic Volume (vph)	5	10	210	1	10	230
Future Volume (vph)	5	10	210	1	10	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910		0.999			
Flt Protected	0.984					0.998
Satd. Flow (prot)	1084	0	1861	0	0	1772
Flt Permitted	0.984					0.998
Satd. Flow (perm)	1084	0	1861	0	0	1772
Link Speed (mph)	25		30			30
Link Distance (ft)	112		260			384
Travel Time (s)	3.1		5.9			8.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.41	0.41	0.41	0.41	0.41	0.41
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	57%	57%	2%	2%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	12	24	512	2	24	561
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	514	0	0	585
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

300: Range Line Road & North Driveway

10/15/2020

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W			W
Traffic Vol, veh/h	5	10	210	1	10	230
Future Vol, veh/h	5	10	210	1	10	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	41	41	41	41	41	41
Heavy Vehicles, %	57	57	2	2	7	7
Mvmt Flow	12	24	512	2	24	561
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	1122	513	0	0	514	0
Stage 1	513	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Critical Hdwy	6.97	6.77	-	-	4.17	-
Critical Hdwy Stg 1	5.97	-	-	-	-	-
Critical Hdwy Stg 2	5.97	-	-	-	-	-
Follow-up Hdwy	4.013	3.813	-	-	2.263	-
Pot Cap-1 Maneuver	179	466	-	-	1026	-
Stage 1	503	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	173	466	-	-	1026	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	18.8		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt						
NBT	NBRWBLn1	SBL	SBT			
Capacity (veh/h)	-	-	298	1026	-	-
HCM Lane V/C Ratio	-	-	0.123	0.024	-	-
HCM Control Delay (s)	-	-	18.8	8.6	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

10/15/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	110	105	105	0	0	235
Future Volume (vph)	110	105	105	0	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1881	0	0	1776
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1881	0	0	1776
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.35	0.35	0.36	0.36	0.36	0.36
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	1%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	314	300	292	0	0	653
Shared Lane Traffic (%)						
Lane Group Flow (vph)	314	300	292	0	0	653
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

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Synchro 11 Report

HCM 6th TWSC

310: Range Line Road & Middle Driveway

10/15/2020

Intersection						
Int Delay, s/veh	25.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	110	105	105	0	0	235
Future Vol, veh/h	110	105	105	0	0	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	35	35	36	36	36	36
Heavy Vehicles, %	2	2	1	1	7	7
Mvmt Flow	314	300	292	0	0	653

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	945	292	0	-	-	-
Stage 1	292	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 291	747	-	0	0	-
Stage 1	758	-	-	0	0	-
Stage 2	518	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 291	747	-	-	-	-
Mov Cap-2 Maneuver	~ 291	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	65.2	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 291 747	-
HCM Lane V/C Ratio	- 1.08 0.402	-
HCM Control Delay (s)	- 115 13	-
HCM Lane LOS	- F B	-
HCM 95th %tile Q(veh)	- 12.4 1.9	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s *: Computation Not Defined *: All major volume in platoon

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Synchro 11 Report

Lanes, Volumes, Timings

320: Range Line Road & South Driveway

10/15/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	105	105	120	225
Future Volume (vph)	0	0	105	105	120	225
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	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.932			
Flt Protected						0.983
Satd. Flow (prot)	0	1863	1736	0	0	1762
Flt Permitted						0.983
Satd. Flow (perm)	0	1863	1736	0	0	1762
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.37	0.37	0.37	0.37	0.37	0.37
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	284	284	324	608
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	568	0	0	932
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

320: Range Line Road & South Driveway

10/15/2020

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	105	105	120	225
Future Vol, veh/h	0	0	105	105	120	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	37	37	37	37	37	37
Heavy Vehicles, %	2	2	2	2	6	6
Mvmt Flow	0	0	284	284	324	608
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	-	426	0	0	568	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.254	-
Pot Cap-1 Maneuver	0	628	-	-	985	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	628	-	-	985	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	0		0		3.6	
HCM LOS	A					
Minor Lane/Major Mvmt						
NBT	NBRWBLn1	SBL	SBT			
Capacity (veh/h)	-	-	-	985	-	-
HCM Lane V/C Ratio	-	-	-	0.329	-	-
HCM Control Delay (s)	-	-	-	0	10.4	0
HCM Lane LOS	-	-	A	B	A	
HCM 95th %tile Q(veh)	-	-	-	1.4	-	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

10/15/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	45	85	145	0	0	225
Future Volume (vph)	45	85	145	0	0	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1792	0	0	1743
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1792	0	0	1743
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.50	0.50	0.51	0.51	0.51	0.51
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	6%	6%	9%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	90	170	284	0	0	441
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	170	284	0	0	441
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

10/15/2020

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	45	85	145	0	0	225
Future Vol, veh/h	45	85	145	0	0	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	51	51	51	51
Heavy Vehicles, %	1	1	6	6	9	9
Mvmt Flow	90	170	284	0	0	441
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	725	284	0	-	-	-
Stage 1	284	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	-	-
Pot Cap-1 Maneuver	393	757	-	0	0	-
Stage 1	766	-	-	0	0	-
Stage 2	651	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	393	757	-	-	-	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	13.1		0		0	
HCM LOS	B					
Minor Lane/Major Mvmt						
NBTWBLn1WBLn2	SBT					
Capacity (veh/h)	-	393	757	-	-	-
HCM Lane V/C Ratio	-	0.229	0.225	-	-	-
HCM Control Delay (s)	-	16.9	11.1	-	-	-
HCM Lane LOS	-	C	B	-	-	-
HCM 95th %tile Q(veh)	-	0.9	0.9	-	-	-

Lanes, Volumes, Timings

320: Range Line Road & South Driveway

10/15/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	145	45	80	190
Future Volume (vph)	0	0	145	45	80	190
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	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.968			
Flt Protected						0.985
Satd. Flow (prot)	0	1881	1768	0	0	1733
Flt Permitted						0.985
Satd. Flow (perm)	0	1881	1768	0	0	1733
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	4%	4%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	223	69	123	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	292	0	0	415
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

320: Range Line Road & South Driveway

10/15/2020

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	145	45	80	190
Future Vol, veh/h	0	0	145	45	80	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	1	1	4	4	8	8
Mvmt Flow	0	0	223	69	123	292
Major/Minor						
	Minor1		Major1		Major2	
Conflicting Flow All	-	258	0	0	292	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	-	-	4.18	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	-	-	2.272	-
Pot Cap-1 Maneuver	0	783	-	-	1236	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	783	-	-	1236	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB		NB		SB	
HCM Control Delay, s	0		0		2.4	
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1236	-	-
HCM Lane V/C Ratio	-	-	-	0.1	-	-
HCM Control Delay (s)	-	-	-	0	8.2	0
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-

APPENDIX B

COVID-Based Traffic Analysis Outputs

Lanes, Volumes, Timings

300: Range Line Road & North Driveway

10/08/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Volume (vph)	5	5	190	1	5	225
Future Volume (vph)	5	5	190	1	5	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932		0.999			
Flt Protected	0.976					0.999
Satd. Flow (prot)	971	0	1861	0	0	1774
Flt Permitted	0.976					0.999
Satd. Flow (perm)	971	0	1861	0	0	1774
Link Speed (mph)	25		30			30
Link Distance (ft)	112		260			384
Travel Time (s)	3.1		5.9			8.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.42	0.42	0.42	0.42	0.42	0.42
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	78%	78%	2%	2%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	12	12	452	2	12	536
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	454	0	0	548
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

300: Range Line Road & North Driveway

10/08/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	5	5	190	1	5	225
Future Vol, veh/h	5	5	190	1	5	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	42	42	42	42	42	42
Heavy Vehicles, %	78	78	2	2	7	7
Mvmt Flow	12	12	452	2	12	536
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	1013	453	0	0	454	0
Stage 1	453	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Critical Hdwy	7.18	6.98	-	-	4.17	-
Critical Hdwy Stg 1	6.18	-	-	-	-	-
Critical Hdwy Stg 2	6.18	-	-	-	-	-
Follow-up Hdwy	4.202	4.002	-	-	2.263	-
Pot Cap-1 Maneuver	194	476	-	-	1081	-
Stage 1	507	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	191	476	-	-	1081	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	19.4	0	0.2			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBT	NBRWBLn1	SBL	SBT			
Capacity (veh/h)	-	-	273	1081	-	-
HCM Lane V/C Ratio	-	-	0.087	0.011	-	-
HCM Control Delay (s)	-	-	19.4	8.4	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

10/08/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	65	100	90	0	0	230
Future Volume (vph)	65	100	90	0	0	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1845	0	0	1759
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1845	0	0	1759
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.35	0.35	0.39	0.39	0.39	0.39
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	186	286	231	0	0	590
Shared Lane Traffic (%)						
Lane Group Flow (vph)	186	286	231	0	0	590
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

10/08/2020

Intersection						
Int Delay, s/veh	6.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	100	90	0	0	230
Future Vol, veh/h	65	100	90	0	0	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	35	35	39	39	39	39
Heavy Vehicles, %	1	1	3	3	8	8
Mvmt Flow	186	286	231	0	0	590
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	821	231	0	-	-	-
Stage 1	231	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	-	-
Pot Cap-1 Maneuver	346	811	-	0	0	-
Stage 1	810	-	-	0	0	-
Stage 2	556	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	346	811	-	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Control Delay, s	17.7	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
	NBTWBLn1WBLn2	SBT				
Capacity (veh/h)	- 346 811	-				
HCM Lane V/C Ratio	- 0.537 0.352	-				
HCM Control Delay (s)	- 26.8 11.8	-				
HCM Lane LOS	- D B	-				
HCM 95th %tile Q(veh)	- 3 1.6	-				

320: Range Line Road & South Driveway

10/08/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	90	95	120	175
Future Volume (vph)	0	0	90	95	120	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.931			
Flt Protected						0.980
Satd. Flow (prot)	0	1863	1717	0	0	1757
Flt Permitted						0.980
Satd. Flow (perm)	0	1863	1717	0	0	1757
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.38	0.38	0.38	0.38	0.38	0.38
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	237	250	316	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	487	0	0	777
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

320: Range Line Road & South Driveway

10/08/2020

Intersection						
Int Delay, s/veh		2.5				
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	90	95	120	175
Future Vol, veh/h	0	0	90	95	120	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	38	38	38	38
Heavy Vehicles, %	2	2	3	3	6	6
Mvmt Flow	0	0	237	250	316	461

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	- 362	0	0 487	0	
Stage 1	- -	-	-	-	-
Stage 2	- -	-	-	-	-
Critical Hdwy	- 6.22	-	- 4.16	-	
Critical Hdwy Stg 1	- -	-	-	-	-
Critical Hdwy Stg 2	- -	-	-	-	-
Follow-up Hdwy	- 3.318	-	- 2.254	-	
Pot Cap-1 Maneuver	0 683	-	- 1056	-	
Stage 1	0 -	-	- -	-	-
Stage 2	0 -	-	- -	-	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	- 683	-	- 1056	-	
Mov Cap-2 Maneuver	- -	-	- -	-	-
Stage 1	- -	-	- -	-	-
Stage 2	- -	-	- -	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1056	-
HCM Lane V/C Ratio	-	-	0.299	-
HCM Control Delay (s)	-	-	0	9.9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	1.3	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

10/08/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	55	95	140	0	0	210
Future Volume (vph)	55	95	140	0	0	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1743	0	0	1696
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1743	0	0	1696
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	9%	9%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	112	194	286	0	0	429
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	194	286	0	0	429
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

10/08/2020

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	55	95	140	0	0	210
Future Vol, veh/h	55	95	140	0	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	49	49	49	49	49	49
Heavy Vehicles, %	1	1	9	9	12	12
Mvmt Flow	112	194	286	0	0	429

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	715	286	0
Stage 1	286	-	-
Stage 2	429	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	399	755	-
Stage 1	765	-	0
Stage 2	659	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	399	755	-
Mov Cap-2 Maneuver	399	-	-
Stage 1	765	-	-
Stage 2	659	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 399 755	-
HCM Lane V/C Ratio	- 0.281 0.257	-
HCM Control Delay (s)	- 17.5 11.4	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 1.1 1	-

Lanes, Volumes, Timings

320: Range Line Road & South Driveway

10/08/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	140	45	70	195
Future Volume (vph)	0	0	140	45	70	195
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	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.967			
Flt Protected						0.987
Satd. Flow (prot)	0	1881	1686	0	0	1720
Flt Permitted						0.987
Satd. Flow (perm)	0	1881	1686	0	0	1720
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.53	0.53	0.53	0.53	0.53	0.53
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	9%	9%	9%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	264	85	132	368
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	349	0	0	500
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

320: Range Line Road & South Driveway

10/08/2020

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	140	45	70	195
Future Vol, veh/h	0	0	140	45	70	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	53	53	53	53	53
Heavy Vehicles, %	1	1	9	9	9	9
Mvmt Flow	0	0	264	85	132	368
Major/Minor						
	Minor1		Major1		Major2	
Conflicting Flow All	-	307	0	0	349	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	-	-	4.19	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	-	-	2.281	-
Pot Cap-1 Maneuver	0	735	-	-	1172	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	735	-	-	1172	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB		NB		SB	
HCM Control Delay, s	0		0		2.2	
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	-	1172	-	-
HCM Lane V/C Ratio	-	-	-	0.113	-	-
HCM Control Delay (s)	-	-	0	8.5	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0.4	-	-

APPENDIX C

PEAK HOUR ANALYSIS OUTPUTS *WITH RECOMMENDATIONS*

Attachment: Packet Docs_Lake Shore (5775 : Kapur and Associates for Mequon Thiensville School District)

APPENDIX C

Existing Traffic – With Recommendations Analysis Outputs

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

11/02/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	105	95	105	0	0	230
Future Volume (vph)	105	95	105	0	0	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1881	0	0	1776
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1881	0	0	1776
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.35	0.35	0.36	0.36	0.36	0.36
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	1%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	300	271	292	0	0	639
Shared Lane Traffic (%)						
Lane Group Flow (vph)	300	271	292	0	0	639
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

11/02/2020

Intersection						
Int Delay, s/veh	21.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖			↗
Traffic Vol, veh/h	105	95	105	0	0	230
Future Vol, veh/h	105	95	105	0	0	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	35	35	36	36	36	36
Heavy Vehicles, %	2	2	1	1	7	7
Mvmt Flow	300	271	292	0	0	639
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	931	292	0	-	-	-
Stage 1	292	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 296	747	-	0	0	-
Stage 1	758	-	-	0	0	-
Stage 2	526	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 296	747	-	-	-	-
Mov Cap-2 Maneuver	~ 296	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Control Delay, s	55.7	0	0			
HCM LOS	F					
Minor Lane/Major Mvmt						
	NBTWBLn1WBLn2	SBT				
Capacity (veh/h)	- 296 747	-				
HCM Lane V/C Ratio	- 1.014 0.363	-				
HCM Control Delay (s)	- 94.7 12.5	-				
HCM Lane LOS	- F B	-				
HCM 95th %tile Q(veh)	- 10.9 1.7	-				
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s *: Computation Not Defined *: All major volume in platoon						

Lanes, Volumes, Timings

300: Range Line Road & North Driveway

11/02/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Volume (vph)	5	10	225	1	5	215
Future Volume (vph)	5	10	225	1	5	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910		0.999			
Flt Protected	0.984					0.999
Satd. Flow (prot)	989	0	1843	0	0	1774
Flt Permitted	0.984					0.999
Satd. Flow (perm)	989	0	1843	0	0	1774
Link Speed (mph)	25		30			30
Link Distance (ft)	112		260			384
Travel Time (s)	3.1		5.9			8.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.51	0.51	0.51	0.51	0.51	0.51
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	72%	72%	3%	3%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	10	20	441	2	10	422
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	443	0	0	432
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

300: Range Line Road & North Driveway

11/02/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	5	10	225	1	5	215
Future Vol, veh/h	5	10	225	1	5	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	51	51	51	51	51	51
Heavy Vehicles, %	72	72	3	3	7	7
Mvmt Flow	10	20	441	2	10	422
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	884	442	0	0	443	0
Stage 1	442	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Critical Hdwy	7.12	6.92	-	-	4.17	-
Critical Hdwy Stg 1	6.12	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	-	-	-
Follow-up Hdwy	4.148	3.948	-	-	2.263	-
Pot Cap-1 Maneuver	241	492	-	-	1091	-
Stage 1	522	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	238	492	-	-	1091	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s	15.8	0	0.2			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBT	NBRWBLn1	SBL	SBT			
Capacity (veh/h)	-	-	363	1091	-	-
HCM Lane V/C Ratio	-	-	0.081	0.009	-	-
HCM Control Delay (s)	-	-	15.8	8.3	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-	-

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

11/02/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	45	80	145	0	0	220
Future Volume (vph)	45	80	145	0	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1792	0	0	1743
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1792	0	0	1743
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.50	0.50	0.51	0.51	0.51	0.51
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	6%	6%	9%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	90	160	284	0	0	431
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	160	284	0	0	431
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

11/02/2020

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	45	80	145	0	0	220
Future Vol, veh/h	45	80	145	0	0	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	51	51	51	51
Heavy Vehicles, %	1	1	6	6	9	9
Mvmt Flow	90	160	284	0	0	431

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	715	284	0
Stage 1	284	-	-
Stage 2	431	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	399	757	-
Stage 1	766	-	0
Stage 2	657	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	399	757	-
Mov Cap-2 Maneuver	399	-	-
Stage 1	766	-	-
Stage 2	657	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 399 757	-
HCM Lane V/C Ratio	- 0.226 0.211	-
HCM Control Delay (s)	- 16.6 11	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 0.9 0.8	-

320: Range Line Road & South Driveway

11/02/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	145	45	75	190
Future Volume (vph)	0	0	145	45	75	190
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	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.968			
Flt Protected						0.986
Satd. Flow (prot)	0	1881	1768	0	0	1735
Flt Permitted						0.986
Satd. Flow (perm)	0	1881	1768	0	0	1735
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	4%	4%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	223	69	115	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	292	0	0	407
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

320: Range Line Road & South Driveway

11/02/2020

Intersection						
Int Delay, s/veh		1.3				
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	145	45	75	190
Future Vol, veh/h	0	0	145	45	75	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	1	1	4	4	8	8
Mvmt Flow	0	0	223	69	115	292

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	- 258	0	0 292
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.21	- -	4.18 -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.309	- -	2.272 -
Pot Cap-1 Maneuver	0 783	- -	1236 -
Stage 1	0 -	- -	- -
Stage 2	0 -	- -	- -
Platoon blocked, %		- -	- -
Mov Cap-1 Maneuver	- 783	- -	1236 -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1236	-
HCM Lane V/C Ratio	-	-	0.093	-
HCM Control Delay (s)	-	-	0	8.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	-

APPENDIX C

Growth Traffic – With Recommendations Analysis Outputs

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

11/02/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	110	100	105	0	0	235
Future Volume (vph)	110	100	105	0	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1881	0	0	1776
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1881	0	0	1776
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.35	0.35	0.36	0.36	0.36	0.36
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	1%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	314	286	292	0	0	653
Shared Lane Traffic (%)						
Lane Group Flow (vph)	314	286	292	0	0	653
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

TADI

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Synchro 11 Report

HCM 6th TWSC

310: Range Line Road & Middle Driveway

11/02/2020

Intersection						
Int Delay, s/veh	25.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	110	100	105	0	0	235
Future Vol, veh/h	110	100	105	0	0	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	35	35	36	36	36	36
Heavy Vehicles, %	2	2	1	1	7	7
Mvmt Flow	314	286	292	0	0	653

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	945	292	0	-	-	-
Stage 1	292	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 291	747	-	0	0	-
Stage 1	758	-	-	0	0	-
Stage 2	518	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 291	747	-	-	-	-
Mov Cap-2 Maneuver	~ 291	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	66.3	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 291 747	-
HCM Lane V/C Ratio	- 1.08 0.382	-
HCM Control Delay (s)	- 115 12.8	-
HCM Lane LOS	- F B	-
HCM 95th %tile Q(veh)	- 12.4 1.8	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s *: Computation Not Defined *: All major volume in platoon

TADI

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Synchro 11 Report

Lanes, Volumes, Timings

310: Range Line Road & Middle Driveway

11/02/2020

	↖	↗	↖	↗	↖	↗
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	45	85	145	0	0	225
Future Volume (vph)	45	85	145	0	0	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1792	0	0	1743
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1792	0	0	1743
Link Speed (mph)	25		30			30
Link Distance (ft)	154		170			260
Travel Time (s)	4.2		3.9			5.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.50	0.50	0.51	0.51	0.51	0.51
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	6%	6%	9%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	90	170	284	0	0	441
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	170	284	0	0	441
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

310: Range Line Road & Middle Driveway

11/02/2020

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	45	85	145	0	0	225
Future Vol, veh/h	45	85	145	0	0	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	51	51	51	51
Heavy Vehicles, %	1	1	6	6	9	9
Mvmt Flow	90	170	284	0	0	441
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	725	284	0	-	-	-
Stage 1	284	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	-	-
Pot Cap-1 Maneuver	393	757	-	0	0	-
Stage 1	766	-	-	0	0	-
Stage 2	651	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	393	757	-	-	-	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Control Delay, s	13.1	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
	NBTWBLn1WBLn2	SBT				
Capacity (veh/h)	-	393	757	-		
HCM Lane V/C Ratio	-	0.229	0.225	-		
HCM Control Delay (s)	-	16.9	11.1	-		
HCM Lane LOS	-	C	B	-		
HCM 95th %tile Q(veh)	-	0.9	0.9	-		

Lanes, Volumes, Timings

320: Range Line Road & South Driveway

11/02/2020

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	145	45	80	190
Future Volume (vph)	0	0	145	45	80	190
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	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.968			
Flt Protected						0.985
Satd. Flow (prot)	0	1881	1768	0	0	1733
Flt Permitted						0.985
Satd. Flow (perm)	0	1881	1768	0	0	1733
Link Speed (mph)	25		30			30
Link Distance (ft)	317		401			170
Travel Time (s)	8.6		9.1			3.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	4%	4%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	223	69	123	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	292	0	0	415
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

320: Range Line Road & South Driveway

11/02/2020

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	145	45	80	190
Future Vol, veh/h	0	0	145	45	80	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	1	1	4	4	8	8
Mvmt Flow	0	0	223	69	123	292
Major/Minor						
	Minor1		Major1		Major2	
Conflicting Flow All	-	258	0	0	292	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	-	-	4.18	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	-	-	2.272	-
Pot Cap-1 Maneuver	0	783	-	-	1236	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	783	-	-	1236	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB		NB		SB	
HCM Control Delay, s	0		0		2.4	
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1236	-	-
HCM Lane V/C Ratio	-	-	-	0.1	-	-
HCM Control Delay (s)	-	-	-	0	8.2	0
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-

APPENDIX D

RANGE LINE CRASH DATA

CRASH FREQUENCY/SEVERITY

4
Crashes

- 0 Fatal Crash (K)
- 0 Incapacitating (Type A)
- 0 Non-Incapacitating (Type B)
- 2 Possible (Type C)
- 2 Property Damage Only



LEGEND

→ Moving Vehicle	⬇️ Traffic Signal	↘️ Angle (Right Angle)	↔️ Head-On
↔️ Backing Vehicle	⬆️ Stop/Yield Sign	↙️ Angle (Left Turn)	↗️ Rear-End
--- Pedestrian	Ⓣ Tree	↘️ Angle (Right Turn)	⚡ Out of Control
⋯ Bicyclist	Ⓤ Utility Pole	↔️ Sideswipe-Same	➡️ Overtake
🚗 Parked Vehicle	ⓕ Fixed Object	↔️ Sideswipe-Opposite	⤵️ Overturn
	Ⓝ Non-Fixed Object		

= CRASH FREQUENCY (if > 1)

"REFERENCE"
ALCOHOL/DRUG INVOLVEMENT, AL/DG
DATE OF CRASH, MILITARY TIME
LIGHT, ROAD, WEATHER CONDITIONS
SEVERITY - SEE SEVERITY DEFINITIONS (NOTES)

NOTE: DEER CRASHES NOT INCLUDED

SP = Speeding/Too fast for conditions

CRASH SEVERITY DEFINITIONS

- K = Fatal Crash
- A = Incapacitating Injury Crash
- B = Non-Incapacitating Injury Crash
- C = Possible Injury Crash
- D = Property Damage Only Crash



EXHIBIT DATE: 02-27-20



NOT TO SCALE

CRASH HISTORY (2015-2019)
N RANGE LINE RD (EAST OF STH 167 TO W CRIMSON CT)
MEQUON, WISCONSIN

Corridor Safety Analysis

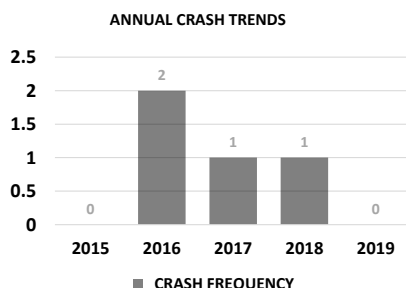
Location: Range Line Drive
Municipality: Mequon
County: Ozaukee
Length of Corridor: 0.3 miles
GPS Coordinates (Start): 43.221320, -87.943984

From: 1/1/2015 **5 Years**
To: 12/31/2019 **0 Months**
AADT: 3,500
Peer Group: Urban Streets
GPS Coordinates (End): 43.217146, -87.943997

[MAP](#)

TOTAL CRASHES 4
AVG. CRASHES/YEAR: 0.8
CRASH RATE: 215.9 per 100MVM
KAB CRASH RATE: 0.0 per 100MVM
ECONOMIC LOSS*: \$ 58,000

*KAB = \$85K, C=\$25K, PDO=\$4K

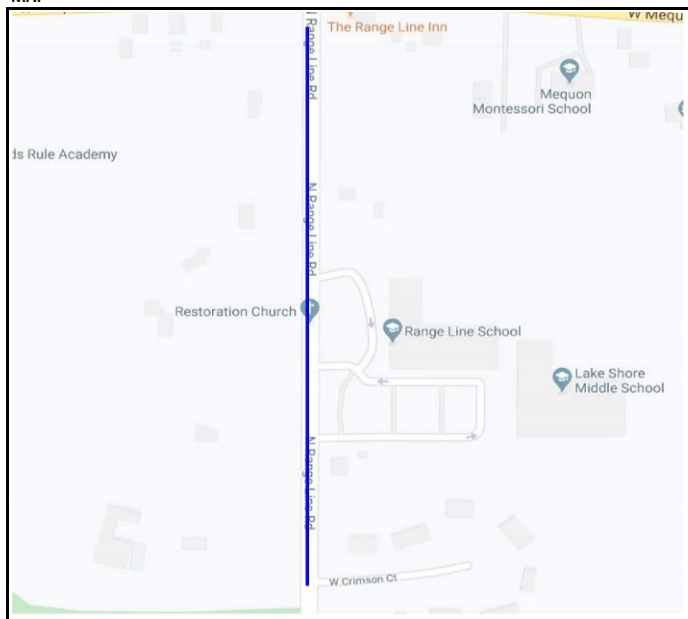


YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2015	0	0	0	0	0	0	\$ -
2016	0	0	0	1	1	2	\$ 29,000
2017	0	0	0	0	1	1	\$ 4,000
2018	0	0	0	1	0	1	\$ 25,000
2019	0	0	0	0	0	0	\$ -

TOTAL 0 0 0 2 2 4 \$ 58,000

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury, C = Possible Injury, PDO = Property Damage Only

MAP



CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Rear-End	0	0	0	1	1	2	\$ 29,000
Right-Angle	0	0	0	1	0	1	\$ 25,000
ROR Fixed-Object	0	0	0	0	1	1	\$ 4,000

TOTAL 0 0 0 2 2 4 \$ 58,000

ROAD CONDITIONS		
DRY	3	75%
WET	1	25%
SNOW	0	0%
ICE	0	0%
OTH.	0	0%
TOT.	4	

LIGHT CONDITIONS		
DAY	3	75%
DARK	1	25%
TOT.	4	

DRIVER BEHAVIOR		
ALCOHOL	0	0%
DRUGS	0	0%
SPEED	1	25%

SEASON		
SPRING	0	0%
SUMMER	1	25%
FALL	3	75%
WINTER	0	0%
TOT.	4	

RUN-OFF-ROAD		
ROR	1	25%
OTH.	3	75%
TOT.	4	

CAUSATION		
FTY	0	0%
DTC	0	0%

FTY = FAILURE TO YIELD

DTC = DISREGARDED TRAFFIC CONTROL

VEHICLE DAMAGE	
OTHER/UNK.	0
NONE	0
VERY MINOR	1
MINOR	0
MODERATE	3
SEVERE	3
VERY SEVERE	0
TOTAL VEHICLES	7

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MON	0
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TUE	0
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	WED	3
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	THU	1
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	FRI	0
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SAT	0
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SUN	0
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	0	0		

TO: Planning Commission

FROM: JAC ZADER, ASSISTANT DIRECTOR COMMUNITY DEVELOPMENT

DATE: December 14, 2020

SUBJECT: Kapur and Associates for Mequon Thiensville School District. The applicant is seeking building and site plan amendment and fill permit approval to allow for 9,800 C.Y. of fill for a 3,000 sq. ft. addition for the property located at 6633 Steffen Drive (Steffen Middle School).

Applicant:	Kapur and Associates
Status of Applicant:	Agent
Requested:	Building and Site Plan Amendment Fill Permit
Existing Zoning:	IPS (Institutional)
Lot size:	23 Acres
Location:	6633 Steffen Drive
Tax Key:	#14-027-03-001.00
District:	#4

Background: The applicant is requesting building and site plan amendment and sign approval for an addition to Steffen Middle School at 6633 W Steffen Drive. The addition will include space for a larger cafeteria and a storage room. The addition is approximately 3,000 square feet in area. As part of the site plan amendment, the applicant is looking to reconfigure the parent drop off/pick up location and relocate it to the west side of the building. The parcel is zoned IPS (Institutional).

Site Plan:

The proposed addition is located on southwest end of the existing building approximately 110 feet from the closest property line. With the addition, the overall FAR for the site is 14 percent and the green space ratio is 69%. The parking area and parent drop off location has been reconfigured which will result in a loss of 5 parking spaces. The overall parking on site will be reduced to 98 total spaces. The number of spaces exceeds the zoning code requirement of 59 stalls.

The parent drop pickup/drop off area is now shown to be located west of the existing building. The proposal will allow for a larger queuing of vehicles during peak times. Currently, during peak times traffic backs up on to Steffen Drive in both directions. A Traffic Impact Analysis was completed by TADi as part of this project (see attached). See Engineering comments regarding the study below. The change to the west parking area results is a reduction of the parking offset and requires the installation of a retaining wall. The parking offset is now shown at 15 feet which is less than the code required 20 feet. The retaining wall, which will be approximately 4-5 feet high, is required due to the change in elevation to the property to the west. Staff is supportive of the reduction of the offset in order to allow for the reconfiguration of the drop off area. Staff will

recommend as a condition of approval that landscaping be provided along the west property line in order to screen the parking lot from the adjacent parcel.

Building Plan:

The addition is shown to be clad with a brick, aluminum store front windows and precast panels that is consistent with the design of the existing building. The plan also shows a metal wall panel on the roof to screen the mechanical equipment. Staff has no issues with the proposed building design.

Landscaping Plan:

The landscaping plan shows new trees along the front of the building and in the boulevard along the west drive aisle. The plan also shows new foundation plantings along the west elevation of the building. As stated above, staff recommends landscaping along the west property line to providing screening to the neighboring parcel.

Signage Plan:

The applicant is requesting to replace the existing freestanding sign with an electronic message board. The sign code allows certain uses including schools the ability to have an electronic message sign. The sign appears to meet the size and dimension requirements of the code but fails to meet the 10-foot setback to the property line and the 100-foot setback requirement from residential properties. The sign is located partially in the Steffen Drive right of way and 56 feet from the residential parcel across the street (see map). The sign could be relocated to the south to comply with the 10-foot setback but there is not enough space to move it back to comply with the 100-foot setback without encroaching into the parking lot. Staff recommends relocating the sign to comply with the 10-foot setback. This would result in the sign being located 127 feet from the nearest residential structure. At this distance, there should be no negative impact to the adjacent residential properties.

The sign design is shown with a pre-cast concrete base. The code states that the base of the sign shall be consistent with the architectural style of the building. Staff recommends the base of the sign include brick to match the existing building. The applicant is also proposing a similar sign at Lakeshore School and the Range Line Community Center which is also on the agenda. In order to have a consistent look among all signs, staff will make the same recommendation for that item.

Engineering Report:

Kristen Lundeen, Director of Public Works/City Engineer reviewed the plans and has the following comments:

Historically, queuing issues related to the drop-off and pick-up of students at Steffen have resulted in traffic issues on public roadways. Staff is generally supportive of the reconfiguration to provide additional queuing and safety to all users of the site. Specifically, in modifications that would encourage a general traffic pattern southbound on Mequon Trail, eastbound on Steffen Drive to Buntrock Avenue. Reducing the amount of traffic crossing back onto itself will help address the impact on the public roadway. In review of the Traffic Impact Analysis (TIA), staff is supportive of the majority of the recommendations. In addition to the modifications shown and incorporated into the plan:

- Staff recommends that the building and site plan be revised to incorporate the additional recommendation from the TIA to eliminate the egress movement at the Steffen West Driveway and force vehicles to instead exit at the Steffen East/Wilson West Driveway or Wilson Center driveway. If elimination of the egress is not supported, staff recommends

a condition that the gate to close the access from egress is utilized during peak traffic surges from 7:35 to 7:50am and 2:50 to 3:10pm.

- While the TIA did not incorporate turning movements for Wilson School, staff recommends considering the elimination of the Steffen East/Wilson West Driveway. Traffic would travel further to the east to utilize the Wilson Center or Wilson East driveways.

A Filling and Excavation permit is required. The total amount of filling and excavation is anticipated to be greater than 1,000 cubic yards and requires Planning Commission review. Haul route approval and a haul route bond are included with the development agreement and are intended to protect City streets from the increase in the amount of hauled material.

The site proposes land disturbance, but it is difficult to discern if it is in excess of one acre. A City erosion control permit appears to be required. Evidence of the WDNR required WRAPP permit, if applicable, shall also be provided for the site.

The increase in impervious surface was not provided. If in excess of one half acre and/or site disturbance of greater than an acre therefore requires a stormwater management plan (SWMP). The proposed site will be required to provide additional stormwater management to meet the current City of Mequon, WDNR and MMSD criteria.

Planning Staff Recommendation:

Planning Staff recommends approval of the building and site plan amendment and sign plan subject to the following conditions:

1. Staff review and approval of final site, elevation and landscaping plans.
2. Building lighting shall be reviewed and approved by staff.
3. The sign shall comply with the 10-foot setback.
4. Staff review and approval of the materials for the base of the sign.
5. Staff review and approval of landscaping along the west property line.
6. Staff review and approval of final site, building and lighting prior to issuance of permits. The applicant shall submit such plan within 30 days of Planning Commission action, or the required plan(s) shall be submitted to Planning Commission for additional review and action and subject to all necessary fees.
7. A landscaping escrow equal to 125% of the improvement costs for installation of landscaping by a licensed contractor and an escrow equal to 25% of the landscape contract cost to insure that landscaping that dies within three (3) years of installation will be replaced by the applicant.
8. All ground-level and roof top mechanical equipment shall be well screened from public view.
9. Eliminate the egress movement at the Steffen West Driveway and force vehicles to instead exit at the Wilson Center Driveway.
10. Eliminate the Steffen East/Wilson West Driveway.
11. Submittal of a right-of-way permit for the review of the drainage and road modifications within the public right-of-way.
12. Application for and approval of a City erosion control permit, subject to applicable fees and conditioned upon WDNR issuance of a WRAPP permit.
13. Application for and approval of a City Filling and Excavation Permit. The application shall include a proposed haul route, which will be used to determine whether a road bond is required and the associated amount. Construction traffic shall utilize Mequon Road to Range Line Road and not continue south on Range Line Road.

14. Approval of a storm water management plan for the site in conformance to City ordinances, WDNR and MMSD Chapter 13, including execution of a Storm Water Facilities Maintenance and Easement Agreement.
15. As a condition of approval and issuance of the permit, the city engineer will require in accordance with City ordinance 58-677(b) that the applicant deposit an escrow or letter of credit to guarantee a good faith execution of the approved control plan and any permit conditions. The escrow / letter of credit shall be in an amount equal to 125% of the estimated cost of construction and maintenance of the storm water management practices and the City will release the portion of the Financial Guarantee less any costs incurred by the city to complete installation of practices, upon submission of a certification in accordance with 58-678(h).

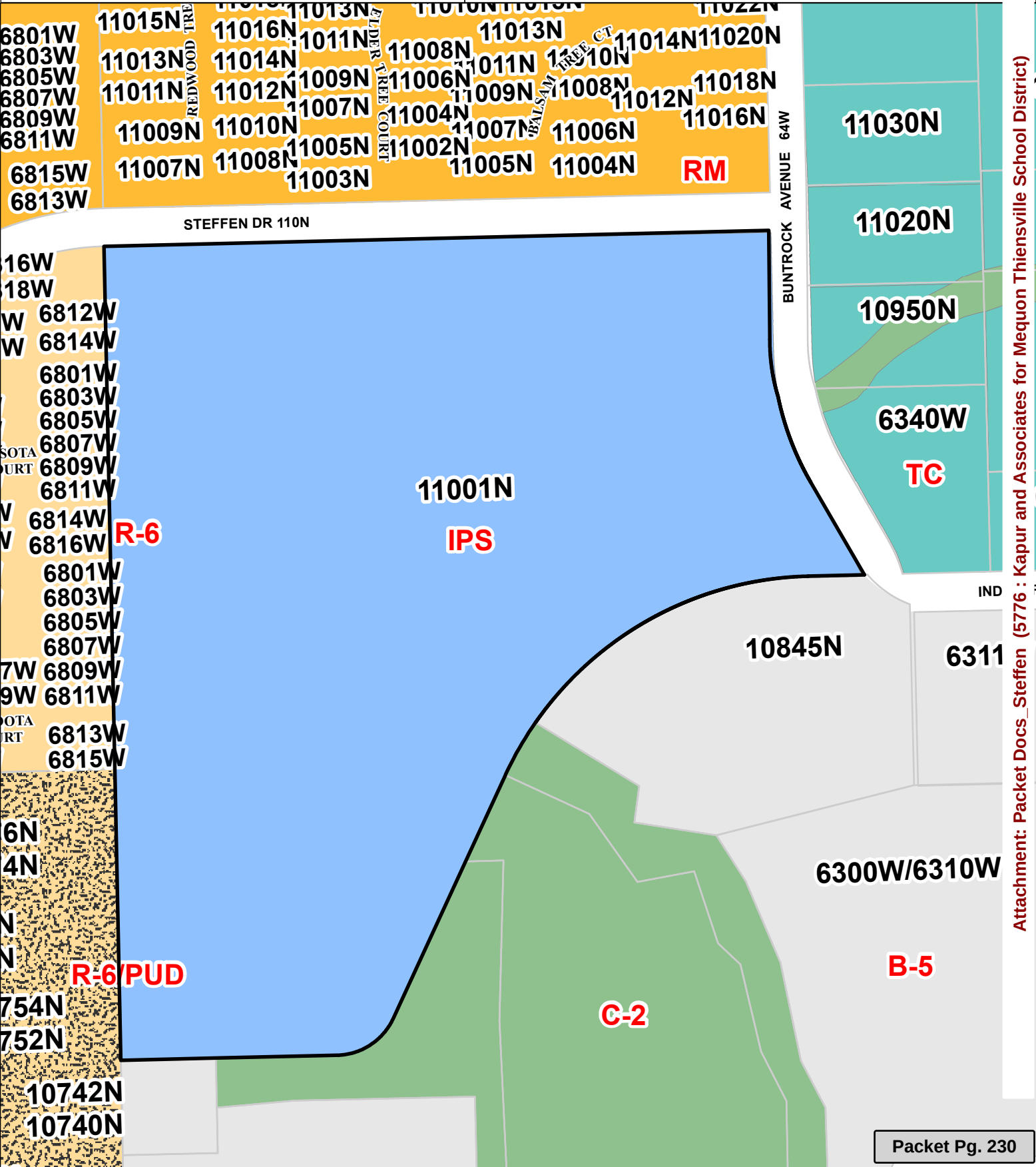
Attachments:

Packet Docs_Steffen (PDF)

Steffen Middle School

AC	Arrival Corridor	LTD	Limited Use
A-1	Agricultural Preserve	OA	Agricultural Overlay
A-2	General Agricultural	PUD	Planned Unit Development Overlay
B-1	Neighborhood Business	P-1	Park & Recreation
B-2	Community Business	R-1	Single-Family Residential (5 Ac. Min.)
B-3	Office & Service Business	R-1B	Single-Family Residential (2.5 Ac. Min.)
B-4	Business Park	R-2	Single-Family Residential (2.0 Ac. Min.)
B-5	Light Industrial	R-2B	Single-Family Residential (1.5 Ac. Min.)
B-6	Rural Industrial	R-3	Single-Family Residential (1.0 Ac. Min.)
B-7	Rural Business	R-4	Single-Family Residential (3/4 Ac. Min.)
C-1	Shoreland/Wetland Conservancy	R-5	Single-Family Residential (1/2 Ac. Min.)
C-2	General Conservancy	R-6	Single-Family Residential (4 du/Ac)
CGO	Central Growth Overlay	RM	Multi-Family Residential
FFO	Flood Fringe Overlay	TC	Town Center
FW	Floodway	TDR	Transfer of Development Rights
IPS	Institutional & Public Service		

3.d.a





December 2nd, 2020

Jac Zader

Assistant Director of Community Development
11333 North Cedarburg Road
Mequon, WI 53092

Re: Steffen Middle School Site/Architectural Plan Commission Review

Dear Mr. Zader,

I am writing this letter to serve as a summary for the proposed project named MTSD – Steffen Middle School.

An approximately 2600 square foot single story addition is being provided on the first floor of the south side of the building to increase the size and capacity of the existing cafeteria. The interior improvements include toilet room, physical education and cafeteria renovations and updates. The toilet rooms are being altered and updated to be code compliant with the currently adopted state building codes. They will also be updated with new interior surface finishes and new plumbing fixtures. The existing interior finishes in the gymnasium are being removed and replaced with newer finishes. There will also be a new set of telescoping bleachers for 180 persons. The existing cafeteria is scheduled to receive updated finishes to complement the finishes of the new cafeteria addition.

The exterior improvements include updates to the pickup and drop off area to the west of Steffen Middle School. The existing parking lot is proposed to be removed and replaced with the loop and angled parking. Because of the paving being extended to the west, a modular block retaining wall is being proposed to account for the grade change along the adjacent property line. The visitor drop off and parking is also being reconfigured to include angled stalls north of Steffen Middle School. The overall parking stall count onsite is 59 where code requires 59 per staff and classrooms. A new monument sign is being proposed with the location shown on the site plan. Figures of the signs are included with this submittal. The existing trash enclosure is proposed to be removed and replaced along the south side of the drop off loop. It is intended to be screened with chain-link fence, gates and privacy slats at this time. Please note, all improvements shown on the site plan were directed by the recommendations of the Traffic Impact Analysis provided by TADI which is included with this submittal.

Storm water management is being proposed in the form of one bio-retention basin shown on the plans. Storm water management is being designed to meet City of Mequon and MMSD code. A storm water management plan will be submitted to City for final review upon completion of the plans. A proposed water lateral for both domestic and fire protection is shown to connect to the existing water main located in Steffen Drive.

Attachment: Packet Docs_Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)

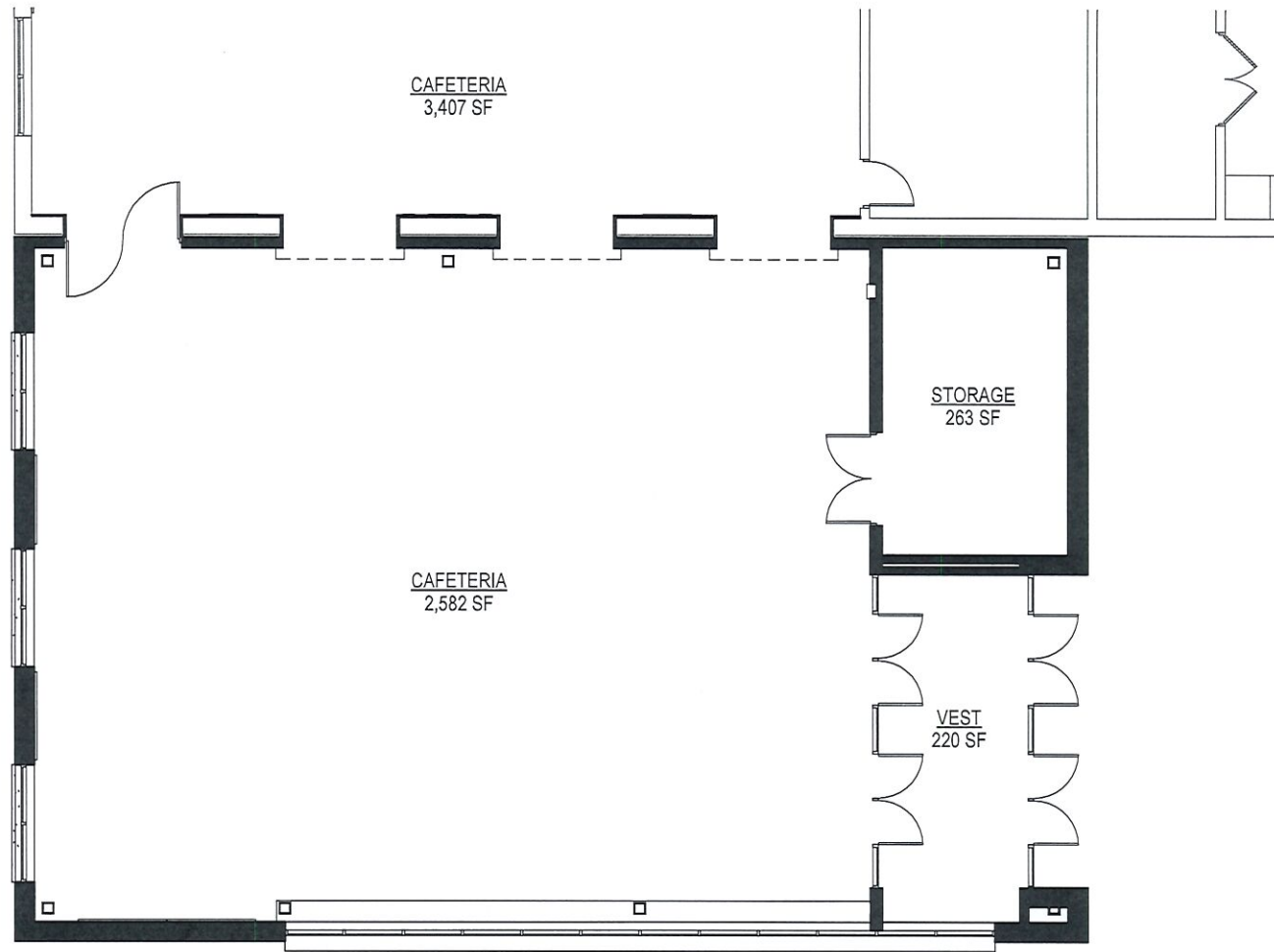


We are respectfully requesting a waiver on the parking lot shading requirement of 30%. Based on the current landscape plan and using the new paving as required to be shaded, our overall parking lot shading totals 8.6%. We feel as if we are providing dense landscaping with various species of trees to try and shade the new paving as best as possible. We are also requesting a waiver on the parking lot setback from the west property line. The proposed parking lot edge of asphalt is approximately 16' which is under the 20' setback per code. No other waivers are being requested.

Please let me know if there are any questions or if additional information is needed.

Thanks,

Ryan Birschbach
Kapur



1ST FLR PLAN

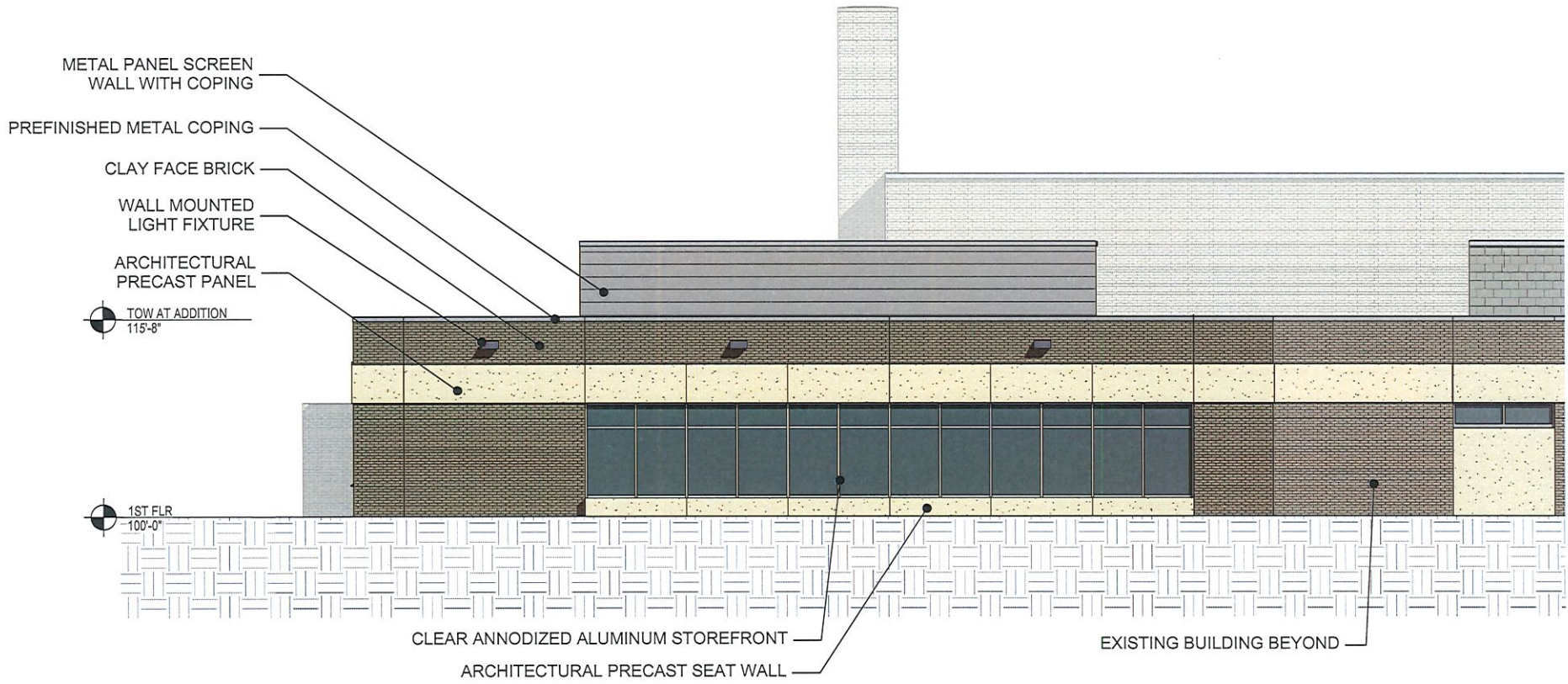
1/8" = 1'-0"



FLOOR PLAN

MTSD - STEFFEN MIDDLE SCHOOL

318480-C
11/16/2



SOUTH BLDG ELEVATION

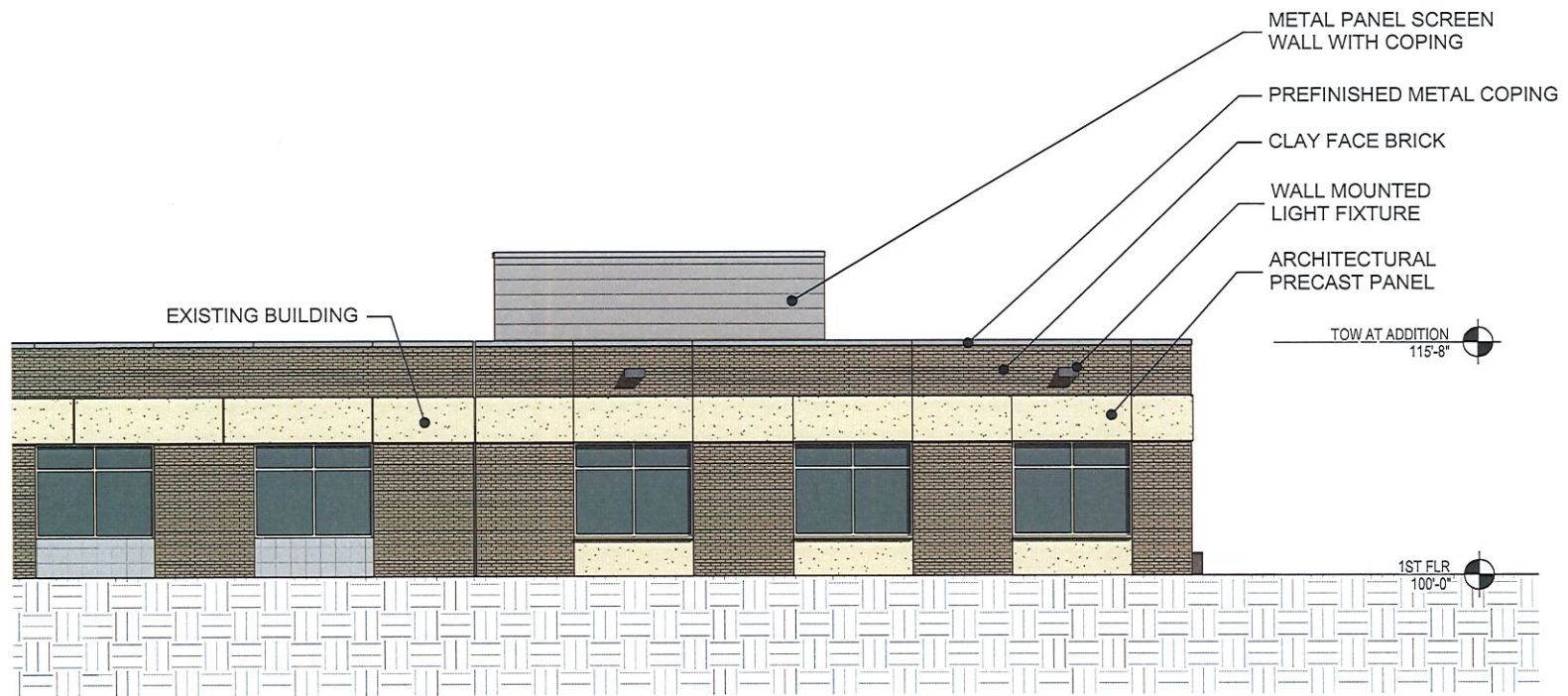
1/8" = 1'-0"

EXTERIOR ELEVATION



MTSD - STEFFEN MIDDLE SCHOOL

318480-C
11/16/2



EAST BLDG ELEVATION

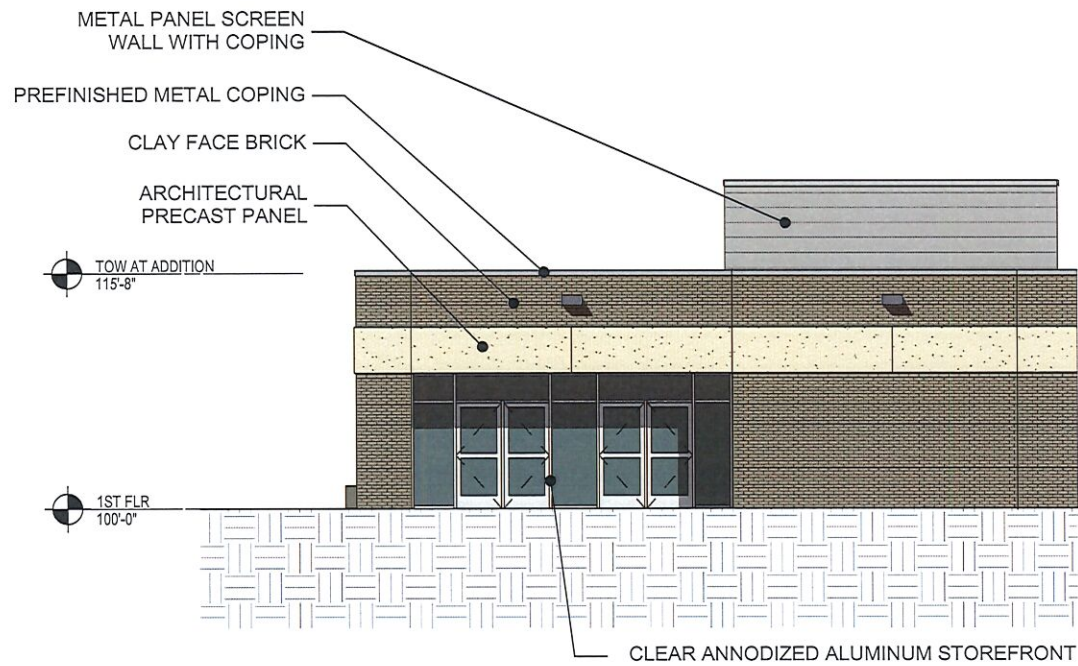
1/8" = 1'-0"

EXTERIOR ELEVATION



MTSD - STEFFEN MIDDLE SCHOOL

318480-1
11/16/20



WEST BLDG ELEVATION

1/8" = 1'-0"



EXTERIOR ELEVATION

MTSD - STEFFEN MIDDLE SCHOOL

318480-C
11/16/2



NOTE: SEE EXTERIOR ELEVATIONS FOR EXTERIOR WALL MOUNTED LIGHT FIXTURE LOCATIONS

PERSPECTIVE RENDER



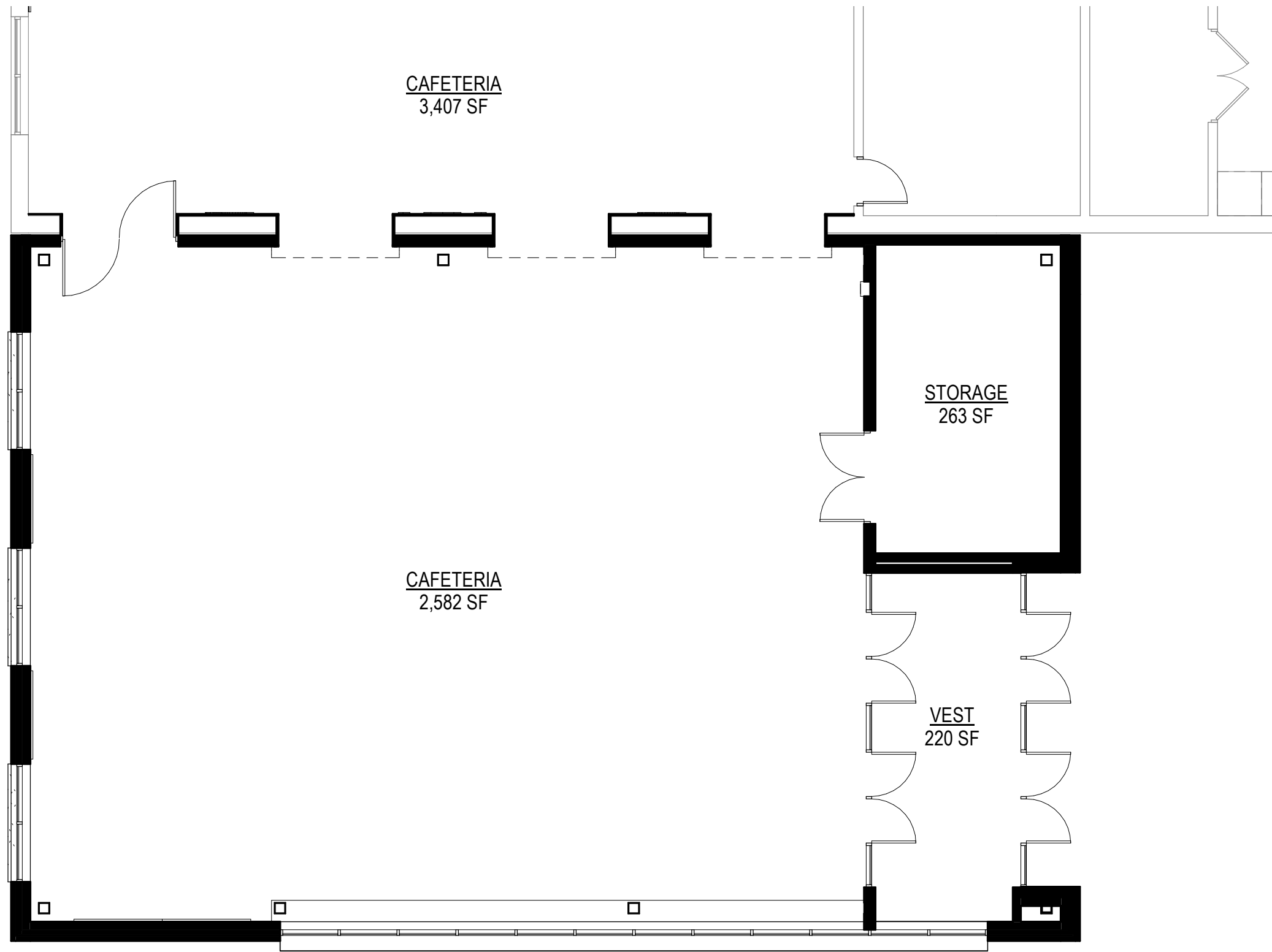


Attachment: Packet Docs_Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)

NOTE: SEE EXTERIOR ELEVATIONS FOR EXTERIOR WALL MOUNTED LIGHT FIXTURE LOCATIONS

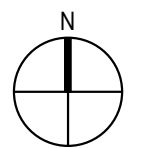
PERSPECTIVE RENDER





1ST FLR PLAN

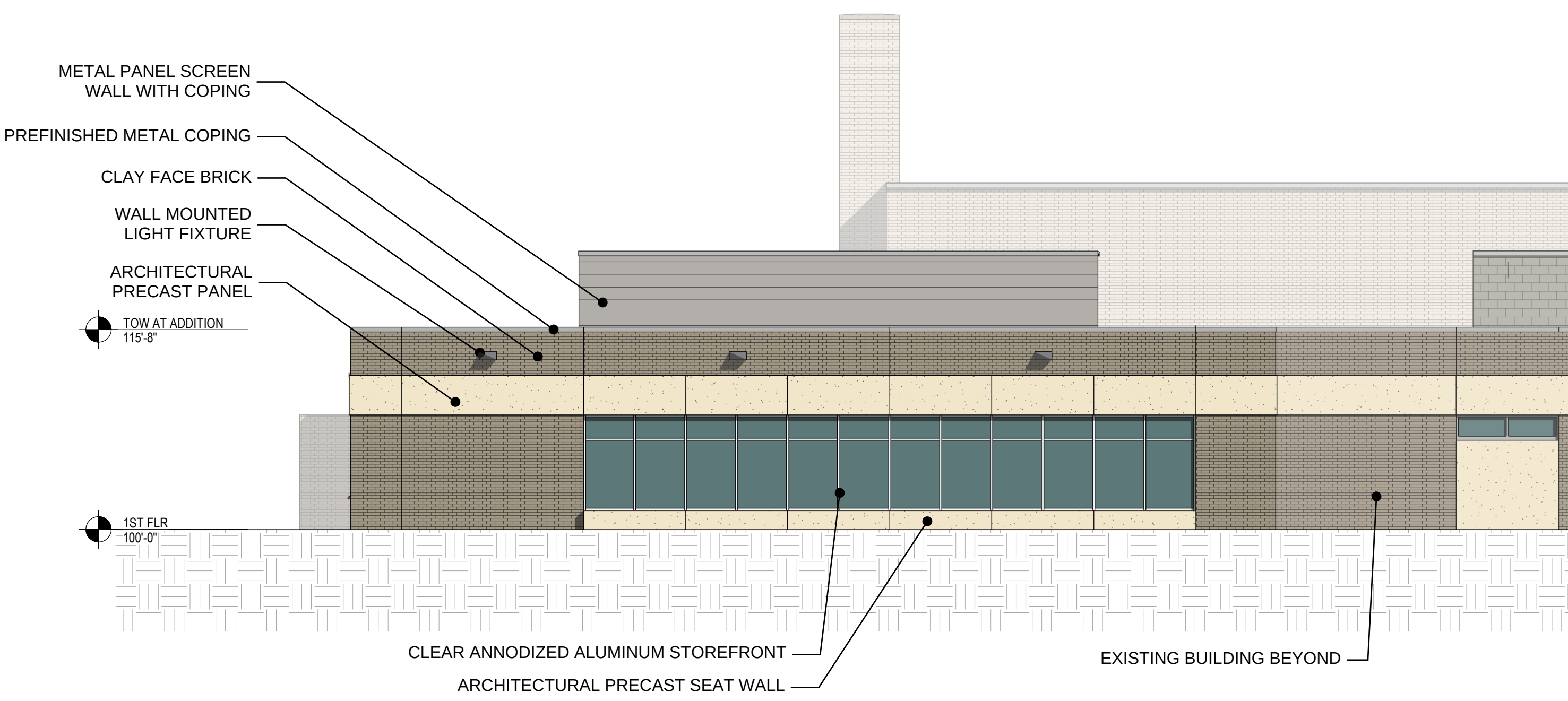
1/8" = 1'-0"



FLOOR PLAN



MTSD - STEFFEN MIDDLE SCHOOL

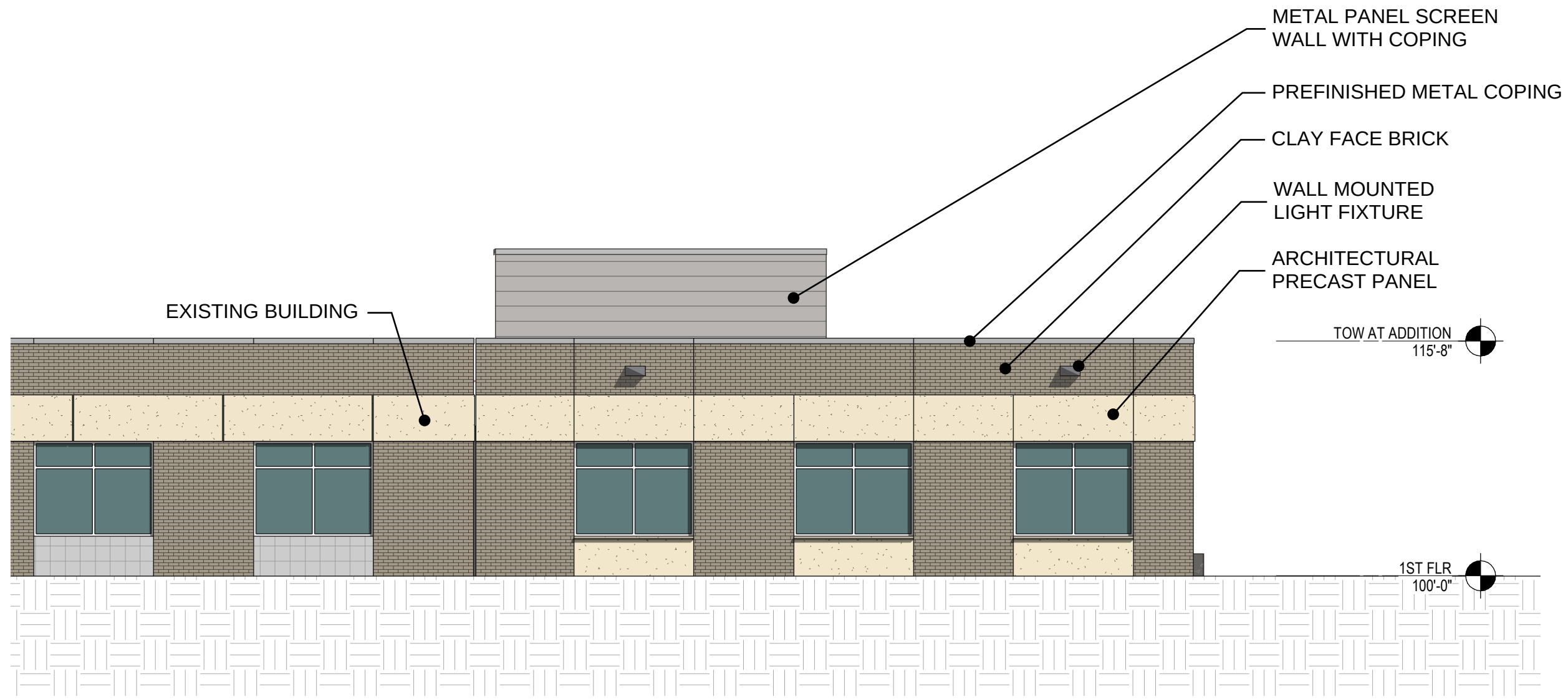


SOUTH BLDG ELEVATION

1/8" = 1'-0"

EXTERIOR ELEVATIONS

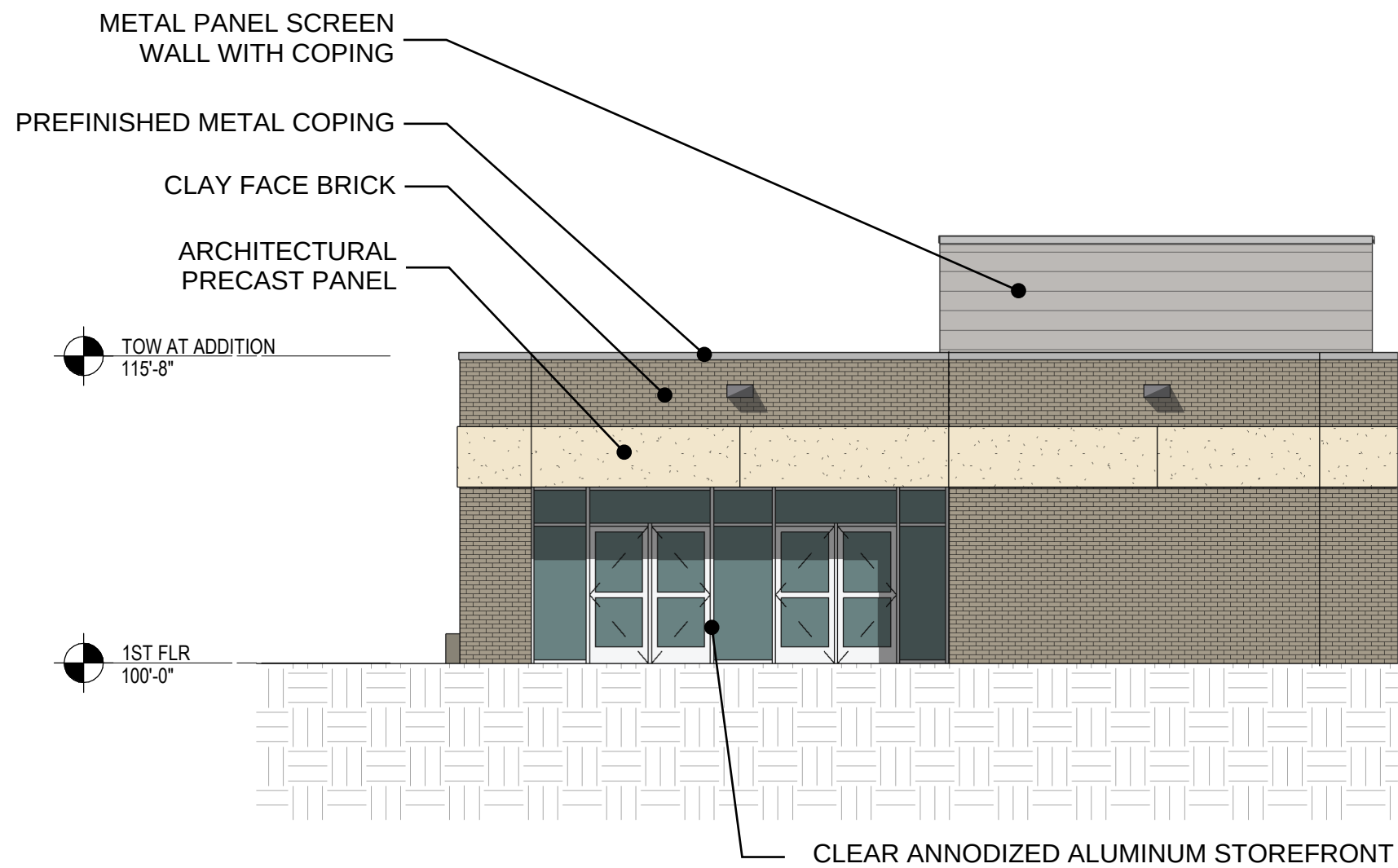




EAST BLDG ELEVATION

1/8" = 1'-0"

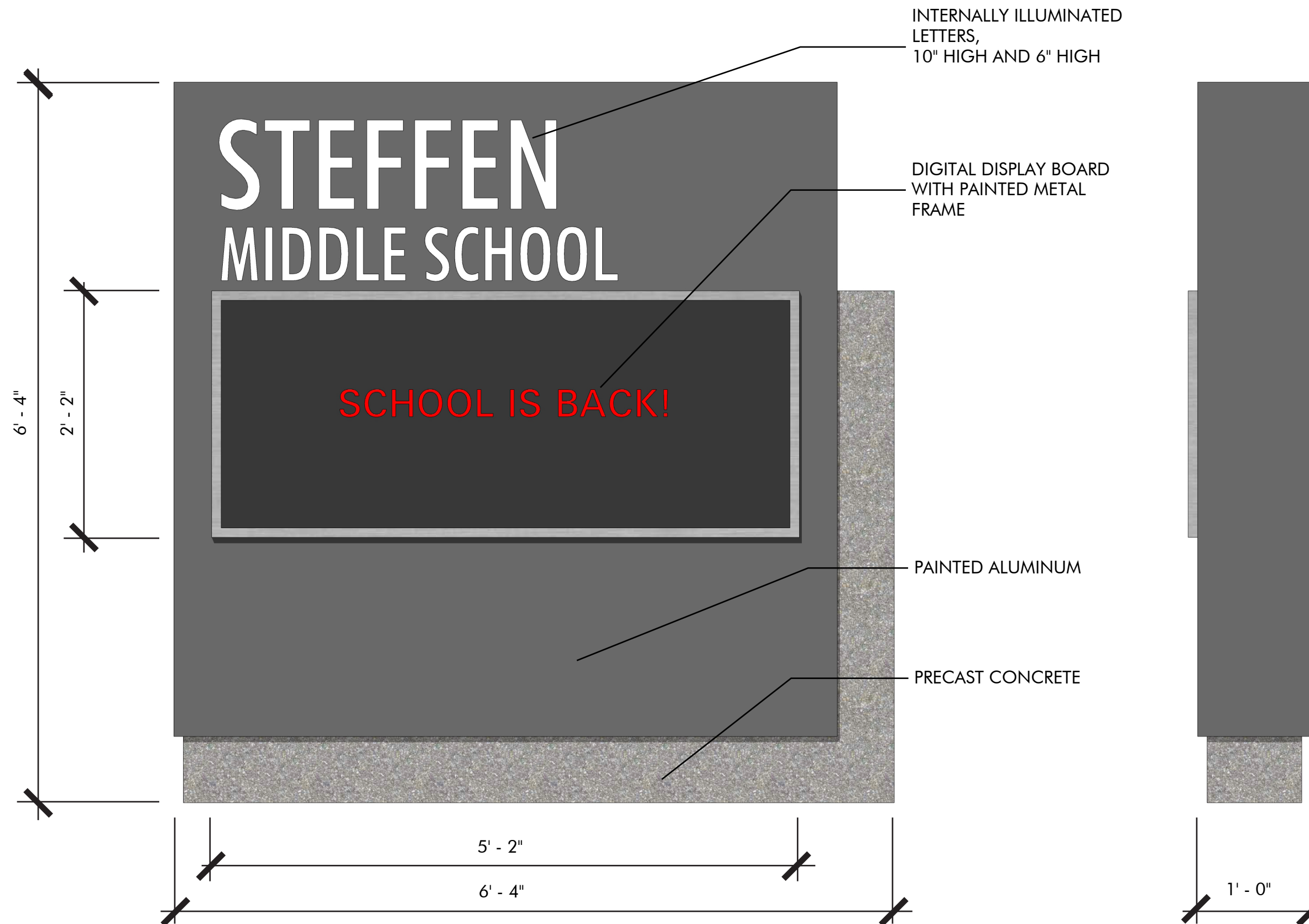
EXTERIOR ELEVATIONS



WEST BLDG ELEVATION

1/8" = 1'-0"

EXTERIOR ELEVATIONS



MONUMENT SIGN WITH DIGITAL DISPLAY

Attachment: Packet Docs_Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)

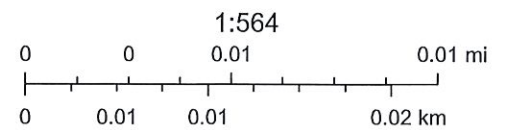
City of Mequon



Attachment: Packet Docs_Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)

12/3/2020, 3:54:46 PM

Parcels	Tax Parcel	Highways
Road Reservation	Historical Parcel Lines	US Highway
Road Right-of-Way	Local Roads	State Highway
Condominium	Private Road	County Road
Gap	Town/Public Road	Ramp
Overlap		Railroad Centerline



LEGAL DESCRIPTION

A parcel of land located in the Southwest 1/4 of the Northeast 1/4 of Section 27, Township 9 North, Range 21 East, in the City of Mequon, Ozaukee County, Wisconsin, bounded and described as follows:

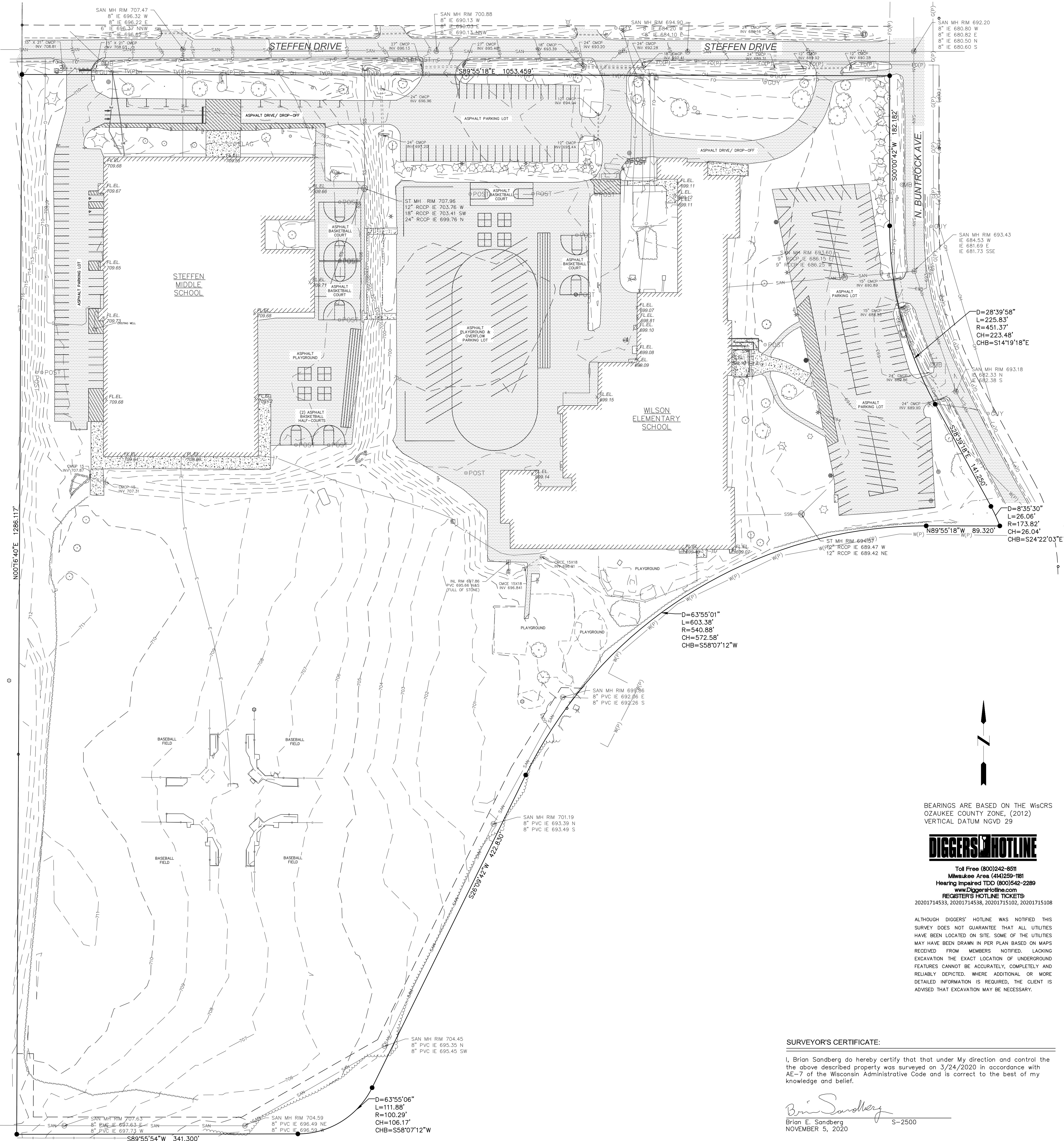
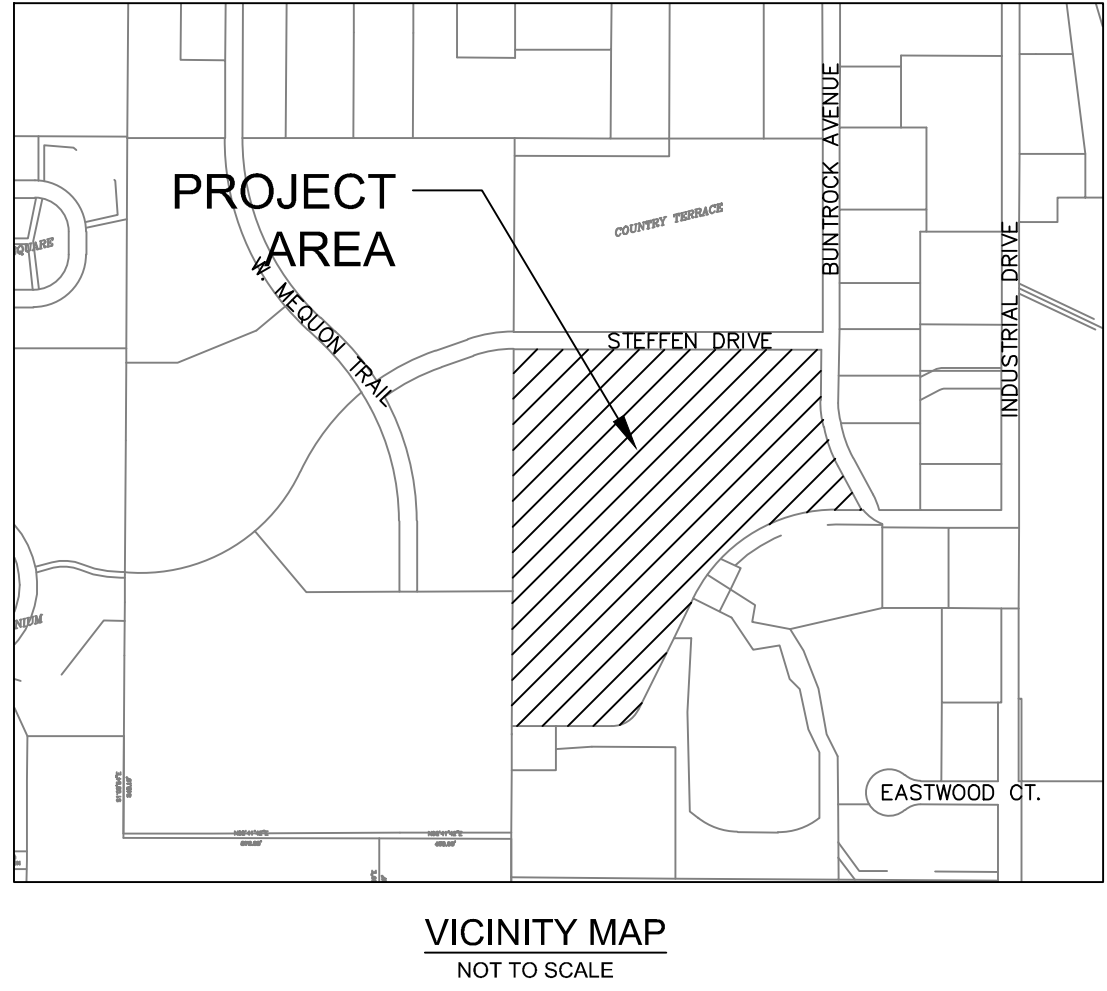
Commencing at the North 1/4 stone of said Section 27; thence S. 0 degrees 09' W. 1320 feet along the West line of the NE 1/4 to the place of beginning of the land to be described; thence due East 1053.83 feet to a point in the West line of Wilson Avenue; thence along the West line of Wilson Avenue S.0 degrees 04' E. 102 feet to a point of curve; thence Southeasterly on a curved line with a radius of 451.37 feet and whose center is to the East (Long Chord S. 14 degrees 24' E. 223.48 feet) 225.84 feet to a point of tangent; thence S. 28 degrees 44' N. 141.25 feet to a point of curve; thence Southerly on a curved line with a radius of 173.82 feet and whose center is to the West (Long Chord S. 24 degrees 26'15" E. 26.04 feet) 26.06 feet to a point of tangent; thence due West 89.32 feet to a point of curve; thence Southwesterly on a curved line with a radius of 540.88 feet and whose center is to the South (Long Chord S. 58 degrees 02'30" W. 572.58 feet) 603.38 feet to a point of tangent; thence S. 26 degrees 05' W. 422.83 feet to a point of curve; thence Southwesterly on a curved line with a radius of 100.29 feet and whose center is to the North (Long Chord S. 58 degrees 02'30" W. 106.17 feet) 111.88 feet to a point of tangent; thence due West 341.67 feet tp a point in the Wet line of the NE 1/4; thence N. 0 degrees 09' E. 1285.25 feet along the West line of the NE 1/4 to the place of beginning.

FOR INFORMATIONAL PURPOSES ONLY

PROPERTY ADDRESS: 11001 N. BUNTROCK AVENUE, 6633 W. STEFFEN DRIVE, MEQUON, WI 53092
TAX KEY NO.: 14-027-03-001.00

CONTROL TABLE				DESCRIPTION
POINT NO.	NORTHING	EASTING	ELEVATION	
200	365019.392	584438.28	693.41	CP MAG NAIL SET
201	365020.837	584256.805	709.763	CP MAG NAIL SET
202	365021.934	584038.651	700.67	CP MAG NAIL SET
203	365021.683	583846.38	704.79	CP MAG NAIL SET
204	365020.864	583595.682	711.22	CP MAG NAIL SET
205	364739.913	583576.483	709.24	CP MAG NAIL SET
206	364471.129	583631.279	709.49	CP MAG NAIL SET
207	364533.694	583932.45	707.82	CP MAG NAIL SET
208	364390.878	584100.562	697.96	CP MAG NAIL SET
209	364848.511	583948.196	707.68	CP MAG NAIL SET
210	364701.363	584592.416	692.91	CP MAG NAIL SET
211	364449.352	584594.423	694.89	CP MAG NAIL SET
200	365043.682	584196.577	700.077	BM NW FLG BOLT HYD
301	365026.669	584557.894	690.308	BM CNK SE COR. CONC PAD FOR STORM STRUCTURE
302	364616.783	584632.466	692.216	BM CNK NW COR HEADWALL OF CULVERT
303	364862.359	584006.069	719.578	BM SE COR. TOP STEP SOUTHERN MOST STAIRWAY BETWEEN STEFFEN AND WILSON SCHOOLS

- LEGEND
- ⊕ = BENCH MARK
 - ▲ = CONTROL POINT
 - = 1 1/4" IRON PIPE O.D. FOUND OR AS NOTED
 - = 1-1/4" O.D. x 18" LONG IRON PIPE SET, WEIGHING 1.68 LBS./FT.
 - = SECTION CORNER MON.
 - (R.A.) = RECORDED AS
 - O.D. = OUTSIDE DIAMETER
 - ⊗ = WATER VALVE
 - ⊙ = FIRE HYDRANT
 - 970.90 = SPOT ELEVATION
 - ⊕ = BUSH, SHRUB
 - ⊙ = POLE/POST/BOLLARD
 - = BOULDER
 - ⊙ = PULLBOX
 - (MH) = MANHOLE TYPE NOTED
 - (SA) = SANITARY SEWER MANHOLE
 - (ST) = STORM SEWER MANHOLE
 - (E) = ELECTRIC MANHOLE
 - (T) = TELEPHONE MANHOLE
 - (W) = WATER MANHOLE
 - ⊕ = UTILITY METER
 - ⊕ = GUY WIRE POLE
 - ⊕ = LIGHT POLE
 - ⊕ = PEDESTAL
 - ⊕ = POWER POLE
 - ⊕ = INLET
 - ⊕ = CURB INLET
 - ⊕ = GAS VALVE
 - ⊕ = LIGHT POLE WITH MAST
 - ⊕ = TREE (CONIFEROUS) DRIP LINE SCALABLE
 - ⊕ = TREE (DECIDUOUS) DRIP LINE SCALABLE
 - ⊕ = CLEANOUT
 - ⊕ = FLAG POLE
 - ⊕ = UTILITY MARKER POST
 - ⊕ = SIGN ON POST
 - ⊕ = UTILITY CONTROL BOX
 - ⊕ = UNKNOWN UTILITY VALVE
 - FL. EL. = FIRST FLOOR ELEVATION
 - ▬ = BUILDING OUTLINE
 - 3 = MINOR CONTOUR
 - 5 = MAJOR CONTOUR
 - = FENCE
 - = BEAM GUARD
 - = CHAINLINK FENCE
 - = WOODED AREA/SHRUB EDGE
 - W = WATER MAIN
 - ST = STORM SEWER
 - SAN = SANITARY SEWER
 - G = NATURAL GAS MAIN
 - T = UNDERGROUND TELEPHONE
 - E = UNDERGROUND ELECTRIC
 - OH = OVERHEAD UTILITY LINES
 - FO = UNDERGROUND FIBER OPTIC
 - TV = UNDERGROUND CABLE TV
 - C = COMMUNICATION CONDUIT
 - ▨ = ASPHALT SURFACE
 - ▨ = CONCRETE SURFACE
 - ▨ = CRUSHED AGGREGATE



SURVEYOR'S CERTIFICATE:

I, Brian Sandberg do hereby certify that that under My direction and control the above described property was surveyed on 3/24/2020 in accordance with AE-7 of the Wisconsin Administrative Code and is correct to the best of my knowledge and belief.

Brian E. Sandberg
NOVEMBER 5, 2020

BEARINGS ARE BASED ON THE WisCRS
OZAUKEE COUNTY ZONE, (2012)
VERTICAL DATUM NVD 29

DIGGERS HOTLINE

Toll Free (800)242-8511
Milwaukee Area (414)259-181
Hearing Impaired TDD (800)542-2289
www.DiggerHotline.com
REGISTER'S HOTLINE TICKETS:
20201714533, 20201714538, 20201715102, 20201715108

ALTHOUGH DIGGERS' HOTLINE WAS NOTIFIED THIS SURVEY DOES NOT GUARANTEE THAT ALL UTILITIES HAVE BEEN LOCATED ON SITE. SOME OF THE UTILITIES MAY HAVE BEEN DRAWN IN PER PLAN BASED ON MAPS RECEIVED FROM MEMBERS NOTIFIED. LACKING EXCAVATION THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.

PROJECT:
MTSD - STEFFEN
MIDDLE SCHOOL

LOCATION:
11001 N. BUNTROCK
AVENUE, 6633 W.
STEFFEN DRIVE,
MEQUON, WI 53092

CLIENT:
MEQUON -
THIENSVILLE
SCHOOL DISTRICT

RELEASE:
FINAL

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1" = 50'

SEAL:

all in

SHEET:

PROJECT MANAGER: BES
PROJECT NUMBER: 200524.01
DATE: 11/5/2020

SHEET NUMBER:

1 of 1



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denver 1899 Wynkoop Street, Suite 300
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303.595.4500

PROJECT INFORMATION

MTSD - STEFFEN
MIDDLE SCHOOL

6633 Steffen Dr,
Mequon, WI 53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



7711 N. Port Washington Road
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SHEET INFORMATION

**PROGRESS DOCUMENTS
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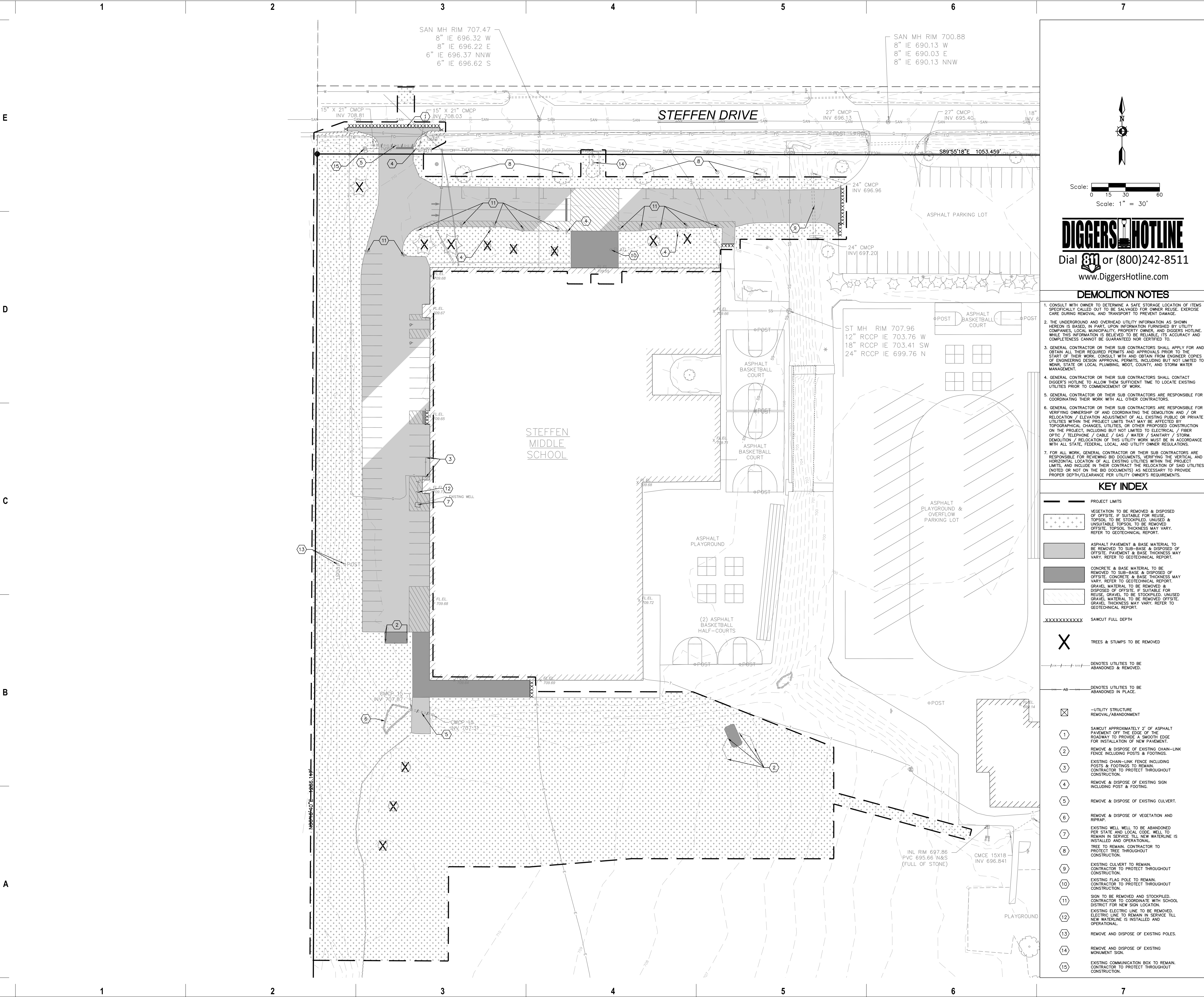
These documents reflect progress and intent and may be subject to change, including additional detail. These are not final construction documents and shall not be used for final bidding or construction-related purposes.

PROJECT MANAGER RS

PROJECT NUMBER 318480-01

SITE DEMOLITION
PLAN

C101





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PROJECT INFORMATION

**MTSD - STEFFEN
MIDDLE SCHOOL**

6633 Steffen Dr,
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ISSUANCE AND REVISIONS	
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11/16/2020	PLAN COMMISSION

KEY PLAN

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PROJECT MANAGER RS

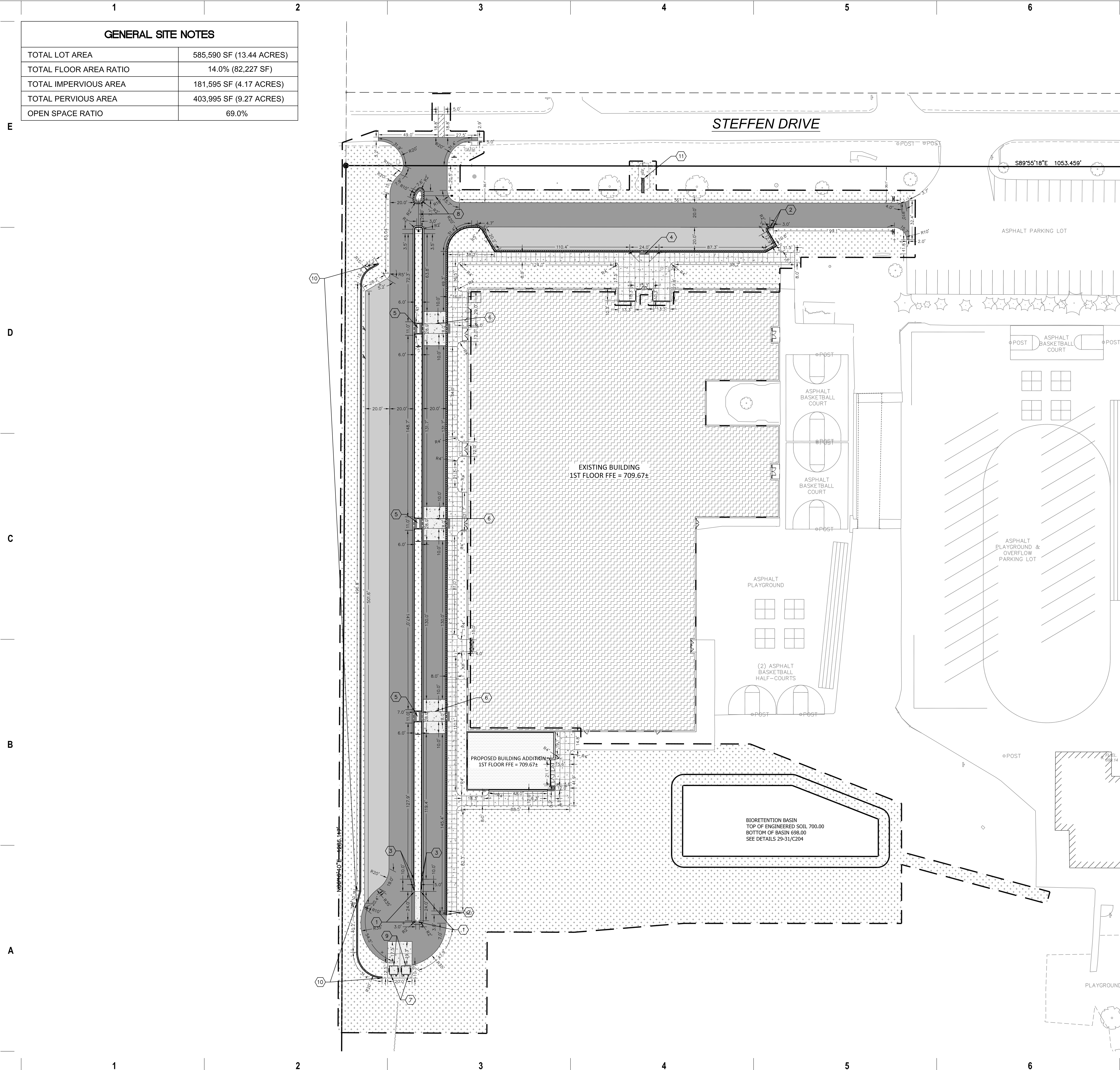
PROJECT NUMBER 318480-01

SITE LAYOUT PLAN

C102

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Attachment: Packet Docs: Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)



Scale: 0 15 30 60
Scale: 1" = 30'

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

KEY INDEX	
PROJECT LIMITS	
AREAS DISTURBED BY CONSTRUCTION (NOT SPECIFICALLY CALLED OUT ON THE LANDSCAPE PLANS) TO BE RESTORED WITH MINIMUM 4" TOPSOIL, SEED, FERTILIZER, AND MULCH (TYP). USE SALVAGED TOPSOIL OR IMPORT TOPSOIL IF REQUIRED.	
NEW ASPHALTIC CONCRETE (LIGHT DUTY)	5 C202
NEW ASPHALTIC CONCRETE (HEAVY DUTY)	5 C202
MATCH EXISTING ROADWAY PAVEMENT	
NEW CONCRETE SLAB	6 C202
NEW HEAVY DUTY CONCRETE SLAB	6 C202
HIGH-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED	8 C202
LOW-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED	8 C202
DEPRESSED CONCRETE CURB & GUTTER 18" DEPRESSED UNLESS OTHERWISE NOTED	9 C202
NEW LOW SIDE 24" MOUNTABLE CURB & GUTTER	10 C202
3" TRANSITION FROM 18" BARRIER CURB & GUTTER TO ZERO FACE GUTTER	8 C202 11 C202
10" TRANSITION FROM 18" BARRIER CURB & GUTTER TO 24" MOUNTABLE CURB & GUTTER	8 C202 10 C202
NEW ACCESSIBILITY RAMP WITH TRUNCATED DOME DETECTABLE WARNING FIELDS	1 C202
NEW ACCESSIBILITY RAMP WITH TRUNCATED DOME DETECTABLE WARNING FIELDS	13 C202
SPEED TABLES	15 C202
NEW 6" DIAMETER BOLLARDS	21 C202
NEW "FAAC MODEL 660H" SINGLE ARM LIFT GATE. ARM LENGTH TO BE 26". INSTALL PER MANUFACTURER SPECIFICATION AND DETAILS. REFER TO SITE ELECTRICAL PLAN FOR MORE INFORMATION.	
EXISTING GARBAGE CANS	
RETAINING WALL	
NEW MONUMENT SIGN. REFER TO ARCHITECTURAL PLAN FOR MORE INFORMATION.	



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PROJECT INFORMATION

**MTSD - STEFFEN
MIDDLE SCHOOL**

6633 Steffen Dr,
Mequon, WI 53092

ISSUANCE AND REVISIONS	
DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN

kapur

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Milwaukee, Wisconsin 53217

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SHEET INFORMATION

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PROJECT MANAGER RS

PROJECT NUMBER 318480-01

**SITE GEOMETRIC &
TRAFFIC CONTROL
PLAN**

C103

E

D

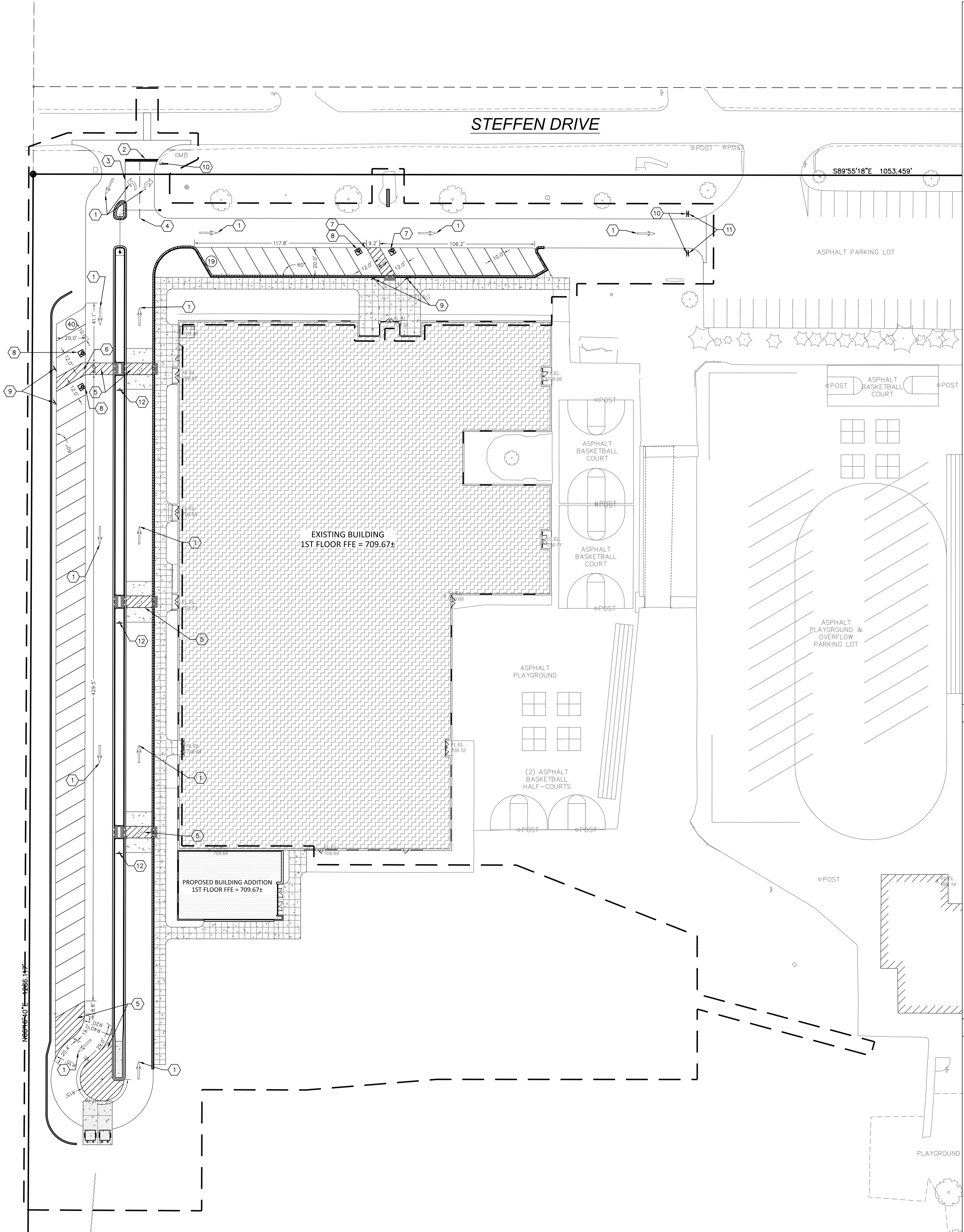
C

B

A

A

PARKING LOT SUMMARY	
REQUIRED VEHICLE SPACES - STEFFEN MIDDLE SCHOOL STAFF = 43 - STEFFEN MIDDLE SCHOOL CLASSROOMS = 16	59
STANDARD SPACES	55
ACCESSIBLE SPACES	4
TOTAL VEHICLE SPACES	59





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PROJECT INFORMATION

MTSD - STEFFEN MIDDLE SCHOOL

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ISSUANCE AND REVISIONS

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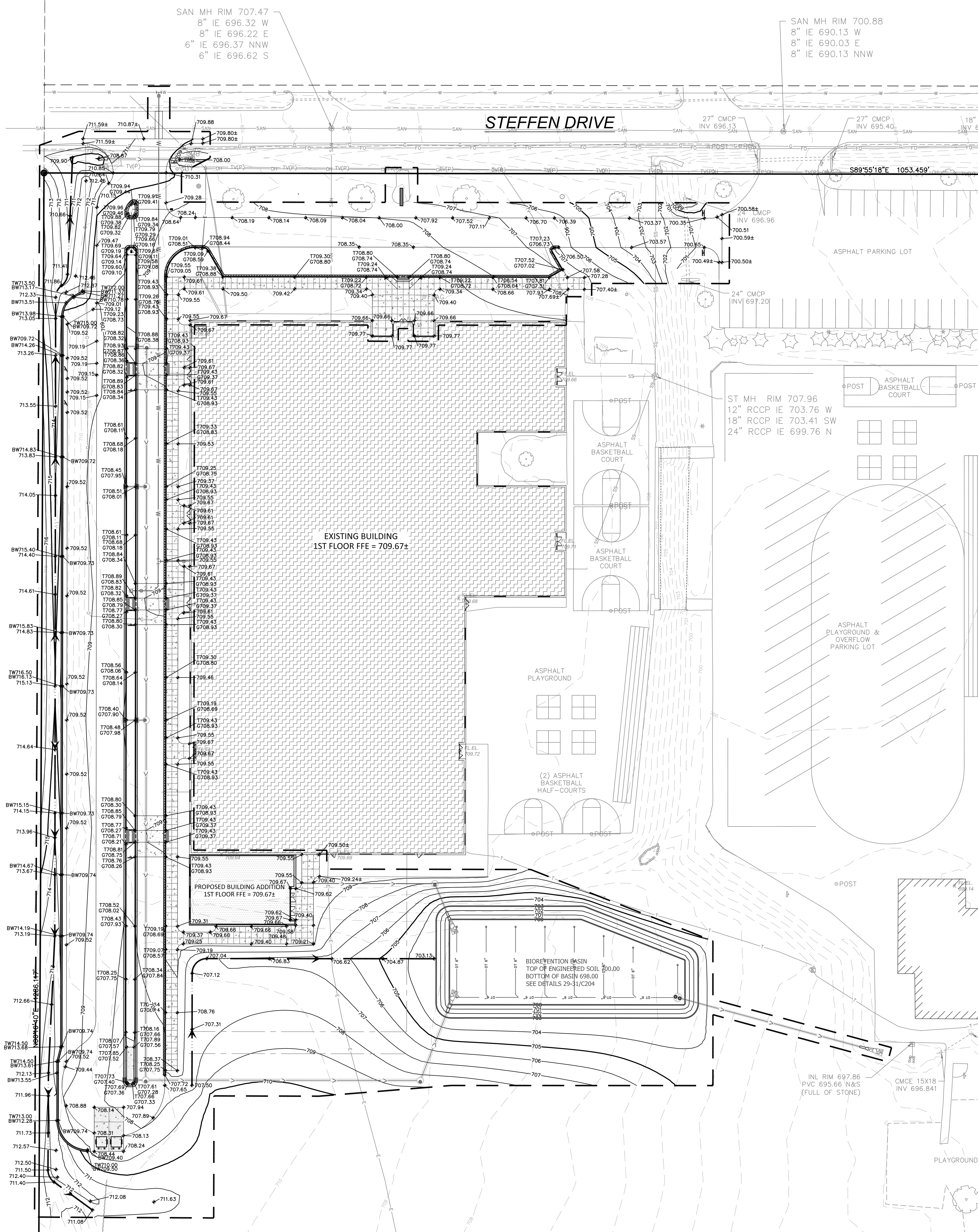
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SITE GRADING PLAN

C104

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PROJECT INFORMATION

MTSD - STEFFEN
MIDDLE SCHOOL

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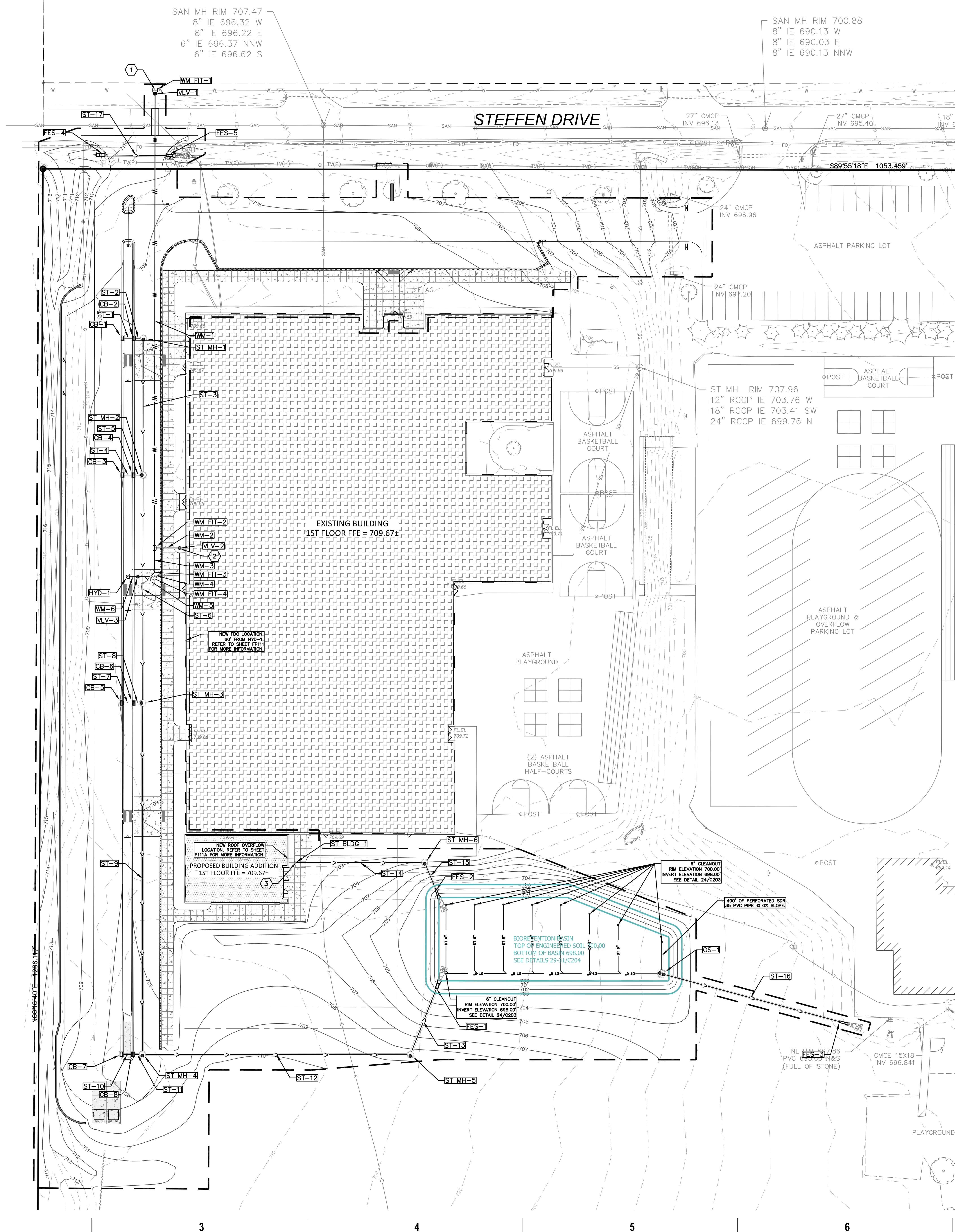
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PROJECT NUMBER 318480-01

SITE UTILITY PLAN

C105A

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PROJECT INFORMATION

MTSD - STEFFEN
MIDDLE SCHOOL

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ISSUANCE AND REVISIONS

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PROJECT MANAGER RS

PROJECT NUMBER 318480-01

SITE UTILITY TABLES

C105B

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PROJECT INFORMATION

MTSD - STEFFEN
MIDDLE SCHOOL

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ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMISSION

KEY PLAN



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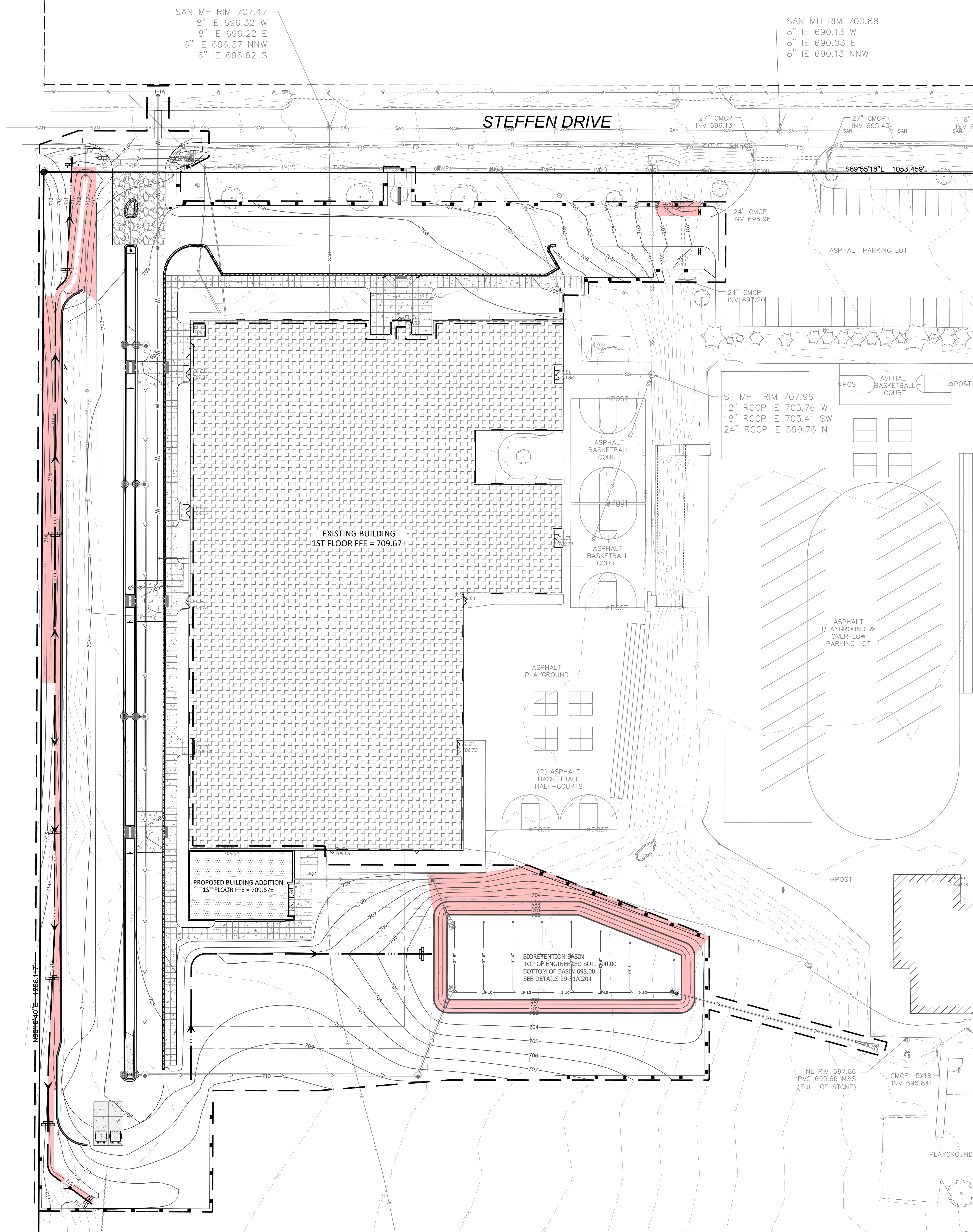
PROJECT MANAGER RS

PROJECT NUMBER 318480-01

SITE EROSION CONTROL PLAN

C106

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PROJECT INFORMATION

MTSD - STEFFEN
MIDDLE SCHOOL

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ISSUANCE AND REVISIONS

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11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN



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PROJECT MANAGER RS
PROJECT NUMBER 318480-01

SITE EROSION
CONTROL DETAILS

C201

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EROSION CONTROL MEASURES

- CONTRACTOR TO INSTALL AND MAINTAIN EROSION CONTROL MEASURES AS INDICATED ON THIS PLAN AND PER THE LATEST MNR TECHNICAL STANDARDS. TECHNICAL STANDARDS MAY BE VIEWED ONLINE AT: http://dnr.wi.gov/topic/stormwater/standards/consol_standards.html
- INLETS AND CATCH BASINS SHALL BE PROTECTED WITH INLET FILTERS THAT ARE PHASED IN WITH CONSTRUCTION TO REDUCE SEDIMENT FROM ENTERING THESE AREAS PER MNR TECHNICAL STANDARD 1059 AS FOLLOWS:
ALL FABRIC BARRIERS SELECTED FOR INLET/CATCH BASIN PROTECTION DEVICES SHALL BE SELECTED FROM THE LIST OF APPROVED FABRICS CERTIFIED FOR INLET PROTECTION, GEOTEXTILE FABRIC, TYPE FF IN THE CURRENT EDITION OF THE MNR TECHNICAL ACCEPTABILITY LIST, TO OBTAIN THE PAL, PLEASE REFER TO THIS WEBSITE: <http://wisconsinindot.gov/Documents/dcmg-bus/eng-consultants/engal-rccres/tools/pal/pal-7-14.pdf>
A. INLET PROTECTION SHALL BE AT A MINIMUM INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT OF 1/8 INCH OR GREATER DURING A 24-HOUR PERIOD.
B. PLACEMENT OF SPOIL MATERIAL, DEBRIS, SOLS, ETC. ON TOP OF INLETS/CATCH BASINS, EVEN IF TEMPORARY, IS STRICTLY DISCOURAGED AND PROHIBITED.
C. SEDIMENT DEPOSITS SHALL BE REMOVED AND THE INLET PROTECTION DEVICE RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED BETWEEN 1/3 TO 1/2 THE DESIGN DEPTH OF THE DEVICE FOR TYPES A-C, WHEN SEDIMENT IS WITHIN 6" OF THE BOTTOM OF THE OVERFLOW HOLE FOR TYPE D, OR WHEN THE DEVICE IS NO LONGER FUNCTIONING PER MANUFACTURER'S SPECIFICATIONS. ALL SEDIMENT COLLECTED SHALL BE PROPERLY DISPOSED OF TO PREVENT DISCHARGE INTO AREA WATERWAYS AND WETLANDS.
D. DUE CARE SHALL BE TAKEN TO ENSURE SEDIMENT DOES NOT FALL INTO THE INLETS/CATCH BASINS AND IMPIDE THE INTENDED FUNCTION OF THE DEVICE. ANY MATERIAL FALLING INTO THE INLET/CATCH BASIN SHALL BE REMOVED AND PROPERLY DISPOSED OF TO PREVENT DISCHARGE INTO AREA WATERWAYS AND WETLANDS.
E. INLET FILTERS MAY BE REMOVED AND PROPERLY DISPOSED OF UPON COMPLETION OF CONSTRUCTION. HAULING OR MOVEMENT OF CONSTRUCTION EQUIPMENT THROUGHOUT THE SITE, AND ONCE THE SITE IS ADEQUATELY STABILIZED, UNLESS AS OTHERWISE NOTIFIED BY THE MNR.
- A TRACKING PAD SHALL BE INSTALLED AS SHOWN ON THE PLAN SHEET PRIOR TO THE START OF CONSTRUCTION TO REDUCE OFF-SITE SEDIMENTATION BY ELIMINATING THE TRACKING OF SEDIMENT FROM THE SITE PER MNR TECHNICAL STANDARD 1057 AS FOLLOWS:
A. AGGREGATE USED FOR TRACKING PADS SHALL BE 3 TO 3.0 INCH CLEAR OR WASHED STONE, ALL MATERIAL TO BE RETAINED BY 3 INCH SIEVE.
B. THE AGGREGATE SHALL BE PLACED IN A LAYER OF AT LEAST 12 INCHES THICK, ON SITES WITH A HIGH WATER TABLE, OR WHERE SATURATED CONDITIONS ARE EXPECTED, TRACKING PADS WILL BE UNDERLAIN WITH MsdOT TYPE R GEOTEXTILE FABRIC.
C. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT (MIN. 15 FEET WIDE) AND BE AT LEAST 50 FEET LONG.
D. VEHICLES TRAVELING ACROSS THE TRACKING PAD SHALL MAINTAIN A SLOW CONSTANT SPEED.
E. ANY SEDIMENT OR ROCK ACCUMULATION ONTO LOCAL ROADWAYS SHALL BE REMOVED BY STREET CLEANING, NOT FLUSHING BEFORE THE END OF EACH WORKING DAY.
F. THE TRACKING PAD SHALL, AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT OF 1/8 INCH OF RAIN OR MORE DURING A 24-HOUR PERIOD.
G. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED AT A MINIMUM OF 12" BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
- THE CONSTRUCTION SITE PERIMETER AND TOPSOIL STOCKPILE AREA SHALL BE PROTECTED WITH SILT FENCE. FENCE IS SHOWN ON THE PLAN SHEET PRIOR TO THE START OF CONSTRUCTION AND REMOVE THE FLOW OF SEDIMENT-LADEN SHEET FLOW RUNOFF FROM THE CONSTRUCTION SITE PER MNR TECHNICAL STANDARD 1059 AS FOLLOWS:
A. SILT FENCE ENDS SHALL BE EXTENDED UPSLOPE TO PREVENT WATER FROM FLOWING AROUND THE ENDS OF THE FENCE AS SHOWN ON THE PLAN SHEET.
B. INSTALLED SILT FENCE SHALL BE A MINIMUM 14 INCHES HIGH AND SHALL NOT EXCEED 28 INCHES IN HEIGHT MEASURED FROM THE INSTALLED GROUND ELEVATION.
C. SILT FENCE SHALL BE SUPPORTED BY EITHER STEEL OR WOOD SUPPORT POSTS.
D. THE MAXIMUM SPACING OF POSTS FOR NONWOVEN SILT FENCE SHALL BE 3 FEET OR FOR WOVEN FABRIC 8 FEET.
E. SILT FENCE SHALL HAVE A SUPPORT CORD AT THE TOP OF THE FENCE.
F. WHERE JOINTS ARE NEEDED, EACH END OF THE FABRIC SHALL BE SECURELY FASTENED TO A POST. THE POSTS SHALL BE WRAPPED AROUND EACH OTHER TO PRODUCE A STABLE AND SECURE JOINT OR SHALL BE OVERLAPPED THE DISTANCE BETWEEN TWO POSTS.
G. A MINIMUM OF 20 INCHES OF THE POSTS SHALL EXTEND INTO THE GROUND AFTER INSTALLATION.
H. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8 INCHES OF THE FABRIC IN A 4 INCH WIDE BY 8 INCH DEEP TRENCH, OR 6 INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. THE TRENCH SHALL BE BACKFILLED AND COMPACTED. TRENCHES SHALL NOT BE EXCAVATED ANY WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
I. ON THE TERMINAL ENDS OF THE SILT FENCE THE FABRIC SHALL BE WRAPPED AROUND THE POST SUCH THAT THE STAPLES ARE NOT VISIBLE.
J. GEOTEXTILE FABRIC SPECIFICATIONS SHALL MEET VALUES ESTABLISHED IN TECHNICAL STANDARD 1056.
K. SILT FENCE SHALL BE REMOVED ONCE THE SITE IS ADEQUATELY STABILIZED.
L. WHEN PLACING SILT FENCE NEAR TREES, CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO THE ROOT SYSTEM BY AVOIDING COMPACTION AND ROOT CUTTING WITHIN A RADIUS OF 1.5 FEET MULTIPLIED BY THE INCH DIAMETER OF THE TREE.
M. THE CONTRACTOR MAY FURTHER STRENGTHEN THE SILT FENCE BY USING HAY BALES ON THE DOWN SLOPE SIDE AS NEEDED.
N. SILT FENCE SHALL, AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 1/8 INCH OF RAIN OR MORE DURING A 24 HOUR PERIOD.
O. DAMAGED OR DECOMPOSED SILT FENCE, UNDERCUTTING, OR FLOW CHANNELING AROUND THE END OF BARRIERS SHALL BE REPAIRED OR CORRECTED.
P. SEDIMENT SHALL BE PROPERLY DISPOSED OF ONCE THE DEPOSIT REACHES 1/2 THE HEIGHT OF THE FENCE TO PREVENT DISCHARGE INTO AREA WATERWAYS AND WETLANDS.
- SEEDING AND MULCHING TECHNIQUES SHALL BE USED ON AREAS OF EXPOSED SOIL WHERE THE ESTABLISHMENT OF VEGETATION IS DESIRED. TEMPORARY SEEDING APPLIES TO DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND-DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 CALENDAR DAYS, REQUIRING VEGETATIVE COVER FOR LESS THAN ONE YEAR. SEED AND MULCH SHALL BE UTILIZED THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH TEMPORARY VEGETATION TO HELP REDUCE EROSION PER MNR TECHNICAL STANDARDS 1059 AND 1058 RESPECTIVELY AS FOLLOWS:
A. TEMPORARY SEEDING REQUIRES A SEEDBED OF LOOSE SOIL TO A MINIMUM DEPTH OF 2 INCHES.
B. FERTILIZER APPLICATION IS NOT GENERALLY REQUIRED FOR TEMPORARY SEEDING. HOWEVER, ANY APPLICATION OF FERTILIZER OR LIME SHALL BE BASED ON SOIL TESTING.
C. THE SOIL SHALL HAVE A PH RANGE OF 5.5 TO 8.0.
D. ALL SEED SHALL CONFORM TO THE REQUIREMENTS OF THE WISCONSIN STATE STATUTES AND OF THE ADMINISTRATIVE CODE CHAPTER ATP 20.01 REGARDING NOXIOUS WEED SEED CONTENT AND LABELING.
E. SEED SHALL NOT BE USED LATER THAN ONE YEAR AFTER THE TEST DATE ON THE LABEL.
F. IN THE SUMMER-SPRING, CONTRACTOR SHALL USE OATS APPLIED AT 131 LBS./ACRE FOR TEMPORARY SEEDING PURPOSES. IN THE FALL THE CONTRACTOR SHALL USE ANNUAL REYGRASS APPLIED AT 80 LBS./ACRE OR WINTER WHEAT OR CEREAL RYE APPLIED AT 131 LBS./ACRE. THE CONTRACTOR SHALL USE STRAW MULCH APPLIED AT 1.5 TONS/ACRE. DORMANT SEED SHALL BE USED WHEN SOIL TEMPERATURE IS CONSISTENTLY BELOW 53 DEGREES FAHRENHEIT (TYPICALLY NOV. 1 UNTIL SNOW COVER ANNUALLY). NEVER PLACE SEED ON TOP OF SNOW. IF COVER IS NEEDED AFTER SNOW FALLS, CONTRACTOR MAY CHOOSE TO USE A DRY, NONTOXIC TYPE B SOIL STABILIZER PER MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY THE MNR.
G. SEEDING SHALL NOT TAKE PLACE WHEN THE SOIL IS TOO WET.
H. CONTRACTOR MAY CONSIDER WATERING TO HELP ESTABLISH THE SEED. WATER APPLICATION RATES SHALL BE CONTROLLED TO HELP PREVENT RUNOFF AND EROSION.
I. DURING CONSTRUCTION, AREAS THAT HAVE BEEN SEEDING AND MULCHED SHALL AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 1/8 INCH OF RAIN OR MORE DURING A 24 HOUR PERIOD. INSPECT WEEKLY DURING THE GROWING SEASON UNTIL VEGETATION IS DENSELY ESTABLISHED OR THE SOIL IS LAID, REPAIR AND RESEED AREAS THAT HAVE EROSION DAMAGE AS NECESSARY.
J. CONTRACTOR IS TO LIMIT VEHICLE TRAFFIC AND OTHER FORMS OF COMPACTION IN AREAS THAT ARE SEEDING AS MUCH AS POSSIBLE. RE-SEED DRIVEN OVER AREAS AS NEEDED.
K. MULCH SHOULD BE PLACED WITHIN 24 HOURS OF SEEDING.
L. MULCHING OPERATIONS SHALL NOT TAKE PLACE DURING PERIODS OF EXCESSIVELY HIGH WINDS THAT WOULD PRECLUDE THE PROPER PLACEMENT OF MULCH.
M. MULCH THAT IS DISPLACED SHALL BE REAPPLIED AND PROPERLY ANCHORED. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION TO SITE CONDITIONS.
N. WHEN CHANNEL EROSION MAT IS USED WITHIN CONSTRUCTION SITE EROSION AREAS, TECHNICAL STANDARDS 1055 AND 1056 SHALL BE FOLLOWED.
O. WHEN NON-CHANNEL EROSION MAT IS USED TECHNICAL STANDARD 1052 SHALL BE FOLLOWED.
P. DEPENDING ON DURATION OF CONSTRUCTION, THE CONTRACTOR MAY NEED TO RE-SEED AND RE-STABILIZE THE TOPSOIL STOCKPILE AS NECESSARY TO DISCOURAGE SEDIMENT AND EROSION.
6. A COPY OF EROSION CONTROL INSPECTION REPORTS AND THE APPROVED EROSION CONTROL PLANS SHALL BE KEPT ON SITE.
7. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL PRACTICES BY THE END OF EACH WORKDAY.
8. LOCAL ROADS SHALL BE CLEAN BY THE END OF EACH WORKDAY. CONTRACTOR SHALL HAVE LOCAL ROADS SWEEP WHERE SEDIMENT ACCUMULATES.

EROSION CONTROL OPERATION SEQUENCE + SCHEDULE

AFTER BIDS ARE RECEIVED AND A MASS GRADING CONTRACTOR IS SELECTED, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE WITH ALL PARTICIPATING PARTIES IN ATTENDANCE.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL SILT FENCES, SEEDING, EROSION MATTING, AND OTHER EROSION CONTROL MEASURES. GENERAL CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PRIOR TO COMMENCING GRADING, GRUBBING, OR OTHER LAND DISTURBING ACTIVITIES. EROSION CONTROL MEASURES MUST BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF EVERY PRECIPITATION EVENT OF 1/8 INCH OR GREATER. IN ADDITION, THE ACTIVE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS AND DOCUMENT CONDITIONS AND REPAIRS MADE, ALONG WITH DATE, TIME OF INSPECTION, AND WEATHER CONDITIONS IN A DAILY LOG BOOK.

ALL REGULATORY PERMITS, PROJECT PLANS, AND INSPECTION LOGS SHALL BE KEPT ON SITE IN AN ACCESSIBLE LOCATION, SUCH AS A MAILBOX, AVAILABLE TO REGULATORY AGENCIES UPON REQUEST.

CONTRACTORS ARE TO MAINTAIN THE CONSTRUCTION SITE IN A NEAT AND TIDY MANNER FOR THE DURATION OF THE PROJECT.

THE TIMING AND SEQUENCE OF CONSTRUCTION IS SCHEDULED AS FOLLOWS:

- OBTAIN PLAN APPROVAL FROM THE CITY OF MEQUON, AND ALL APPLICABLE PERMITS, INCLUDING EROSION CONTROL PERMIT.
- CONSTRUCTION IS SCHEDULED TO BEGIN IN SPRING OF 2021, DEPENDING ON WEATHER & GROUND CONDITIONS.
- A GRAVEL TRACKING PAD UNDERLAIN WITH MsdOT TYPE R GEOTEXTILE FABRIC, ALONG WITH A TEMPORARY CULVERT IF NECESSARY, AS SHOWN ON THE PLANS, RE-GRADE EXISTING ROADWAY, DITCH AS NECESSARY. IF INSTALLED, THE TEMPORARY CULVERT SHALL BE REMOVED AT END OF CONSTRUCTION ACTIVITIES. IF INDICATED ON PLANS, INSTALL CONSTRUCTION FENCE AND ANY TEMPORARY TRAFFIC CONTROLS.
- SILT FENCE, INLET FILTER PROTECTION, AND TRIANGULAR SILT DIKES SHALL BE INSTALLED AS SHOWN ON THE PLANS, AND INSPECTED PRIOR TO COMMENCING OF ANY LAND DISTURBING ACTIVITIES PER PROJECT PLANS AND DETAILS. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN THEY REACH A DEPTH OF 1/2 FENCE HEIGHT.
- FOLLOWING INSTALLATION OF THE EROSION CONTROL MEASURES, CONSTRUCT THE BIO-RETENTION BASIN TO FINISH GRADES. CONTRACTOR SHALL CONSTRUCT BASIN INLETS AND OUTLET STRUCTURE FOR USE DURING CONSTRUCTION (REFER TO DETAIL 30 ON SHEET C204 FOR ADDITIONAL INFORMATION). CONTRACTOR SHALL IMMEDIATELY STABILIZE THE BASIN BANKS, INLETS, AND OUTLET STRUCTURE.
- BIO-RETENTION BASIN SHALL, AT A MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 1/8 INCH OF RAIN OR MORE DURING A 24-HOUR PERIOD. SEDIMENT SHALL BE REMOVED TO MAINTAIN THE 3 FOOT DEPTH OF THE TREATMENT SURFACE AREA AS MEASURED FROM THE INVERT OF THE PRINCIPAL OUTLET. IF THE OUTLET BECOMES CLOGGED IT SHALL BE CLEANED TO RESTORE FLOW CAPACITY. SEDIMENT TO BE REMOVED AFTER CONSTRUCTION & SITE STABILIZATION IS COMPLETE.
- SITE DEMOLITION OF PAVEMENT, ETC. WILL OCCUR AFTER ALL EROSION CONTROL MEASURES ARE IN PLACE.
- CONSTRUCTION OF THE BUILDING, STARTING WITH THE FOUNDATION, WILL BEGIN IMMEDIATELY AFTER THE SITE DEMOLITION IS COMPLETE IN THE BUILDING PAD AREA.
- TOPSOIL STRIPPING AND ROUGH GRADING WILL FOLLOW. TOPSOIL STOCKPILES WILL BE LOCATED AS SHOWN ON THE PLANS AND BE STABILIZED WITHIN 7 DAYS OF LAY UP. STOCKPILES WILL BE USED FOR FINAL LANDSCAPING. REMAINING STOCKPILES WILL BE REMOVED FROM THE SITE.
- UTILITY INSTALLATION WILL OCCUR NEXT AND CONTINUE UNTIL ALL THE UTILITIES ARE INSTALLED.
- AFTER ROUGH GRADING IS COMPLETE IN HARD SURFACE AREAS SUCH AS ROADWAYS, PARKING LOTS, AND BUILDINGS, THE REQUIRED THICKNESS OF DENSE GRADED BASE COURSE, PER THE PROJECT PLANS AND DETAILS WILL BE APPLIED FOR STABILIZATION. AFTER ROUGH GRADING IS COMPLETE OUTSIDE OF HARD SURFACE AREAS, THE TOPSOIL WILL BE REAPPLIED AND THE LANDSCAPE CONTRACTOR WILL COMPLETE SEEDING/SODDING/FERTILIZING/MULCHING AND INSTALL EROSION MATTING AS PER APPROVED PLANS AND SPECIFICATIONS.
- FINAL SITE STABILIZATION IS ANTICIPATED FOLLOWING THE COMPLETION OF GRADING ACTIVITIES PER MNR TECHNICAL STANDARD 1059. IF SITE STABILIZATION CANNOT BE COMPLETED BY OCTOBER 15, THEN THE USE OF ANONIC POLYMER/LIME CONFORMING TO MNR TECHNICAL STANDARD 1050 SHALL BE USED. IN ADDITION, ALL SLOPES OF GREATER THAN 20% MUST ADHERE TO THE SCHEDULE IN TABLE 1 BELOW.
- AFTER ALL TOPSOIL HAS BEEN REAPPLIED AND STABILIZATION IS UNDERWAY, ROADWAY, PARKING LOT, AND SIDEWALK BASE MATERIAL WILL BE APPLIED PER PROJECT SPECIFICATIONS.
- THE GENERAL CONTRACTOR WILL REQUEST A FINAL INSPECTION BY THE CITY. UPON APPROVAL, ALL SILT FENCES, INLET FILTER PROTECTION, AND TRIANGULAR SILT DIKES SHALL BE REMOVED, AND ACCUMULATED SEDIMENT IN THE SEDIMENT BASIN/BIO-RETENTION BASIN SHALL BE DREDGED AND PROPERLY DISPOSED OF. IN ADDITION, THE CONTRACTOR MUST ENSURE THAT THE BIO-RETENTION BASIN IS RETURNED TO THE SLOPES AND GRADES SHOWN ON THE PROJECT PLANS AND DETAILS.
- IF REQUIRED, FINAL "AS-BUILT" SURVEYS ARE TO BE CONDUCTED BY THE OWNER AND FINAL DOCUMENTS FORWARDED TO THE CITY.
- BARE SOIL LEFT UNDISTURBED FOR 14 CALENDAR DAYS MUST BE TEMPORARILY STABILIZED PER MNR TECHNICAL STANDARD 1059. BY OCTOBER 15, THE SITE SHALL BE STABILIZED PER NOTE 12 ABOVE.
- WE DO NOT ANTICIPATE THE NEED FOR WATERING WITH THIS CONSTRUCTION SCHEDULE. HOWEVER, IF ADEQUATE RAIN IS NOT EXPERIENCED WITHIN ONE WEEK AFTER INITIAL SEED GERMINATION AT ANY POINT DURING THE CONSTRUCTION PROCESS, WATER SHALL BE TRUCKED IN AND APPLIED ONCE PER WEEK.

IF CONSTRUCTION SCHEDULES SHOULD CHANGE SIGNIFICANTLY, THIS PLAN NARRATIVE WILL BE UPDATED AND RESUBMITTED BY THE GENERAL CONTRACTOR TO THE CITY AND WNR.

TABLE 1 - MAXIMUM PERIOD OF BARE SOIL FOR SLOPES GREATER THAN 20%		
SLOPE AREA DRAINS TO SEDIMENT BASIN?	LAND DISTURBANCE BETWEEN SEPT. 16 AND MAY 1	LAND DISTURBANCE BETWEEN MAY 2 AND SEPT. 15
YES	90 DAYS	90 DAYS
NO	60 DAYS	30 DAYS

TABLE FROM WI DNR GUIDANCE DOC # 3800-2015-06

DEWATERING PLAN

TO FACILITATE CONSTRUCTION AT THE PROJECT SITE, DEWATERING MAY TAKE PLACE BY THE SELECTED CONTRACTOR WITHIN LOW FLOODING AREAS. THESE INSTRUCTIONS WHILE PERFORMING DEWATERING ACTIVITIES ON-SITE, IF DEWATERING IS TO TAKE PLACE AT THE SITE, IT WILL OCCUR BETWEEN STEPS 3 AND 14 OF THE EROSION CONTROL OPERATION SEQUENCE.

NOTE: THESE INSTRUCTIONS DO NOT APPLY TO WATER BEING DISCHARGED DIRECTLY TO GROUNDWATER OR KARST FEATURES OR WELL DEWATERING SYSTEMS. CONTRACTOR SHALL COORDINATE ACCORDINGLY FOR OTHER DEWATERING ACTIVITIES AS DEEMED NECESSARY BY THE MNR.

- THE CONTRACTOR SHALL ENSURE THAT THE DEWATERING PRACTICES CARRIED OUT MEET OR EXCEED MNR TECHNICAL STANDARD NUMBER 1061.
- A PAN OR OTHER CONTAINMENT DEVICE SHALL BE PLACED UNDERNEATH THE PUMP TO CAPTURE ANY SPILLS. OILS, GASOLINE, ETC. SHALL NOT BE STORED WITHIN WETLANDS, NEAR THE STORMWATER POND, OR OTHER ON-SITE WATER AREAS.
- A TYPE 2 GEOTEXTILE BAG THAT IS NO SMALLER THAN 100 SQUARE FEET; HAS A MAXIMUM APPARENT OPENING SIZE OF 0.212 mm; HAS A TENSILE STRENGTH OF 300 LBS.; MULLER BURST OF 180 PSI; PERMEABILITY OF 0.2 CM/SEC; FABRIC WEIGHT OF 12 OZ SHALL BE USED. THE GEOTEXTILE BAG AREA AND DOWNGRADE FLOW AREA SHALL CONSIST OF VEGETATED AND UNDISTURBED SOILS.

- POLYMER APPROVED BY THE MNR MEETING MNR TECHNICAL STANDARD 1051 MAY BE USED IN COMBINATION WITH THE DEWATERING BAG. IF THE DEWATERING BAG IS NOT DONE AN ADEQUATE JOB ALONE OF FILTERING SEDIMENTS, THE CONTRACTOR SHALL SUPPLY TOXICITY TESTING DATA TO THE MNR BEFORE USE ON-SITE FOR MNR APPROVAL. POLYMER SHALL NOT BE DIRECTLY APPLIED TO SURFACE WATER. CONTRACTOR SHALL OBTAIN THE MATERIAL SAFETY DATA SHEETS (MSDS) FOR THE SELECTED POLYMER, MANUFACTURER'S INFORMATION AND MNR USE RESTRICTIONS (SEE TECHNICAL STANDARD 1051) AND KEEP ALL THIS INFORMATION ON-SITE. CONTRACTOR SHALL ADHERE TO MANUFACTURER AND MNR'S APPLICATION RATES FOR THE POLYMER WITH THE MNR'S RATE TAKING PRECEDENCE. THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT THE POLYMER IS NOT SPILLED. SPILL KITS SHALL BE KEPT ON SITE. THE MANUFACTURER'S RECOMMENDED CLEANUP PROCEDURES SHALL BE FOLLOWED IN THE EVENT OF A SPILL.
- A TARP MAY BE UTILIZED UNDERNEATH THE TYPE 2 GEOTEXTILE BAG AND JUST DOWN SLOPE OF THE BAG TO DISCOURAGE EROSION AND SCOUR.
- A FLOATING SUCTION HOSE OR OTHER FLOTATION METHOD SHALL BE UTILIZED WHEN PUMPING FROM AN AREA WITH STANDING WATER TO AVOID SUCKING SEDIMENT FROM GRADE.
- IF TURBID WATER IS LEAVING THE GEOTEXTILE BAG, THE CONTRACTOR SHALL SHUT OFF THE PUMP TO ALLOW SEDIMENTS TO SETTLE INTO THE BAG. CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S SPECIFICATIONS FOR DETERMINING THE SEDIMENT CAPACITY OF THE GEOTEXTILE BAG USING GOOD COMMON SENSE. SEDIMENT LEVELS CONTAINED IN THE BAG SHALL BE MONITORED TO MEASURE THE LOSS OF STORAGE CAPACITY OVER TIME. THE CONTRACTOR SHALL PROPERLY DISPOSE OF THE GEOTEXTILE BAG IN A WASTE RECEPTACLE ONCE IT IS NO LONGER USED.

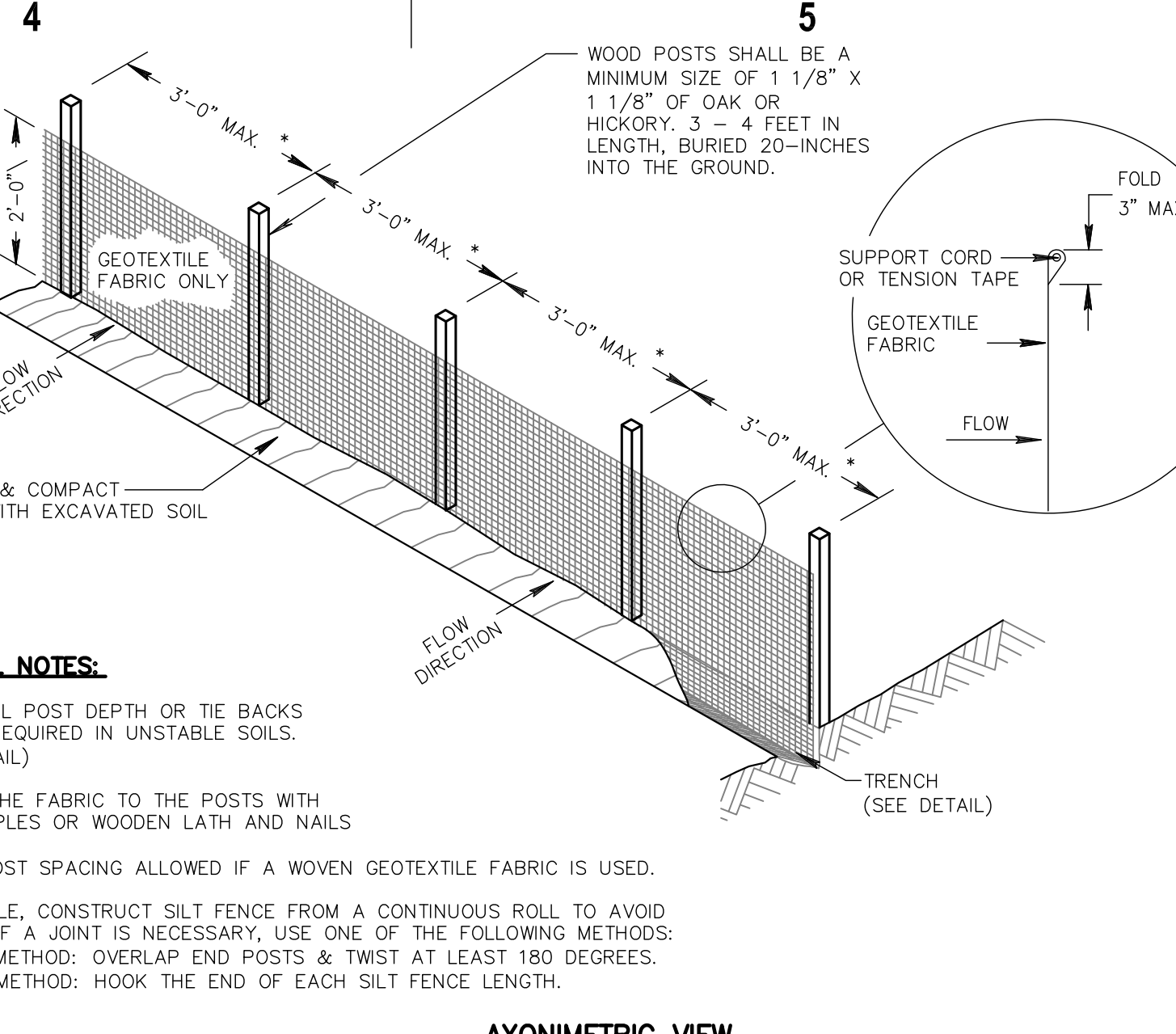
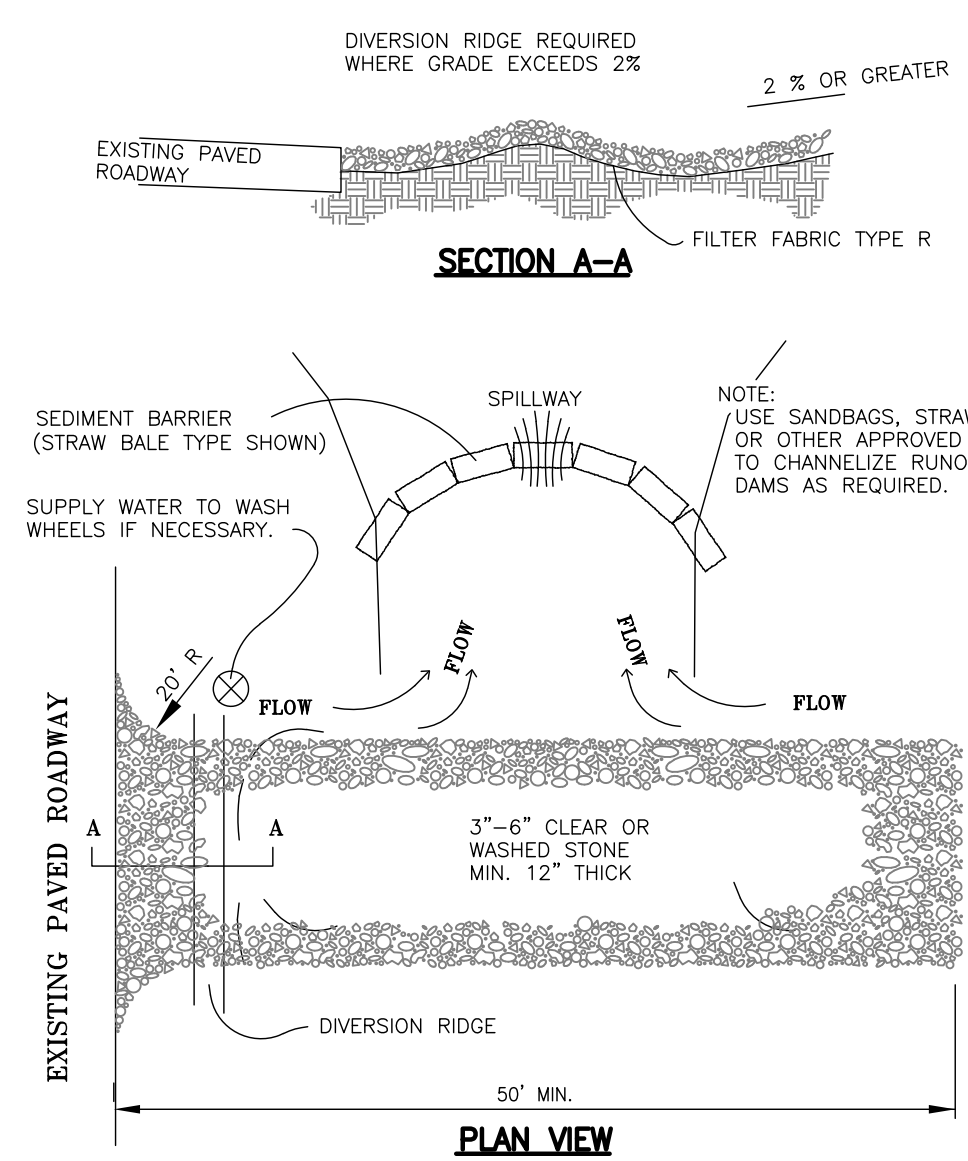
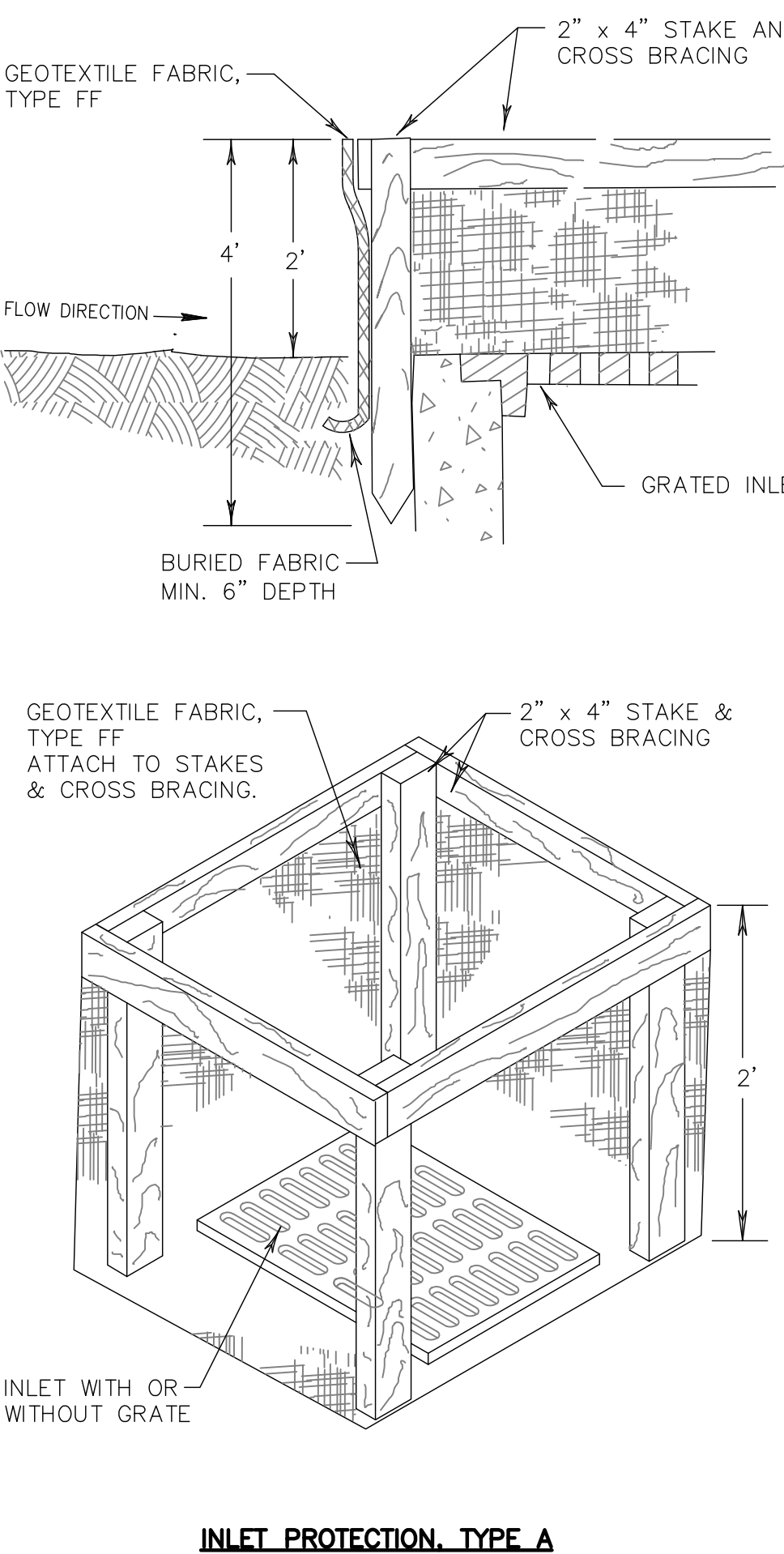
- DURING DEWATERING ACTIVITIES THE CONTRACTOR SHALL MONITOR DEWATERING PRACTICES AND KEEP A LOG OF THE FOLLOWING:
A. DISCHARGE DURATION AND SPECIFIED PUMPING RATE.
B. OBSERVED WATER TABLE AT TIME OF DEWATERING.
C. MAINTENANCE ACTIVITIES
D. NAME AND QUANTITY OF POLYMER USED. PRODUCT TYPE, APPLICATION RATE OF POLYMER IN POUNDS/ACRE FEET OF WATER, DATE AND TIME APPLIED, WEATHER CONDITIONS DURING APPLICATION, METHOD OF APPLICATION.

THIS LOG NEEDS TO BE KEPT ON SITE FOR MNR REGULATORY REVIEW. COPIES OF THIS DOCUMENTATION SHOULD BE KEPT IN THE CONTRACTOR'S MONITORING LOG AND MADE AVAILABLE UPON REQUEST.

REVIEW THE FOLLOWING FOR MORE INFORMATION:
MNR TECHNICAL STANDARD 1061 FOR DEWATERING – http://dnr.wi.gov/topic/stormwater/documents/Dewatering_1061.pdf
MNR TECHNICAL STANDARD 1051 FOR POLYMER – <http://dnr.wi.gov/topic/stormwater/documents/dnr1051.pdf>

INSPECT ALL EROSION CONTROL MEASURES PRIOR TO COMMENCING GRADING, GRUBBING OR OTHER LAND DISTURBING ACTIVITIES. EROSION CONTROL MEASURES MUST BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF EVERY PRECIPITATION EVENT OF 0.50 INCH OR GREATER. IN ADDITION THE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS AND DOCUMENT CONDITIONS AND REPAIRS MADE, ALONG WITH DATE, TIME OF INSPECTION AND WEATHER CONDITIONS IN A DAILY LOG BOOK. THE DAILY LOG BOOK, WEEKLY/0.50 INCH PRECIPITATION REPORTS, APPROVED PLANS WIDES PERMIT & CHAPTER 30 PERMIT SHALL BE KEPT IN AN ACCESSIBLE LOCATION, LIKE A MAILBOX, WITHIN THE STATION AREA.

AT ABSOLUTELY NO TIME MAY CONSTRUCTION EQUIPMENT, DEBRIS, FILL, ETC. BE PLACED WITHIN WETLANDS, WATERWAYS OR FLOODPLAINS UNLESS IDENTIFIED IN THE PLANS & APPROVED BY DNR/USACE.

1 FILTER FABRIC SILT FENCE DETAIL
N.T.S.2 STONE TRACKING CONSTRUCTION ENTRANCE
N.T.S.

INLET PROTECTION, TYPE A

INLET PROTECTION, TYPE C, WITH CURB BOX

GENERAL NOTES

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- FINISHED SIDE SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL. SIDE FLAPS, WHEN REQUIRED SHALL BE A MIN. OF TWO INCHES LONG, FOLD THE FABRIC OVER AND REINFORCE WITH MULTIPLE STITCHES.
- FOR INLET PROTECTION, TYPE C (WITH CURB BOX), FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2"x4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE FLAP AND NOT BLOCK THE TOP HALF OF THE CURB BOX OPENING.

4 INLET PROTECTION DETAIL
N.T.S.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC A MINIMUM OF 10" AROUND GRATE FOR MAINTENANCE OR REMOVAL. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEW FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

UTILIZE INLET PROTECTION TYPE D IN INLETS DEEPER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3".

WHERE NECESSARY THE CONTRACTOR MAY PINCH THE BAG, USING PLASTIC ZIP TIES, TO FIT INLETS LESS THAN 30" DEPTH. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION, TYPE B, WITHOUT CURB BOX
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)INLET PROTECTION, TYPE D, WITHOUT A CURB BOX
(CAN BE INSTALLED IN ANY INLET TYPE, WITH OR WITHOUT A CURB BOX)INLET PROTECTION, TYPE C, WITH CURB BOX
(CAN BE INSTALLED IN ANY INLET TYPE, WITH OR WITHOUT A CURB BOX)INLET PROTECTION, TYPE D, WITHOUT A CURB BOX
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MTSD - STEFFEN
MIDDLE SCHOOL

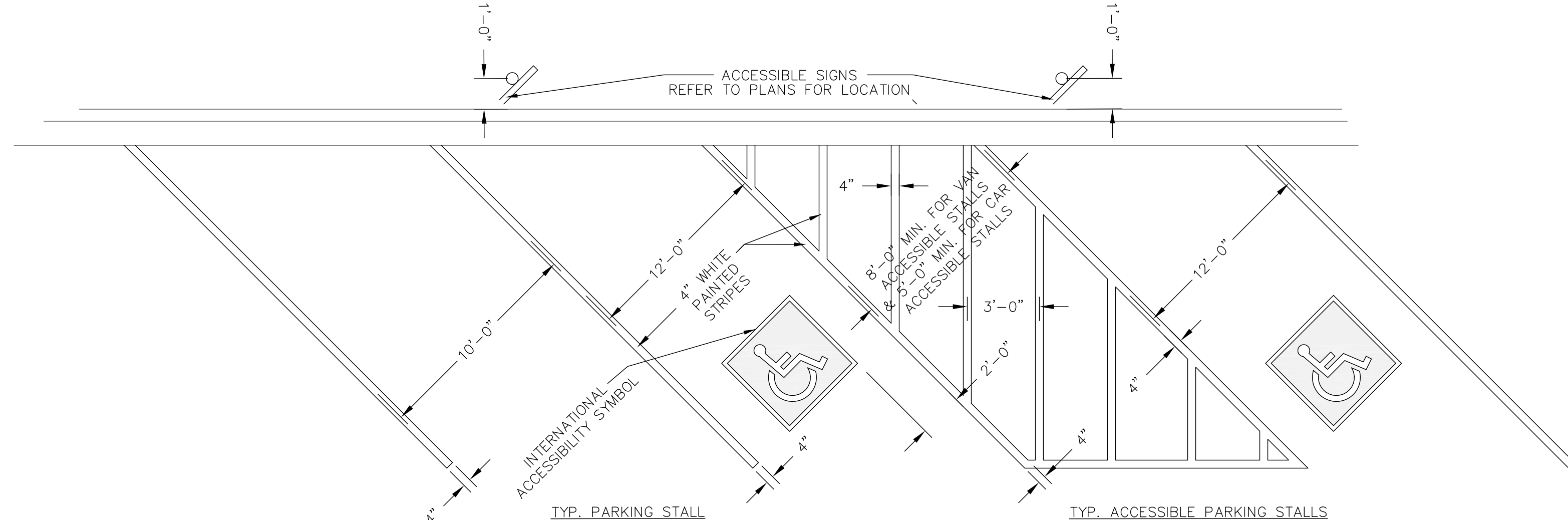
DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMISSION

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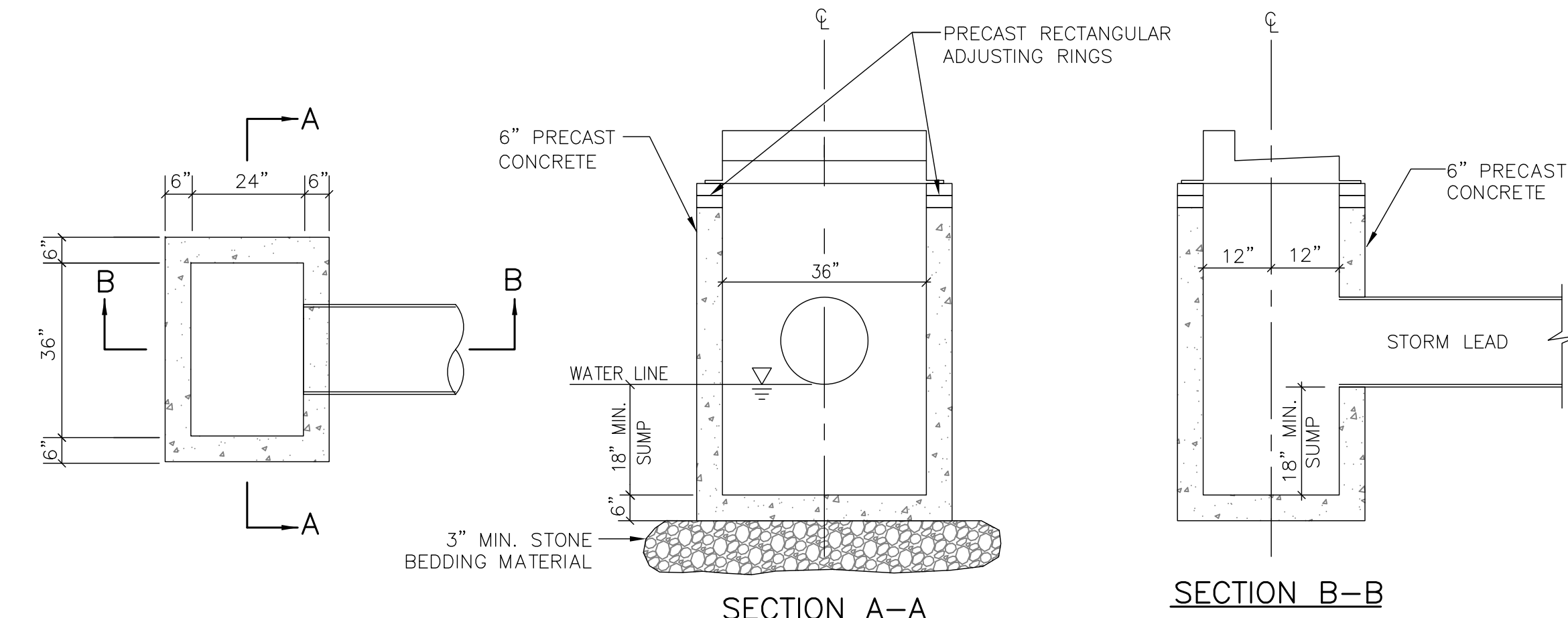
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PROJECT NUMBER 318480-01

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17 ACCESSIBLE PARKING STALL MARKING
N.T.S.



NOTE:
REFER TO SITE UTILITY PLAN FOR FRAME & GRATE.

SECTION B-E

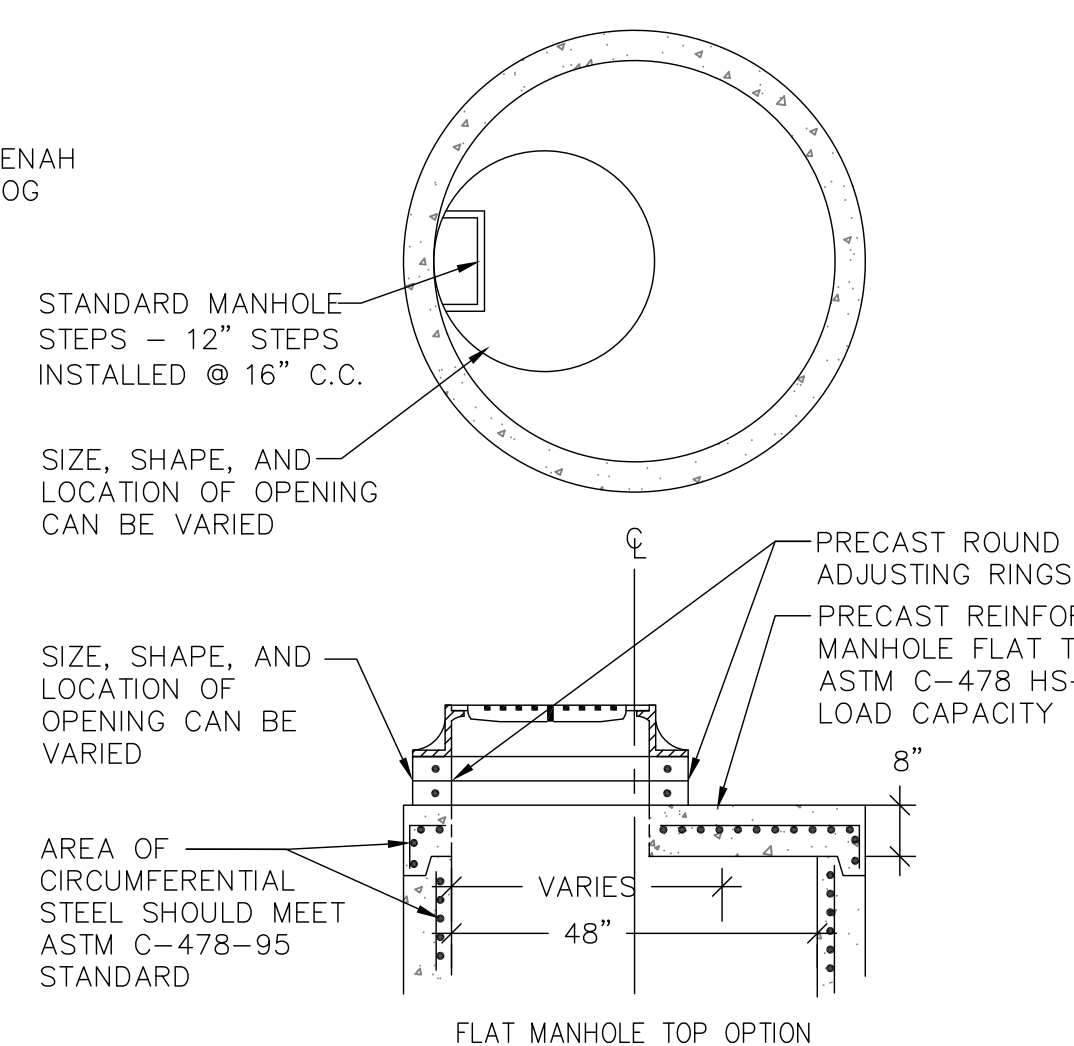
NOTE:
REFER TO SITE UTILITY PLAN FOR FRAME & GRATE.

22 24" X 36" STORM CATCH BASIN WITH
N.T.S. GUTTER INLET/CURB BOX FRAME & GRATE

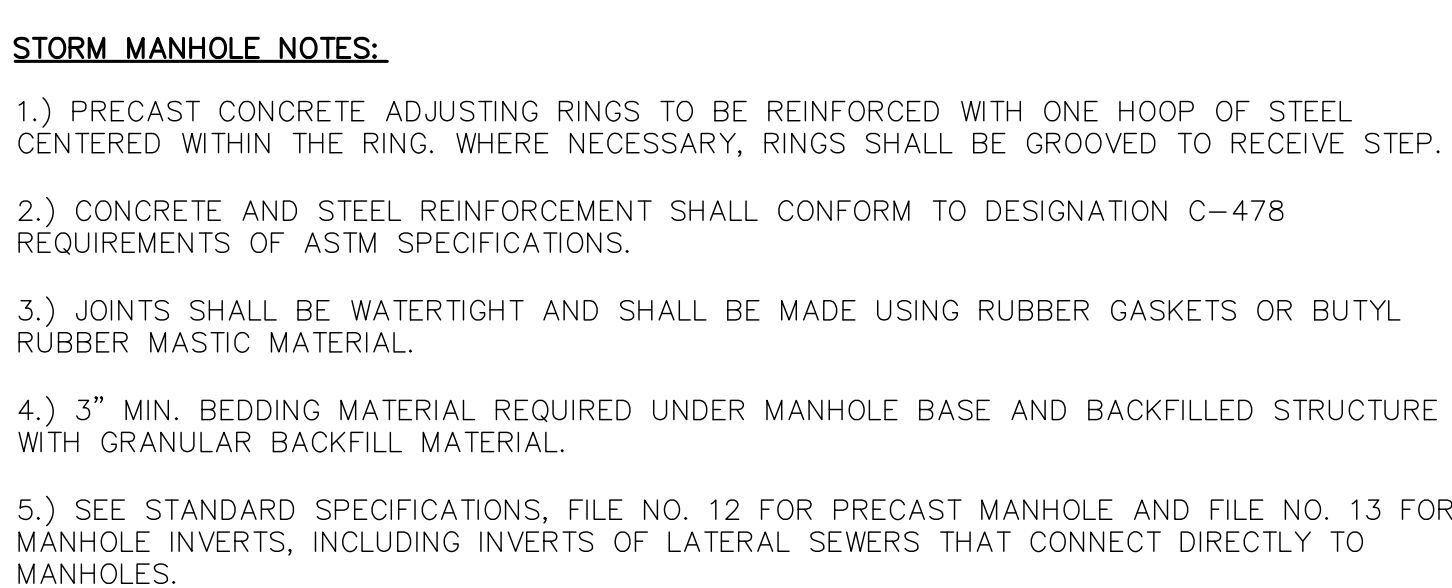
19 ACCESSIBLE PARKING
N.T.S. STALL SIGN

20 SIGN POST DETAIL
N.T.S.

21 STANDARD STEEL BOLLARD
N.T.S.



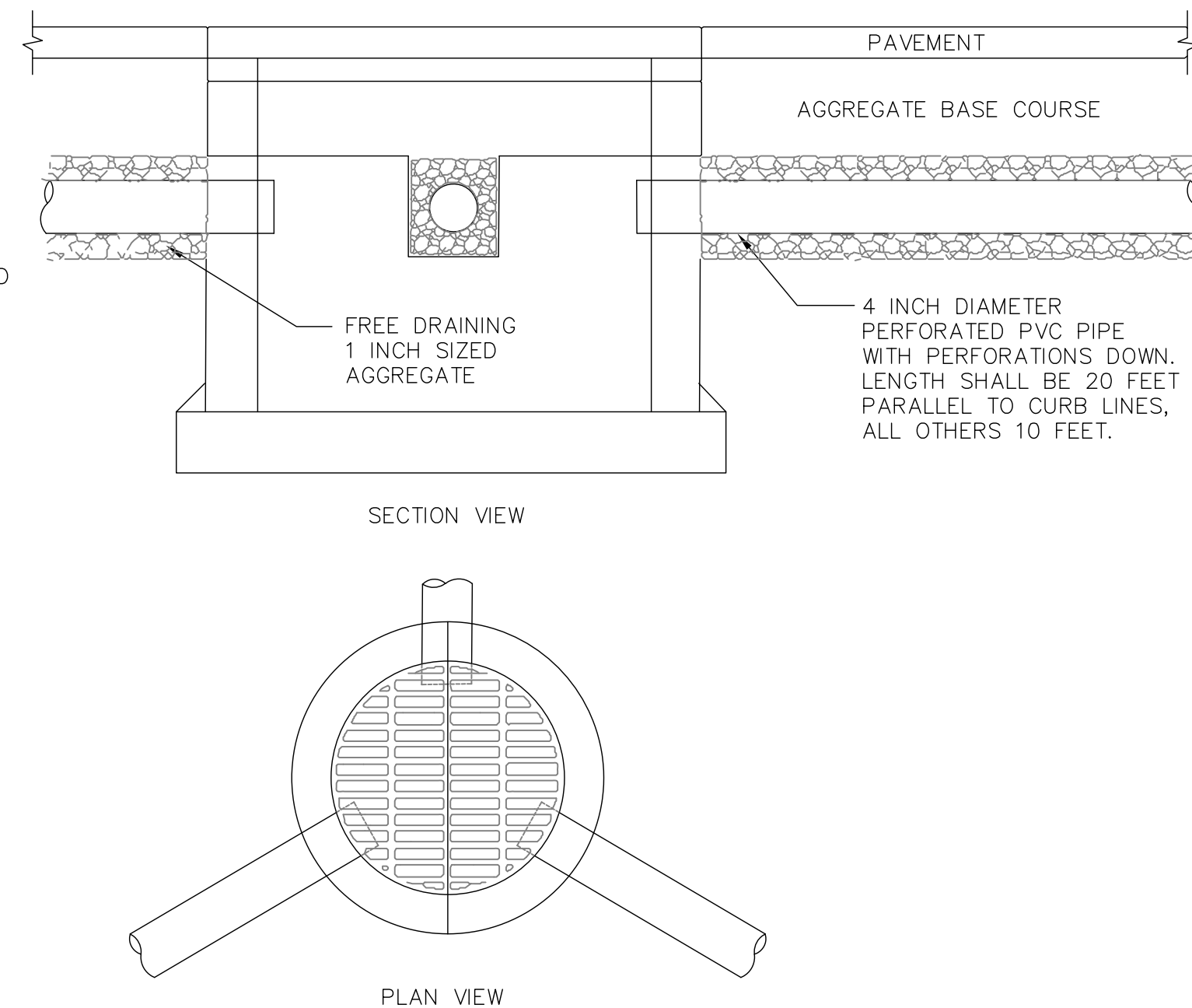
26 OPTIONAL FLAT TOP MANHOLE WITH
N.T.S. ROUND FRAME & COVER



STORM MANHOLE NOTES:

- 1.) PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTRED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP.
- 2.) CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.
- 3.) JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.
- 4.) 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE AND BACKFILLED STRUCTURE WITH GRANULAR BACKFILL MATERIAL.
- 5.) SEE STANDARD SPECIFICATIONS, FILE NO. 12 FOR PRECAST MANHOLE AND FILE NO. 13 FOR MANHOLE INVERTS, INCLUDING INVERTS OF LATERAL SEWERS THAT CONNECT DIRECTLY TO MANHOLES.

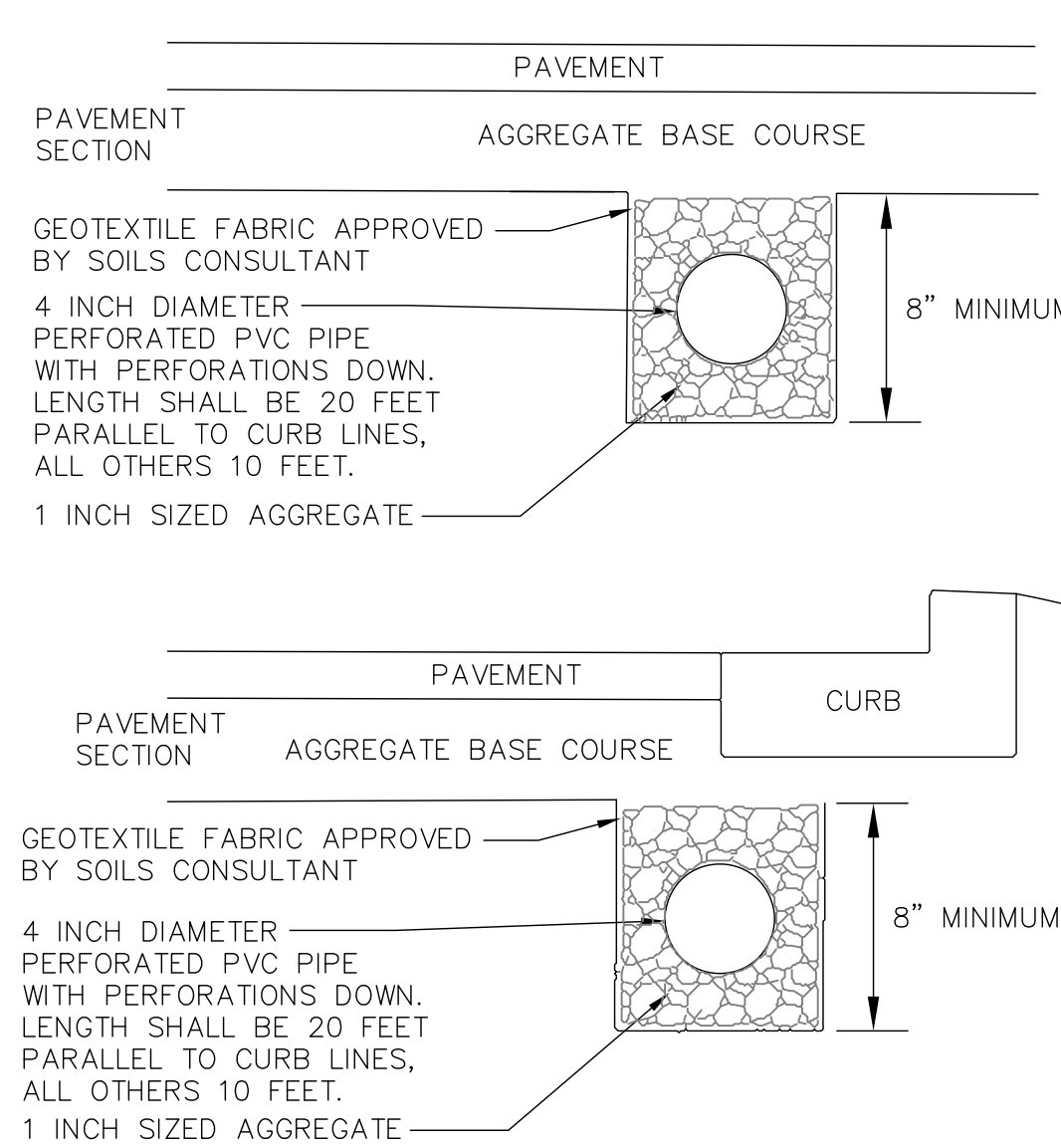
27 OPTIONAL POURED MANHOLE BASE
N.T.S. FOR MANHOLES



NOTE: A MINIMUM OF TWO STUB DRAINS SHOULD BE PLACED AT EACH CATCH BASIN. THE STUB DRAINS SHOULD BE PLACED PARALLEL TO THE DIRECTION OF VEHICLE TRAVEL TO MINIMIZE THE POTENTIAL FOR "FROST BUMPS" WHICH MAY OCCUR BECAUSE OF DIFFERING DEPTHS OF FILL MATERIAL. IN ADDITION, PLEASE NOTE THAT THIS DETAIL IS INTENDED AS A TYPICAL DETAIL ONLY AND CERTAIN CONSTRUCTION CONSIDERATIONS MAY LIMIT ITS DUPLICATION IN THE FIELD. HOWEVER, AN APPROXIMATION OF THESE CONDITIONS SHOULD MINIMIZE EXCESSIVE BUILD-UP OF WATER IN THE AGGREGATE BASE COURSE IN THE AREA OF THE CATCH BASIN.

REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION ON PAVEMENT SUBDRAINAGE.

28 PAVEMENT DRAINTILE SUBDRAINAGE SYSTEM
N.T.S.



PAVEMENT

PAVEMENT SECTION

AGGREGATE BASE COURSE

INLET

4 INCH DIAMETER PERFORATED PVC PIPE WITH PERFORATIONS DOWN.
MINIMUM LENGTH SHALL BE 20 FEET PARALLEL TO CURB LINES, ALL OTHERS 10 FEET.

28 PAVEMENT DRAINTILE SUBDRAINAGE SYSTEM
N.T.S.

MTSD - STEFFEN
MIDDLE SCHOOL

6633 Steffen Dr,
Mequon, WI 53092

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMISSION

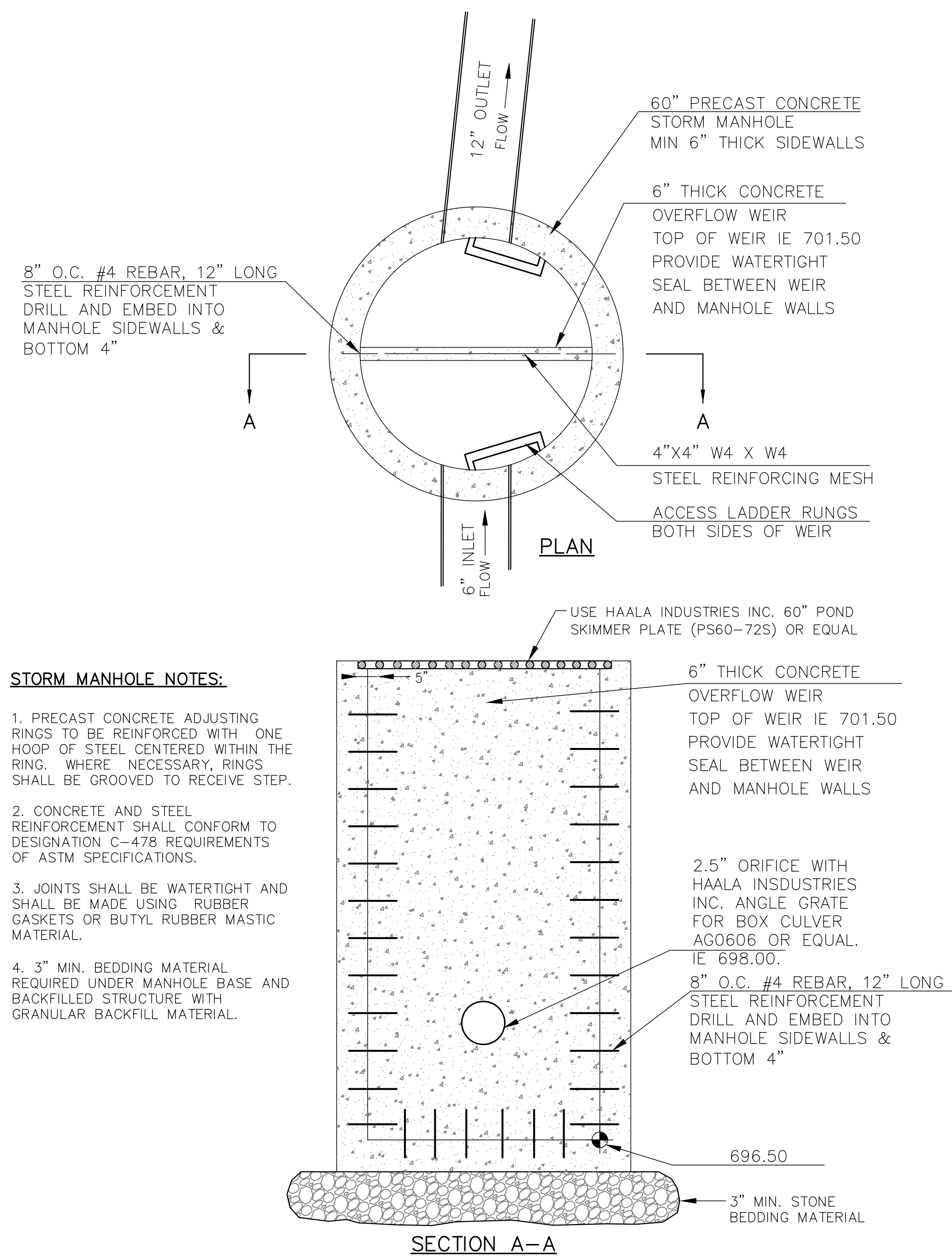
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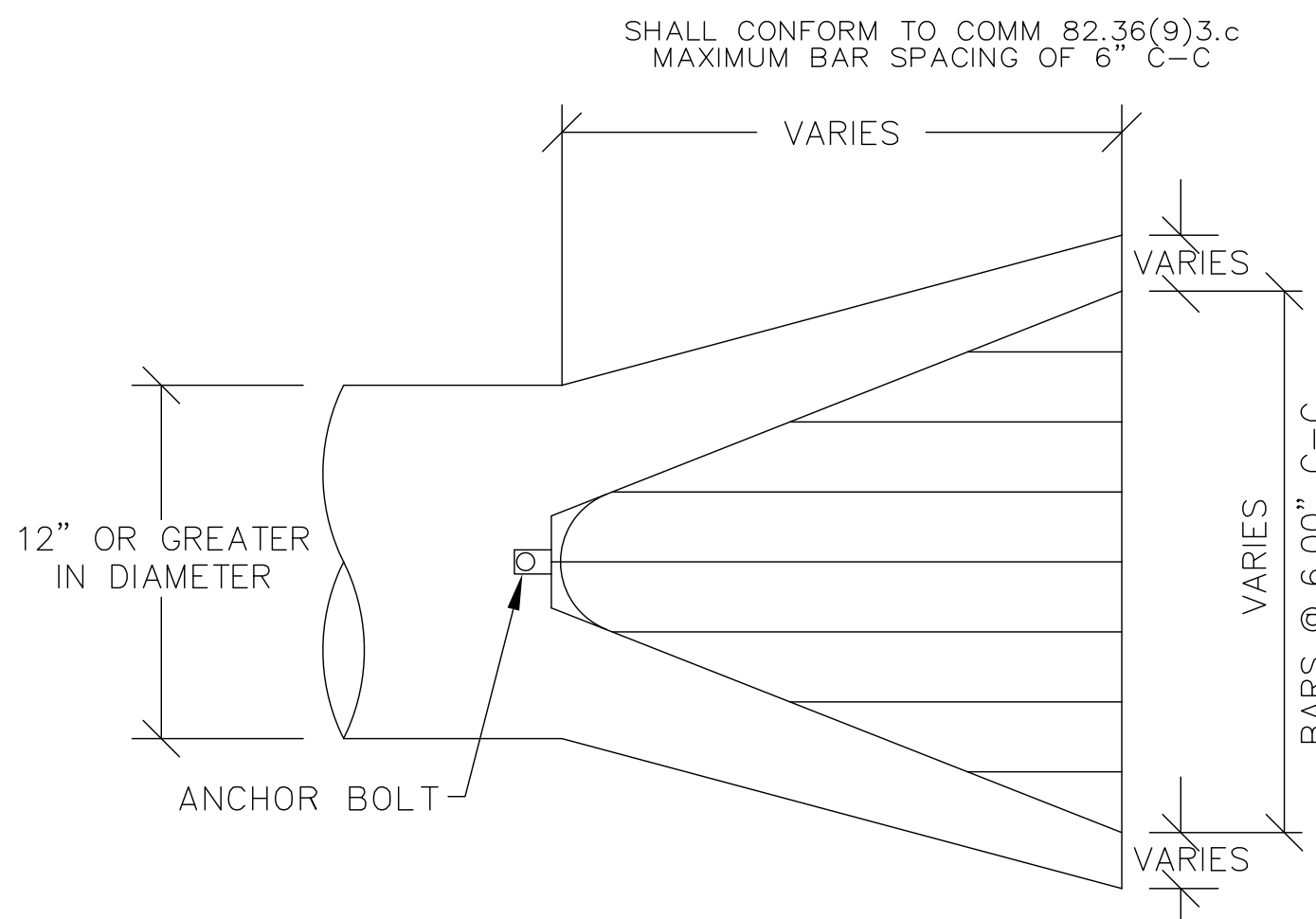
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Packet Pg. 256



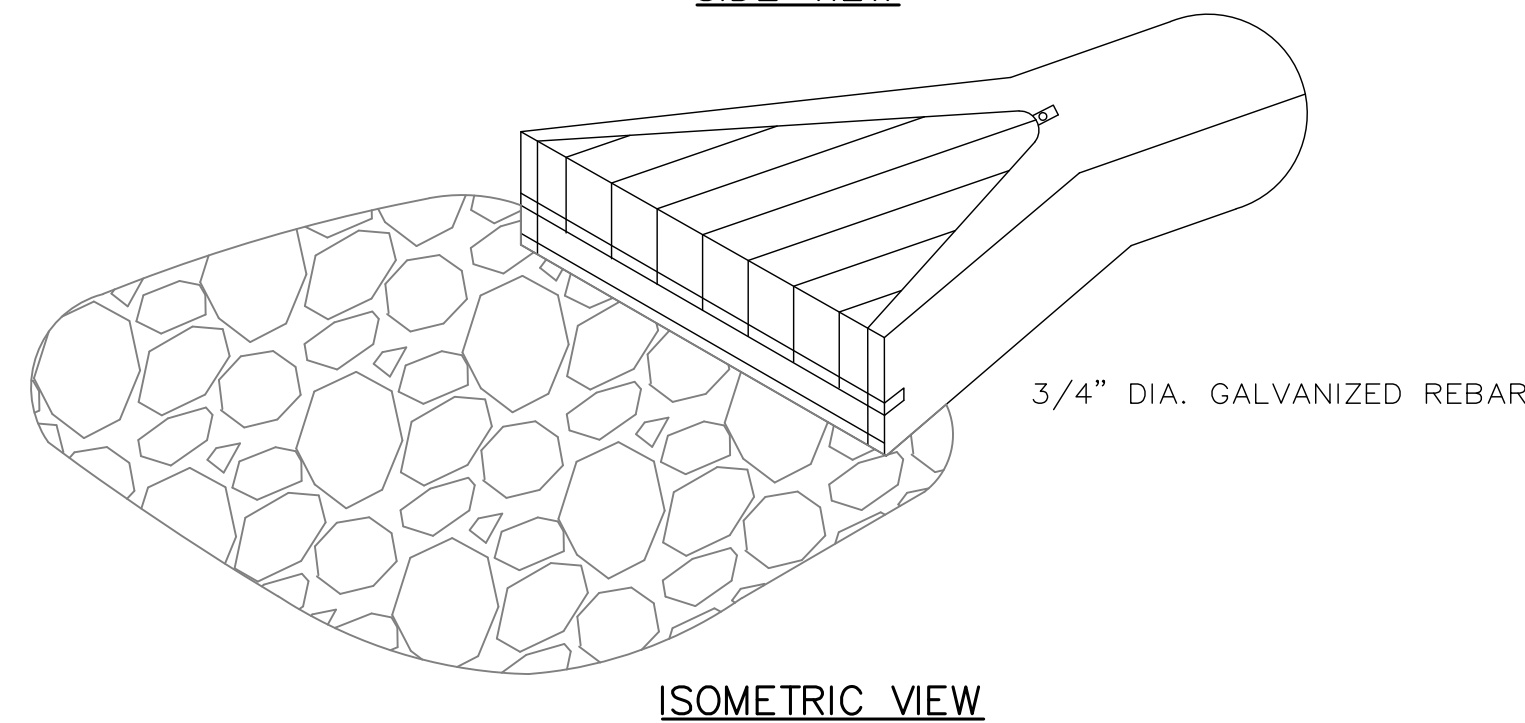
1. PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEEL REINFORCEMENT.
2. CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.
3. JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.
4. 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE AND BACKFILLED STRUCTURE WITH GRANULAR BACKFILL MATERIAL.

30 60-INCH STORM OUTFALL STRUCTURE
N.T.S. NORTH STRUCTURE



TOP VIEW

SIDE VIEW



33 TRASH GUARD AT RCP APRON ENDWALLS
N.T.S.

N.T.S

NOTE 1: THE BIO-RETENTION BASIN WILL FUNCTION AS A TEMPORARY SEDIMENT BASIN DURING LAND DISTURBING CONSTRUCTION ACTIVITIES. THE SEDIMENT BASIN SHALL BE CONSTRUCTED WITHIN THE FOOTPRINT OF THE FUTURE BIO-RETENTION BASIN AND EXCAVATED TO A DEPTH OF 3 FEET BELOW THE TOP ELEVATION OF THE ENGINEERED SOIL TO ALLOW FOR 3 FEET OF PONDING. ALL HEAVY EQUIPMENT AND CONSTRUCTION TRAFFIC IS PROHIBITED WITHIN THE FOOTPRINT OF THE BIO-RETENTION BASIN/SEDIMENT BASIN. THE SEDIMENT BASIN SHALL BE CONSTRUCTED IN ACCORDANCE TO WISCONSIN DNR TECHNICAL STANDARD 1064 UNLESS SHOWN OTHERWISE IN PLANS OR SPECIFICATIONS. IF SEDIMENT BASIN NEEDS TO BE DEWATERED IT SHALL BE DONE IN ACCORDANCE TO WISCONSIN DNR TECHNICAL STANDARD 1061.

NOTE 2: FOLLOWING SITE STABILIZATION, THE SEDIMENT BASIN SHALL BE DEWATERED AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND PROPERLY DISPOSED. FOLLOWING SEDIMENT REMOVAL, THE BASIN WILL NO LONGER ACT AS A TEMPORARY SEDIMENT BASIN AND THEREFORE NO SEDIMENT LADEN WATER FROM CONSTRUCTION ACTIVITIES SHALL BE ALLOWED TO DISCHARGE INTO THE BASIN.

NOTE 3: CONSTRUCTION OF THE BIO-RETENTION BASIN SHALL BEGIN ONLY AFTER THE SITE HAS BEEN FULLY DEVELOPED AND STABILIZED FROM EROSION AND ANY ACCUMULATED SEDIMENT WITHIN THE BASIN HAS BEEN DISPOSED.

NOTE 4: ONCE CONSTRUCTION OF THE BIO-RETENTION BASIN BEGINS, ALL HEAVY EQUIPMENT AND CONSTRUCTION TRAFFIC IS STILL PROHIBITED WITHIN THE FOOTPRINT OF THE BIO-RETENTION BASIN. INSTALL CONSTRUCTION FENCING TO PREVENT TRAFFIC AS NEEDED. PLACEMENT OF THE ENGINEERED SOIL LAYERS SHALL BE COMPLETED WITH A BACKHOE FROM THE SIDE SLOPES OF THE BASIN. EVERY EFFORT SHALL BE MADE TO AVOID THE COMPACTION OF THE ENGINEERED SOIL WITHIN THE BASIN DURING AND AFTER CONSTRUCTION. IF COMPACTION OCCURS, REFER TO DNR TECHNICAL STANDARD 1004 FOR COMPACTION REMEDIATION.

NOTE 5: BASIN CONSTRUCTION SHALL BE SUSPENDED DURING PERIODS OF RAINFALL OR SNOWMELT. CONSTRUCTION SHALL REMAIN SUSPENDED IF PONDED WATER IS PRESENT OR IF RESIDUAL SOIL MOISTURE CONTRIBUTES SIGNIFICANTLY TO THE POTENTIAL FOR SOIL SMEARING, CLUMPING, OR OTHER FORMS OF COMPACTION.

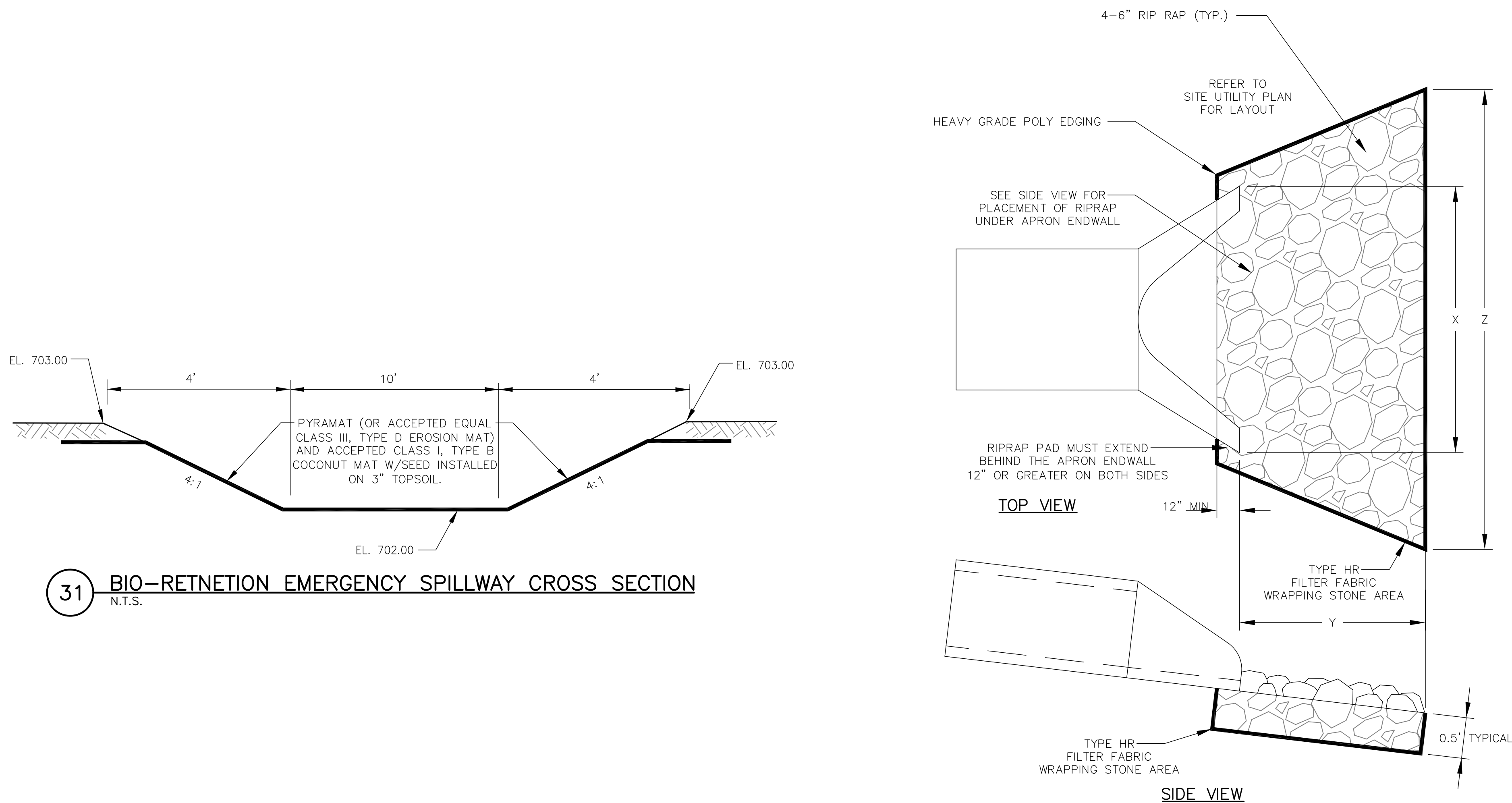
NOTE 6: ENGINEERED SOIL CONSIST OF: 70% PRE-WASHED, COARSE DOLOMITIC SAND AND 30% COMPOST (SHALL MEET DNR SPECIFICATION 100; AVAILABLE AT S & R COMPOST, WAUKESHA, WI OR PURPLE COW ORGANICS, OCONOMOWOC, WI)

NOTE 7: CONSTRUCT PER WISCONSIN DNR TECHNICAL STANDARD 1004 BIORETENTION FOR INFILTRATION UNLESS INDICATED IN SPECIFICATIONS AND DETAILS.

NOTE 8: REFER TO SPECIFICATION 32 92 00 PLANTS FOR ADDITIONAL INFORMATION.

NOTE 9: DIMENSIONS, ELEVATIONS, AND INVERTS VARY. SEE SITE PLAN, SITE GRADING PLAN, AND SITE UTILITY PLAN

29 TYPICAL BIO-RETENTION FACILITY DETAIL
N.T.S.



32 TYPICAL PLACEMENT OF RIPRAP AT APRON ENDWALLS
N.T.S.

N.T.S

DIA (INCH)	X (INCH)	Y (INCH)	Z (INCH)
12	24	120	48
15	30	120	60
18	36	120	60
21	42	120	72
24	48	120	72
27	54	120	81
30	60	120	90
36	72	120	108
42	78	120	120
48	84	120	120
54	90	120	150
60	96	120	162
66	102	120	174
72	108	120	186

NOTES:

- 1.) STANDARD SPECIFICATION SHALL APPLY TO ALL INSTALLATIONS.
- 2.) PIPES 36" AND GREATER SHALL HAVE JOINT TIES.
- 3.) PIPES 36" OR GREATER SHALL HAVE 50% OF THE RIPRAP PAD PLACED WITH A SLURRY GROUT MIX ON AN UNEVEN RIPRAP SURFACE.
- 4.) TWIN APRON INSTALLATIONS SHALL BE GOVERNED BY THE OUTSIDE DIMENSIONS OF A SINGLE PIPE.

33 TRASH GUARD AT RCP APRON ENDWALLS
N.T.S.

N.T.S



milwaukee 333 East Chicago Street
Milwaukee, Wisconsin 53202
414.271.5350

madison 309 West Johnson Street, Suite 202
Madison, Wisconsin 53703
608.442.5350

denver 1899 Wynkoop Street, Suite 300
Denver, Colorado 80202
303.595.4500

PROJECT INFORMATION

MTSD - STEFFEN
MIDDLE SCHOOL

6633 Steffen Dr,
Mequon, WI 53092

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
11/06/2020	DESIGN DEVELOPMENT
11/16/2020	PLAN COMMISSION

KEY PLAN

kapur

7711 N. Port Washington Road
Milwaukee, Wisconsin 53217

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SHEET INFORMATION

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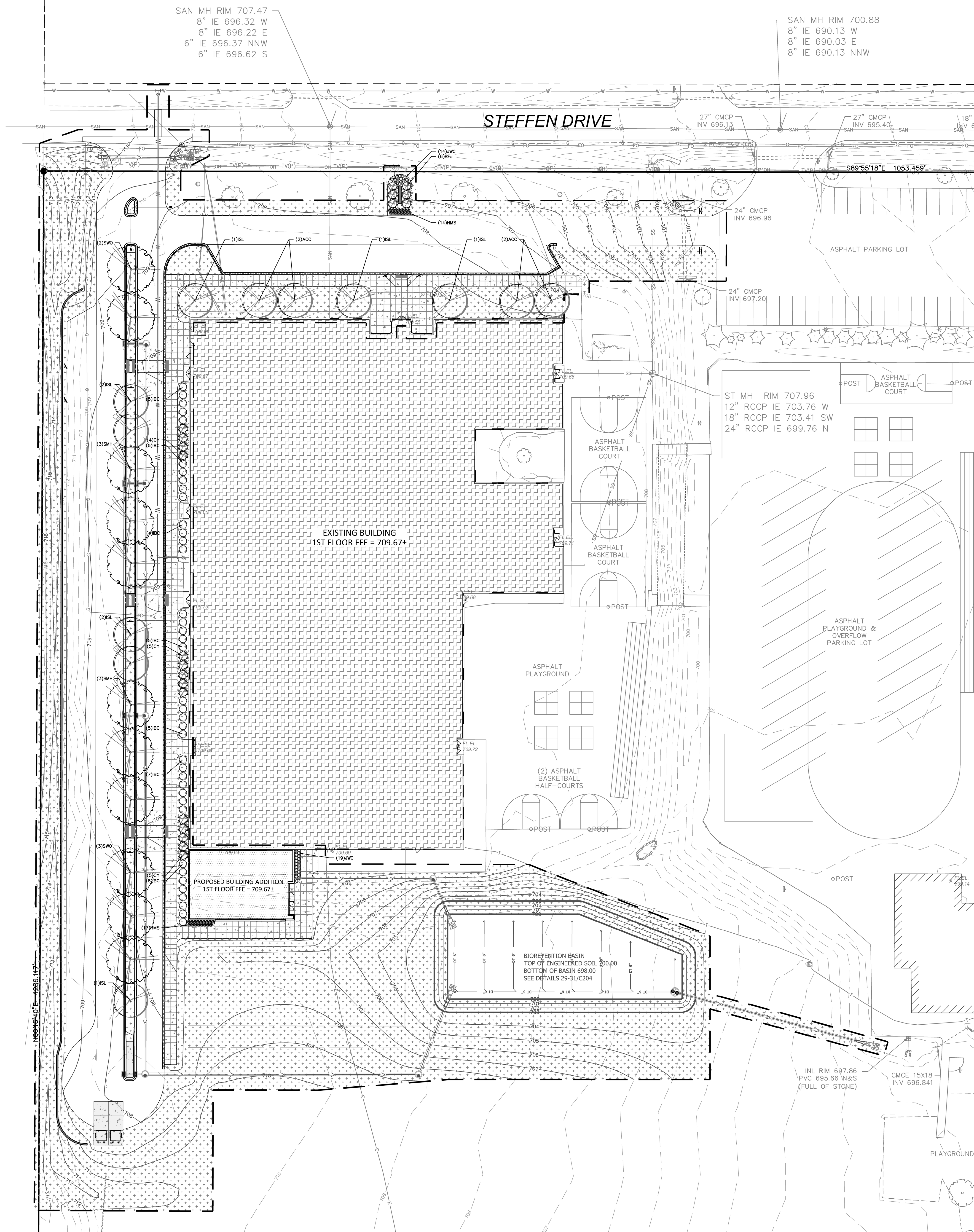
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PROJECT MANAGER RS

PROJECT NUMBER 318480-01

SITE LANDSCAPE
PLAN

L101



E

Plant Schedule						
Symbol	Scientific Name	Common Name	Quantity	Spacing	Install Size	Size
						Maturity in ft. (Height/Spread)
Deciduous Trees:						
ACC	Prunus maackii	Amur Chokecherry	4	Per Plan	3" caliper B&B	20-30'/20-30'
ISL	Syringa reticulata 'Ivory Silk'	Ivory Silk Lilac	8	Per Plan	2.5" caliper B&B	25'/15'
SMH	Gleditsia tricanthos 'Shademaster' PP1,515	Shademaster Honeylocust	7	Per Plan	3" caliper B&B	60'/35'
SWO	Quercus bicolor	Swamp White Oak	5	Per Plan	3" caliper B&B	75'/65'
Evergreen Shrubs:						
BFJ	Juniperus sabina 'Buffalo'	Buffalo Juniper	6	Per Plan	#5 cont.	12"/4-6'
CY	Taxus x media 'Chadwickii'	Chadwick Yew	14	Per Plan	#5 cont.	2-4'/4-6'
Deciduous Shrubs:						
IBC	Aronia melanocarpa 'Morton'	Iroquois Beauty Chokecherry	39	Per Plan	#5 cont.	2-3'/4-5'
Perennials						
HMS	Panicum virgatum 'Heavy Metal'	Heavy Metal Switchgrass	31	Per Plan	1 gal.	36-54"/24-36"
JWC	Nepeta	Junior Walker Catmint	33	Per Plan	1 gal.	15-18"/18-24"
NOTE: Installation contractor is responsible for verifying plant count from plan. Plan quantities take precedence over list.						

D

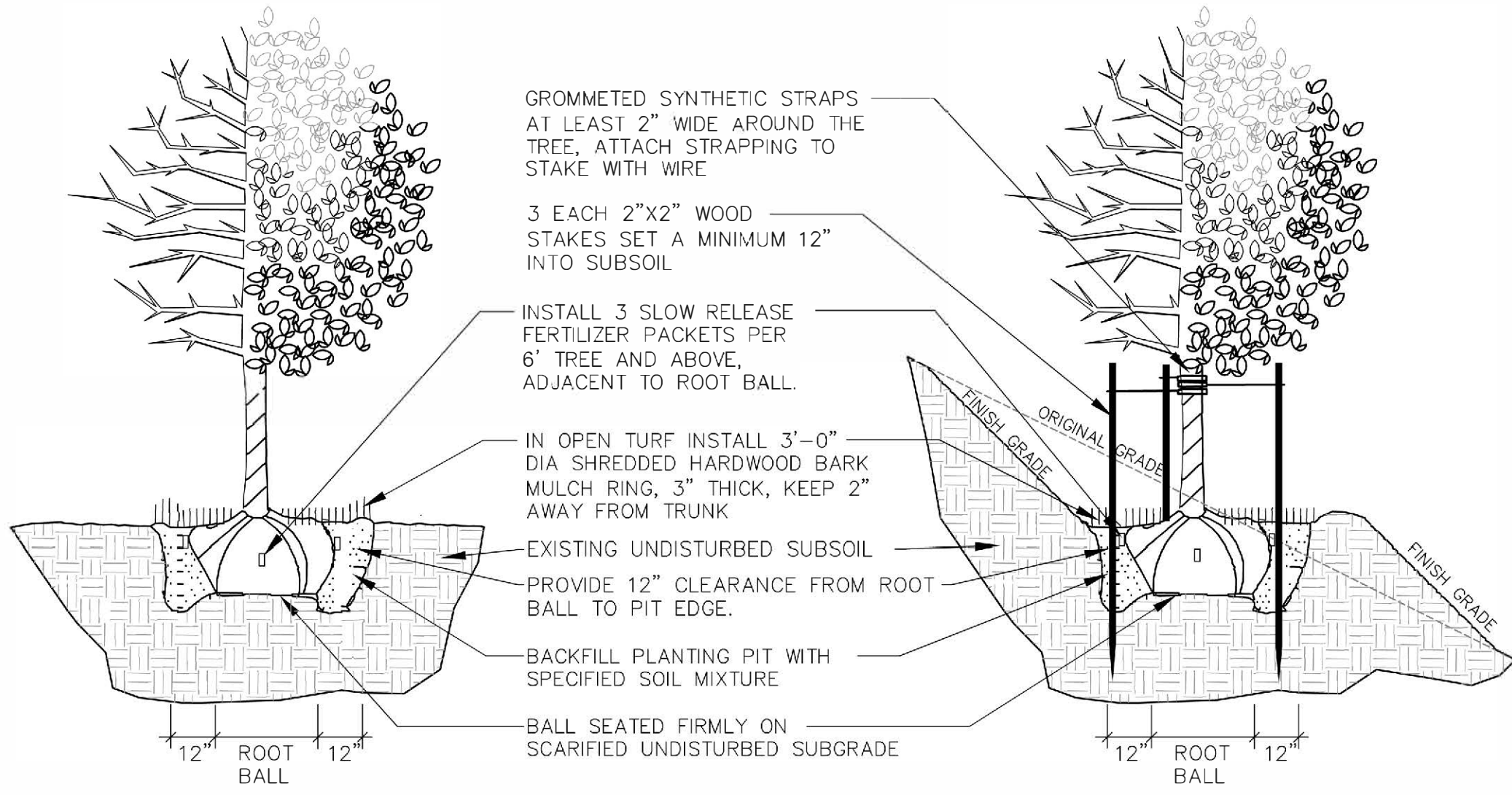
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- ALL PLANT MATERIAL SHALL BE OBTAINED FROM A NURSERY LOCATED IN ZONE 5, CONFORM TO APPLICABLE REQUIREMENTS OF THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AND BOTANICAL NAMES SHALL BE ACCORDING TO THE CURRENT EDITION OF "STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURE NOMENCLATURE.
- CONTRACTOR TO PROVIDE TO THE LANDSCAPE ARCHITECT SAMPLES OF ALL BARK AND MINERAL/STONE MULCHES, DECORATIVE GRAVELS, MAINTENANCE STRIP STONE, OR OTHER GROUND COVER MATERIALS FOR APPROVAL PRIOR TO INSTALLATION.
- BARK MULCH TO BE FRESHLY ACQUIRED HARDWOOD SHREDDED BARK MULCH. NOT DOUBLE MILLED, EXCESSIVE DIRT AND DUST LIKE MATERIAL OR OLD MATERIAL IS NOT ACCEPTABLE.
- LANDSCAPE EDGING TO BE ALUMINUM EDGING. REFER TO SPECIFICATION 32 93 00 PLANTS FOR ADDITIONAL INFORMATION.
- ALL PLANTING AREAS TO RECEIVE A 3-INCH THICK LAYER OF HARDWOOD SHREDDED BARK MULCH OVER TYPAR WEED FABRIC WITH EDGING. EDGING TO BE INSTALLED BETWEEN DIFFERENT TYPES OF MULCHES, BETWEEN MULCHES AND TURF, AND/OR WHERE SPECIFICALLY NOTED ON THE PLAN. REFER TO SPECIFICATION 32 93 00 PLANTS FOR ADDITIONAL INFORMATION.
- INSTALL SHOVEL CUT EDGE AROUND ALL INDIVIDUAL TREES AND SHRUBS IN LAWN AREAS AND ALONG PAVEMENT WHERE PLANTING AREAS ABUT TO PREVENT HARDWOOD SHREDDED BARK MULCH FROM SPILLING OUT OF PLANTING AREA.
- CONTRACTOR RESPONSIBLE FOR MAINTENANCE OF PLANT MATERIAL FOR 90 DAYS FROM INSTALLATION, INCLUDING WATERING, WEEDING, ETC. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF SEEDED AREAS FOR 60 DAYS FROM INSTALLATION, INCLUDING WATERING, WEEDING, ETC. CONTRACTOR TO PROVIDE AND REVIEW MAINTENANCE INSTRUCTIONS WITH THE OWNER PRIOR TO THE COMPLETION OF THESE MAINTENANCE PERIODS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- CLEANLY PRUNE AND REMOVE DAMAGED BRANCHES, DEAD WOOD, AND ROOTS IMMEDIATELY PRIOR TO PLANTING. DO NOT CUT LEADERS OR LEAVE "V" CROTCHES OR DOUBLE LEADERS UNLESS A MULTI-STEM TREE IS SPECIFIED.
- REMOVE BURLAP, WIRE BASKET, ROPE, TWINE, AND ALL SYNTHETIC MATERIAL FROM THE ROOTS, TRUNK, OR CROWN OF PLANT.
- REMOVE EXCESS SOIL ABOVE ROOT COLLAR.
- PLANT TREES AND SHRUBS SO THAT THE ROOT COLLAR IS 2" ABOVE FINISHED GRADE OR SEVERAL INCHES ABOVE GRADE IF PLANT IS INSTALLED IN POOR SOILS.
- PLANT TREES AND SHRUBS WITH SAME ORIENTATION AS WHEN HARVESTED FROM THE NURSERY OR TO SHOWCASE THE MOST AESTHETIC VIEW.
- PLANT ALL TREES WITH THREE SLOW RELEASE FERTILIZER PACKETS, SPACED EQUIDISTANT AROUND THE EDGE OF THE ROOT BALL.
- PLANT ALL SHRUBS WITH ONE SLOW RELEASE FERTILIZER PACKET, PLACE BELOW THE ROOTING SYSTEM.
- WATER AND TAMP BACKFILL AND ROOTS OF ALL NEWLY SET PLANT MATERIAL SO THE SOIL AND ROOTS ARE THOROUGHLY SOAKED AND AIR POCKETS ARE REMOVED.
- FOR INDIVIDUAL TREES & SHRUBS PLANTED IN TURF AREAS, PROVIDE CONTINUOUS 3" SOIL SAUCER TO CONTAIN WATER & MULCH (TREES ON SLOPES SHALL BE SAUCERED ON THE DOWNHILL SIDE)
- INSTALL 3" THICK SHREDDED HARDWOOD BARK MULCH RING 3'-0" DIA. FOR DECIDUOUS TREES AND ALL INDIVIDUAL SHRUBS IN LAWN AREAS. 5'-0" DIA. FOR EVERGREEN TREES. KEEP MULCH 2" AWAY FROM TRUNKS.
- STAKING -- ONLY STAKE EVERGREEN TREES 5'-0" OR GREATER IN HEIGHT OR TREES THAT ARE UNABLE TO REMAIN UPRIGHT AFTER PLANTING. TREES WILL BECOME STRONGER FASTER WHEN THE TOP 2/3 OF THE TREE IS FREE TO SWAY. DO NOT ATTACH WIRE DIRECTLY TO TREES OR THROUGH HOSES -- UTILIZE GROMMETED, SYNTHETIC STRAPS AT LEAST 2" WIDE AROUND THE TREE, ATTACH STRAPPING TO STAKE WITH WIRE. STAKE ONLY WHEN NECESSARY. STAKES SHOULD BE DRIVEN DEEPLY INTO THE GROUND TO PREVENT DISLODGING. CHECK AT LEAST EVERY THREE MONTHS FOR BINDING OR OTHER PROBLEMS. STAKES AND TIES SHOULD BE REMOVED SIX MONTHS TO ONE YEAR AFTER PLANTING.
- STONE CHIP MAINTENANCE STRIP TO BE 3-INCHES DEEP OVER WEED FABRIC WITH ALUMINUM EDGING. CONTRACTOR TO INSTALL MAINTENANCE STRIP 2- FEET WIDE ALONG BUILDING EDGE, WHERE INDICATED ON L101 SITE LANDSCAPE PLAN.
- STONE CHIP TO BE 3/8-INCH RAVENS BLACK DECORATIVE STONE CHIP FROM HALQUIST STONE. CONTRACTOR TO CONTACT HALQUIST STONE N51 W23563 LISBON ROAD SUSSEX, WI 53089 TELEPHONE (262)246-9000 EMAIL: INFO@HALQUISTSTONE.COM.
- NO MOW TO BE NO MOW FESCUE SEED MIX WITH ANNUAL RYE NURSE CROP FROM PRAIRIE NURSERY, INC. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. PRAIRIE NURSERY ADDRESS: PO BOX 306 WESTFIELD, WI 53964. TELEPHONE: 1-800-476-9453 FAX: 608-296-2741.
- NATIVE SEED MIX TO BE SHORT GRASS PRAIRIE FOR MESIC SOILS SEED MIX WITH ANNUAL RYE NURSE CROP FROM AGRECOL, LLC. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. AGRECOL, LLC ADDRESS: 10101 NORTH CASEY ROAD EVANSVILLE, WI 53536. TELEPHONE: 608-223-3571 FAX: 608-884-4640 EMAIL: ECOSOLUTIONS@AGRECOL.COM.
- REFER TO SPECIFICATIONS 32 93 00 PLANTS AND 32 92 00 TURF AND GRASSES FOR ADDITIONAL INFORMATION.

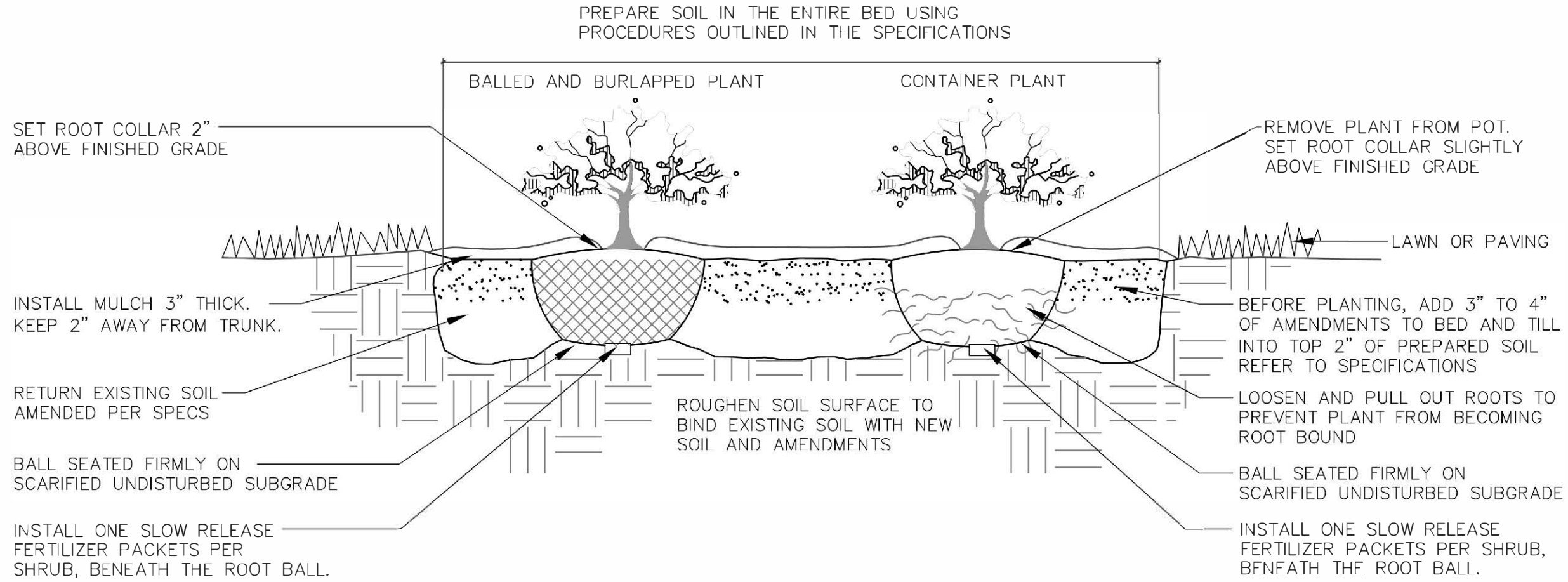
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2 LANDSCAPE NOTES
REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

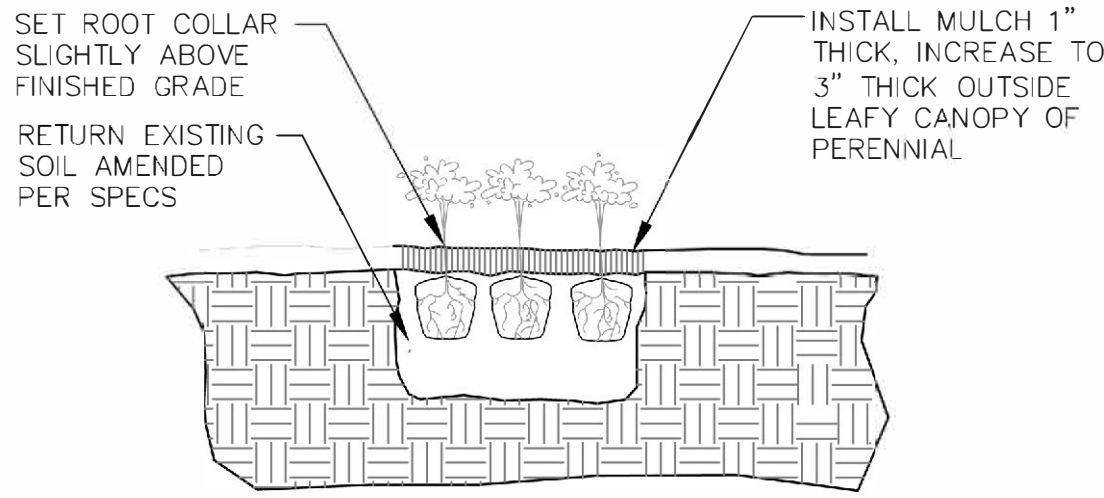
3 DECIDUOUS TREE PLANTING, STAKING, & PLANTING ON A SLOPE
N.T.S.



5 DECIDUOUS & EVERGREEN SHRUB PLANTING
N.T.S.



6 PERENNIAL PLANTING
N.T.S.



E

milwaukee	333 East Chicago Street Milwaukee, Wisconsin 53202 414.271.5350
madison	309 West Johnson Street, Suite 202 Madison, Wisconsin 53703 608.442.5350
denver	1899 Wynkoop Street, Suite 300 Denver, Colorado 80202 303.595.4500

PROJECT INFORMATION
MTSD - STEFFEN
MIDDLE SCHOOL

D 6633 Steffen Dr,
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C

KEY PLAN

kapur

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Milwaukee, Wisconsin 53217

kapurinc.com

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PROJECT MANAGER	RS
PROJECT NUMBER	318480-01

SITE LANDSCAPE
DETAILS

L201

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Steffen Middle School Traffic Impact Analysis

City of Mequon
Ozaukee County, Wisconsin

December 1, 2020



TRAFFIC IMPACT ANALYSIS FOR:

STEFFEN MIDDLE SCHOOL

CITY OF MEQUON, OZAUCKEE COUNTY, WISCONSIN

DATE SUBMITTED: December 1, 2020

PREPARED FOR:

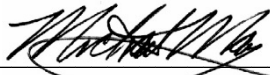
Mequon-Thiensville School District
 5000 West Mequon Road
 Mequon, WI 53092
 Phone: (262) 238-8509
 Contact Person: Sarah Viera, Executive Director of Business Services

PREPARED BY:

TADI
 P.O. Box 128
 Cedarburg, WI 53012
 Phone: (800) 605-3091
 Contact Persons: Michael May, P.E., PTOE
 John Bieberitz, P.E., PTOE



"I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering."


 Michael May, P.E., PTOE
 Wisconsin Registration #37622-006
 TADI

**Steffen Middle School
Traffic Impact Analysis
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LIST OF EXHIBITS

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- Exhibit 1-2Steffen Middle School Conceptual Recommendations
-
- Exhibit 2-1Study Area Aerial
- Exhibit 2-2Existing Transportation Detail
-
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- Exhibit 3-2COVID-Based Traffic Volumes
- Exhibit 3-3Existing & Additional Trip Generation Tables
- Exhibit 3-4COVID-Based Trip Generation Table
- Exhibit 3-5Additional New Trips
- Exhibit 3-6Growth Traffic Volumes
- Exhibit 3-7Existing Site Observation Photos
- Exhibit 3-8COVID-Based Site Observation Photos
- Exhibit 3-9Existing & Growth Traffic Operations
- Exhibit 3-10COVID-Based Traffic Operations
- Exhibit 3-11Existing & Growth Traffic Operations, With Recommendation

LIST OF APPENDICES

Appendix A.....Traffic Counts

Existing Traffic Counts (December 2019)

Existing Traffic Counts (September 2020)

Appendix BPeak Hour Analysis Outputs

Existing Traffic

Growth Traffic

COVID-Based Traffic

Appendix CPeak Hour Analysis Outputs – *With Recommendations*

Existing Traffic – With Recommendations

Growth Traffic – With Recommendations

CHAPTER I – INTRODUCTION & EXECUTIVE SUMMARY

PART A – PURPOSE OF REPORT AND STUDY OBJECTIVES

The Mequon-Thiensville School District retained TADI to analyze existing and future growth traffic operations at Steffen Middle School located west of Buntrock Avenue and south of Steffen Drive in the City of Mequon. The school is located west of Wilson Elementary School.

This traffic impact analysis (TIA) documents the procedures, findings, and conclusions of the analysis. The analysis identifies recommended modifications based on existing roadway and site conditions, existing and future growth traffic volumes, and observations of traffic operations during the morning school arrival and afternoon school dismissal peak hours.

PART B – EXECUTIVE SUMMARY

The executive summary includes a description of the study area, description of the development and conclusions based on the findings of the TIA.

B1. Study Area

A study area aerial for Steffen Middle School is shown in [Exhibit 1-1](#).

The study area includes the following existing intersections. The intersection control for each intersection is shown in parentheses.

- Steffen Drive & Steffen West Driveway (one-way stop)
- Steffen Drive & Elder Tree Court/Steffen East-Wilson West Driveway (two-way stop)
- Steffen Drive & Balsam Tree Court/Wilson Center Driveway (two-way stop)
- Steffen Drive & Wilson East Driveway (one-way stop)
- Buntrock Avenue & Steffen Drive (one-way stop)

B2. Student Growth

Steffen Middle School had a 2019-2020 enrollment of 452 students and has a projected future enrollment of 548 students. This represents a potential future increase in enrollment of 96 students.

B3. Site Generated Traffic

During the 2019-2020 school year, Steffen Middle School was in session from 7:55am to 3:20pm with an early arrival time of 7:45am. TADI performed peak hour traffic counts for Steffen Middle School from 7:05 to 8:05am and from 2:50 to 3:50pm. These counts were taken in December of 2019 before COVID Safer-At-Home orders (“normal” conditions). Counts were taken again in late September of 2020 under COVID procedures.

B3.1 Trip Generation – Normal Conditions

The December of 2019 counts show that Steffen Middle School generates approximately 305 trips (170 in/135 out) during the morning arrival peak hour and 220 trips (95 in/125 out) during the afternoon dismissal peak hour.

The addition of 96 students is expected to result in an additional 65 trips (35 in/30 out) during the morning arrival peak hour and an additional 45 trips (20 in/25 out) during the afternoon dismissal peak hour.

That is, under full projected future enrollment, Steffen Middle School is expected to generate 370 total trips (205 in/165 out) during the morning arrival peak hour and 265 total trips (115 in/150 out) during the afternoon dismissal peak hour.

B3.2 Trip Generation – COVID Conditions

The September 2020 counts show that Steffen Middle School generates approximately 285 trips (160 in/125 out) during the morning arrival peak hour and 385 trips (190 in/195 out) during the afternoon dismissal peak hour. That is, during COVID conditions, Steffen Middle School generates approximately 20 fewer trips (10 fewer in/10 fewer out) during the morning arrival peak hour and 165 additional trips (95 additional in/70 additional out) during the afternoon dismissal peak hour. This represents an 7% reduction in morning arrival peak hour traffic trips and a 75% increase in afternoon dismissal peak hour trips when compared to “normal” conditions.

B4. Summary of Operations Without Recommended Modifications

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). 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 purpose of this study, and as is standard for use in the WisDOT Southeast Region, LOS D or better was used to define desirable peak hour operating conditions. Due to the surge of traffic that occurs to/from schools, LOS E and low-delay LOS F conditions are acceptable for movements exiting the school during those surge periods. The delay associated with the various levels of service are as follows.

LOS	Description	Average Delay
A	Intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	<10 sec/veh
B	Stable operation.	10 – 15 sec/veh
C	Stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so.	15 – 25 sec/veh
D	Increasing traffic restrictions as movements approach instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs.	25 – 35 sec/veh
E	Capacity of the intersection.	35 – 50 sec/veh
F	Jammed conditions where a movement is over capacity and acceptable gaps in the mainline traffic flow are minimal.	≥ 50 sec/veh

B4.1 Existing Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the 2019-2020 school year site layout, and under existing traffic volumes during normal conditions, intersections are expected to operate acceptably at LOS C or better conditions if vehicles could be sufficiently queued and serviced within the school site.

The following is a summary of site observations taken during normal conditions.

- The peak surges in traffic occurred 7:40 to 7:50am and 3:20 to 3:30pm.
- Eastbound traffic (from the west) wishing to turn right onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to eight vehicles observed in the morning arrival surge and seven vehicles observed in the afternoon dismissal surge.

- Westbound traffic wishing to turn left onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to six vehicles observed in the morning arrival surge and two vehicles in the afternoon dismissal surge.
- A student was observed crossed Steffen Drive east of the Steffen West Driveway coming from the north along the overhead power lines during the morning arrival surge. This student then walked along the unpaved shoulder on the south side of Steffen Drive. Additional students crossed west of the same driveway due to motorists who dropped students off from the north side of Steffen Drive.
- A group of nine students was observed during the afternoon dismissal surge to walk along south side of Steffen Drive (narrow unpaved shoulder) from the school to Buntrock Avenue, then north along the west side of Buntrock Avenue (narrow paved shoulder). The group was observed approximately 15 minutes later walking back towards the school using the west side of Buntrock Avenue and south side of Steffen Drive.
- A traffic queue of approximately ten vehicles developed eastbound on Steffen Drive at Buntrock Avenue when buses exited during the afternoon dismissal peak hour and quickly dispersed.
- Approximately five to six motorists were observed waiting in the Wilson staff parking lot for their students during the afternoon dismissal surge, with approximately half of these motorists parked in the drive aisles of the lot rather than in parking spaces.

B4.2 Growth Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the existing site layout, and under growth traffic volumes (with projected enrollment), traffic operations at the intersections are expected to continue to operate acceptably at LOS C or better conditions if vehicles can be sufficiently queued and serviced within the school site.

B4.3 Existing Traffic Operations – COVID Conditions, Existing Site Layout

Under the existing site layout, and under COVID procedures, all movements are expected to operate at LOS B or better.

The following is a summary of site observations taken during COVID procedures.

- The peak surges in traffic occurred 7:35 to 7:50am and 2:50 to 3:10pm.
- Eight pick-up/drop-off positions were utilized along the curb on the north side of the building. Parents did not efficiently pull ahead to utilize all the positions, with only four or five of the eight positions used. TADI noted staff outside the door of the school along the pick-up/drop-off lane but did not see staff directing parents to pull ahead.
- Eastbound traffic (from the west) wishing to turn right onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to three vehicles observed in the morning arrival surge and nineteen vehicles observed in the afternoon dismissal surge.
- Westbound traffic wishing to turn left onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to three vehicles observed in the morning arrival surge and three vehicles in the afternoon dismissal surge.
- A traffic queue of approximately eight vehicles developed eastbound on Steffen Drive at Buntrock Avenue when buses exited during the afternoon dismissal peak hour and quickly dispersed.

- Very few middle school parents parked in the parking lot northeast of the school for pick-up/drop-off. It is understood that this was by design specifically for COVID procedures.

B5. Recommended Modifications

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back onto the public roadway network.

Recommended modifications are for jurisdictional consideration and are not legally binding. The City of Mequon and the Mequon-Thiensville School District reserve the right to determine alternative solutions.

B5.1 Recommendations for Steffen Middle School

A conceptual drawing for Steffen Middle School is shown in [Exhibit 1-2](#).

- Move the pick-up/drop-off zone to along the west side of the school. The queuing space shown conceptually in [Exhibit 1-2](#) is expected to be sufficient to remove the spillback of traffic that otherwise currently occurs onto Steffen Drive.
- Utilize the longer pick-up/drop-off zone along the west side of the school fully to service more students exiting/entering vehicles in a timelier and more efficient fashion (i.e. more motorists being serviced simultaneously). The pick-up/drop-off lane is recommended to be at least 18-feet wide to minimize pedestrian crossing distances and improve safety. The 18-foot wide lane are expected to be sufficiently wide for a 7- to 8-foot wide pick-up/drop-off parking lane and a 10- to 11-foot wide through lane. Additionally, staff is encouraged to direct parents to pull ahead to make use of all pick-up/drop-off positions.
- Include raised crosswalk(s) across the pick-up/drop-off lane to bring greater attention to the area where pedestrians cross and to the area where cars should and should not be loading.
- Maintain one-way eastbound traffic flow in the drive aisle on the north side of the school.
- Provide two exit lanes on the Steffen West Driveway (one left-turn lane, one right-turn lane).
- Install auto gates on the Steffen West Driveway immediately south of Steffen Drive. One auto gate is recommended to close off inbound traffic from the parking lot on the north side of the school. This gate can be used during morning arrival and afternoon departure to control internal site conflicts. Another gate is recommended to close off outbound traffic from the parking lot in case of poor operations, at which time traffic can be diverted through the north parking lot to the Steffen East/Wilson West Driveway.

B5.2 Other Considerations

Other considerations that may be given consideration are summarized below.

- Consider providing pedestrian accommodations to and across Steffen Drive and Buntrock Avenue to accommodate students observed walking to/from school.
- Consider providing bicycle racks at the school to accommodate students and staff who may wish to bike to/from school.
- The northbound left-turn movement from the Steffen West Driveway to Steffen Drive may be expected to operate at LOS F with a traffic queue of 145-feet within the parking lot during the weekday morning peak hour under growth traffic volumes. The average vehicle delay expected for this movement is 92-seconds per vehicle, or 57-seconds per

vehicle beyond the LOS D/E threshold. This level of delay and queuing may occur during the peak 15-minute surge of the morning arrival peak hour. Operations are expected to improve outside of this period. It is recommended to observe operations. Should the level of delay and queuing become problematic, consideration may be given in the future to prohibiting the left-out movement during the morning arrival peak hour, or closing the exit and forcing vehicles to instead exit at the Steffen East/Wilson West Driveway.

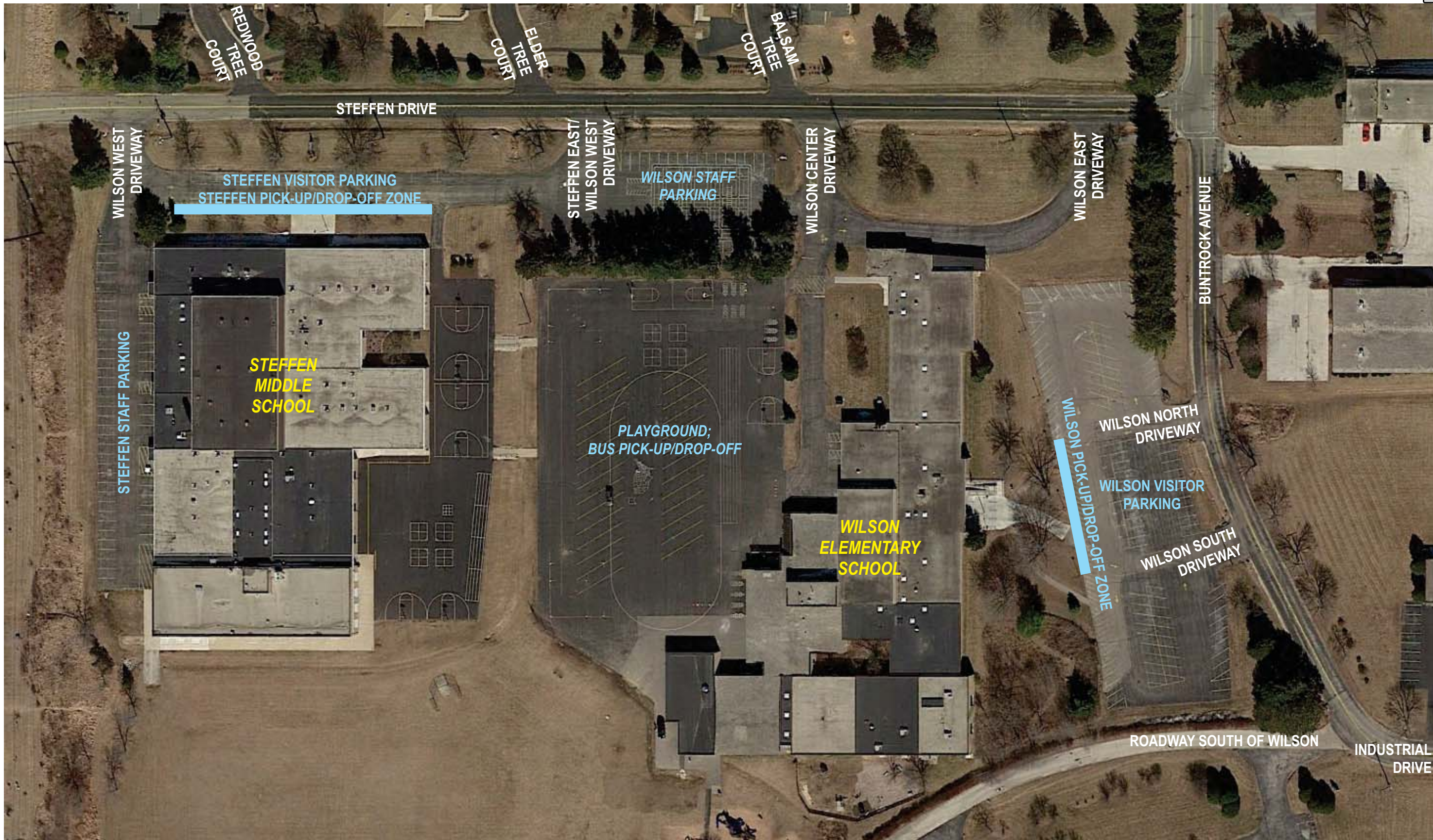
To further improve traffic operations, the District may also consider implementing strategies that help spread traffic arrival/discharge over a longer period of time or that help reduce vehicle demands. Examples of demand-management strategies for Steffen Middle School are included below.

- Consider if there may be strategies to make bus transportation more desirable and/or convenient for parents and students. If practical, implement those strategies to reduce vehicle demands at the school.
- Consider administering a “SchoolPool” ride-matching program. Such a program provides parents with information on neighborhood students who are interested in carpooling to/from school and facilitate the matching of students to encourage that carpooling (for parent drop-off/pick-up and student parking). Such a program may reduce vehicle demands at the school.

B6. Conclusion

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back to the public roadway network.

The recommendations outlined in this study are expected to result in safer and more efficient operations for Steffen Middle School if properly designed and implemented.

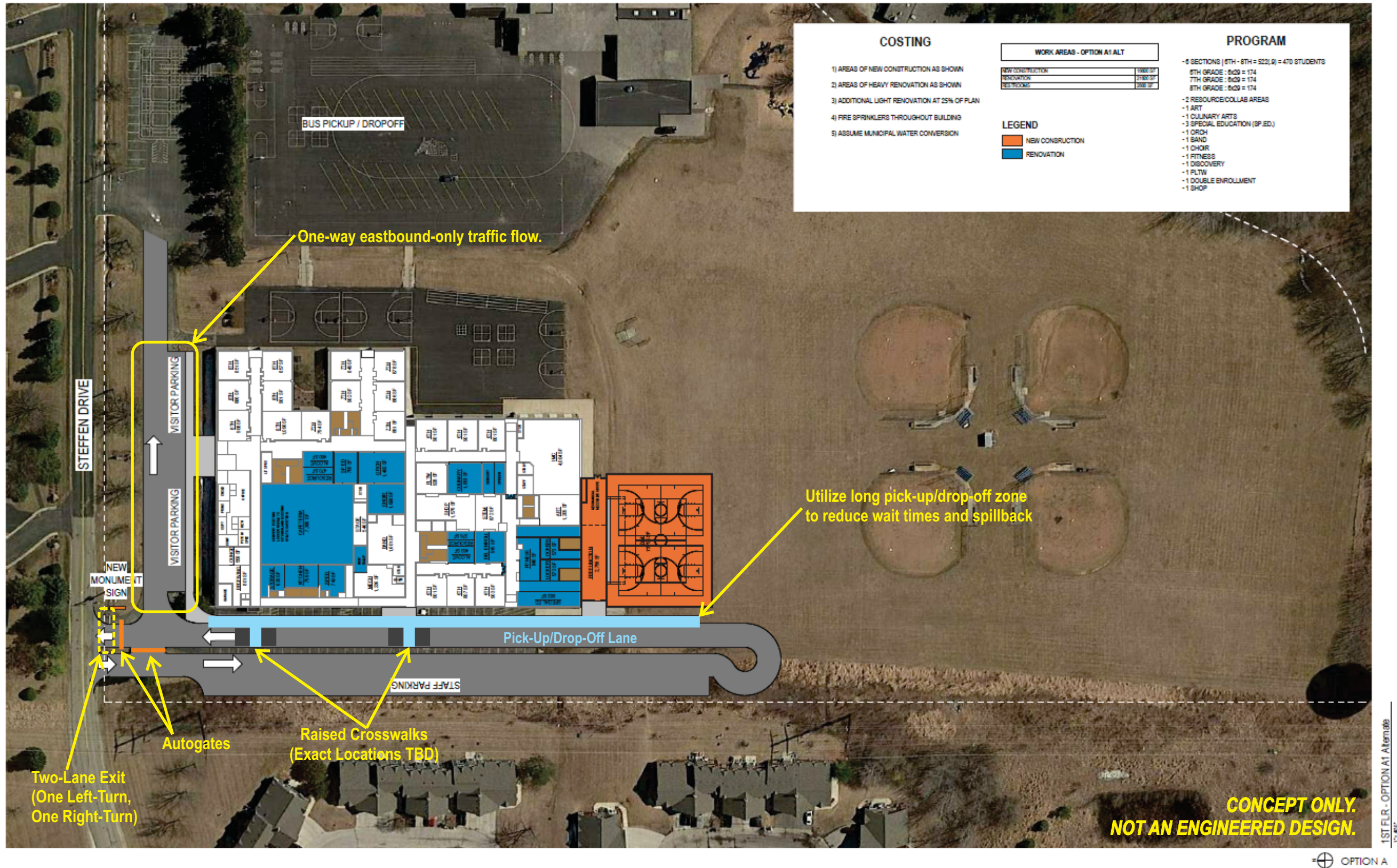


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EXHIBIT 1-1
STUDY AREA AERIAL

MEQUON, WISCONSIN



STEFFEN MIDDLE SCHOOL

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EXHIBIT 1-2
STEFFEN MIDDLE SCHOOL CONCEPTUAL RECOMMENDATIONS
(TADI COMMENTS PROVIDED ON INITIAL EUA CONCEPTUAL DIAGRAM)

MEQUON, WISCONSIN

CHAPTER II – STUDY AREA

PART A – STUDY AREA INTERSECTIONS

A study area aerial for Steffen Middle School is shown in [Exhibit 2-1](#).

The study area includes the following existing intersections. The intersection control for each intersection is shown in parentheses.

- Steffen Drive & Steffen West Driveway (one-way stop)
- Steffen Drive & Elder Tree Court/Steffen East-Wilson West Driveway (two-way stop)
- Steffen Drive & Balsam Tree Court/Wilson Center Driveway (two-way stop)
- Steffen Drive & Wilson East Driveway (one-way stop)
- Buntrock Avenue & Steffen Drive (one-way stop)

An existing transportation detail, showing lane configurations, traffic controls, speed limits, and approximate intersection spacing, is included in [Exhibit 2-2](#).

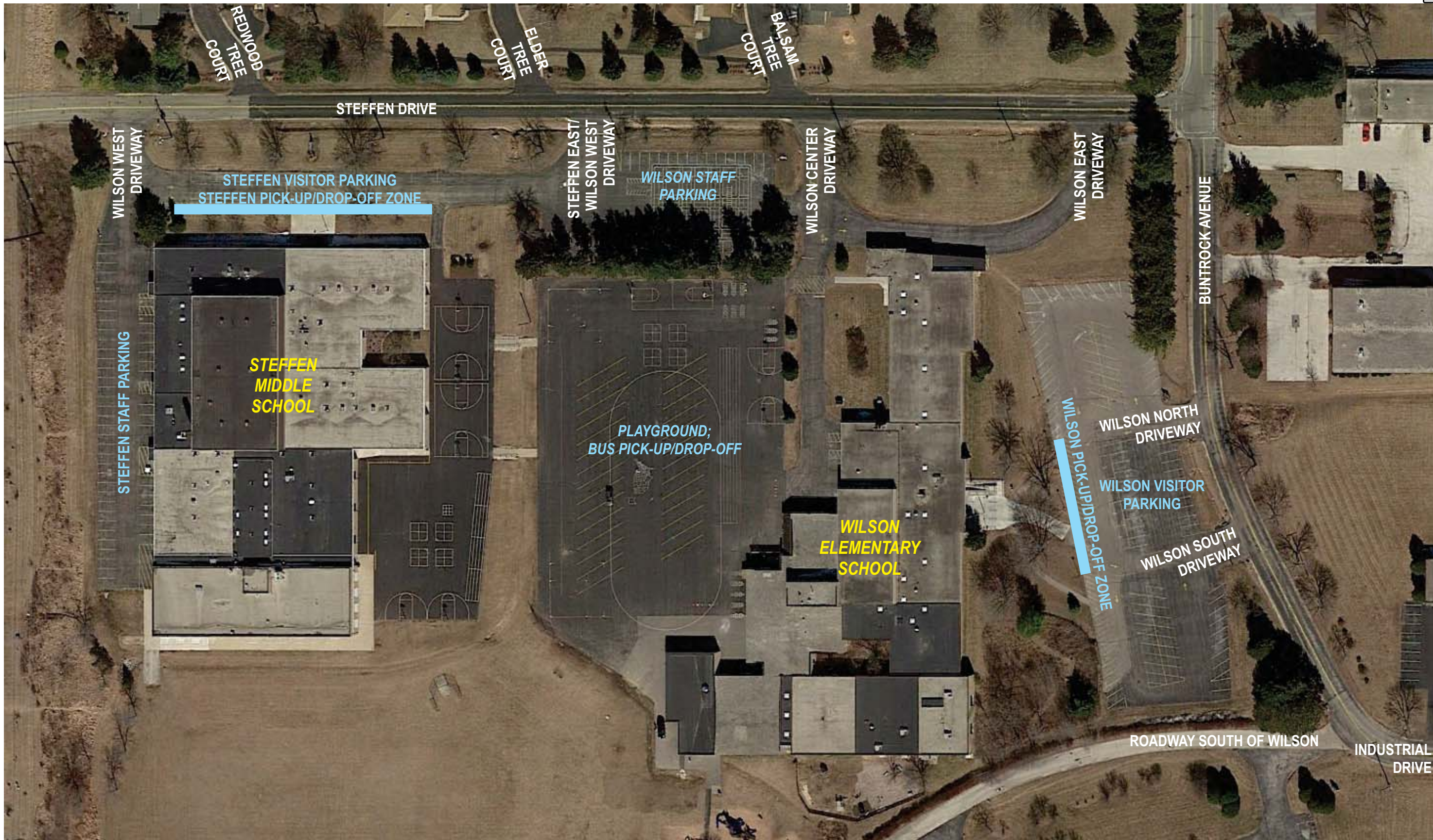
PART B – STUDY AREA ROADWAYS

Buntrock Avenue is a two-lane undivided north-south street with a posted speed limit of 25 mph. A school zone with a speed limit of 20 mph is posted in the vicinity of the study area schools. Annual average daily traffic (AADT) volumes are not recorded for Buntrock Avenue.

Steffen Drive is a two-lane undivided east-west street that intersects Buntrock Avenue as a tee-intersection from the west with a posted speed limit of 25 mph. A school zone with a speed limit of 20 mph is posted in the vicinity of the study area schools. AADT volumes are not recorded for Steffen Drive.

Elder Tree Court is a two-lane undivided north-south dead-end residential street that intersects Steffen Drive as a tee-intersection from the north and a posted speed limit of 25 mph. The existing Steffen East-Wilson West Driveway is offset slightly east of Elder Tree Court on the south side of Steffen Drive.

Balsam Tree Court is a two-lane undivided north-south dead-end residential street that intersects Steffen Drive as a tee-intersection from the north and a posted speed limit of 25 mph. The existing Wilson Center Driveway is offset slightly east of Balsam Tree Court on the south side of Steffen Drive.



Attachment: Packet Docs_Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)

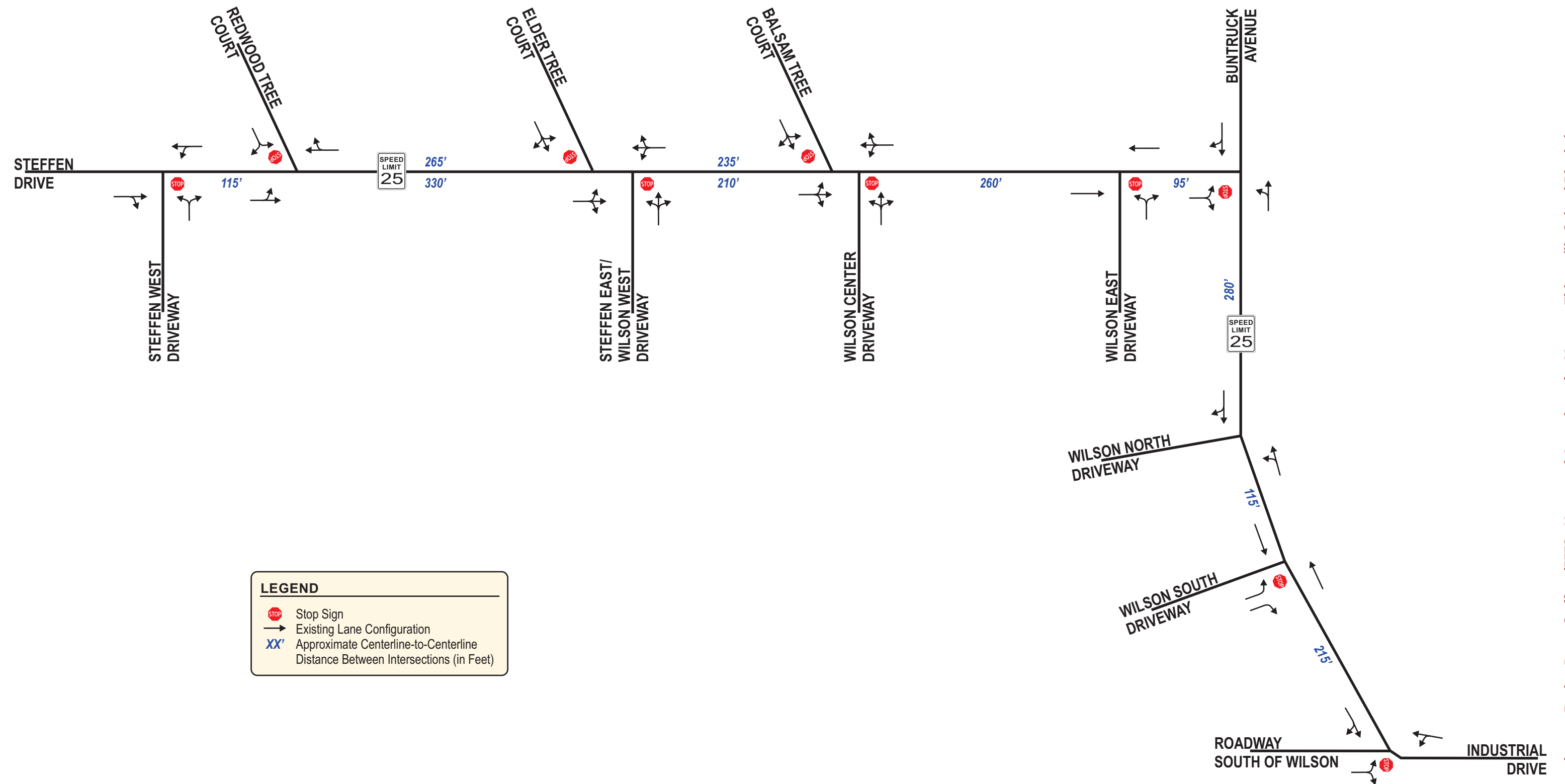


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EXHIBIT 2-1
STUDY AREA AERIAL

MEQUON, WISCONSIN



2456; 12-01-2020



EXHIBIT 2-2
EXISTING TRANSPORTATION DETAIL

MEQUON, WISCONSIN

CHAPTER III – STEFFEN MIDDLE SCHOOL OPERATIONS

PART A – EXISTING TRAFFIC VOLUMES

During the 2019-2020 school year, Steffen Middle School was in session from 7:55am to 3:20pm with an early arrival time of 7:45am. TADI performed peak hour traffic counts for Steffen Middle School from 7:05 to 8:05am and from 2:50 to 3:50pm. These counts were taken in December of 2019 before COVID Safer-At-Home orders (“normal” conditions). Counts were taken again in late September of 2020 with COVID procedures. The following table outlines the dates of the traffic counts for Steffen Middle School.

Steffen Middle School Turning Movement Count Dates

Intersection	AM Arrival	PM Dismissal
Steffen Drive & Steffen West Driveway	Thur 12-12-2019 Wed 9-23-2020	Thur 12-12-2019 Tue 9-22-2020
Steffen Drive & Steffen East-Wilson East Driveway	Thur 12-12-2019 Thur 9-24-2020	Thur 12-12-2019 Tue 9-22-2020
Steffen Drive & Wilson Center Driveway		Thur 12-12-19 Tue 9-22-2020
Steffen Drive & Wilson East Driveway		Fri 12-13-19 Tue 9-22-2020
Buntrock Avenue & Steffen Drive		Fri 12-13-19 Tue 9-22-2020

The existing traffic volumes under “normal” conditions and the existing site layout as it existed during the 2019-2020 school year are shown in [Exhibit 3-1](#).

The existing traffic volumes under COVID, with the existing site layout, are shown in [Exhibit 3-2](#).

PART B – TRIP GENERATION & DISTRIBUTION

To address potential future traffic impacts at the study area intersections, it is necessary to identify the hourly volume of traffic generated by the Steffen Middle School.

B1. Trip Generation, Distribution & Assignment – Normal Conditions

[Exhibit 3-3](#) shows the existing and additional growth trip generation and distribution for Steffen Middle School. The existing trip generation and distribution are based on existing traffic volumes at the school driveways as collected during the 2019-2020 school year. The additional growth uses the same trip rates, in/out splits, and distribution as the existing traffic volumes.

The December of 2019 counts show that Steffen Middle School generates approximately 305 trips (170 in/135 out) during the morning arrival peak hour and 220 trips (95 in/125 out) during the afternoon dismissal peak hour.

The addition of 96 students is expected to result in an additional 65 trips (35 in/30 out) during the morning arrival peak hour and an additional 45 trips (20 in/25 out) during the afternoon dismissal peak hour.

That is, under full projected future enrollment, Steffen Middle School is expected to generate 370 total trips (205 in/165 out) during the morning arrival peak hour and 265 total trips (115 in/150 out) during the afternoon dismissal peak hour.

B2. Trip Generation – COVID Conditions

[Exhibit 3-4](#) shows the existing trip generation for Steffen Middle School based on counts collected during COVID procedures.

The September 2020 counts show that Steffen Middle School generates approximately 285 trips (160 in/125 out) during the morning arrival peak hour and 385 trips (190 in/195 out) during the afternoon dismissal peak hour. That is, during COVID conditions, Steffen Middle School generates approximately 20 fewer trips (10 fewer in/10 fewer out) during the morning arrival peak hour and 165 additional trips (95 additional in/70 additional out) during the afternoon dismissal peak hour. This represents an 7% reduction in morning arrival peak hour traffic trips and a 75% increase in afternoon dismissal peak hour trips when compared to “normal” conditions.

PART C – GROWTH TRAFFIC VOLUMES

The Steffen Middle School additional new trips, shown in [Exhibit 3-5](#), were determined based on the existing trip distribution and revised site layout.

The growth traffic volumes under existing site layout, shown in [Exhibit 3-6](#), were determined by summing the existing traffic volumes under “normal” conditions ([Exhibit 3-1](#)) and Steffen Middle School additional new trips ([Exhibit 3-5](#)).

PART D – FIELD OBSERVATIONS

D1. Field Observations – Normal Conditions

The following is a summary of site observations taken during normal conditions. [Exhibit 3-7](#) includes photographs of operations observed at Steffen Middle School under normal conditions.

- The peak surges in traffic occurred 7:40 to 7:50am and 3:20 to 3:30pm.
- Eastbound traffic (from the west) wishing to turn right onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to eight vehicles observed in the morning arrival surge and seven vehicles observed in the afternoon dismissal surge.
- Westbound traffic wishing to turn left onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to six vehicles observed in the morning arrival surge and two vehicles in the afternoon dismissal surge.
- A student was observed crossed Steffen Drive east of the Steffen West Driveway coming from the north along the overhead power lines during the morning arrival surge. This student then walked along the unpaved shoulder on the south side of Steffen Drive. Additional students crossed west of the same driveway due to motorists who dropped students off from the north side of Steffen Drive.
- A group of nine students was observed during the afternoon dismissal surge to walk along south side of Steffen Drive (narrow unpaved shoulder) from the school to Buntrock Avenue, then north along the west side of Buntrock Avenue (narrow paved shoulder). The group was observed approximately 15 minutes later walking back towards the school using the west side of Buntrock Avenue and south side of Steffen Drive.
- A traffic queue of approximately ten vehicles developed eastbound on Steffen Drive at Buntrock Avenue when buses exited during the afternoon dismissal peak hour and quickly dispersed.

- Approximately five to six motorists were observed waiting in the Wilson staff parking lot for their students during the afternoon dismissal surge, with approximately half of these motorists parked in the drive aisles of the lot rather than in parking spaces.

D2. Field Observations – COVID Conditions

The following is a summary of site observations taken during COVID procedures. [Exhibit 3-8](#) includes photographs of operations observed at Steffen Middle School under COVID conditions.

- The peak surges in traffic occurred 7:35 to 7:50am and 2:50 to 3:10pm.
- Eight pick-up/drop-off positions were utilized along the curb on the north side of the building. Parents did not efficiently pull ahead to utilize all the positions, with only four or five of the eight positions used. TADI noted staff outside the door of the school along the pick-up/drop-off lane but did not see staff directing parents to pull ahead.
- Eastbound traffic (from the west) wishing to turn right onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to three vehicles observed in the morning arrival surge and nineteen vehicles observed in the afternoon dismissal surge.
- Westbound traffic wishing to turn left onto the Steffen West Driveway was observed to spillback onto Steffen Drive with a queue up to three vehicles observed in the morning arrival surge and three vehicles in the afternoon dismissal surge.
- A traffic queue of approximately eight vehicles developed eastbound on Steffen Drive at Buntrock Avenue when buses exited during the afternoon dismissal peak hour and quickly dispersed.
- Very few middle school parents parked in the parking lot northeast of the school for pick-up/drop-off. It is understood that this was by design specifically for COVID procedures.

PART E – TRAFFIC OPERATIONS

E1. Level of Service Definitions

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). 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 purpose of this study, and as is standard for use in the WisDOT Southeast Region, LOS D or better was used to define desirable peak hour operating conditions. Due to the surge of traffic that occurs to/from schools, LOS E and low-delay LOS F conditions are acceptable for movements exiting the school during those surge periods. The delay associated with the various levels of service are as follows.

LOS	Description	Average Delay
A	Intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	<10 sec/veh
B	Stable operation.	10 – 15 sec/veh
C	Stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so.	15 – 25 sec/veh
D	Increasing traffic restrictions as movements approach instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs.	25 – 35 sec/veh
E	Capacity of the intersection.	35 – 50 sec/veh
F	Jammed conditions where a movement is over capacity and acceptable gaps in the mainline traffic flow are minimal.	≥ 50 sec/veh

E2. Traffic Operations – Without Recommended Modifications

E2.1 Existing Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the 2019-2020 school year site layout, and under existing traffic volumes during normal conditions, intersections are expected to operate acceptably at LOS C or better conditions if vehicles could be sufficiently queued and serviced within the school site ([Exhibit 3-9](#)).

E2.3 Growth Traffic Operations – “Normal” Conditions, Existing Site Layout

Under the existing site layout, and under growth traffic volumes (with projected enrollment), traffic operations at the intersections are expected to continue to operate acceptably at LOS C or better conditions if vehicles can be sufficiently queued and serviced within the school site ([Exhibit 3-9](#)).

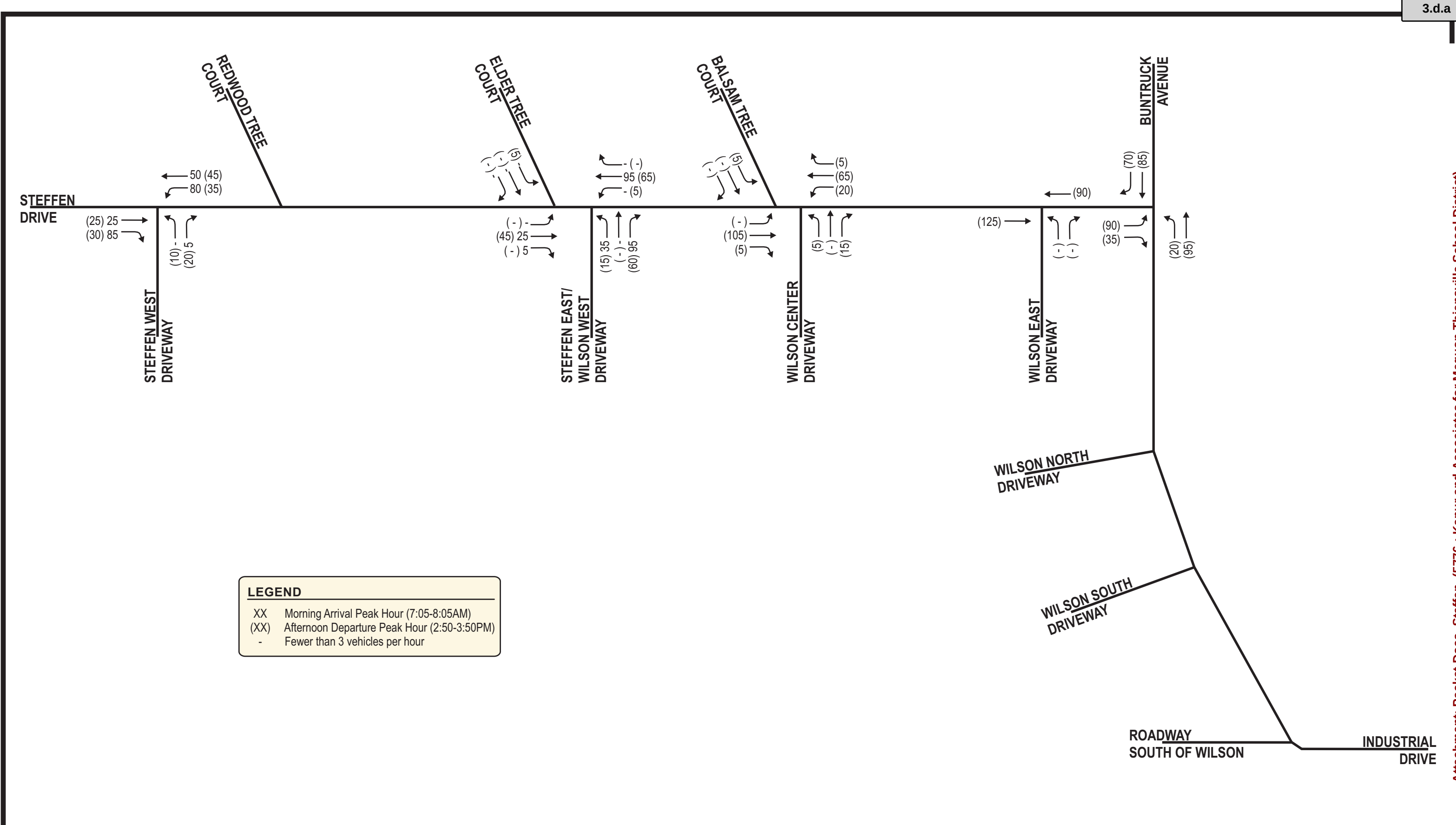
E2.3 Existing Traffic Operations – COVID Conditions, Revised Site Layout

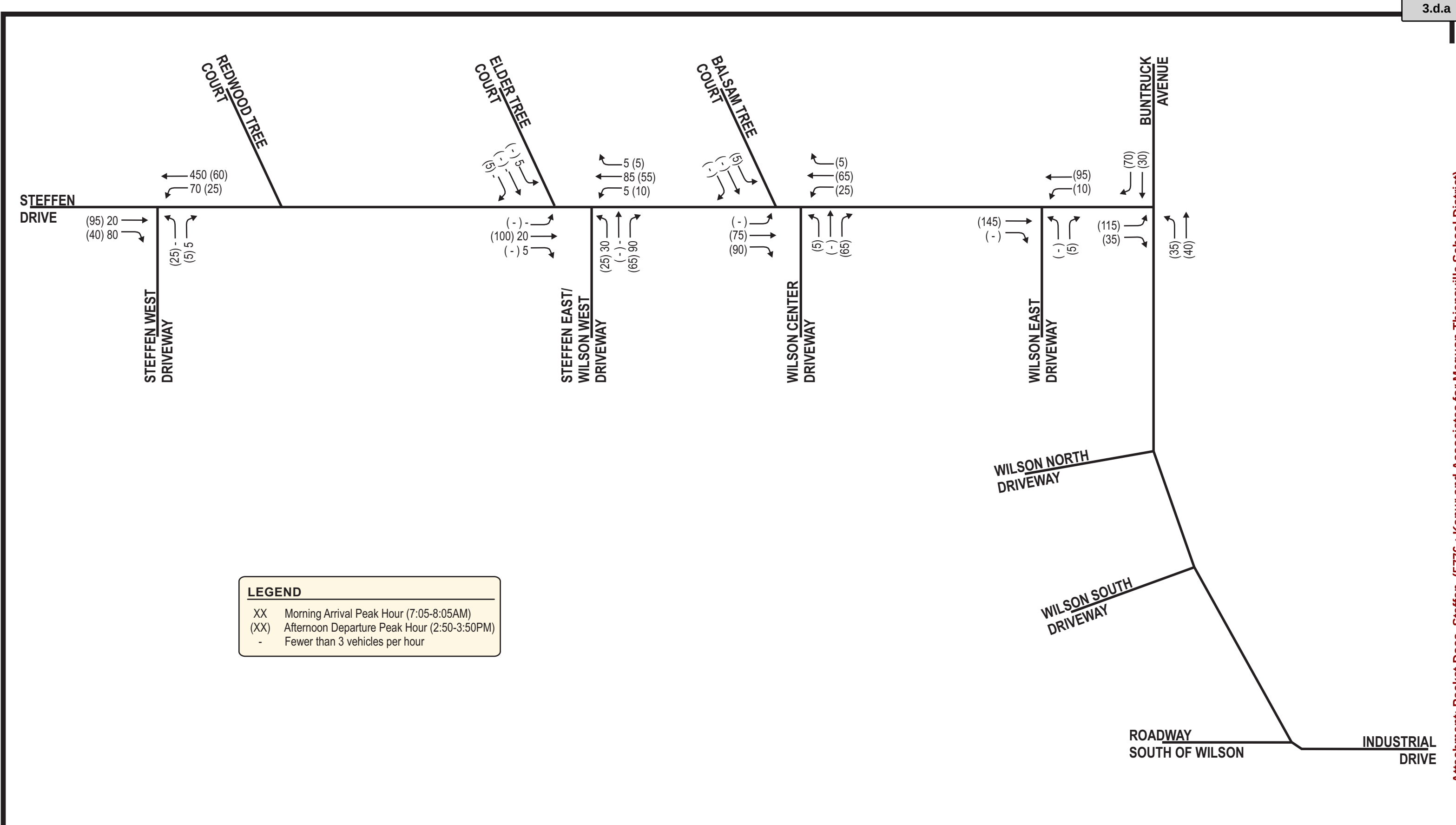
Under the existing site layout, and under COVID procedures, all movements are expected to operate at LOS B or better ([Exhibit 3-10](#)).

E3. Traffic Operations – With Recommended Modifications

Recommendations to accommodate Steffen Middle School are outlined in Chapter IV. [Exhibit 3-11](#) shows the peak hour operating conditions and expected maximum queues at the study area intersections with recommendations.

As shown, the northbound left-turn movement from the Steffen West Driveway to Steffen Drive may be expected to operate at LOS F with a traffic queue of 145-feet within the parking lot during the weekday morning peak hour under growth traffic volumes. The average vehicle delay expected for this movement is 92-seconds per vehicle, or 57-seconds per vehicle beyond the LOS D/E threshold. This level of delay and queuing may occur during the peak 15-minute surge of the morning arrival peak hour. Operations are expected to improve outside of this period. It is recommended to observe operations. Should the level of delay and queuing become problematic, consideration may be given in the future to prohibiting the left-out movement during the morning arrival peak hour, or closing the exit and forcing vehicles to instead exit at the Steffen East/Wilson West Driveway.





Steffen Middle School - Existing Trip Generation

Land Use	ITE Code	Proposed Size	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Steffen Middle School (Existing)	TADI	452 Students	170 (56%)	135 (44%)	305 (0.67)	95 (43%)	125 (57%)	220 (0.49)
Total New Trips			170	135	305	95	125	220

Existing trip generation rates and in/out splits based on existing counts at Steffen Driveways

TRIP DISTRIBUTION

North on Buntrock, In AM	35%	60		
North on Buntrock, Out AM	55%		75	
South on Buntrock, In AM	15%	25		
South on Buntrock, Out AM	25%		35	
West on Steffen, In AM	50%	85		
West on Steffen, Out AM	20%		25	
North on Buntrock, In PM	50%			45
North on Buntrock, Out PM	55%			70
South on Buntrock, In PM	15%			15
South on Buntrock, Out PM	20%			25
West on Steffen, In PM	35%			35
West on Steffen, Out PM	25%			30
	100%	170	135	95 125

Steffen Middle School - Additional Growth Trip Generation

Land Use	ITE Code	Proposed Size	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Steffen Middle School (Growth)	TADI	96 Students	35 (56%)	30 (44%)	65 (0.67)	20 (43%)	25 (57%)	45 (0.49)
Total New Trips			35	30	65	20	25	45

Existing trip generation rates and in/out splits based on existing counts at Steffen Driveways

TRIP DISTRIBUTION

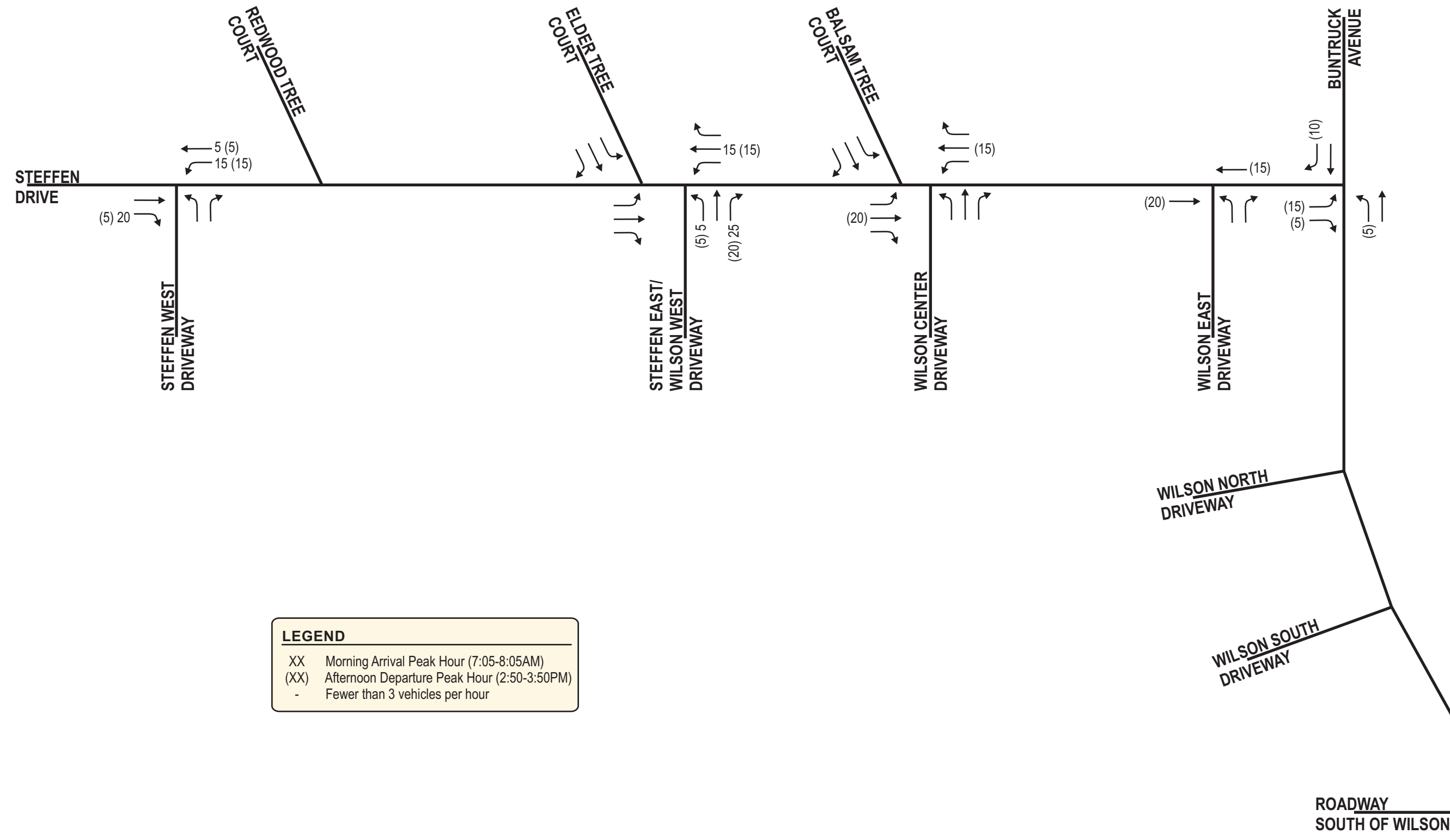
North on Buntrock, In AM	35%	10		
North on Buntrock, Out AM	55%		15	
South on Buntrock, In AM	15%	5		
South on Buntrock, Out AM	25%		10	
West on Steffen, In AM	50%	20		
West on Steffen, Out AM	20%		5	
North on Buntrock, In PM	50%			10
North on Buntrock, Out PM	55%			15
South on Buntrock, In PM	15%			5
South on Buntrock, Out PM	20%			5
West on Steffen, In PM	35%			5
West on Steffen, Out PM	25%			5
	100%	35	30	20 25

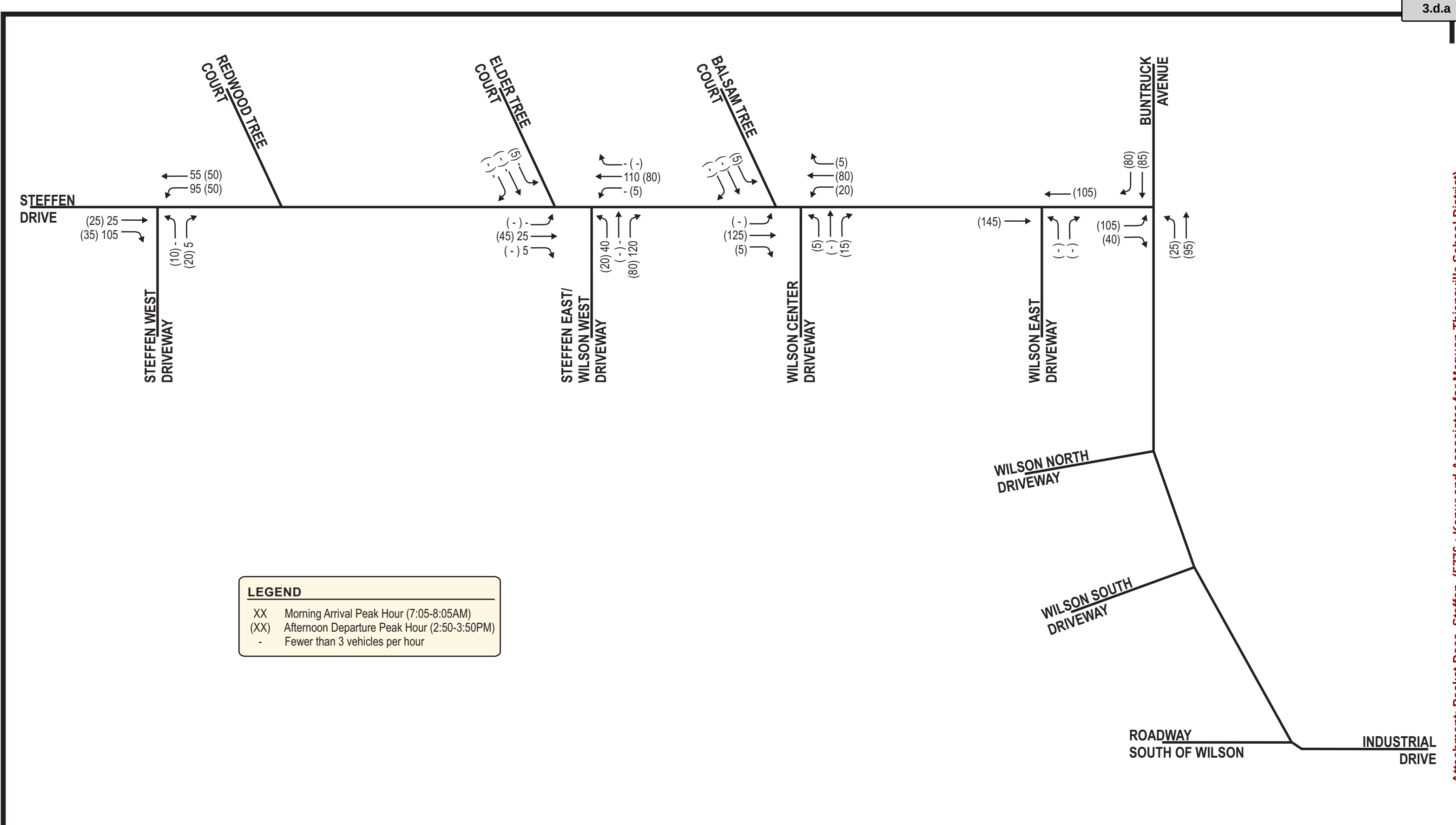
Steffen Middle School - COVID Trip Generation

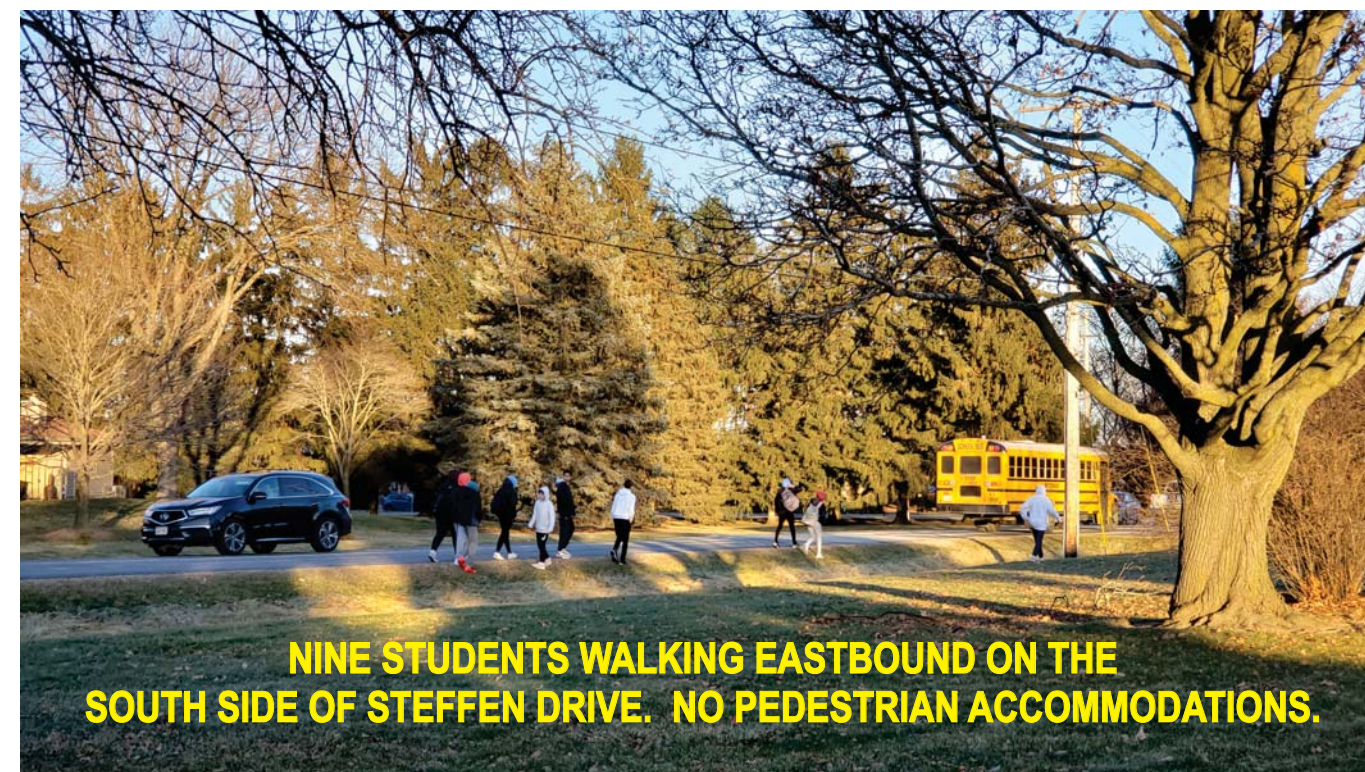
Land Use	ITE Code	Proposed Size	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Steffen Middle School (Existing)	TADI	Unknown	160 (56%)	125 (44%)	285	190 (49%)	195 (51%)	385
Total New Trips			160	125	285	190	195	385

Based on counts from mid-September, 2020 during COVID











Steffen Existing Traffic - Operations & Queues
With Existing Site Layout

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Steffen Drive & Steffen West Driveway (One-Way Stop)	AM	LOS	-	*		A	-		B	-	-	-		
		Queue	-	*		20	-		20	-	-	-		
	PM	LOS	-	*		A	-		B	-	-	-		
		Queue	-	*		20	-		20	-	-	-		
Steffen Drive & Elder Tree Court/ Steffen East-Wilson West Drwy (Two-Way Stop)	AM	LOS	A			A			C			B		
		Queue	20			20			85			20		
	PM	LOS	A			A			B			C		
		Queue	20			20			45			20		
Steffen Drive & Balsam Tree Court/ Wilson Center Driveway (Two-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	A			A			C			C		
		Queue	20			20			20			20		
Steffen Drive & Wilson East Driveway (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	-	*		A	-		B	-	-	-		
		Queue	-	*		20	-		20	-	-	-		
Buntrock Avenue & Steffen Drive (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	C			-	-	-	A	-	-	*		
		Queue	55			-	-	-	20	-	-	*		

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Queue is maximum of the 50th & 95th percentile queue, measured in feet.
Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

Steffen Growth Traffic - Operations & Queues
With Existing Site Layout

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Steffen Drive & Steffen West Driveway (One-Way Stop)	AM	LOS	-	*		A	-		B	-	-	-		
		Queue	-	*		30	-		20	-	-	-		
	PM	LOS	-	*		A	-		B	-	-	-		
		Queue	-	*		20	-		20	-	-	-		
Steffen Drive & Elder Tree Court/ Steffen East-Wilson West Drwy (Two-Way Stop)	AM	LOS	A			A			C			C		
		Queue	20			20			140			20		
	PM	LOS	A			A			B			C		
		Queue	20			20			75			20		
Steffen Drive & Balsam Tree Court/ Wilson Center Driveway (Two-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	A			A			C			C		
		Queue	20			20			20			20		
Steffen Drive & Wilson East Driveway (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	-	*		A	-		B	-	-	-		
		Queue	-	*		20	-		20	-	-	-		
Buntrock Avenue & Steffen Drive (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	C			-	-	-	A	-	-	*		
		Queue	75			-	-	-	20	-	-	*		

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Queue is maximum of the 50th & 95th percentile queue, measured in feet.
Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

COVID-Based Traffic Operations & Queues
With Existing Site Layout

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Steffen Drive & Steffen West Driveway (One-Way Stop)	AM	LOS	-	*		A	-		B			-	-	-
		Queue	-	*		20	-		20			-	-	-
	PM	LOS	-	*		A	-		B			-	-	-
		Queue	-	*		20	-		20			-	-	-
Steffen Drive & Elder Tree Court/ Steffen East-Wilson West Drwy (Two-Way Stop)	AM	LOS	A			A			B			B		
		Queue	20			20			55			20		
	PM	LOS	A			A			B			B		
		Queue	20			20			25			20		
Steffen Drive & Balsam Tree Court/ Wilson Center Driveway (Two-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	A			A			B			B		
		Queue	20			20			20			20		
Steffen Drive & Wilson East Driveway (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	-	*		A	-		B			-	-	-
		Queue	-	*		20	-		20			-	-	-
Buntrock Avenue & Steffen Drive (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	B			-	-	-	A	-	-	-	*	
		Queue	45			-	-	-	20	-	-	-	*	

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Queue is maximum of the 50th & 95th percentile queue, measured in feet.
Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

Existing Traffic - Operations & Queues
With Recommended Modifications

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Steffen Drive & Steffen West Driveway (One-Way Stop)	AM	LOS	-	*		A	-		E	-	B	-	-	-
		Queue	-	*		25	-		75	-	70	-	-	-
	PM	LOS	-	*		A	-		B	-	B	-	-	-
		Queue	-	*		20	-		20	-	35	-	-	-
Steffen Drive & Elder Tree Court/ Steffen East-Wilson West Drwy (Two-Way Stop)	AM	LOS	A			A			B			B		
		Queue	20			20			20			20		
	PM	LOS	A			A			B			B		
		Queue	20			20			65			20		
Steffen Drive & Balsam Tree Court/ Wilson Center Driveway (Two-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	A			A			C			C		
		Queue	20			20			20			20		
Steffen Drive & Wilson East Driveway (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	-	*		A	-		B			-	-	-
		Queue	-	*		20	-		20			-	-	-
Buntrock Avenue & Steffen Drive (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	C			-	-	-	A			-	-	*
		Queue	55			-	-	-	20			-	-	*

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Queue is maximum of the 50th & 95th percentile queue, measured in feet.
Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

Growth Traffic - Operations & Queues
With Recommended Modifications

Intersection	Peak Hour		Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Steffen Drive & Steffen West Driveway (One-Way Stop)	AM	LOS	-	*		A	-		F	-	C	-	-	-
		Queue	-	*		30	-		145	-	115	-	-	-
	PM	LOS	-	*		A	-		C	-	B	-	-	-
		Queue	-	*		20	-		30	-	45	-	-	-
Steffen Drive & Elder Tree Court/ Steffen East-Wilson West Drwy (Two-Way Stop)	AM	LOS	A			A			C			C		
		Queue	20			20			20			20		
	PM	LOS	A			A			C			C		
		Queue	20			20			20			20		
Steffen Drive & Balsam Tree Court/ Wilson Center Driveway (Two-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	A			A			C			C		
		Queue	20			20			20			20		
Steffen Drive & Wilson East Driveway (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	-	*		A	-		B			-	-	-
		Queue	-	*		20	-		20			-	-	-
Buntrock Avenue & Steffen Drive (One-Way Stop)	AM	LOS												
		Queue												
	PM	LOS	C			-	-	-	A			-	-	*
		Queue	75			-	-	-	20			-	-	*

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Queue is maximum of the 50th & 95th percentile queue, measured in feet.
Operations assume traffic can be sufficiently queued & serviced within the school site. See report text for more details.

CHAPTER IV – RECOMMENDATIONS AND CONCLUSION

PART A – RECOMMENDED MODIFICATIONS

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back onto the public roadway network.

Recommended modifications are for jurisdictional consideration and are not legally binding. The City of Mequon and the Mequon-Thiensville School District reserve the right to determine alternative solutions.

A1. Recommendations for Steffen Middle School

A conceptual drawing for Steffen Middle School is shown in [Exhibit 1-2](#).

- Move the pick-up/drop-off zone to along the west side of the school. The queuing space shown conceptually in [Exhibit 1-2](#) is expected to be sufficient to remove the spillback of traffic that otherwise currently occurs onto Steffen Drive.
- Utilize the longer pick-up/drop-off zone along the west side of the school fully to service more students exiting/entering vehicles in a timelier and more efficient fashion (i.e. more motorists being serviced simultaneously). The pick-up/drop-off lane is recommended to be at least 18-foot wide to minimize pedestrian crossing distances and improve safety. The 18-foot wide lane are expected to be sufficiently wide for a 7- to 8-foot wide pick-up/drop-off parking lane and a 10- to 11-foot wide through lane. Additionally, staff is encouraged to direct parents to pull ahead to make use of all pick-up/drop-off positions.
- Include raised crosswalk(s) across the pick-up/drop-off lane to bring greater attention to the area where pedestrians cross and to the area where cars should and should not be loading.
- Maintain one-way eastbound traffic flow in the drive aisle on the north side of the school.
- Provide two exit lanes on the Steffen West Driveway (one left-turn lane, one right-turn lane).
- Install auto gates on the Steffen West Driveway immediately south of Steffen Drive. One auto gate is recommended to close off inbound traffic from the parking lot on the north side of the school. This gate can be used during morning arrival and afternoon departure to control internal site conflicts. Another gate is recommended to close off outbound traffic from the parking lot in case of poor operations, at which time traffic can be diverted through the north parking lot to the Steffen East/Wilson West Driveway.

A2. Other Considerations

Other considerations that may be given consideration are summarized below.

- Consider providing pedestrian accommodations to and across Steffen Drive and Buntrock Avenue to accommodate students observed walking to/from school.
- Consider providing bicycle racks at the school to accommodate students and staff who may wish to bike to/from school.
- The northbound left-turn movement from the Steffen West Driveway to Steffen Drive may be expected to operate at LOS F with a traffic queue of 145-feet within the parking lot during the weekday morning peak hour under growth traffic volumes. The average vehicle delay expected for this movement is 92-seconds per vehicle, or 57-seconds per

vehicle beyond the LOS D/E threshold. This level of delay and queuing may occur during the peak 15-minute surge of the morning arrival peak hour. Operations are expected to improve outside of this period. It is recommended to observe operations. Should the level of delay and queuing become problematic, consideration may be given in the future to prohibiting the left-out movement during the morning arrival peak hour, or closing the exit and forcing vehicles to instead exit at the Steffen East/Wilson West Driveway.

To further improve traffic operations, the District may also consider implementing strategies that help spread traffic arrival/discharge over a longer period of time or that help reduce vehicle demands. Examples of demand-management strategies for Steffen Middle School are included below.

- Consider if there may be strategies to make bus transportation more desirable and/or convenient for parents and students. If practical, implement those strategies to reduce vehicle demands at the school.
- Consider administering a “SchoolPool” ride-matching program. Such a program provides parents with information on neighborhood students who are interested in carpooling to/from school and facilitate the matching of students to encourage that carpooling (for parent drop-off/pick-up and student parking). Such a program may reduce vehicle demands at the school.

PART B – CONCLUSION

Traffic observations and intersection analyses show the need to prevent spillback onto the public roadway network, more efficiently service motorists at drop-off/pick-up zones, and more adequately service motorists exiting back to the public roadway network.

The recommendations outlined in this study are expected to result in safer and more efficient operations for Steffen Middle School if properly designed and implemented.

APPENDIX A

TRAFFIC COUNTS

APPENDIX A

Existing Traffic Counts (December 2019)

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location A Steffen Dr and Western Drive\Steffen Dr & Location A Driveway AM - AS.ppc
Start Date: 12/12/2019
Start Time: 7:00:00 AM
Site Code: 00000000
Comment 1: Mequon
Comment 2: AM
Comment 3: TOTAL VEHICLES
Comment 4: AS

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	1	2	0	5
7:10:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	4
7:15:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3	0	6
7:20:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	4
7:25:00 AM	0	0	0	0	3	2	0	0	0	0	0	0	0	1	8	0	14
7:30:00 AM	0	0	0	0	5	5	0	0	0	0	0	0	0	4	11	0	25
7:35:00 AM	0	0	0	0	11	11	0	0	0	0	0	0	0	6	18	0	46
7:40:00 AM	0	0	0	0	28	10	0	0	0	0	1	0	0	5	25	0	69
7:45:00 AM	0	0	0	0	20	16	0	0	0	0	0	0	0	3	12	0	51
7:50:00 AM	0	0	0	0	2	4	0	0	0	0	1	0	0	1	4	0	12
7:55:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	4
8:00:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	4
TOTAL:	0	0	0	0	78	52	0	0	0	0	2	0	0	26	86	0	

Peak Hour: 7:05-8:05AM
PHF: 0.29
%HV: #DIV/0! 0.8% 100.0% 5.4%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location A Steffen Dr and Western Drive\Steffen Dr & Location A Driveway AM - AS.ppc

Start Date: 12/12/2019

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: AS

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	1	2	0	5
7:10:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	4
7:15:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3	0	6
7:20:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	4
7:25:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	1	8	0	13
7:30:00 AM	0	0	0	0	5	5	0	0	0	0	0	0	0	3	11	0	24
7:35:00 AM	0	0	0	0	11	11	0	0	0	0	0	0	0	2	18	0	42
7:40:00 AM	0	0	0	0	28	10	0	0	0	0	0	0	0	5	24	0	67
7:45:00 AM	0	0	0	0	20	16	0	0	0	0	0	0	0	3	12	0	51
7:50:00 AM	0	0	0	0	2	4	0	0	0	0	0	0	0	1	4	0	11
7:55:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	4
8:00:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	4
TOTAL:	0	0	0	0	77	52	0	0	0	0	0	0	0	21	85	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location A Steffen Dr and Western Drive\Steffen Dr & Location A Driveway AM - AS.ppc

Start Date: 12/12/2019

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	0	0	0	0	0	1	0	0	5	1	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location A Steffen Dr and Western Drive\Steffen Dr & Location A Driveway AM - AS.ppc

Start Date: 12/12/2019

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr, Steffen MS Location A, PM.ppd

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: TOTAL VEHICLES

Comment 4: LN.

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	3	1	0	7
2:55:00 PM	0	0	0	0	2	4	0	0	0	0	0	0	0	1	2	0	9
3:00:00 PM	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:05:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	2	2	0	10
3:10:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	4
3:15:00 PM	0	0	0	0	1	1	0	0	0	0	1	0	0	2	1	0	6
3:20:00 PM	0	0	0	0	7	3	0	0	1	0	0	0	0	0	5	0	16
3:25:00 PM	0	0	0	0	10	12	0	0	2	0	2	0	0	1	13	0	40
3:30:00 PM	0	0	0	0	2	4	0	0	0	0	2	0	0	0	1	0	9
3:35:00 PM	0	0	0	0	2	2	0	0	4	0	6	0	0	2	0	0	16
3:40:00 PM	0	0	0	0	0	2	0	0	1	0	2	0	0	5	0	0	10
3:45:00 PM	0	0	0	0	1	0	0	0	2	0	5	0	0	1	0	0	9
TOTAL:	0	0	0	0	35	33	0	0	10	0	18	0	0	17	28	0	

Peak Hour: 2:50-3:50PM

PHF: 0.29

%HV: #DIV/0!

7.4%

3.6%

6.7%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr, Steffen MS Location A, PM.ppd

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: CARS & PEDS

Comment 4: LN.

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	3	1	0	7
2:55:00 PM	0	0	0	0	2	4	0	0	0	0	0	0	0	1	2	0	9
3:00:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:05:00 PM	0	0	0	0	2	3	0	0	0	0	0	0	0	1	2	0	8
3:10:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	4
3:15:00 PM	0	0	0	0	1	1	0	0	0	0	1	0	0	1	1	0	5
3:20:00 PM	0	0	0	0	7	3	0	0	1	0	0	0	0	0	5	0	16
3:25:00 PM	0	0	0	0	10	10	0	0	1	0	2	0	0	1	13	0	37
3:30:00 PM	0	0	0	0	2	4	0	0	0	0	2	0	0	0	1	0	9
3:35:00 PM	0	0	0	0	2	2	0	0	4	0	6	0	0	2	0	0	16
3:40:00 PM	0	0	0	0	0	2	0	0	1	0	2	0	0	4	0	0	9
3:45:00 PM	0	0	0	0	1	0	0	0	2	0	5	0	0	1	0	0	9
TOTAL:	0	0	0	0	33	30	0	0	9	0	18	0	0	14	28	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr, Steffen MS Location A, PM.ppd

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: LN.

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:05:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	3
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	2	3	0	0	1	0	0	0	0	3	0	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr, Steffen MS Location A, PM.ppd

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: LN.

Start Time	STEFFEN W DRWY From North				STEFFEN DR LOC A From East				STEFFEN W DRWY From South				STEFFEN DR LOC A From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr & Location B Driveway AM - JS.ppd

Start Date: 12/12/2019

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: TOTAL VEHICLES

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
7:10:00 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	2	0	0	5
7:15:00 AM	0	0	1	0	0	2	0	0	0	0	0	0	0	2	0	0	5
7:20:00 AM	0	0	0	0	0	2	0	0	0	0	1	0	0	2	0	0	5
7:25:00 AM	0	0	0	0	0	4	0	0	0	0	3	0	0	1	0	0	8
7:30:00 AM	0	0	0	0	0	9	0	0	4	0	10	0	0	4	0	1	28
7:35:00 AM	1	0	0	0	0	21	0	0	9	0	17	0	0	7	0	0	55
7:40:00 AM	0	0	0	0	0	24	0	0	10	0	34	0	0	2	3	0	73
7:45:00 AM	0	0	0	0	1	20	0	0	9	0	23	0	0	3	1	0	57
7:50:00 AM	0	0	0	0	0	2	0	0	4	0	6	0	0	2	0	1	15
7:55:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00:00 AM	0	0	0	0	0	1	0	0	0	0	3	0	0	1	0	0	5
TOTAL:	1	0	1	0	1	92	1	0	36	0	97	0	0	27	4	2	

Peak Hour: 7:05-8:05AM

PHF: **0.30**

%HV: **0.0%**

1.1%

0.0%

22.6%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr & Location B Driveway AM - JS.ppd

Start Date: 12/12/2019

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
7:10:00 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	2	0	0	5
7:15:00 AM	0	0	1	0	0	2	0	0	0	0	0	0	0	2	0	0	5
7:20:00 AM	0	0	0	0	0	2	0	0	0	0	1	0	0	2	0	0	5
7:25:00 AM	0	0	0	0	0	3	0	0	0	0	3	0	0	1	0	0	7
7:30:00 AM	0	0	0	0	0	9	0	0	4	0	10	0	0	3	0	1	27
7:35:00 AM	1	0	0	0	0	21	0	0	9	0	17	0	0	3	0	0	51
7:40:00 AM	0	0	0	0	0	24	0	0	10	0	34	0	0	1	3	0	72
7:45:00 AM	0	0	0	0	1	20	0	0	9	0	23	0	0	2	1	0	56
7:50:00 AM	0	0	0	0	0	2	0	0	4	0	6	0	0	2	0	1	15
7:55:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00:00 AM	0	0	0	0	0	1	0	0	0	0	3	0	0	1	0	0	5
TOTAL:	1	0	1	0	1	91	1	0	36	0	97	0	0	20	4	2	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr & Location B Driveway AM - JS.ppd

Start Date: 12/12/2019

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	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	6	0	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Steffen Dr & Location B Driveway AM - JS.ppd

Start Date: 12/12/2019

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location B Steffen Dr Eastern Dr-Elder Tree Ct\Steffen Dr & Location B Driveway PM - /

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: TOTAL VEHICLES

Comment 4: AS

Start Time	ELDER TREE CT From North				STEFFEN DR LOC B From East				STEFFEN CENTER DRWY From South				STEFFEN DR LOC B From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	1	0	0	4	0	0	0	0	1	0	0	2	0	0	8
2:55:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0	8
3:00:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	1	0	0	7
3:05:00 PM	2	0	0	0	1	6	1	0	0	0	0	0	0	3	0	0	13
3:10:00 PM	0	0	0	0	3	3	0	0	0	0	1	0	0	0	0	0	7
3:15:00 PM	0	0	0	0	0	7	0	0	0	0	1	0	0	4	0	0	12
3:20:00 PM	0	0	0	0	0	4	0	0	1	0	15	0	0	0	0	1	21
3:25:00 PM	0	0	0	0	0	12	0	0	10	0	30	0	0	3	0	0	55
3:30:00 PM	0	0	0	0	0	4	0	0	1	0	9	0	0	2	0	0	16
3:35:00 PM	0	0	0	0	0	2	0	0	1	0	0	0	0	5	0	0	8
3:40:00 PM	0	0	0	0	0	1	0	0	1	0	2	0	0	5	0	0	9
3:45:00 PM	0	0	0	1	0	2	0	0	0	0	2	0	0	7	0	0	12
TOTAL:	2	0	1	1	4	57	1	0	14	0	61	0	0	34	0	1	

Peak Hour: 2:50-3:30PM

PHF: **0.27**

%HV: **0.0%**

8.1%

1.3%

8.8%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location B Steffen Dr Eastern Dr-Elder Tree Ct\Steffen Dr & Location B Driveway PM - /

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: AS

Start Time	ELDER TREE CT From North				STEFFEN DR LOC B From East				STEFFEN CENTER DRWY From South				STEFFEN DR LOC B From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	1	0	0	4	0	0	0	0	1	0	0	2	0	0	8
2:55:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0	8
3:00:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	5
3:05:00 PM	2	0	0	0	1	5	1	0	0	0	0	0	0	2	0	0	11
3:10:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	6
3:15:00 PM	0	0	0	0	0	7	0	0	0	0	1	0	0	3	0	0	11
3:20:00 PM	0	0	0	0	0	4	0	0	1	0	15	0	0	0	0	1	21
3:25:00 PM	0	0	0	0	0	10	0	0	10	0	30	0	0	3	0	0	53
3:30:00 PM	0	0	0	0	0	4	0	0	1	0	9	0	0	2	0	0	16
3:35:00 PM	0	0	0	0	0	2	0	0	1	0	0	0	0	5	0	0	8
3:40:00 PM	0	0	0	0	0	1	0	0	1	0	2	0	0	4	0	0	8
3:45:00 PM	0	0	0	1	0	2	0	0	0	0	2	0	0	7	0	0	12
TOTAL:	2	0	1	1	4	52	1	0	14	0	60	0	0	31	0	1	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location B Steffen Dr Eastern Dr-Elder Tree Ct\Steffen Dr & Location B Driveway PM - /

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS

Start Time	ELDER TREE CT From North				STEFFEN DR LOC B From East				STEFFEN CENTER DRWY From South				STEFFEN DR LOC B From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3:05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	5	0	0	0	0	1	0	0	3	0	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location B Steffen Dr Eastern Dr-Elder Tree Ct\Steffen Dr & Location B Driveway PM - /

Start Date: 12/12/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS

Start Time	ELDER TREE CT From North				STEFFEN DR LOC B From East				STEFFEN CENTER DRWY From South				STEFFEN DR LOC B From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location C Steffen Dr West DW& Balsaam Tree Ct\Steffen Dr & Location C Driveway PI

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: TOTAL VEHICLES

Comment 4: AS

Start Time	BALSAM TREE CT From North				STEFFEN DR LOC C From East				STEFFEN E/WILSON W DRWY From South				STEFFEN DR LOC C From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	2	0	0	9
2:55:00 PM	1	0	0	0	0	7	0	0	0	0	0	0	0	3	0	0	11
3:00:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	1	4	0	0	10
3:05:00 PM	0	0	0	0	2	10	0	0	0	0	0	0	0	2	1	0	15
3:10:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	6
3:15:00 PM	0	0	0	0	4	7	0	0	1	0	0	0	0	4	2	0	18
3:20:00 PM	0	0	0	0	7	9	0	0	0	0	0	0	0	20	0	0	36
3:25:00 PM	1	0	0	0	1	5	0	0	2	0	13	0	0	37	0	0	59
3:30:00 PM	1	0	0	0	1	8	0	0	0	0	0	0	0	19	0	0	29
3:35:00 PM	0	0	0	0	3	4	0	0	0	0	3	0	0	8	0	0	18
3:40:00 PM	1	0	0	0	1	3	2	0	0	0	0	0	0	3	0	0	10
3:45:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	7
TOTAL:	4	0	0	0	22	70	2	0	3	0	16	0	1	107	3	0	

Peak Hour: 2:50-3:50PM

PHF: **0.32**

%HV: **0.0%**

19.1%

89.5%

3.6%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location C Steffen Dr West DW& Balsam Tree Ct\Steffen Dr & Location C Driveway PI

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: AS

Start Time	BALSAM TREE CT From North				STEFFEN DR LOC C From East				STEFFEN E/WILSON W DRWY From South				STEFFEN DR LOC C From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	2	0	0	9
2:55:00 PM	1	0	0	0	0	5	0	0	0	0	0	0	0	3	0	0	9
3:00:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	1	4	0	0	10
3:05:00 PM	0	0	0	0	1	10	0	0	0	0	0	0	0	2	0	0	13
3:10:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
3:15:00 PM	0	0	0	0	1	7	0	0	1	0	0	0	0	4	0	0	13
3:20:00 PM	0	0	0	0	2	9	0	0	0	0	0	0	0	19	0	0	30
3:25:00 PM	1	0	0	0	0	5	0	0	0	0	1	0	0	37	0	0	44
3:30:00 PM	1	0	0	0	0	8	0	0	0	0	0	0	0	19	0	0	28
3:35:00 PM	0	0	0	0	1	4	0	0	0	0	0	0	0	8	0	0	13
3:40:00 PM	1	0	0	0	1	3	2	0	0	0	0	0	0	3	0	0	10
3:45:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	7
TOTAL:	4	0	0	0	6	68	2	0	1	0	1	0	1	106	0	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location C Steffen Dr West DW& Balsam Tree Ct\Steffen Dr & Location C Driveway PI

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS

Start Time	BALSAM TREE CT From North				STEFFEN DR LOC C From East				STEFFEN E/WILSON W DRWY From South				STEFFEN DR LOC C From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
3:10:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:15:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	5
3:20:00 PM	0	0	0	0	5	0	0	0	0	0	0	0	0	1	0	0	6
3:25:00 PM	0	0	0	0	1	0	0	0	2	0	12	0	0	0	0	0	15
3:30:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:35:00 PM	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	5
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	16	2	0	0	2	0	15	0	0	1	3	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location C Steffen Dr West DW& Balsam Tree Ct\Steffen Dr & Location C Driveway PI

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS

Start Time	BALSAM TREE CT From North				STEFFEN DR LOC C From East				STEFFEN E/WILSON W DRWY From South				STEFFEN DR LOC C From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location D Steffen Dr & East Driveway\Steffen Dr & Location D Driveway PM - JB.ppd
Start Date: 12/13/2019
Start Time: 2:50:00 PM
Site Code: 00000000
Comment 1: Mequon
Comment 2: PM
Comment 3: TOTAL VEHICLES
Comment 4: JB

Start Time	WILSON EAST DRWY From North				STEFFEN DR LOC D From East				WILSON EAST DRWY From South				STEFFEN DR LOC D From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	2	0	0	9
2:55:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	4	0	0	11
3:00:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
3:05:00 PM	0	0	0	0	0	12	0	0	0	0	0	0	0	2	0	0	14
3:10:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7
3:15:00 PM	0	0	0	0	0	11	0	0	0	0	0	0	0	4	0	0	15
3:20:00 PM	0	0	0	0	0	15	0	0	0	0	0	0	0	20	0	0	35
3:25:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	49	0	0	55
3:30:00 PM	0	0	0	0	0	9	0	0	0	0	0	0	0	25	0	0	34
3:35:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	11	0	0	17
3:40:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0	0	10
3:45:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	7
TOTAL:	0	0	0	0	0	93	0	0	0	0	0	0	0	130	0	0	

Peak Hour: 2:50-3:50PM
PHF: 0.34
%HV:

#DIV/0!

19.4%

#DIV/0!

13.1%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location D Steffen Dr & East Driveway\Steffen Dr & Location D Driveway PM - JB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: JB

Start Time	WILSON EAST DRWY From North				STEFFEN DR LOC D From East				WILSON EAST DRWY From South				STEFFEN DR LOC D From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	2	0	0	9
2:55:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
3:00:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
3:05:00 PM	0	0	0	0	0	11	0	0	0	0	0	0	0	2	0	0	13
3:10:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
3:15:00 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	12
3:20:00 PM	0	0	0	0	0	10	0	0	0	0	0	0	0	19	0	0	29
3:25:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	40	0	0	45
3:30:00 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	21	0	0	29
3:35:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	8	0	0	12
3:40:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0	0	10
3:45:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	7
TOTAL:	0	0	0	0	0	75	0	0	0	0	0	0	0	113	0	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location D Steffen Dr & East Driveway\Steffen Dr & Location D Driveway PM - JB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: JB

Start Time	WILSON EAST DRWY From North				STEFFEN DR LOC D From East				WILSON EAST DRWY From South				STEFFEN DR LOC D From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:10:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
3:15:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
3:20:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	6
3:25:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	9	0	0	10
3:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	5
3:35:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	18	0	0	0	0	0	0	0	17	0	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location D Steffen Dr & East Driveway\Steffen Dr & Location D Driveway PM - JB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: JB

Start Time	WILSON EAST DRWY From North				STEFFEN DR LOC D From East				WILSON EAST DRWY From South				STEFFEN DR LOC D From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location E Steffen Dr & Buntrock Ave\Steffen Dr & Location E Driveway PM - KB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: TOTAL VEHICLES

Comment 4: KB

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	5	6	0	0	0	0	0	1	5	0	0	1	0	0	0	18
2:55:00 PM	0	1	4	0	1	0	0	0	3	6	0	0	2	0	2	0	19
3:00:00 PM	0	4	6	0	0	0	0	1	0	8	0	0	3	0	1	1	24
3:05:00 PM	0	5	7	0	0	0	0	0	4	9	0	0	2	0	1	0	28
3:10:00 PM	0	4	6	0	0	0	0	0	2	6	0	0	0	0	0	0	18
3:15:00 PM	0	4	9	0	0	0	0	0	2	3	0	0	2	0	1	0	21
3:20:00 PM	0	2	11	0	0	0	0	0	3	10	0	0	16	0	4	0	46
3:25:00 PM	0	6	6	0	0	0	1	0	2	5	0	0	33	0	10	1	64
3:30:00 PM	0	6	7	0	0	0	0	0	2	10	0	0	19	0	8	0	52
3:35:00 PM	0	8	5	0	0	0	0	0	1	15	0	0	8	0	3	0	40
3:40:00 PM	0	13	1	0	0	0	0	0	4	7	0	0	2	0	2	0	29
3:45:00 PM	0	25	1	0	0	0	0	1	1	11	0	0	1	0	3	0	43
TOTAL:	0	83	69	0	1	0	1	2	25	95	0	0	89	0	35	2	

Peak Hour: 2:50-3:50PM

PHF: **0.52**

%HV: **12.5%**

0.0%

8.3%

12.9%

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location E Steffen Dr & Buntrock Ave\Steffen Dr & Location E Driveway PM - KB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: KB

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	5	6	0	0	0	0	0	1	4	0	0	1	0	0	0	17
2:55:00 PM	0	1	3	0	1	0	0	0	2	6	0	0	2	0	2	0	17
3:00:00 PM	0	4	6	0	0	0	0	1	0	7	0	0	3	0	1	1	23
3:05:00 PM	0	5	6	0	0	0	0	0	4	9	0	0	2	0	1	0	27
3:10:00 PM	0	4	3	0	0	0	0	0	1	6	0	0	0	0	0	0	14
3:15:00 PM	0	2	6	0	0	0	0	0	2	3	0	0	2	0	1	0	16
3:20:00 PM	0	2	7	0	0	0	0	0	3	9	0	0	15	0	4	0	40
3:25:00 PM	0	5	5	0	0	0	1	0	2	5	0	0	25	0	10	1	54
3:30:00 PM	0	6	6	0	0	0	0	0	2	9	0	0	17	0	6	0	46
3:35:00 PM	0	8	3	0	0	0	0	0	1	14	0	0	6	0	2	0	34
3:40:00 PM	0	13	1	0	0	0	0	0	4	6	0	0	2	0	2	0	28
3:45:00 PM	0	25	1	0	0	0	0	0	1	9	0	0	1	0	3	0	40
TOTAL:	0	80	53	0	1	0	1	1	23	87	0	0	76	0	32	2	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location E Steffen Dr & Buntrock Ave\Steffen Dr & Location E Driveway PM - KB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: KB

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
2:55:00 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
3:00:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3:05:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:10:00 PM	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4
3:15:00 PM	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3:20:00 PM	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	6
3:25:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	8	0	0	0	10
3:30:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2	0	6
3:35:00 PM	0	0	2	0	0	0	0	0	0	1	0	0	2	0	1	0	6
3:40:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3:45:00 PM	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
TOTAL:	0	3	16	0	0	0	0	1	2	8	0	0	13	0	3	0	

File Name: C:\Users\Inge\Counts\2456 PL, Mequon MS\Location E Steffen Dr & Buntrock Ave\Steffen Dr & Location E Driveway PM - KB.ppd

Start Date: 12/13/2019

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: KB

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	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	0	0	0	0

APPENDIX A

Existing Traffic Counts (September 2020)

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW AM - LO.
Start Date: 9/23/2020
Start Time: 7:05:00 AM
Site Code: 00000000
Comment 1: Mequon
Comment 2: AM
Comment 3: Total Volumes
Comment 4: LO

Start Time	STEFFEN MS W DRIVE From North					STEFFEN DR LOC A From East					STEFFEN MS W DRIVE From South					STEFFEN DR LOC A From West					TOTAL
	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
7:05:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3	4	0	0	9
7:10:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3	2	0	0	7
7:20:00 AM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	2	0	0	7
7:25:00 AM	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	2	2	0	0	9
7:30:00 AM	0	0	0	2	0	5	0	0	0	0	0	0	1	0	0	0	1	4	0	0	11
7:35:00 AM	0	0	0	0	0	14	13	0	0	0	0	0	0	0	0	0	3	14	0	0	44
7:40:00 AM	0	0	0	0	0	11	7	0	0	0	0	0	0	0	0	0	1	18	0	0	37
7:45:00 AM	0	0	0	0	0	14	9	0	0	0	0	0	0	0	0	0	1	24	0	0	48
7:50:00 AM	0	0	0	0	0	15	7	0	0	0	0	0	0	0	0	0	2	7	0	0	31
7:55:00 AM	0	0	0	0	0	4	3	0	0	0	0	0	1	0	0	0	2	3	0	0	13
8:00:00 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	2	0	0	7
	0	0	0	2		70	49	0	0		0	0	2	0		0	21	82	0		224

Peak Hour: 7:05-8:05AM
PHF: 0.39
%HV: 0.0% 1.7% 50.0% 1.9%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW AM - LC

Start Date: 9/23/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: LO

Start Time	STEFFEN MS W DRIVE From North				STEFFEN DR LOC A From East				STEFFEN MS W DRIVE From South				STEFFEN DR LOC A From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	3	4	0	
7:10:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
7:15:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	3	2	0	
7:20:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	1	2	0	
7:25:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2	0	
7:30:00 AM	0	0	0	2	5	0	0	0	0	0	1	0	0	1	4	0	
7:35:00 AM	0	0	0	0	14	13	0	0	0	0	0	0	0	2	14	0	
7:40:00 AM	0	0	0	0	11	7	0	0	0	0	0	0	0	1	18	0	
7:45:00 AM	0	0	0	0	13	9	0	0	0	0	0	0	0	0	24	0	
7:50:00 AM	0	0	0	0	15	7	0	0	0	0	0	0	0	2	7	0	
7:55:00 AM	0	0	0	0	4	3	0	0	0	0	0	0	0	2	3	0	
8:00:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	2	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW AM - LC

Start Date: 9/23/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: LO

Start Time	STEFFEN MS W DRIVE From North				STEFFEN DR LOC A From East				STEFFEN MS W DRIVE From South				STEFFEN DR LOC A From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW AM - LC

Start Date: 9/23/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: LO

Start Time	STEFFEN MS W DRIVE From North				STEFFEN DR LOC A From East				STEFFEN MS W DRIVE From South				STEFFEN DR LOC A From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW PM - LN.

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: Total Volumes

Comment 4: LN.

Start Time	STEFFEN MS W DRIVE From North					STEFFEN DR LOC A From East					STEFFEN MS W DRIVE From South					STEFFEN DR LOC A From West					TOTAL
	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
2:50:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
2:55:00 PM	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
3:00:00 PM	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0	1	6	0	0	16
3:05:00 PM	0	0	0	1	1	1	9	0	0	0	0	0	3	0	0	0	3	12	0	0	28
3:10:00 PM	0	0	0	0	0	1	10	0	0	0	1	0	0	0	0	0	3	16	0	0	31
3:15:00 PM	0	0	0	0	0	4	3	0	0	0	0	0	1	0	0	0	11	0	0	0	19
3:20:00 PM	0	0	0	0	0	2	7	0	2	3	0	0	1	1	0	0	9	0	0	0	22
3:25:00 PM	0	0	0	0	0	4	1	0	0	4	0	0	0	0	0	0	0	0	0	0	9
3:30:00 PM	0	0	0	0	0	1	5	0	0	1	0	0	1	0	0	0	32	1	0	0	41
3:35:00 PM	0	0	0	1	0	0	4	0	0	5	0	0	1	0	0	0	20	2	0	0	32
3:40:00 PM	0	0	0	0	0	2	2	0	0	9	0	0	0	0	0	0	10	0	0	0	23
3:45:00 PM	0	0	0	1	0	0	2	0	1	0	0	0	0	0	0	0	7	0	0	0	9
	0	0	0	3		23	51	0	3		23	0	7	1		0	96	39	0		239

239

239

Peak Hour: 2:50-3:50PM

PHF: 0.49

%HV: 0.0%

8.1%

6.7%

2.2%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW PM - LN

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: CARS & PEDS

Comment 4: LN.

Start Time	STEFFEN MS W DRIVE From North				STEFFEN DR LOC A From East				STEFFEN MS W DRIVE From South				STEFFEN DR LOC A From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	
2:55:00 PM	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	
3:00:00 PM	0	0	0	0	3	6	0	0	0	0	0	0	0	1	6	0	
3:05:00 PM	0	0	0	0	1	9	0	0	0	0	2	0	0	2	12	0	
3:10:00 PM	0	0	0	0	1	10	0	0	1	0	0	0	0	3	16	0	
3:15:00 PM	0	0	0	0	4	3	0	0	0	0	1	0	0	10	0	0	
3:20:00 PM	0	0	0	0	2	4	0	0	3	0	1	0	0	9	0	0	
3:25:00 PM	0	0	0	0	4	1	0	0	4	0	0	0	0	0	0	0	
3:30:00 PM	0	0	0	0	0	5	0	0	1	0	1	0	0	32	1	0	
3:35:00 PM	0	0	0	1	0	4	0	0	4	0	1	0	0	20	1	0	
3:40:00 PM	0	0	0	0	2	2	0	0	9	0	0	0	0	10	0	0	
3:45:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	7	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW PM - LN

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: LN.

Start Time	STEFFEN MS W DRIVE From North				STEFFEN DR LOC A From East				STEFFEN MS W DRIVE From South				STEFFEN DR LOC A From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
3:20:00 PM	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location A - Steffen Dr & Steffen MS West DW PM - LN

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: LN.

Start Time	STEFFEN MS W DRIVE From North				STEFFEN DR LOC A From East				STEFFEN MS W DRIVE From South				STEFFEN DR LOC A From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct AM - JS

Start Date: 9/24/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: Total Volumes

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:10:00 AM	0	0	0	1	0	1	1	0	0	0	0	0	0	3	1	0	6
7:15:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	6
7:20:00 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	1	1	0	6
7:25:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:30:00 AM	1	0	0	0	1	5	0	0	0	0	0	0	0	1	0	0	8
7:35:00 AM	0	0	0	0	0	8	0	0	7	0	9	0	0	1	0	0	25
7:40:00 AM	0	0	0	0	0	11	0	0	8	0	25	0	0	4	0	0	48
7:45:00 AM	0	0	0	2	0	23	0	0	9	0	24	0	0	1	0	0	57
7:50:00 AM	0	0	0	0	0	13	0	0	7	0	20	0	0	2	0	1	42
7:55:00 AM	2	0	0	0	0	5	1	0	0	0	9	0	0	4	0	0	21
8:00:00 AM	0	0	0	0	1	3	0	0	0	0	1	0	0	1	1	0	7
	3	0	0	3	3	79	2	0	31	0	88	0	0	20	3	1	229

229

229

Peak Hour: 7:05-8:05AM

PHF: 0.33

%HV: 0.0%

1.2%

0.8%

13.0%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct AM - .

Start Date: 9/24/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: CARS & PEDS

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	1	0	1	1	0	0	0	0	0	0	3	1	0	0
7:15:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0
7:20:00 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	1	1	0	0
7:25:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	1	0	0	0	1	5	0	0	0	0	0	0	0	1	0	0	0
7:35:00 AM	0	0	0	0	0	8	0	0	7	0	9	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	11	0	0	7	0	25	0	0	4	0	0	0
7:45:00 AM	0	0	0	0	0	22	0	0	9	0	24	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	13	0	0	7	0	20	0	0	2	0	1	0
7:55:00 AM	2	0	0	0	0	5	1	0	0	0	9	0	0	3	0	0	0
8:00:00 AM	0	0	0	0	1	3	0	0	0	0	1	0	0	1	1	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct AM - .

Start Date: 9/24/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct AM - .

Start Date: 9/24/2020

Start Time: 7:05:00 AM

Site Code: 00000000

Comment 1: Mequon

Comment 2: AM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct PM - JS

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: Total Volumes

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	1
2:55:00 PM	0	0	0	0	2	8	0	0	0	0	0	0	0	2	0	0	12
3:00:00 PM	0	0	0	0	2	4	1	0	8	0	7	0	0	1	0	0	23
3:05:00 PM	0	0	0	1	0	4	0	0	6	0	21	0	0	5	0	0	36
3:10:00 PM	0	0	0	0	0	5	0	1	8	0	28	0	0	4	0	0	45
3:15:00 PM	0	0	0	0	0	6	0	0	1	0	0	0	0	7	0	0	14
3:20:00 PM	0	0	1	0	0	11	0	0	0	0	4	1	0	1	0	0	17
3:25:00 PM	0	0	0	0	0	4	1	0	0	0	2	0	0	0	0	0	7
3:30:00 PM	0	0	0	0	1	5	0	0	1	0	0	0	0	39	0	0	46
3:35:00 PM	0	0	1	1	0	4	0	0	0	0	1	0	0	18	0	0	24
3:40:00 PM	0	0	0	0	1	3	0	0	0	0	0	0	0	14	0	0	18
3:45:00 PM	1	0	1	0	1	4	0	0	0	0	0	0	1	12	0	0	20
	1	0	3	2	8	59	2	1	24	0	63	2	1	103	0	1	264

264

Peak Hour: 2:50-3:50PM

PHF: 0.48

%HV: 0.0%

8.7%

1.1%

2.9%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct PM - .

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: CARS & PEDS

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	
2:55:00 PM	0	0	0	0	2	6	0	0	0	0	0	0	0	2	0	0	
3:00:00 PM	0	0	0	0	2	4	1	0	8	0	7	0	0	1	0	0	
3:05:00 PM	0	0	0	0	0	4	0	0	6	0	21	0	0	3	0	0	
3:10:00 PM	0	0	0	0	0	5	0	0	8	0	28	0	0	4	0	0	
3:15:00 PM	0	0	0	0	0	6	0	0	1	0	0	0	0	6	0	0	
3:20:00 PM	0	0	1	0	0	8	0	0	0	0	4	0	0	1	0	0	
3:25:00 PM	0	0	0	0	0	4	1	0	0	0	2	0	0	0	0	0	
3:30:00 PM	0	0	0	0	1	4	0	0	1	0	0	0	0	39	0	0	
3:35:00 PM	0	0	1	1	0	4	0	0	0	0	0	0	0	18	0	0	
3:40:00 PM	0	0	0	0	1	3	0	0	0	0	0	0	0	14	0	0	
3:45:00 PM	1	0	1	0	1	4	0	0	0	0	0	0	1	12	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct PM - .

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
3:20:00 PM	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location B - Steffen Dr & East DW-Elder Tree Ct PM - .

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: JS

Start Time	ELDER TREE CT From North				STEFFEN DR From East				STEFFEN CENTER DRWY From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location C - Steffan Dr & Balsam Tree Ct, PM - WP.ppr

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM (2:50-3:50pm)

Comment 3: Total Volumes

Comment 4: WP.

Start Time	BALSAM TREE CT From North				STEFFEN DR LOC C From East				STEFFEN E/WILSON W DRWY From South				STEFFEN DR LOC C From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
2:55:00 PM	0	0	0	0	1	10	0	0	0	0	0	0	0	2	0	0	13
3:00:00 PM	0	0	0	0	5	7	1	0	0	0	1	0	0	8	0	0	22
3:05:00 PM	0	0	0	1	5	4	0	0	0	0	0	0	0	23	2	0	34
3:10:00 PM	0	0	0	0	4	5	0	0	0	0	2	0	0	29	0	0	40
3:15:00 PM	1	0	0	0	5	6	1	0	1	0	0	0	0	4	1	0	19
3:20:00 PM	0	0	0	0	2	8	0	0	3	0	10	1	0	4	0	0	27
3:25:00 PM	0	0	0	0	0	5	0	0	0	0	2	0	0	3	0	0	10
3:30:00 PM	0	0	0	0	1	6	1	0	0	0	3	0	0	0	42	0	53
3:35:00 PM	0	0	0	1	0	4	0	0	0	0	9	0	0	1	15	0	29
3:40:00 PM	0	0	0	0	0	3	1	0	0	0	17	0	0	1	13	1	36
3:45:00 PM	0	0	0	0	0	5	0	1	0	0	20	0	0	1	18	0	45
	1	0	0	2	23	65	4	1	4	0	64	1	0	76	91	1	

Peak Hour: 2:50-3:50PM

PHF: 0.52

%HV: 0.0%

18.5%

23.5%

2.4%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location C - Steffan Dr & Balsam Tree Ct, PM - WP.ppr

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: CARS & PEDS

Comment 4: WP.

Start Time	BALSAM TREE CT From North				STEFFAN DR From East				BALSAM TREE CT From South				STEFFAN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	1	8	0	0	0	0	0	0	0	2	0	0	0
3:00:00 PM	0	0	0	0	5	7	1	0	0	0	1	0	0	8	0	0	0
3:05:00 PM	0	0	0	0	3	4	0	0	0	0	0	0	0	22	1	0	0
3:10:00 PM	0	0	0	0	0	5	0	0	0	0	2	0	0	29	0	0	0
3:15:00 PM	1	0	0	0	0	6	1	0	1	0	0	0	0	4	0	0	0
3:20:00 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	0
3:25:00 PM	0	0	0	0	0	5	0	0	0	0	1	0	0	3	0	0	0
3:30:00 PM	0	0	0	0	0	5	1	0	0	0	1	0	0	0	42	0	0
3:35:00 PM	0	0	0	1	0	4	0	0	0	0	9	0	0	1	15	0	0
3:40:00 PM	0	0	0	0	0	3	1	0	0	0	17	0	0	0	13	0	0
3:45:00 PM	0	0	0	0	0	5	0	0	0	0	20	0	0	1	18	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location C - Steffan Dr & Balsam Tree Ct, PM - WP.ppr

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: WP.

Start Time	BALSAM TREE CT From North				STEFFAN DR From East				BALSAM TREE CT From South				STEFFAN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	0	0
3:10:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0
3:20:00 PM	0	0	0	0	2	0	0	0	3	0	10	1	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location C - Steffan Dr & Balsam Tree Ct, PM - WP.ppr

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: WP.

Start Time	BALSAM TREE CT From North				STEFFAN DR From East				BALSAM TREE CT From South				STEFFAN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
3:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location D - Steffen Dr & Wilson East DW PM - RA.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM (2:50-3:50PM)

Comment 3: Total Volumes

Comment 4: RA

Start Time	WILSON EAST DR From North				STEFFEN DR LOCAT D From East				WILSON EAST DR From South				STEFFEN DR LOCAT D From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
2:55:00 PM	0	0	0	0	1	9	0	0	0	0	0	0	0	2	0	0	12
3:00:00 PM	0	0	0	0	1	13	0	0	0	0	0	0	0	8	0	0	22
3:05:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	22	0	0	29
3:10:00 PM	0	0	0	0	0	5	0	0	0	0	1	1	0	32	0	0	38
3:15:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	5	0	0	12
3:20:00 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	12
3:25:00 PM	0	0	0	0	3	6	0	0	0	0	0	0	0	4	0	0	13
3:30:00 PM	0	0	0	0	1	5	0	0	0	0	0	0	0	2	0	0	8
3:35:00 PM	0	0	0	0	0	4	0	0	0	0	1	1	0	10	0	0	15
3:40:00 PM	0	0	0	0	3	4	0	0	0	0	0	0	0	17	0	0	24
3:45:00 PM	0	0	0	0	1	5	0	0	0	0	0	0	0	22	0	0	28
	0	0	0	0	10	76	0	0	0	0	2	2	0	129	0	0	

Peak Hour: 2:50-3:50PM

PHF: **0.48**

%HV: **0.0%**

18.6%

50.0%

11.6%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location D - Steffen Dr & Wilson East DW PM - RA.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM (2:50-3:50PM)

Comment 3: CARS & PEDS

Comment 4: RA

Start Time	WILSON EAST DR From North				STEFFEN DR LOCAT D From East				WILSON EAST DR From South				STEFFEN DR LOCAT D From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	
2:55:00 PM	0	0	0	0	1	9	0	0	0	0	0	0	0	2	0	0	
3:00:00 PM	0	0	0	0	1	13	0	0	0	0	0	0	0	8	0	0	
3:05:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	22	0	0	
3:10:00 PM	0	0	0	0	0	5	0	0	0	0	1	1	0	32	0	0	
3:15:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	5	0	0	
3:20:00 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	
3:25:00 PM	0	0	0	0	3	6	0	0	0	0	0	0	0	4	0	0	
3:30:00 PM	0	0	0	0	1	5	0	0	0	0	0	0	0	2	0	0	
3:35:00 PM	0	0	0	0	0	4	0	0	0	0	1	1	0	10	0	0	
3:40:00 PM	0	0	0	0	3	4	0	0	0	0	0	0	0	17	0	0	
3:45:00 PM	0	0	0	0	1	5	0	0	0	0	0	0	0	22	0	0	
	0	0	0	0	10	76	0	0	0	0	2	2	0	129	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location D - Steffen Dr & Wilson East DW PM - RA.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM (2:50-3:50PM)

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: RA

Start Time	WILSON EAST DR From North				STEFFEN DR LOCAT D From East				WILSON EAST DR From South				STEFFEN DR LOCAT D From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:55:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:05:00 PM	0	0	0	1	0	2	0	0	0	0	0	0	0	1	0	0	
3:10:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
3:15:00 PM	0	0	0	0	0	6	0	0	0	0	0	1	0	0	0	0	
3:20:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	10	0	0	
3:25:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
3:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	1	0	15	0	0	1	0	0	2	0	15	0	0	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location D - Steffen Dr & Wilson East DW PM - RA.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: Weekday PM (2:50-3:50PM)

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: RA

Start Time	WILSON EAST DR From North				STEFFEN DR LOCAT D From East				WILSON EAST DR From South				STEFFEN DR LOCAT D From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location E - Buntrock Ave & Steffen Dr PM - AS.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM (2:50-3:50PM)

Comment 3: Total Volumes

Comment 4: AS

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	3	2	0	0	0	0	2	1	0	0	2	0	0	0	1	6
2:55:00 PM	0	3	9	0	0	0	0	0	2	3	0	0	1	1	1	0	20
3:00:00 PM	0	1	9	0	0	0	0	0	5	3	0	0	6	0	2	1	26
3:05:00 PM	0	2	7	1	0	0	0	1	2	2	0	0	16	0	6	0	35
3:10:00 PM	0	1	8	0	0	0	0	0	1	0	0	0	29	0	6	0	45
3:15:00 PM	0	1	11	0	0	0	0	2	2	6	0	2	3	0	2	0	25
3:20:00 PM	0	3	5	0	0	0	0	0	4	1	0	0	12	0	1	0	26
3:25:00 PM	0	3	4	0	0	0	0	0	6	4	0	0	4	0	2	0	23
3:30:00 PM	0	4	4	0	0	0	0	0	3	9	0	0	1	0	2	0	23
3:35:00 PM	0	1	1	0	0	0	0	0	3	6	0	0	6	0	5	3	22
3:40:00 PM	0	5	5	0	0	0	0	1	2	2	0	1	12	0	5	4	31
3:45:00 PM	0	5	5	0	0	0	0	3	2	3	0	3	18	0	4	4	37
	0	32	70	1	0	0	0	9	33	39	0	8	108	1	36	13	

Peak Hour: 2:50-3:50PM

PHF: 0.59

%HV: 24.5%

0.0%

8.3%

10.3%

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location E - Buntrock Ave & Steffen Dr PM - AS.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM (2:50-3:50PM)

Comment 3: CARS & PEDS

Comment 4: AS

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	2	2	0	0	0	0	2	1	0	0	2	0	0	0	1	
2:55:00 PM	0	2	8	0	0	0	0	0	1	3	0	0	1	1	1	0	
3:00:00 PM	0	1	9	0	0	0	0	0	5	3	0	0	6	0	2	1	
3:05:00 PM	0	1	5	0	0	0	0	0	2	2	0	0	15	0	6	0	
3:10:00 PM	0	1	4	0	0	0	0	0	1	0	0	0	29	0	6	0	
3:15:00 PM	0	1	6	0	0	0	0	1	1	6	0	1	3	0	2	0	
3:20:00 PM	0	3	4	0	0	0	0	0	4	0	0	0	3	0	0	0	
3:25:00 PM	0	2	3	0	0	0	0	0	6	3	0	0	3	0	2	0	
3:30:00 PM	0	3	4	0	0	0	0	0	2	9	0	0	1	0	0	0	
3:35:00 PM	0	0	1	0	0	0	0	0	3	5	0	0	6	0	5	3	
3:40:00 PM	0	2	5	0	0	0	0	1	2	2	0	1	12	0	4	4	
3:45:00 PM	0	3	5	0	0	0	0	3	2	3	0	3	18	0	4	4	

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location E - Buntrock Ave & Steffen Dr PM - AS.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM (2:50-3:50PM)

Comment 3: MEDIUM TRUCKS, BUSES & BIKES

Comment 4: AS

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	1	2	1	0	0	0	1	0	0	0	0	1	0	0	0	0
3:10:00 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	5	0	0	0	0	1	1	0	0	1	0	0	0	0	0
3:20:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	9	0	1	0	0
3:25:00 PM	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0
3:30:00 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0
3:35:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:40:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3:45:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: C:\Users\Inge\Counts\2505 Mequon Schools Counts\Wilson Steffens Counts\Location E - Buntrock Ave & Steffen Dr PM - AS.ppd

Start Date: 9/22/2020

Start Time: 2:50:00 PM

Site Code: 00000000

Comment 1: Mequon

Comment 2: PM (2:50-3:50PM)

Comment 3: HEAVY TRUCKS & U-TURNS

Comment 4: AS

Start Time	BUNTROCK AVE From North				STEFFEN DR From East				BUNTROCK AVE From South				STEFFEN DR From West				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
2:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B

PEAK HOUR ANALYSIS OUTPUTS

APPENDIX B

Existing Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Volume (vph)	25	85	80	50	1	5
Future Volume (vph)	25	85	80	50	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.896				0.885	
Flt Protected				0.970	0.993	
Satd. Flow (prot)	1621	0	0	1825	1113	0
Flt Permitted				0.970	0.993	
Satd. Flow (perm)	1621	0	0	1825	1113	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	1%	1%	50%	50%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	86	293	276	172	3	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	379	0	0	448	20	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

TADI

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Synchro 10 Report

HCM 6th TWSC
100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Vol, veh/h	25	85	80	50	1	5
Future Vol, veh/h	25	85	80	50	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	29	29	29	29	29	29
Heavy Vehicles, %	5	5	1	1	50	50
Mvmt Flow	86	293	276	172	3	17

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	379
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.11
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.209
Pot Cap-1 Maneuver	-	-	1185
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1185
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.5	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	466	-	-	1185	-
HCM Lane V/C Ratio	0.044	-	-	0.233	-
HCM Control Delay (s)	13.1	-	-	9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.9	-

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Synchro 10 Report

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	25	5	1	95	1	35	1	95	1	1	1
Future Volume (vph)	1	25	5	1	95	1	35	1	95	1	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.978			0.999			0.902			0.955	
Flt Protected		0.999						0.987			0.984	
Satd. Flow (prot)	0	1509	0	0	1879	0	0	1675	0	0	1768	0
Flt Permitted		0.999						0.987			0.984	
Satd. Flow (perm)	0	1509	0	0	1879	0	0	1675	0	0	1768	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	23%	23%	23%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	83	17	3	317	3	117	3	317	3	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	323	0	0	437	0	0	9	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

TADI

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	25	5	1	95	1	35	1	95	1	1	1
Future Vol, veh/h	1	25	5	1	95	1	35	1	95	1	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	30	30	30	30	30	30	30	30	30	30	30	30
Heavy Vehicles, %	23	23	23	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	83	17	3	317	3	117	3	317	3	3	3

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	320	0	0	100	0	0	426	424	92	583	431	319
Stage 1	-	-	-	-	-	-	98	98	-	325	325	-
Stage 2	-	-	-	-	-	-	328	326	-	258	106	-
Critical Hdwy	4.33	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.407	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1131	-	-	1499	-	-	540	523	968	425	519	724
Stage 1	-	-	-	-	-	-	911	816	-	690	651	-
Stage 2	-	-	-	-	-	-	687	650	-	749	809	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1131	-	-	1499	-	-	533	520	968	283	516	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	533	520	-	283	516	-
Stage 1	-	-	-	-	-	-	908	814	-	688	650	-
Stage 2	-	-	-	-	-	-	679	649	-	500	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	15	13.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	790	1131	-	-	1499	-	-	438
HCM Lane V/C Ratio	0.553	0.003	-	-	0.002	-	-	0.023
HCM Control Delay (s)	15	8.2	0	-	7.4	0	-	13.4
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	3.4	0	-	-	0	-	-	0.1

TADI

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Synchro 10 Report

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Volume (vph)	25	30	35	45	10	20
Future Volume (vph)	25	30	35	45	10	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)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.926				0.910	
Flt Protected				0.979	0.984	
Satd. Flow (prot)	1644	0	0	1738	1636	0
Flt Permitted				0.979	0.984	
Satd. Flow (perm)	1644	0	0	1738	1636	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	86	103	121	155	34	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	0	276	103	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Vol, veh/h	25	30	35	45	10	20
Future Vol, veh/h	25	30	35	45	10	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	29	29	29	29	29	29
Heavy Vehicles, %	7	7	7	7	4	4
Mvmt Flow	86	103	121	155	34	69

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	189
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.17
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.263
Pot Cap-1 Maneuver	-	-	1355
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1355
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	680	-	-	1355	-
HCM Lane V/C Ratio	0.152	-	-	0.089	-
HCM Control Delay (s)	11.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	45	1	5	65	1	15	1	60	5	1	1
Future Volume (vph)	1	45	1	5	65	1	15	1	60	5	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.997			0.998			0.894			0.980		
Flt Protected	0.999			0.996			0.990			0.966		
Satd. Flow (prot)	0	1736	0	0	1749	0	0	1665	0	0	1781	0
Flt Permitted	0.999			0.996			0.990			0.966		
Satd. Flow (perm)	0	1736	0	0	1749	0	0	1665	0	0	1781	0
Link Speed (mph)	25			25			25			25		
Link Distance (ft)	440			210			81			140		
Travel Time (s)	12.0			5.7			2.2			3.8		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%			0%			0%		
Adj. Flow (vph)	4	167	4	19	241	4	56	4	222	19	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	175	0	0	264	0	0	282	0	0	27	0
Sign Control	Free		Free		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

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	1	45	1	5	65	1	15	1	60	5	1	1
Future Vol, veh/h	1	45	1	5	65	1	15	1	60	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles, %	9	9	9	8	8	8	1	1	1	1	1	1
Mvmt Flow	4	167	4	19	241	4	56	4	222	19	4	4

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	245	0	0	171	0	0	462	460	169	571	460	243
Stage 1	-	-	-	-	-	-	177	177	-	281	281	-
Stage 2	-	-	-	-	-	-	285	283	-	290	179	-
Critical Hdwy	4.19	-	-	4.18	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.281	-	-	2.272	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1281	-	-	1371	-	-	512	499	878	433	499	798
Stage 1	-	-	-	-	-	-	827	755	-	728	680	-
Stage 2	-	-	-	-	-	-	724	679	-	720	753	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1281	-	-	1371	-	-	499	490	878	317	490	798
Mov Cap-2 Maneuver	-	-	-	-	-	-	499	490	-	317	490	-
Stage 1	-	-	-	-	-	-	825	753	-	726	669	-
Stage 2	-	-	-	-	-	-	705	668	-	534	751	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	12.5	15.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	757	1281	-	-	1371	-	-	367
HCM Lane V/C Ratio	0.372	0.003	-	-	0.014	-	-	0.071
HCM Control Delay (s)	12.5	7.8	0	-	7.7	0	-	15.6
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.7	0	-	-	0	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	105	5	20	65	5	5	1	15	5	1	1
Future Volume (vph)	1	105	5	20	65	5	5	1	15	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.992			0.904			0.982	
Flt Protected					0.989			0.988			0.965	
Satd. Flow (prot)	0	1816	0	0	1566	0	0	893	0	0	1783	0
Flt Permitted					0.989			0.988			0.965	
Satd. Flow (perm)	0	1816	0	0	1566	0	0	893	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		210			260			100			102	
Travel Time (s)		5.7			7.1			2.7			2.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	19%	19%	19%	90%	90%	90%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	328	16	63	203	16	16	3	47	16	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	347	0	0	282	0	0	66	0	0	22	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	105	5	20	65	5	5	1	15	5	1	1
Future Vol, veh/h	1	105	5	20	65	5	5	1	15	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	32	32	32	32	32	32	32	32	32	32	32	32
Heavy Vehicles, %	4	4	4	19	19	19	90	90	90	1	1	1
Mvmt Flow	3	328	16	63	203	16	16	3	47	16	3	3

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	219	0	0	344
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	4.29	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.236	-	2.371	-
Pot Cap-1 Maneuver	1339	-	1126	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1339	-	1126	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	15.4	16.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	410	1339	-	-	1126	-	-	340
HCM Lane V/C Ratio	0.16	0.002	-	-	0.056	-	-	0.064
HCM Control Delay (s)	15.4	7.7	0	-	8.4	0	-	16.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings
130: Wilson East Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Volume (vph)	125	1	1	90	1	1
Future Volume (vph)	125	1	1	90	1	1
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)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1680	0	0	1595	1711	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1680	0	0	1595	1711	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	260			100	85	
Travel Time (s)	7.1			2.7	2.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.34	0.34	0.34	0.34	0.34	0.34
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	19%	19%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	368	3	3	265	3	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	371	0	0	268	6	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
130: Wilson East Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Vol, veh/h	125	1	1	90	1	1
Future Vol, veh/h	125	1	1	90	1	1
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	34	34	34	34	34	34
Heavy Vehicles, %	13	13	19	19	1	1
Mvmt Flow	368	3	3	265	3	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	371
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.29
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.371
Pot Cap-1 Maneuver	-	-	1100
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1100
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	534	-	-	1100	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Control Delay (s)	11.8	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
140: Buntrock Ave & Steffen Dr

01/06/2020

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	90	35	20	95	85	70
Future Volume (vph)	90	35	20	95	85	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.962				0.939	
Flt Protected	0.965			0.991		
Satd. Flow (prot)	1561	0	0	1666	1652	0
Flt Permitted	0.965			0.991		
Satd. Flow (perm)	1561	0	0	1666	1652	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	100			288	998	
Travel Time (s)	2.7			7.9	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.52	0.52	0.52	0.52	0.52	0.52
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	13%	13%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	173	67	38	183	163	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	0	0	221	298	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
140: Buntrock Ave & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	90	35	20	95	85	70
Future Vol, veh/h	90	35	20	95	85	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	13	13	13	13	8	8
Mvmt Flow	173	67	38	183	163	135

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	490	231	298
Stage 1	231	-	-
Stage 2	259	-	-
Critical Hdwy	6.53	6.33	4.23
Critical Hdwy Stg 1	5.53	-	-
Critical Hdwy Stg 2	5.53	-	-
Follow-up Hdwy	3.617	3.417	2.317
Pot Cap-1 Maneuver	518	782	1203
Stage 1	782	-	-
Stage 2	759	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	500	782	1203
Mov Cap-2 Maneuver	500	-	-
Stage 1	755	-	-
Stage 2	759	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.3	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	1203	-	556	-
HCM Lane V/C Ratio	0.032	-	0.432	-
HCM Control Delay (s)	8.1	0	16.3	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	2.2	-

APPENDIX B

Growth Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Volume (vph)	25	105	95	55	1	5
Future Volume (vph)	25	105	95	55	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.891				0.885	
Flt Protected				0.969	0.993	
Satd. Flow (prot)	1612	0	0	1823	1113	0
Flt Permitted				0.969	0.993	
Satd. Flow (perm)	1612	0	0	1823	1113	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	1%	1%	50%	50%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	86	362	328	190	3	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	448	0	0	518	20	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Vol, veh/h	25	105	95	55	1	5
Future Vol, veh/h	25	105	95	55	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	29	29	29	29	29	29
Heavy Vehicles, %	5	5	1	1	50	50
Mvmt Flow	86	362	328	190	3	17

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	448
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.11
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.209
Pot Cap-1 Maneuver	-	-	1118
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1118
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	389	-	-	1118	-
HCM Lane V/C Ratio	0.053	-	-	0.293	-
HCM Control Delay (s)	14.8	-	-	9.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	1.2	-

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	25	5	1	110	0	40	1	120	1	1	1
Future Volume (vph)	1	25	5	1	110	0	40	1	120	1	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.978						0.899			0.955	
Flt Protected		0.999						0.988			0.984	
Satd. Flow (prot)	0	1509	0	0	1881	0	0	1671	0	0	1768	0
Flt Permitted		0.999						0.988			0.984	
Satd. Flow (perm)	0	1509	0	0	1881	0	0	1671	0	0	1768	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	23%	23%	23%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	83	17	3	367	0	133	3	400	3	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	370	0	0	536	0	0	9	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	25	5	1	110	0	40	1	120	1	1	1
Future Vol, veh/h	1	25	5	1	110	0	40	1	120	1	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	30	30	30	30	30	30	30	30	30	30	30	30
Heavy Vehicles, %	23	23	23	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	83	17	3	367	0	133	3	400	3	3	3

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	367	0	0	100	0	0	474	471	92	672	479	367
Stage 1	-	-	-	-	-	-	98	98	-	373	373	-
Stage 2	-	-	-	-	-	-	376	373	-	299	106	-
Critical Hdwy	4.33	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.407	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1085	-	-	1499	-	-	502	492	968	371	487	681
Stage 1	-	-	-	-	-	-	911	816	-	650	620	-
Stage 2	-	-	-	-	-	-	647	620	-	712	809	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1085	-	-	1499	-	-	494	489	968	216	484	681
Mov Cap-2 Maneuver	-	-	-	-	-	-	494	489	-	216	484	-
Stage 1	-	-	-	-	-	-	908	814	-	648	618	-
Stage 2	-	-	-	-	-	-	638	618	-	415	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	19.3	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	778	1085	-	-	1499	-	-	367
HCM Lane V/C Ratio	0.69	0.003	-	-	0.002	-	-	0.027
HCM Control Delay (s)	19.3	8.3	0	-	7.4	0	-	15.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.6	0	-	-	0	-	-	0.1

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Synchro 10 Report

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

01/07/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Volume (vph)	25	35	50	50	10	20
Future Volume (vph)	25	35	50	50	10	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)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.921				0.910	
Flt Protected				0.976	0.984	
Satd. Flow (prot)	1635	0	0	1733	1636	0
Flt Permitted				0.976	0.984	
Satd. Flow (perm)	1635	0	0	1733	1636	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	86	121	172	172	34	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	0	344	103	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

01/07/2020

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Vol, veh/h	25	35	50	50	10	20
Future Vol, veh/h	25	35	50	50	10	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	29	29	29	29	29	29
Heavy Vehicles, %	7	7	7	7	4	4
Mvmt Flow	86	121	172	172	34	69

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	207
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.17
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.263
Pot Cap-1 Maneuver	-	-	1335
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1335
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	601	-	-	1335	-
HCM Lane V/C Ratio	0.172	-	-	0.129	-
HCM Control Delay (s)	12.2	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.4	-

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	45	1	5	80	0	20	1	80	5	1	1
Future Volume (vph)	1	45	1	5	80	0	20	1	80	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997						0.893			0.980	
Flt Protected		0.999			0.997			0.990			0.966	
Satd. Flow (prot)	0	1736	0	0	1754	0	0	1663	0	0	1781	0
Flt Permitted		0.999			0.997			0.990			0.966	
Satd. Flow (perm)	0	1736	0	0	1754	0	0	1663	0	0	1781	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	167	4	19	296	0	74	4	296	19	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	175	0	0	315	0	0	374	0	0	27	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/07/2020

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	45	1	5	80	0	20	1	80	5	1	1
Future Vol, veh/h	1	45	1	5	80	0	20	1	80	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles, %	9	9	9	8	8	8	1	1	1	1	1	1
Mvmt Flow	4	167	4	19	296	0	74	4	296	19	4	4

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	296	0	0	171	0	0	515	511	169	661	513	296
Stage 1	-	-	-	-	-	-	177	177	-	334	334	-
Stage 2	-	-	-	-	-	-	338	334	-	327	179	-
Critical Hdwy	4.19	-	-	4.18	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.281	-	-	2.272	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1226	-	-	1371	-	-	472	467	878	377	466	746
Stage 1	-	-	-	-	-	-	827	755	-	682	645	-
Stage 2	-	-	-	-	-	-	679	645	-	688	753	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1226	-	-	1371	-	-	459	457	878	244	456	746
Mov Cap-2 Maneuver	-	-	-	-	-	-	459	457	-	244	456	-
Stage 1	-	-	-	-	-	-	824	752	-	679	634	-
Stage 2	-	-	-	-	-	-	660	634	-	452	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	14.8	18.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	738	1226	-	-	1371	-	-	291
HCM Lane V/C Ratio	0.507	0.003	-	-	0.014	-	-	0.089
HCM Control Delay (s)	14.8	7.9	0	-	7.7	0	-	18.6
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	2.9	0	-	-	0	-	-	0.3

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Synchro 10 Report

Lanes, Volumes, Timings

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	125	5	20	80	5	5	1	15	5	1	1
Future Volume (vph)	1	125	5	20	80	5	5	1	15	5	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%				0%				0%			
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.995				0.993		0.904				0.982	
Flt Protected					0.991		0.988				0.965	
Satd. Flow (prot)	0	1818	0	0	1571	0	0	893	0	0	1783	0
Flt Permitted					0.991		0.988				0.965	
Satd. Flow (perm)	0	1818	0	0	1571	0	0	893	0	0	1783	0
Link Speed (mph)	25				25		25				25	
Link Distance (ft)	210				260		100				102	
Travel Time (s)	5.7				7.1		2.7				2.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	19%	19%	19%	90%	90%	90%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%				0%		0%				0%	
Adj. Flow (vph)	3	391	16	63	250	16	16	3	47	16	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	410	0	0	329	0	0	66	0	0	22	0
Sign Control	Free				Free		Stop				Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/07/2020

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	125	5	20	80	5	5	1	15	5	1	1
Future Vol, veh/h	1	125	5	20	80	5	5	1	15	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	32	32	32	32	32	32	32	32	32	32	32	32
Heavy Vehicles, %	4	4	4	19	19	19	90	90	90	1	1	1
Mvmt Flow	3	391	16	63	250	16	16	3	47	16	3	3

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	266	0	0	407
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.29
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.236	-	-	2.371
Pot Cap-1 Maneuver	1286	-	-	1066
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1286	-	-	1066
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	17.4	18.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1286	-	-	1066	-	-	286
HCM Lane V/C Ratio	0.184	0.002	-	-	0.059	-	-	0.076
HCM Control Delay (s)	17.4	7.8	0	-	8.6	0	-	18.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings
130: Wilson East Driveway & Steffen Dr

01/07/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Volume (vph)	145	1	0	105	1	1
Future Volume (vph)	145	1	0	105	1	1
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)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1680	0	0	1597	1711	0
Flt Permitted					0.976	
Satd. Flow (perm)	1680	0	0	1597	1711	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	260			100	85	
Travel Time (s)	7.1			2.7	2.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.34	0.34	0.34	0.34	0.34	0.34
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	19%	19%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	426	3	0	309	3	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	429	0	0	309	6	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC
130: Wilson East Driveway & Steffen Dr

01/07/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Vol, veh/h	145	1	0	105	1	1
Future Vol, veh/h	145	1	0	105	1	1
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	34	34	34	34	34	34
Heavy Vehicles, %	13	13	19	19	1	1
Mvmt Flow	426	3	0	309	3	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	737 428
Stage 1	-	-	-	-	428 -
Stage 2	-	-	-	-	309 -
Critical Hdwy	-	-	-	-	6.41 6.21
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	-	-	3.509 3.309
Pot Cap-1 Maneuver	-	-	0	-	387 629
Stage 1	-	-	0	-	660 -
Stage 2	-	-	0	-	747 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	387 629
Mov Cap-2 Maneuver	-	-	-	-	387 -
Stage 1	-	-	-	-	660 -
Stage 2	-	-	-	-	747 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	479	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s)	12.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

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Synchro 10 Report

Lanes, Volumes, Timings
140: Buntrock Ave & Steffen Dr

01/07/2020

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	105	40	25	95	85	80
Future Volume (vph)	105	40	25	95	85	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.963				0.934	
Flt Protected	0.965			0.990		
Satd. Flow (prot)	1563	0	0	1665	1643	0
Flt Permitted	0.965			0.990		
Satd. Flow (perm)	1563	0	0	1665	1643	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	100			288	998	
Travel Time (s)	2.7			7.9	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.52	0.52	0.52	0.52	0.52	0.52
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	13%	13%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	202	77	48	183	163	154
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	0	231	317	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
140: Buntrock Ave & Steffen Dr

01/07/2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	105	40	25	95	85	80
Future Vol, veh/h	105	40	25	95	85	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	13	13	13	13	8	8
Mvmt Flow	202	77	48	183	163	154

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	519	240	317	0	-	0
Stage 1	240	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.23	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.317	-	-	-
Pot Cap-1 Maneuver	498	773	1183	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	476	773	1183	-	-	-
Mov Cap-2 Maneuver	476	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	1.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	1183	-	532	-
HCM Lane V/C Ratio	0.041	-	0.524	-
HCM Control Delay (s)	8.2	0	19	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	3	-

APPENDIX B

COVID-Based Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Steffen West Driveway & Steffen Dr

11/04/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Volume (vph)	20	80	70	45	1	5
Future Volume (vph)	20	80	70	45	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.892				0.889	
Flt Protected				0.970	0.991	
Satd. Flow (prot)	1662	0	0	1807	1116	0
Flt Permitted				0.970	0.991	
Satd. Flow (perm)	1662	0	0	1807	1116	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.39	0.39	0.39	0.39	0.35	0.35
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	50%	50%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	51	205	179	115	3	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	256	0	0	294	17	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
100: Steffen West Driveway & Steffen Dr

11/04/2020

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Vol, veh/h	20	80	70	45	1	5
Future Vol, veh/h	20	80	70	45	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	39	39	39	39	35	35
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	51	205	179	115	3	14

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	256
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1309
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1309
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	632	-	-	1309	-
HCM Lane V/C Ratio	0.027	-	-	0.137	-
HCM Control Delay (s)	10.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.5	-

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

11/04/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	1	20	5	5	85	5	30	1	90	5	1	1
Future Volume (vph)	1	20	5	5	85	5	30	1	90	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.974			0.993			0.900			0.981	
Flt Protected		0.998			0.997			0.988			0.966	
Satd. Flow (prot)	0	1634	0	0	1862	0	0	1673	0	0	1783	0
Flt Permitted		0.998			0.997			0.988			0.966	
Satd. Flow (perm)	0	1634	0	0	1862	0	0	1673	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	13%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	61	15	15	258	15	91	3	273	15	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	288	0	0	367	0	0	21	0
Sign Control	Free			Free			Stop			Stop		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

11/04/2020

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	20	5	5	85	5	30	1	90	5	1	1
Future Vol, veh/h	1	20	5	5	85	5	30	1	90	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	33	33	33	33	33	33	33	33	33	33	33	33
Heavy Vehicles, %	13	13	13	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	61	15	15	258	15	91	3	273	15	3	3

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	273	0	0	76	0	0	374	378	69	509	378	266
Stage 1	-	-	-	-	-	-	75	75	-	296	296	-
Stage 2	-	-	-	-	-	-	299	303	-	213	82	-
Critical Hdwy	4.23	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.317	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1229	-	-	1529	-	-	585	555	997	476	555	775
Stage 1	-	-	-	-	-	-	937	834	-	715	670	-
Stage 2	-	-	-	-	-	-	712	665	-	791	829	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1229	-	-	1529	-	-	574	547	997	340	547	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	574	547	-	340	547	-
Stage 1	-	-	-	-	-	-	934	831	-	713	662	-
Stage 2	-	-	-	-	-	-	697	657	-	571	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	12.6	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	838	1229	-	-	1529	-	-	393
HCM Lane V/C Ratio	0.438	0.002	-	-	0.01	-	-	0.054
HCM Control Delay (s)	12.6	7.9	0	-	7.4	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	2.2	0	-	-	0	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

11/04/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Volume (vph)	95	40	25	60	25	5
Future Volume (vph)	95	40	25	60	25	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.960				0.978	
Flt Protected				0.985	0.960	
Satd. Flow (prot)	1788	0	0	1733	1667	0
Flt Permitted				0.985	0.960	
Satd. Flow (perm)	1788	0	0	1733	1667	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	8%	8%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	194	82	51	122	51	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	276	0	0	173	61	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

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Synchro 10 Report

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

11/04/2020

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Vol, veh/h	95	40	25	60	25	5
Future Vol, veh/h	95	40	25	60	25	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	49	49	49	49	49	49
Heavy Vehicles, %	2	2	8	8	7	7
Mvmt Flow	194	82	51	122	51	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	276
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.18
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.272
Pot Cap-1 Maneuver	-	-	1253
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1253
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	-	-	1253	-
HCM Lane V/C Ratio	0.11	-	-	0.041	-
HCM Control Delay (s)	12.2	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

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Synchro 10 Report

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

11/04/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	100	1	10	55	5	25	1	65	1	1	5
Future Volume (vph)	1	100	1	10	55	5	25	1	65	1	1	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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.991			0.904			0.904	
Flt Protected					0.993			0.986			0.993	
Satd. Flow (prot)	0	1843	0	0	1715	0	0	1677	0	0	1689	0
Flt Permitted					0.993			0.986			0.993	
Satd. Flow (perm)	0	1843	0	0	1715	0	0	1677	0	0	1689	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	208	2	21	115	10	52	2	135	2	2	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	0	146	0	0	189	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

11/04/2020

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	100	1	10	55	5	25	1	65	1	1	5
Future Vol, veh/h	1	100	1	10	55	5	25	1	65	1	1	5
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	48	48	48	48	48	48	48	48	48
Heavy Vehicles, %	3	3	3	9	9	9	1	1	1	1	1	1
Mvmt Flow	2	208	2	21	115	10	52	2	135	2	2	10

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	125	0	0	210
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.13	-	4.19	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.227	-	2.281	-
Pot Cap-1 Maneuver	1455	-	1320	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1455	-	1320	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.1	11.6	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	733	1455	-	-	1320	-	-	737
HCM Lane V/C Ratio	0.259	0.001	-	-	0.016	-	-	0.02
HCM Control Delay (s)	11.6	7.5	0	-	7.8	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	0.1

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Synchro 10 Report

Lanes, Volumes, Timings

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

11/04/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	75	90	25	65	5	5	1	65	5	1	1
Future Volume (vph)	1	75	90	25	65	5	5	1	65	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.927			0.993			0.877			0.981		
Flt Protected					0.987			0.996			0.966	
Satd. Flow (prot)	0	1727	0	0	1565	0	0	1338	0	0	1783	0
Flt Permitted					0.987			0.996			0.966	
Satd. Flow (perm)	0	1727	0	0	1565	0	0	1338	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		210			260			100			102	
Travel Time (s)		5.7			7.1			2.7			2.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	19%	19%	19%	24%	24%	24%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	144	173	48	125	10	10	2	125	10	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	319	0	0	183	0	0	137	0	0	14	0
Sign Control	Free			Free			Stop			Stop		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

11/04/2020

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	75	90	25	65	5	5	1	65	5	1	1
Future Vol, veh/h	1	75	90	25	65	5	5	1	65	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	52	52	52	52	52	52	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	19	19	19	24	24	24	1	1	1
Mvmt Flow	2	144	173	48	125	10	10	2	125	10	2	2

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	135	0	0	317	0	0	463	466	231	524	547	130
Stage 1	-	-	-	-	-	-	235	235	-	226	226	-
Stage 2	-	-	-	-	-	-	228	231	-	298	321	-
Critical Hdwy	4.12	-	-	4.29	-	-	7.34	6.74	6.44	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.34	5.74	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.34	5.74	-	6.11	5.51	-
Follow-up Hdwy	2.218	-	-	2.371	-	-	3.716	4.216	3.516	3.509	4.009	3.309
Pot Cap-1 Maneuver	1449	-	-	1153	-	-	474	463	757	465	446	922
Stage 1	-	-	-	-	-	-	721	672	-	779	719	-
Stage 2	-	-	-	-	-	-	728	674	-	713	653	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1449	-	-	1153	-	-	455	441	757	373	425	922
Mov Cap-2 Maneuver	-	-	-	-	-	-	455	441	-	373	425	-
Stage 1	-	-	-	-	-	-	720	671	-	777	687	-
Stage 2	-	-	-	-	-	-	692	644	-	592	652	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0		2.2		11.2		13.9
HCM LOS					B		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	1449	-	-	1153	-	-	416
HCM Lane V/C Ratio	0.191	0.001	-	-	0.042	-	-	0.032
HCM Control Delay (s)	11.2	7.5	0	-	8.3	0	-	13.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1

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Synchro 10 Report

Lanes, Volumes, Timings
130: Wilson East Driveway & Steffen Dr

11/04/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Volume (vph)	145	1	10	95	1	5
Future Volume (vph)	145	1	10	95	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.887	
Frt Protected				0.995	0.992	
Satd. Flow (prot)	1695	0	0	1589	1115	0
Frt Permitted				0.995	0.992	
Satd. Flow (perm)	1695	0	0	1589	1115	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	260			100	85	
Travel Time (s)	7.1			2.7	2.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.48	0.48	0.48	0.48	0.48	0.48
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	12%	12%	19%	19%	50%	50%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	302	2	21	198	2	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	304	0	0	219	12	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
130: Wilson East Driveway & Steffen Dr

11/04/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Vol, veh/h	145	1	10	95	1	5
Future Vol, veh/h	145	1	10	95	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	48	48	48	48	48	48
Heavy Vehicles, %	12	12	19	19	50	50
Mvmt Flow	302	2	21	198	2	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	304
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.29
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.371
Pot Cap-1 Maneuver	-	-	1166
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1166
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	586	-	-	1166	-
HCM Lane V/C Ratio	0.021	-	-	0.018	-
HCM Control Delay (s)	11.3	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lanes, Volumes, Timings
140: Buntrock Ave & Steffen Dr

11/04/2020

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	35	35	40	30	70
Future Volume (vph)	115	35	35	40	30	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.969				0.905	
Flt Protected	0.963			0.977		
Satd. Flow (prot)	1612	0	0	1719	1376	0
Flt Permitted	0.963			0.977		
Satd. Flow (perm)	1612	0	0	1719	1376	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	100			288	998	
Travel Time (s)	2.7			7.9	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	10%	8%	8%	25%	25%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	195	59	59	68	51	119
Shared Lane Traffic (%)						
Lane Group Flow (vph)	254	0	0	127	170	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
140: Buntrock Ave & Steffen Dr

11/04/2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	115	35	35	40	30	70
Future Vol, veh/h	115	35	35	40	30	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	59	59	59	59	59	59
Heavy Vehicles, %	10	10	8	8	25	25
Mvmt Flow	195	59	59	68	51	119

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	297	111	170
Stage 1	111	-	-
Stage 2	186	-	-
Critical Hdwy	6.5	6.3	4.18
Critical Hdwy Stg 1	5.5	-	-
Critical Hdwy Stg 2	5.5	-	-
Follow-up Hdwy	3.59	3.39	2.272
Pot Cap-1 Maneuver	678	921	1372
Stage 1	894	-	-
Stage 2	827	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	647	921	1372
Mov Cap-2 Maneuver	647	-	-
Stage 1	854	-	-
Stage 2	827	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	3.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	1372	-	695	-
HCM Lane V/C Ratio	0.043	-	0.366	-
HCM Control Delay (s)	7.7	0	13.1	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.1	-	1.7	-

APPENDIX C

PEAK HOUR ANALYSIS OUTPUTS *WITH RECOMMENDATIONS*

Attachment: Packet Docs_Steffen (5776 : Kapur and Associates for Mequon Thiensville School District)

APPENDIX C

Existing Traffic – With Recommendations Analysis Outputs

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Volume (vph)	20	90	80	15	35	100
Future Volume (vph)	20	90	80	15	35	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	1
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.890					0.850
Flt Protected				0.960	0.950	
Satd. Flow (prot)	1610	0	0	1806	1203	1077
Flt Permitted				0.960	0.950	
Satd. Flow (perm)	1610	0	0	1806	1203	1077
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	1%	1%	50%	50%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	69	310	276	52	121	345
Shared Lane Traffic (%)						
Lane Group Flow (vph)	379	0	0	328	121	345
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

TADI

Z:\Shared\W\2456 - Wilson-Steffen Mequon\Analysis\Steffen\2. Exist MOD\A - West Exit\AM.syn

Synchro 10 Report

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	10.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Vol, veh/h	20	90	80	15	35	100
Future Vol, veh/h	20	90	80	15	35	100
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	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	29	29	29	29	29	29
Heavy Vehicles, %	5	5	1	1	50	50
Mvmt Flow	69	310	276	52	121	345

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	379
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.11
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.209
Pot Cap-1 Maneuver	-	-	1185
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1185
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.5	21.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	216	709	-	-	1185	-
HCM Lane V/C Ratio	0.559	0.486	-	-	0.233	-
HCM Control Delay (s)	40.9	14.8	-	-	9	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	3	2.7	-	-	0.9	-

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Synchro 10 Report

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔				↔			↔			↔	
Traffic Volume (vph)	1	120	1	1	95	1	1	1	1	1	1	1
Future Volume (vph)	1	120	1	1	95	1	1	1	1	1	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.999				0.999			0.955			0.955	
Flt Protected								0.984			0.984	
Satd. Flow (prot)	0	1543	0	0	1879	0	0	1768	0	0	1768	0
Flt Permitted								0.984			0.984	
Satd. Flow (perm)	0	1543	0	0	1879	0	0	1768	0	0	1768	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	23%	23%	23%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	400	3	3	317	3	3	3	3	3	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	406	0	0	323	0	0	9	0	0	9	0
Sign Control	Free				Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔				↔			↔			↔	
Traffic Vol, veh/h	1	120	1	1	95	1	1	1	1	1	1	1
Future Vol, veh/h	1	120	1	1	95	1	1	1	1	1	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	30	30	30	30	30	30	30	30	30	30	30	30
Heavy Vehicles, %	23	23	23	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	400	3	3	317	3	3	3	3	3	3	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	320	0	0	403	0	0	736	734	402	736	734	319
Stage 1	-	-	-	-	-	-	408	408	-	325	325	-
Stage 2	-	-	-	-	-	-	328	326	-	411	409	-
Critical Hdwy	4.33	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.407	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1131	-	-	1161	-	-	336	349	650	336	349	724
Stage 1	-	-	-	-	-	-	622	598	-	690	651	-
Stage 2	-	-	-	-	-	-	687	650	-	620	598	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1131	-	-	1161	-	-	331	347	650	330	347	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	331	347	-	330	347	-
Stage 1	-	-	-	-	-	-	620	596	-	688	649	-
Stage 2	-	-	-	-	-	-	678	648	-	612	596	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0.1		0.1		14.2		14
HCM LOS					B		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	403	1131	-	-	1161	-	-	411
HCM Lane V/C Ratio	0.025	0.003	-	-	0.003	-	-	0.024
HCM Control Delay (s)	14.2	8.2	0	-	8.1	0	-	14
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

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Synchro 10 Report

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Volume (vph)	25	30	40	30	25	80
Future Volume (vph)	25	30	40	30	25	80
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	1
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.926					0.850
Flt Protected				0.972	0.950	
Satd. Flow (prot)	1644	0	0	1726	1736	1553
Flt Permitted				0.972	0.950	
Satd. Flow (perm)	1644	0	0	1726	1736	1553
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	86	103	138	103	86	276
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	0	241	86	276
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	6.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Vol, veh/h	25	30	40	30	25	80
Future Vol, veh/h	25	30	40	30	25	80
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	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	29	29	29	29	29	29
Heavy Vehicles, %	7	7	7	7	4	4
Mvmt Flow	86	103	138	103	86	276

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	189
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.17
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.263
Pot Cap-1 Maneuver	-	-	1355
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1355
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	459	905	-	-	1355	-
HCM Lane V/C Ratio	0.188	0.305	-	-	0.102	-
HCM Control Delay (s)	14.6	10.7	-	-	8	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	1.3	-	-	0.3	-

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Synchro 10 Report

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	105	1	1	70	1	1	1	1	5	1	1
Future Volume (vph)	1	105	1	1	70	1	1	1	1	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.998			0.955			0.980	
Flt Protected		0.999			0.999			0.984			0.966	
Satd. Flow (prot)	0	1740	0	0	1754	0	0	1768	0	0	1781	0
Flt Permitted		0.999			0.999			0.984			0.966	
Satd. Flow (perm)	0	1740	0	0	1754	0	0	1768	0	0	1781	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	389	4	4	259	4	4	4	4	19	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	397	0	0	267	0	0	12	0	0	27	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

TADI

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	105	1	1	70	1	1	1	1	5	1	1
Future Vol, veh/h	1	105	1	1	70	1	1	1	1	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles, %	9	9	9	8	8	8	1	1	1	1	1	1
Mvmt Flow	4	389	4	4	259	4	4	4	4	19	4	4

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	263	0	0	393	0	0	672	670	391	672	670	261
Stage 1	-	-	-	-	-	-	399	399	-	269	269	-
Stage 2	-	-	-	-	-	-	273	271	-	403	401	-
Critical Hdwy	4.19	-	-	4.18	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.281	-	-	2.272	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1262	-	-	1134	-	-	371	379	660	371	379	780
Stage 1	-	-	-	-	-	-	629	604	-	739	688	-
Stage 2	-	-	-	-	-	-	735	687	-	626	603	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1262	-	-	1134	-	-	364	376	660	364	376	780
Mov Cap-2 Maneuver	-	-	-	-	-	-	364	376	-	364	376	-
Stage 1	-	-	-	-	-	-	626	602	-	736	685	-
Stage 2	-	-	-	-	-	-	725	684	-	616	601	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0.1		0.1		13.5		14.7
HCM LOS					B		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	433	1262	-	-	1134	-	-	396
HCM Lane V/C Ratio	0.026	0.003	-	-	0.003	-	-	0.065
HCM Control Delay (s)	13.5	7.9	0	-	8.2	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	105	5	20	65	5	5	1	15	5	1	1
Future Volume (vph)	1	105	5	20	65	5	5	1	15	5	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%				0%						0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.994				0.992				0.904		0.982	
Flt Protected					0.989				0.988		0.965	
Satd. Flow (prot)	0	1816	0	0	1566	0	0	893	0	0	1783	0
Flt Permitted					0.989				0.988		0.965	
Satd. Flow (perm)	0	1816	0	0	1566	0	0	893	0	0	1783	0
Link Speed (mph)	25				25				25		25	
Link Distance (ft)	210				260				100		102	
Travel Time (s)	5.7				7.1				2.7		2.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	19%	19%	19%	90%	90%	90%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%				0%				0%		0%	
Adj. Flow (vph)	3	328	16	63	203	16	16	3	47	16	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	347	0	0	282	0	0	66	0	0	22	0
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	105	5	20	65	5	5	1	15	5	1	1
Future Vol, veh/h	1	105	5	20	65	5	5	1	15	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	32	32	32	32	32	32	32	32	32	32	32	32
Heavy Vehicles, %	4	4	4	19	19	19	90	90	90	1	1	1
Mvmt Flow	3	328	16	63	203	16	16	3	47	16	3	3

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	219	0	0	344
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.29
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.236	-	-	2.371
Pot Cap-1 Maneuver	1339	-	-	1126
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1339	-	-	1126
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	15.4	16.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	410	1339	-	-	1126	-	-	340
HCM Lane V/C Ratio	0.16	0.002	-	-	0.056	-	-	0.064
HCM Control Delay (s)	15.4	7.7	0	-	8.4	0	-	16.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings
130: Wilson East Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Volume (vph)	125	1	1	90	1	1
Future Volume (vph)	125	1	1	90	1	1
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)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1680	0	0	1595	1711	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1680	0	0	1595	1711	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	260			100	85	
Travel Time (s)	7.1			2.7	2.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.34	0.34	0.34	0.34	0.34	0.34
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	19%	19%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	368	3	3	265	3	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	371	0	0	268	6	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
130: Wilson East Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Vol, veh/h	125	1	1	90	1	1
Future Vol, veh/h	125	1	1	90	1	1
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	34	34	34	34	34	34
Heavy Vehicles, %	13	13	19	19	1	1
Mvmt Flow	368	3	3	265	3	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	371
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.29
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.371
Pot Cap-1 Maneuver	-	-	1100
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1100
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	534	-	-	1100	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Control Delay (s)	11.8	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
140: Buntrock Ave & Steffen Dr

01/06/2020

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	90	35	20	95	85	70
Future Volume (vph)	90	35	20	95	85	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.962				0.939	
Flt Protected	0.965			0.991		
Satd. Flow (prot)	1561	0	0	1666	1652	0
Flt Permitted	0.965			0.991		
Satd. Flow (perm)	1561	0	0	1666	1652	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	100			288	998	
Travel Time (s)	2.7			7.9	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.52	0.52	0.52	0.52	0.52	0.52
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	13%	13%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	173	67	38	183	163	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	0	0	221	298	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
140: Buntrock Ave & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	90	35	20	95	85	70
Future Vol, veh/h	90	35	20	95	85	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	13	13	13	13	8	8
Mvmt Flow	173	67	38	183	163	135

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	490	231	298
Stage 1	231	-	-
Stage 2	259	-	-
Critical Hdwy	6.53	6.33	4.23
Critical Hdwy Stg 1	5.53	-	-
Critical Hdwy Stg 2	5.53	-	-
Follow-up Hdwy	3.617	3.417	2.317
Pot Cap-1 Maneuver	518	782	1203
Stage 1	782	-	-
Stage 2	759	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	500	782	1203
Mov Cap-2 Maneuver	500	-	-
Stage 1	755	-	-
Stage 2	759	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.3	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	1203	-	556	-
HCM Lane V/C Ratio	0.032	-	0.432	-
HCM Control Delay (s)	8.1	0	16.3	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	2.2	-

APPENDIX C

Growth Traffic – With Recommendations Analysis Outputs

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Volume (vph)	20	110	95	15	40	125
Future Volume (vph)	20	110	95	15	40	125
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	1
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.886				0.850	
Flt Protected				0.959	0.950	
Satd. Flow (prot)	1603	0	0	1804	1203	1077
Flt Permitted				0.959	0.950	
Satd. Flow (perm)	1603	0	0	1804	1203	1077
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	1%	1%	50%	50%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	69	379	328	52	138	431
Shared Lane Traffic (%)						
Lane Group Flow (vph)	448	0	0	380	138	431
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	17.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Vol, veh/h	20	110	95	15	40	125
Future Vol, veh/h	20	110	95	15	40	125
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	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	29	29	29	29	29	29
Heavy Vehicles, %	5	5	1	1	50	50
Mvmt Flow	69	379	328	52	138	431

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	448
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.11
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.209
Pot Cap-1 Maneuver	-	-	1118
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1118
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	8.2	36.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	162	676	-	-	1118	-
HCM Lane V/C Ratio	0.851	0.638	-	-	0.293	-
HCM Control Delay (s)	91.9	19.2	-	-	9.5	0
HCM Lane LOS	F	C	-	-	A	A
HCM 95th %tile Q(veh)	5.8	4.6	-	-	1.2	-

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Synchro 10 Report

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	145	1	1	110	1	1	1	1	1	1	1
Future Volume (vph)	1	145	1	1	110	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.999		0.999		0.955		0.955		0.955		0.955	
Flt Protected												
Satd. Flow (prot)	0	1543	0	0	1879	0	0	1768	0	0	1768	0
Flt Permitted												
Satd. Flow (perm)	0	1543	0	0	1879	0	0	1768	0	0	1768	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	23%	23%	23%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	483	3	3	367	3	3	3	3	3	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	489	0	0	373	0	0	9	0	0	9	0
Sign Control	Free		Free		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	145	1	1	110	1	1	1	1	1	1	1
Future Vol, veh/h	1	145	1	1	110	1	1	1	1	1	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	30	30	30	30	30	30	30	30	30	30	30	30
Heavy Vehicles, %	23	23	23	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	483	3	3	367	3	3	3	3	3	3	3

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	370	0	0	486	0	0	869	867	485	869	867	369
Stage 1	-	-	-	-	-	-	491	491	-	375	375	-
Stage 2	-	-	-	-	-	-	378	376	-	494	492	-
Critical Hdwy	4.33	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
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	2.407	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1082	-	-	1082	-	-	273	292	584	273	292	679
Stage 1	-	-	-	-	-	-	561	550	-	648	619	-
Stage 2	-	-	-	-	-	-	646	618	-	559	549	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1082	-	-	1082	-	-	268	290	584	268	290	679
Mov Cap-2 Maneuver	-	-	-	-	-	-	268	290	-	268	290	-
Stage 1	-	-	-	-	-	-	559	548	-	645	617	-
Stage 2	-	-	-	-	-	-	637	616	-	550	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	16	15.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	337	1082	-	-	1082	-	-	347
HCM Lane V/C Ratio	0.03	0.003	-	-	0.003	-	-	0.029
HCM Control Delay (s)	16	8.3	0	-	8.3	0	-	15.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

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Synchro 10 Report

Lanes, Volumes, Timings

100: Steffen West Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Volume (vph)	25	35	55	30	30	100
Future Volume (vph)	25	35	55	30	30	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	1
Taper Length (ft)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.921					0.850
Flt Protected				0.969	0.950	
Satd. Flow (prot)	1635	0	0	1721	1736	1553
Flt Permitted				0.969	0.950	
Satd. Flow (perm)	1635	0	0	1721	1736	1553
Link Speed (mph)	25			25	25	
Link Distance (ft)	577			440	129	
Travel Time (s)	15.7			12.0	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.29	0.29	0.29	0.29	0.29	0.29
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	86	121	190	103	103	345
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	0	293	103	345
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

100: Steffen West Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	7.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	↖
Traffic Vol, veh/h	25	35	55	30	30	100
Future Vol, veh/h	25	35	55	30	30	100
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	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	29	29	29	29	29	29
Heavy Vehicles, %	7	7	7	7	4	4
Mvmt Flow	86	121	190	103	103	345

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	207	0	630
Stage 1	-	-	-	-	147
Stage 2	-	-	-	-	483
Critical Hdwy	-	-	4.17	-	6.44
Critical Hdwy Stg 1	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	5.44
Follow-up Hdwy	-	-	2.263	-	3.536
Pot Cap-1 Maneuver	-	-	1335	-	442
Stage 1	-	-	-	-	876
Stage 2	-	-	-	-	616
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1335	-	375
Mov Cap-2 Maneuver	-	-	-	-	375
Stage 1	-	-	-	-	876
Stage 2	-	-	-	-	523

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	375	895	-	-	1335	-
HCM Lane V/C Ratio	0.276	0.385	-	-	0.142	-
HCM Control Delay (s)	18.2	11.5	-	-	8.1	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	1.1	1.8	-	-	0.5	-

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Synchro 10 Report

Lanes, Volumes, Timings

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	125	1	1	85	1	1	1	1	5	1	1
Future Volume (vph)	1	125	1	1	85	1	1	1	1	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.998			0.955			0.980	
Flt Protected					0.999			0.984			0.966	
Satd. Flow (prot)	0	1741	0	0	1754	0	0	1768	0	0	1781	0
Flt Permitted					0.999			0.984			0.966	
Satd. Flow (perm)	0	1741	0	0	1754	0	0	1768	0	0	1781	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			210			81			140	
Travel Time (s)		12.0			5.7			2.2			3.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	463	4	4	315	4	4	4	4	19	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	0	0	323	0	0	12	0	0	27	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

TADI

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Synchro 10 Report

HCM 6th TWSC

110: Steffen East-Wilson West Drwy/Elder Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	125	1	1	85	1	1	1	1	5	1	1
Future Vol, veh/h	1	125	1	1	85	1	1	1	1	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles, %	9	9	9	8	8	8	1	1	1	1	1	1
Mvmt Flow	4	463	4	4	315	4	4	4	4	19	4	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	319	0	0	467
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.19	-	-	4.18
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.281	-	-	2.272
Pot Cap-1 Maneuver	1202	-	-	1064
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1202	-	-	1064
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	15.1	17
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	366	1202	-	-	1064	-	-	327
HCM Lane V/C Ratio	0.03	0.003	-	-	0.003	-	-	0.079
HCM Control Delay (s)	15.1	8	0	-	8.4	0	-	17
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

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Synchro 10 Report

Lanes, Volumes, Timings

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	125	5	20	80	5	5	1	15	5	1	1
Future Volume (vph)	1	125	5	20	80	5	5	1	15	5	1	1
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)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.995			0.993			0.904			0.982	
Flt Protected					0.991			0.988			0.965	
Satd. Flow (prot)	0	1818	0	0	1571	0	0	893	0	0	1783	0
Flt Permitted					0.991			0.988			0.965	
Satd. Flow (perm)	0	1818	0	0	1571	0	0	893	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		210			260			100			102	
Travel Time (s)		5.7			7.1			2.7			2.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	19%	19%	19%	90%	90%	90%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	391	16	63	250	16	16	3	47	16	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	410	0	0	329	0	0	66	0	0	22	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

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Synchro 10 Report

HCM 6th TWSC

120: Wilson Center Driveway/Balsam Tree Ct & Steffen Dr

01/06/2020

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	125	5	20	80	5	5	1	15	5	1	1
Future Vol, veh/h	1	125	5	20	80	5	5	1	15	5	1	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	32	32	32	32	32	32	32	32	32	32	32	32
Heavy Vehicles, %	4	4	4	19	19	19	90	90	90	1	1	1
Mvmt Flow	3	391	16	63	250	16	16	3	47	16	3	3

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	266	0	0	407
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.29
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.236	-	-	2.371
Pot Cap-1 Maneuver	1286	-	-	1066
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1286	-	-	1066
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	17.4	18.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1286	-	-	1066	-	-	286
HCM Lane V/C Ratio	0.184	0.002	-	-	0.059	-	-	0.076
HCM Control Delay (s)	17.4	7.8	0	-	8.6	0	-	18.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.2

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Synchro 10 Report

Lanes, Volumes, Timings
130: Wilson East Driveway & Steffen Dr

01/06/2020

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Volume (vph)	145	0	0	105	0	0
Future Volume (vph)	145	0	0	105	0	0
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)			75		75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1681	0	0	1597	1881	0
Flt Permitted						
Satd. Flow (perm)	1681	0	0	1597	1881	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	260			100	85	
Travel Time (s)	7.1			2.7	2.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.34	0.34	0.34	0.34	0.34	0.34
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	19%	19%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	426	0	0	309	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	426	0	0	309	0	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
130: Wilson East Driveway & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↖	↗
Traffic Vol, veh/h	145	0	0	105	0	0
Future Vol, veh/h	145	0	0	105	0	0
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	34	34	34	34	34	34
Heavy Vehicles, %	13	13	19	19	1	1
Mvmt Flow	426	0	0	309	0	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	735 426
Stage 1	-	-	-	-	426 -
Stage 2	-	-	-	-	309 -
Critical Hdwy	-	-	-	-	6.41 6.21
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	-	-	3.509 3.309
Pot Cap-1 Maneuver	-	0	0	-	388 631
Stage 1	-	0	0	-	661 -
Stage 2	-	0	0	-	747 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	388 631
Mov Cap-2 Maneuver	-	-	-	-	388 -
Stage 1	-	-	-	-	661 -
Stage 2	-	-	-	-	747 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
140: Buntrock Ave & Steffen Dr

01/06/2020

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	105	40	25	95	85	80
Future Volume (vph)	105	40	25	95	85	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.963				0.934	
Flt Protected	0.965			0.990		
Satd. Flow (prot)	1563	0	0	1665	1643	0
Flt Permitted	0.965			0.990		
Satd. Flow (perm)	1563	0	0	1665	1643	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	100			288	998	
Travel Time (s)	2.7			7.9	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.52	0.52	0.52	0.52	0.52	0.52
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	13%	13%	13%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	202	77	48	183	163	154
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	0	231	317	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
140: Buntrock Ave & Steffen Dr

01/06/2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	105	40	25	95	85	80
Future Vol, veh/h	105	40	25	95	85	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	13	13	13	13	8	8
Mvmt Flow	202	77	48	183	163	154

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	519	240	317	0	-	0
Stage 1	240	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.23	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.317	-	-	-
Pot Cap-1 Maneuver	498	773	1183	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	476	773	1183	-	-	-
Mov Cap-2 Maneuver	476	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	1.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	1183	-	532	-
HCM Lane V/C Ratio	0.041	-	0.524	-
HCM Control Delay (s)	8.2	0	19	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	3	-



11333 N. Cedarburg Rd
Mequon, WI 53092-1930
Phone: 262-236-2902
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development

TO: Planning Commission
FROM: KRISTEN LUNDEEN, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
DATE: December 14, 2020
SUBJECT: John Mikkleson. The applicant is seeking an approval for a waiver to the Standard Specifications for Land Development to allow for the construction of a shared driveway instead of the required private road for the property located at 12501 N. Lake Shore Drive.

Applicant:	John Mikkleson
Status of Applicant:	Owner
Requested:	Minor Request - Land Development Spec Waiver
Existing Zoning:	R-1B (Single Family Residential 2.5 Acre)
Lot size:	3.03 Acres
Location:	12501 N. Lake Shore Drive
Tax Key:	#15-017-08-006.00
District:	#5

Background:

The applicant requests Planning Commission approval of a minor request for a waiver to the Standard Specifications for Land Development. Section 3.2.8 of the Standard Specifications for Land Development outline the requirements for private roads and private driveways. Specifically:

- A. Private driveways serve a maximum of 4 lots and extend less than 500-feet in length.
- B. A private roadway can serve up to 10 lots and extend up to 1,000-feet in length.

The applicant is seeking a waiver to the private roadway requirement, as the proposed access exceeds 500-feet in length.

Section 58-605(a) expressly says:

All streets shall be constructed in accordance with the publication "City of Mequon Standard Specifications for Land Development," Seventh Edition, December 2002, or any amendment or revision thereof approved by the common council. The planning commission may waive or modify these specifications if, in its judgment, it is not adverse to the public health, safety and welfare."

It is important to note that these are existing platted lots, which require legal access, as opposed to new lots where access could be defined at the time or as a condition of land division.

Engineering Report:

Kristen Lundeen, Director of Public Works/City Engineer, has reviewed the application and has the following comments:

Requiring additional infrastructure for a larger number of homes or a longer length of access was driven by concerns for public safety and to protect property owners who will utilize a shared access. Emergency management access is complicated by lack of requirements for driveway of access width and material. Additionally, private driveways that are not maintained can cause long term access issues for adjacent property owners.

In this case, the construction of a private road instead of a private driveway would negatively impact wetlands in the area. As noted, the lots were previously platted and are not a new development. As the Fire Chief supports the private driveway construction and it would eliminate a negative impact on the wetlands, staff is supportive of the application.

Staff Recommendation:

Engineering staff recommends approval of a waiver to the Standard Specifications for Land Development to allow for the construction of a shared driveway instead of the required private road for the property located at 12501 N. Lake Shore Drive.

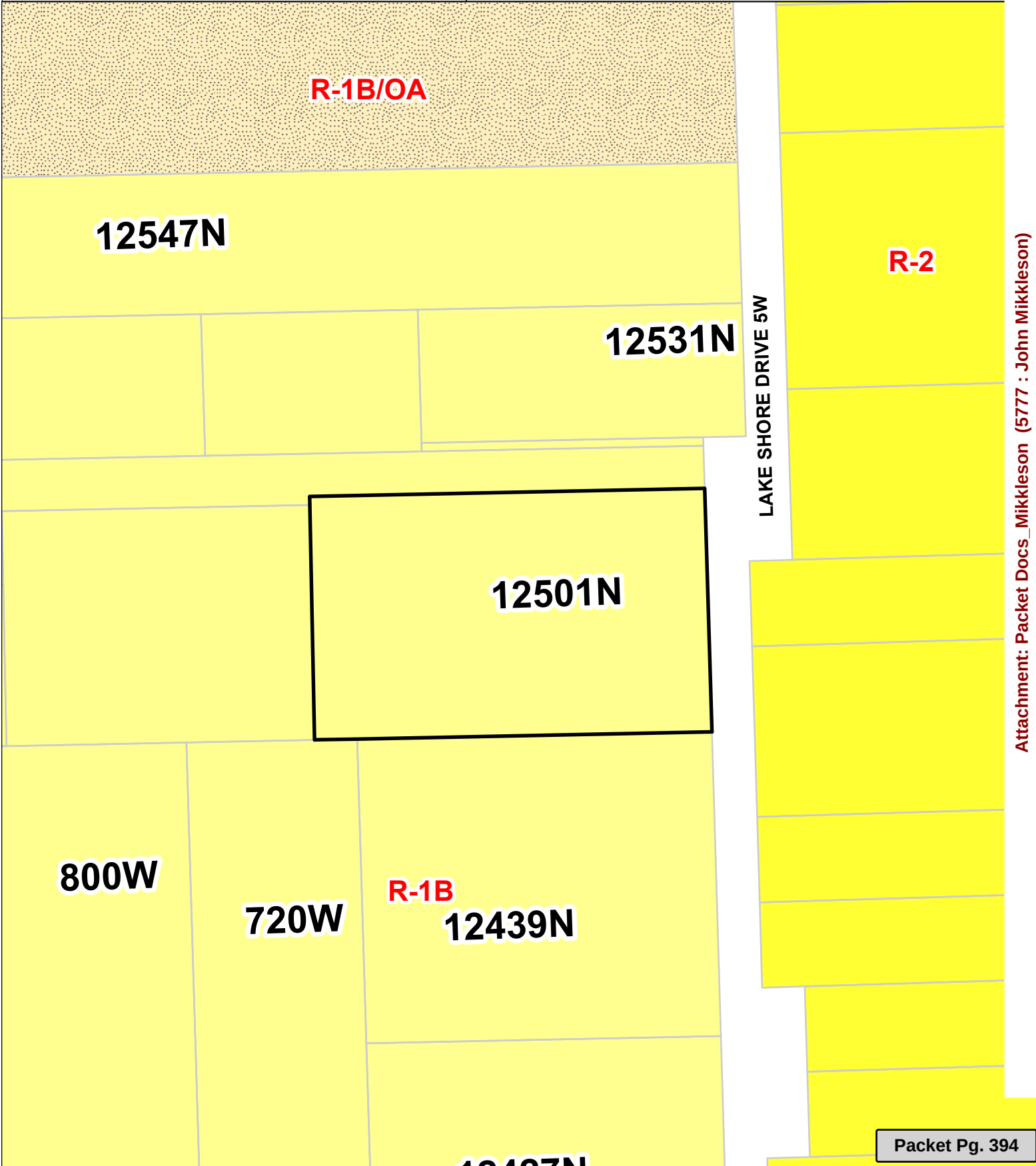
Attachments:

Packet Docs_Mikkleson (PDF)

John Mikkelson

AC	Arrival Corridor
A-1	Agricultural Preserve
A-2	General Agricultural
B-1	Neighborhood Business
B-2	Community Business
B-3	Office & Service Business
B-4	Business Park
B-5	Light Industrial
B-6	Rural Industrial
B-7	Rural Business
C-1	Shoreland/Wetland Conservancy
C-2	General Conservancy
CGO	Central Growth Overlay
FFO	Flood Fringe Overlay
FW	Floodway
IPS	Institutional & Public Service

LTD	Limited Use
OA	Agricultural Overlay
PUD	Planned Unit Development Overlay
P-1	Park & Recreation
R-1	Single-Family Residential (5 Ac. Min.)
R-1B	Single-Family Residential (2.5 Ac. Min.)
R-2	Single-Family Residential (2.0 Ac. Min.)
R-2B	Single-Family Residential (1.5 Ac. Min.)
R-3	Single-Family Residential (1.0 Ac. Min.)
R-4	Single-Family Residential (3/4 Ac. Min.)
R-5	Single-Family Residential (1/2 Ac. Min.)
R-6	Single-Family Residential (4 du/Ac)
RM	Multi-Family Residential
TC	Town Center
TDR	Transfer of Development Rights

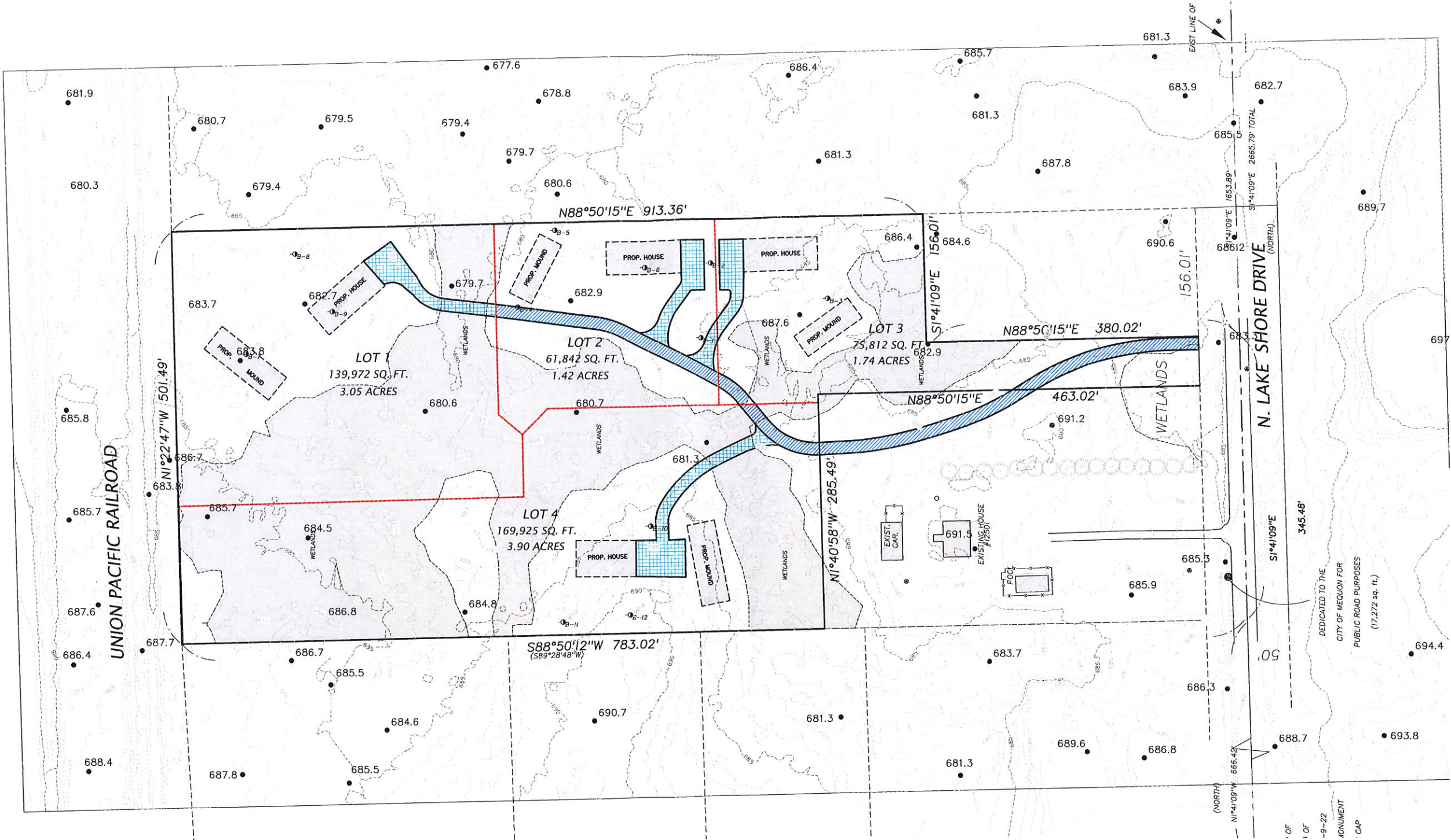


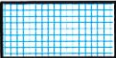
The current parcel of land west of Lake Shore rd and east of the Union Pacific Railroad is divided into 8 tax key parcels. Applicant (John Mikkelsen) is purchasing the parcel provided he can combine the 8 tax key parcels into 4 build able lots and clean up the current non sensical tax key numbers into 4 lots via a CSM.

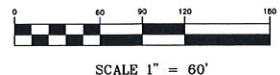
We have done soil tests and have suitable mound locations. We are proposing a private drive to serve 4 parcels. The private drive would be 14' wide with 2' shoulders and 900' in length. The 14' is a requirement of the fire chief who has reviewed the plans. There are many private drives serving multiple lots in Mequon that are over 900' in length.

The development standard in Mequon is that a private drive must be less than 500' or it must be a private road. A private road requires 18' of asphalt plus shoulders. The extra width is not required by the fire chief or necessary for the four parcels. The extra width only creates additional hardscape, impacts more asphalt over wetland areas, adds additional water runoff and is a larger road through the current property on Lake Shore. This requirement creates more asphalt and shoulders that are not necessary and is a visual eye sore for the current residence.

Applicant seeks a waiver for the private road requirement and will install a private drive meeting City of Mequon construction standards. All of the lots will have Rain ponds in addition to a rain pond serving the drive on the current homestead.



-  DENOTES PROPOSED SHARED PRIVATE DRIVEWAY (14 FT. WIDTH W/ 1 FT. SHOULDERS)
-  DENOTES PROPOSED OWNER'S DRIVEWAY
-  DENOTES PROPOSED LOT LINE



SCALE 1" = 60'

NSE NORTH SHORE ENGINEERING, INC.
Consulting Engineers & Land Surveyors
11433 N. Port Washington Rd., Mequon, Wisconsin, 53092
(262) 241-9400 • FAX: (262) 241-5337
www.northshoreengineering.net

Proposed Private Driveway Alignment Exhibit	
FOR Mikkelsen Builders	
12500 Block of N. Lake Shore Drive Mequon, WI	
FIELD CREW:	APPROVED:
DATE: November 13, 2020	
DWN. BY: J.M.B.	Contract No.:
CHKD. BY:	Plat No.: LS-4857-20_Contours



11333 N. Cedarburg Rd
Mequon, WI 53092-1930
Phone: 262-236-2902
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development

TO: Planning Commission
FROM: KRISTEN LUNDEEN, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
DATE: December 14, 2020
SUBJECT: Wagner Excavating. The applicant is seeking minor request approval for fill in excess of 1,000 cubic yards for a bluff revetment project for 11 properties located between 1000-10120 N. Sheridan Drive.

Applicant:	Wagner Excavating
Status of Applicant:	Agent
Requested:	Fill Permit in excess of 1,000 C.Y.
Existing Zoning:	R-3 (Single Family Residential Detached 1-Acre)
Location:	1000 -10120 N. Sheridan Drive (11 properties)
Tax Keyes:	#15-064-07-010.01 #15-064-08-010.00 #15-064-08-030.00 #15-064-08-050.00 #15-064-08-060.00 #15-064-08-070.00 #15-064-08-090.00 #15-064-08-110.00 #15-064-08-120.00 #15-064-08-130.00 #15-064-08-140.00
District:	#8

Background:

The applicant requests Planning Commission approval of a minor request for fill in excess of 1,000 cubic yards for a bluff revetment project. Revetments are constructed by property owners to protect the toe of the bluff from erosion using large rocks, granite blocks or other material.

Aside from zoning and setbacks, management of bluffs are outside of the City's jurisdiction and are regulated by the Wisconsin Department of Natural Resources and the US Army Corps of Engineers. The City and Planning Commission are only reviewing the project as it relates to requirements for a fill permit and erosion control permit.

The proposed project covers eleven properties with either new or reconstructed revetments. The fill permit also covers the material required for the new access driveway, which will be the access point for all of the individual revetments.

Engineering Report:

Kristen Lundeen, Director of Public Works/City Engineer, has reviewed the application and has

the following comments:

Again, as it relates to the bluff revetment project, the City and Planning Commission only have jurisdiction over the fill permit and erosion control permit.

The applicant indicates that the project will include 305 truckloads of fill for the revetments, in addition to those required for the access drive. Staff is requiring the submittal of a haul route, with a restriction to keep the trucks on main arterial roads to the extent practical and submit a road bond to protect the potential for damage to local roads. Hauling and construction are subject to the City's noise ordinance which restricts work hours.

Staff Recommendation:

Planning staff recommends approval of the minor request for fill up to 4,500 cubic yards subject to the following conditions:

1. The City of Mequon has no authority over the approval of the bluff revetment project itself. The applicant or property owner is required to establish and document any required approvals from the Wisconsin Department of Natural Resources and US Army Corps of Engineers, as applicable.
2. City of Mequon approval for the fill permit does not provide legal access or property owner permission. The applicant is responsible for obtaining property owner permission for access to those properties both included in the project, and impacted by the project, as well as the construction and maintenance of the access drive.
3. The hauling and revetment work is subject to the City's noise ordinance, which restricts the hours of operation.
4. Application for and approval of a City Filling and Excavation Permit and adherence to Chapter 7 of the Standard Specifications for Land Development.
5. Application for, approval of and payment of all fees associated with a City Erosion Control Permit.
6. Submittal of a haul route for the material. To the extent practical, deliveries shall be restricted to main arterial roads in route to the project site. A haul bond shall be required for any local roads.

Attachments:

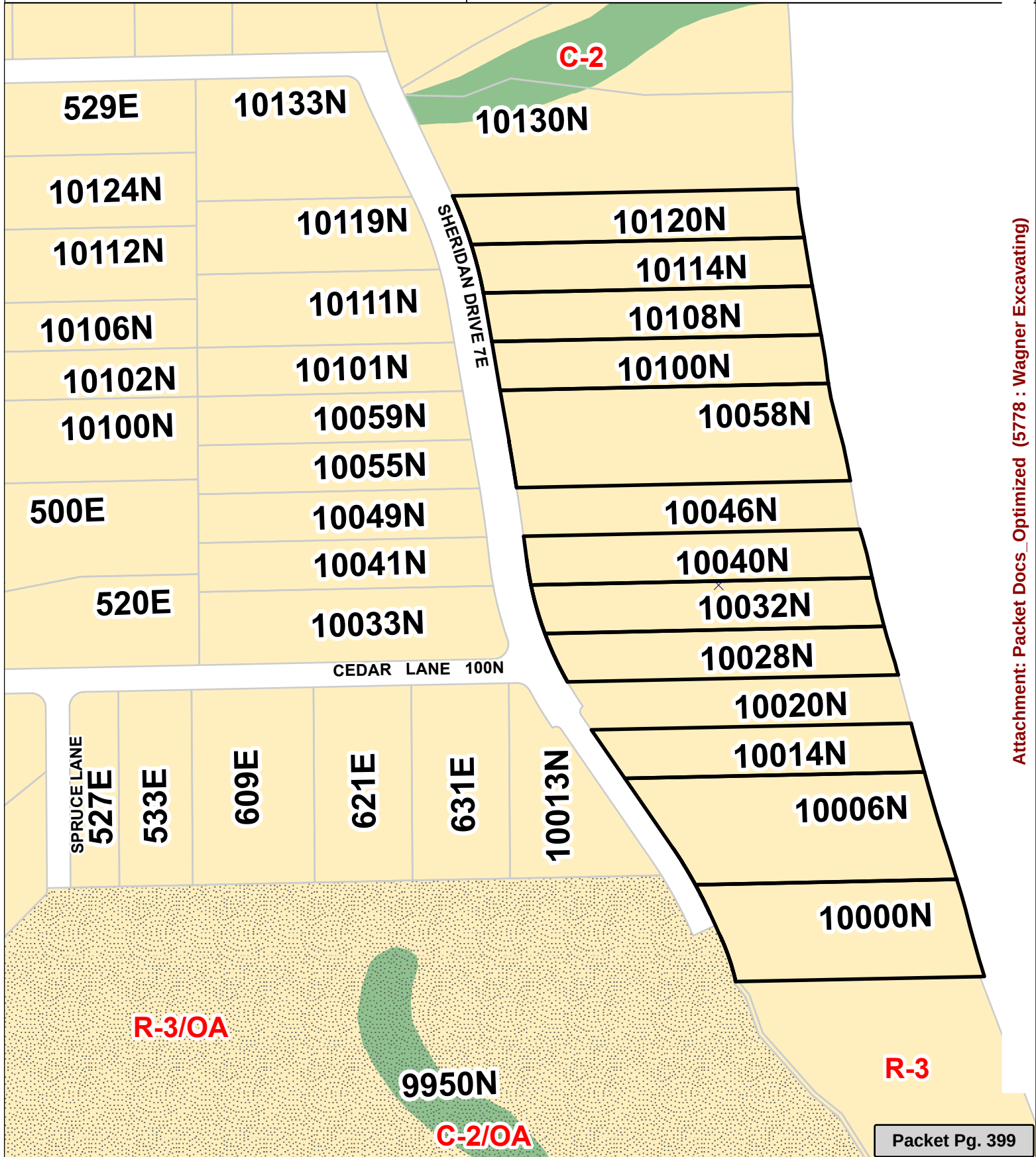
Packet Docs_Optimized (PDF)

Wagner Excavating Inc.

AC Arrival Corridor
A-1 Agricultural Preserve
A-2 General Agricultural
B-1 Neighborhood Business
B-2 Community Business
B-3 Office & Service Business
B-4 Business Park
B-5 Light Industrial
B-6 Rural Industrial
B-7 Rural Business
C-1 Shoreland/Wetland Conservancy
C-2 General Conservancy
CGO Central Growth Overlay
FFO Flood Fringe Overlay
FW Floodway
IPS Institutional & Public Service

LTD Limited Use
OA Agricultural Overlay
PUD Planned Unit Development Overlay
P-1 Park & Recreation
R-1 Single-Family Residential (5 Ac. Min.)
R-1B Single-Family Residential (2.5 Ac. Min.)
R-2 Single-Family Residential (2.0 Ac. Min.)
R-2B Single-Family Residential (1.5 Ac. Min.)
R-3 Single-Family Residential (1.0 Ac. Min.)
R-4 Single-Family Residential (3/4 Ac. Min.)
R-5 Single-Family Residential (1/2 Ac. Min.)
R-6 Single-Family Residential (4 du/Ac)
RM Multi-Family Residential
TC Town Center
TDR Transfer of Development Rights

4.b.a



Attachment: Packet Docs_Optimized (5778 : Wagner Excavating)

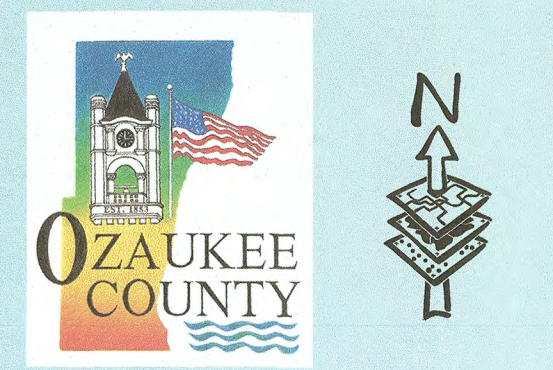


Legend

Tax Parcel	Historical Parcel Lines	Cemetery Plat	Plat of Survey	County Road	Town/Public Road
Gap	Assessors Plat	Condominium Plat	US Highway	Ramp	Railroad Centerline
Overlap	CSM	Subdivision Plat	State Highway	Private Road	

Product of the LAND INFORMATION OFFICE
11/13/2020, 2:09:22 PM

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DISCLAIMER: This map is not a substitute for an actual field survey or onsite investigation. The accuracy of this map is limited to the quality of the records from which it was assembled.



HISTORY AND ECOLOGY OF THE GREAT LAKES

EROSION CONTROL STRUCTURES ON GREAT LAKES

The Great Lakes constitute the largest body of fresh water in the world. These incredibly large lakes were formed by glaciation and are still surrounded by the silt, sand, gravel and clay that the retreating glaciers left behind. There are some areas of rock outcroppings, but even many of the rocky shoreline areas are more recently formed sandstone and limestone, which can be susceptible to erosion. Lake Michigan and Lake Superior are also fairly unique when you compare the size of the watersheds to the size of the waterbodies. The Lake Superior Watershed is only 1.5 times larger than the lake surface area; Lake Michigan is half as large as its watershed. While this means that a specific impact on land can have less cumulative impact on the water, it also means that the lake levels are influenced by much more than rainfall in the watershed.

- [Wisconsin's Great Lakes Strategy Steers Ahead: The Spirit of Collaboration](#).^[PDF]
- [Our Beautiful Great Lakes Shorelines](#).^[PDF]
- [Biodiversity - Great Lakes Beach](#)
- [Oblique aerials](#).^[exit DNR]
- [Ohio DNR](#).^[exit DNR]

WATER LEVELS

The Great Lakes basin is subject to harsh, rapid changes in weather and temperature. Each year, Great Lakes waters change from cold and ice-covered to warm enough for swimming in as little as four months. Changes in the lakes' water levels may occur hourly and daily, season to season and over many years. Lake levels are determined primarily by precipitation, evaporation, river and groundwater flows. The water levels of the Great Lakes fluctuate at different time scales to different forces.



Very short-term water level changes are caused by wind and storms. These short-term (hours to days) effects can be dramatic and can cause the lake levels from one side of the lake to the other to vary by several feet for a short time. Each of the Great Lakes has an annual rise and fall cycle driven

by the timing of precipitation, snowmelt and evaporation. In general, the lakes are at their lowest levels in the winter and highest levels in summer or fall. The annual change in water levels is from 11 to 20 inches.

In addition to the storm-caused and annual changes, data shows that the long-term lake levels change on a 10-year to 30-year cycle. On Lake Michigan, the difference between the recorded low levels and the recorded high levels is greater than 6 feet. A six-foot difference in water level can significantly change how the shoreline looks and acts. Lake Michigan experienced a prolonged period of low water levels between the high waters of the 1980s and record lows of 2013. Marinas and harbors were dredged and shoreline property had exposed beaches. Commercial freight traffic was impacted and some property owners no longer had access to open water. Three of the five Great Lakes recovered their water levels at a record pace, with Lake Superior gaining 2.3 feet from January 2013 through November of 2015, and Lakes Michigan and Huron increasing by 3.2 feet in that same period. That's the fastest ever for Superior and the second-fastest for Huron and Michigan. Property owners that had a beautiful sandy beach now have to worry about erosion.

- [Great Lakes Water Level Dashboard](#)^[exit DNR]
- [NOAA Nautical Charts](#)^[exit DNR]

EROSION ON THE GREAT LAKES SHORELINES

Erosion is the process where wave energy moves material from the shore out to greater water depths. Erosion on the Great Lakes occurs even during low water levels. Not only is the glacial till material susceptible to wave erosion, the lakes experience storm surges. As the wind blows across the surface of a Great Lake, energy is transferred from the wind to the water surface. This energy generates currents and builds waves. The lakes respond to strong winds more quickly with waves and storm surges than with currents. Storm winds cause rapid changes in water levels. As the wind blows across many miles of open water, it drags some water towards the downwind side of the lakes. This causes a temporary rise in water level along the downwind shore and a lowering of water on the upwind shore. Storm surges typically raise the water level one to two feet on the open coast and two to five feet in bays. On top of the rise in water level, these storms include high winds that cause high waves. Fortunately, much of the Lake Michigan and Lake Superior coastline has shallow water. As large storm waves approach shallow water, they will break and reform into smaller waves. Rising lake levels and/or lakebed erosion (reflected wave energy causing lakebed downcutting) create deeper water close to the water's edge and allow more wave power to attack the shore. Falling lake levels have the opposite effect.

Changes in a beach shoreline are often called erosion, but most are caused by a process called "sand starvation." Waves usually approach a beach at a slight angle, creating a "push" against the beach in the alongshore direction, which causes sediment to move laterally. As long as the same amount of sand comes into the beach at one end and goes out the other, it doesn't matter how big or small the waves are. It only matters when the ratio of sand coming in to sand going out changes. This sideways movement of sand is called littoral drift. Along the Lake Michigan shoreline, littoral drift generally occurs in a southerly direction. The balance of sediment budget in the nearshore environment can determine the stability of coastal bluffs.

When waves strike the shoreline straight on, there is sand in the system that is carried onshore with a wave and offshore with the undertow (return of the wave). This sand can be trapped by intrusions along the shoreline but will continue to move with high waves or to settle during calm waters. If the nearshore area is deep enough or the undertow strong enough, the sand can be moved into deeper water where it settles on the lakebed. If the sand settles into deep enough water, wave action no longer touches the bed and the sand is lost to the littoral drift system.

In the Great Lakes, other forms of shoreline processes occur as well. One shoreline change called an ice shove or push is due to the formation and movement of ice during winter. Though ice may grow as a solid sheet across the lake, the stress and friction of the wind blowing across the ice surface force it to move. It will push against the shoreline and frequently ride up, bulldozing shoreline material with it. In extreme cases, it may freeze around an object such as a rock or pile and lift it from its foundation.



Wind will carry sand off the beach and pile it inland, building tall dunes that can then march farther inland. However, in general, most changes seen on Great Lakes shores are triggered by wave action.

- [Causes of lakeshore and streambank erosion](#)

NEARSHORE ENVIRONMENT

The nearshore environment, located where the land and water meet, plays an important role in ecosystem functions in the Great Lakes. The nearshore environment is affected by waves, currents and water level fluctuations as well as coastal protection structures such as breakwaters, jetties, groins and harbors. The type of sediment forming the beach and the underwater slope of the lakebed can affect habitats and biological communities. For instance, a steeper lakebed has deeper water, which can mean higher waves and more energetic circulation patterns. This energy is concentrated in the nearshore area and can transport bottom sediments and redistribute macroinvertebrates that live in the water. The composition and porosity of the sediment are associated with different species of fish and benthic macroinvertebrates. Structures that would occupy existing beaches or the shallow nearshore areas along the great lakes have impacts on these unique and limited habitats. In the simplest terms, structures use space that would otherwise be available to the organisms that would usually be there.

- [Factsheet for permanent structures in the nearshore environment](#) [PDF]
- [Types of Shore Structures](#) [exit DNR]

BEACH NOURISHMENT

The most effective shore parallel structure is the simple beach. Its broad shallow sloping surface causes waves to break gradually until all energy is lost. Studies have shown that flat beaches can reduce the offshore wave height by 40%. Structures and natural steeper slopes can create wave run-

ups that are twice the height of the offshore waves. The sand of the beach is highly mobile so that the beach width and profile are not consistent and frequently not predictable. Waves are continually moving sand in the system. During calm waters, many beaches reach an equilibrium beach profile by net onshore sand movement. But storm waves create an undertow which moves the sand back out to deeper water.

For beaches to be self-sustaining, there must be a source of sand from the updrift area that is not obstructed by a natural or man-made intrusion. Sand is not destroyed in the system, but it may be moved into an area where it is “trapped” and no longer moved by waves.

Beach nourishment is a man-made enhancement of the sand in the littoral drift system. Rather than let calm water build up the beach, sand is placed on the beach. To be effective over the long term, beach nourishment is an ongoing process.

- [Case Study: An Evaluation of Beach Nourishment on the Lake Superior Shore](#) [PDF]
- [DNR fact sheet, Beach Maintenance Activities](#) [PDF]

VEGETATION AS EROSION CONTROL

Vegetation can help stabilize beach areas from wind and wave erosion. There are a few species of plants that are recommended for use in the Great Lakes region. First plant these species: Marram (dune) grass, wheat grass, wild rye, and dune willows. Once these plants are established and flourishing, plant sand cherry and choke cherry. After the sand and choke cherry are flourishing, you can add cottonwood and basswood. Avoid walking through these areas and do not let any motorized vehicles operate in these areas. Many sand beaches on the Great Lakes are colonized by deep rooting plants during low water levels. Unless you are planning to do invasive species removal for phragmites, keeping these plants in place is critical to protecting the dunes from wind and waves.



BLUFFS AND BLUFF STABILITY

A bluff is stable as long as the soil's resistance to failure remains greater than the forces that can cause failure. Loads placed on the bluff that can contribute to failures include the weight of the soil itself, buildings and other bluff-top structures, and the water in the bluff. When the loads become greater than the strength of the soil in the bluff, sections of the bluff break loose and slide towards the lake. In Wisconsin, another factor that contributes to bluff instability is frost action. On the natural bluff face, freezing and thawing can break up the material. Concrete pieces are also susceptible to frost cracking. Many of the bluffs also contain clay materials. Solifluction, which occurs in spring when frozen clays begin to melt and the thawing soil flows down the face of the bluff, can move natural bluff material and fill material.

Bluff stability also depends, to some measure, on the slope of the bluff face. The degree to which any particular angle is stable depends on the soil types and the amount of water in the soils that make up the bluff. Different soil types, climate changes, erosive forces, and man-made changes on the bluff and in the watershed can all cause short and long term changes in how water content affects the bluff. There can even be differences in the makeup of the clay that can affect the stability. In the red clay shores of Lake Superior, a stable slope may require a 1:3 slope or flatter. The improper placement of fill can accelerate/cause bluff failure. The action of dumping fill itself can increase the chance of bluff failure. Driving a dump truck, crane, or dozer to the bluff edge, or depositing the fill material near the bluff top, can add to bluff load and result in bluff failure. Groundwater in the bluff increases the chance that slumping will occur, as the water both adds to the soil load and lubricates the soil, weakening its resistance to failure. "Some material used for fill is simply inappropriate for bluff stabilization and only adds trash to the lake." (UW Sea Grant Pennants). Fill made up of small rubble, asphalt pavement, reinforcing wire and rod, lumber, etc. will soon litter the lake water and lake bed.

Any material added to the bluff face must include a plan for managing groundwater in the bluff itself. Groundwater seeps are not always visible in the bluff face, especially in the summer and fall season. Impermeable bluff fill can cause groundwater to pool in the bluff, eventually causing a blowout. Several methods have been tested for groundwater management in the bluffs, but the constantly changing surface and drastically seasonal rainfall events can cause failures. Any material designed to concentrate water in the bluff itself can be susceptible to shifts and failures, which create a build-up of water pressure that will eventually breach the surface of the bluff face. Yard waste and household garbage kill underlying vegetation and add weight to the upper portion of a slope, which can cause a potential slide, thereby damaging established vegetation down below.

BLUFFS AND TOE EROSION

The glacial till soils of the tall bluffs are very susceptible to erosion from waves. This erosion at the base of the bluff is called bluff toe erosion and can cause the bluffs to oversteepen and slump. Continued slumping exposes even more erosive materials to the waves and often causes major bluff failures. Many property owners on the Great Lakes look to protect the toe of the bluff from erosion by constructing revetments, using large rocks, granite blocks or other forms of material (often several tons each) laid over filter fabric and stone. The most effective revetment will be designed to have the first layer of rocks trenched into the lakebed, stone high enough to prevent overtopping during storm events, and at least two layers of armor (outer layer) stone. Caution! Revetments can cause damage to neighboring properties and construction access can be problematic. Professional assistance is encouraged. DNR and US Army Corps of Engineers permits are needed for placement of a revetment.

- [DNR offers guidance for property owners in light of rising Lake Michigan water levels \(June 2016\)](#)
- [Stabilizing Coastal Slopes](#) [exit DNR]

TO: Planning Commission

FROM: JAC ZADER, ASSISTANT DIRECTOR COMMUNITY DEVELOPMENT

DATE: December 14, 2020

SUBJECT: Mequon Medical. The applicant is seeking building plan approval for a 29,000 sq. ft. +/- outpatient medical clinic for the property located at 1310 W. Highland Road. Based upon updated information regarding the relocation of the Sugar Maple tree, this has been added to the agenda for possible reconsideration (REMOVE FROM TABLE).

Applicant:	John Ford
Status of Applicant:	Agent
Requested:	Building Plan
	Reconsideration of specimen tree relocation requirement
Existing Zoning:	Neighborhood Commercial
Existing Land Use Plan:	Neighborhood Commercial
Lot size:	3.93 Acres
Location:	1310 W. Highland Road
Tax Key:	#15-007-16-000.00
District:	#5

Background:

The applicant is requesting building approval for a 29,989 square foot medical office building at 1310 W Highland Road. The Common Council approved the rezoning from R-2B (Single Family 1.5 Acre) to NC (Neighborhood Commercial) with a PUD at its November 10, 2020 meeting. The Planning Commission approved the site plan at its November 24, 2020 meeting but tabled the building design due to concerns from several of the Commissioners.

Building Plan:

Since the last Planning Commission meeting, the applicant met with staff and the two Commission architects to go over design alternatives. After making a number of design changes, the both Commission architects are now supportive of the proposed building design (see attached).

Reconsideration of Specimen Tree Conditions:

At the request of the Mayor, the reconsideration of the action taken by the Planning Commission at its last meeting regarding the removal of two specimen trees has been added to the agenda. The applicant has provided staff with an estimate (see attached) to relocate the tree which ranges from \$23,000 to \$35,000. The contractor also states that there is fiber optic under the tree which may or may not be intertwined in the root ball. The contractor also estimates that the survival rate for the tree is about 50%. The applicant is proposing to replace the tree with two 6-7-inch Sienna Glen Maples within the outlot. In accordance with Article IV of the Municipal Code, any commissioner voting in the majority may move for reconsideration of a vote at the next regular meeting. If the motion is seconded, the Commission may discuss modifications to the

previously approved conditions. If there is no motion or if a motion fails to get a second, the conditions of the original approval stand.

Planning staff and the City Forester have reviewed the updated information provided by the applicant. If the Commission votes to reconsider the item, staff would be supportive of the updated proposal.

Staff Recommendation: Planning staff recommends approval of the building plan subject to the following conditions:

1. Staff review and approval of the final building design.

Attachments:

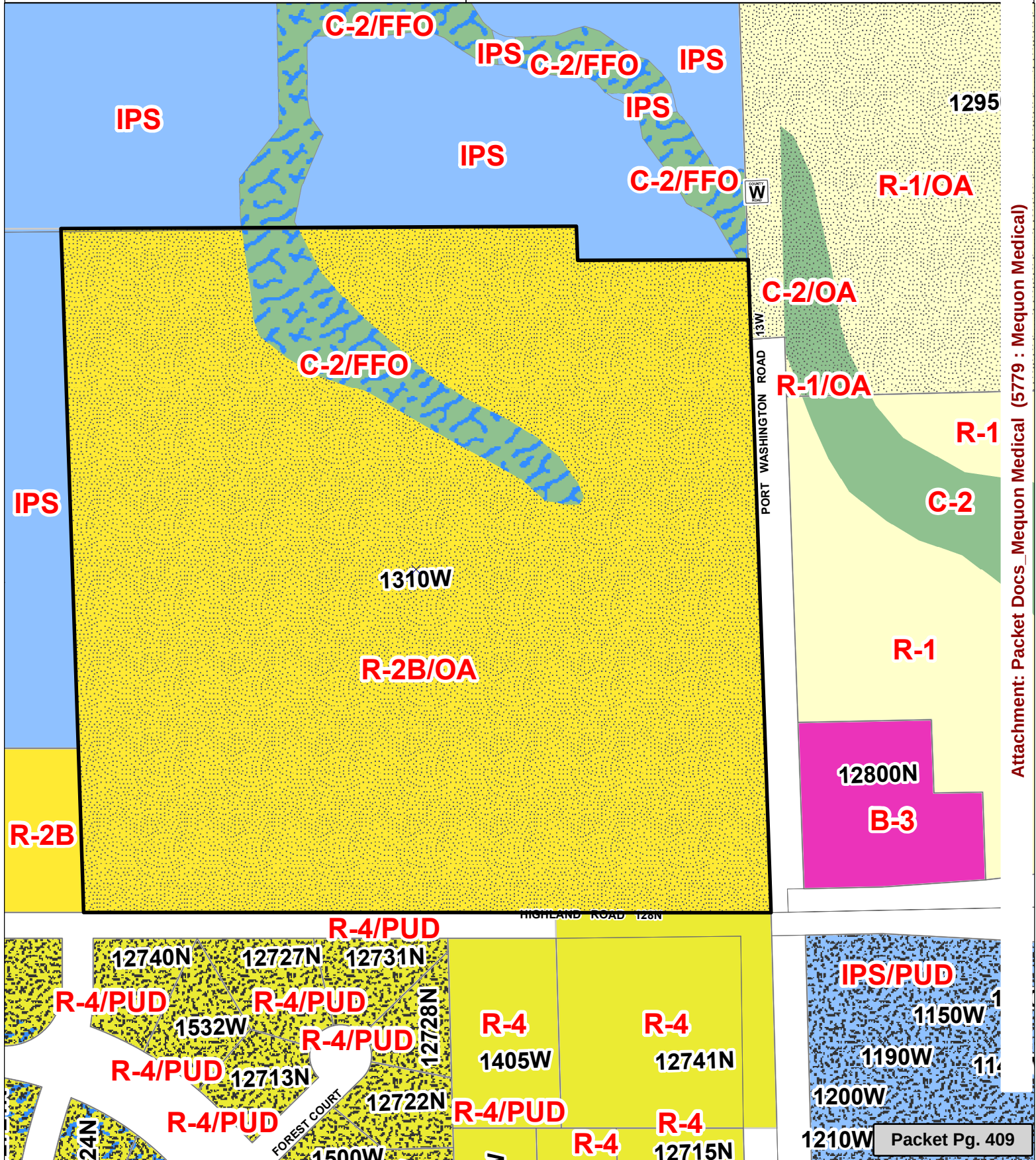
Packet Docs_Mequon Medical (PDF)

Mequon Medical

AC	Arrival Corridor
A-1	Agricultural Preserve
A-2	General Agricultural
B-1	Neighborhood Business
B-2	Community Business
B-3	Office & Service Business
B-4	Business Park
B-5	Light Industrial
B-6	Rural Industrial
B-7	Rural Business
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C-2	General Conservancy
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R-1	Single-Family Residential (5 Ac. Min.)	
R-1B	Single-Family Residential (2.5 Ac. Min.)	
R-2	Single-Family Residential (2.0 Ac. Min.)	
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R-3	Single-Family Residential (1.0 A.C. Min.)	
R-4	Single-Family Residential (3/4 Ac. Min.)	
R-5	Single-Family Residential (1/2 Ac. Min.)	5
R-6	Single-Family Residential (4 du/Ac)	
RM	Multi-Family Residential	
TC	Town Center	
TDR	Transfer of Development Rights	6

4.c.a





MAIN ENTRANCE PERSPECTIVE



DARK BRICK



LIGHT BRICK



STONE



FIBER CEMENT
GABLE PANELS + SCREEN WALL



METAL FASCIA PANELS
WINDOW FRAMES
GLASS



NORTHEAST PERSPECTIVE



SOUTHEAST PERSPECTIVE



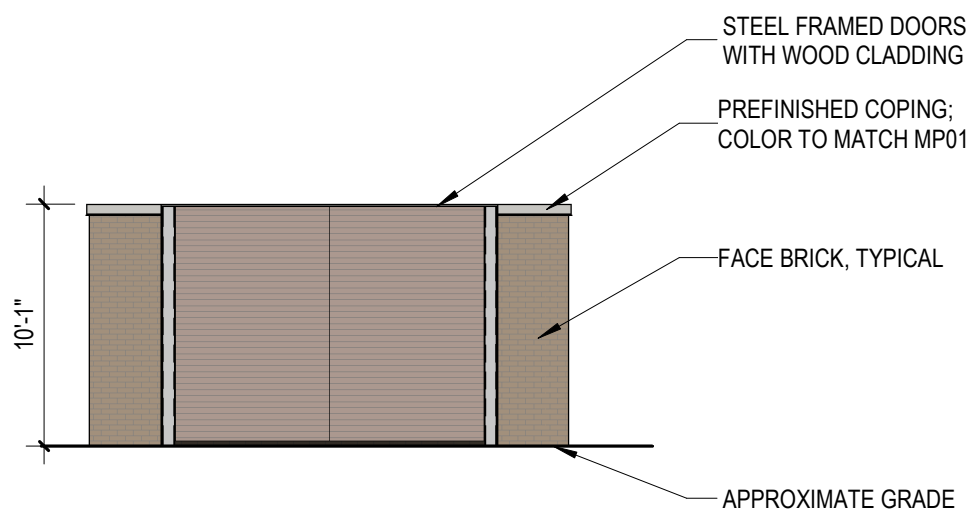
SOUTHERN PERSPECTIVE



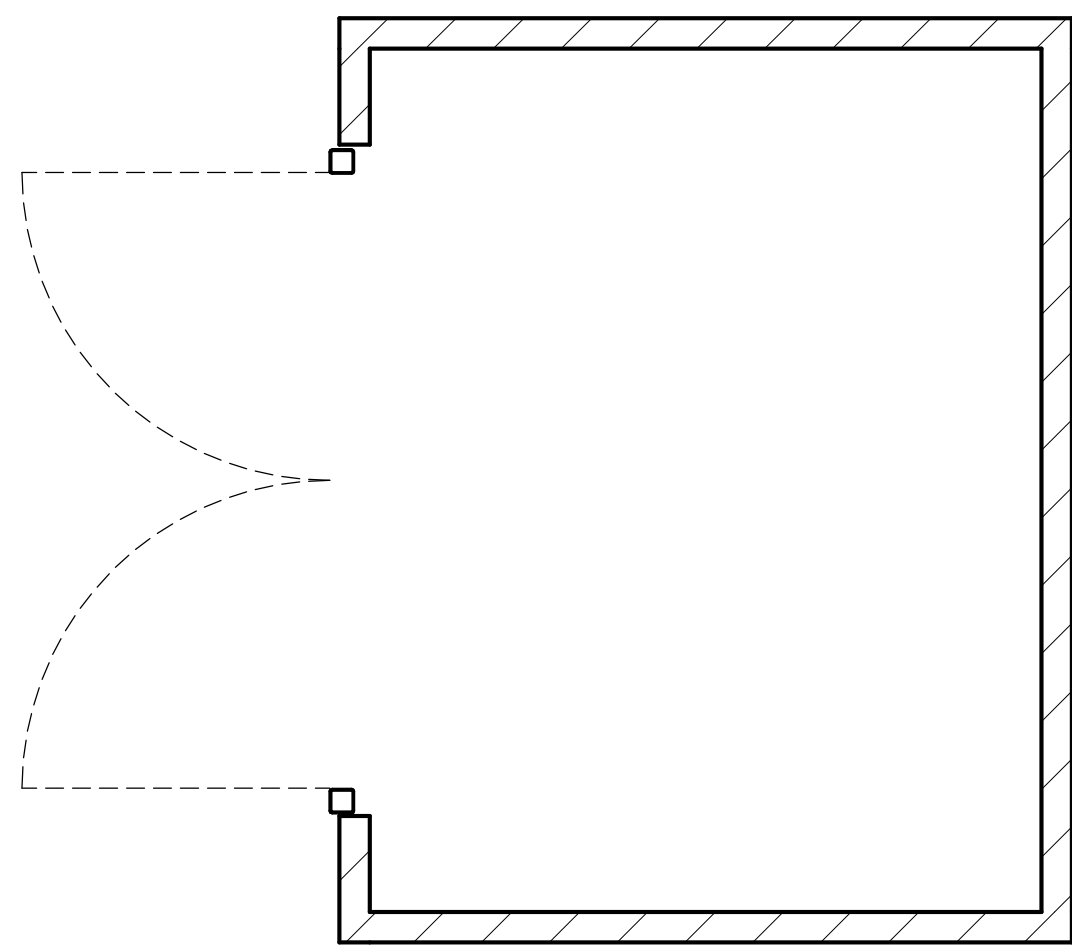
SOUTHWEST PERSPECTIVE



1 FIRST FLOOR PLAN - PRESENTATION
3/32" = 1'-0"

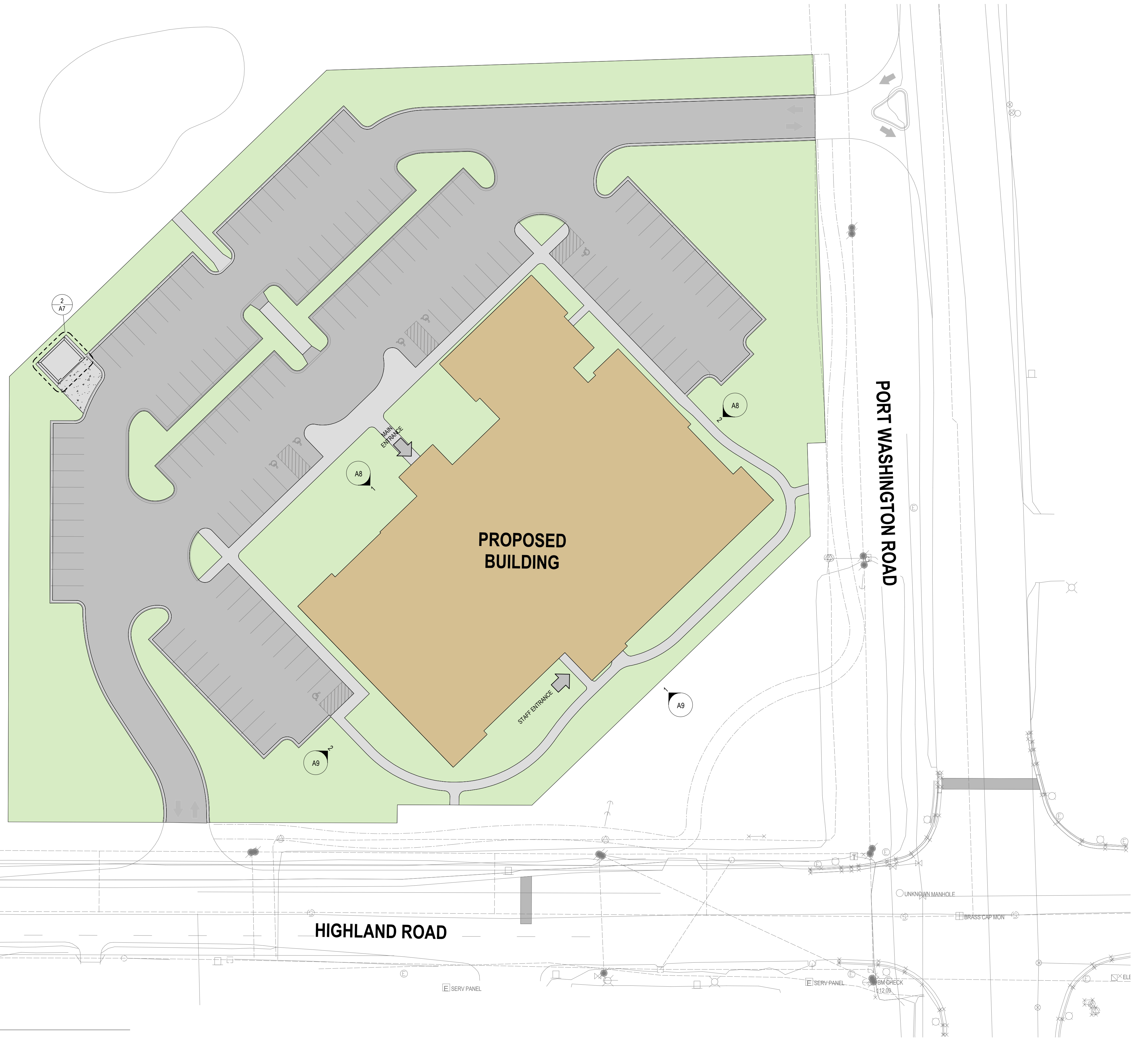


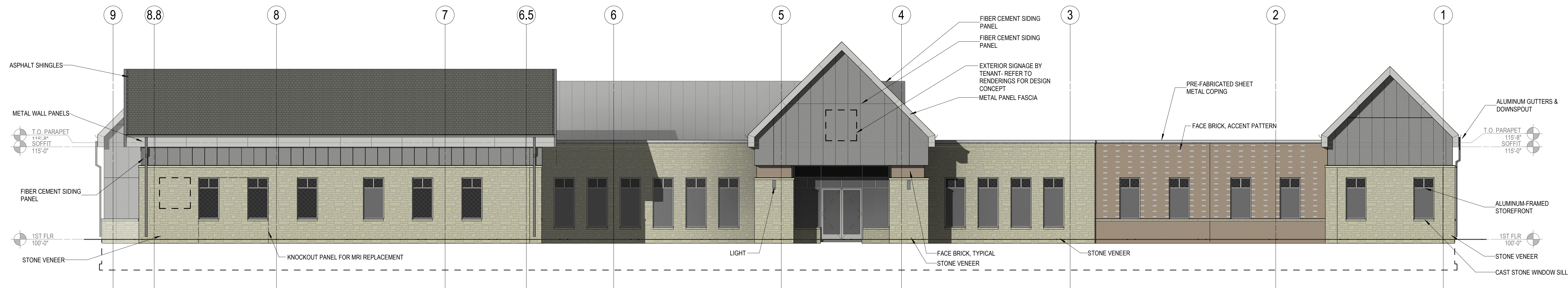
3 WASTE ENCLOSURE ELEVATION
1/8" = 1'-0"



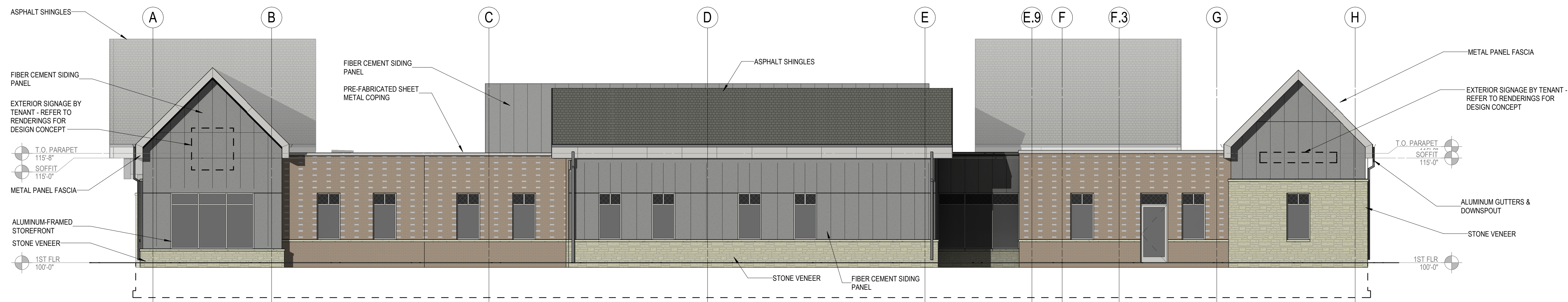
2 DUMPSTER ENCLOSURE PLAN
1/4" = 1'-0"

1 ARCHITECTURAL SITE
1" = 30'-0"

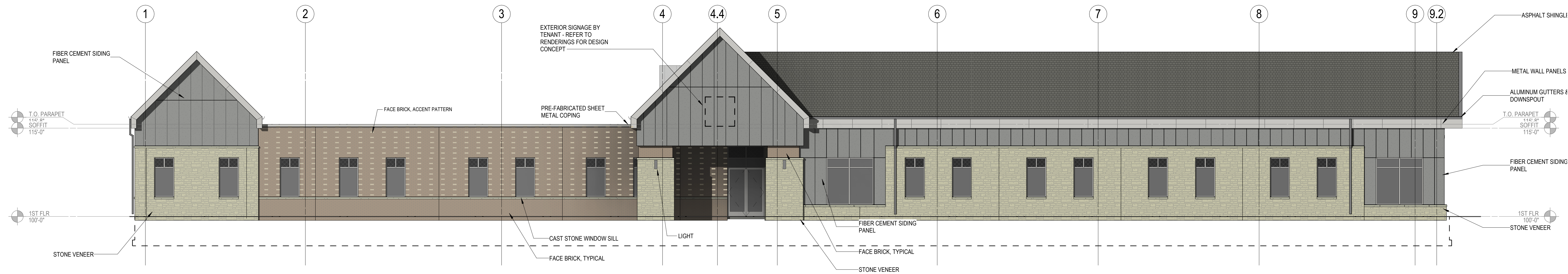




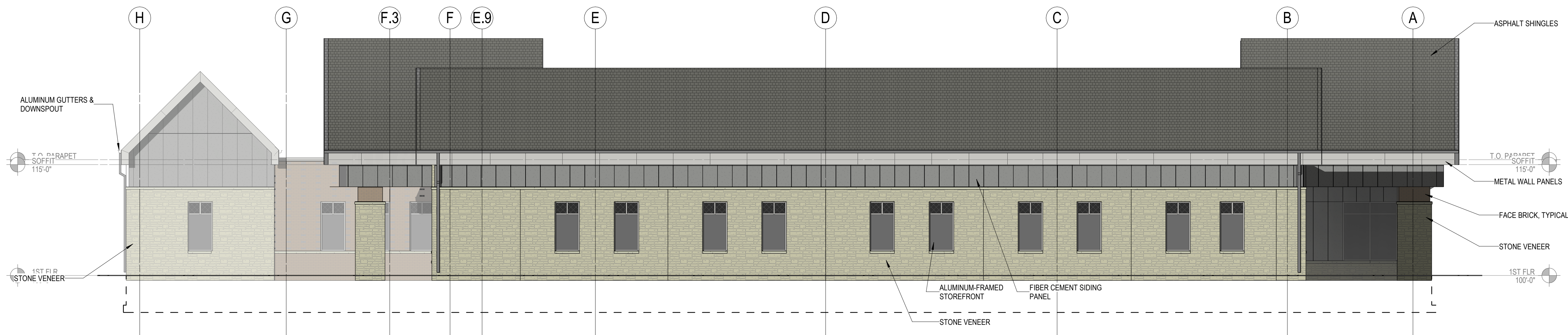
1 PLAN REVIEW - NORTH ELEVATION
1/8" = 1'-0"



2 PLAN REVIEW - EAST ELEVATION
1/8" = 1'-0"



1 PLAN REVIEW - SOUTH ELEVATION
1/8" = 1'-0"



2 PLAN REVIEW - WEST ELEVATION
1/8" = 1'-0"

Attachment: Packet Docs_Mequon Medical (5779 : Mequon Medical)

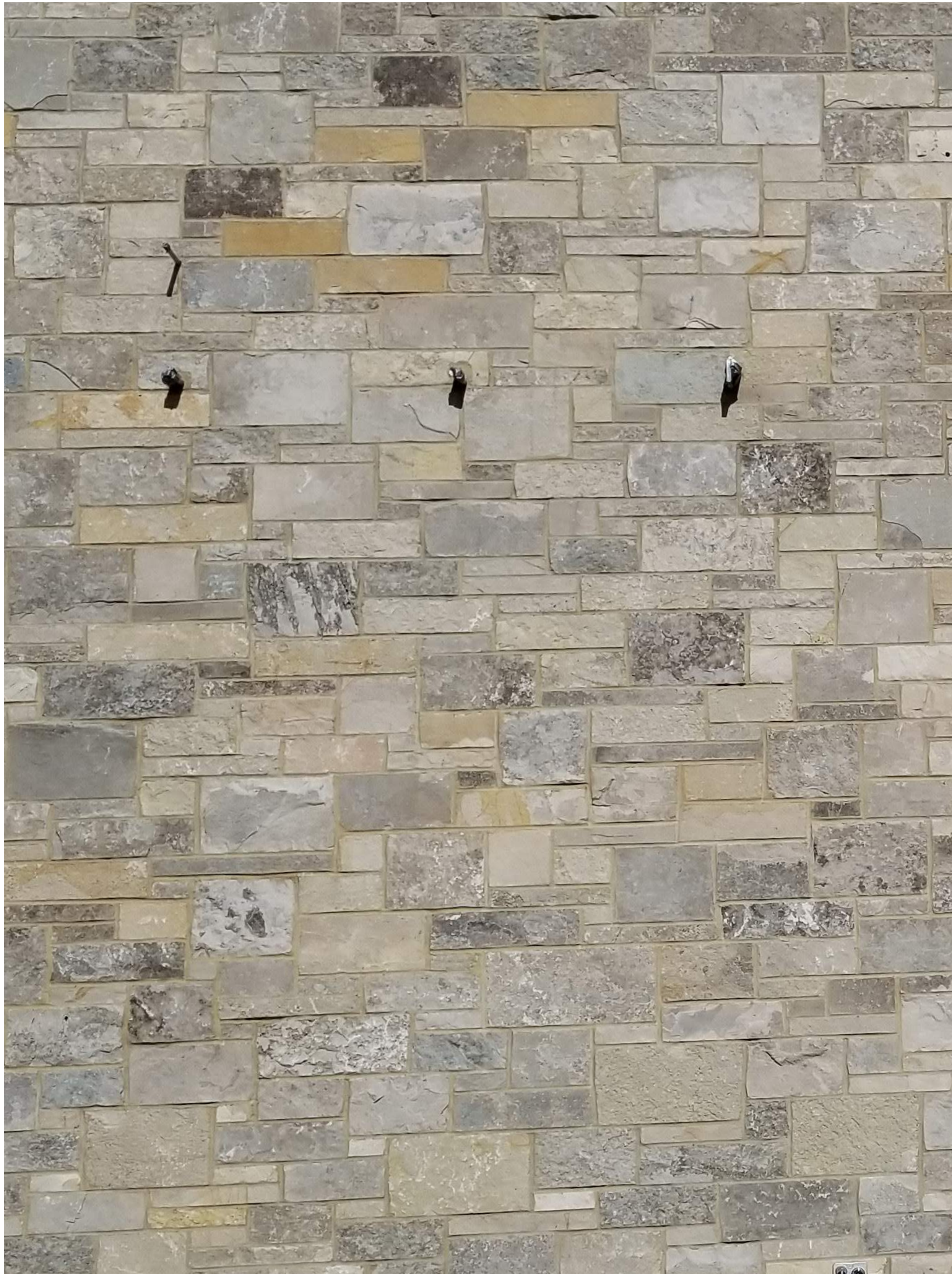


FIBER CEMENT
GABLE PANELS + SCREEN WALL

LIGHT BRICK



DARK BRICK



STONE



FIBER CEMENT
GLASS
METAL FASCIA + WINDOW FRAMES

Jac – here are summary points re: Maple Tree #9 at Highland/Port Washington:

- 14" diameter tree that is approximately 20-25' tall
- Approximately 25-33% of tree is either in close proximity or within the power lines above.
- No local landscaper has spade large enough to cut this out / relocate. Most likely would have to use as large as spade that they have + crane to lift out and relocate.
- Power lines above would be very challenging given would need to lift the tree ball out of the ground and the power lines will prohibit such.
- In addition, there are fiber optic cabling running below the Tree area. TBD if entangled within portions of tree ball.
- Landscape professionals discussed with all indicated LESS THAN 50% chance of survival if successful in moving.
- Relocating Tree Estimate – approximately \$13-15k (see attached proposal) for the tree PLUS an additional \$10-\$20k coordination with power lines and fiber optics.
- Our Landscape Architect (Michael Davis – InSite Landscape Design) connected with Mequon Parks & Forestry Superintendent (Mike Gies) who is in agreement with our proposed solution below.

Proposed Solution:

- Mequon Medical is allowed to take down / demo the tree
- In exchange, we will plant two (2) approximately 6-7" Sienna Glen Maple trees - similar type & color. These would be planted within out lot area adjacent to pathway – see attached out lot design with the two new trees shown. One towards Port Washington...one towards Highland.
- This will provide a much more coordinated aesthetic appearance as view building from street.
- Mike Gies is in agreement with our approach to demo tree (given condition + risk – power lines above, fiber optics below, less than 50% survival) and plant two 7" trees which are good size and will have a significantly better chance of survival.

Let me know if any questions / need anything else regarding this.

Thank you.

John T. Ford

Partner



833 E. Michigan St. Suite 1000
Milwaukee, WI 53202
(414) 399-0165
www.catalystdevelops.com



December 9, 2020

Mike Davis
Insite Design
11525 W North Ave
Wauwatosa WI 53226

Re: Tree Relocation Budget for Ascension Mequon Medical Clinic

Dear Mike,

Thank you for the opportunity you have given us. After our discussion and inspection of your site, we are pleased to submit our quotation for Landscape Improvement Services.

KEI will provide all labor, equipment, tools, materials, supervision, and any other service necessary to complete the following in an orderly and professional manner.

**Option #1: Relocate Existing 14" Maple Tree from the Corner of
Port Washington Rd/Highland Rd. and Transplant on-site**

- Deploy backhoe to create a perimeter around the existing tree.
- Create a "Root Ball" so as to Ball and Burlap it.
- Once unitized, the tree will be transplanted into place somewhere on-site within close proximity to the extraction.
- The tree will be watered heavily and a slow-release fertilizer applied.
- Tree will be mulched as needed.
- The hole created from the extraction will be backfilled w soil from the transplant.

Budget pending actual on-site confirmation.....\$13,000.00 - \$15,000.00 + tax

Items NOT INCLUDED in this price:

- Dealing w existing utilities that are currently present
 - There are currently overhead power and communication lines running directly over the tree in question. The tree is actually growing up and into those lines. For us to be able to do anything, it will be necessary to have those overhead utilities completely removed (at least temporarily) to accommodate our work.
 - We've been informed of the presence of underground utilities as well. It has been relayed to us that underground Fiber Optic service runs directly below or in very close proximity to the root zone of that tree. It would also likewise be necessary to have that underground service completely removed (at least temporarily) to accommodate our work.
- Any brush clearing and/or restoration that might be necessary to accommodate our initial extraction. It is assumed that this work might concur w the overall grading and landscaping that would be part of the overall development.

The budget for these two utility bypass operations could easily range anywhere from \$10K-20K or more pending a formal review by the utilities and Ascension.

Attachment: Packet Docs_Mequon Medical (5779 : Mequon Medical)

Option #2: Installation of 2 x units of 7” Caliper State Street Maples

KEI can provide 2 x units of Specimen Grade 7” State Street Maples for installation per the landscape plan.

Installation as follows:

- **Excavate holes with large backhoe to accept trees. B&B root-balls approx. 64” across x 54-60” deep. Spread spoils on-site.**
- **Accept flatbed delivery of trees (1 per delivery x 2 deliveries) and handle them with same large HD Capacity Backhoe.**
- **Trees to be installed in appropriate sized holes and backfilled as needed.**
- **Trees will be watered and treated with slow-release fertilizer.**
- **Trees will be mulched as needed.**

Cost.....\$9,200.00 + tax

As these trees are coming from a nursery and do not require the same extraction as the transplant, this option will not require the following additional services”

- **No utility removal or bypass. Neither overhead nor underground.**
- **No brush clearing or additional restoration of the extraction area.**

Please review our proposal carefully, and do not hesitate to call with any questions and/or comments you may have.

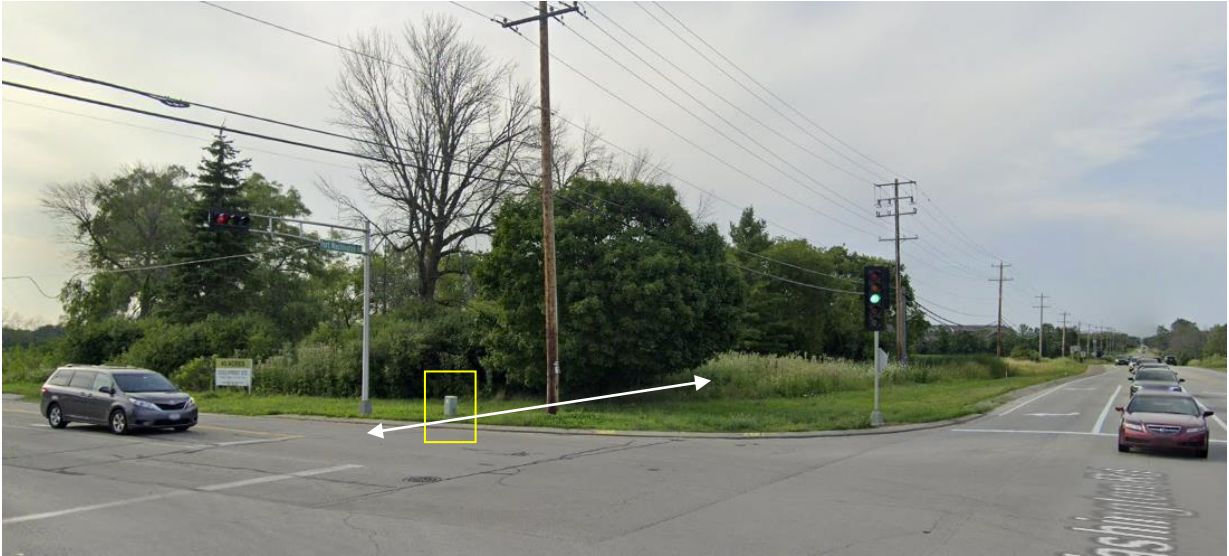
Sincerely,

KUJAWA ENTERPRISES, INC.

Chris Kujawa, CCLP, FMP, LEED GA
President

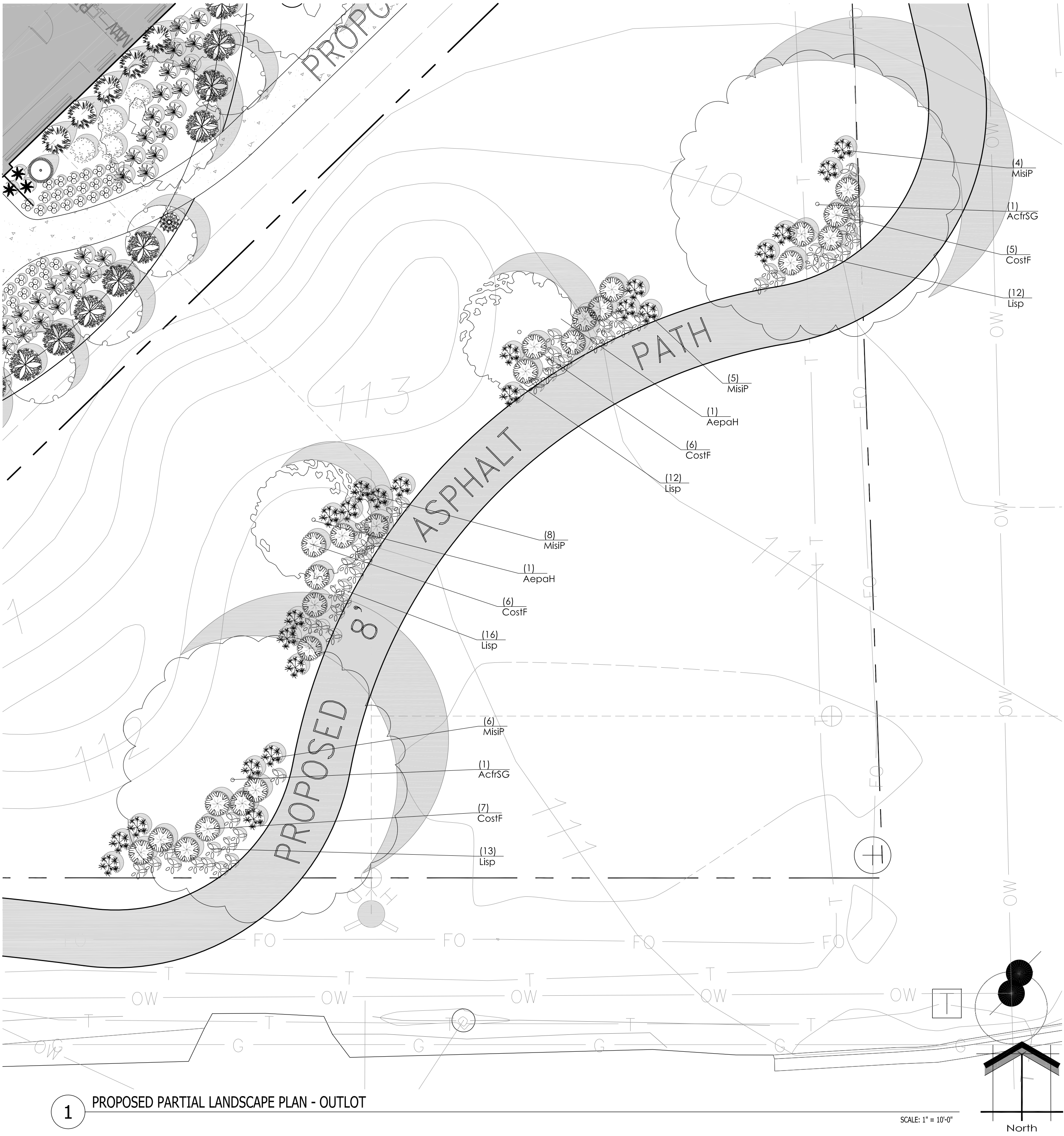
Existing Maple Tree





This is a slightly smaller version of a 14" tree, but it is representative of the procedure we would use for the transplant.

It is also representative of what an imported 7" B&B tree will look like



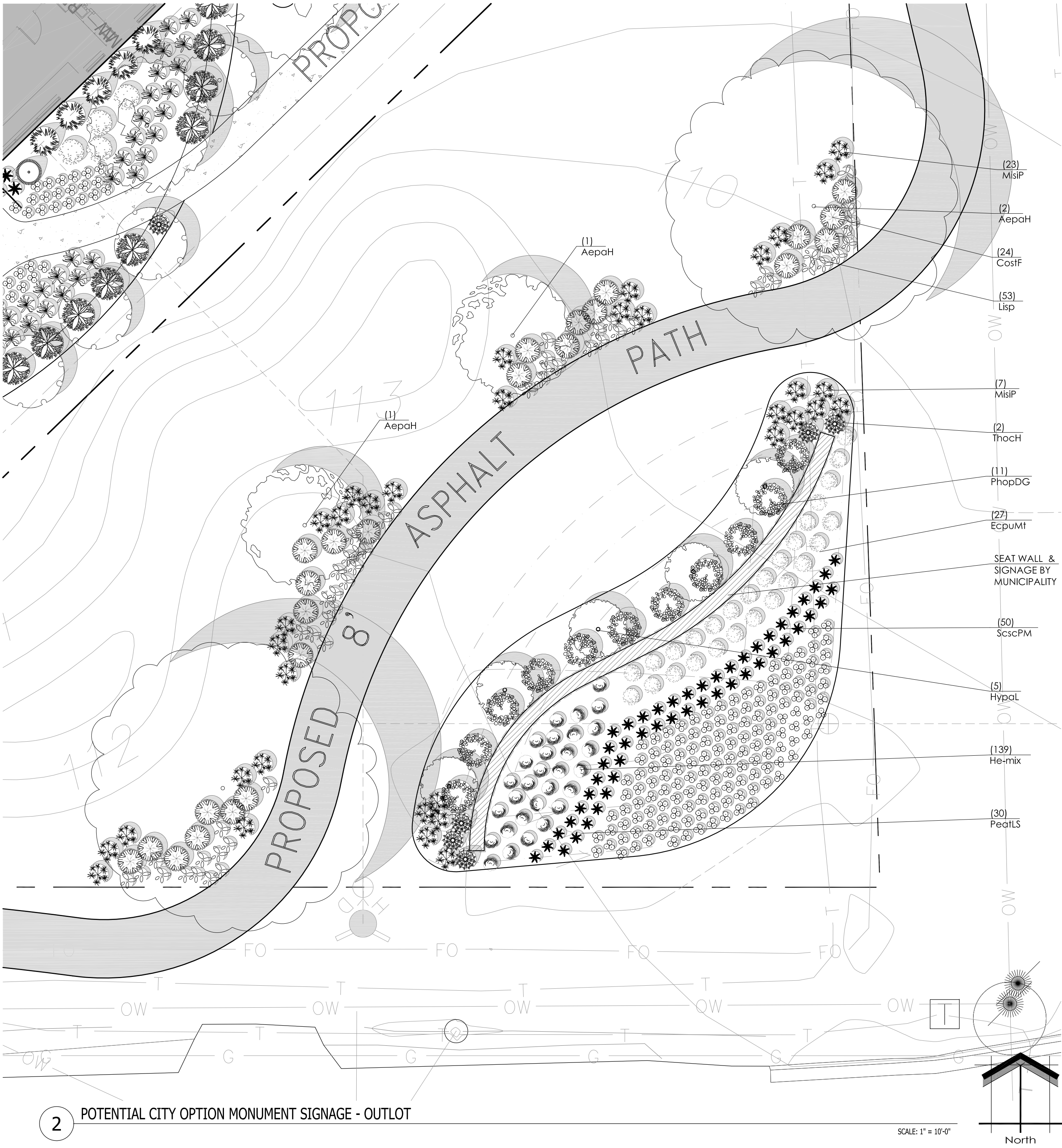
1 PROPOSED PARTIAL LANDSCAPE PLAN - OUTLOT

SCALE: 1" = 10'-0"

North

Proposed Plant Material Table - Outlot Option #1

Broadleaf Deciduous Tree						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	AcrfSG		Acer x freemanii 'Sienna'	Sienna Glen Maple	7"-Cal - B&B	
2	AepaH		Aesculus pavia 'Humilis'	Baumann Dwarf Red Buckeye	2"-Cal - B&B	
Broadleaf Deciduous Shrub						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
24	CostF		Cornus stolonifera 'Farrow'	Arctic Fire Red Twig Dogwood	18" - Cont	
Perennial Grass						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
23	MisiP		Miscanthus sinensis 'Purpuracens'	Purple Silver Grass	1-Gal - Cont	
Perennial						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
53	Lisp		Liatris spicata 'Kobold'	Kobold Blazing Star	4 1/2" pot	



2 POTENTIAL CITY OPTION MONUMENT SIGNAGE - OUTLOT

SCALE: 1" = 10'-0"

North

Proposed Plant Material Table - Outlot Option #2

Broadleaf Deciduous Tree						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	AcrfSG		Acer x freemanii 'Sienna'	Sienna Glen Maple	7"-Cal - B&B	
2	AepaH		Aesculus pavia 'Humilis'	Baumann Dwarf Red Buckeye	2"-Cal - B&B	
Broadleaf Deciduous Shrub						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
24	CostF		Cornus stolonifera 'Farrow'	Arctic Fire Red Twig Dogwood	18" - Cont	
11	PhopDG		Physocarpus opulifolius 'Dart's Gold'	Dart's Gold Ninebark	18" - 24" - Cont	
5	HypaL		Hydrangea paniculata 'Limelight'	Limelight Hardy Hydrangea	4" - Cont - free form	
Conifer Evergreen Shrub						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
5	ThocH		Thuja occidentalis 'Holmstrup'	Holmstrup Dwarf Arborvitae	3" - B&B	
Perennial Grass						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
35	MisiP		Miscanthus sinensis 'Purpuracens'	Purple Silver Grass	1-Gal - Cont	
50	ScscPM		Schizachyrium scoparium 'Prairie Munchkin'	Prairie Munchkin Little Bluestem	1-Gal - Cont	
Perennial						
Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
27	EcpuMt		Echinacea purpurea 'Merlot'	Merlot Coneflower	1-Gal - Cont	
52	Lisp		Liatris spicata 'Kobold'	Kobold Blazing Star	4 1/2" pot	
30	PeatLS		Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	1-Gal - Cont	
139	He-mix		Hemerocallis mix	Little Business Dwarf Daylily	4 1/2" pot	
			Hemerocallis x 'Swirling Water'	Swirling Water Daylily		
			Hemerocallis x 'Nosferatu'	Trophytaker Nosferatu Daylily		
			Hemerocallis x 'Ruby Spider'	Ruby Spider Daylily		
			Hemerocallis x 'VER00204'	Yellow Punch Daylily		

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Landscape Consulting
& Master Planning Design Services
11525 W. North Avenue, Suite 1B
Wauwatosa, WI 53226
Tel (414) 476-1204
www.insitedesigninc.com
mdavis@insitedesigninc.com

Project:

MEQUON MEDICAL LLC

Highland Rd
& N. Port Washington Rd
Mequon, WI 53092

Project for:

MEQUON MEDICAL LLC

833 E. Michigan St.
Suite 1000
Milwaukee, WI 53092

Issuance and Revisions:

Date	Number	Description
08/27/20		Client Review Submittal
08/28/20		Client Review Submittal
09/21/20		Plan Commission Submittal
11/23/20		Plan Commission Re-Submittal
12/09/20		Plan Commission Re-Submittal

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Sheet Title:

PROPOSED PARTIAL LANDSCAPE PLANS
OUTLOT OPTIONS
AND PLANT MATERIAL TABLES

Date of Drawing: 12/09/20

Scale: 1" = 16'-0"

Drawn By: MCD

Job Number: L20-069

Sheet Number:

LSP1.4

NOT FOR CONSTRUCTION - PRELIMINARY - FOR ESTIMATING AND REVIEW ONLY - DO NOT SCALE THESE DRAWINGS - Attachment: Packet Docs Mequon Medical 6779 - Mequon Medical





11333 N. Cedarburg Rd
Mequon, WI 53092-1930
Phone: 262-236-2902
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development

TO: Planning Commission
FROM: PA PHOUALA VANG, PLANNER
DATE: December 14, 2020
SUBJECT: Lakeside Development Company for RDC Investments. The applicant is seeking a consultation for a proposed 13,500 sq. ft. addition to the existing building for the property located at 10235 N. Port Washington Road.

Applicant:	Lakeside Development Company
	Brian Scheive
Status of Applicant:	Agent
Requested:	Consultation
Existing Zoning:	B-3 (Office and Service)
Land Use Plan:	Office
Lot size:	2.08 Acres
Location:	10235 N. Port Washington Road
Tax Key:	#15-031-01-014.00
District:	#7

Background:

The applicant is requesting a consultation for an addition to the existing building at 10235 N Port Washington Road. The expansion to the data center will provide additional server storage for RDC Investments. The building has an existing conditional use grant for a building over 20,000 square feet in the B-3 zoning district. Changes to the site and structure will require Building and Site Plan Approval and Conditional Use Grant amendment approval.

Site Plan:

The site plan shows the 13,500 square foot addition to the west of the existing building. The proposed addition meets setback and offset requirements. The offset from the west property line, which is shared with Cedar Ridge Condominium, is 45 feet. The existing wooded area between the building and the west property line will remain.

The addition results in an overall 39% floor area ratio (FAR) which exceeds the 30% allowed by code. The expansion will maintain a 38% open space ratio which meets the 30% open space requirement for additions to buildings approved prior to August 12, 1994.

The site currently has a total of 24 parking stalls and no additional parking is proposed. The applicant indicated that no additional parking is required for the expansion since the addition is for data storage only. Although the parking on site meets the needs of the current tenant, based on the size of the building, new users of the space may require more parking than what is available. If Planning Commission supports the addition, the Commission may choose to require a deed restriction to restrict the type of users for the property to avoid parking issues in the future. The Planning Commission may want to consider this in case future tenants request to put in additional parking which would then reduce the overall open space ratio.

The site has been subject to noise complaints and violations. The violations have been corrected but noise from the site continues to be a concern for the adjacent condominiums. The applicant indicated that the proposed addition has the potential to block some of the noise coming from the existing stand-alone generator since the addition will wrap around and surround the generator. The applicant indicated that the addition will have standard rooftop cooling units which do not seem to be the cause of the noise complaints. The applicant explained that the generator is an emergency back-up power source and only runs for 45 minutes per week during a test cycle. No generator is proposed as part of the project, and the applicant does not anticipate any increase in noise levels with the proposed addition.

Staff's main concerns with the proposal is related to the parking and the proposed floor area ratio. Staff believes that parking concerns can be addressed if a deed restriction is put in place to restrict the type of users to a similar use with reduced parking needs. Regarding the floor area ratio, the Planning Commission has not typically approved a 39% FAR for sites that meet the minimum lot size requirement. However, the total building does provide a 38% open space ratio which exceeds the 30% required by code.

Building Design:

The proposed addition will match the materials and overall design of the existing building. The addition will be 21'-2" in height to match the existing height. The generator approved by Planning Commission in July 2018 will remain in its current outdoor location, and the addition is proposed to be built around the generator. The addition will be visible from Port Washington Road.

Engineering Report:

Kristen Lundeen, Director of Public Works/City Engineer, reviewed the application and made the following comments:

The access and public utility connections for the site remain unimpacted by the proposed addition.

There are wetlands present on the west side of the property. A wetland delineation should be completed, and the appropriate wetland setback applied. It appears as though a large portion of the proposed addition may violate the setback and potentially impact the wetland. If filling the wetland is considered as a part of the project, it would require a wetland fill permit. Wetland fill permits are issued by the Wisconsin Department of Natural Resources (WDNR).

The amount of land disturbance and increase in impervious surface are not identified. The applicant should be advised that an erosion control permit, WDNR WRAPP and/or stormwater management plan may be required.

Staff Comment:

Overall, staff is primarily concerned with setting precedent by allowing a greater floor area ratio than permitted by code. Benefits of the project include exceeding the open space ratio and the potential to reduce noise coming from the existing generator. If the Commission is supportive of the project, staff will work with the applicant going forward to continue to make improvement to the overall design of the site and building.

Attachments:

Packet Docs_RDC (PDF)

RDC Investments

AC Arrival Corridor
A-1 Agricultural Preserve
A-2 General Agricultural
B-1 Neighborhood Business
B-2 Community Business
B-3 Office & Service Business
B-4 Business Park
B-5 Light Industrial
B-6 Rural Industrial
B-7 Rural Business
C-1 Shoreland/Wetland Conservancy
C-2 General Conservancy
CGO Central Growth Overlay
FFO Flood Fringe Overlay
FW Floodway
IPS Institutional & Public Service

LTD Limited Use
OA Agricultural Overlay
PUD Planned Unit Development Overlay
P-1 Park & Recreation
R-1 Single-Family Residential (5 Ac. Min.)
R-1B Single-Family Residential (2.5 Ac. Min.)
R-2 Single-Family Residential (2.0 Ac. Min.)
R-2B Single-Family Residential (1.5 Ac. Min.)
R-3 Single-Family Residential (1.0 Ac. Min.)
R-4 Single-Family Residential (3/4 Ac. Min.)
R-5 Single-Family Residential (1/2 Ac. Min.)
R-6 Single-Family Residential (4 du/Ac)
RM Multi-Family Residential
TC Town Center
TDR Transfer of Development Rights

4.d.a

10W

17W

305N

261N

259N

253N

251N

0247N

0245N

428W

1426W

LE

1419W

1421W

10315N

10303N

R-6/PUD

10235N

B-3

10201N

PORT WASHINGTON ROAD 13W

B-2



R-4

Attachment: Packet Docs_RDC (5780 : Lakeside Development Company for RDC Investments)

TO: JAC ZADER
FROM: BRIAN K. SCHEIVE
DATE: 11/16/2020

REGARDING:

DATA CENTER ADDITION AT 10235 N. PORT WASHINGTON ROAD

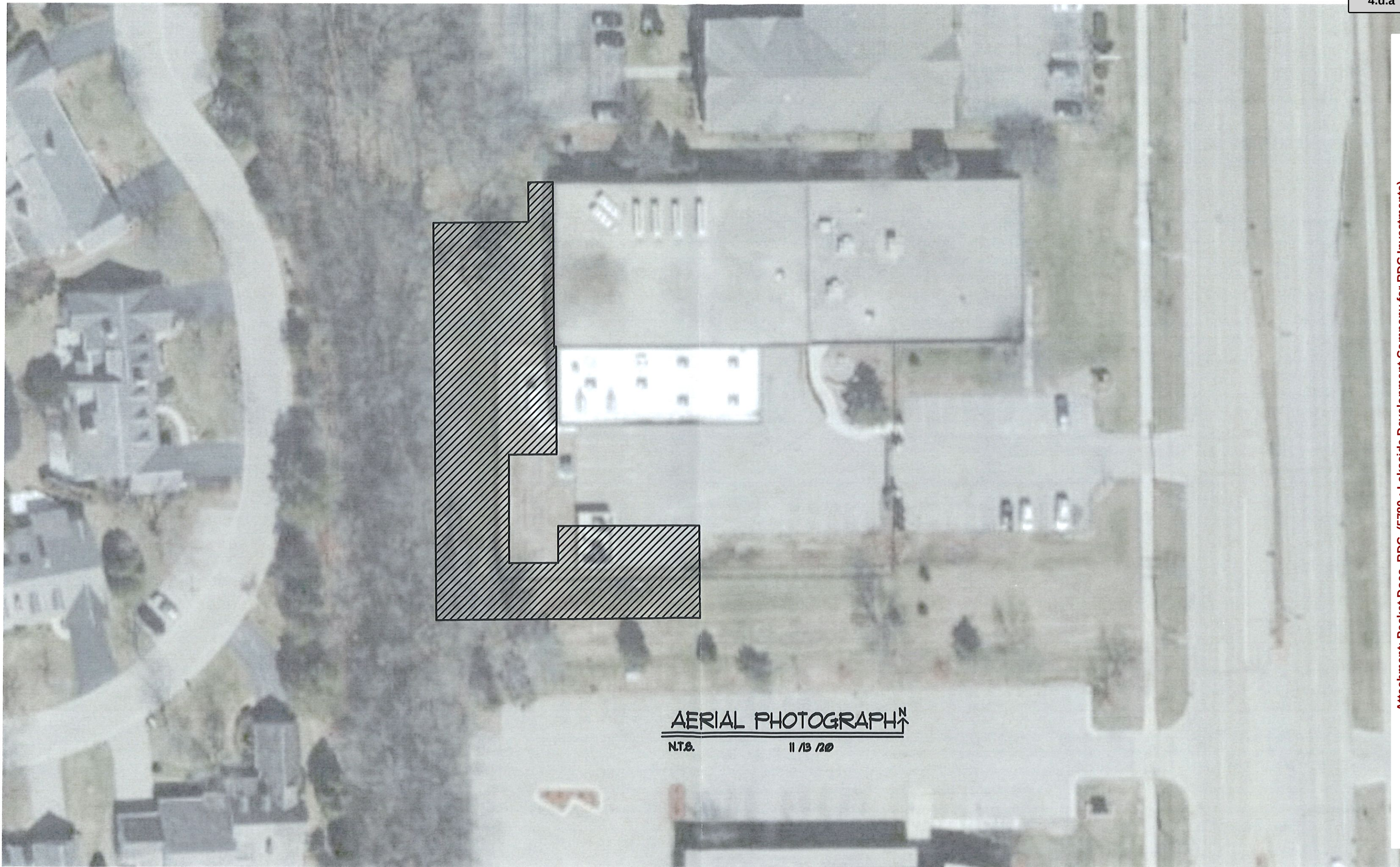
JAC ZADER,

PLEASE SEE THE ATTACHED

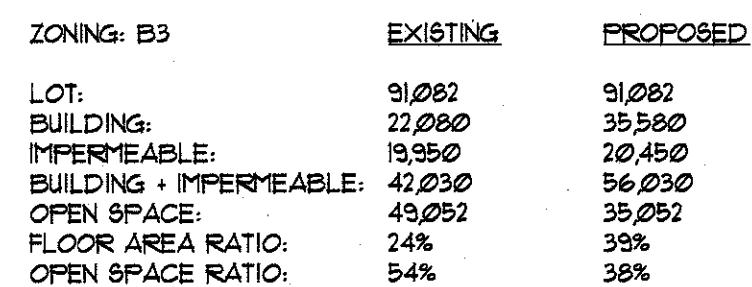
- APPLICATION TO THE DECEMBER PLANNING COMMISSION MEETING,
- EXISTING CONDITIONS SURVEY,
- EXISTING PICTURES
- PROPOSED PRELIMINARY SITE PLAN,
- PROPOSED PRELIMINARY EXTERIOR ELEVATIONS

WE ASK FOR A CONSULTATION WITH THE PLANNING COMMISSION TO GAUGE WHAT WOULD BE REQUIRED BY THIS BOARD FOR ACCEPTANCE OF THIS ADDITION.

- ANY CHANGES TO THE STRUCTURES ALREADY REQUIRES CONDITIONAL USE APPROVAL.
- WE PROPOSE A 39% FLOOR AREA RATIO (30% MAX ALLOWED).
- THIS EXPANSION IS NECESSARY TO CONTINUE GROWTH OF THIS BUSINESS.
- THE EXPANSION WILL BE TO THE WESTERN REAR OF THE LOT WHERE A 45 FOOT WOODED SETBACK WILL BE MAINTAINED.
- THE EXPANSION WILL MAINTAIN A 38% OPEN SPACE RATIO (MIN. 30%) WHICH IS POSSIBLE BECAUSE OF THE SMALL AMOUNT OF PARKING REQUIRED.
- THE EXPANSION HAS THE ABILITY TO IMPROVE BACKUP GENERATOR NOISE REDUCTION.



AERIAL PHOTOGRAPH^N
NTS. 11/13/20



PROPOSED PRELIMINARY SITE PLAN

DATA CENTER ADDITION
10235 N. PORT WASHINGTON ROAD
MEQUON, WISCONSIN 53092

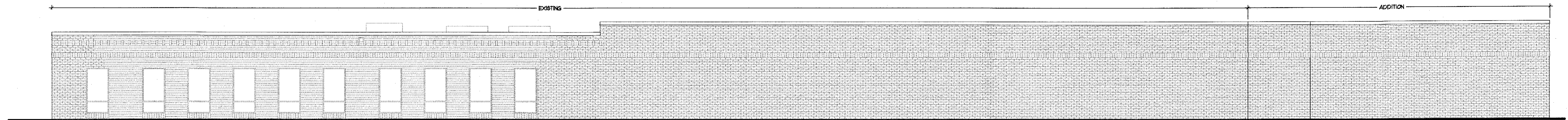
Lakecide Development
Company

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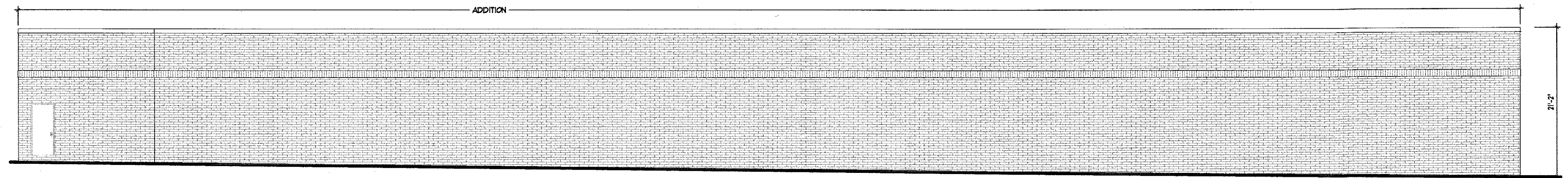
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DATE: NOV. 13 2020
JOB: 1305
DRAWN BY: BKS
CHECKED BY:



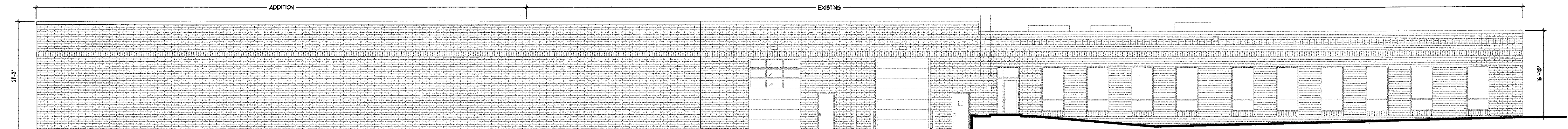
PROPOSED PRELIMINARY NORTH ELEVATION

3/32" = 1'-0"



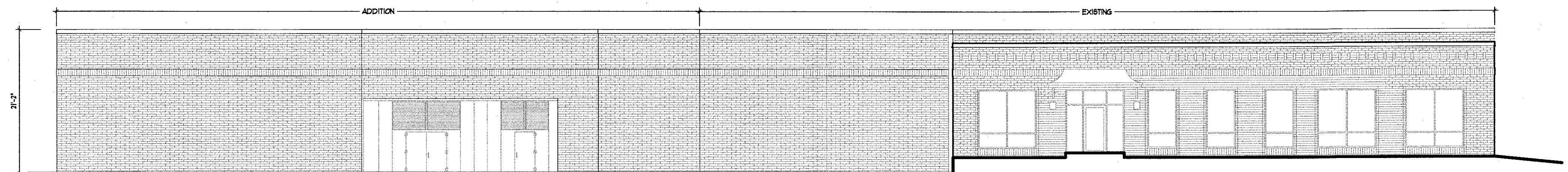
PROPOSED PRELIMINARY WEST ELEVATION

3/32" = 1'-0"



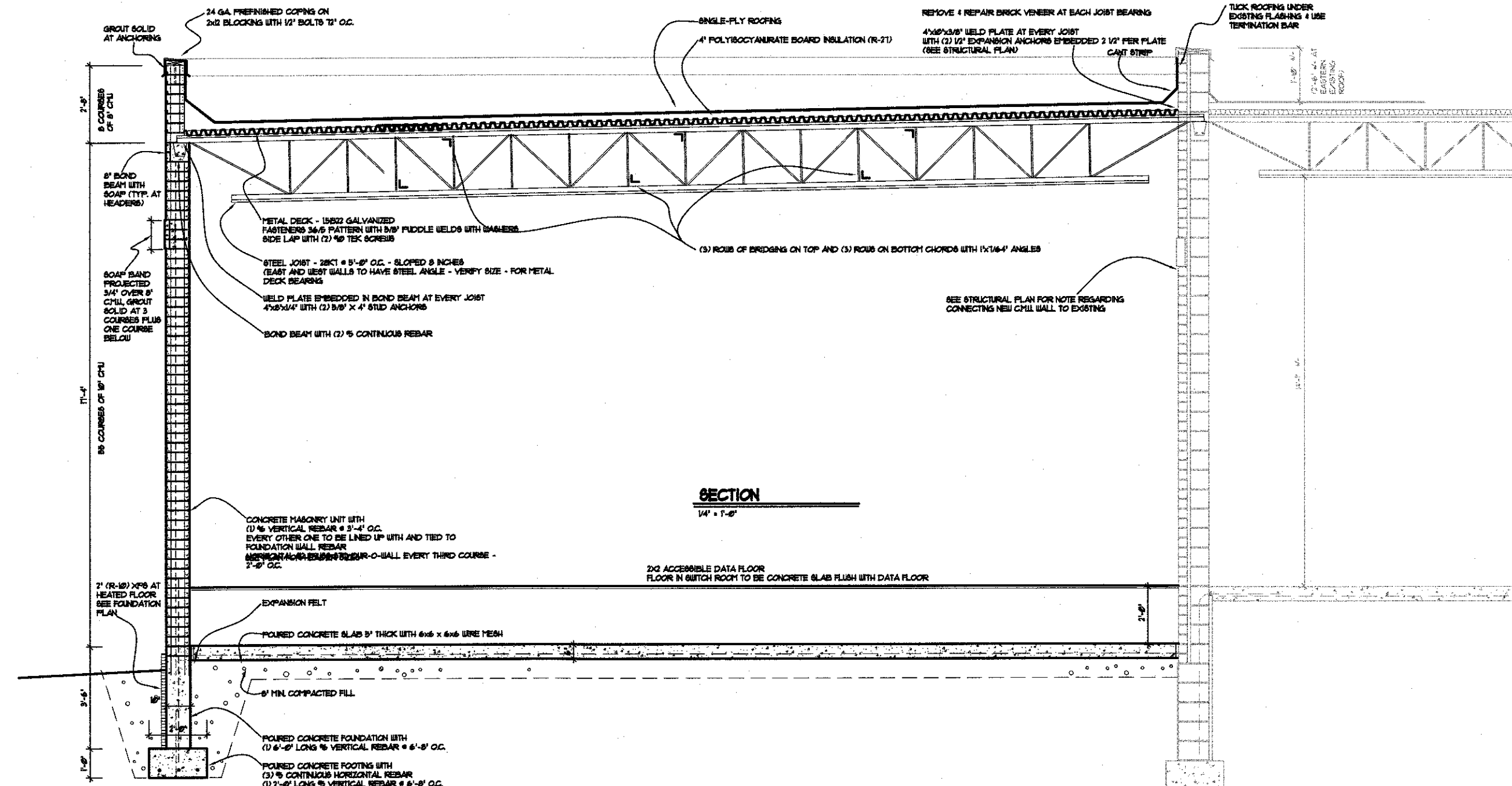
PROPOSED PRELIMINARY SOUTH ELEVATION

3/32" = 1'-0"



PROPOSED PRELIMINARY EAST ELEVATION

3/32" = 1'-0"



DATA CENTER ADDITION
10235 N. PORT WASHINGTON ROAD
MEQUON, WISCONSIN 53092

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DATE:	NOV. 13 2020
JOB:	1305
DRAWN BY:	BKS
CHECKED BY:	

LEGAL DESCRIPTION:

Parcel 1:

Parcel 1 of Certified Survey Map No. 2103, recorded September 19, 1989 in Volume 15 of Certified Survey Maps on Pages 333 to 336, as Document No. 421051, as amended by Affidavit of Correction recorded on May 28, 2013 as Document No. 986961, being a part of the Northeast 1/4 of the Northeast 1/4 of Section 31, Town 9 North, Range 22 East, in the City of Mequon, County of Ozaukee, State of Wisconsin.

Excepting therefrom that portion deeded from Schaum Publications, Inc. to William B. Arden II and Victoria S. Arden, husband and wife in Quit Claim Deed dated October 20, 1995 recorded October 25, 1995 in Volume 952 of Records on Pages 207-208, Document No. 546165.

Parcel 2:

A strip of land approximately 3 feet (North/South) by 458.50 feet (East/West) being a part of the East 1/3-5/6 acres of the Northeast 1/4 of the Northeast 1/4 of Section 31, Town 9 North, Range 22 East, in the City of Mequon, County of Ozaukee, State of Wisconsin, and also being a part of Parcel 1, Certified Survey Map #2103, as amended by Affidavit of Correction recorded on May 28, 2013 as Document No. 986961, recorded September 19, 1989 in Volume 15 of Certified Survey Maps on Pages 333 to 336, as Document No. 421051, which strip of land is located immediately South of that certain line established by mutual agreement between the owners of parcels of land identified by street address as 10303 North Port Washington Road and 10235 North Port Washington Road as the boundary line between said parcels, which line is described and located as follows:

Commencing at the Northeast corner of said 1/4 Section; thence Southerly along the East line of said 1/4 Section 650.00 feet to the Northeast corner of the parcel of land identified by street address as 10303 North Port Washington Road and described in the Warranty Deed recorded January 27, 1995, Volume 921, Pages 163 to 164, as Document No. 533205 in the office of the Ozaukee County Register of Deeds; thence continuing Southerly along the East line of said 1/4 Section 201.79 feet to the point of beginning of the boundary line herein described; thence running Westerly on a line bearing North 89° 58' 55" West and parallel to the South line of the Northeast 1/4 of said 1/4 Section 458.50 feet to a point in the West line of the East 1/3-5/6 acres of the Northeast 1/4 of said 1/4 Section, which parcel is also described as follows:

Commencing at the Northeast Corner of said 1/4 Section; thence Southerly along the East line of said 1/4 Section 650.00 feet to the Northeast corner of the parcel of land described in the above referenced Warranty Deed recorded January 27, 1995 as Document No. 533205; thence continuing Southerly along the East line of said 1/4 Section 201.79 feet to the point of beginning of the land to be described; thence continuing Southerly along the East line of said 1/4 Section 3.00 feet; thence Westerly on a line bearing North 89° 58' 55" West and parallel to the South line of the Northeast 1/4 of said 1/4 Section 458.50 feet to a point in the West line of the East 1/3 5/6 acres of the Northeast 1/4 of said 1/4 Section; thence Northerly on a line bearing North 00° 01' 52" West along the West line of the East 1/3 5/6 acres of the Northeast 1/4 of said 1/4 Section 3.00 feet to a point; thence Easterly on a line bearing South 89° 58' 55" East and parallel to the South line of said 1/4 Section approximately 458.50 feet to the point of beginning.

Exception Therefrom that part of the East 65 feet thereof, which was previously dedicated to the City of Mequon for public street purposes on Certified Survey Map No. 2103.

Said lands containing 91,693 sq. ft./ 2.10 acres of land more or less.

LEGAL DESCRIPTION (continued):

Parcel 3:(Leasehold)

A strip of land 10 feet (North/South) by 458.50 feet (East/West) being a part of the East 1/3-5/6 acres of the Northeast 1/4 of the Northeast 1/4 of Section 31, Town 9 North, Range 22 East, in the City of Mequon, County of Ozaukee, State of Wisconsin, and also being a part of Parcel 1, Certified Survey Map #2103, recorded September 19, 1989 in Volume 15 of Certified Survey Maps on Pages 333 to 336 as Document No. 421051, as amended by Affidavit of Correction recorded on May 28, 2013 as Document No. 986961, which strip of land is located immediately North of that certain line established by mutual agreement between the owners of parcels of land identified by street address as 10303 North Port Washington Road and 10235 North Port Washington Road as the boundary line between said parcels, which line is described and located as follows:

Commencing at the Northeast corner of said 1/4 Section; thence Southerly along the East line of said 1/4 Section 650.00 feet to the Northeast corner of the parcel of land identified by street address as 10303 North Port Washington Road and described in the Warranty Deed recorded January 27, 1995, Volume 921, Pages 163 to 164, as Document No. 533205 in the office of the Ozaukee County Register of Deeds; thence continuing Southerly along the East line of said 1/4 Section 201.79 feet to the point of beginning of the boundary line herein described; thence running Westerly on a line bearing North 89° 58' 55" West and parallel to the South line of the Northeast 1/4 of said 1/4 Section 458.50 feet to a point in the West line of the East 1/3-5/6 acres of the Northeast 1/4 of said 1/4 Section, which parcel is also described as follows:

Commencing at the Northeast Corner of said 1/4 Section; thence Southerly along the East line of said 1/4 Section 650.00 feet to the Northeast corner of the parcel of land described in the above referenced Warranty Deed recorded January 27, 1995 as Document No. 533205; thence continuing Southerly along the East line of said 1/4 Section 191.79 feet to the point of beginning of the land to be described; thence continuing Southerly along the East line of said 1/4 Section 10.00 feet; thence Westerly on a line bearing North 89° 58' 55" West and parallel to the South line of the Northeast 1/4 of said 1/4 Section 458.50 feet to a point in the West line of the East 1/3 5/6 acres of the Northeast 1/4 of said 1/4 Section; thence Northerly on a line bearing North 00° 01' 52" West along the West line of the East 1/3 5/6 acres of the Northeast 1/4 of said 1/4 Section 10.00 feet to a point; thence Easterly on a line bearing South 89° 58' 55" East and parallel to the South line of said 1/4 Section approximately 458.50 feet to the point of beginning.

Exception Therefrom that part of the East 65 feet thereof, which was previously dedicated to the City of Mequon for public street purposes on Certified Survey Map No. 2103.

SURVEY CERTIFICATE

I have surveyed the above described property and the above map is a true representation thereof and shows the size and location of the property, its exterior boundaries, the location and dimensions of all visible structures thereon, boundary fences, apparent easements, roadways, and visible encroachments, if any.

This survey is made for the exclusive use of the present owners of the property, and also those who purchase, mortgage, or guarantee the title thereto within one (1) year from date hereof.

2-13-2019
Date

James G. Schneider
Surveyor - S-2127

THIS IS AN ORIGINAL PRINT
ONLY IF STAMPED IN RED

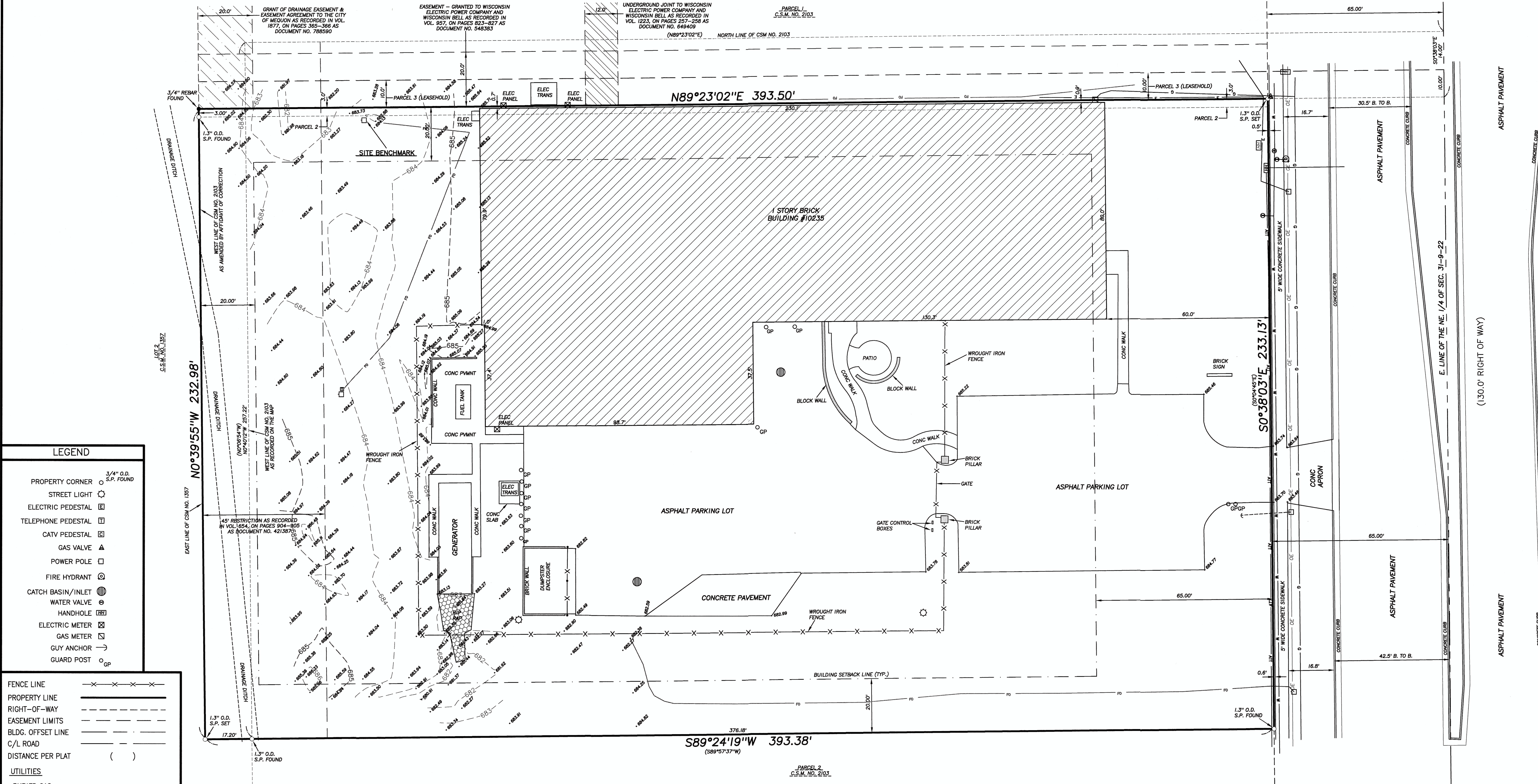


NOTES :

- () DENOTES DISTANCE PER DEED
- ALL BEARINGS ARE REFERENCED TO GRID NORTH OF THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. (NAD-27) EAST LINE OF THE NE 1/4 OF SEC. 31-9-22 WHICH BEARS S0°38'03"E

BENCHMARK NOTE :

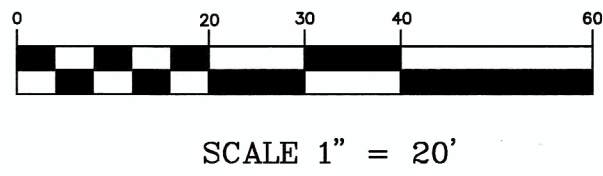
- SITE BENCHMARK R/R SPIKE SET IN E. FACE OF E/P NW. CORNER OF SITE AS SHOWN ON DRAWING ELEV. = 665.35
- MAIN BENCHMARK IS SECTION CORNER TIE AND REM. FIRE HYDRANT LOCATED 142' SE. OF C/L DONGES BAY RD. EAST SIDE OF PORT WASHINGTON RD. CHISELED CROSS IN TOP OF E. SIDE OF FLANGE ELEVATION = 665.66



N. PORT WASHINGTON RD.

130.0' RIGHT OF WAY

MARK	DATE	REVISION	BY	APVD
TOPOGRAPHIC SURVEY				
for Lakeside Development & RDC Investments, LLC				
10235 N. Port Washington Rd. Mequon, WI				
FIELD CREW:	E.A.J. & S.F.Z.	APPROVED:		
DWN. BY:	A.R.H.	DATE:	February 13, 2019	
CHKD. BY:	J.G.S.	Plat No.	LS-4468-19	



NORTH SHORE ENGINEERING, INC.
Consulting Engineers & Land Surveyors
11433 N. Port Washington Rd., Mequon, Wisconsin, 53092
(262) 241-9400 • FAX: (262) 241-5337
www.NorthShoreEngineering.net

WEST ELEVATION

4.d.a



Attachment: Packet Docs_RDC (5780 : Lakeside Development Company for RDC Investments)

EAST

4.d.a



Attachment: Packet Docs_RDC (5780 : Lakeside Development Company for RDC Investments)



Public Feedback

Planning Commission meeting 12.14.2020 Lakeside Development Company for RDC Investments Consultation

1)
The Planning Commission,

I own and reside at 10245 N Westport Circle. It is a wonderful, quiet and well maintained neighborhood. I am concerned with the possible additional development being so close to my neighborhood because of the increased noise level. We are already dealing with the constant hum of a generator or air compressor type machine and on Wednesdays and Thursdays an ear splitting compressor type machine is turned on for several hours during these 2 days. This machine even ran on Thanksgiving afternoon.

I would hope the Commission would consider and research the additional noise pollution this development would cause and it's impact on my neighborhood.

Regards,
Mary Bennett
1-414-254-0242

2)
To Whom It May Concern:

Pursuant to the courtesy notice sent by the planning commission of Mequon, I hear by voice my opposition to the expansion at 10235 N. Port Washington Road.

The noise created by continuous running of air conditioners and generators would be excessive by day and night, Winter and Summer, for an area so close to residential housing of an upscale nature and could easily cause a deterioration of the property values which would then cause a deterioration of the tax base fore the city of Mequon.

Sincerely,

Rose Mary O'Byrne
Property Owner
1434 W. Westport Circle

Attachment: Packet Docs_RDC (5780 : Lakeside Development Company for RDC Investments)

3)

Good Morning Mayor Wirth and Staff Liaison Kim Tollefson,

We live in the Cedar Ridge Condos which is adjacent to the property located at 10235 N. Port Washington Road which is being considered for a proposed conversion into self-storage. Our concern is that this conversion does not include adding any cooling towers or generator sets that could increase the already annoying noise from existing generator sets in this area. Additionally if this conversion includes raising the height of the existing facility it could negatively impact the view from the residential Cedar Ridge area. Furthermore, if this storage increases vehicular traffic during non business hours that would be a concern.

We are certainly in favor of responsible growth in Mequon and would hope that any decisions made would not negatively affect our home value or quality of life.

We hope you will address these concerns in the Monday, December 14 Planning Commission meeting.

Regards,

Bruce and Debra Brixey
1414 West Westport Circle
Mequon, WI 53092



TO: Planning Commission
FROM: JAC ZADER, ASSISTANT DIRECTOR COMMUNITY DEVELOPMENT
DATE: December 14, 2020
SUBJECT: Anderson Ashton Design/Build for 10448 N. Port Washington Road. The applicant is seeking a consultation to convert an existing 62,00 sq. ft. industrial building into self-storage for the property located at 10448 N. Port Washington Road.

Applicant:	Anderson Ashton
Status of Applicant:	Agent
Requested:	Consultation
Existing Zoning:	B-4 (Business Park) PUD (Planned Unit Development)
Land Use Plan:	Business Park
Lot size:	4.92 Acres
Location:	10448 N. Port Washington Road
Tax Key:	#15-029-11-008.00
District:	#8

Background:

The applicant is requesting a consultation for a self-storage facility at 10448 N Port Washington Road. The parcel is currently zoned B-4 (Business Park) with a PUD. Self-storage falls under the zoning classification of warehousing. The B-4 zoning district does not allow warehousing as a permitted or conditional use. The B-2 (Community Commercial) and the B-5 (Light Industrial) allow warehousing as a conditional use.

The parcel currently includes a 62,000 square foot building that was primarily used for industrial. There is a vacant portion of land to the south that was anticipated to be developed for office space. There was a PUD approved (2014-1424) in 2014 that dictated the size of building that could be built on the vacant piece based on a shared FAR and green space ratio.

Site Plan:

The proposed site plan only includes 3.67 acres of the 4.92 acres that make up the parcel. The plan assumes the remaining acreage will be split off and developed separately. The plan shows the elimination of a majority of the parking lot and an increase in the amount of green space. There are currently 100 parking spaces on the site which is reduced to 9 based on the new use of a storage facility. The increase in green space brings this portion of the site up to 30% which is compliant with the code as it relates to uses built prior to 1994. The plan also shows a building addition of 5,600 square feet. With the proposed addition, the FAR for this portion of the site would be 42%. This exceeds the 30% code requirement. Based on the PUD, the vacant remaining parcel was allowed a building no greater than 13,000 square feet. This approval did not anticipate the 5,600 square foot addition to the existing building.

Building Design:

The proposed building design shows the existing building refaced with fiber cement panels and aluminum storefront windows. The proposed design is a substantial improvement from the appearance of the existing building. While the design is an improvement, it still falls short in comparison to other buildings along the Port Washington Road corridor. The building includes a relatively small amount of natural materials and lacks the appropriate amount of fenestration for this size of structure. Staff also believes that the addition on the south end of the building is not consistent with changes made to the rest of the building and takes away from the overall appearance. Staff also does not support the location of the main overhead doorway on the west elevation.

Port Washington Zoning and Development Study:

The Economic Development Board is evaluating the zoning, use and character of the Port Washington Road corridor since August. Their work includes looking at the appropriateness of existing zoning classifications and to identify opportunities where land use modifications are needed or are desirable. The area around the Donges Bay/Port Washington Road intersection has been preliminarily designated as a possible entertainment/hospitality district. This would include uses such as restaurants, hotels and apartments. While this process is still in the early stages of completion, staff questions whether it would be premature to rezone this parcel prior to this land use analysis being completed.

TIF District #5:

The parcel is located in TIF District #5 which was created in 2012 as a rehabilitation TIF. The district was created to provide an incentive for the redevelopment of existing buildings in the corridor. The incentive was based on a specific formula (fast track formula) that was developed to ensure that all applicants were treated equitably. At the time, it was acknowledged that the formula would not provide enough of an incentive on this parcel to justify removing the existing structure.

Staff Comment:

Over the last several years, staff has met with a number of interested parties regarding this parcel. The majority of the proposals included either storage related uses that would take advantage of the existing building or high-density multi-family on a clean site. Staff's desired outcome for this site includes demolition of the existing building. We understand that economically this only makes sense if a certain valuation can be achieved. Even with the financial incentive available in the TIF, previous multi-family proposals included either densities greater than what is believed to be acceptable or lack substantial amenities and quality long term design value.

Over the years, there have been unsuccessful attempts at retrofitting the industrial building into a different use. The size, design and layout of the building makes this process difficult. This is exacerbated due to the context of the surrounding area which includes much smaller scale buildings. The shape and layout of the existing building makes it an attractive candidate for a storage retrofit. However, staff believes that this type of use, or any other industrial related use, is not the highest and best use at this location. Furthermore, staff is concerned over the timing of the request based on the work being done by the Economic Development Board. Rezoning of the parcel at this time seems premature based on the ongoing efforts. While the proposed design changes are an improvement from the existing condition, it is a short-term fix that will prolong the useful life of the building.

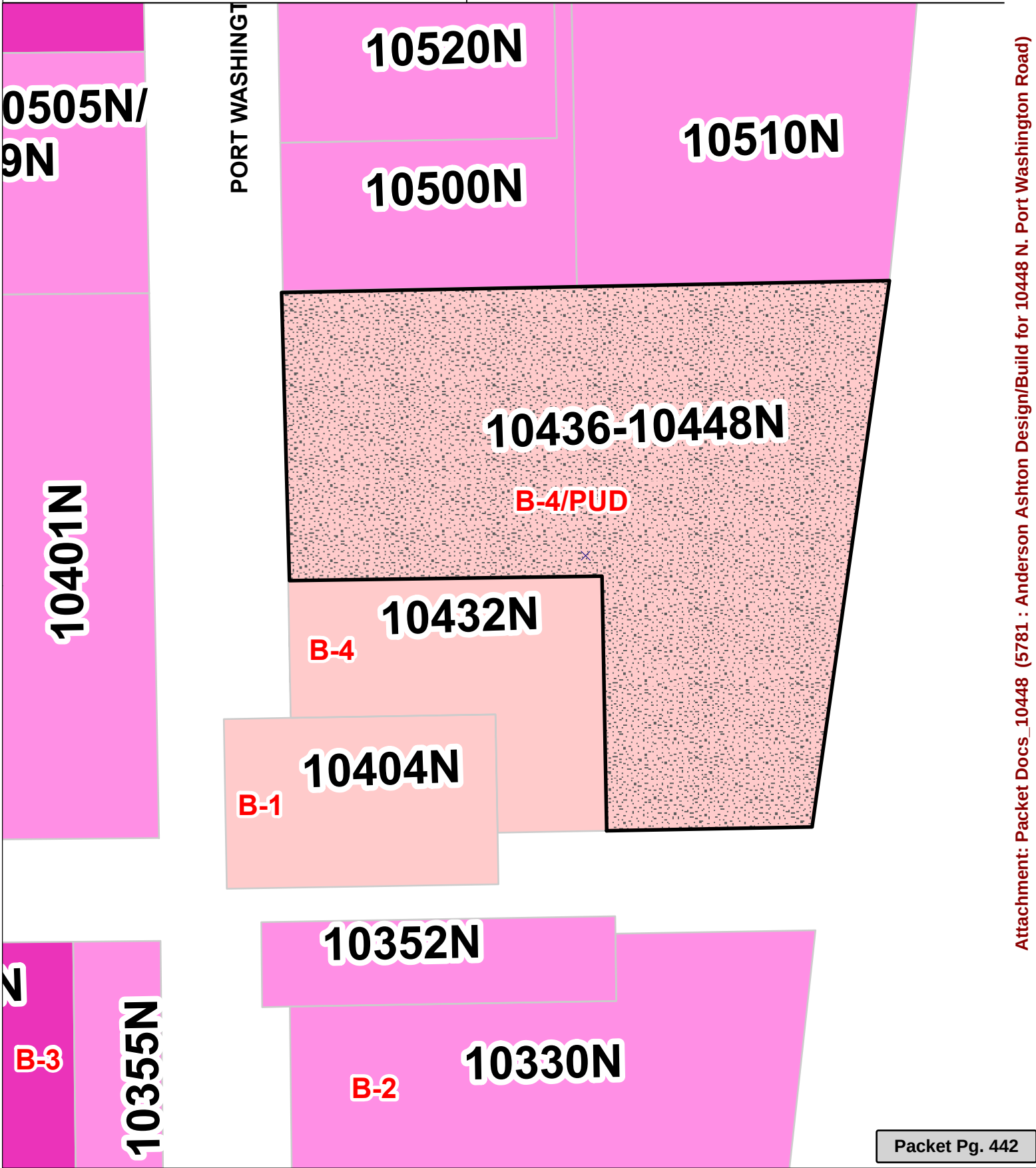
If the Commission does support the use of storage at this location, the B-2 zoning district would be the most likely candidate for the rezoning. As part of the rezoning, staff would suggest, among other improvements, that the proposal include a retail or service component at the front of the building along Port Washington Road.

Attachments:

Packet Docs_10448 (PDF)

Anderson Ashton Design

AC	Arrival Corridor	LTD	Limited Use	4.e.a
A-1	Agricultural Preserve	OA	Agricultural Overlay	
A-2	General Agricultural	PUD	Planned Unit Development Overlay	
B-1	Neighborhood Business	P-1	Park & Recreation	
B-2	Community Business	R-1	Single-Family Residential (5 Ac. Min.)	
B-3	Office & Service Business	R-1B	Single-Family Residential (2.5 Ac. Min.)	
B-4	Business Park	R-2	Single-Family Residential (2.0 Ac. Min.)	
B-5	Light Industrial	R-2B	Single-Family Residential (1.5 Ac. Min.)	
B-6	Rural Industrial	R-3	Single-Family Residential (1.0 Ac. Min.)	
B-7	Rural Business	R-4	Single-Family Residential (3/4 Ac. Min.)	
C-1	Shoreland/Wetland Conservancy	R-5	Single-Family Residential (1/2 Ac. Min.)	
C-2	General Conservancy	R-6	Single-Family Residential (4 du/Ac)	
CGO	Central Growth Overlay	RM	Multi-Family Residential	
FFO	Flood Fringe Overlay	TC	Town Center	
FW	Floodway	TDR	Transfer of Development Rights	
IPS	Institutional & Public Service			



Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design/Build for 10448 N. Port Washington Road)



2746 South 166th Street
 New Berlin, WI 53151
 262.786.4640 P
 262.786.4675 F
andersonashton.com

November 16, 2020

Mequon Planning Commission
 11333 N Cedarburg Rd.
 Mequon, WI 53092

**Re: Planning Commission Application for Consultation
 10448 N. Port Washington Road, Mequon
 Parcel No. 15-029-11-001.00**

Dear Mequon Planning Commission,

Enclosed please find our application for a Planning Commission Consultation regarding 10448 N. Port Washington Road, Mequon. A copy of proposed elevations and a site plan are included for your consideration.

By way of background, the subject parcel consists of an "L" shaped parcel approximately 4.92 acres in size at the intersection of Port Washington Rd and Donges Bay Rd. The buyer has agreed to purchase the portion of the site with the existing industrial building (approx. 3.67 acres). The remaining vacant land will be retained by the seller for a future use. The site is currently zoned B4. The building is anticipated to be entirely vacant by Spring 2021.

The proposed redevelopment anticipates converting the unsightly industrial building into a Class-A climate controlled self-storage facility. The building footprint will remain largely the same, however substantial improvements will be made to the exterior façade. The interior will be repurposed to provide an office/retail space along with two stories of interior climate-controlled space. The buyer contemplates working with a national operator to provide a state-of-the-art facility to consumers.

STATEMENT OF QUALIFICATIONS

Since 2008, Anderson Ashton has designed, built, converted, restored, and planned nearly two million sq. ft. of self storage. We have done conversions of existing industrial or warehouse space in Brookfield, Milwaukee, Franklin, Waukesha, New Berlin, and West Allis. We have converted existing retail space into self-storage in Delavan, and have ground-up state-of-the-art facilities in Brookfield, Milwaukee, Waukesha, West Bend, Menomonee Falls, and New Lenox, IL.

Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design/Build for 10448 N. Port Washington Road)

WHY SELF-STORAGE

State-of-the-art self-storage is the second fastest growing construction investment segment next to student housing in the US, with little signs of slowing down. This interest in self-storage has been spurred-on by the demand for secure, interior climate-controlled facilities that cater to a client base, 65% to 80% of which are women.

Retro-fit and conversion self-storage projects have been particularly popular as municipalities struggle (pre-Covid) with the vanishing of mid to big box retail businesses. Brick and mortar retail were already in trouble before the pandemic, and certainly industrial facilities in a business and retail environment carry an even heavier burden.

Self-storage has also proven to be immune to recession and economic downturns as evidence by the facilities we have been involved in. The tax revenue generated by a facility like the one here is real and immediate as the demand in this part of Mequon is significant.

Our solution in this location eliminates row style self-storage as an option, greatly enhances the architecture of an old, unsightly and almost impossible industrial building to redevelop. It creates a much higher barrier of entry for subsequent self-storage facilities based on our proposed building upgrades.

Self-storage in general reduces traffic over an active retail or office business as self-storage traffic is negligible with 5 to 8 average hourly trips when fully occupied. Self-storage also provides a high level of security that allows renters to feel safe, while providing a disincentive to crime both inside and outside of the facility.

Sincerely,



Brian Fisher

Vice President of Operations

bfisher@andersonashton.com

262.786.4640 p

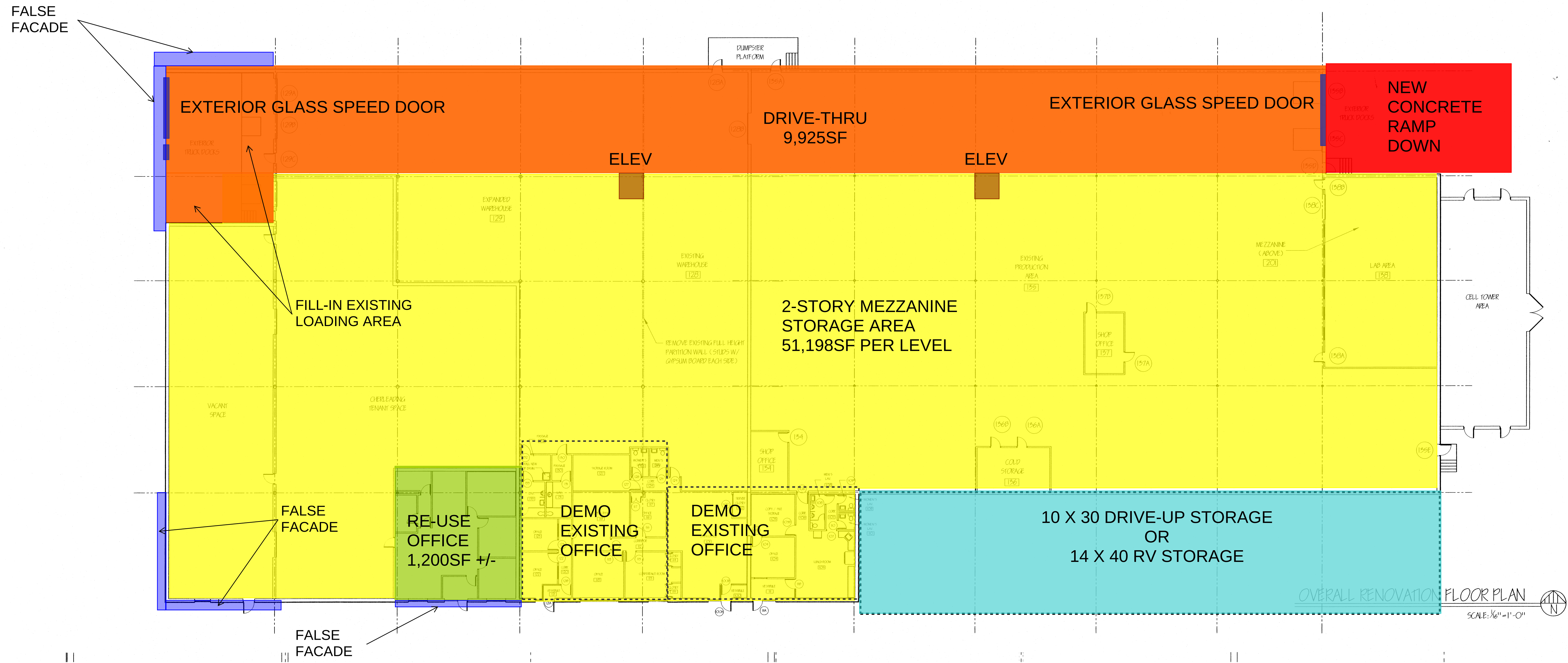
262.613.4015 c

M M A C • C O S B E



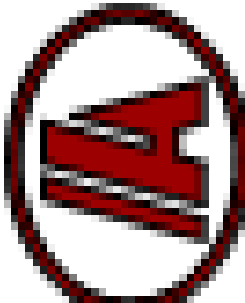
An EnergySTAR Partner





REVISIONS	

ANDERSON-ASHTON, INC.
DESIGN / BUILD
15448 NORTH POST WASHINGTON RD. MEQUON, WI 53001
TEL: 414.223.1100
WWW.ANDERSON-ASHTON.COM

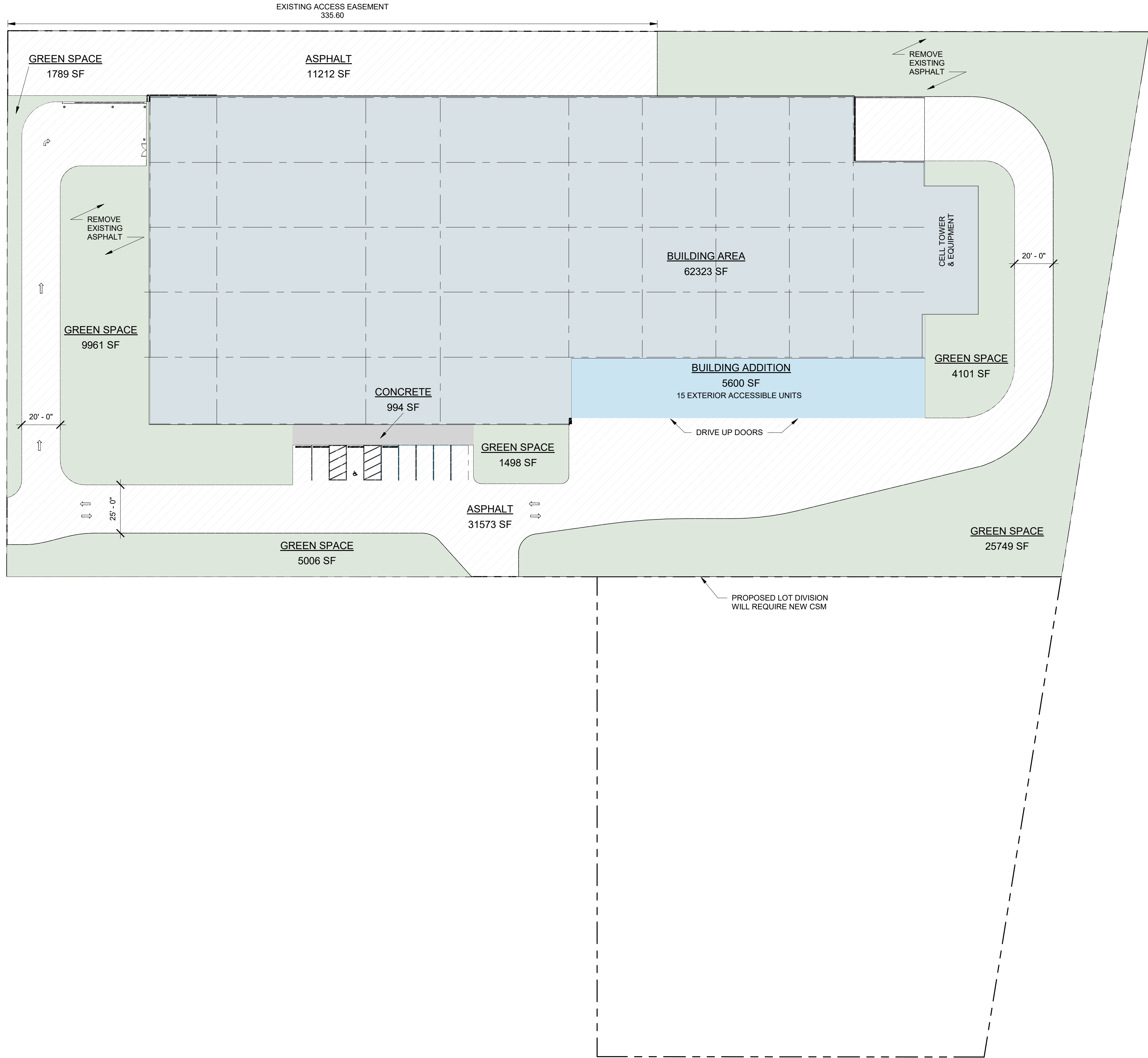


PROPOSED LOCATION, RENOVOL. NEW BUILDING FOR MEQUON SELF STORAGE	
DATE:	05/20/18
DESIGNER:	AK
CHECK:	05/20/18
APPROVAL DATE:	05/20/18
DESIGNED BY:	AK
CONSTRUCTION:	AK

OFFICE RENOVATION FLOOR PLAN
SCALE: 1/8"=1'-0"

A1.1

PORT WASHINGTON ROAD



SITE STATISTICS	
PROPOSED BUILDING ADDTION AREA:	5600 S.F. (3.5%)
EXISTING BUILDINGS AREA:	62323 S.F. (39%)
SIDEWALK-CONCRETE AREA:	994 S.F. (0.5%)M
EXISTING SIDEWALK-CONCRETE AREA:	0 S.F. (0%)
PAVED AREA:	42785 S.F. (27%)
GREEN SPACE AREA:	48105 S.F. (30%)
TOTAL LOT AREA:	159806 S.F. (100%)

SITE PLAN AREA	
AREA TYPE	SQUARE FOOTAGE
ASPHALT	31573 SF
ASPHALT	11212 SF
ASPHALT: 2	42785 SF
BUILDING ADDITION	5600 SF
BUILDING ADDITION: 1	5600 SF
BUILDING AREA	62323 SF
BUILDING AREA: 1	62323 SF
CONCRETE	994 SF
CONCRETE: 1	994 SF
GREEN SPACE	5006 SF
GREEN SPACE	25749 SF
GREEN SPACE	4101 SF
GREEN SPACE	9961 SF
GREEN SPACE	1498 SF
GREEN SPACE	1789 SF
GREEN SPACE: 6	48105 SF
Grand total: 11	159806 SF

- GENERAL SITE NOTES:**
- VISIT JOB SITE TO VERIFY EXISTING SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. MEET WITH GENERAL CONTRACTOR PRIOR TO STARTING.
 - REMOVE EXISTING TREES ALONG WITH ROOTS AS REQUIRED @ PROPOSED BUILDING AND PAVING AREAS.
 - STRIP AND REMOVE ALL REMAINDER VEGETATION & X" +/- TOP SOIL FROM WITHIN THE BUILDING AND PAVING AREAS. STOCKPILE REUSABLE. UNCONTAMINATED TOPSOIL AND PROVIDE FOR ALL EXCESS MATERIAL TO BE TRUCKED OFF SITE. SPREAD SALVAGED TOPSOIL OVER DISTURBED AREAS TO APPROX. 4" DEPTH AFTER CONSTRUCTION IS FINISHED.
 - CUT (OR FILL) THE BUILDING AREA +5.0' BEYOND PERIMETER OF THE BUILDING
 - CUT THE FLOOR AREA TO THE SUB-GRADE ELEVATION. (THE PERIMETER FOUNDATION FOOTINGS TO BE EXCAVATED BY CONC. CONTR. TO THE REQUIRED DEPTHS PER THE FOUNDATION PLAN). BENCH GRADE BACK PER CURRENT OSHA CODE STANDARDS PART #1926 IF REQ'D BY THE G.C. FOR THE PROJECT
 - PROOF ROLL BUILDING AREA FOR ANY SOFT MATERIALS. REPORT ANY SOFT SPOTS TO THE GENERAL CONTRACTOR.
 - ALL FILL MATERIAL FOR BRINGING GRADES UP TO SUB-GRADE ELEVATIONS SHALL BE GRANULAR OR CLEAN COMPACTABLE CLAY AND APPROVED BY ANDERSON-ASHTON.
 - ALL EXTERIOR BACKFILL MATERIAL FOR STANDARD FROST FOUNDATION WALLS SHALL BE CLEAN COMPACTABLE CLAY. INTERIOR BACKFILL MATERIAL SHALL BE 3/4" CLEAR STONE.
 - ALL BACKFILL & FILL MATERIALS SHALL BE INSPECTED AND APPROVED BY ANDERSON-ASHTON PRIOR TO PLACEMENT. ALL FILL MATERIALS SHALL BE COMPACTED IN 8" MAX. LIFTS @ 95% MODIFIED PROCTOR.
 - PREPARE THE PAVING AREA AS SHOWN ON THE CONSTRUCTION DOCUMENTS TO +/- 0.10'
 - PREPARE ALL SWALES AS SHOWN ON PLAN TO PROVIDE POSITIVE DRAINAGE DURING CONSTRUCTION.
 - RETURN AFTER THE BUILDING IS ENCLOSED & FINISH GRADE AND TOPSOIL AROUND PERIMETER OF BUILDING. ALSO, FINISH GRADE AROUND ELECTRICAL, TELEPHONE, GAS, SEWER, WATER AND UTILITY TRENCHES.
 - GRADING CONTRACTOR SHALL FIX AND REPAIR PARKING AREA AND DRIVES AS REQUIRED AFTER UTILITY AND OTHER WORK THAT MAY DISTURB THE SOIL AND/OR GRAVEL BASE BEFORE PAVING BEGINS. GRADING CONTRACTOR SHALL SMOOTH DRUM ROLL ALL PARKING AREAS AND DRIVES BEFORE PAVING BEGINS.
 - GRADING CONTRACTOR SHALL BE PREPARED TO HANDLE ALL SPOILS WHICH MAY INCLUDE ON SITE STORAGE AND TRUCKING OFF SITE. GRADER TO GET PRIOR APPROVAL FROM G.C. FOR PLACEMENT OF STOCKPILE SITES PRIOR TO STARTING STRIPPING OF TOPSOIL.
 - AWARDED GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR THE LABOR AND MATERIAL NEEDED FOR SUPPLYING ANY TRAFFIC CONTROL BARRIERS OR SIGNS AS NEEDED PER LOCAL OR D.O.T. CODES & REGULATIONS DUE TO ANY ROAD WORK OUTSIDE OF PROPERTY LINES

- ASPHALT PAVING WORK**
- FURNISH AND INSTALL A 8" CRUSHED AGGREGATE BASE AT THE ASPHALT PAVING PARKING AREAS.
 - FINE GRADE AND COMPACT STONE BASE.
 - FURNISH AND INSTALL A 4" (TWO LIFT) AVG. THICKNESS COMPACTED ASPHALT PAVEMENT AT TRUCK/DRIVE AREAS
 - FURNISH AND INSTALL ALL PARKING STALL STRIPING, H.C. SYMBOLS, & H.C. SIGNS ON METAL POSTS.

SITE PLAN LEGEND

- ASPHALT
- BUILDING ADDITION
- BUILDING AREA
- CONCRETE
- GREEN SPACE

4.e.a

REVISIONS

ANDERSON-ASHTON, INC. DESIGN / BUILD
2746 South 168th Street
New Berlin, WI 53151
PHONE: 262.534.0000
WWW.ANDERSONASHTON.COM

PROPOSED (ADDITION, REMODEL, NEW) BUILDING FOR:
MEQUON SELF STORAGE
10448 NORTH PORT WASHINGTON RD. MEQUON, WI

COPYRIGHT PROTECTED 2019

DRAFTED BY: JWN
DESIGNER: JWN
ISSUE: 11/16/20 3:38
SUBMITTAL DATE: 11/12
DESIGN NO. P-01930
CONSTRUCTION NO. ####

AS01

Packet Pg. 446

Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design)Build for 10448 N. Port Washington Road)

1 ARCH SITE PLAN
1" = 30'-0"



Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design/Build for 10448 N. Port Washington Road)

SITE AERIAL



Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design/Build for 10448 N. Port Washington Road)

SOUTHWEST CORNER



Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design/Build for 10448 N. Port Washington Road)

OFFICE



**ANDERSON
ASHTON**
DESIGN / BUILD



DRIVE THRU ENTRY

Attachment: Packet Docs_10448 (5781 : Anderson Ashton Design/Build for 10448 N. Port Washington Road)



**ANDERSON
ASHTON**
DESIGN / BUILD

COMMON COUNCIL
OF THE
CITY OF MEQUON

ORDINANCE NO. 2014-1424

To amend the map portion of the “Development Ordinance of the City of Mequon” (i.e., Chapter 58) with respect to approximately 4.92 acres of land located at 10448 N Port Washington Road

THE COMMON COUNCIL OF THE CITY OF MEQUON, OZAUKEE COUNTY, STATE OF WISCONSIN, DOES ORDAIN AS FOLLOWS:

SECTION I:

Pursuant to section 62.23(3) of the Wisconsin Statutes, the City of Mequon, is authorized to prepare and adopt a comprehensive plan, or amendment thereof, as defined in section 66.1001(1)(a) and 66.1001(2).

1. Any future building on Lot 2 shall not exceed 13,000 square feet unless all the requirements of the B-4 zoning district are complied with for both lots.
2. The green space ratio for the entire site may be reduced from the required 30% to no less than 26.5% if it is determined by the Planning Commission that additional parking is needed to meet on site demand. Action by the Planning Commission is required through a Building and Site Plan application.
3. The setback along Donges Bay shall be reduced to 40 feet.
4. The setback along the freeway shall be reduced to 30 feet provide that there is no conflict with the requirements of Trans 233.
5. The CSM shall provide a cross access easement to the new parcel to maintain access to Port Washington Road.
6. Any future building must connect to public utilities and provide erosion control devices and storm water facilities in compliance with City ordinances, MMSD Chapter 13 and NR151/216.
7. Additional connections to Donges Bay Road must conform to all City ordinances regarding width and spacing requirements.

SECTION II:

Following recommendation of the Planning Commission on the 9th day of June, 2014, and after due notice and hearing by the Common Council of the City of Mequon on the 8th day of July, 2014, the existing and official City of Mequon district zoning maps are hereby amended so as to change the zoning classification of certain properties, as described and illustrated in Exhibit A, to B-4, PUD.

SECTION III:

All other ordinances or parts of ordinances contravening the terms of this ordinance are hereby and to that extent repealed.

SECTION IV:

This ordinance shall take effect and be in full force upon its passage and the day after its publication.

Approved By: Dan Abendroth, Mayor

Date Approved: 07/14/14

This is to certify that the foregoing ordinance was adopted by the Common Council of the City of Mequon, Wisconsin at a meeting held on the 8th day of July, 2014.

Lee Szymborski, City Clerk

Published: _____

PLANNING COMMISSION SCHEDULE 2021

Meeting Start Time is 6:00 pm

PC APPLICATIONS Deadline	PC Meeting Date	Next Council Meeting
12/14/20	01/25/21	02/09/21
01/18/21	02/22/21	03/09/21
02/15/21	03/22/21	04/13/21
3/22/21	04/26/21	05/11/21
04/19/21	05/24/21	06/08/21
05/24/21	06/28/21	7/13/21
06/21/21	07/26/21	8/10/21
08/23/21	09/27/21	10/12/21
09/20/21	10/25/21	11/09/21
10/18/21	11/22/21	12/14/21
11/08/21	12/13/21	01/10/22

Planning Commission applications are scheduled for meetings on a first-come-first-serve basis. Only complete applications, as determined by the Community Development Department staff, will be scheduled for Planning Commission meetings.

Updated 12.09.2020

Attachment: 2021 Planning Commission Meeting Schedule (5783 : 2021 Meeting Calendar)