Wauwatosa, WI

Plan Commission

Meeting Agenda - Final

7725 W. North Avenue
Wauwatosa, WI 53213

Monday, March 13, 2023 **6:00 PM** **Council Chambers and Zoom: https://us02web.zoom.us/j/83599194279, Meeting ID: 835 9919 4279**

Regular Meeting

HYBRID MEETING INFORMATION

Members of the public may observe and participate in the meeting in-person or via Zoom at the link above. To access the Zoom meeting via phone, call 1-312-626-6799 and enter the Meeting ID.

CALL TO ORDER

ROLL CALL

APPROVAL OF MINUTES

NEW BUSINESS

1.	Public hearing and consideration of the request by Brian Pham for a Conditional Use in the C2 District at 2635 N. Mayfair Road for an eating establishment	**23-1180**
2.	Public hearing and consideration of the request by Jacob Jansen, Authentic Child Care, for a Conditional Use Permit in the C2 District at 530 N. 108th Place for a daycare establishment	**23-1181**
3.	Public hearing and consideration of the request by Jeff Olson, Hansen Storage Company, for a Conditional Use in the M1/Planned Unit Development District at 1300 Glenview Place for a general warehousing operation	**23-1182**
4.	Public hearing and consideration of the request by Julianne Arter, Irgens, for a Conditional Use in the Special Purpose District - Research Park (SP-RP) at 850 N. Mayfair Road for eating establishments including a drive-through	**23-1183**
5.	Request by Jonathan Ward, Altius Building Company, for a Land Combination via Certified Survey Map at 11400 W. Blue Mound Road	**23-1185**
6.	Request by Jonathan Ward, Altius Building Company, for a Zoning Map Amendment from C2 District to C2/Planned Unit Development (PUD) District at 11400 W. Blue Mound Road	**23-1186**

7. Request by Jonathan Ward, Altius Building Company, for Planned Unit Development preliminary plans at 11400 W. Blue Mound Road for a multi-unit building **23-1350**

ADJOURNMENT

NOTICE TO PERSONS WITH A DISABILITY
Persons with a disability who need assistance to participate in this meeting should call the City Clerk's office at (414) 479-8917 or send an email to tclerk@wauwatosa.net, with as much advance notice as possible.

File #: 23-1180 **Agenda Date:** 3/13/2023 **Agenda #:** 1.

Public hearing and consideration of the request by Brian Pham for a Conditional Use in the C2 District at 2635 N. Mayfair Road for an eating establishment

A. Background/Options

The applicant is proposing to operate a 8,644 s.f. eating establishment in an existing building located at 2635 N. Mayfair Road in the General Commercial (C2) Zone. Surrounding land uses are primarily commercial to the north, south, and east, and the Canadian Pacific rail line to the west. The building was formerly an eating establishment (BW3).

The floor plan contains a seating area, kitchen, cooler & freezer space, restrooms, and a small outdoor eating area located at the rear of the building. The entrance into the space is located at the south end of the building adjacent to the onsite parking area. The proposed operating hours are 11:30 am to 10:00 pm Monday through Thursday, 11:30 am to 11:00 pm Friday, 12:00 pm to 11:00 pm Saturday, and 12:00 pm to 10:00 pm Sunday.

Attached to this report is the applicant's project request and proposed plans.

B. Staff Comments

Planning/Zoning Division
Replacing a previous restaurant use. No issues.

Building Division
Plan review & applicable building permits required. DSPS plan approvals may be required depending on scope of work.

City Assessor’s Office
Provide detailed costs of any alterations and/or new construction, as well as income and expense information as requested by the Assessor's Office.

City Clerk’s Office
Full retail Class B beer and liquor license will be needed. Possibly entertainment license as well. Mr. Pham has already contacted the Clerk's Office about it.

Engineering Division
Any building project that has a construction cost in excess of $100,000 is subject to sanitary sewer lateral replacement or repair if the existing lateral does not pass Board of Public Works testing requirements according to City Code 13.30.030.

Fire Department
No comments provided.

Health Department

Applicable license required.

Police Department
No comments provided.

C. Recommendation

Staff recommends approvals subject to:

1. Establishing hours of operation.
2. Providing detailed costs of any alterations and/or new construction, as well as income & expense as requested by the Assessor's office.
3. Under WMC 24.16.040I., a Conditional Use will lapse and have no further effect one year after it is approved by the Common Council, unless a building permit has been issued (if required); the use or structure has been lawfully established; or unless a different lapse of approval period or point of expiration has been expressly established by the Common Council.
4. Obtaining other required licenses, permits, and approvals.

2635 N. Mayfair Rd.

City of Wauwatosa

CITY OF WAUWATOSA | 7725 N. NORTH AVE | WAUWATOSA WI, 53213 | WAUWATOSA.NET

1 " = 173 '

Monday, February 6, 202

Kpot Korean BBQ & Hot Pot Restaurant

Company Website: https://thekpot.com

Location:
2635 N Mayfair Rd,
Wauwatosa, WI 53226

Hour of Operation:

Monday	11:30-10pm
Tuesday	11:30-10pm
Wednesday	11:30-10pm
Thursday	11:30-10pm
Friday	11:30-11pm
Saturday	12-11pm
Sunday	12-10pm

Estimate Number of Employees: 31
Estimate Number of customers: 300 customers/day

Menu: See attached attachment

General Manager:
Bryan Pham
Cell: 262-506-8989
Email: bryanpham2016@hotmail.com

Bryan has over 10+ years in the restaurant industry with proven success leading startup, turnaround and high-growth restaurant operations. Manager with a winning attitude and desire to deliver an exceptional dining experience. Focused on setting high expectations and raising service standards.

Kpot Background: KPOT is leading a cultural dining revolution! Born from four friends from different backgrounds who blended their cuisines over a shared table, KPOT is a unique, hands-on, all-you-can-eat experience that merges traditional Asian hot pot with Korean BBQ flavors.

But its more than just a meal. KPOT is for both the food adventurers and the social eaters. It's about tasting the global spices and seasonings all while feeling a sense of community. It's hot pot and Korean BBQ modernized with a full bar and nightlife atmosphere. But in the true spirit of those four friends, KPOT is mostly about gathering together for lively conversation over a feast of good food.

So come for an intimate dinner for two or celebrate with 20 of your closest pals, because this revolution welcomes everyone. See attached attachment for more information.

Estimate Total Project Cost: $1,400,000

Architect Contact Information:

Paul Sherer
Cell: 414-852-8465
Email: psherer@thinkdrawer.com

Drinks (Non-Alcoholic)

Fountain Drinks (Free Refills) $3.00
- Pepsi
- Diet Pepsi
- Sierra Mist
- Brisk Iced Tea
- Fruit Punch
- Lemonade
- Ginger Ale

Favored Lemonade / Soda $4.00
(Peach / strawberry / Mango / Lychee / Passionfruit / Watermelon)

Juice $3.00
(Orange / Cranberry / Pineapple/ Apple)

Mango Pineapple Orange Juice $4.00
Strawberry Peach Orange Juice $4.00
Peachy Pineapple Juice $4.00
Virgin Strawberry Daiquiri $4.50
Virgin Pina Colada $4.50

Drinks (Alcoholic)

Draft Beer — Glass / Pitcher

- Yuengling $4 / $12.5
- Coors Light $4 / $12.5
- Sam Adams Seasonal $5 / $15
- Goose IPA $5 / $15
- Kirin Ichiban $5 / $15
- Stella Artois $5 / $15

Bottled Beer

- Budweiser $4
- Heineken $5
- Tsingtao $5
- Kloud $5
- Guinness $5
- Sapporo $5
- Corona Extra $5

Wine — Glass / Bottle

Red $8 / 24
- CK Mondavi Cabernet Sauvignon
- CK Mondavi Merlot
- Sartori Family Pinot Noir

White $8 / 24
- CK Mondavi Pinot Grigio
- CK Mondavi Chardonnay
- CK Mondavi Moscato

Drinks (Alcoholic)

SOJU

Soon Hari Original	$13
Soon Hari Peach	$13
Soon Hari Apple	$13
Soon Hari Yogurt	$13
Soon Hari Apple Mango	$13
Soon Hari Strawberry	$13
Jinro Green Grape	$13
Jinro Plum	$13
Hwayo 23	$35

Sake

Hot Sake (Sho Chiku Bai)	$10
Nikko Oni	$12
Kome Uma	$12
Junmai Ginjo	$17

Classic Favorites

Classic Margarita $8
Flavored Margarita +$2
(Peach/Strawberry/Mango/Lychee/Passionfruit/Watermelon/Coconut)

Classic Mojito $8
Flavored Mojito +$2
(Peach/Strawberry/Mango/Lychee/Passionfruit/Watermelon/Coconut)

Classic Martini $8
Flavored Martini +$2
(Apple/Lemon/Watermelon/Cosmopolitan)

Manhattan $10
Long Island Iced Tea $10
Whiskey Sour $6

KPOT Favorites

Pineapple Painkiller $10
(Don Q Pineapple / Coconut Puree / Pineapple Juice / Orange Juice)

Mango Long Island $11
(Wheatley Vodka / Bombay Sapphire / Don Q / El Jimador / Triple Sec / Mango Puree / Sour Mix)

Blue Lagoon $10
(El Jimador / Blue Curacao / Sour Mix)

Strawberry Hennessy $15
(Hennessy / Triple Sec / Sour Mix / Strawberry Puree)

Passionfruit Soju Mule $12
(Yobu Soju / Passion Fruit Puree / Lime Juice / Gosling Ginger Beer)

Ultimate Margarita $14
(Casamigos / Cointreau / Sour Mix / Lime Juice)

Lazy Lycheetini $12
(Haku Vodka / Moonstone Pear Sake / Lychee Puree)

Yuzu Spritz $10
(Roku Gin / Fever Tree Lime & Yuzu Soda)

Mai Tai $10
(Don Q / Cointreau / Myers Dark Rum / Lime Juice / Orange Juice)

Jameson Smash $12
(Jameson Orange / Orange Bitters / Simple Syrup)

Peachy Sangria $8/24
Red/White

KPOT
KOREAN BBQ & HOT POT

샤브샤브

뜨거운 냄비

Hot pot is a Asian cooking method, prepared with a simmering pot of soup stock at the dining table, containing a variety of East Asian foodstuffs and ingredients. While the hot pot is kept simmering, ingredients are placed into the pot and are cooked at the table, in a manner similar to fondue. Typical hot pot dishes include thinly sliced meat, leaf vegetables, mushrooms, wontons, egg dumplings, tofu, and seafood. The cooked food is usually eaten with a dipping sauce.

KPOT
KOREAN BBQ & HOT POT

Soup Base

spicy

Thai Tom Yum

Szechuan Spicy

Tomato Soup (vegetarian)

Healthy Herbs

Japanese Miso

Korean Seafood Tofu

Mushroom Soup (vegetarian)

ALL PICTURES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY

18% tip will add to party of 6 & up

Sliced Meats

Hot Pot

LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
WE RESERVE THE RIGHT TO IMPOSE A SURCHARGE OF $13.99 / LB OF FOOD WASTE

Sliced Pork

Sliced Pork Belly

Sliced Beef Belly

Prime Brisket
(Dinner Item)

Sliced Lamb

Kobe Beef
(Dinner Item)

Sliced Chicken

ALL PICTURES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY
18% tip will add to party of 6 & up

TABLE MUST MATCH OPTION
LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
WE RESERVE THE RIGHT TO IMPOSE A SURCHARGE OF $13.99 / LB OF FOOD WASTE

Meat / Sides

Crab Meat

Spam

Mini Sausages

Shrimp Dumplings

Cattle Tripe

Quail Eggs

Tempura

Gyoza

LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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Meat / Sides

Lobster Balls
(Dinner Item)

Beef Meatballs
(Dinner Item)

Fish Meatballs

Fish Roe Balls
(Dinner Item)

Shumai

Fish Cakes

ALL PICTURES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY
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Seafood

TABLE MUST MATCH OPTION
LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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Seafood

Jumbo Shrimp
(Dinner Item)

Swai Fish

Mussel
(Dinner Item)

Clam

Squid

Soy Bean

Fried Tofu

Soft Tofu

Fried Tofu Skin

Bean Curd Stick

LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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Vegetable

LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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Spinach


Crown Daisy

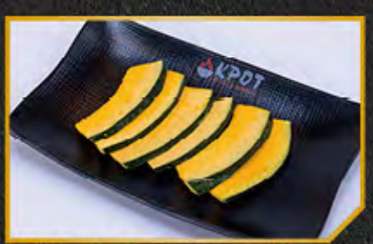

Watercress


Broccoli


Napa


King Oyster Mushroom


Shiitake Mushroom


Sliced Pumpkins


Enoki Mushroom


White Mushroom


Seaweed Knots


Daikon


Black Fungus


Fresh Corn

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TABLE MUST MATCH OPTION
LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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Vegetable


Fried Taro


Bok Choy


Lotus Root


Potato


Green Leaf Lettuce


Yam

Noodles


Vermicelli


Udon


Ramen Noodle


White Rice


Rice Cake


Mei Fun

LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
WE RESERVE THE RIGHT TO IMPOSE A SURCHARGE OF $13.99 / LB OF FOOD WASTE

Korean BBQ

고기구이

Korean Barbecue (gogigui,"Meat Roast") refers to the popular method in Korean cuisine of grilling meat, typically beef, pork or chicken, that you prepare yourself at your simple. Grill your meat and vegetable to perfection,spread out some lettuce leaves or wrap your cooked meat in the lettuce toss on some sliced pepper and kimchi and a dash of "k-pot special sauce" fold it over add some rice. Haven in the lips.

There are three basic booze options when it comes to drinking with your KBBQ : Soju(basic rice wine), Takju(a cloudy rice wine) and Korean Light Beef

TABLE MUST MATCH OPTION
LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
WE RESERVE THE RIGHT TO IMPOSE A SURCHARGE OF $13.99 / LB OF FOOD WASTE

BBQ Beef

Beef Bulgogi
Thinly Sliced & Marinated Beef

Spicy Beef Bulgogi
Thinly Sliced & Marinated Beef with Spicy Sauce

Angus Chuck Flap Tail
(Dinner Item)

Prime Brisket

KPOT Steak
(Dinner Item)

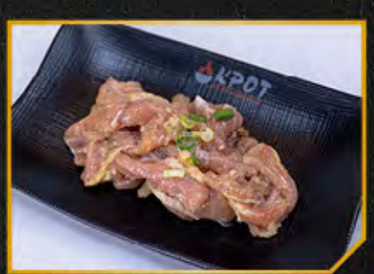
K-Pot Short Rib
(Dinner Item)

Hanging Steak
(Dinner Item)

BBQ Chicken

Chicken Bulgogi
Thinly Sliced & Marinated Chicken

Spicy Chicken Bulgogi
Thinly Sliced & Marinated Chicken with Spicy Sauce



Garlic Chicken
Marinated Chicken with Garlic Sauce

LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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BBQ Pork

Spicy Pork Bulgogi
Thinly Sliced & Marinated Pork with Spicy Sauce

Pork Belly
Regular Style Sliced Pork Belly

Spicy Pork Belly
Marinated Pork Belly with Spicy Sauce

Smoke Garlic Pork Belly
Smoked & Marinated Pork Belly with Garlic Sauce

K-Pot Pork Belly
Premium Pork Belly

Signature Pork Cheek
(Dinner Item)

ALL PICTURES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY
18% tip will add to party of 6 & up

TABLE MUST MATCH OPTION
LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
WE RESERVE THE RIGHT TO IMPOSE A SURCHARGE OF $13.99 / LB OF FOOD WASTE

BBQ Seafood

Spicy Calamari
Marinated Calamari with spicy sauce

Mussel

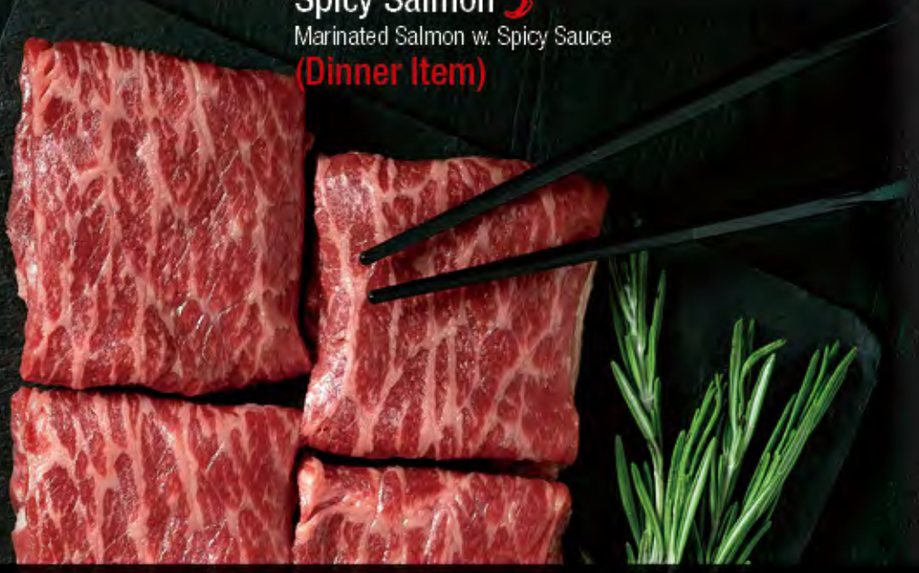
Spicy Fish Fillet
Marinated Fish Fillet with Spicy Sauce

Garlic Shrimp
Marinated Shrimp wiht Garlic Sauce
(Dinner Item)

Spicy Baby Octopus
Marinated Baby Octepus w. Spicy Sauce
(Dinner Item)

Jumbo Shrimp
(Dinner Item)

Spicy Salmon
Marinated Salmon w. Spicy Sauce
(Dinner Item)



LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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LIMITED DINING TIME 2 HOURS. DON'T WASTE FOOD
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BBQ Vegetable


Onion


Eggplant


Sliced Pumpkins


Zucchini


Sweet Potato


Potato


King Oyster Mushroom

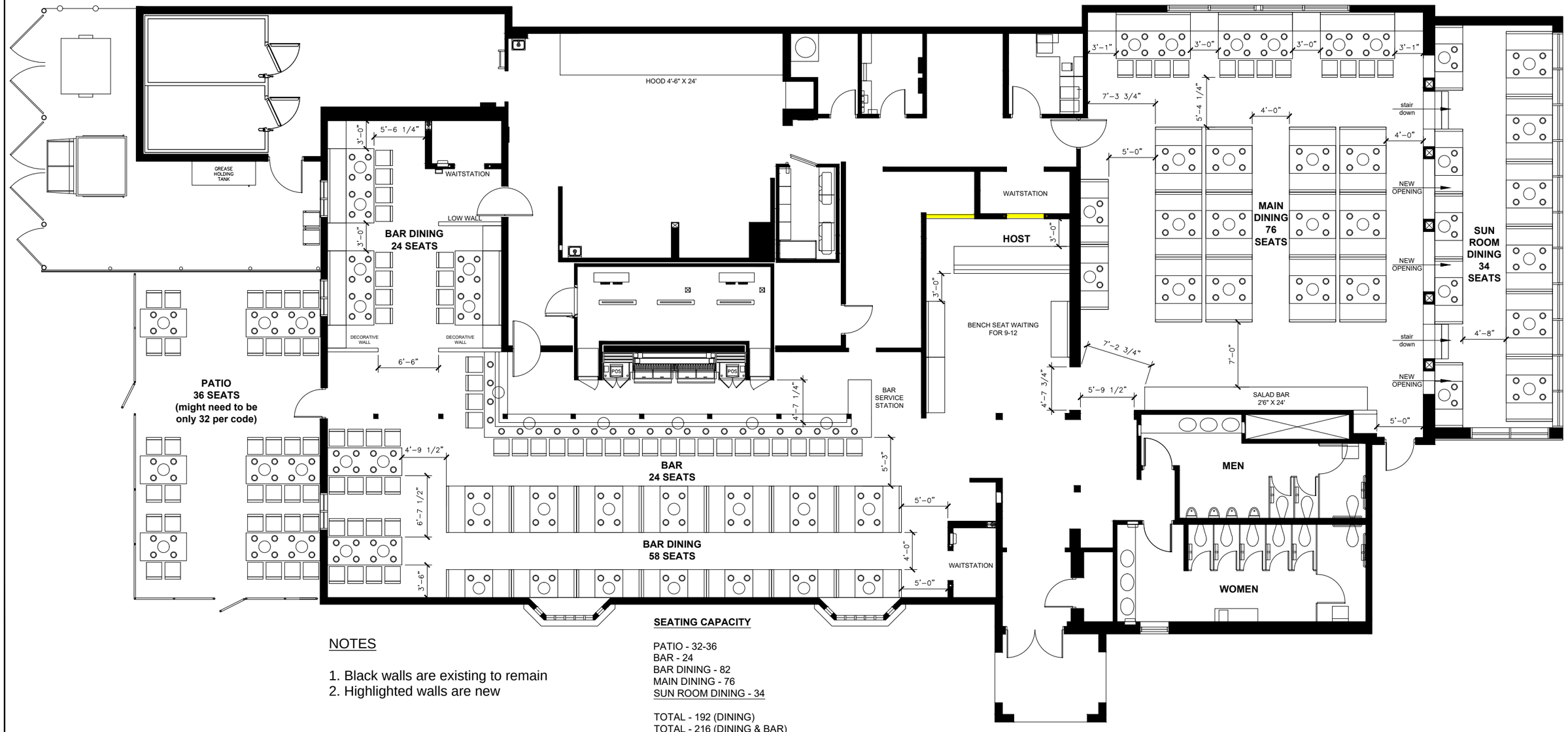

Shiitake Mushroom


Green Leaf Lettuce


Garlic


Pineapple

ALL PICTURES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY
18% tip will add to party of 6 & up



NOTES

1. Black walls are existing to remain
2. Highlighted walls are new

SEATING CAPACITY

PATIO - 32-36
BAR - 24
BAR DINING - 82
MAIN DINING - 76
SUN ROOM DINING - 34

TOTAL - 192 (DINING)
TOTAL - 216 (DINING & BAR)

PROJ. NO.:	FLOOR PLAN OPTION 1	KPOT restaurant	OWNER / TENANT:
DATE: 1/24/23		2635 N. MAYFAIR RD WAUWATOSA, WI	SCALE: 3/32" = 1'-0"
SHEET # SK-1	DRAWN BY / CHECKED BY #1 / CHECKED BY #2 / APPROVED		

THINK DRAWER
a collaborative design studio
e: psherer@thinkdrawer.com
c: 414-852-8465

File #: 23-1181 **Agenda Date:** 3/13/2023 **Agenda #:** 2.

Public hearing and consideration of the request by Jacob Jansen, Authentic Child Care, for a Conditional Use Permit in the C2 District at 530 N. 108th Place for a daycare establishment

A. Background/Options

On January 17, 2023, the Common Council approved a conditional use permit for a childcare facility at 530 N. 108th Place in the General Commercial (C2) zoning district. The childcare facility has not yet commenced operations. The applicant is now proposing the following increases to the use:

	Current Approval	Proposed Expansion
Square Footage	1,600 sq. ft.	4,200 sq. ft.
No. of Children	16	60
No. of Employees	6	12
Children Age Range	6 weeks - 2 years	6 weeks - 5 years

The operating hours will remain the same as previously approved: from 6:00 am to 6:00 pm Monday through Friday. Drop off and pick up of children is still planned to occur within the parking area at the south end of the building adjacent to the facility's entrance. The outdoor play area, enclosed with a four-foot tall chain link fence, will remain as previously approved at the southeast corner of the site (see attached site plan). However, the applicant proposes to install an additional wood fence along the western edge of the playground area for additional security from railroad tracks. According to parking counts taken at the project site, a sufficient amount of parking remains available for all users of the site, including the proposed use.

Attached to this report is the applicant's project request and proposed plans. The previous approval is linked.

B. Staff Comments

Planning/Zoning Division
No issues.

Building Division
Architectural supervision, plan review and building permits required.

City Assessor's Office
Provide detailed costs of any alterations and/or new construction, as well as income and expense information as requested by the Assessor's Office.

City Clerk's Office
No issues.

Engineering Division

Submit updated site plan showing additional fence.

Fire Department
All NFPA and applicable fire codes will be followed.

Health Department
No comments provided.

Police Department
No comments provided.

C. Recommendation

1. Establishing hours of operation.
2. Obtaining Site Plan approval from the City's Engineering Division.
3. Providing detailed costs of any alterations and/or new construction as well as income and expense as requested by the Assessor's Office.
4. Under 24.16.040I., a Conditional Use will lapse and have no further effect one year after it is approved by the Common Council, unless a building permit has been issued (if required); the use or structure has been lawfully established; or unless a different lapse of approval period or point of expiration has been expressly established by the Common Council
5. Obtaining any additional permits, licenses, and approvals.

530 N 108th Place

City of Wauwatosa

CITY OF WAUWATOSA | 7725 N. NORTH AVE | WAUWATOSA WI, 53213 | WAUWATOSA.NET

1 " = 114 '

Thursday, November 10, 2

Authentic Child Care

530 North 108th Place Unit 201 and 202

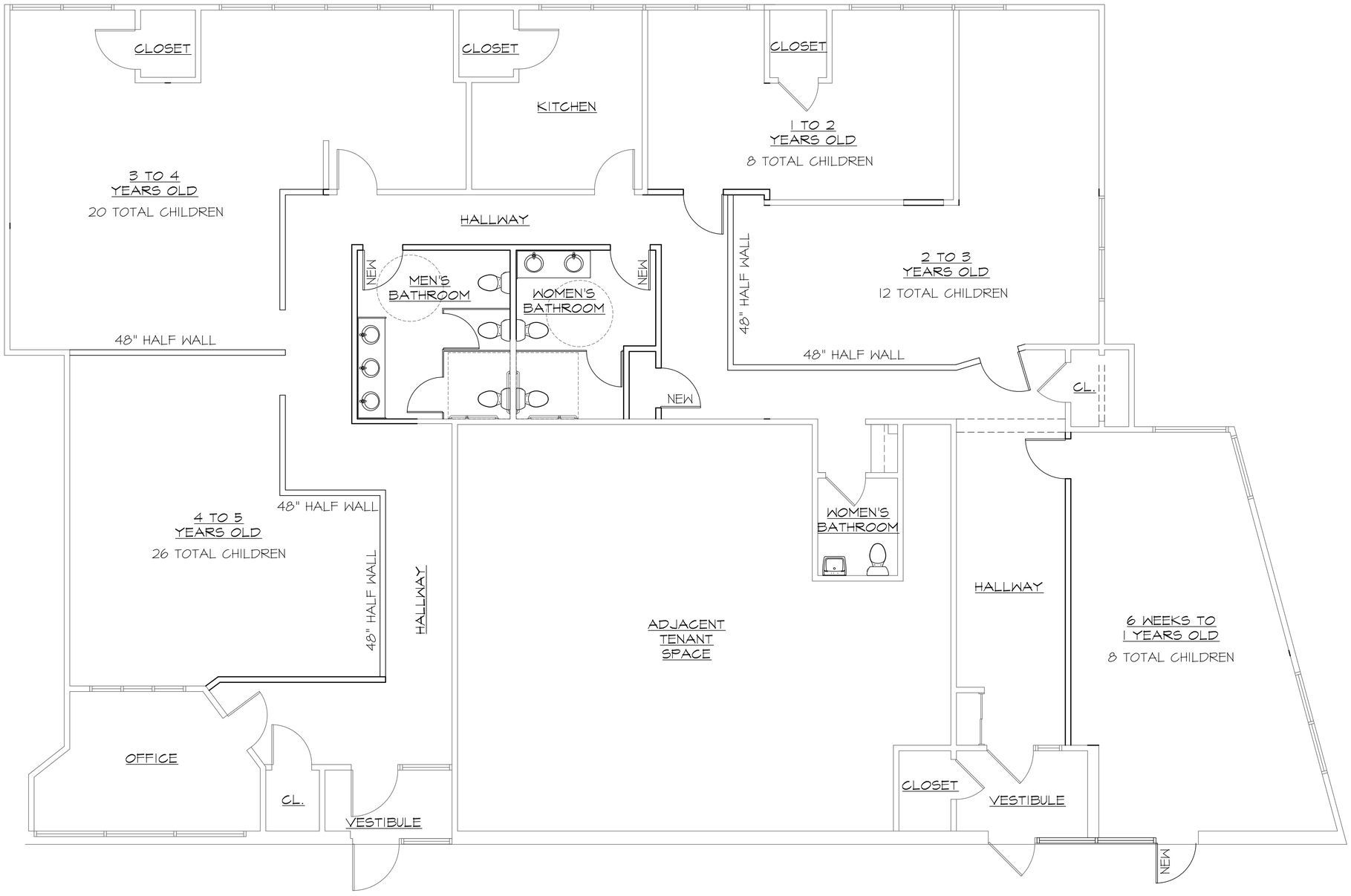
Hours of Operation – 6am to 6pm

Employees – 12 total

Nature of Business – Child Care Center

This child care business was already approved in January 2023, but because of an issue with extra bathrooms needed in the end unit, this made the start up costs prohibitive and the space unprofitable for 14 children after design. Currently the state licensing for child care does not require children under 30 months to be counted for bathrooms and we thought the current 1 bathroom would be enough for the 6 employees based on the Department of Families and Children child care code. The Wauwatosa city code DOES count bathrooms for infants and toddlers and required a second bathroom. Because of this, the only way to make this project work is to expand earlier/now (we were planning to expand Nov. 1st 2023). While we were hoping to clear some initial hurdles before going full speed, the project is not viable any other way than to expand now instead of November.

The current plan will be for approximately 60 children ages 6 weeks to 5 years old along with 12 teachers. It will be open 6am to 6pm as before. The playground will remain the same size and was already approved. We would like to add a secondary 6 foot fence along the train track fence to alleviate concern from all aldermen and alderwomen however this will not effect square footage or parking spaces.



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

NORTH

TDI ASSOCIATES, INC.
ARCHITECTURE & PLANNING

25217 SOUTH WIND LAKE ROAD
WIND LAKE, WISCONSIN 53185
PHONE 262-409-2530

AUTHENTIC CHILD CARE

530 NORTH 108TH PLACE
WAUWATOSA, WISCONSIN

Sheet Title
FLOOR PLAN

Issued For: Date:

Date: **02-07-2023**
Job NO.: **22136.000**
Drawn By: **RJH**
Sheet No.
A1.1


6 FOOT TALL DECORATIVE WOOD OPAQUE FENCE AROUND
DUMPSTERS WITH A SECURE GATE EXTENDING TO GROUND LEVEL
4 FOOT TALL CHAIN LINK FENCE AROUND REMAINDER OF PLAYGROUND
This will remove 7 of the buildings 57 spaces and will
leave 3 remaining, van accessible (8 feet space next to) which is in compliance with
city ordinance.
24 feet behind spaces for cars to back out.
All parking spaces are 9 feet x 18 feet in dimensions
Black Circles are ULINE 48" Flexible Delineator Round Post w Base 48" Yellow
27' 0"
8' 10 1/2"
530 N 108th Pl
Google Earth

File #: 23-1182 **Agenda Date:** 3/13/2023 **Agenda #:** 3.

Public hearing and consideration of the request by Jeff Olson, Hansen Storage Company, for a Conditional Use in the M1/Planned Unit Development District at 1300 Glenview Place for a general warehousing operation

A. Background/Options

The applicant proposes to operate a multi-tenant storage/warehousing facility at 1300 Glenview Place in the Light Industrial (M1)/Planned Unit Development (PUD) zone. Surrounding land uses include railroad tracks and open space to the north, open space to the west, and a mix of residential and commercial uses to the south and east. Currently there are three (3) buildings onsite:

Building 1: (Warehouse Building): 184,838 square feet
Building 2: (Warehouse Building): 24,441 square feet
Building 3: (Office Building) 16,556 square feet

Hansen intends to occupy a portion of either Buildings 1, 2, or 3 (space location and square footage are to be determined) while leasing the remaining square footage to other businesses for storage purposes. Hansen will primarily use their portion of the building(s) for long term product storage which will be managed by approximately ten (10) employees. All storage will occur inside existing building(s), no outdoor storage is requested.

On June 1, 2021, the Common Council approved a Zoning Map Amendment & Planned Unit Development preliminary plans to allow construction of a multi-family residential development at the project site. Ultimately, the plan did not moved forward as the project became infeasible.

B. Staff Comments

Planning/Zoning Division
No issues.

Building Division
Plan review & applicable building permits required. DSPS plan approvals and Design Review Board may be required depending on scope of work.

City Assessor's Office
Provide detailed costs of any alterations and/or new construction, as well as income and expense information as requested by the Assessor's Office.

City Clerk's Office
No issues.

Engineering Division
The existing buildings are within the Menomonee River floodplain and the Milwaukee County Grounds hydraulic shadow. If any building permits are desired, the applicant will be required to work with staff on any

required floodplain permitting.

Any building project that has a construction cost in excess of $100,000 is subject to sanitary sewer lateral replacement or repair if the existing lateral does not pass Board of Public Works testing requirements according to City Code 13.30.030.

Fire Department
No comments provided.

Health Department
No comments provided.

Police Department
No comments provided.

C. Recommendation

Staff recommends approval subject to:

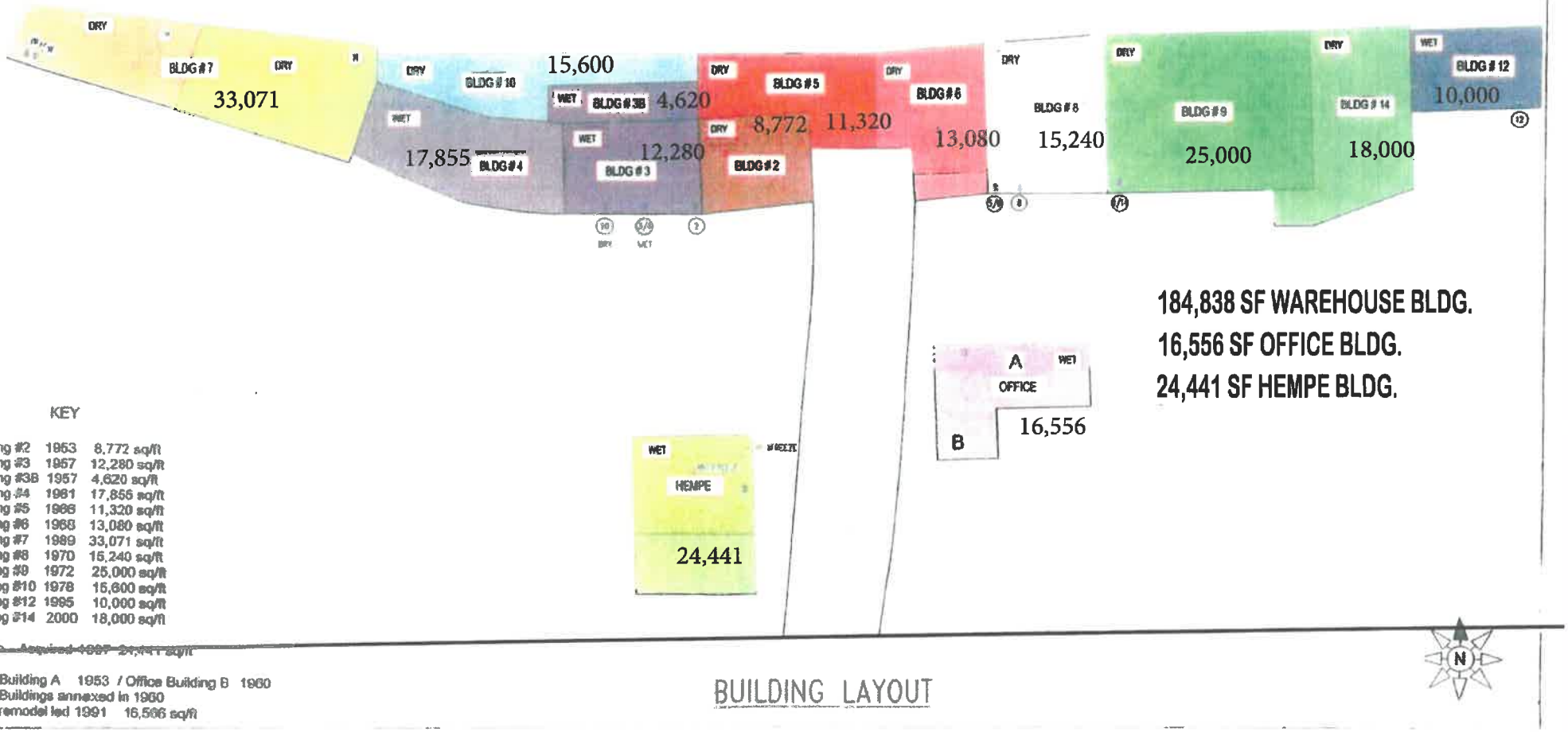
1. Providing detailed costs of any alterations and/or new construction, as well as income & expense as requested by the Assessor's office.
2. Prior to occupancy or issuance of a building permit for any future user of the site, whichever occurs first, the facility user must submit a detailed business description to the Planning Division for review and approval to ensure Conditional Use Permit compliance.
3. Under WMC 24.16.040I., a Conditional Use will lapse and have no further effect one year after it is approved by the Common Council, unless a building permit has been issued (if required); the use or structure has been lawfully established; or unless a different lapse of approval period or point of expiration has been expressly established by the Common Council.
4. A Floodplain Development permit is required along with building permits, if applicable.
5. Obtaining other required licenses, permits, and approvals.

1300 Glenview Pl.

City of Wauwatosa

WESTERN BUILDING PRODUCTS

1300 North Glenview Place
Wauwatosa, Wisconsin 53213



184,838 SF WAREHOUSE BLDG.
16,556 SF OFFICE BLDG.
24,441 SF HEMPE BLDG.

KEY

Building #2	1953	8,772 sq/ft
Building #3	1957	12,280 sq/ft
Building #3B	1957	4,620 sq/ft
Building #4	1981	17,855 sq/ft
Building #5	1966	11,320 sq/ft
Building #6	1968	13,080 sq/ft
Building #7	1989	33,071 sq/ft
Building #8	1970	15,240 sq/ft
Building #9	1972	25,000 sq/ft
Building #10	1978	15,600 sq/ft
Building #12	1995	10,000 sq/ft
Building #14	2000	18,000 sq/ft
~~Hempe Acquired 1997 24,441 sq/ft~~		

Office Building A 1953 / Office Building B 1960
Office Buildings annexed in 1960
Office remodel led 1991 16,556 sq/ft

BUILDING LAYOUT

HANSEN STORAGE COMPANY

MAIN OFFICE: 2880 N. 112th STREET • MILWAUKEE, WI 53222 • 414/476-9221 • FAX: 414/476-0646

February 17, 2023

Art Pinon, Planner
City of Wauwatosa
Development Department
7725 W. North Avenue
Wauwatosa, WI 53213

Via Email

RE: Conditional Use Permit – 1300 Glenview Place

Dear Art:

Hansen Storage Company is requesting a conditional use permit for product storage within the entire building at 1300 Glenview Place. Hansen Storage Company will occupy a portion of the building, the specific location and square footage to be determined, and the remaining portion of the building will be leased to other businesses for their product storage. Hansen Storage Company will use its portion of the building primarily for long-term product storage, and we anticipate approximately ten employees to work at this location. With less employees than Hansen Storage Company's 112th Street location and long-term storage use, this site is anticipated to generate significantly less traffic than Hansen Storage Company's location on 112th Street. The site will be used for indoor storage only; no outdoor storage is being requested.

If you have any questions or require further information, please contact us.

Sincerely,

Peter J. Hansen
President

PJH/jjp

Cc: W.C. Hansen, W.G. Hansen, J.D. Olson

File #: 23-1183 **Agenda Date:** 3/13/2023 **Agenda #:** 4.

Public hearing and consideration of the request by Julianne Arter, Irgens, for a Conditional Use in the Special Purpose District - Research Park (SP-RP) at 850 N. Mayfair Road for eating establishments including a drive-through

A. Background/Options

The applicant is requesting approval of a conditional use permit for two restaurant uses within an 8,180 square-foot multi-tenant commercial building at the southeast corner of N. Mayfair Road and Research Drive in the Special Purpose District - Research Park (SP-RP) zone. Three tenant spaces are proposed in the building consisting of an eating and drinking establishment with drive through and outdoor dining at the north end, a commercial use compliant with the land use standards of the SP-RP zone in the middle space, and another eating and drinking establishment with outdoor eating area at the south end of the building.

The project site is currently developed with a portion of a parking area serving a professional office building located at 10701 Research Drive. Access to the site is provided from a shared driveway at the northeast corner of the site from Research Drive. Surrounding land uses include professional offices uses to the north and east, a parking lot to the south, and commercial uses to the west.

B. Staff Comments

Planning/Zoning Division
Parking provided on the parcel for the proposed uses does not meet WMC requirements and access to the parcel is on an adjacent parcel. A shared parking and access agreement for the overall Research One development (consisting of parcels 379-1001-000 thru 3791004-000) is required to comply with parking and access requirements.

Master Plan Compliance: The project site is located within the Wauwatosa Life Sciences District Master Plan (LSDMP), which encourages high-density residential and retail development with minimal street setbacks along Mayfair Road and south of Watertown Plank Road. The SP-RP zoning regulations have not been updated to reflect the recommendations of the Plan. The proposed development meets required setbacks. LSDMP Link: <https://www.wauwatosa.net/home/showpublisheddocument/520/636809009719400000>

Building Division
Plan review, applicable building permits and DSPS plan approvals required.

City Assessor's Office
Provide detailed costs of any alterations and/or new construction, as well as income and expense information as requested by the Assessor's Office.

City Clerk's Office
Contact the Clerk's Office if any business licenses are needed.

Engineering Division

Site plans showing adequate sewer capacity, construction staging information, lighting, and storm water management subject to approval by the Engineering Division.

The proposed sanitary sewer is a private interceptor sewer and is subject to approval by MMSD and requires full time public inspection paid for by the development.

Site plans must show vehicle stacking spaces, location of drive-through windows, and communication systems in accordance with City Code 24.11.100.

Short- and long-term bicycle parking must be clearly identified and quantified to confirm compliance with City Code 24.11.080.

Pedestrian connectivity to the public right-of-way and within the development must be in accordance with City Code 24.13.030.

The City's Bike and Pedestrian Plan recommends a multi-use trail on the east side of N. Mayfair Road. City staff is in the process of applying for a State grant for the construction of a multi-use trail that will connect the Regional Medical Campus to this development. The applicant shall continue to support efforts for this multi-use trail connection and work with staff on providing an easement.

The overall development must accommodate all travel modes in the primary access routes or private streets. Bike and pedestrian accommodations must meet the intent of the Tosa Streets Ordinance (Code Section 12.10).

Applicant shall meet all requirements of code chapter 24.12 pertaining to landscaping; including the requirement for a landscape performance guarantee (Section 24.12.070).

Fire Department
FD met with Irgens design group and stated FDC shall be located on East side, North corner. FD also stated the Mayfair address was acceptable to FD. Proposed hydrant location good. All NFPA fire codes will be applied.

Health Department
Applicable food licenses required.

Police Department
No comments provided.

C. Recommendation

Staff recommends approvals subject to:

1. Establishing hours of operation. Facility operations shall not occur before 6:00 am or after 11:00 pm.
2. Prior to occupancy issuance, the applicant shall record a shared parking and access agreement, approved by the City, between the properties at the Research One development.
3. Prior to occupancy or issuance of a building permit for any future eating and drinking establishment of the northern or southern end suites, whichever occurs first, the user must submit a project description to the Planning Division for review and approval to ensure Conditional Use Permit compliance.
4. Providing detailed costs of any alterations and/or new construction, as well as income and expense as requested by the Assessor's office.
5. Obtaining site plan approval that addresses and complies with Engineering staff report comments.

6. Full time public inspection of the private interceptor sewer shall be paid for by the development.
7. Compliance with bike and pedestrian regulations including connectivity, short and long-term bicycle parking accommodations, and Tosa Streets; as well as providing an easement for the Mayfair Road multi-use trail.
8. Under WMC 24.16.040I., a Conditional Use will lapse and have no further effect one year after it is approved by the Common Council, unless a building permit has been issued (if required); the use or structure has been lawfully established; or unless a different lapse of approval period or point of expiration has been expressly established by the Common Council.
9. Obtaining other required licenses, permits, and approvals.

Title

City of Wauwatosa

CITY OF WAUWATOSA | 7725 N. NORTH AVE | WAUWATOSA WI, 53213 | WAUWATOSA.NET

1 " = 200 '

Wednesday, March 8, 2

IRGENS

MEMORANDUM

TO: City of Wauwatosa, Planning Division

FROM: Rob Oldenburg | Senior Vice President, Development

DATE: February 2, 2023

RE: Mayfair Research Retail Project Description – Conditional Use Permit

---

Research Retail Development Partners, LLC on behalf of Irgens Partners, LLC is requesting a conditional use permit for a multi-tenant retail development (the "Project") situated at the southeast corner of the signalized intersection of Research Drive and Mayfair Road at the gateway of the Milwaukee County Research Park ("MCRP"). The Project site is legally known as Lot 2 of Certified Survey Map 9388.

The Project will include a single-story, +/- 8,200 rentable square foot ("RSF") retail center with a brick masonry façade. The site will feature a double drive-through lane, two outdoor patios, and surface parking stalls. Approximately 6,100 SF of the development is anticipated to be occupied by two national, fast-casual restaurants; one will lease the north endcap space of approximately 3,800 SF including the drive-through lane, and the other will lease the south endcap space of approximately 2,300 SF. The in-line space of 2,100 SF remains currently available for lease and is being promoted for general retail, service, and professional users.

Owner/Applicant:	Research Retail Development Partners, LLC, which is 100% owned by Irgens Partners, LLC
Project Size:	Single-story, 8,200 RSF building
Tenancy:	Multi-tenant with three total tenants anticipated
Location:	Southeast corner of Mayfair Road and Research Drive, Wauwatosa, WI 53226
Site Size:	Approximately 1.203 acres
Zoning:	Special Purpose – Research Park.
Site Access:	Shared access point via existing curb cut on Research Drive.
Vehicular Parking:	Approximately 35 on-site surface parking stalls will provided including two handicap-accessible stalls. Additional parking to meet code requirements will be provided on the adjacent Lot 1 through a shared parking easement.
Bike Parking:	Bicycle racks will be provided along the south side of the building.

Stormwater Retention:	MCRP features central stormwater retention facilities that will serve the Project. More than 35% of Project site will feature greenspace or pervious surface area.
Mechanical Screening:	Façade features a parapet screen wall, sized between 5 to 7 feet in height to conceal all rooftop equipment.
Hours of Operation:	Business hours are anticipated to be 6:00 am – 9:00 pm, seven days per week
Employees:	Total employee count has not been determined. Project is anticipated to generate a total of 30-40 full and part-time employees. Based on the projected uses, approximately 15 employees are estimated to be on-site at any given time.
Construction Staging:	Construction staging, including dumpsters, crane, materials storage, and contractor parking will occur on the Project site and the adjacent Lot 1. No street closures or street occupancy permits will be required.
Project Team:	Developer: Irgens Partners, LLC Architect: Eppstein Uhen Architects General Contractor: Catalyst Construction Civil Engineer: The Sigma Group Structural Engineer: Pierce Engineers Property Manager: Irgens Partners, LLC
Site Plan/ Parking Lot Permit:	Application was submitted to City Engineering on January 27, 2023.
Applicant Contact:	Rob Oldenburg – Senior Vice President, Development Phone: (414) 443-2526 Email: roldenburg@irgens.com

IRGENS RESEARCH DRIVE PHASE II

10701 RESEARCH DRIVE

CITY OF WAUWATOSA

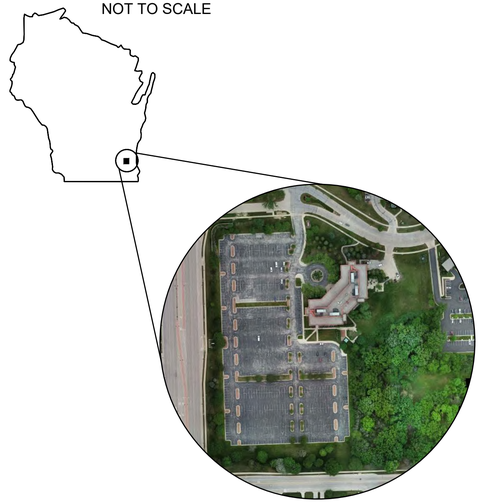
CIVIL ENGINEERING PLANS

PREPARED BY:

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

SITE LOCATION MAP:

NOT TO SCALE



SHEET INDEX	
IRGENS RESEARCH DRIVE	
SHEET NO.	**CIVIL PLANS**
C000	COVER SHEET
C001	SURVEY
C002	SITE PREPARATION & EROSION CONTROL
C100	SITE PLAN
C200	GRADING PLAN
C300	UTILITY PLAN
C400 - C402	DETAILS
C500 - C501	SPECIFICATIONS
SHEET NO.	**LANDSCAPING PLANS**
L101	SITE LANDSCAPE PLAN - LOT 3
L200	LANDSCAPE NOTES & DETAILS

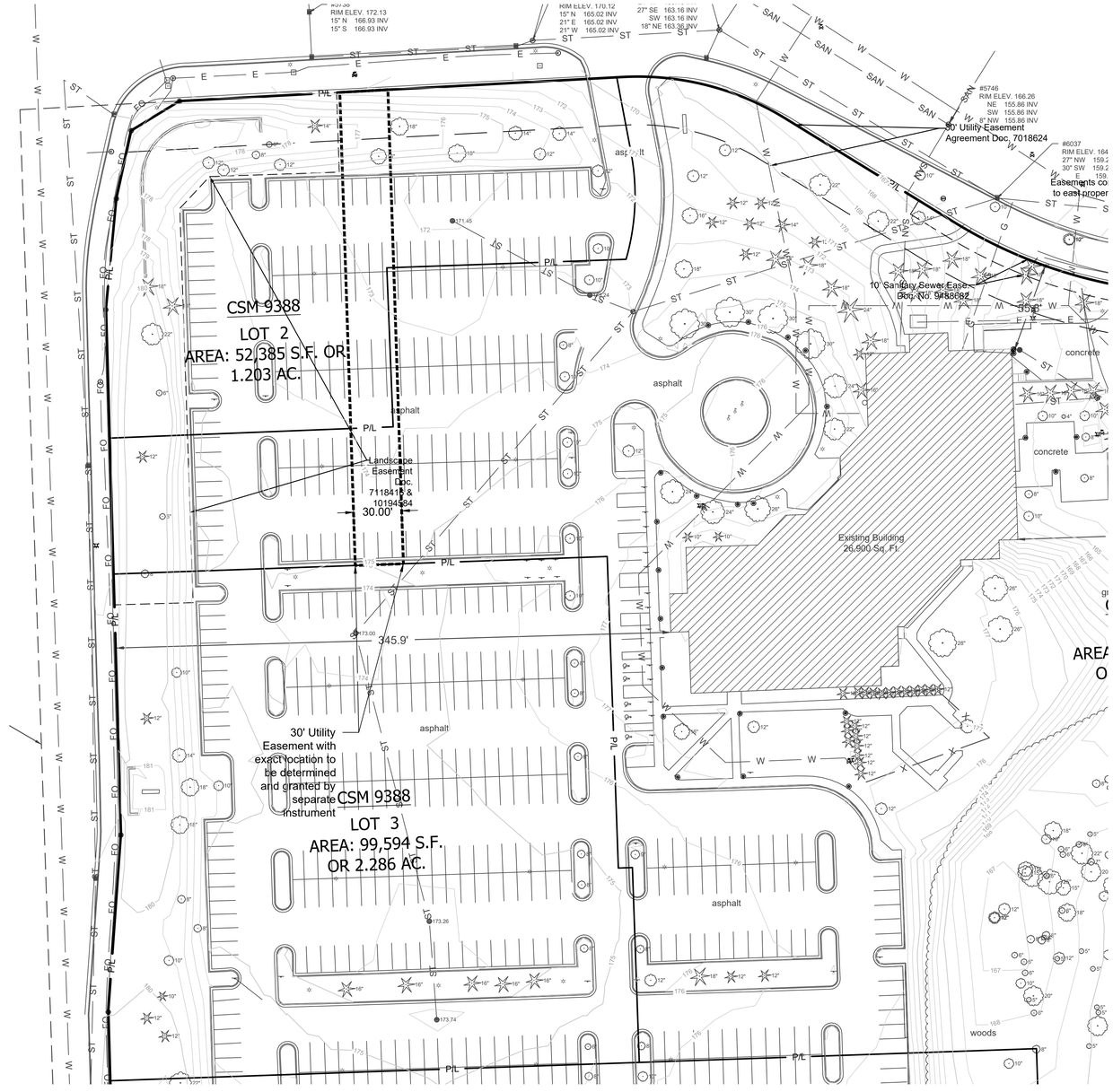
TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

Date 1/24/2023



LEGEND:

	SECTION 1/4 SECTION LINE
	PROPERTY LINE
	EASEMENT
x x x	CHAIN LINK FENCE
	TREE LINE
OH OH	OVERHEAD UTILITY LINE
E E	ELECTRIC
T T	TELEPHONE
FO FO	FIBER OPTIC
CTV CTV	CABLE TV
SAN SAN	SANITARY SEWER
FM FM	FORCE MAIN
ST ST	STORM SEWER
W W	WATER MAIN
G G	GAS
670	EXISTING CONTOUR

MANHOLE	IRON PIPE FOUND/SET
CATCH BASIN	REBAR FOUND/SET
CATCH BASIN (ROUND)	CHISELED CROSS FOUND/SET
ROOF DRAIN	PK NAIL FOUND/SET
HYDRANT	SPIKE/NAIL
WATER VALVE	MONUMENT
GAS VALVE	BENCHMARK
UTILITY POLE	SIGN
GUY WIRE	DECIDUOUS TREE
GAS METER	CONIFEROUS TREE
ELECTRIC METER	BUSH
UTILITY PEDESTAL	POST
TRAFFIC SIGNAL	
LIGHT POLE	
SOIL BORING	
MONITORING WELL	

GENERAL NOTES:

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2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

3. DRAWING IS BASED ON FIELD SURVEY COMPLETED BY THE SIGMA GROUP ON 6/15/2021.

4. DATUM FOR THE PROJECT SURVEY IS USGS NAVD 88. BENCHMARK FOR THE PROJECT SURVEY IS IS THE WEST 1/4 CORNER OF SECTION 29-7-21. ELEV. 182.23.

5. CONTRACTOR TO VERIFY EXISTING CONDITIONS, CONTACT ENGINEER WITH DISCREPANCIES.

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

GRAPHIC SCALE
0 40 80

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

SURVEY

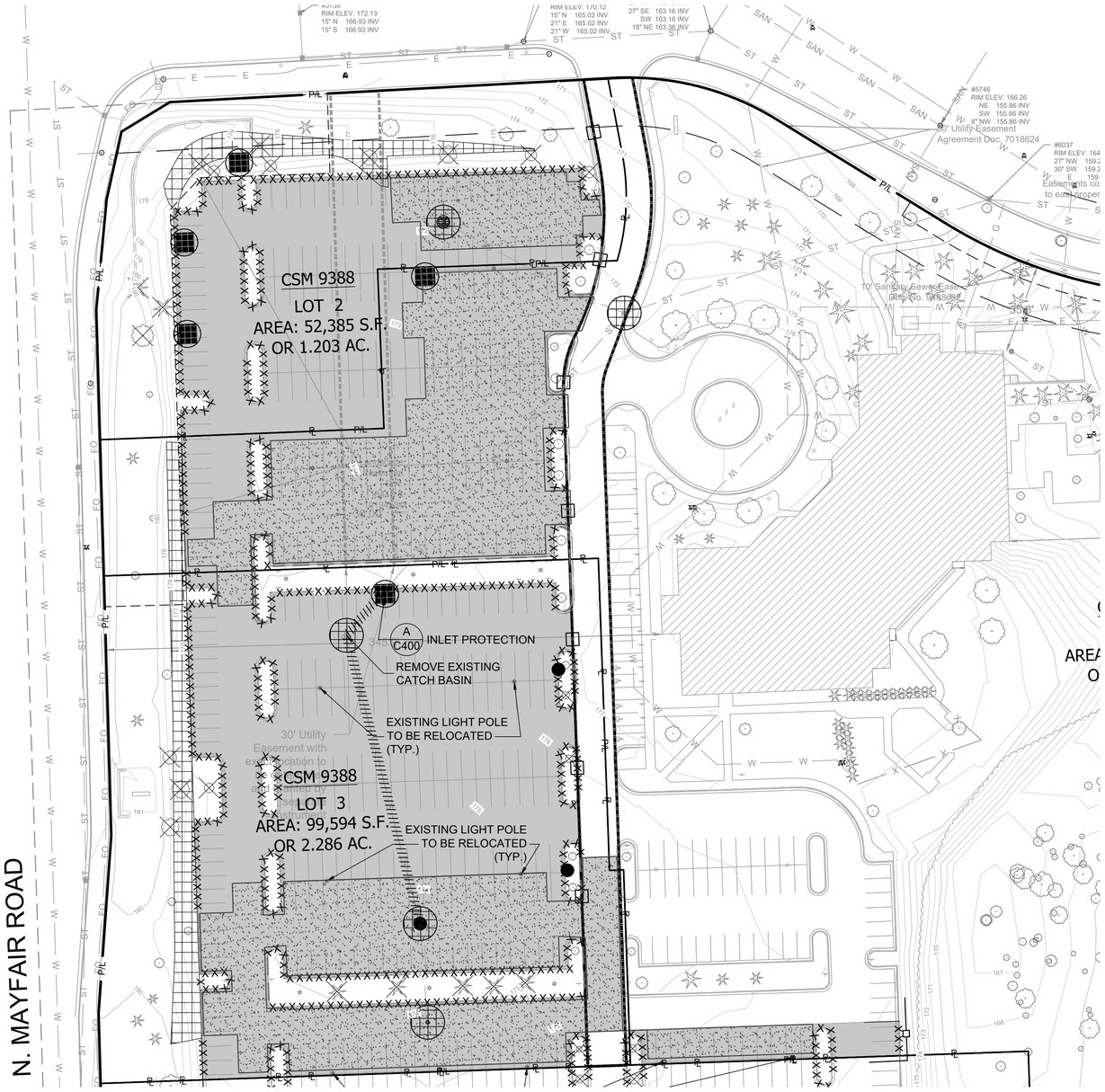
ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

NO. REVISION	DATE

SCALE:	1"=40'
PROJECT NO:	20166
DESIGN DATE:	----
PLOT DATE:	2023.01.24
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----
SHEET NO:	C001

2023.01.24
CMUELLER
C001
20166

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C001 Survey.dwg



LEGEND:

- B C400 — PROPOSED SILT FENCE OR SILT SOCK
- A C400 — PROPOSED INLET PROTECTION
- D C400 — PROPOSED TRACKING PAD
- C C400 — PROPOSED EROSION MATTING WISDOT APPROVED CLASS 1 TYPE B
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- UTILITY REMOVAL
- XXXXXXX — CURB REMOVAL
- STRUCTURE REMOVAL
- PAVEMENT REMOVAL OR PULVERIZE IN PLACE AND REUSE AS BASE
- EXISTING ASPHALT MILL AND OVERLAY (1.25")
- TREE REMOVAL

GENERAL NOTES:

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3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
5. SEE SHEET C400 FOR A COMPLETE LIST OF EROSION CONTROL NOTES AND DETAILS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO START OF LAND DISTURBING ACTIVITIES.
6. DO NOT BEGIN LAND DISTURBING ACTIVITIES UNTIL AN EROSION CONTROL PERMIT IS OBTAINED FROM LOCAL JURISDICTION.

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

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GRAPHIC SCALE
0 40 80

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II

10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

SITE PREPARATION & EROSION CONTROL

ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

NO.	REVISION	DATE

SCALE:	######
PROJECT NO:	20166
DESIGN DATE:	----
PLOT DATE:	2023.01.24
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----

SHEET NO:
C002

2023.01.24
CMUELLER
C002
20166

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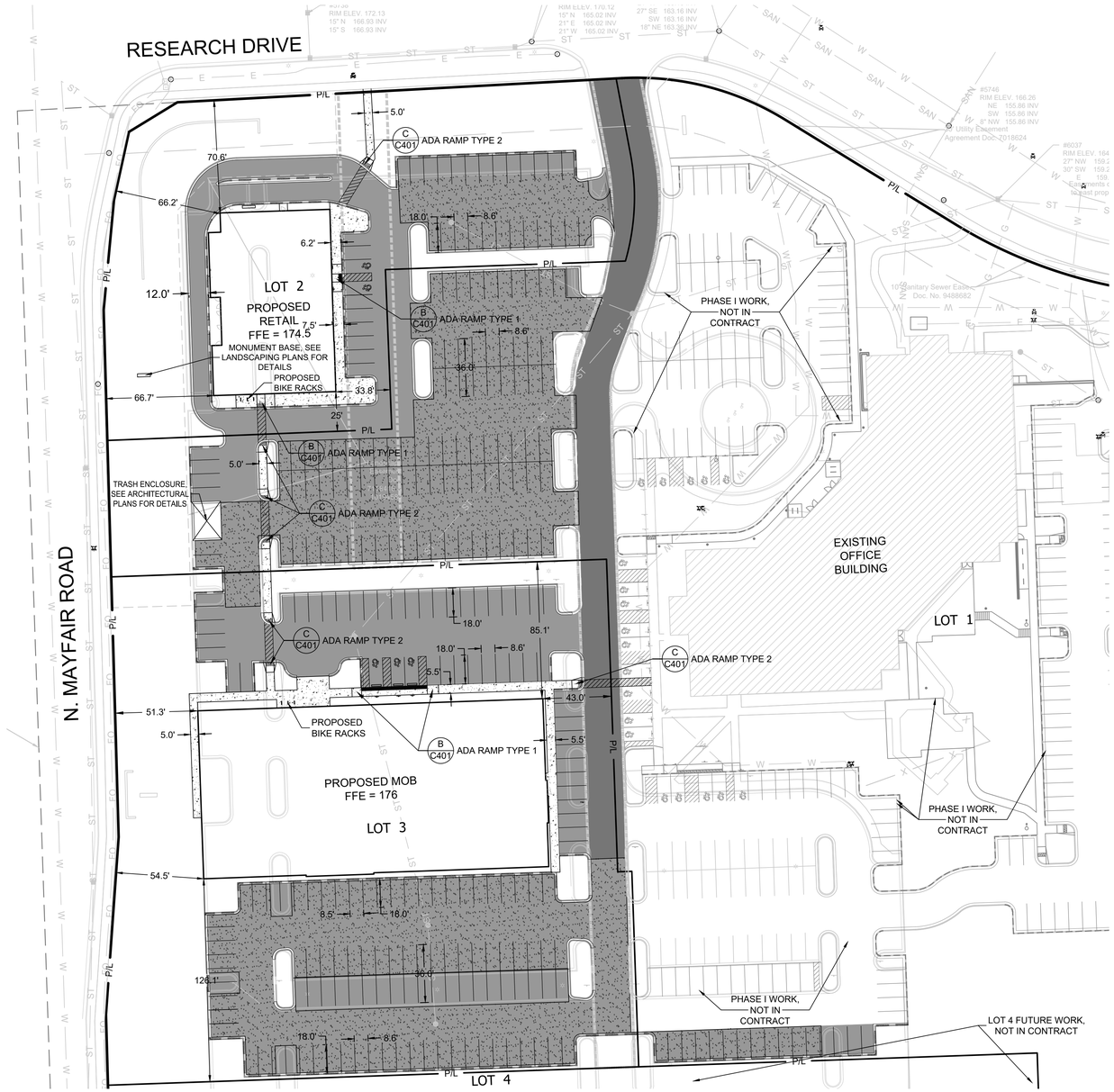

LOT 1 SITE INFORMATION			
SITE AREA	293209	6.731 AC	
SITE DISTURBED AREA	40650	0.933 AC	
EXISTING IMPERVIOUS AREA	194600	4.467 AC	66.4 %
PROPOSED IMPERVIOUS AREA	193438	4.441 AC	66.0 %
TOTAL PARKING SPACES	455		
ADA PARKING SPACES	19		

LOT 2 SITE INFORMATION			
SITE AREA	52385	1.203 AC	
SITE DISTURBED AREA	38750	0.890 AC	
EXISTING IMPERVIOUS AREA	28416	0.652 AC	54.2 %
PROPOSED IMPERVIOUS AREA	29085	0.668 AC	55.5 %
TOTAL PARKING SPACES	35		
ADA PARKING SPACES	2		

LOT 3 SITE INFORMATION			
SITE AREA	99594	2.286 AC	
SITE DISTURBED AREA	87641	2.012 AC	
EXISTING IMPERVIOUS AREA	72350	1.661 AC	72.6 %
PROPOSED IMPERVIOUS AREA	72092	1.655 AC	72.4 %
TOTAL PARKING SPACES	140		
ADA PARKING SPACES	3		

LEGEND:

- G / C401 — 5" THICK CONCRETE WALK
- E / C401 — ASPHALT SURFACE
- F / C401 — ASPHALT SURFACE - HEAVY DUTY
- EXISTING ASPHALT MILL AND OVERLAY (1.25")
- EXISTING CURB & GUTTER TO REMAIN
- A / C401 — CURB & GUTTER (ACCEPT)
- A / C401 — CURB & GUTTER (REJECT)

GENERAL NOTES:

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5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
6. WORK WITHIN THE PUBLIC RIGHT OF WAY, INCLUDING BUT NOT LIMITED TO DRIVEWAY OPENINGS, SIDEWALK AND RAMPS, PAVING, AND CURB AND GUTTER SHALL BE COMPLETED PER MUNICIPAL AND/OR COUNTY REQUIREMENTS AND STANDARDS.
7. EARTHWORK SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

TO OBTAIN LOCATIONS OF PARTSOPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

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TOLL FREE

WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

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GRAPHIC SCALE
0 40 80

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

SITE PLAN

ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

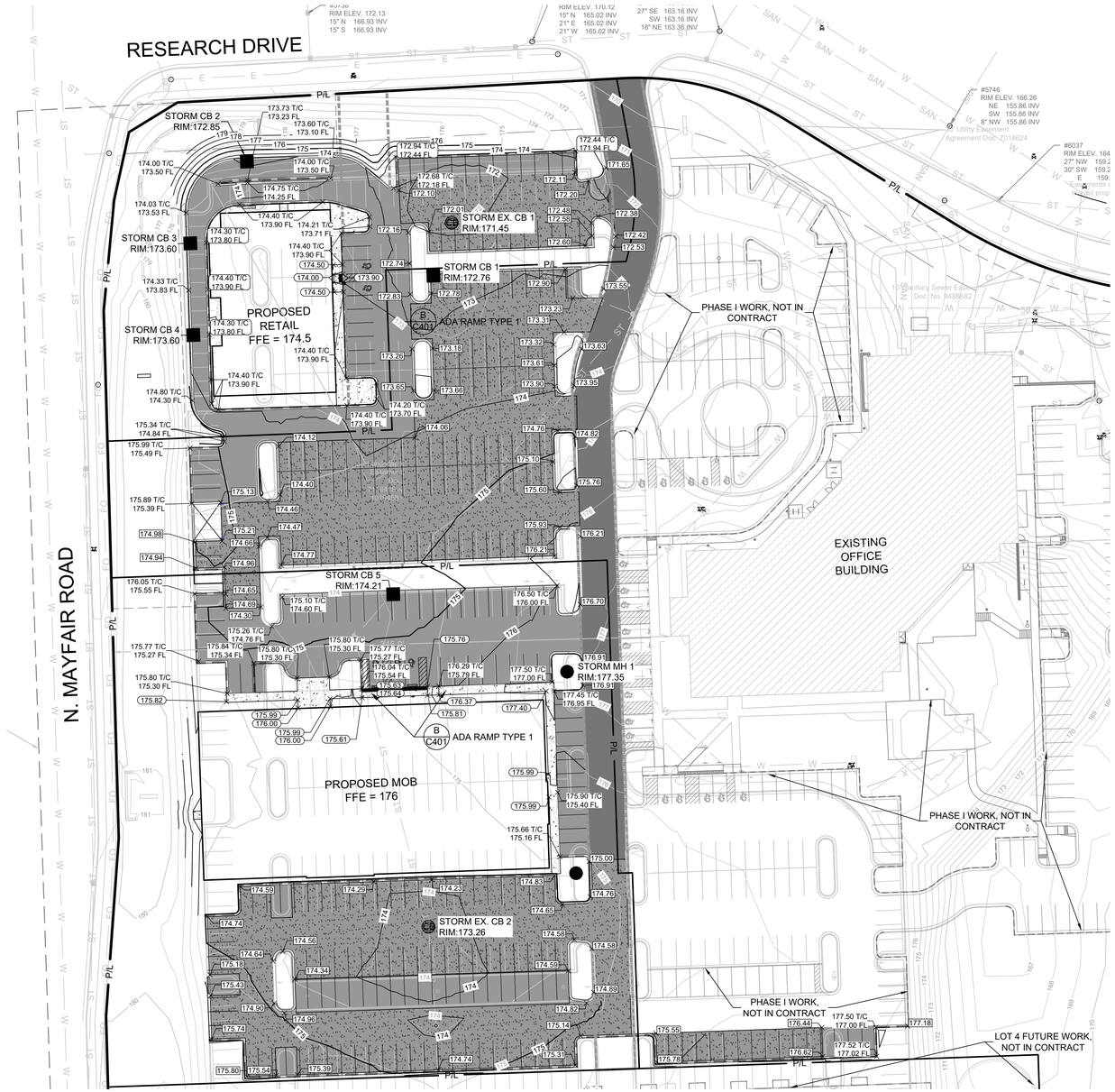
NO.	REVISION	DATE

SCALE:	1"=40'
PROJECT NO:	20166
DESIGN DATE:	----
PLOT DATE:	2023.02.06
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----

SHEET NO:
C100

2023.02.06
CMUELLER
C100
20166

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C102 Site Plan.dwg



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- A C401 — CURB & GUTTER (ACCEPT)
- A C401 — CURB & GUTTER (REJECT)
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- 100.50 T/C 100.00 FL — PROPOSED CURB & GUTTER SPOT GRADE T/C: TOP OF CURB GRADE FL: FLOW LINE CURB GRADE
- 100.00 — PROPOSED SURFACE SPOT GRADE
- 100.00 — EXISTING SURFACE SPOT GRADE (MATCH)

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GRAPHIC SCALE 0 40 80

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IRGENS RESEARCH DRIVE PHASE II

10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

GRADING PLAN

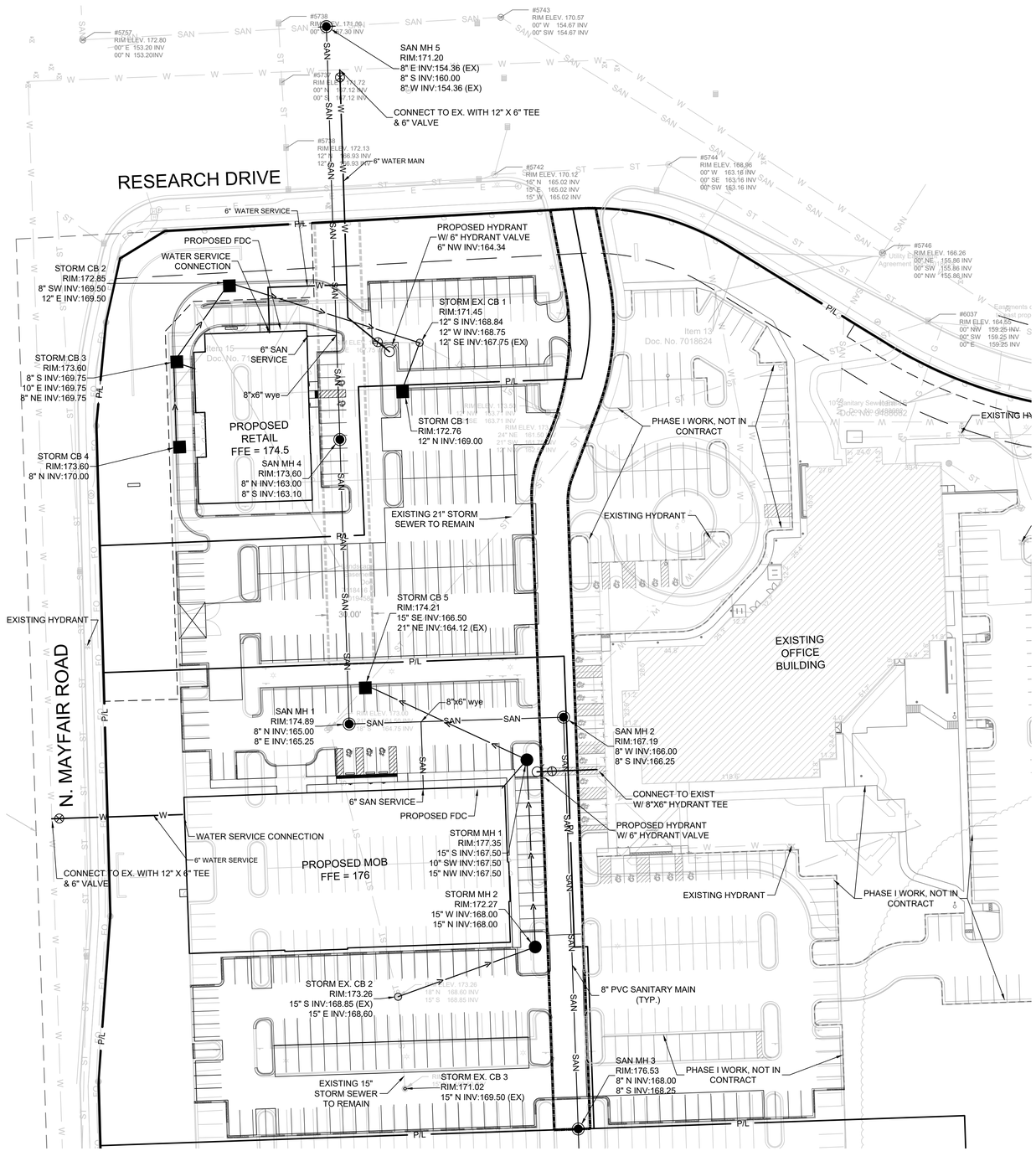
ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

NO.	REVISION	DATE

SCALE:	1"=40'
PROJECT NO:	20166
DESIGN DATE:	----
PLOT DATE:	2023.01.24
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----
SHEET NO:	C200

2023.01.24
CMUELLER
C200
20166

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C200 Grading Plan.dwg



TO OBTAIN LOCATIONS OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

LEGEND:

W	PROPOSED WATER SERVICE
SAN	PROPOSED SANITARY SERVICE
	PROPOSED STORM SEWER
A C402	PROPOSED STORM INLET
D C402	PROPOSED STORM MANHOLE
E C402	PROPOSED FLARED END SECTION
F C402	PROPOSED HYDRANT ASSEMBLY
B C402	PROPOSED SANITARY MANHOLE

GENERAL NOTES:

1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
5. ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
6. PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUBS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
7. WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
8. PRIVATE STORM SEWER 12-INCH DIAMETER OR LARGER SHALL BE HDPE. BELOW 12-INCH DIAMETER SHALL BE PVC SDR-35 ASTM D3034. PRIVATE WATER MAIN SHALL BE CLASS 235 DR 18 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
9. COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES.
10. IF PROJECT IS DESIGN BUILD MEP, THE GENERAL CONTRACTOR IS REQUIRED TO PROVIDE FINAL SEWER AND WATER DESIGN SHOWING LOCATION, INVERTS AND SIZES TO THE ENGINEER FOR FINAL REVIEW AND VERIFICATION PRIOR TO STARTING UNDERGROUND UTILITY CONSTRUCTION.
11. WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS HALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGA-LUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS.
12. INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGA-LUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER FILE NO'S:44,45,46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS.

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Milwaukee, WI 53233
Phone: 414-643-4200
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GRAPHIC SCALE
0 40 80

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

UTILITY PLAN

ISSUANCE	DATE
SD SET	04/20/2022
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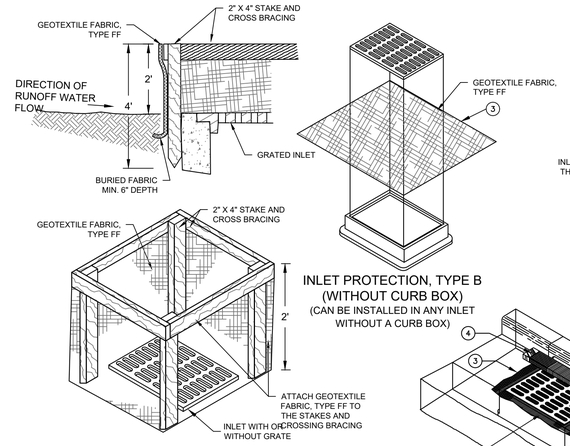
2023.01.24

EROSION CONTROL NOTES:

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.
2. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY. DOCUMENT AND MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH WDNR NR216 REQUIREMENTS.
4. SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
5. FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
6. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.
7. PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN ADJACENT STREETS FREE OF DUST AND DIRT.
8. SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ANY TOPSOIL AND FILL STOCKPILES.
9. SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE MEASURES SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
10. WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
11. TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING, TO THE SATISFACTION OF THE MUNICIPALITY, BEFORE THE END OF EACH WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR PRACTICE SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. NOTIFY MUNICIPALITY OF ANY CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.
12. SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORKDAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORKDAY.
13. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT PRACTICE FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.
14. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILES. IF REMAINING FOR MORE THAN THIRTY DAYS, PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS OR OTHER MEANS.
15. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY PRACTICES, SUCH AS FILTER FABRIC FENCES, STRAW BALES, SEDIMENT AND SEDIMENT TRAPS, FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS SHALL BE REMOVED.
16. NOTIFY THE LOCAL MUNICIPALITY HAVING JURISDICTION WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.
17. OBTAIN PERMISSION FROM THE LOCAL MUNICIPALITY HAVING JURISDICTION PRIOR TO MODIFYING THE EROSION CONTROL PLAN.
18. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
19. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.
20. CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE DISTURBANCE OF EXISTING VEGETATION DURING CONSTRUCTION.
21. CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE COMPACTION OF TOPSOIL AND PRESERVE TOPSOIL IN GREENSPACE AREAS.
22. WASH WATER FROM VEHICLES AND WHEEL WASHING SHALL BE CONTAINED AND TREATED PRIOR TO DISCHARGE.
23. CONTRACTOR SHALL MAINTAIN SPILL KITS ON-SITE.
24. PERMAMENT TURF SEEDING OF DISTURBED AREA MUST OCCUR PRIOR TO SEPTEMBER 15TH. IF ADEQUATE TIME IS NOT AVAILABLE TO APPLY PERMANENT SEEDING PRIOR TO SEPTEMBER 15TH, THEN DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH AN ANNUAL RYE GRASS PER WDNR TECHNICAL STANDARD 1059, WHERE THE TEMPORARY SEEDING MUST OCCUR PRIOR TO OCTOBER 15TH.
25. IF TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED TO DISTURBED AREA PER WDNR TECHNICAL STANDARD 1050. INSPECT ANIONIC PAM APPLICATION AT A MINIMUM FREQUENCY OF EVERY TWO MONTHS AND REAPPLY AS NECESSARY

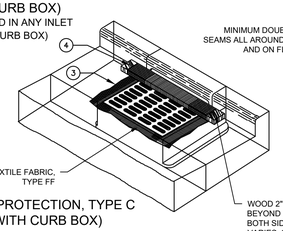
CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCING AND INLET PROTECTION.
3. INITIATE STOCKPILING OF IMPORTED MATERIAL. PLACE SILT FENCE AROUND STOCKPILE(S).
4. STRIP TOPSOIL FROM STORM WATER BASIN LOCATION AND STOCKPILE.
5. CONSTRUCT STORM WATER BASIN AND INSTALL TEMPORARY OUTLET AND EMERGENCY OVERFLOW. BASIN IS TO BE USED AS A SEDIMENTATION BASIN DURING THE COURSE OF CONSTRUCTION.
6. CONSTRUCT DIVERSION SWALES, DIRECT RUNOFF TO STORM BASIN. INSTALL ASSOCIATED DITCH CHECKS.
7. INSTALL RIP-RAP AT STORM WATER BASIN AS SHOWN ON THE PLANS.
8. STRIP TOPSOIL FROM REMAINDER OF SITE IN A PROGRESSIVE MANNER, AND STOCKPILE.
9. PERFORM ROUGH SITE GRADING. STABILIZE FINISHED AREAS AS THE WORK PROGRESSES. USE EROSION MATTING WHERE CALLED FOR ON THE PLANS. PER WDNR TECHNICAL STANDARD 1059: AREAS THAT RECEIVE TEMPORARY SEEDING SHALL HAVE A MINIMUM TOPSOIL DEPTH OF 2 INCHES. AREAS THAT RECEIVE PERMANENT SEEDING SHALL HAVE A MINIMAL TOPSOIL DEPTH OF 4 INCHES.
10. PREPARE BUILDING PAD AND BEGIN FOUNDATIONS WORK FOR BUILDING.
11. INSTALL UTILITIES. INSTALL ANY ADDITIONAL INLET PROTECTION ON NEW STORM SEWER AND INSTALL RIP-RAP AT NEW STORM SEWER OUTFALLS.
12. REMOVE TEMPORARY OUTLET CONTROL STRUCTURE ON BASIN AND INSTALL PAVEMENTS.
13. STABILIZE AREAS REMAINING AREAS WITHIN 7 DAYS OF COMPLETION OF FINAL GRADING AND TOPSOILING.
14. REMOVE EXCESS SEDIMENT FROM STORMWATER BASINS AND RETURN BASINS TO THEIR DESIGN DIMENSIONS AND VOLUMES.
15. REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED.

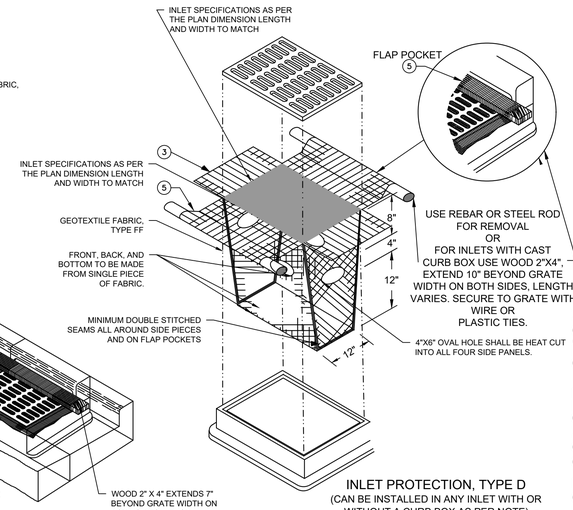


INLET PROTECTION, TYPE A

INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C
(WITH CURB BOX)



INLET PROTECTION, TYPE D
(CAN BE INSTALLED IN ANY INLET WITH OR WITHOUT A CURB BOX AS PER NOTE) 4

GENERAL NOTES:

1. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
2. 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.
3. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
4. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

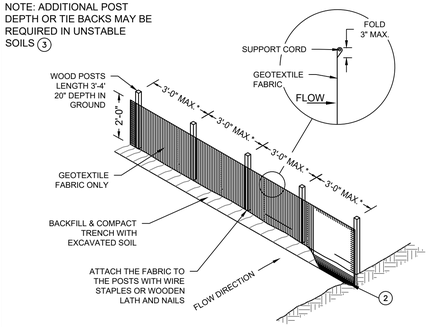
TYPE D
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACES AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

GENERAL NOTE
INLET PROTECTION SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1060

THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 10-2

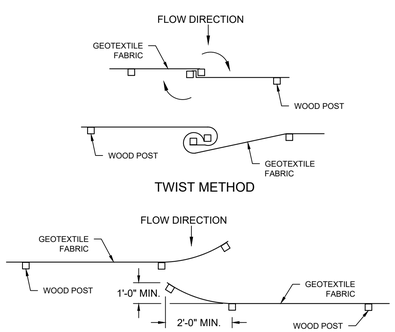
A INLET PROTECTION
SCALE:NTS

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS 3

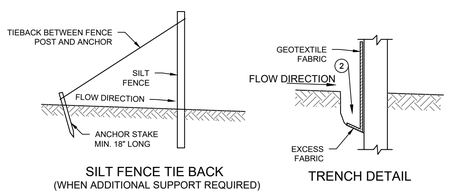


* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5

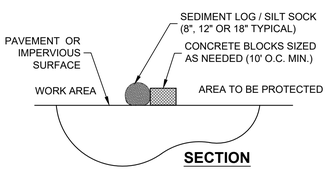


SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

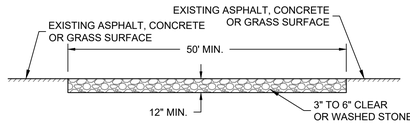
TRENCH DETAIL

GENERAL NOTES
1. HORIZONTAL BRACE REQUIRED WITH 2"X4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1-1/32" X 1-1/32" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ON THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST OR ROTATE, AT LEAST 180 DEGREES. B) HOOK THE END OF EACH SILT FENCE LENGTHS.
6. SILT FENCE SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1056
7. THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 9-6

B SILT FENCE
SCALE:NTS



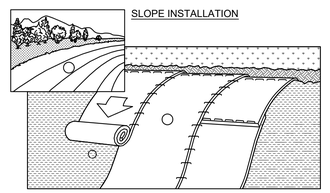
B SILT SOCK
SCALE:NTS



GENERAL NOTE:

STONE TRACKING PAD SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1057

D CONSTRUCTION ENTRANCE
SCALE:NTS



1. ECRMs (EROSION CONTROL REVEGATIVE MATS) SHALL BE INSTALLED AFTER ALL TOPSOILING, FERTILIZING, LIMING, AND SEEDING IS COMPLETE.
2. THE MAT SHALL BE IN FIRM AND INTIMATE CONTACT WITH THE SOIL. IT SHALL BE INSTALLED AND ANCHORED PER THE MANUFACTURER'S RECOMMENDATION.
3. TRMs (TURF-REINFORCEMENT MAT) SHALL BE INSTALLED INCONJUCTION WITH THE TOPSOILING OPERATION AND SHALL BE FOLLOWED BY ECRM INSTALLATION.
4. AT TIME OF INSTALLATION, DOCUMENT THE MANUFACTURER AND MAT TYPE BY RETENTION OF MATERIAL LABELS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. RETAIN THIS DOCUMENTATION UNTIL THE SITE HAS BEEN STABILIZED.

NOTES:

1. EROSION MATTING SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1052.
2. INSTALL PER MANUFACTURERS SPECIFICATIONS.

C EROSION MATTING - WDNR TS-1052
SCALE:NTS

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PRELIMINARY NOT FOR CONSTRUCTION

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10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

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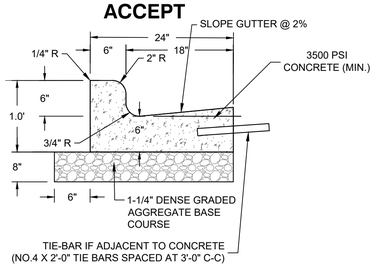
2023.01.24

ACCEPT



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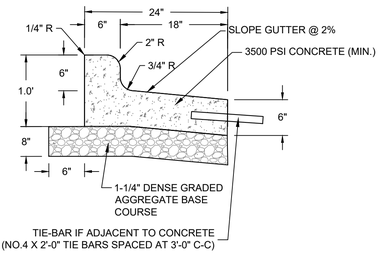
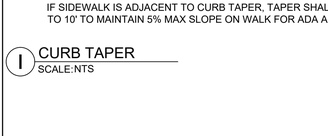


A 24INCH CURB
SCALE:NTS



E ASPHALT PAVEMENT
SCALE:NTS

F ASPHALT PAVEMENT HEAVY DUTY
SCALE:NTS

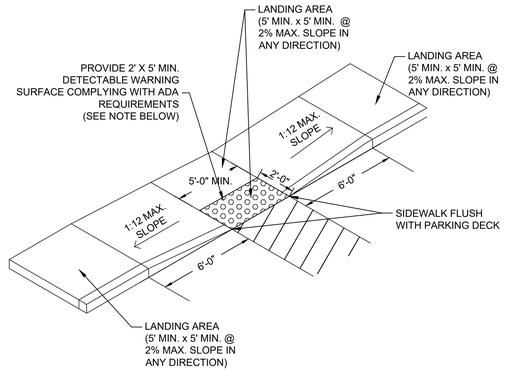
G CONCRETE SIDEWALK
SCALE:NTS

NOTES:

IF SIDEWALK IS ADJACENT TO CURB TAPER, TAPER SHALL BE EXTENDED TO 10' TO MAINTAIN 5% MAX SLOPE ON WALK FOR ADA ACCESS

I CURB TAPER
SCALE:NTS

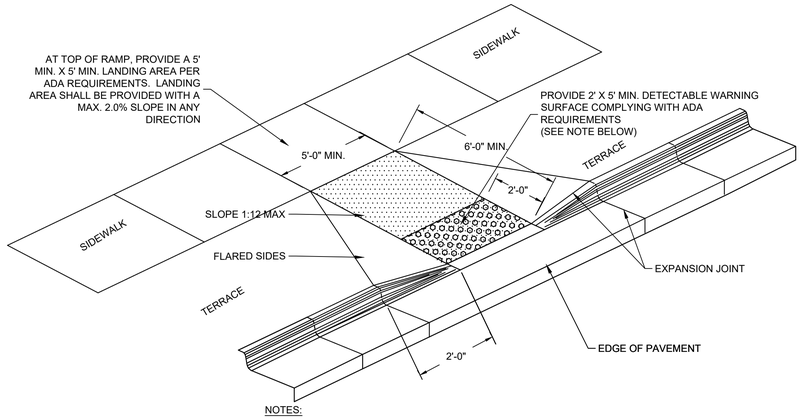
B ADA RAMP TYPE 1
SCALE:NTS



NOTES:

1. CONTRACTOR TO VERIFY ADA RAMP DETAIL WITH CITY AND ADJUST AS NEEDED.
2. PROVIDE DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES OF SIZE, SPACING AND CONTRAST REQUIRED BY ADA GUIDELINES.
3. DETECTABLE WARNINGS SHALL BE PER CITY STANDARDS.

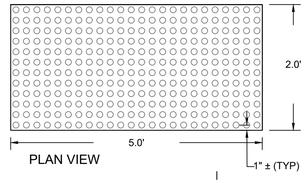
C ADA RAMP TYPE 2
SCALE:NTS



NOTES:

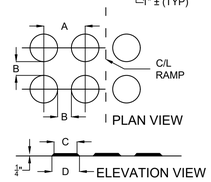
1. CONTRACTOR TO VERIFY ADA RAMP DETAIL WITH CITY AND ADJUST AS NEEDED.
2. PROVIDE DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES OF SIZE, SPACING AND CONTRAST REQUIRED BY ADA GUIDELINES.
3. DETECTABLE WARNINGS SHALL BE PER CITY STANDARDS.

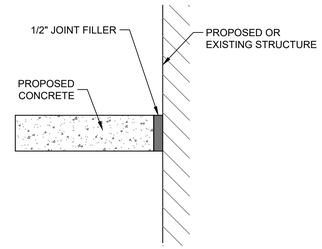
D TRUNCATED DOMES
SCALE:NTS



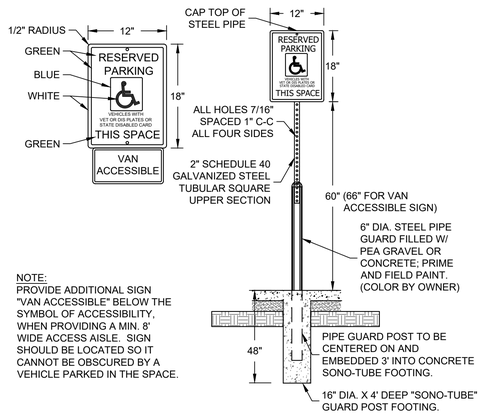
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	X	X
D	0.9"	1.4"

X = THE C DIMENSIONS IS 50% TO 65% OF THE D DIMENSION



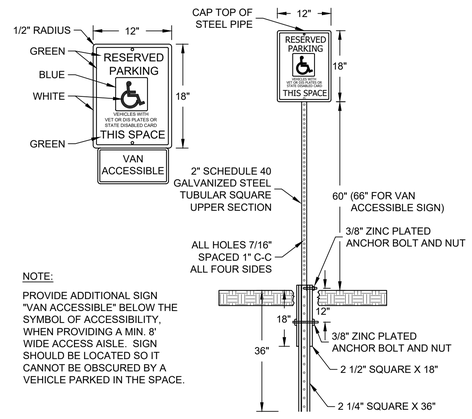


H CONCRETE JOINT-ISOLATION
SCALE:NTS



NOTE:
PROVIDE ADDITIONAL SIGN "VAN ACCESSIBLE" BELOW THE SYMBOL OF ACCESSIBILITY, WHEN PROVIDING A MIN. 8' WIDE ACCESS AISLE. SIGN SHOULD BE LOCATED SO IT CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

J HANDICAP SIGN AND BOLLARD POST
SCALE:NTS



NOTE:
PROVIDE ADDITIONAL SIGN "VAN ACCESSIBLE" BELOW THE SYMBOL OF ACCESSIBILITY, WHEN PROVIDING A MIN. 8' WIDE ACCESS AISLE. SIGN SHOULD BE LOCATED SO IT CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

K HANDICAP SIGN AND POST
SCALE:NTS

THE SIGMA GROUP
Single Source. Sound Solutions.
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Fax: 414-643-4210

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

DETAILS

ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

NO. REVISION	DATE

SCALE:	
PROJECT NO:	20166
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DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----

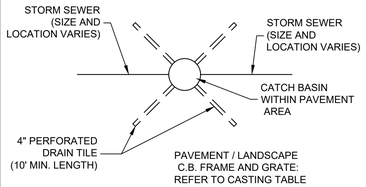
SHEET NO:
C401

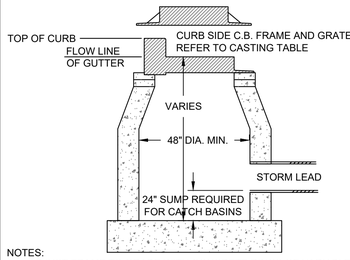
CMUELLER
C401
20166

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C401 Details.dwg

2023.01.24

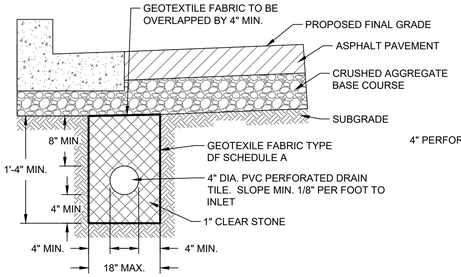
CATCH BASIN WITHIN LOW POINT OF PAVEMENT AREA



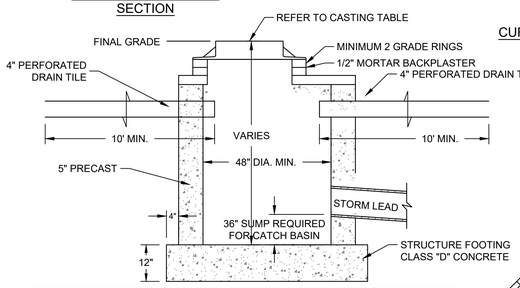


NOTES:
1. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6". MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING.
2. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
3. 3" BEDDING OF STONE UNDER BASE REQUIRED ON WET SUB-GRADE.
4. UNLESS NOTED ON THE PLANS CONTRACTOR IS RESPONSIBLE FOR ALL CATCH BASIN SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.

A INLET AND CATCH BASIN
SCALE:NTS



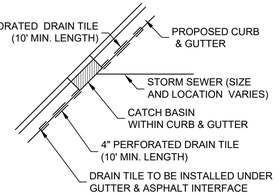
CURB INLET LOCATION SECTION



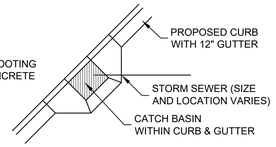
CATCH BASIN / INLET CASTING TABLE

	IF 18" CURB & GUTTER		IF 24" CURB & GUTTER		IF 30" CURB AND GUTTER	
	CASTING	GRATE	CASTING	GRATE	CASTING	GRATE
CURB INLET	NEENAH R-3067	A	NEENAH R-3067	A	NEENAH R-3228H	C
AREA INLET	NEENAH R-2050	C				

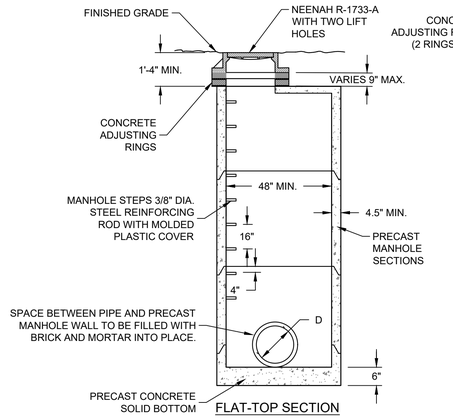
NOTE:
DRAIN TILE SHALL HAVE TWO (2) SEGMENTS POSITIONED ALONG THE GUTTER & ASPHALT INTERFACE.



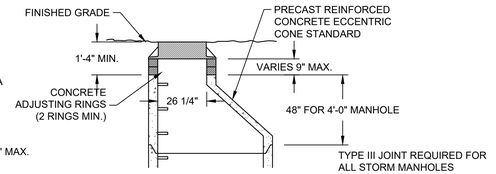
CURB INLET WITHIN CURB & GUTTER PLAN



CONCRETE BUMP OUT TO BE APPLIED FOR 12" GUTTER PAN



FLAT-TOP SECTION

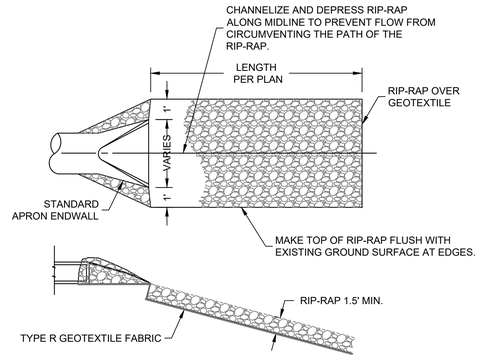


CONE-TOP SECTION

NOTES:

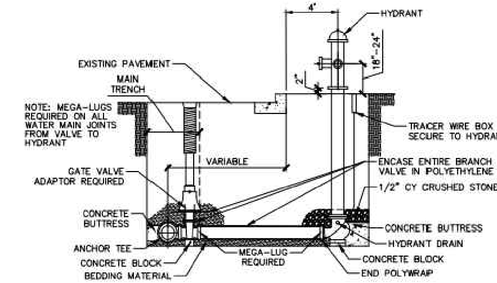
1. CONSTRUCT MANHOLE IN ACCORDANCE WITH FILE NO. 12 OF THE STATE STANDARD SPECIFICATIONS FOR SEWER AND WATER.
2. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6". MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY RINGS SHALL BE GROOVED TO RECEIVE STEP.
3. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
4. JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING MORTAR, OR FLEXIBLE RUBBER TYPE GASKETS FOR STORM MANHOLES.
5. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT MIN.
6. 3" OF BEDDING STONE UNDER BASE.
7. UNLESS NOTED ON THE PLANS CONTRACTOR IS RESPONSIBLE FOR ALL MANHOLE SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.

D PRECAST STORM MANHOLE
SCALE:NTS



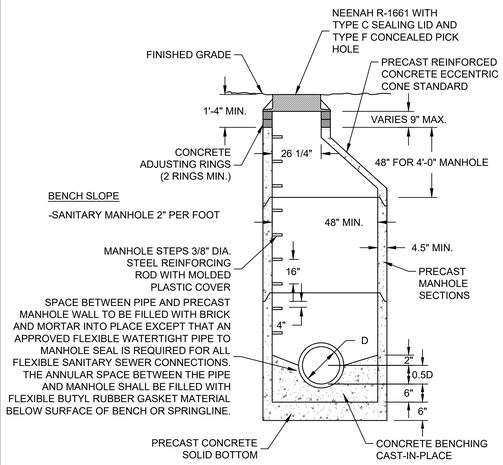
NOTES:
1. INSTALL RIP-RAP WHERE SHOWN ON PLANS.
2. FOR PERMANENT POOL (WET) DETENTION BASINS: EXTEND RIP-RAP FROM OUTFALL TO AT LEAST 10 FEET BEYOND THE NORMAL WATER LEVEL.
3. RIP-RAP SHALL BE MEDIUM RIP-RAP PER WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION
4. GEOTEXTILE FABRIC SHALL BE TYPE R PER WISDOT STANDARD SPECIFICATIONS PER HIGHWAY AND STRUCTURE CONSTRUCTION.

E RIP-RAP
SCALE:NTS



SECTION VIEW

F HYDRANT SETTING WAUWATOSA
SCALE:NTS



NOTES:

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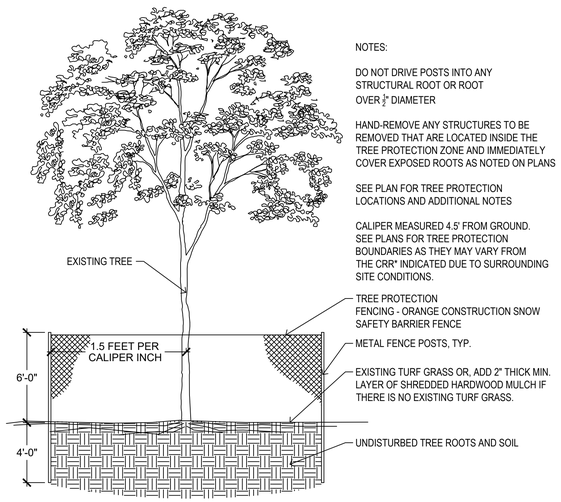
2. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6". MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY RINGS SHALL BE GROOVED TO RECEIVE STEP.
3. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
4. JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING FLEXIBLE RUBBER TYPE GASKETS.
5. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT MIN.
6. 3" OF BEDDING STONE UNDER BASE.
7. ALL SANITARY MANHOLES SHALL BE PROVIDED WITH EXTERNAL CHIMNEY SEALS AND SELF-SEALING LIDS WITH CONCEALED PICK HOLES.
8. UNLESS NOTED ON THE PLANS, THE CONTRACTORS IS RESPONSIBLE FOR ALL MANHOLE SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.
9. TYPE I FRAME/CHIMNEY JOINT REQUIRED ON ALL SANITARY MANHOLES UNLESS OTHERWISE SPECIFIED.

B PRECAST SANITARY MANHOLE
SCALE:NTS



NOTES:

DO NOT DRIVE POSTS INTO ANY STRUCTURAL ROOT OR ROOT OVER 2" DIAMETER

HAND-REMOVE ANY STRUCTURES TO BE REMOVED THAT ARE LOCATED INSIDE THE TREE PROTECTION ZONE AND IMMEDIATELY COVER EXPOSED ROOTS AS NOTED ON PLANS

SEE PLAN FOR TREE PROTECTION LOCATIONS AND ADDITIONAL NOTES

CALIPER MEASURED 4.5' FROM GROUND. SEE PLANS FOR TREE PROTECTION BOUNDARIES AS THEY MAY VARY FROM THE CRR* INDICATED DUE TO SURROUNDING SITE CONDITIONS.

*CRR - CRITICAL ROOT RADIUS IS DEFINED AS TREE DIAMETER (AT LEAST 4.5' FROM GROUND) X 1.5 = CRR VALUE EXPRESSED IN FEET.

C TREE PROTECTION
SCALE:NTS

WATER MAIN JOINT RESTRAINT DISTANCE (FT) PER FITTING

FITTING TYPE	4" DIAMETER	6" DIAMETER	8" DIAMETER	12" DIAMETER	16" DIAMETER	20" DIAMETER
HORIZONTAL BEND - 11.25°	5	5	5	5	8	8
HORIZONTAL BEND - 22.5°	8	8	8	10	10	15
HORIZONTAL BEND - 45°	10	10	12	16	20	26
HORIZONTAL BEND - 90°	16	20	25	32	40	52
* RESTRAIN LARGER SIZED PIPE						
REDUCER - DIA. X 4"	-	25	50	60	80	130
REDUCER - DIA. X 6"	-	-	25	60	100	125
REDUCER - DIA. X 8"	-	-	-	50	80	120
REDUCER - DIA. X 12"	-	-	-	-	50	100
REDUCER - DIA. X 16"	-	-	-	-	-	50
DEAD END	40	40	60	90	120	150
TEE OR CROSS - RUN	10	10	10	20	30	40
TEE - 4" BRANCH	8	6	6	6	6	6
TEE - 6" BRANCH	-	8	6	6	6	6
TEE - 8" BRANCH	-	-	10	6	6	6
TEE - 12" BRANCH	-	-	-	12	6	6
TEE - 16" BRANCH	-	-	-	-	30	10
TEE - 20" BRANCH	-	-	-	-	-	50
VERTICAL BEND - 45° - UPPER	12	20	26	40	50	60
VERTICAL BEND - 45° - LOWER	5	5	6	10	12	14
VERTICAL BEND - 22.5° - UPPER	8	10	14	18	24	28
VERTICAL BEND - 22.5° - LOWER	4	5	5	8	8	8
VERTICAL BEND - 11.25° - UPPER	6	6	8	10	12	14
VERTICAL BEND - 11.25° LOWER	4	4	4	4	4	6

* WHERE RESTRAINT LENGTHS ARE NOT IDENTIFIED ON THE PLANS, THE VALUES IN THIS TABLE SHALL BE PROVIDED AS A MINUMUM

G WATER MAIN JOINT RESTRAINT TABLE
SCALE:NTS

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
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Fax: 414-643-4210

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

DETAILS

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SD SET	04/20/2022
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NO.	REVISION	DATE

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PLOT DATE:	2023.01.24
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----

SHEET NO: C402

CMUELLER
C402
20166

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C402 DETAILS.dwg

2023.01.24

GENERAL:

1. EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, AND NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR ENGINEER FOR THEIR ACCURACY OR COMPLETENESS.
2. CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR SHALL HAVE SITE MARKED BY DIGGER'S HOTLINE AND SHALL HAVE PRIVATE UTILITIES MARKED BY A PRIVATE UTILITY LOCATOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS, AND SIZES OF EXISTING UTILITIES AND SHALL CHECK ALL UTILITY CROSSINGS AND PROPOSED CONNECTIONS FOR CONFLICTS/DISCREPANCIES PRIOR TO INITIATING CONSTRUCTION. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE ENGINEER SO REDESIGN MAY OCCUR IF NEEDED.
3. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLANS. LENGTHS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

SITE CLEARING:

1. EXCEPT FOR STRIPPED TOPSOIL OR OTHER MATERIALS INDICATED TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
2. MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.
3. SALVABLE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNER'S PREMISES WHERE INDICATED.
4. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
5. DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
6. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
7. LOCATE AND CLEARLY FLAG TREES AND VEGETATION TO REMAIN OR TO BE RELOCATED.
8. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION; RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.
9. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES INDICATED TO BE REMOVED; ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
10. EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY THE OWNER AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES.
11. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED; PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.
12. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
13. STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
14. STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.
15. REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
16. SAWCUT ALL PAVEMENTS FULL DEPTH PRIOR TO REMOVAL; SAWCUTS SHALL BE IN STRAIGHT LINES PERPENDICULAR AND/OR PARALLEL TO EXISTING PAVEMENT JOINTS AND PAVEMENT EDGES.
17. REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
18. SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NONRECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

SITE WATER SERVICE:

1. COMPLY WITH STANDARDS OF STATE PLUMBING CODE (SPS CH. 382, 384), LOCAL WATER UTILITY REQUIREMENTS AND STANDARDS OF AUTHORITIES HAVING JURISDICTION FOR FIRE-SUPPRESSION AND WATER SERVICE PIPING INCLUDING MATERIALS, FITTINGS, APPURTENANCES, INSTALLATION, TESTING, SERVICE TAPS, ETC. IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND STATE PLUMBING CODE OR LOCAL JURISDICTIONAL AUTHORITY, STATE PLUMBING CODE AND LOCAL JURISDICTIONAL AUTHORITY REQUIREMENTS GOVERN.
2. DO NOT INTERRUPT SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY OWNERS OF SUCH FACILITIES AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER-DISTRIBUTION SERVICE.
3. WATER SERVICE PIPING MAY BE EITHER DUCTILE IRON WATER PIPE OR PVC WATER PIPE AS ALLOWED BY THE LOCAL WATER UTILITY.
4. DUCTILE IRON WATER PIPE CONFORMING TO THE REQUIREMENTS OF THE AMERICAN NATIONAL STANDARD FOR DUCTILE IRON PIPE, CENTRIFUGALLY CAST, AWWA C151/A21.51 - LATEST REVISION AND REQUIREMENTS OF CHAPTER 8.18.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
    a. CLASS 52
    b. CEMENT MORTAR LINING AND INTERNAL AND EXTERNAL BITUMINOUS COATS IN ACCORDANCE WITH SECTION 51.8 OF AWWA C151.
    c. PUSH-ON GASKET PIPE
    d. PLAIN RUBBER GASKETS
    e. BONDING STRAPS TO PROVIDE ELECTRICAL CONDUCTIVITY WITHOUT FIELD TESTING
5. JOINTS FOR DUCTILE IRON PIPE: JOINTS SHALL BE RUBBER GASKET JOINTS; CONFORM TO THE REQUIREMENTS OF AMERICAN NATIONAL STANDARD FOR RUBBER GASKET JOINTS FOR DUCTILE IRON PRESSURE PIPE AND FITTINGS (ANSI/AWWA C111/A21.11, LATEST EDITION)
6. FITTINGS FOR DUCTILE IRON PIPE: CONFORM TO THE REQUIREMENTS OF AMERICAN NATIONAL STANDARD FOR DUCTILE IRON AND GRAY IRON FITTINGS, 3" THROUGH 48" FOR WATER ANSI/AWWA C110/A21.10, LATEST EDITION); CLASS 250 MECHANICAL JOINT PIPE FITTINGS; CEMENT LINED; ALL BELLS; ENTIRE FITTING TARRED; CONDUCTIVE MECHANICAL JOINT (NO LEAD) RUBBER GASKETS, FLANGES, AND BOLTS.
7. PVC AWWA PIPE: AWWA C900, CLASS 235 WITH BELL END WITH GASKET AND WITH SPIGOT END AND MEETING REQUIREMENTS OF CHAPTER 8.20.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. FITTINGS SHALL BE IN ACCORDANCE WITH CHAPTER 8.22.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. MECHANICAL -JOINT, DUCTILE IRON FITTINGS: AWWA C153, DUCTILE-IRON COMPACT PATTERN. GLANDS, GASKETS AND BOLTS: AWWA C111, DUCTILE IRON GLANDS, RUBBER GASKETS AND STEEL BOLTS.
8. GATE VALVES: CONFORM TO AWWA C-500 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN SUITABLE FOR DIRECT BURY.
9. VALVE BOXES: CAST IRON CONFORMING TO ASTM DESIGNATION A-48, CLASS 20 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
10. FIRE HYDRANTS: TO MEET LOCAL STANDARDS.
11. WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS HALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGA-LUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS
12. GENERAL WATER PIPE INSTALLATION: IN ACCORDANCE WITH CHAPTER 4.3.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
13. INSTALL DUCTILE-IRON, WATER-SERVICE PIPING ACCORDING TO AWWA C600 AND CHAPTER 4.4.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
14. ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C105, LATEST EDITION AND IN ACCORDANCE WITH CHAPTER 4.4.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. ALL JOINTS AND FITTINGS SHALL HAVE POLYETHYLENE ENCASEMENT INSTALLED PER MANUFACTURER'S REQUIREMENTS AND PROCEDURES.
15. INSTALL PVC AWWA PIPE ACCORDING TO ASTM F645 AND AWWA M23 AND CHAPTER 4.6.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
16. INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGA-LUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER FILE NO'S:44,45,46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS.INSTALL WATER SERVICE PIPING SUCH THAT THERE IS A MINIMUM OF 6' OF COVER OVER THE TOP OF THE WATER SERVICE PIPING.

SITE WATER SERVICE CONT.:

17. BEDDING AND COVER FOR WATER SERVICE PIPING SHALL BE IN ACCORDANCE WITH SECTION 4.3.3 AND FILE NO. 36 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. TRENCH BACKFILL SHALL BE GRANULAR B BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION ON-SITE.
18. INSTALL TRACER WIRE FOR NON-METALLIC WATER SERVICES IN ACCORDANCE WITH SPS SECTION 382.40(8)(K). TRACER WIRE INSULATION COLOR SHALL BE BLUE FOR POTABLE WATER SERVICE PIPING.
19. DUCTILE-IRON PIPING, RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 4.4.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
20. PVC PIPING GASKETED JOINTS: USING JOINING MATERIALS ACCORDING TO AWWA C900. CONSTRUCT JOINTS WITH ELASTOMERIC SEALS AND LUBRICANTS ACCORDING TO ASTM D2774 OR ASTM D3139 AND PIPE MANUFACTURER'S WRITTEN INSTRUCTIONS.
21. CONDUCT HYDROSTATIC TESTS IN ACCORDANCE WITH CHAPTER 4.15.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
22. CLEAN AND DISINFECT WATER SERVICE PIPING IN ACCORDANCE WITH SPS CHAPTER 82.40(8)(I) AND AWWA C651.

SANITARY SEWERAGE:

1. ALL PRIVATE SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DSPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
2. ALL PUBLIC SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION (STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS.
3. PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
4. MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS. DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
5. MANHOLES DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
6. SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
7. PIPE JOINT CONSTRUCTION: FOLLOW PIPING MANUFACTURER'S RECOMMENDATIONS; JOIN PVC SEWER PIPE ACCORDING TO ASTM D2321 AND ASTM D 3212 FOR ELASTOMERIC GASKET JOINTS. JOIN DISSIMILAR PIPE MATERIALS WITH NONPRESSURE-TYPE, FLEXIBLE COUPLINGS
7. PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FORM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE LIGHT DUTY, TOP LOADING CLASSIFICATION CLEANOUTS IN EARTH OR UNPAVED FOOT TRAFFIC AREAS; USE MEDIUM DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN PAVED FOOT TRAFFIC AREAS; USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN VEHICULAR TRAFFIC AREAS. SET CLEANOUT FRAMES AND COVERS IN PAVEMENT AREAS FLUSH WITH PAVEMENT SURFACE.
8. CLASS B COMPACTED TRENCH SECTION (FILE NO. NO. 4 OF STANDARD SPECIFICATIONS) SHALL BE UTILIZED. BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF THE STANDARD SPECIFICATIONS.
9. TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
10. MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
11. AFTER INSTALLATION OF SEWER PIPE CLEAN ALL DEBRIS FROM SEWER AND INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. CONDUCT DEFLECTION TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SECTION 3.2.6(I)4 OF THE STANDARD SPECIFICATIONS; REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS. TEST NEW BUILDING SEWER IN ACCORDANCE WITH SECTION 5.4.0 OF THE STANDARD SPECIFICATIONS. REPLACE LEAKING PIPE USING NEW PIPE MATERIALS AAND REPEAT TESTING UNTIL LEAKAGE IS WITHIN ALLOWANCES SPECIFIED.

STORM DRAINAGE:

1. ALL PRIVATE STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DSPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
2. ALL PUBLIC STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION (STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS.
3. PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
4. REINFORCED CONCRETE PIPE: ASTM C76 WITH BELL AND SPIGOT ENDS AND GASKETED JOINTS WITH ASTM C443 RUBBER GASKETS IN ACCORDANCE WITH CHAPTER 8.6.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
5. HDPE PIPE: ADS N12 PIPE AS APPROVED ON THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCT REGISTER.
6. CATCH BASINS: STANDARD PRECAST CONCRETE CATCH BASINS CONFORMING TO CHAPTER 3.6.0 OF THE STANDARD SPECIFICATIONS AND IN GENERAL CONFORMANCE WITH FILE NO. 26 OF THE STANDARD SPECIFICATIONS. DEPTH AND DIAMETER AS INDICATED ON PLANS. CATCH BASIN SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
7. FRAMES AND GRATES: AS INDICATED ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SPECIFIED FRAME/GRATE IS COMPATIBLE WITH STRUCTURE; IF NOT, NOTIFY ENGINEER.
8. MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS. DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
9. MANHOLES AND CATCH BASINS DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
10. SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORDANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
11. PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FORM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE LIGHT DUTY, TOP LOADING CLASSIFICATION CLEANOUTS IN EARTH OR UNPAVED FOOT TRAFFIC AREAS; USE MEDIUM DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN PAVED FOOT TRAFFIC AREAS; USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN VEHICULAR TRAFFIC AREAS. SET CLEANOUT FRAMES AND COVERS IN PAVEMENT AREAS FLUSH WITH PAVEMENT SURFACE.
12. CLASS B COMPACTED TRENCH SECTION (FILE NO. NO. 4 OF STANDARD SPECIFICATIONS) SHALL BE UTILIZED. BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF THE STANDARD SPECIFICATIONS.
13. TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
14. MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
15. CATCH BASIN INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.6 OF THE STANDARD SPECIFICATIONS. CATCH BASIN EXCAVATION AND PREPARATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.4(A) AND (B) OF THE STANDARD SPECIFICATIONS. FRAMES AND GRATES SHALL BE SET TO THE ELEVATIONS SHOWN ON THE PLANS.
16. AFTER INSTALLATION OF SEWER PIPE CLEAN ALL DEBRIS FROM SEWER AND INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. CONDUCT DEFLECTION TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SECTION 3.2.6(I)4 OF THE STANDARD SPECIFICATIONS; REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS.

EARTH MOVING:

1. ALL EARTH WORK SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER PRESENTED IN THE SITE GEOTECHNICAL REPORT, GEOTECHNICAL ENGINEER RECOMMENDATIONS MADE IN THE FIELD AND THESE SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER SHALL GOVERN.
2. CONTRACTOR SHALL PROVIDE MATERIAL TEST REPORTS FROM A QUALIFIED TESTING AGENCY INDICATING TEST RESULTS FOR CLASSIFICATION ACCORDING TO ASTM D2487 AND LABORATORY COMPACTION CURVES ACCORDING TO ASTM D 1557 FOR EACH ON-SITE AND OFF-SITE SOIL MATERIAL PROPOSED FOR FILL AND BACKFILL.
3. CONTRACTOR SHALL PROVIDE PREEXCAVATION PHOTOS OR VIDEOS SHOWING EXISTING CONDITIONS OF ADJOINING STRUCTURES AND SITE IMPROVEMENTS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY EARTHWORK OPERATIONS.
4. OLD BUILDING FOUNDATIONS, BUILDING REMNANTS OR UNSUITABLE BACKFILL MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND THE NEW BUILDING PAD AREAS. THE RESULTING EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL.
5. FOUNDATIONS, FOUNDATION WALLS OR CONCRETE FLOOR SLABS SHALL BE REMOVED TO A MINIMUM OF TWO FEET BELOW PROPOSED SUBGRADE WITHIN PROPOSED PARKING AND GREENSPACE AREAS. BASEMENT SLABS LOCATED BELOW 2 FEET FROM PLANNED SUBGRADE ELEVATION MAY BE LEFT IN PLACE BUT SHALL BE BROKEN INTO MAXIMUM 6 INCH PIECES TO FACILITATE DRAINAGE.
6. SATISFACTORY SOILS FOR FILL: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER OR ANY SOIL GROUP OR COMBINATION OF GROUPS APPROVED OF BY THE PROJECT GEOTECHNICAL ENGINEER.
7. UNSATISFACTORY SOILS FOR FILL: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487 OR A COMBINATION OF THESE GROUPS UNLESS DEEMED SATISFACTORY BY THE PROJECT GEOTECHNICAL ENGINEER. UNSATISFACTORY SOILS ALSO INCLUDE SOILS NOT MAINTAINED WITHIN 3 PERCENT OF OPTIMUM SOIL MOISTURE CONTENT AT THE TIME OF COMPACTION.
8. AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION.
9. ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; WITH AT LEAST 90 PERCENT PASSING A 1-1/2-INCH (37.5-MM) SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 SIEVE OR ANY SOIL DEEMED ACCEPTABLE FOR ENGINEERED FILL BY THE PROJECT GEOTECHNICAL ENGINEER. ENGINEERED FILL SHALL BE FREE OF ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIAL AND HAVE A MAXIMUM PARTICLE SIZE LESS THAN 3 INCHES. CLAY FILLS SHALL HAVE A LIQUID LIMIT OF LESS THAN 49 AND PLASTICITY INDEX BETWEEN 11 AND 25.
10. BEDDING COURSE FOR SEWERS AND WATER SERVICE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND CONFORMING TO THE REQUIREMENTS OF SECTION 8.43.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
11. DRAINAGE COURSE BENEATH BUILDING SLABS: NARROWLY GRADED MIXTURE OF WASHED, CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL; ASTM D 448; COARSE-AGGREGATE GRADING SIZE 57; WITH 100 PERCENT PASSING A 1-1/2-INCH (37.5-MM) SIEVE AND 0 TO 5 PERCENT PASSING A NO. 8 SIEVE.
12. TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
13. PIPE COVER MATERIAL: CONFORM TO SECTION 8.43.3 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
14. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
15. SHORING, SHEETING AND BRACING: SHORE, BRACE OR SLOPE BANKS OF EXCAVATION TO PROTECT WORKMEN, BANKS, ADJACENT PAVING, STRUCTURES, AND UTILITIES TO MEET OSHA REQUIREMENTS. DESIGN OF TEMPORARY SUPPORT OF EXCAVATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
16. EXCAVATE TO SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. UNCLASSIFIED EXCAVATED MATERIALS MAY INCLUDE ROCK, SOIL MATERIALS, AND OBSTRUCTIONS. NO CHANGES IN THE CONTRACT SUM OR THE CONTRACT TIME WILL BE AUTHORIZED FOR ROCK EXCAVATION OR REMOVAL OF OBSTRUCTIONS.
17. PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH FULLY LOADED TANDEM AXLE DUMP TRUCK OR RUBBER TIRED VEHICLE OF SIMILAR SIZE AND WEIGHT, TYPICALLY 9 TONS/AXLE, WHERE COHESIVE SOILS ARE ENCOUNTERED OR WITH A SMOOTH DRUMMED VIBRATORY ROLLER WHERE GRANULAR SOILS ARE PRESENT. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES AND PROOFROLL IN DRY WEATHER. PROOF ROLL IN PRESENCE OF PROJECT GEOTECHNICAL ENGINEER OR TECHNICIAN. SOILS THAT ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD (TYPICALLY >1") SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED ENGINEERED FILL. IN PAVEMENT AREAS WHERE UNDERCUTS ARE PERFORMED, THE EDGES OF THE OVEREXCAVATIONS SHALL BE FEATHERED INOT THE SURROUNDING SUITABLE SOIL SO THAT EDGE FAILURE OF THE OVEREXCAVATED AREA DOES NOT OCCUR.
18. DUE TO CLAYEY SOILS, IF UNDERCUTS OCCUR WITHIN PAVEMENT AREAS AND THEY ARE BACKFILLED WITH GRANULAR SOILS, THE BOTTOM OF THE OVEREXCAVATION SHALL BE SLOPED TO A DRAINTILE THAT IS IN KIND SLOPED TOWARD THE NEAREST STORM SEWER. MINIMUM SLOPES OF SUCH DRAINTILES SHALL BE 0.5%.
19. CONVENTIONAL DISKING AND AERATION TECHNIQUES SHALL BE USED TO DRY SOILS BEFORE PROOF ROLLING. ALLOT FOR PROPER DRYING TIME IN PROJECT SCHEDULE.
20. ENGINEERED FILL SHALL BE PLACED IN MAXIMUM LIFTS OF EIGHT INCHES OF LOOSE MATERIAL AND COMPACTED WITHIN 3% OF OPTIMUM SOIL MOISTURE CONTENT VALUE AND A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D1557. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
21. EXISTING OLD FILL MATERIAL SHALL BE REMOVED BELOW FOOTINGS OR FOUNDATION SUPPORTING FILL. ENGINEERED FILL BELOW FOOTINGS SHOULD HAVE AN IN-PLACE DENSITY OF 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. ENGINEERED FILL BELOW FOOTINGS SHALL BE EVALUATED BY IN-FIELD DENSITY TESTS DURING CONSTRUCTION.
22. WHERE UNSUITABLE BEARING SOILS ARE ENCOUNTERED IN A FOOTING EXCAVATION, THE EXCAVATION SHALL BE DEEPENED TO COMPETENT BEARING SOIL AND THE FOOTING LOWERED OR AN OVEREXCAVATION AND BACKFILL PROCEDURE PERFORMED. OVEREXCAVATION AND BACKFILL TREATMENT REQUIRES WIDENING THE DEEPENED EXCAVATION IN ALL DIRECTIONS AT LEAST 6 INCHES BEYOND THE EDGE OF THE FOOTING FOR EACH 12 INCHES OF OVEREXCAVATION DEPTH. THE OVEREXCAVATION SHALL BE BACKFILLED UP TO FOOTING BASE ELEVATION IN MAXIMUM 8 INCH LOOSE LIFTS WITH SUITABLE GRANULAR FILL MATERIAL AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. SOILS AT FOUNDATION BEARING ELEVATION IN THE FOOTING EXCAVATIONS SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
23. A MINIMUM OF FOUR INCHES OF DRAINAGE COURSE MAT SHALL BE PLACED BELOW BUILDING FLOOR SLABS. DRAINAGE COURSE SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557)
24. UTILITY TRENCHES FOR SEWER AND WATER SHALL CONFORM TO CLASS B COMPACTED TRENCH SECTION IN ACCORDANCE WITH FILE NO. 4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
25. BACKFILL UTILITY TRENCHES IN 4 TO 6 INCH LOOSE LIFTS COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE MOISTURE CONDITIONED TO BE WITH 3% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.
26. UTILITY BEDDING PLACEMENT: CONFORM TO SECTION 3.2.6 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. BEDDING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557).
27. COMPACTION TESTING OF UTILITY TRENCHES SHALL BE PERFORMED ONE FOR EVERY 200 CUBIC YARDS OF BACKFILL PLACED OR ONE FOR TEST PER 200 LINEAR FEET OF TRENCH FOR EACH LIFT, WHICHEVER IS LESS.
28. AGGREGATE BASE COURSE BENEATH PAVEMENTS SHALL BE PLACED AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. AGGREGATE BASE SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
29. GRADING GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED. SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
30. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY-CONTROL TESTING.
31. FOOTING SUBGRADE TESTING: EACH ISOLATED FOOTING SHALL INCLUDE AT LEAST ONE TEST PROBE. TEST PROBES SHALL BE PERFORMED EVERY 20 LINEAR FEET IN CONTINUOUS FOOTINGS.
32. BUILDING SLAB AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EVERY 2500 SQ. FT. OR LESS OF BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
33. PAVEMENT AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY LIFT FOR EVERY 2,500 SQUARE FEET OF PAVEMENT AREA, BUT IN NO CASES FEWER THAN 3 TESTS.
34. FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EACH 50 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
35. WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
36. DISPOSAL: REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNER'S PROPERTY.

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PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

SPECIFICATIONS

ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

NO. REVISION	DATE

SCALE:	NTS
PROJECT NO:	20166
DESIGN DATE:	----
PLOT DATE:	2023.01.24
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----

SHEET NO:
C500

CMUELLER
C500
20166

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C500 SPECIFICATIONS.dwg

2023.01.24

CONCRETE PAVING:

1. THE COMPOSITION, PLACING AND CONSTRUCTION OF CONCRETE PAVEMENTS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTIONS 415, 416, 501, 601, AND 602 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS AND SPECIFICATIONS.
2. CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES; JOB-MIX DESIGNS: CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS; AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
3. MANUFACTURER QUALIFICATIONS: MANUFACTURER OF READY-MIXED CONCRETE PRODUCTS WHO COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT AND APPROVED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
4. CONCRETE GRADE: GRADE A, GRADE A-2, OR A-FA CONFORMING TO SECTION 501.3.1.3 OF THE WISDOT STANDARD SPECIFICATIONS
5. AGGREGATES: CONFORM TO SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS. PROVIDE AGGREGATES FROM A SINGLE SOURCE.
6. WATER: ASTM C 94/C 94M AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
7. AIR-ENTRAINING ADMIXTURE: ASTM C 260 AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
8. CHEMICAL ADMIXTURES: PER SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
9. CURING MATERIALS IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
10. EXPANSION JOINT MATERIAL: CONFORM TO SECTION 415.2.3 OF THE WISDOT STANDARD SPECIFICATIONS.
11. MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE IN ACCORDANCE WITH SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
12. GENERAL EXECUTION: CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS.
13. PROOFROLL SUBGRADE AND AGGREGATE BASE AS OUTLINED IN EARTH MOVING SPECIFICATION PRIOR TO PLACEMENT OF PAVEMENTS.
14. SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
15. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.
16. JOINTS GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE INDICATED. CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS
17. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS.
18. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED.
19. CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS TO MATCH JOINTING OF EXISTING ADJACENT CONCRETE PAVEMENT.
20. EDGING: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.
21. CURBING: COMPLY WITH SECTION 601 OF THE WISDOT STANDARD SPECIFICATIONS.
22. SIDEWALKS: COMPLY WITH SECTION 602 OF THE WISDOT STANDARD SPECIFICATIONS.
23. MOISTEN AGGREGATE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED.
24. FINISH CURBING IN ACCORDANCE WITH SECTION 601.3.5 OF THE WISDOT STANDARD SPECIFICATIONS.
25. FINISH SIDEWALK AND PATIO IN ACCORDANCE WITH SECTION 602.3.2.3 OF THE WISDOT STANDARD SPECIFICATIONS (LIGHT BROOM FINISH).
26. FINISH CONCRETE VEHICULAR PAVEMENTS AND PADS IN ACCORDANCE WITH SECTION 415.3.8 OF THE WISDOT STANDARD SPECIFICATIONS (ARTIFICIAL TURF DRAG FINISH).
27. PROTECT AND CURE SIDEWALK IN ACCORDANCE WITH SECTION 602.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
28. PROTECT AND CURE CURBING IN ACCORDANCE WITH SECTION 601.3.7 OF THE WISDOT STANDARD SPECIFICATIONS.
29. PROTECT AND CURE VEHICULAR CONCRETE PAVING IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
30. REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION.
31. PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 7 DAYS AFTER PLACEMENT.
32. MAINTAIN CONCRETE PAVEMENT FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE PAVEMENT NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

ASPHALTIC PAVING:

1. THE COMPOSITION, PLACING AND CONSTRUCTION OF ASPHALTIC PAVEMENTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460, 465, AND 475 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS).
2. CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES; JOB-MIX DESIGNS: CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS; AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
3. MANUFACTURER QUALIFICATIONS: MANUFACTURER SHALL BE REGISTERED WITH AND APPROVED BY THE DOT OF THE STATE IN WHICH PROJECT IS LOCATED.
4. ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF BASE COURSE IS WET OR EXCESSIVELY DAMP OR IF THE FOLLOWING CONDITIONS ARE NOT MET: APPLY TACK COAT WHEN AMBIENT TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES FAHRENHEIT FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION; PLACE ASPHALTIC CONCRETE SURFACE COURSE WHEN TEMPERATURE IS ABOVE 40 DEGREES FAHRENHEIT; BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30 DEGREES FAHRENHEIT AND RISING. PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES. DO NOT APPLY BELOW THE MINIMUM PAVEMENT TEMPERATURE AS RECOMMENDED BY THE MANUFACTURER.
5. AGGREGATES SHALL BE IN ACCORDANCE WITH SECTION 460.2.2 OF THE WISDOT STANDARD SPECIFICATIONS.
6. ASPHALT MATERIALS SHALL BE IN ACCORDANCE WITH CHAPTER 455 OF THE WISDOT STANDARD SPECIFICATIONS.
7. PAVEMENT MARKING PAINT: PROVIDE PAINT FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCTS LIST. COLOR SHALL BE WHITE UNLESS INDICATED OTHERWISE ON PLANS.
8. HOT-MIX ASPHALT: ASPHALTIC BINDER COURSE AND SURFACE COURSE SHALL BE MIXTURE LT FOR REGULAR DUTY PAVEMENT AND LT FOR HEAVY DUTY PAVEMENT COMPLYING WITH THE WISDOT STANDARD SPECIFICATIONS. ASPHALTIC BINDER SHALL BE 58-28 S UNLESS NOTED.
9. AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE WISDOT STANDARD SPECIFICATIONS.
10. PAVEMENT PLACEMENT GENERAL: ASPHALT CONCRETE PAVING EQUIPMENT, WEATHER LIMITATIONS, JOB-MIX FORMULA, MIXING, CONSTRUCTION METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS.
11. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS.
12. SWEEP LOOSE GRANULAR PARTICLES FROM SURFACE OF AGGREGATE BASE COURSE PRIOR TO PAVEMENT PLACEMENT. DO NOT DISLODGE OR DISTURB AGGREGATE EMBEDDED IN COMPACTED SURFACE OF BASE COURSE.
13. SPREAD AND FINISH ASPHALTIC MIXTURE IN ACCORDANCE WITH SECTION 450.3.2.5 OF THE WISDOT STANDARD SPECIFICATIONS. PAVEMENT THICKNESSES SHALL BE AS INDICATED ON THE PLANS.
14. PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.
15. COMPACT ASPHALTIC PAVEMENT IN ACCORDANCE WITH SECTION 450.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
16. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.
17. THICKNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS ¼ INCH FOR BINDER COURSE AND PLUS ¼ INCH FOR SURFACE COURSE, NO MINUS.
18. SURFACE SMOOTHNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS: BINDER COURSE: ¼ INCH; SURFACE COURSE: 1/8 INCH. REMOVE AND REPLACE ALL HUMPS OR DEPRESSIONS EXCEEDING THE SPECIFIED TOLERANCES.
19. DO NOT APPLY PAVEMENT-MARKING PAINT UNTIL LAYOUT, COLORS, AND PLACEMENT HAVE BEEN VERIFIED WITH ENGINEER.
20. APPLY MARKINGS TO A DRY SURFACE FREE FROM FROST. REMOVE DUST, DIRT, OIL, GREASE, GRAVEL, DEBRIS OR OTHER MATERIAL THAT MAY PREVENT BONDING TO THE PAVEMENT.
21. APPLY PAINT AS THE MANUFACTURER SPECIFIES WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES AT A MINIMUM RATE OF 17.6 GALLONS/MILE FOR A CONTINUOUS 4" LINE.
22. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS AND TO PREPARE TEST REPORTS.

CMUELLER

C501

20166

THE SIGMA GROUP
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Phone: 414-643-4200
Fax: 414-643-4210

PRELIMINARY NOT FOR CONSTRUCTION

IRGENS RESEARCH DRIVE PHASE II
10701 RESEARCH DRIVE
WAUWATOSEA, WI 53226

SPECIFICATIONS

ISSUANCE	DATE
SD SET	04/20/2022
UPDATED CIVIL PRICING SET	06/24/2022

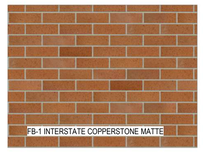
NO.	REVISION	DATE

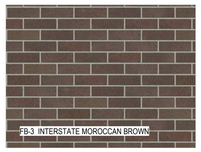
SCALE:	NTS
PROJECT NO:	20166
DESIGN DATE:	----
PLOT DATE:	2023.01.24
DRAWN BY:	----
CHECKED BY:	CTC
APPROVED BY:	----

SHEET NO:
C501

I:\Irgens Development\20116 - Research Drive Wauwatosa\060 CAD\C - Civil\500 Production - Reseach Drive Phase II\030_Production Sheets\100_Civil\C501 SPECIFICATIONS.dwg

EXTERIOR MATERIAL SCHEDULE	
FB-1	FACEBRICK (TYPE-1)
FB-2	FACEBRICK (TYPE-2)
FB-3	FACEBRICK (TYPE-3)
MC-1	METAL COPING
MCM-1	METAL COMPOSITE MATERIAL PANEL
	GLAZING
IG-2A	INSULATING GLASS, CLEAR, LOW-E, ANNEALED, 1" THICK
IG-2T	INSULATING GLASS, CLEAR, LOW-E, FULLY TEMPERED, 1" THICK

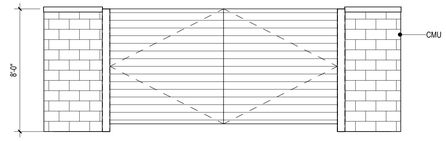




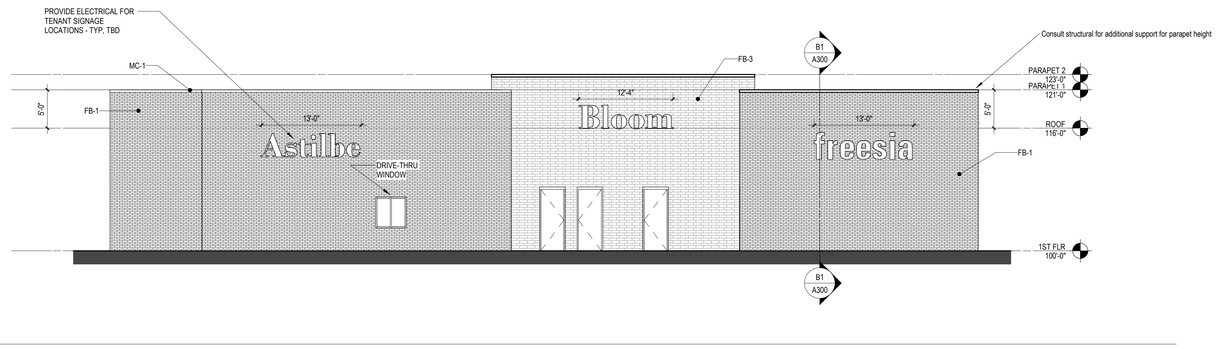
SHEET NOTES - EXTERIOR ELEVATIONS

1. PROVIDE CONTINUOUS SEALANT AND BACKER ROD AT ALL PRECAST CONCRETE JOINTS.
2. ALL INSIDE AND OUTSIDE CORNERS OF PRECAST TRIM TO NOT BE MITERED.
3. EXTERIOR SIGNAGE ON BUILDING TO BE COORDINATED AND VERIFIED WITH ARCHITECT, OWNER AND SIGNAGE VENDOR.
4. ALL VERTICAL INSIDE CORNERS TO HAVE 1/2" MOVEMENT JOINT.
5. MJ = INDICATES MOVEMENT JOINT - 1/2" GAP.
6. PJ = INDICATES METAL PANEL JOINT - 1/2" GAP.

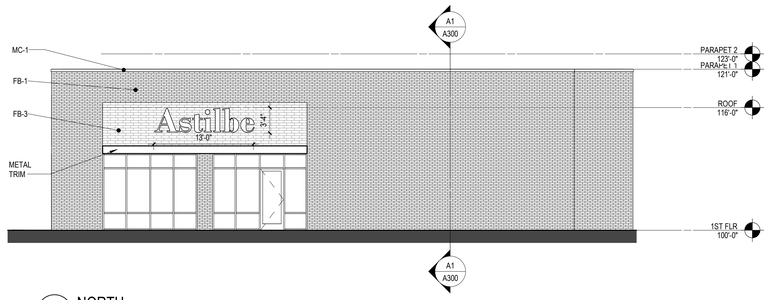
KEYNOTES PER SHEET



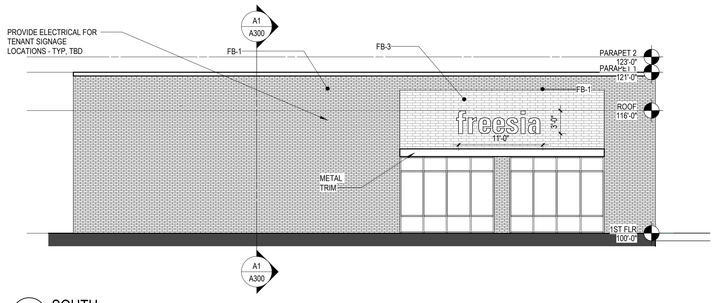
D1 TRASH ENCLOSURE ELEVATION
1/4" = 1'-0"



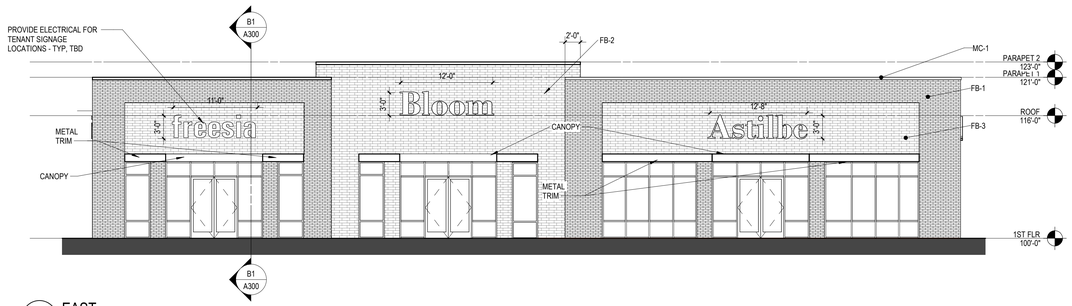
C1 WEST
1/8" = 1'-0"



B1 NORTH
1/8" = 1'-0"



B4 SOUTH
1/8" = 1'-0"



A1 EAST
1/8" = 1'-0"

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PROJECT INFORMATION

RESEARCH DRIVE
RETAIL BUILDING

10701 Research Drive
Wauwatosa, WI 53226

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
4/29/2022	SCHEMATIC DESIGN
01/12/2023	SCHEMATIC DESIGN REVISION

KEY PLAN

SHEET INFORMATION

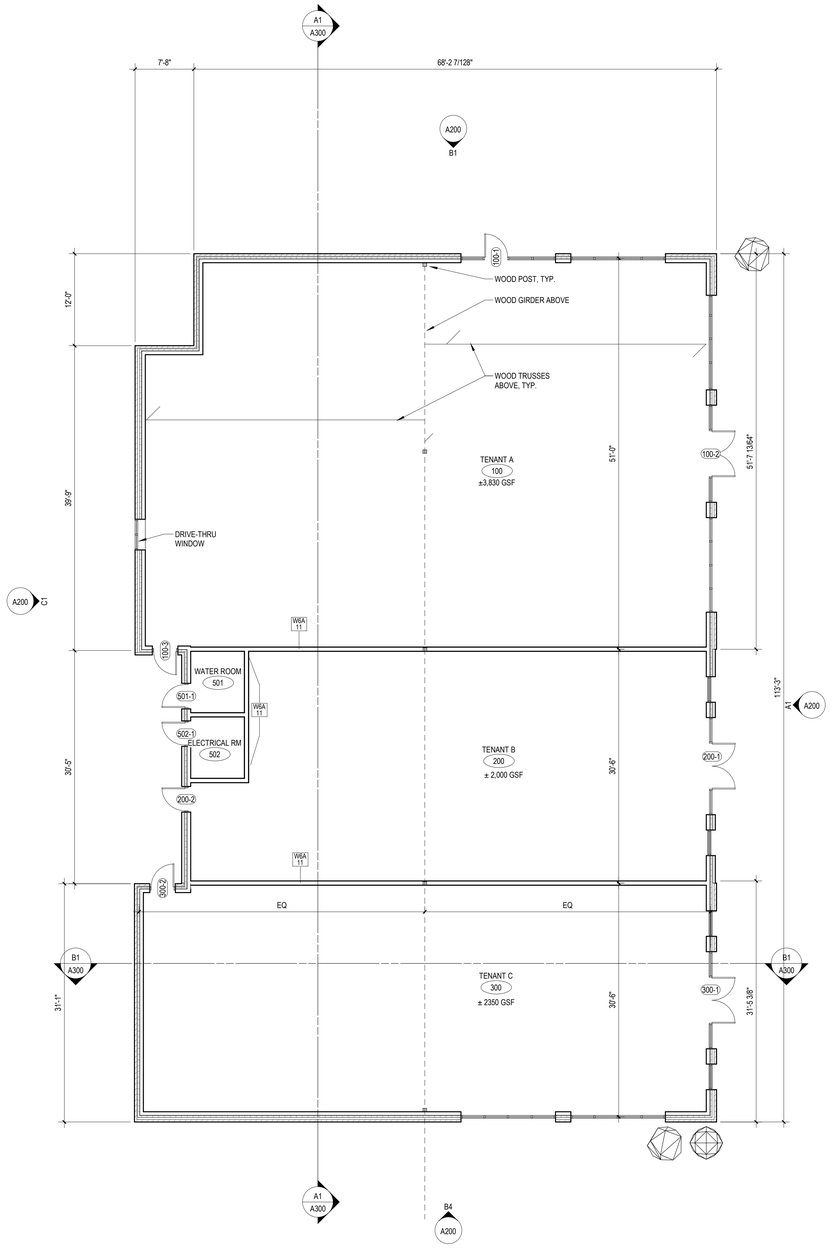
PROGRESS DOCUMENTS NOT FOR CONSTRUCTION

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	PM
PROJECT NUMBER	721110-05

EXTERIOR ELEVATIONS

A200



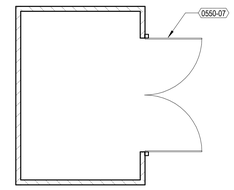
N **A1** 1ST FLR PLAN
1/8" = 1'-0"

SHEET NOTES - FLOOR PLAN

1.	BEFORE BEGINNING WORK, VERIFY THE EXISTENCE AND LOCATION OF PLUMBING, MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK. IF DISCREPANCIES ARE DISCOVERED, NOTIFY ARCHITECT PROMPTLY.
2.	ALL DIMENSION STRINGS ARE TO FINISH FACE OF WALL, UNLESS NOTED OTHERWISE.
3.	REFER TO SHEET A000 FOR REFERENCED PARTITION TYPES AND DETAILS. WALLS NOT TAGGED ON THESE PLANS SHALL BE PARTITION TYPE W6A-11
4.	ALL WALLS DIRECTLY BEHIND OR ADJACENT TO PLUMBING FIXTURES SHALL RECEIVE MOISTURE- AND MOLD-RESISTANT GYPSUM BOARD, UNLESS NOTED OTHERWISE.
5.	LOCATE ALL DOOR JAMBS 4" FROM ADJACENT PERPENDICULAR WALL, UNLESS NOTED OTHERWISE.
6.	PREPARE FLOOR LEVEL AND SMOOTH FOR NEW HARD SURFACE FINISHES. PATCH EXISTING PENETRATIONS AND ABNORMALITIES IN CONCRETE FLOOR.
7.	PROVIDE BLOCKING AND FRAMING AS INDICATED AND AS REQUIRED TO SUPPORT FACING MATERIALS, FIXTURES, SPECIALTY ITEMS, MILLWORK AND TRIM.
8.	PROVIDE 3/4" FIRE-RETARDANT TREATED PLYWOOD AS BACKING PANELS FOR TELEPHONE & ELECTRICAL EQUIPMENT. INSTALL AT 1'-0" AFF TO FINISHED CEILING. PAINT PLYWOOD TO MATCH ADJACENT WALL FINISH. COORDINATE FINAL SIZE AND LOCATION WITH TENANT.

KEYNOTES PER SHEET

0550-07	GATE - SEE ELEVATION



N **A6** TRASH ENCLOSURE FLOOR PLAN
1/8" = 1'-0"

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PROJECT INFORMATION

RESEARCH DRIVE
RETAIL BUILDING

10701 Research Drive
Wauwatosa, WI 53226

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
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KEY PLAN

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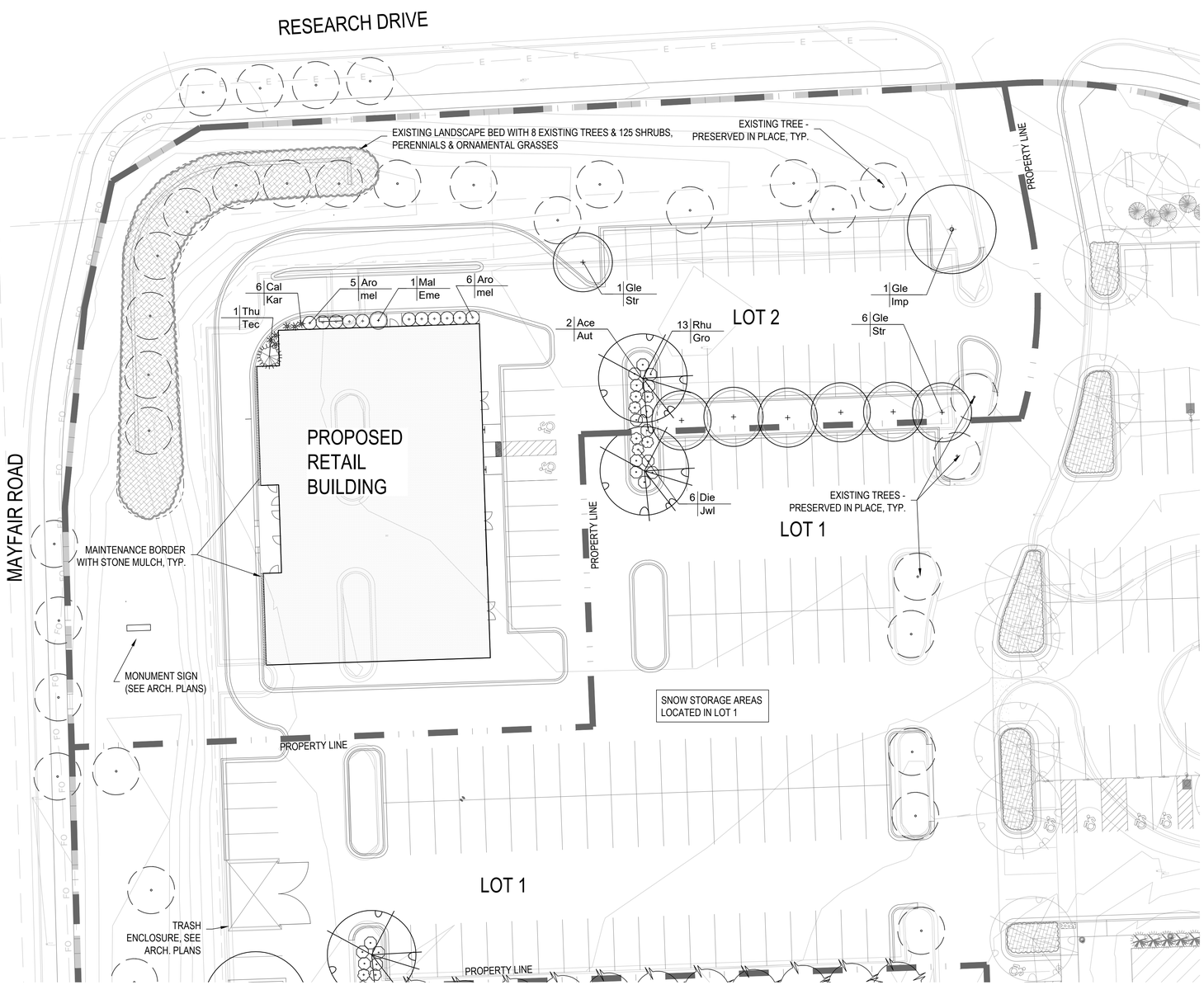
PROJECT MANAGER	PM
PROJECT NUMBER	721110-05

1ST FLR PLAN

A101



1 L100

SITE LANDSCAPE PLAN - LOT 2

SCALE: 1" = 20'-0"

SCALE IN FEET 0 20 40

NORTH

PLAN LEGEND

- EXISTING TREE (DECIDUOUS AND EVERGREEN) TO BE PRESERVED
- EXISTING PLANT BED
- SNOW STORAGE AREAS

LANDSCAPE CALCULATIONS FOR PERIMETER VEHICULAR USE AREAS - LOT 2:

PROPOSED RETAIL BUILDING:
PERIMETER LENGTH OF VEHICULAR USE AREA (VUA) ADJACENT TO STREET PUBLIC RIGHT OF WAY (ROW) - 425 L.F.

REQUIRED DECIDUOUS TREES AND SHRUBS (2 TREES AND 8 SHRUBS PER 50 L.F.)

DECIDUOUS TREES: 17 TREES REQUIRED / 17 EXISTING DECIDUOUS TREES PRESERVED IN PLACE I SHRUBS: 68 REQUIRED / 125 EXISTING SHRUBS PRESERVED IN PLACE

LANDSCAPE CALCULATIONS FOR INTERIOR VEHICULAR USE AREAS - LOT 2:

PROPOSED RETAIL BUILDING:
17,009 SQUARE FEET (SF) TOTAL VEHICULAR USE AREA (VUA)
TOTAL MINIMUM INTERIOR LANDSCAPE AREA (TMILA) IS 1,700 SF (10% OF 17,009 SF)

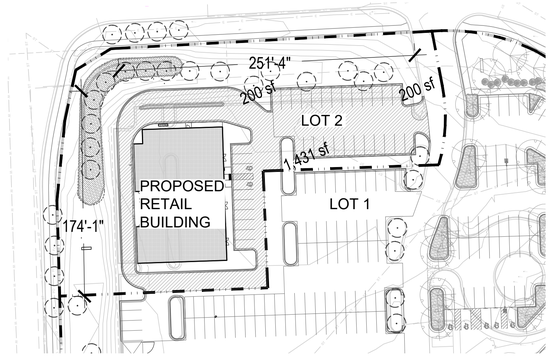
PROVIDED GREEN SPACE AS PER THE CURRENT PLAN = 1,831 SF

PER CITY ORDINANCE: 24.12.030 INTERIOR VEHICULAR USE AREA LANDSCAPING:

"LANDSCAPE ISLANDS AND MEDIAN MUST HAVE AN AREA OF AT LEAST 135 SQUARE FEET AND BE AT LEAST 10 FEET IN WIDTH."

"SHADE TREES MUST BE PROVIDED IN INTERIOR LANDSCAPE ISLANDS AT A MINIMUM RATE OF ONE TREE PER 180 SF OF REQUIRED INTERIOR LANDSCAPE AREA.

1,700 DIVIDED BY 180 S.F. = 10 TREES REQUIRED I TREES: 9 PROVIDED + 1 EXISTING DECIDUOUS TREE TO BE PRESERVED IN PLACE



VEHICLE USE AREA DIAGRAM:
not to scale

VUA DIAGRAM LEGEND

- VEHICLE USE AREA (VUA)
- LOT BOUNDARY LINE
- 1,431 sf — AREA OF INTERNAL PARKING LOT GREEN SPACE
- 251'-4" — LENGTH OF PARKING LOT PERIMETER ALONG R.O.W.

PLANT SCHEDULE:

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
Deciduous Trees						
Ace / Aut	2	Acer x freemanii 'Jeffersred' PP 4864	Autumn Blaze Maple	2 1/2"-3"	BB	
Gle / Imp	7	Gleditsia triacanthos 'Draves' PPAF	Street Keeper Honeylocust	2 1/2"-3"	BB	
Gle / Sky	1	Gleditsia triacanthos 'Impcole' PP 1605	Imperial Honeylocust	2 1/2"-3"	BB	
Mal / Eme	1	Malus 'Jefgreen' PP 23,863	Emerals Spire Crabapple	1 1/2"-2"	BB	
Evergreen Shrubs						
Thu / Tec	1	Thuja occidentalis 'Bail John' PP15,850	Technito Arborvitae	4' - 5' ht.	BB	
Deciduous Shrubs						
Aro / mel	11	Aronia melanocarpa	Black Chokeberry	24" - 30"	Cont.	
Die / Jwl	6	Diervilla lonicera 'Jewell'	Jewell Bush-honeysuckle	18" - 24"	Cont.	
Rhu / Gro	13	Rhus aromatica 'Gro-low'	Gro-low Sumac	2 gallon	Cont.	
Ornamental Grasses						
Cal / Kar	6	Calamagrostis acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gallon	Cont.	

new eden
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131 W. Seebath Street, Suite 240
Milwaukee, WI 53204
Tel: (414) 530-1080 www.newedenlandscape.com

RESEARCH ONE
- PHASE 2
10701 W. Research Drive
Wauwatosa, WI 53226

Irgens

Site Landscape Plan - Lot 2

NOT FOR CONSTRUCTION
These progress documents are for review purposes only.

REVISIONS:

PROJECT NO.: 22004-EUA-R2
SCALE: 1" = 20'-0"
DATE: 01-26-2023
DRWN BY: JO CHKD BY: RS
SHEET:

L100

LANDSCAPE CONSTRUCTION NOTES

LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON THE SITE.

ALL WRITTEN DIMENSIONS SUPERSEDE SCALED DIMENSIONS.

THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES AND ADDITIONAL INFORMATION PRIOR TO COMMENCEMENT OF SITE CONSTRUCTION.

ROUGH GRADING AND DRAINAGE CONSTRUCTION IS TO BE COMPLETED PRIOR TO LANDSCAPE CONTRACTOR'S WORK. VERIFY ALL EXISTING SITE AND GRADING CONDITIONS PRIOR TO CONSTRUCTION.

ALL AREAS DISTURBED BY GRADING OR SITE CONSTRUCTION SHALL BE FINE GRADED, PLANTED, OR SEEDED. SEE PLAN FOR SEED LOCATIONS. SEE NOTES FOR SPECIFIED SEED MIXES AND INSTALLATION PROCEDURES.

NO PLANTS WILL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.

LANDSCAPE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN THE PLANT MATERIAL SELECTIONS AND OTHER SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE PLANT MATERIAL SELECTIONS OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK.

PROPOSED PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 ULESS NOTED OTHERWISE. DECIDUOUS SHRUBS SHALL HAVE AT LEAST 5 CANES AT THE SPECIFIED HEIGHT. ORNAMENTAL TREES SHALL HAVE NO "V" CROTCHES AND SHALL BEGIN BRANCHING NO LOWER THAN 3 FEET ABOVE THE ROOT BALL. STREET AND BOULEVARD TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE FINISHED GRADE.

PLAN TAKES PRECEDENCE OVER PLANT SCHEDULE IF DISCREPANCIES IN QUANTITIES EXIST. SPECIFICATIONS AND DETAILS TAKE PRECEDENCE OVER NOTES.

CONTRACTOR SHALL VERIFY PLANT QUANTITIES SHOWN ON THE PLAN AND PROVIDE A LIST TO THE CLIENT IDENTIFYING THE SPECIES AND SIZES TO BE USED THROUGHOUT THE PROJECT. THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY SUBSTANDARD PLANTING MATERIAL. REJECTED MATERIALS SHALL BE REMOVED FROM THE PROJECT SITE IMMEDIATELY.

PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.

PROPOSED PLANT MATERIAL SHALL BE LOCATED AND STAKED AS SHOWN ON PLAN. LANDSCAPE ARCHITECT MUST APPROVE STAKING OF PLANT MATERIAL PRIOR TO DIGGING.

NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL IS REQUESTED OF THE LANDSCAPE ARCHITECT BY THE LANDSCAPE CONTRACTOR PRIOR TO THE SUBMISSION OF BID AND/OR QUOTATION.

ADJUSTMENTS IN LOCATION OF PROPOSED PLANT MATERIALS MAY BE NEEDED IN FIELD. LANDSCAPE ARCHITECT MUST BE NOTIFIED PRIOR TO THE ADJUSTMENT OF PLANTS.

CONTRACTOR SHALL VERIFY PLANT QUANTITIES SHOWN ON THE PLAN AND PROVIDE A LIST TO THE CLIENT IDENTIFYING THE SPECIES AND SIZES TO BE USED THROUGHOUT THE PROJECT. THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY SUBSTANDARD PLANTING MATERIAL. REJECTED MATERIALS SHALL BE REMOVED FROM THE PROJECT SITE IMMEDIATELY.

SOIL PREPARATION FOR PERENNIAL AND GROUNDCOVER PLANTING BEDS SHALL BE AS FOLLOWS:

A. REMOVE ALL ROOTS, LUMPS, STONES, SOD AND OTHER EXTRANEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH.
B. PERENNIAL AND GROUNDCOVER PLANTING BEDS SHALL RECEIVE A TWELVE (12) INCH MIXTURE CONSISTING OF NINE (9) INCH BLENDED TOPSOIL, THREE (3) INCH PURPLE COW CLASSIC COMPOST (PURPLE COW ORGANICS, LLC (608)831-0349 OR APPROVED EQUAL. ADD ½ LB OF 5-10-5 GARDEN FERTILIZER PER 100 SQUARE FEET AND ROTO-TIL AMENDMENTS INTO THE PLANTING SOIL. AVOID DAMAGE TO EXISTING TREE ROOTS WHERE APPLICABLE BY LIGHTLY WORKING AMENDMENTS INTO THE SOIL WITH A PITCH FORK.
C. MIX AMENDED PLANTING SOIL, EITHER PRIOR TO PLANTING APPLY ON SURFACE OF PLANTING BED AND MIX THOROUGHLY BEFORE PLANTING.
D. GRADE. RAKE, AND ROLL PLANTING BED WITH ROLLER WEIGHING NOT LESS THAN 25 LBS OR MORE THAN 100 LBS PER LINEAL FOOT SO AS TO LEAVE IN CONDITION TO PLANT.
E. GRADE PLANTING BEDS TO A TWELVE (12) INCH CROWN AT CENTER.

ALL LAWN AREAS SHALL RECEIVE A BLENDED TOPSOIL MIX TO A DEPTH OF SIX (6) INCHES OVER CLEAN ACCEPTABLE SUBGRADE. ACCEPTABLE CLEAN SUBGRADE IS SUBSOIL THAT DOES NOT HAVE FOREIGN MATERIALS INCLUDING DEBRIS, EXCESSIVE AGGREGATE, AND COMPACTION FROM CONSTRUCTION ACTIVITIES. IF SUBGRADE IS NOT ACCEPTABLE, CONTRACTOR SHALL EXCAVATE AND REMOVE UNACCEPTABLE SUBGRADE A MINIMUM OF TWELVE (12) INCHES IN DEPTH AND REPLACE WITH CLEAN FILL. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS FOR A MINIMUM OF TEN (10) FEET. ROTOTILL BLENDED TOPSOIL INTO PLANTING BED SUBGRADE.

PLANT MATERIAL SHALL BE FERTILIZED UPON INSTALLATION WITH APPROVED FERTILIZER MIXED IN WITH THE PLANTING SOIL PER THE MANUFACTURER'S INSTRUCTIONS OR MAY BE TREATED FOR SUMMER AND FALL INSTALLATION WITH AN APPLICATION OF GRANULAR 0-20-20 OF 12 OZ. PER 2.5" CALIPER TREE AND 6 OZ. PER SHRUB WITH AN ADDITIONAL APPLICATION OF 10-10-10 THE FOLLOWING SPRING IN THE TREE SAUCER.

ALL MIXED PLANTING BEDS WITH PERENNIALS, GROUNDCOVER, SHRUBS, AND TREES SHALL RECEIVE A TWO (2) INCH TO (3) THREE INCH LAYER OF SHREDDED HARDWOOD BARK MULCH. ALL SHRUBS AND TREES PLANTED SINGLY OR TOGETHER IN BEDS SHALL RECEIVE A THREE (3) INCH LAYER OF SHREDDED HARDWOOD BARK MULCH. DO NOT ALLOW MULCH TO TOUCH STEMS OR TRUNKS OF PERENNIALS, SHRUBS, OR TREES. UNLESS OTHERWISE NOTED, NO LANDSCAPE FABRIC OR WEED BARRIER IS TO BE INSTALLED OVER PLANT BEDS.

UNLESS OTHERWISE SHOWN, ALL PERENNIALS AND SHRUBS TO BE PLANTED IN A TRIANGULAR ARRANGEMENT. FOR PLANTS NOT SHOWN INDIVIDUALLY, REFER TO SPACING SHOWN IN THE PLANT SCHEDULE AND DETAILS.

LANDSCAPE CONTRACTOR SHALL WARRANTY NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE DATE OF THE OWNER ACCEPTANCE. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED.

UNLESS NOTED OTHERWISE, THE APPROPRIATE DATES FOR SPRING PLANT MATERIAL INSTALLATION AND SEED/SOD PLACEMENT IS FROM THE TIME THE GROUND HAS THAWED TO JUNE 15.

FALL SODDING IS GENERALLY ACCEPTABLE FROM AUGUST 15 TO NOVEMBER 1. FALL SEEDING IS GENERALLY ACCEPTABLE FROM AUGUST 15 TO SEPTEMBER 15. ADJUSTMENTS TO SOD/SEED PLANTING DATES MUST BE APPROVEDF IN WRITING BY THE LANDSCAPE ARCHITECT.

CONIFEROUS PLANTING IS GENERALLY ACCEPTABLE FROM AUGUST 15 TO OCTOBER 1. FALL DECIDUOUS PLANTING IS GENERALLY ACCEPTABLE FROM THE FIRST FROST UNTIL NOVEMBER 15. ADJUSTMENTS TO PLANTING DATES MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.

PLANT BED EDGING - INSTALL COMMERCIAL GRADE, PERMALOC 3/16" X 4" ALUMINUM BED EDGING IN MILL FINISH, OR APPROVED EQUAL. TO BE INSTALLED PER SUPPLIER'S SPECIFICATIONS.

UNLESS NOTED OTHERWISE, DO NOT STAKE DECIDUOUS TREES LESS THAN OR EQUAL TO 2.5 INCHES CALIPER DIAMETER AT BREAST HEIGHT (DBH) AND EVERGREEN TREES LESS THAN OR EQUAL TO 6 FEET IN HEIGHT. LARGER SIZED TREES SHALL BE STAKED PER PLANTING DETAILS UNLESS OTHERWISE NOTED ON THE PLAN.

SOD INSTALLATION:

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES, TREES, SHRUB, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.

INSTALL EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.

LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 4 INCHES. REMOVE STONES LARGER THAN 1 INCH. SPREAD PLANTING SOIL TO A DEPTH OF 4 INCHES. FINISH GRADE TOPSOIL TO PLUS OR MINUS ½ INCH OF FINISH ELEVATIONS.

APPLY GRANULAR STARTER LAWN FERTILIZER DIRECTLY TO THE SURFACE OF THE FINISH GRADE. MOISTEN PREPARED AREA BEFORE PLANTING IF SOIL IS DRY. DO NOT CREATE MUDDY SOIL.

LAY SOD WITHIN 24 HOURS OF HARVESTING. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD; DO NOT STRETCH OR OVERLAP. STAGGER SOD STRIPS OR PADS TO OFFSET JOINTS IN ADJACENT COURSES,

SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK AFTER PLANTING, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1 ½ INCHES BELOW SOD.

SOIL COMPACTION:

A. WHEN DETRIMENTAL CONDITIONS TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, CLAY FILL, ADVERSE DRAINAGE CONDITIONS, OBSTRUCTIONS, SOIL CONTAMINANTS, COMPACTED SOILS DUE TO CONSTRUCTION ACTIVITIES OR LIKE, CONTRACTOR SHALL NOTIFY ARCHITECT BEFORE PROCEEDING WITH WORK IN THAT AREA.
B. IF COMPACTED SOILS HAVE DEVELOPED DURING CONSTRUCTION PROCESS IN AREAS WHERE PLANTING WILL OCCUR, CONTRACTOR SHALL FIRST TILL AND HARROW SOIL TO A MINIMUM DEPTH OF 8 INCHES PRIOR TO INSTALLATION OF PLANTINGS.
C.IN AREAS WHERE MASONRY BATCH PLANTS HAVE BEEN TEMPORARILY ESTABLISHED ON-SITE, ALL SOILS WITHIN AREA OF BATCH PLANT SHALL BE REMOVED TO FULL DEPTH OF CONTAMINATION AND DISPOSED OFF-SITE. CONTRACTOR SHALL REPLACE REMOVED SOILS WITH PLANTING SOILS AS SPECIFIED IN THIS SECTION.

LANDSCAPE SUBMITTALS:

PROVIDE INFORMATION SUBMITTALS FOR REVIEW AND APPROVAL OF LANDSCAPE ARCHITECT FOR THE FOLLOWING ITEMS PRIOR TO CONSTRUCTION;

- PLANT SPECIES, SIZES AND QUANTITIES AND ANY PROPOSED SUBSTITUTIONS
- FERTILIZER AND OTHER SOIL AMENDMENTS
- SHREDDED HARDWOOD MULCH
- STONE MULCH FOR MAINTENANCE BORDER
- ALUMINUM EDGING

MAINTENANCE:

LANDSCAPE INSTALLER TO PROVIDE 60 DAY INITIAL MAINTENANCE PERIOD AT CONCLUSION OF LANDSCAPE INSTALLATION. INSTALLER IS RESPONSIBLE FOR WATERING SEED/SOD AND PLANTINGS AS WELL AS WEEDING, MOWING, AND CLEANING UP THE EDGING.

GENERAL NOTES/ REQUIREMENTS (CITY OF WAUWATOSA):

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMEDIATION AND RESTORATION REQUIRED IF CONSTRUCTION ACTIVITY OCCURS OUTSIDE OF APPROVED CONSTRUCTION LIMITS.

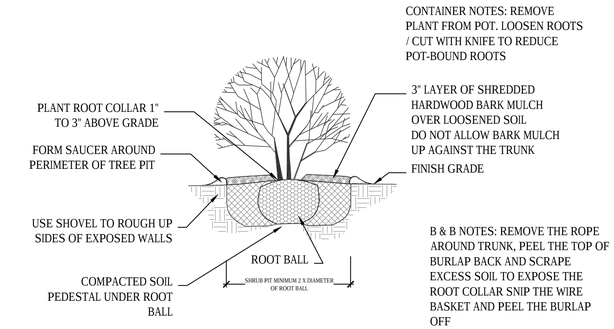
PERFORMANCE GUARANTEE IS REQUIRED AS PART OF THE APPROVAL PROCESS, PER CODE SECTION 24.12.070. PLEASE BE AWARE THAT THE PERFORMANCE GUARANTEE IS INTENDED TO PROVIDE THE CITY WITH ASSURANCE THAT THE APPROVED LANDSCAPING IS INSTALLED AND MAINTAINED IN A MANNER THAT FULFILLS THE ORDINANCES OUTLINED IN CHAPTER 24. A QUOTE FROM A CONTRACTOR WILL BE REQUIRED AND WILL BE USED TO DETERMINE TO COST OF THE FINANCIAL SURETY THAT IS PUT IN PLACE WITH THE DEVELOPMENT DEPARTMENT. FOLLOWING INSTALLATION, AN AFFIDAVIT WILL BE PROVIDED, STAMPED BY THE LANDSCAPE ARCHITECT, WHICH WILL BEGIN THE ONE-YEAR MAINTENANCE PERIOD. ONE YEAR AFTER THE FIRST AFFIDAVIT IS SUBMITTED, A SECOND ONE IS REQUIRED TO ATTEST TO THE MAINTENANCE AND ESTABLISHMENT OF THE REQUIRED LANDSCAPING. AFTER RECEIPT OF THE SECOND AFFIDAVIT, THE PERFORMANCE GUARANTEE WILL BE RELEASED. THE CITY'S PROCESS TO IMPLEMENT THIS NEW PERFORMANCE GUARANTEE WILL REQUIRE THAT AN APPLICANT SUBMIT THE FINANCIAL SURETY AT THE TIME OF SITE PLAN APPROVAL.

TO OBTAIN LOCATIONS OF UNDERGROUND UTILITIES FACILITIES BEFORE YOU DIG, CALL:

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

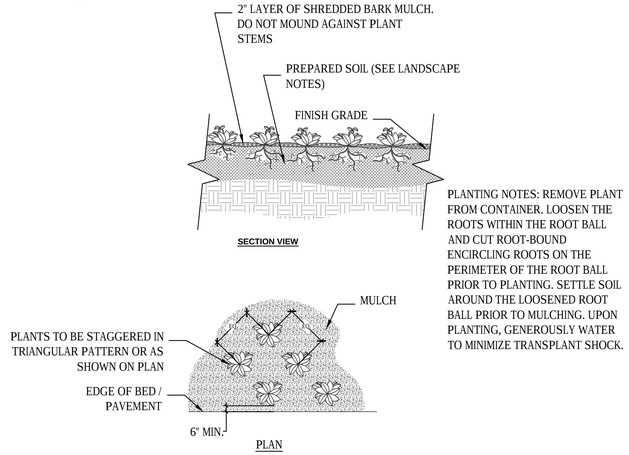
WIS. STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181



3 L200 SHRUB PLANTING DETAIL

NOT TO SCALE



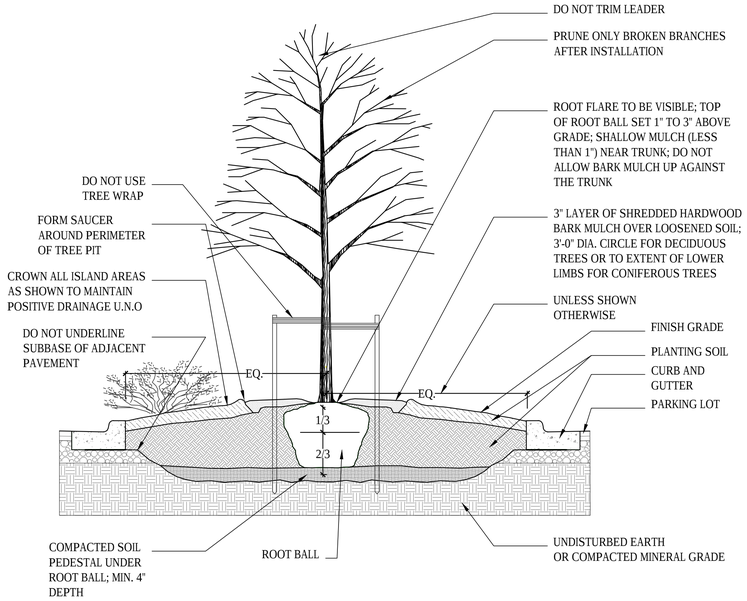
2 L200 PERENNIAL/GROUND COVER PLANTING DETAIL

NOT TO SCALE

GENERAL TREE PLANTING NOTES:

SOIL NOTES: USE EXISTING SOIL REMOVED FROM HOLE AS BACK FILL. IF THE EXISTING SOIL AT THE SITE IS HEAVY CLAY OR EXCESSIVELY SANDY USE 7/8 PARTS EXISTING SOIL AND 1/8 PART PLANT STARTER SOIL MIX FROM LIESENER SOILS, INC. OR APPROVED EQUAL, (262) 377-2753. WATER TREE IN WELL.

B & B NOTES: REMOVE THE ROPE AROUND TRUNK, PEEL THE TOP OF BURLAP BACK AND SCRAPE EXCESS SOIL TO EXPOSE THE ROOT COLLAR SNIP THE WIRE BASKET AND PEEL THE BURLAP OFF



1 L200 TREE PLANTING IN PARKING LOT ISLAND DETAIL

NOT TO SCALE

new eden
LANDSCAPE ARCHITECTURE
131 W. Seeboth Street, Suite 240
Milwaukee, WI 53204
Tel: (414) 530-1080 www.newedenlandscape.com

RESEARCH ONE - PHASE 2
10701 W. Research Drive
Wauwatosa, WI 53226

Irgens

Landscape Notes & Details

NOT FOR CONSTRUCTION
These progress documents are for review purposes only.

REVISIONS:

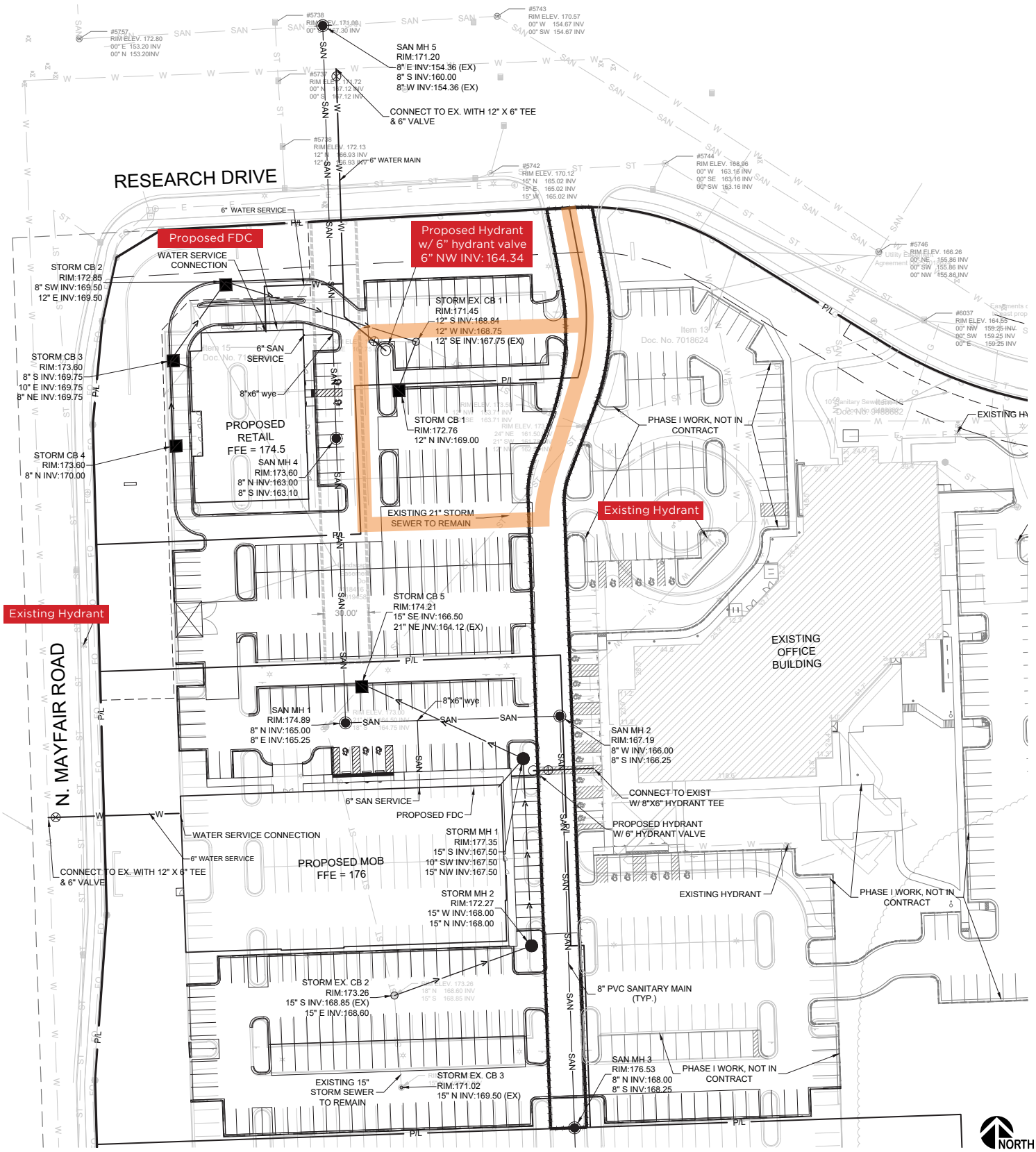
PROJECT NO.: 22004-EUA-R2
SCALE: 1" = 20'-0"
DATE: 12-19-2022
DRWN BY: JO CHKD BY: RS
SHEET:

L200

View 3

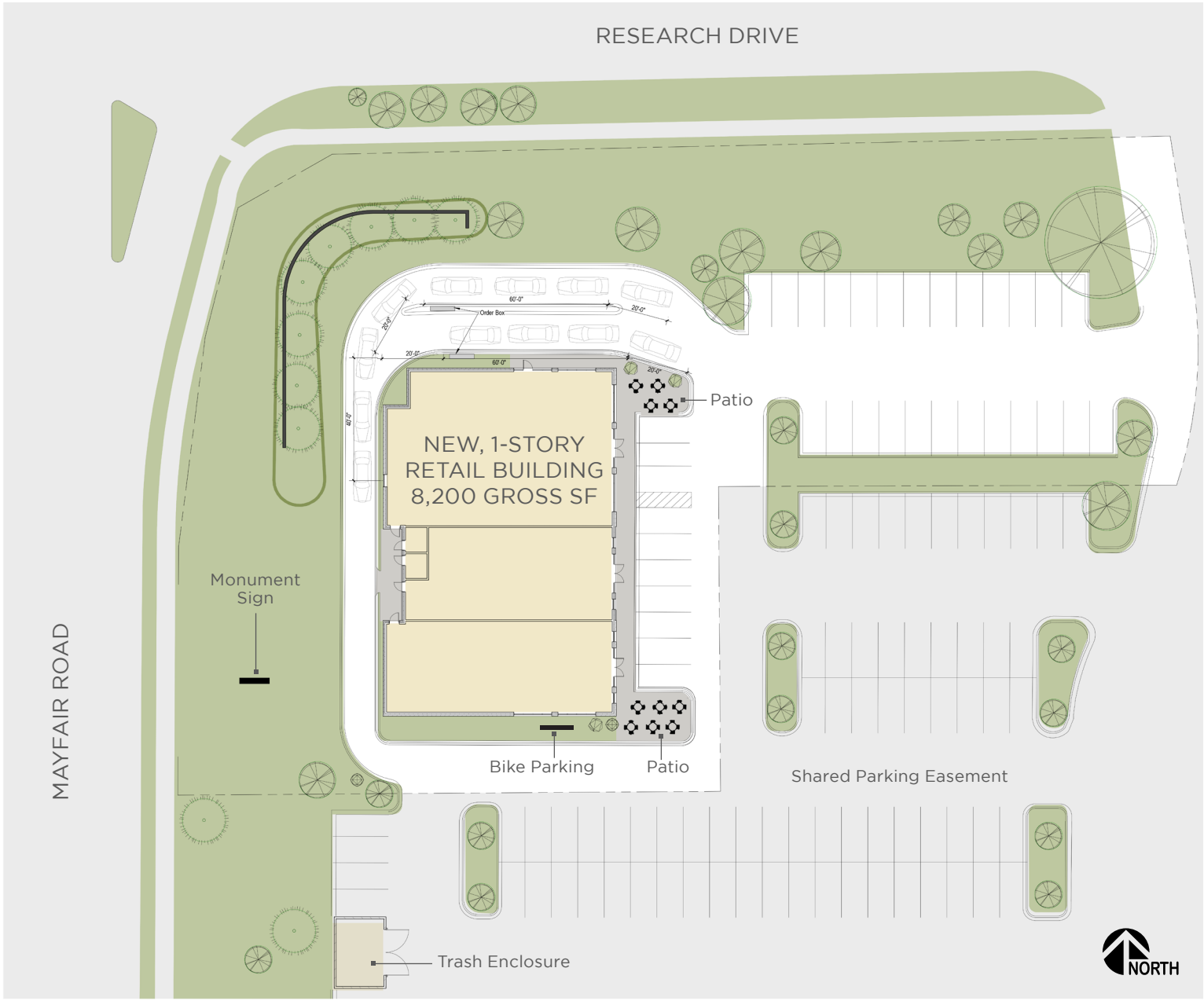
View 1

RESEARCH DRIVE FIRE ACCESS PLAN



Fire Truck Access

RESEARCH DRIVE RETAIL SITE PLAN



CITY OF WAUWATOSA
Resolution

R-21-176

By: Plan Commission

Resolution approving a Land Division via Certified Survey Map at 10701 Research Drive, Rob Oldenburg, Irgens, applicant

BE IT RESOLVED by the Common Council of the City of Wauwatosa, Wisconsin that permission be and the same is hereby granted for a Certified Survey Map at 10701 Research Drive requested by Rob Oldenburg, Irgens. The location of the parcel is more particularly described as follows:

CERTIFIED SURVEY MAP NO 6035 NW 1/4 29-7-21 PARCEL 1, EXC PT TAKEN FOR ST IN DOC #10175755 2013, parcel number 379-9999-058

All in accordance with the application attached hereto and made a part of this resolution, in compliance with Section 17.02.070 of the Code of the City of Wauwatosa and subject to the following conditions:

1. Any technical corrections as identified by the Register of Deeds, WisDOT, and City staff.
2. Per State Statute 236.34 (2), the CSM is to be recorded within 12 months of the Common Council approval.
3. Recording of easement and/or agreement documents related to staff comments with recording documentation indicated on the CSM prior to submitting the survey for recording.
4. At the time of construction or new development on any of the newly created lots, including parking lot improvements, the entirety of that lot, including any new or modified parking lots and new development, will conform to all applicable City regulations.

Passed and Dated November 16, 2021

Adopted: November 16, 2021

Clerk

Approved November 17, 2021

Dennis R. McBride

Mayor

File #: 23-1185 **Agenda Date:** 3/13/2023 **Agenda #:** 5.

Request by Jonathan Ward, Altius Building Company, for a Land Combination via Certified Survey Map at 11400 W. Blue Mound Road

A. Background/Options

Related to the next two agenda items, the applicant is proposing to combine two adjacent parcels into one large parcel via a certified survey map (CSM) to construct a four-story, multi-unit residential development. Combination of the lots is required because buildings and parking areas cannot cross parcel lines.

Attached to this report is the proposed CSM.

The next agenda item provides additional information about the proposed development.

B. Staff Comments

Planning/Zoning Division
Filing the CSM with the Register of Deeds is required prior to issuing any building permits for the proposed development.

Building Division
No issues.

City Assessor's Office
No issues with land combination. See additional comments under PUD preliminary plans.

City Clerk's Office
No issues.

Engineering Division
No issues with land combination. Applicant shall work with staff on establishing an address after the CSM is recorded.

Fire Department
No comments provided.

Health Department
No comments provided.

Police Department
No comments provided.

C. Recommendation

Staff recommends approval subject to:

1. Any technical corrections as identified by the Register of Deeds and City staff.
2. Per State Statute 236.34 (2), the CSM is to be recorded within 12 months of the Common Council approval.

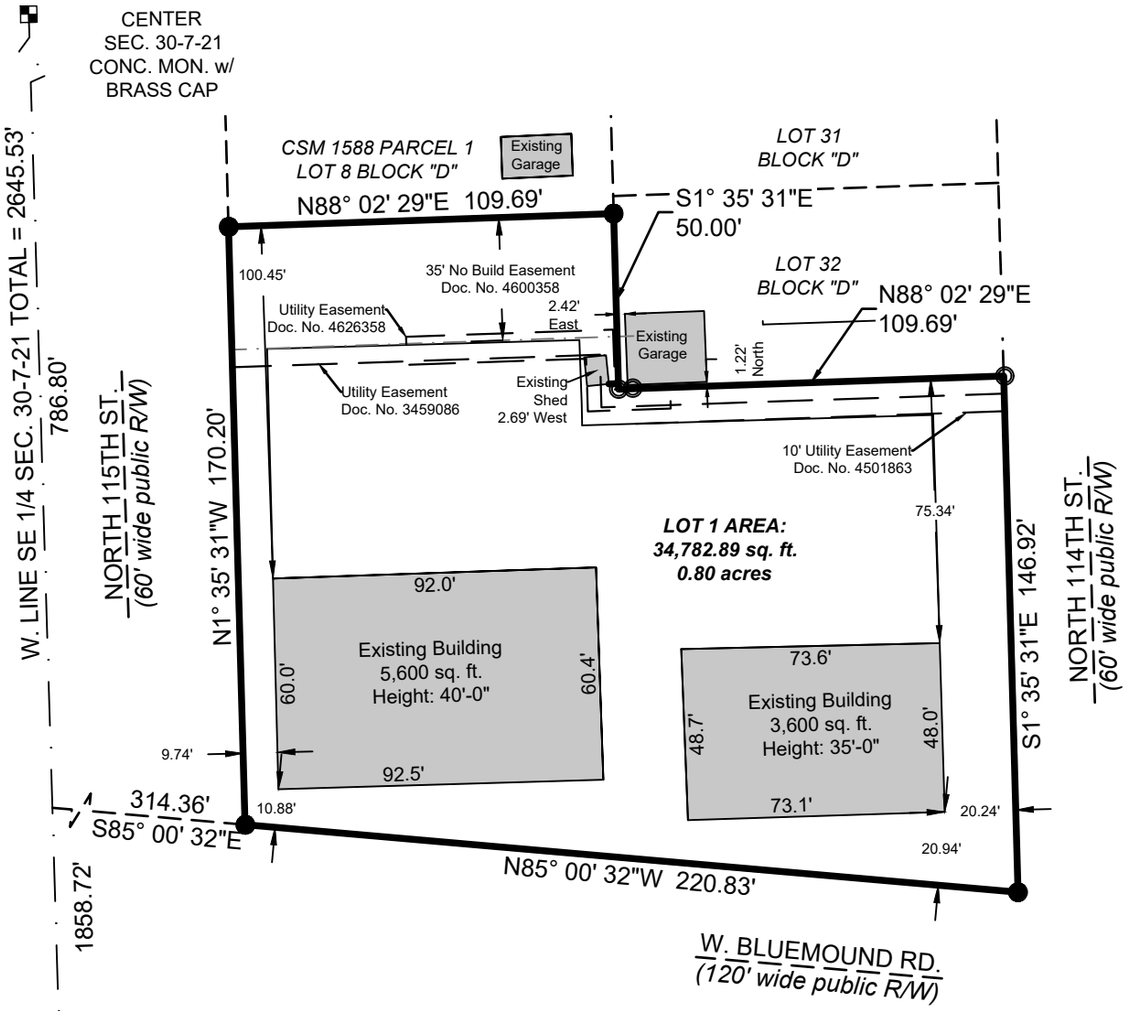
11400-11430 W. Blue Mound Rd

City of Wauwatosa

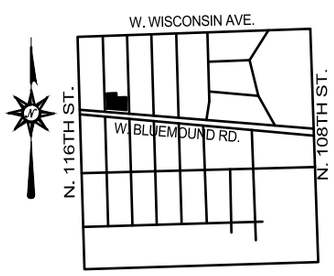
CERTIFIED SURVEY MAP NO._____

Being Parcel 2 and the East 10 feet of Parcel 1 of Certified Survey Map 963 and also Parcel 2 of Certified Survey Map 1588 in Block "D" in Grand Avenue Highlands, all in the Northwest 1/4 of the Southeast 1/4 of Section 30, Township 7 North, Range 21 East in the City of Wauwatosa, County of Milwaukee, State of Wisconsin

ADDRESSES: 11400 & 11430 West Bluemound Road
TAX KEY NUMBERS: 411-0175-04 & 411-0175-03
ZONING: G2



VICINITY MAP:



SE 1/4 SEC. 30-7-21

SCALE: 1" = 2000'

LEGEND & NOTES:

○ INDICATES FOUND MONUMENTATION, AS NOTED ON DRAWING.

● INDICATES SET 3/4" DIAM. REBAR, 18" LONG WEIGHING 1.50 LBS/LIN. FT.

COORDINATES & BEARINGS REFERENCED THE WISCONSIN STATE PLANE COORDINATE SYSTEM WITH THE WEST LINE OF THE SE 1/4 OF SEC. 30-7-21, ASSUMED TO BEAR N 01°42'58" W, AS PUBLISHED BY SEWRPC, NAD 1983.

GRAPHIC SCALE

0 50' 100'

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

PROJECT NUMBER 21393 DRAFTED BY KMA DATE 01/31/2023 Sheet 1 of 3

CERTIFIED SURVEY MAP NO._____

Being Parcel 2 and the East 10 feet of Parcel 1 of Certified Survey Map 963 and also Parcel 2 of Certified Survey Map 1588 in Block "D" in Grand Avenue Highlands, all in the Northwest 1/4 of the Southeast 1/4 of Section 30, Township 7 North, Range 21 East in the City of Wauwatosa, County of Milwaukee, State of Wisconsin.

SURVEYOR'S CERTIFICATE

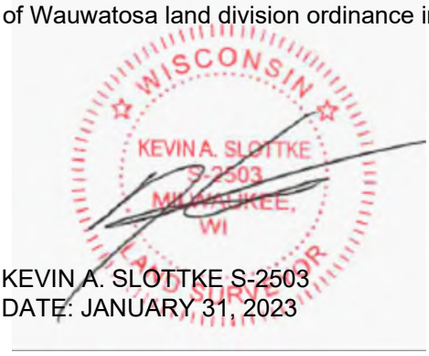
STATE OF WISCONSIN)
SS
MILWAUKEE COUNTY)

I, Kevin A. Slottke, Registered Land Surveyor, hereby certify that I have surveyed, divided and mapped Parcel 2 and the East 10' of Parcel 1 of Certified Survey Map 963 and Parcel 2 of Certified Survey Map 1588 in Block "D" in Grand Avenue Highlands all in the Northwest 1/4 of the Southeast 1/4 of Section 30, Township 7 North, Range 21 East, in the City of Wauwatosa, County of Milwaukee, State of Wisconsin, bounded and described as follows:

Commencing at the South 1/4 corner of the Southeast 1/4 of said Section 30; thence North 01°42'58" West, 1858.72 feet along the West line of said Southeast 1/4 Section; thence South 85°00'32" East, 314.36 feet to the west line of Parcel 2 of CSM 1588 and the point of beginning of this description; thence North 01°35'31" West along said west line, 170.20 feet to the south line of Parcel 1 of CSM 1588; thence North 88°02'29" East along said north line, 109.69 feet; thence South 01°35'31" East along the east line of Parcel 2 of CSM 1588, 50.00 feet; thence North 88°02'29" East, 109.69 feet to the east line of Parcel 2 of CSM 963; thence South 01°35'31" East along Parcel 2 of CSM 963, 146.92 feet along said Parcel 2; thence North 85°00'32" West, 220.83 feet to the point of beginning.

Said parcel contains 34,782.89 square feet or 0.80 acres of land, more or less.

That I have made the survey, land division, and map by the direction of the **Blue Boys Real Estate, LLC.,** owner of said land. That the map is a correct representation of all the exterior boundaries of the land surveyed and the land division thereof made. That I have fully complied with Chapter 236.34 of the Wisconsin Statutes and the City of Wauwatosa land division ordinance in surveying, dividing and mapping the same.



KEVIN A. SLOTTKE S-2503
DATE: JANUARY 31, 2023

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

CERTIFIED SURVEY MAP NO._____

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OWNER'S CERTIFICATE

BLUE BOYS REAL ESTATE, LLC., a Wisconsin limited liability company, duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, certifies that said owner has caused the land described on this map to be surveyed, divided, mapped and dedicated as represented on this map in accordance with Chapter 236 Wisconsin Statutes.

BLUE BOYS REAL ESTATE, LLC., does further certify that this map is required by S.236.10 or S.236.12 to be submitted to the following for approval or objection: **The City of Wauwatosa**

BLUE BOYS REAL ESTATE, LLC

_____ _____ _____

(printed name & title) (signature)

STATE OF WISCONSIN)
SS
MILWAUKEE COUNTY)

Personally came before me this ____ day of _____, 20___, the above-named _____, to me known to be the person who executed the foregoing instrument, and to me known to be the

_____ of **Blue Boys Real Estate, LLC.,** and acknowledged that they executed the foregoing instrument.

_____ _____

(SEAL) notary public, State of Wisconsin

my commission expires _____.
(date)

PLANNING COMMISSION APPROVAL

Approved by the Planning Commission of the City of Wauwatosa on this _____day of _____, 20____.

_____ _____

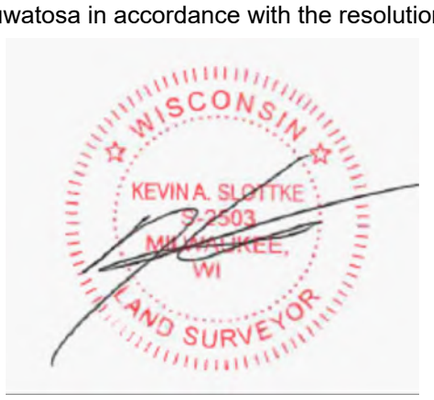
Dennis McBride, Mayor - Chairperson Tamara Szudy, Principal Planner

COMMON COUNCIL APPROVAL

Approved and accepted by the Common Council of The City of Wauwatosa in accordance with the resolution adopted on this _____day of _____, 20____.

_____

Steven A. Braatz, Jr,. City Clerk



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Fax: 414-643-4210

PROJECT NUMBER 21393 DRAFTED BY KMA DATE 01/31/2023

File #: 23-1186 **Agenda Date:** 3/13/2023 **Agenda #:** 6.

Request by Jonathan Ward, Altius Building Company, for a Zoning Map Amendment from C2 District to C2/Planned Unit Development (PUD) District at 11400 W. Blue Mound Road

A. Background/Options

The applicant is requesting a zoning map amendment from General Commercial (C2) District to C2/Planned Unit Development (PUD) Overlay District on an approximately 0.8 acre site located on the north side of Blue Mound Road between 114th Street and 115th Street. The intent of the amendment is to establish a PUD for a four-story, multi-unit residential development consisting of 41 residential units. Rezoning the site to C2/PUD Overlay District is necessary to allow for multi-family residential development, reduce required setbacks to move the building closer to the sidewalks, and reduce the lot area per unit requirement. Surrounding land uses include single-family residential uses to the north and commercial uses to the east, west, and south.

Attached to this report is the applicant's project statement and zoning information. The next agenda item provides additional information about the proposed development.

A zoning map amendment application requires a public hearing date. As part of a motion, the Plan Commission should set a public hearing date of April 18, 2023.

B. Staff Comments

Planning/Zoning Division
This request is contingent upon approval and filing the related certified survey map. A public hearing on April 18, 2023 is required.

The Future Land Use Map in the 2008-2030 Comprehensive Plan indicates maintaining the 2008 uses of the parcels through the future land use category of “Planned Commercial”. Many goals, objectives, and policies found in Volume Two: Polices and Recommendations, primarily in Chapter 2.1 Land Use and Chapter 2.3 Housing and Neighborhood Development, support multifamily housing development opportunities in the City. In addition, to address changing conditions over the life of the Plan, Volume Two of the Comprehensive Plan on page 186 states “the precise location of zoning district boundaries may vary, as judged appropriate by the Plan Commission and City Council. Departures from the exact land use boundaries depicted on the Future Land Use map may be particularly appropriate for planned development projects, projects involving a mix of land uses and/or residential development types, properties split by zoning districts and/or properties located at the edges of future land use areas. In their consideration of zoning map issues, the Plan Commission and City Council will also evaluate the specific timing of the zoning map amendment request, its relationship to the nature of both existing and planned land uses, and the details of the proposed development. Therefore, this Plan allows for the timing of zoning actions and the refinement of the precise recommended land use boundaries through the zoning, conditional use, planned development, and land division processes.” Volume Two of the Comprehensive Plan is found here:

<https://www.wauwatosa.net/home/showpublisheddocument?id=480>

The City's 2023 Housing Study and Needs Analysis identifies a continued demand for housing units that will likely be supplied through multi-family developments. The Housing Study is found here:

<https://www.wauwatosa.net/home/showpublisheddocument/4879/638125711998330000>

Finally, consistent feedback heard during the review of other multi-family development proposals is multi-family developments should be located in areas where there is little impact to residential neighbors. While there are adjacent residential neighbors, the height of the proposed building is only five feet higher than the existing buildings and the massing is similar to the exisitng buildings.

The applicant also provided additional information related to the project's consistency with adopted plans and studies.

Building Division
No issues.

City Assessor's Office
No issues with zoning map amendment.

City Clerk's Office
No issues.

Public Works Department
Click or tap here to enter text.

Engineering Division
No issues with zoning map amendment. Site plan and landscaping comments are included in the preliminary PUD request.

Fire Department
No comments provided.

Health Department
No comments provided.

Police Department
No comments provided.

C. Recommendation

Staff recommends approval and setting a public hearing date of April 18, 2023.

11400-30 W. Bluemound Road PUD Redevelopment Narrative

Revel Real Estate Investments and Altius Development Integration Services are partnering with Smart Asset Capital to propose this demolition and redevelopment of the existing office buildings and parking deck at 11400 and 11430 W. Bluemound Road into a 41-unit multifamily building. Smart Asset Capital owns the properties through a related company and have been actively working with the City to create this redevelopment plan to address the structural issues with the parking deck. The existing buildings are class C office space and the demand for this grade of office space is low making it difficult to support the costs for significant capital improvements to the parking deck; however, the market for multifamily residential continues to expand and we believe the best use of this property would be to redevelop it into multifamily housing.

The new building will be oriented up along Bluemound Road partially wrapping the corner along 115th Street with a 5' landscape buffer along the sidewalk, to move the massing of the building to the front of the site, away from the single-family neighborhood behind it. This will both define the urban street edge, while also screening additional surface parking behind the building. This parking will also act as a transitional buffer to the neighborhood. There will be 41 parking stalls in the garage and 30 surface spaces totaling 71 spaces, or 1.73 per unit. The rear parking will be an improvement over the existing parking deck as it will be brought down to grade level with landscaping for screening. Site access will be off of 114th and 115th streets, the existing Bluemound curb cut will be eliminated. The total interior parking lot paved area will be 10,883 SF which requires 1,083 SF of interior parking landscaped area and six trees; we will provide 1,200 SF of interior parking landscaping area and seven trees. Other site details include two, five-stall bike parking stalls along sidewalk on the east side, along with a pet waste station. The refuse area will be located inside the building in the parking garage to minimize any noxious odors or debris from an outdoor refuse enclosure.

The building's public spaces will be located in the most prominent corner near the intersection of Bluemound and 114th Street in order to activate the street front. The first-floor lobby will have large windows with a front door off Bluemound to bring light, life and energy to the street level to create a sense of place, with eyes on the street for safety. Above the lobby on the second floor will be a community room and fitness center also with large windows and a rooftop deck over the rear lobby entrance to enhance the sense of activity and street life at the corner. The rest of the building will be three-stories of apartments over parking at-grade with 65,936 total s.f. a height of 46 feet or 4.7' taller than the existing building on the west side.

The project will contain a mix of unit sizes with fifteen one-bedroom, six one-bedroom with dens, seventeen two-bedroom, and three three-bedroom units to accommodate housing needs for a wide range of family sizes. Each unit will have a deck, stainless steel appliances, quartz counter tops, WiFi thermostats and keyless entries. Community amenities include a club room, rooftop terrace, fitness room, storage, bike storage, building-wide WiFi internet, rooftop solar and electric car chargers.

This will be a significant redevelopment investment of nearly $13.6 million removing two deteriorating existing buildings with diminishing economic life and tax base with focused density for population growth along a State highway and one the City's main transportation corridors. It will improve upon the existing situation where the wall of the parking deck virtually abuts the neighbor's property line. This project promotes mixed-residential development, and walkability with responsible density, massing and height that is appropriate for this site and neighborhood in compliance of the City's Comprehensive Plan and Comprehensive Housing Study Needs Analysis.

Property: 11400 W. Bluemound Rd, tax key 411-0175-004 (.339 acres)
11430 W. Bluemound Rd, tax key 411-0175-003 (.460 acres)
The combined site is 0.80 acres.

The site is currently zoned C-2 Commercial which does not permit multi-unit residential buildings but has no height limits. Secondly, the 1,000 minimum lot area per unit allowed under C-2 only applies to mixed-use buildings and would only permit a maximum of 34 units. This few units makes the feasibility of clearing the existing buildings to redevelop the site, without public assistance, very difficult, this project is not requesting any public assistance. Finally, we're requesting a reduction in the 10-foot minimum front setback from the underlying zoning in order to move the building closer to the sidewalk in order to both accommodate an additional nine parking spaces in back and while minimizing any shadow the building would cast over neighboring properties to the north. We're requesting a 5.5' front setback and 4.8' setback on the west side where the existing zoning calls for 5' minimum. Therefore, we are requesting PUD zoning to allow for a multi-unit residential use and flexibility on the minimum lot area and setbacks.

- Fire access is provided on three sides of the building from the public streets with existing fire hydrants in close proximity. We intend to build to a NFPA 13 fire suppression rating rather than 13R for a higher level of protection.
- Stormwater catch basins will be connected to existing storm sewer lines in Bluemound Road. The increase in impervious surface over the existing site is negligible and far below ½ acre, so it does not require on-site stormwater detention.

24.05.040 - /PUD, Planned Unit Development Overlay.

A. Purpose.

1. General. The /PUD, Planned Unit Development Overlay district is intended to accommodate development that may be difficult if not impossible to carry out under

otherwise applicable zoning district standards. Examples of the types of development that may benefit from the PUD overlay district include the following:

a. Enhanced Protection of Natural Resource Areas. Developments that offer enhanced protection of natural resources and sensitive environmental features, including streams, water bodies, floodplains, wetlands, steep slopes and woodlands.

b. Energy Conservation/Sustainability. Developments that achieve extremely high levels of energy conservation and developments that achieve extremely high levels of sustainability, as evidenced by commitment to attain at least LEED Gold or equivalent ratings by recognized green building organizations.

c. Traditional Urban Development. Developments characterized by parcel configurations, street patterns, streetscapes and neighborhood amenities commonly found in urban neighborhoods platted or otherwise created before the 1950s.

d. Mixed-use Development. Developments that contain a complementary mix of residential and nonresidential uses.

Applicant Response: We are requesting a PUD zoning to accommodate a new 41-unit multi-unit residential building redevelopment of the deteriorating office buildings because the C-2 zoning does not accommodate multi-unit buildings as a permitted or conditional use; however, it does permit vertical mixed-use buildings which would be substantially the same type of use, with similar size and massing only with a higher intensity of use and traffic. We are requesting flexibility with the underlying 10' front set-back requirement to pull the massing of the building closer to the Bluemound street front as would be more typical for traditional urban development while creating a larger buffer behind the building for the residential neighbors. This front setback flexibility is necessary to accommodate an adequate number of parking stalls behind the building to support the density necessary to make the redevelopment feasible without public assistance. The itself will provide parking screening in front and landscaping will be added to provide screening around the outdoor parking in back. While the building itself will be a single use, it promotes mixed use development by incorporating residences in a commercial district with many restaurants and services within walking distance.

2. Objectives. Different types of PUDs will promote different planning goals. In general, however, PUDs are intended to promote the following objectives:

a. implementation of and consistency with the city's adopted plans and policies;

b. flexibility and creativity in responding to changing social, economic and market conditions allowing greater public benefits than could be achieved using conventional zoning and development regulations;

c. efficient and economical provision of public facilities and services;

d. economic opportunity and environmental and social equity for residents;

e. variety in housing types and sizes to accommodate households of all ages, sizes, incomes and lifestyle choices;

f. compact, mixed-use development patterns where residential, commercial, civic and open spaces are located in close proximity to one another;

g. a coordinated transportation system that includes an inter-connected hierarchy of facilities for pedestrians, bicycles and vehicles;

h. compatibility of buildings and other improvements as determined by their arrangement, massing, form, character and landscaping;

i. the protection and enhancement of open space amenities and natural resource features such as tree canopy, native vegetation, wetland and stream buffer area and hydric soils in the development design;

j. the incorporation of sustainable development features including green infrastructure practices in landscapes and parking area, to maximize the aesthetic and water quality benefits of stormwater management practices; and

k. attractive, high-quality landscaping, lighting, architecture and signage, including the use of native landscaping, that reflects the unique character of the development.

Applicant Response: Excerpt from the Comprehensive Plan:

"As a first-ring community outside the City of Milwaukee, the future vitality of the community will depend largely on its ability to maintain a high quality of life for residents, capitalize on its numerous economic assets, and effectively promote, direct, and manage reinvestments in underused and functionally obsolete properties."
– City of Wauwatosa Comprehensive Plan, p. 23

This project implements and advances the City's objectives to reinvest in underused and functionally obsolete properties. The parking garage of the existing buildings is failing and needs extraordinary investment on repairs. These repairs would be throwing good many after bad because the office buildings are obsolete and will not be able to command adequate rents to justify the expense. Furthermore, the office market for class C office is extremely soft with no relief in sight and high vacancy and even bankruptcies for competing properties in the market. This property has become an eyesore for the neighborhood, the parking structure is no longer sound, and the market demand for office product like this is very weak which is why this property is a risk of becoming a blight and needs to be redeveloped.

Furthermore, the City of Wauwatosa's Housing has identified a significant shortage in all housing types and all new housing promotes competition to help keep housing affordable. This project will offer a variety of unit sizes including one, one with dens, two and three-bedroom units to appeal to a variety of intergenerational residents from active seniors to families with children. The scale of this building is comparable to the scale of the existing buildings on the site and will cluster higher-density residential along transportation corridors. The property is located just a few blocks from the Oak Leaf Trail and bike storage will be incorporated and the garage and outside. Finally, solar panels will be incorporated on the roof and several electric car charges will be included in the garage.

B. Procedure. PUDs must be reviewed and approved in accordance with the procedures of Section 24.16.050. Applications must be signed by all property owners of record.

C. Zoning Map. Approved PUDs must be identified on the zoning map by appending the map symbol "/PUD" as a suffix to the base zoning district classification, as in "R8/PUD."

D. Developer's Statement of Intent. Each PUD application must include a written explanation from the applicant describing the community benefits of the proposed development and how the proposed development provides greater benefits to the city than would a development carried out in accordance with otherwise applicable zoning ordinance standards. The statement must also include a comparison of the proposed development with the standards of the base zoning district.

Applicant Response: The benefits to the community of this development rather than one carried out in accordance to the C2 zoning is that as a mid-rise residential building it is a less intense use than the alternative uses allowed and promotes a mixed-use neighborhood with higher density residential along transportation corridors. The stated purpose of the C2 zoning is to accommodate, "a broad range of business and commercial uses, often in the physical form of shopping centers, large-format retail and other destination-oriented uses in which a large percentage of customers will arrive by automobile." This could include much higher traffic and intense uses such as a grocery store, medical office, other retailers. Unfortunately, while the City's Comprehensive Plan repeatedly calls for mixed-use development, it doesn't actually permit multi-unit residential buildings in commercially zoned areas, which would create mixed-use neighborhoods. Furthermore, there is no height restriction or minimum lot area which would allow a taller building to be built casting a shadow over the single-family neighboring properties to the north. Likewise, adhering to the 10' setback would push the massing of the building closer to the residences casting a shadow over their property.

E. Approval Criteria. A /PUD overlay zoning district may be approved only when the common council determines that the proposed PUD would result in a greater benefit to the city as a whole than would development under conventional zoning district regulations.

F. Standards Eligible for Modification. Unless otherwise expressly approved by the common council as part of the PUD approval process, PUDs are subject to all applicable standards of this zoning ordinance. The common council is authorized to approve PUDs that deviate from strict compliance with specified standards if they determine that the resulting development satisfies the approval criteria of Section 24.05.040E. PUDs may not deviate from compliance with Title 14 (Fire Prevention) or Title 15 (Buildings and Construction) of the city code of ordinances.

G. Allowed Uses. The uses to be allowed in a PUD must be identified as part of the PUD approval process along with all applicable conditions or supplemental use regulations that apply to such uses. Regardless of the underlying zoning, the common council may approve a mix of use types within a PUD as a means of accommodating mixed-use developments and developments with a broader range of housing types and housing options than allowed by the underlying zoning district.

H. Lot Size. Minimum lot area and width standards of the base zoning district may be reduced as part of the PUD approval, provided that lot sizes are adequate to safely accommodate all proposed buildings and site features.

I. Residential Density. The allowable residential density of the base zoning district may be changed if the common council determines that such a change is warranted to support the public benefit likely to result from the proposed development and that the resulting density can be supported by existing and planned public facilities and services.

J. Setbacks. The minimum setback standards of the base zoning district may be reduced as part of the PUD approval.

K. Height. The common council may allow an increase in allowable building heights if it determines that such an increase is warranted to support the public benefit likely to result from the proposed development.

L. Parking and Loading. Off-street parking and loading requirements may be modified when the common council determines that modified requirements are in keeping with projected parking and loading demand of the proposed development, that other means of meeting access demand will be provided or that the requested modifications will better meet the purpose of the PUD overlay.

M. Streets. Alternatives to otherwise "standard" street cross-sections and designs may be approved when the common council determines that such alternative designs would better meet the purpose of the PUD overlay, while still providing a safe and efficient traffic circulation system.

See Next Page...

C2, General Commercial. The C2, General Commercial district accommodates a broad range of business and commercial uses, often in the physical form of shopping centers, large-format retail and other destination-oriented uses in which a large percentage of customers will arrive by automobile.

Lot and Building Standards	Underlying Req. C2	Proposed	Notes
Minimum Lot Area (square feet)	None	n/a	
Minimum Lot Area Per Unit (square feet)[1]	1,000[5]	n/a, applies to vertical mixed-use buildings	
Minimum Lot Width (feet)	None	n/a	
Minimum Setbacks (feet)			
Front	10'	5.5'	see explanation
Street Side	5'	6.3' on East; 4.0' on West	
Interior Side	3[3][5]	n/a	
Rear	10[5]	45.3'	see explanation
Rear and Interior Side (Accessory Buildings)	3	n/a	
Rear Alley (Accessory Buildings)	10	n/a	
Maximum Height (feet)			
Principal Buildings	No max.	46'	4.7' taller than exising W. bldg. There would be not height restriction on a permitted use e.g. office.
Accessory Buildings	20	n/a	

Explanation: Adhering to the 10' setback both eliminates necessary parking and pushes the building closer to the single-family home to the north and could cause a shadow over their property. Our intent is to maximize a buffer to the north between our building and the single-family neibhors to the north while improving the existing conditions where the parking deck wall abuts the neighbor's property to the north along 114th street by bringing parking to grade and screening it with landscaping.

Maximum Building Coverage (% of lot area)			
Interior Lots	No max.	n/a	
Corner Lots	No max.	n/a	

Parking: Multi-Unit Building	Spaces/Unit	Units	Required	Proposed	
One Bedroom	1	21	21		
Two Bedroom	1.5	17	26		
Three Bedroom	2	3	6		
Total*		41	53	71	see explanation
*28 outdoors + 2 outdoor ADA + 39 in-building + 2 ADA in-building		ratio	1.29	1.73	

Explanation: We will provide sufficient parking for our tenants and guests so they will not park along the street in the neighborhood; with no overnight street parking allowed, we must ensure we have adequate parking to accommodate all of our residents or we may not be able to market/lease some units.

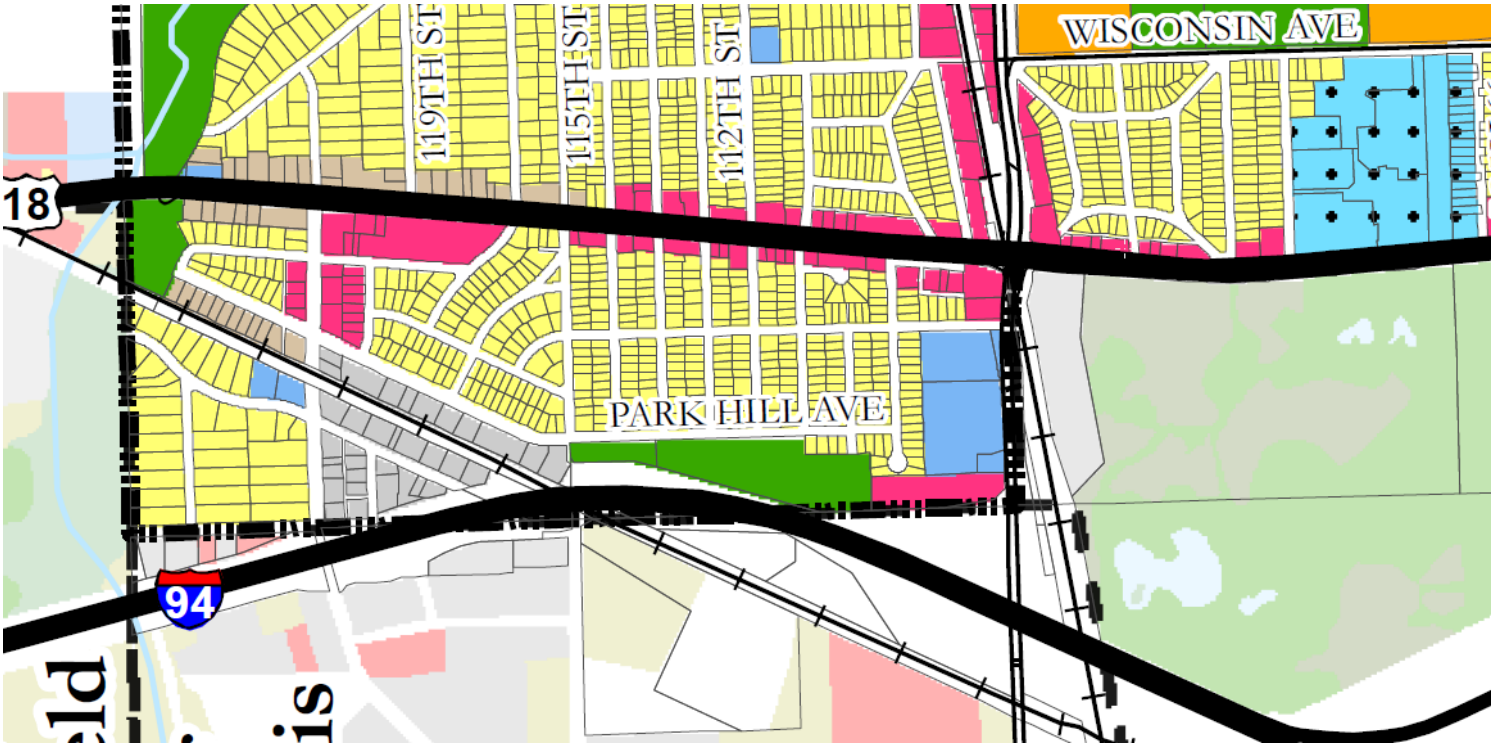
Permitted Uses:	Multi-Unit Building	-	41 Units	Mixed-Use Vertical Buildings are a permitted use

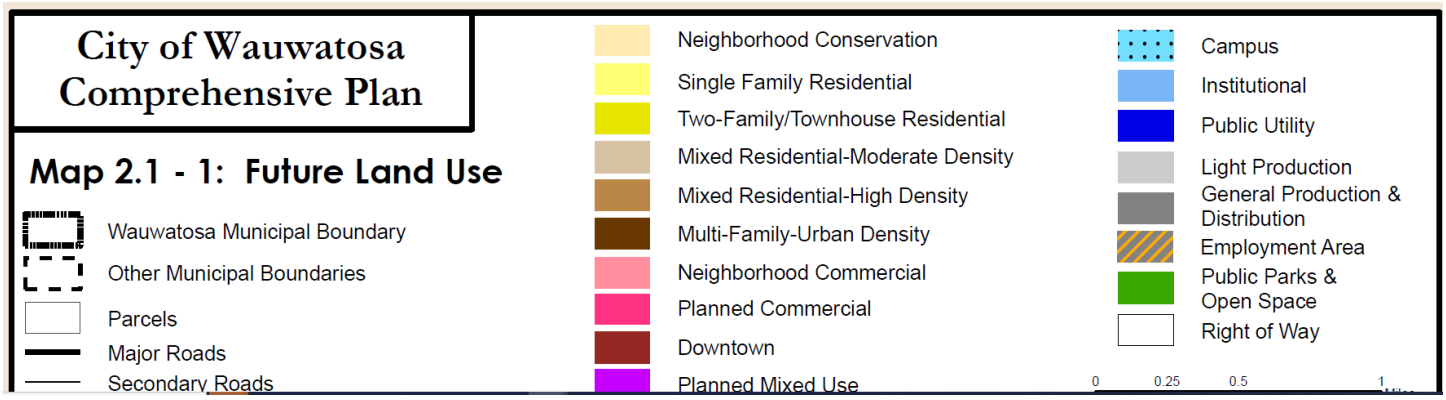
Estimate of Vehicle Trips Per Day for Existing Office vs. Proposed Multi-Unit Residential

Existing Offices	Office	S.F		VTPD/1,000 SF	VTPD
	West Building	16,560			
	East Building	9,100			
		25,660		11.03	283
Proposed Multi-Unit Residential	Units	VTPD/Unit (Low Est.)	VTPD/Unit (High Est.)	VTPD Projected (Low Est.)	VTPD Projected (High Est.)
	41	5.44	6.65	223	273

The estimated vehicle trips per day for the proposed multi-unit residential are less than the estimated trips per day for the exising office use.

Excerpt from 2008-2030 Comprehensive Plan Future Land Use Map





File #: 23-1350 **Agenda Date:** 3/13/2023 **Agenda #:** 7.

Request by Jonathan Ward, Altius Building Company, for Planned Unit Development preliminary plans at 11400 W. Blue Mound Road for a multi-unit building

Submitted by:
Arthur Pinon
Department:
Planning Division

A. Background/Options

The applicant is requesting approval of a preliminary planned unit development (PUD) to construct a four-story, multi-family residential housing project on an approximately 0.8 acre site. The proposed project consists 41 apartments with a mix of one, two, and three bedroom units. The main building entrance is located at the corner of 114th Street and the ground floor serves as a parking garage with residential units located on the upper floors. Vehicular access to the site is provided from 114th Street and 115th Street with 71 parking spaces onsite (41 garage spaces and 30 surface spaces). Short-term bicycle parking is provided at the east end of the building adjacent to the main entrance at 114th Sreet and long-term bicycle storage is provided inside the parking garage. Community amenities include a club room, rooftop terrace, fitness room, rooftop solar, and electric vehicle chargers.

Currently, the project site contains two (2) office buildings with a parking structures at the rear. In 2021, a City inspection revealed significant structural issues with the western parking structure and the structure's certificate of occupancy was revoked.

A preliminary planned unit development application requires a public hearing. As part of a motion, the Plan Commission should set a public hearing date of April 18, 2023.

Attached to this report is the applicant's narrative, and development plans.

B. Staff comments

Planning/Zoning Division: A public hearing on April 18, 2023 is required. This request is contingent upon approval of the zoning map amendment and the certified survey map applications. Filing the certified survey map is required prior to issuing building permits.

The project meets the objectives for a PUD outlined in WMC 24.05.040.A.2 by accomplishing certain housing goals in the City's Comprehensive Plan. Specifically, the project adds to the City's variety of housing types and densities, helps to create a "Complete Neighborhood" along Blue Mound Road by placing residential development adjacent to commercial uses, and serves as a housing option for seniors, young professionals, students, and other residents who cannot afford or do not wish to live in or maintain a single-family home.

The 2022 Wauwatosa vacancy rate for buildings with 4-25 units was 2.5% and for buildings with 26+ units was 2.2%. Given pent up demand from many years where no housing was constructed, the City's large non-resident

workforce population, and continued developer interest in undertaking multi-family projects, demonstrates there remains demand for apartments at varying rent levels, including higher end. Vacancy rates are one of the key statistics the National Association of Home Builders track to judge the health and direction of the housing market. Low vacancy rates are typically interpreted as a sign of tight housing markets, with lower vacancy rates signaling a greater housing shortage, and vice versa for high vacancy rates. While the general perception of property vacancies may be a negative one, vacancy on some level is necessary for a healthy market and economy. Healthy vacancy rates ensure rents remain relatively stable and assist employers in recruiting and retaining workers who can find and afford a place to live in the community. The median rental vacancy rate in the United States has hovered around 7% in recent years and an average vacancy rate between 5-8 % is considered healthy. While there is a low vacancy rate, leasing agencies generally advertise because they want potential tenants to inquire about their residential communities and availability to have a database of prospective clients to contact when units become available.

Building Division: Design Review Board approval required; plan review, building permits and DSPS plan approvals required.

Assessor's Office: Provide detailed costs of any alterations and/or new construction, as well as income and expense information as requested by the Assessor's Office.

City Clerk's Office: No issues.

Engineering Division: Site plans showing adequate sewer capacity, construction staging information, lighting, and storm water management subject to approval by the Engineering Division.

The proposed development is located near a geographic high point and lower water pressures may exist. Fire and domestic water demand calculations must be submitted prior to Final PUD plan approval. Hydrant tests will be required by the developer and must be coordinated with the Water and Engineering Departments. Fire flow calculations must be in accordance with City Code Section 14.20.080 and NFPA 13.

All existing utilities that will not be re-used for the proposed development must be abandoned at the main.

Fire Department Connections and emergency access is subject to approval by the Fire Department.

Short- and long-term bicycle parking must be clearly identified and quantified to confirm compliance with City Code 24.11.080. Site data table must include number of housing units provided in each building broken down by type (number of 1-bedroom, 2-bedroom, etc.).

The City is currently anticipating pavement and utility construction in N. 115th Street from Bluemound Road to Underwood Creek Parkway during the summer of 2023. Applicant shall coordinate locations and construction of proposed utilities and drive approach on N. 115th Street with City staff.

Any public sidewalk damaged during construction must be replaced as directed by the Engineering Department and will require a Street Occupancy permit.

A lighting plan must be submitted and adhere to Board of Public Works rules regulating maximum illumination at property lines.

Applicant shall meet all requirements of code chapter 24.12 pertaining to landscaping; including the requirement for a landscape performance guarantee (Section 24.12.070).

The construction staging plan shows public sidewalk closures on the east, south and west sides of the proposed development. If the public sidewalks are proposed to be closed for long term duration, the sidewalk closure is subject to approval by the Board of Public Works. The construction staging plan must be updated to include the

crane swing radius. If the crane swing radius encroaches within the public right-of-way, the encroachment is subject to approval by the Board of Public Works. If the crane swing radius encroaches onto adjacent private property, the applicant will be required to work with affect adjacent property owners for crane swing rights and encroachment. The construction staging plan should also identify existing trees and landscaping that are to remain and how those features will be protected during construction. If any existing public street trees are damaged during construction, the applicant will be required to pay a street tree replacement fee. The construction staging plan must identify where contractor parking will be provided. If contractors will utilize public street parking, local parking regulations must be followed.

Engineering compared the number of trips that will be generated by this multi-family proposal and compared it to the existing office space use. The multi-family use generates 20 more trips (10 more in/10 more out) over the course of a weekday. On a peak hour basis, the multi-family generates 20 fewer trips (25 fewer in/5 more out) during the morning peak hour and 15 fewer trips (5 more in/20 fewer out) during the evening peak hour. Staff does not have any concerns about traffic operations with this proposal.

Fire Department: No comments provided.

Health Department: No comments provided.

Police Department: No comments provided.

C. Recommendation

Staff recommends approval subject to:

1. Approval of the CSM and zoning map amendment applications.
2. Setting a public hearing on April 18, 2023.
3. Approval from the Design Review Board is required prior to submitting for Final PUD approval.
4. The final PUD submission shall include a signage plan describing the allowable number and area of signs or confirm that the base sign code will be utilized for this development.
5. Providing detailed costs of any alterations and/or new construction as well as income and expense information as requested by the Assessor's office.
6. Site plans showing adequate sewer capacity, construction staging information, traffic/access improvements, site lighting, bike parking, and storm water management subject to approval by the Engineering Division. An applicant response to all initial Engineering site plan review comments must be received by the Engineering Department prior to Final PUD application submittal.
7. Fire and domestic water demand calculations must be submitted prior filing Final PUD application.
8. Final plans must meet all requirements pertaining to landscaping and screening in WMC 24.12.
9. Filing application for Final PUD approval within 12 months of the date of Preliminary PUD approval.
10. Obtaining all necessary approvals, licenses, and permits.

LEGEND:

	SECTION 1/4 SECTION LINE
	PROPERTY LINE
	EASEMENT
	CHAIN LINK FENCE
	TREE LINE
OH	OVERHEAD UTILITY LINE
E	ELECTRIC
TEL	TELEPHONE
FO	FIBER OPTIC
CTV	CABLE TV
SAN	SANITARY SEWER
FM	FORCE MAIN
ST	STORM SEWER
W	WATER MAIN
G	GAS
670	EXISTING CONTOUR
WET	WETLAND
FP	FLOODPLAIN

MANHOLE	IRON PIPE FOUND/SET
CATCH BASIN	REBAR FOUND/SET
CATCH BASIN (ROUND)	CHISELED CROSS FOUND/SET
ROOF DRAIN	PK NAIL FOUND/SET
HYDRANT	SPIKE/NAIL
WATER VALVE	MONUMENT
GAS VALVE	BENCHMARK
UTILITY POLE	SIGN
GUY WIRE	DECIDUOUS TREE
GAS METER	CONIFEROUS TREE
ELECTRIC METER	BUSH
UTILITY PEDESTAL	POST
TRAFFIC SIGNAL	
LIGHT POLE	
SOIL BORING	
MONITORING WELL	

GRAPHIC SCALE
0 20 40

GENERAL NOTES:

1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

3. DRAWING IS BASED ON FIELD SURVEY COMPLETED BY THE SIGMA GROUP ON OCTOBER 5TH, 2022.

4. DATUM FOR THE PROJECT SURVEY IS CITY OF WAUWATOSA. BENCHMARK FOR THE PROJECT SURVEY IS WEST FLANGE BOLT OF HYDRANT AT THE NORTHEAST CORNER OF BLUEMOUND AND 115TH ST. WITH AN ELEVATION OF 237.05.

5. CONTRACTOR TO VERIFY EXISTING CONDITIONS, CONTACT ENGINEER WITH DISCREPANCIES.

TO OBTAIN LOCATIONS OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

SOUTH 1/4 COR.
SEC. 30-7-21

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE
MILW. AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

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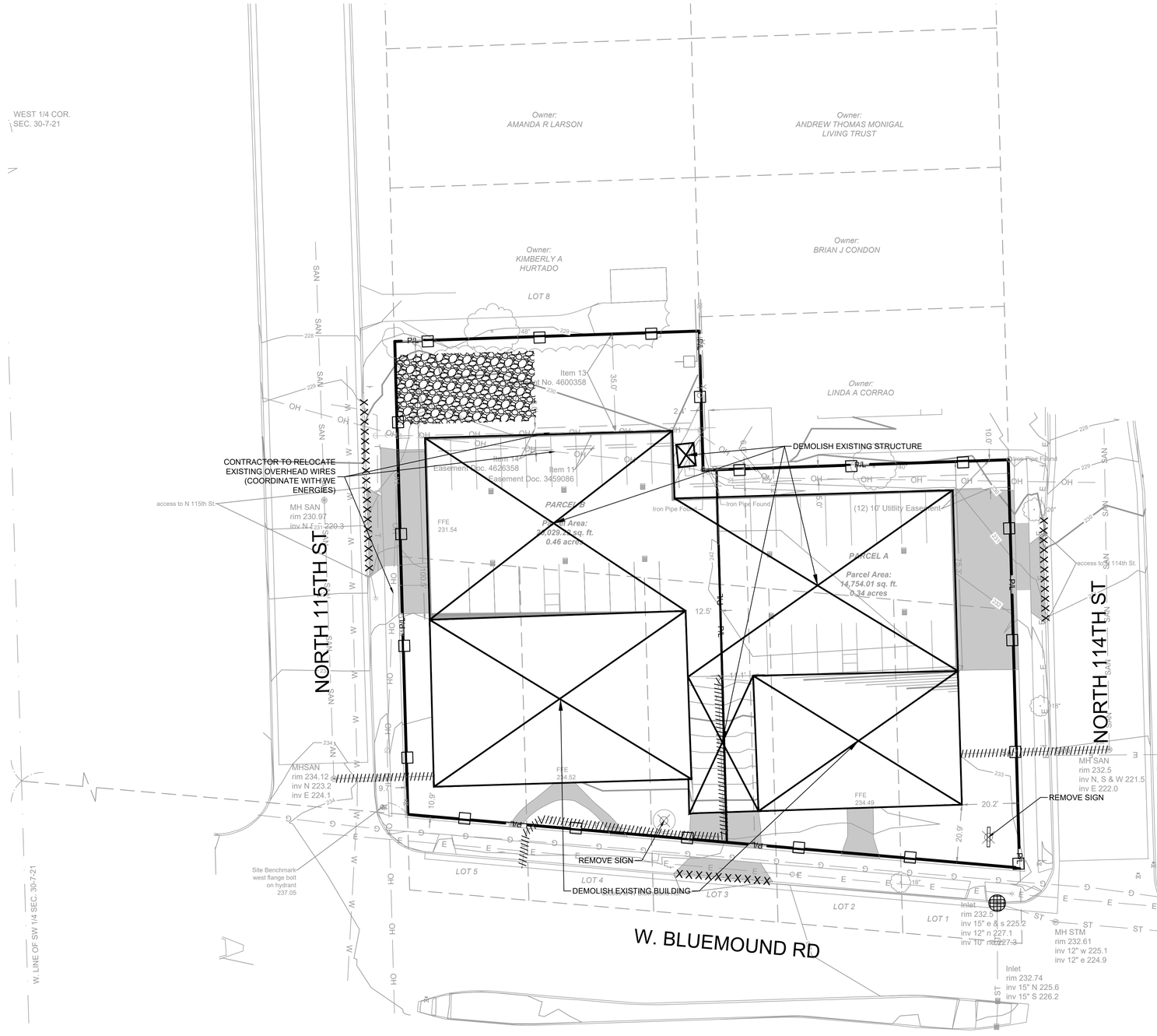
114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

SITE SURVEY

PRELIMINARY
NOT FOR
CONSTRUCTION

SCALE:	1"=20'
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----
SHEET NO:	C001



LEGEND:

- PROPOSED SILT SOCK (B C400)
- PROPOSED INLET PROTECTION (C C400)
- PROPOSED TRACKING PAD (A C400)
- PROPOSED EROSION MATTING WISDOT APPROVED CLASS 1 TYPE B (D C400)
- EXISTING CONTOUR (5)
- PROPOSED CONTOUR (5)
- UTILITY REMOVAL
- CURB REMOVAL (XXXXXXX)
- STRUCTURE REMOVAL
- PAVEMENT REMOVAL

GRAPHIC SCALE
0 20 40

TO OBTAIN LOCATIONS OF PARTICIPATING UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS. STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

GENERAL NOTES:

1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
5. SEE SHEET C401 FOR A COMPLETE LIST OF EROSION CONTROL NOTES AND DETAILS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO START OF LAND DISTURBING ACTIVITIES.
6. DO NOT BEGIN LAND DISTURBING ACTIVITIES UNTIL AN EROSION CONTROL PERMIT IS OBTAINED FROM LOCAL JURISDICTION.

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

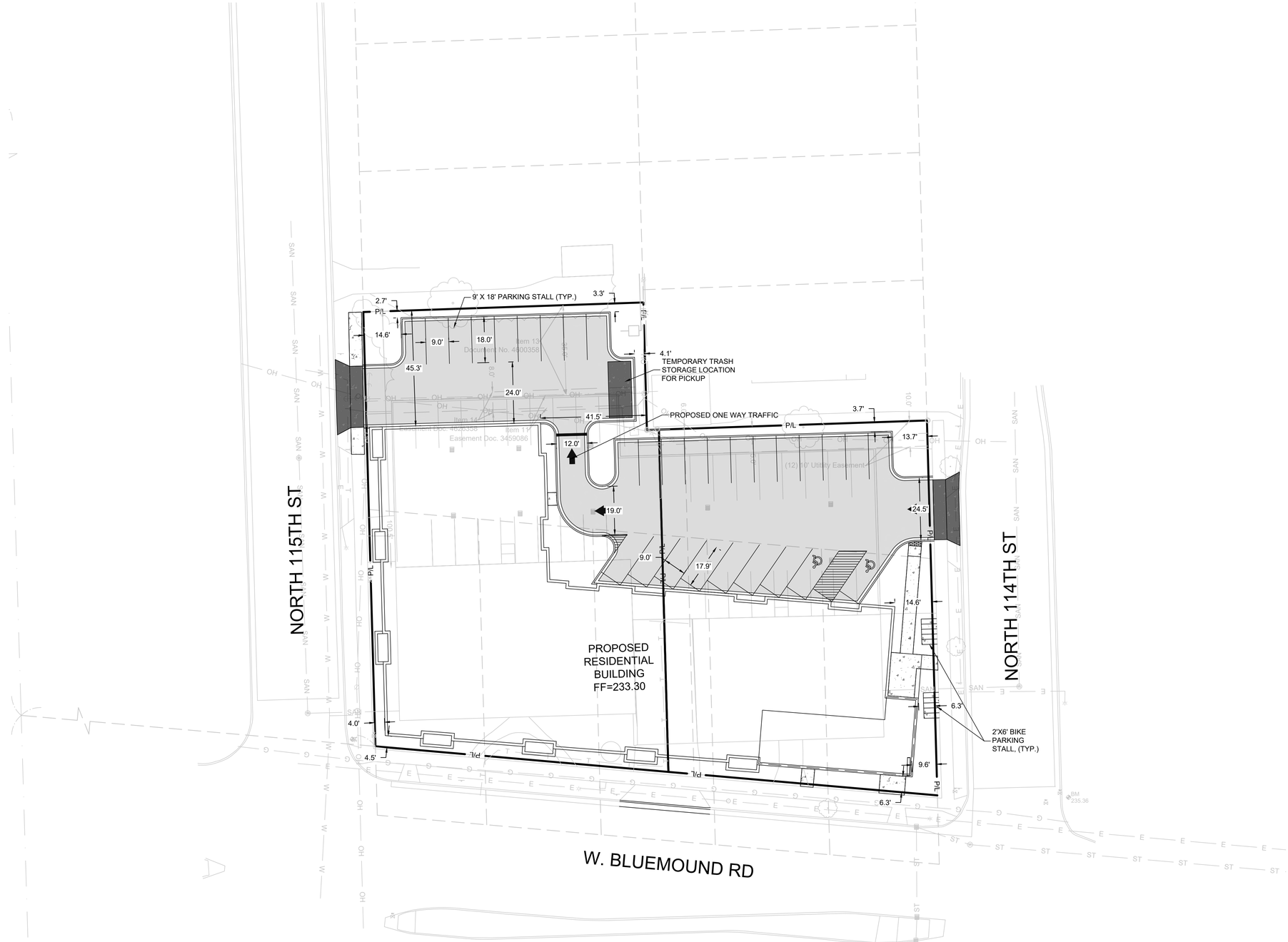
114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

EROSION CONTROL PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

SCALE:	1"=20'
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	2023.01.31
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----

SHEET NO:
C002



SITE INFORMATION			
SITE AREA	34783	0.799 AC	
SITE DISTURBED AREA	34783	0.799 AC	
EXISTING IMPERVIOUS AREA	26310	0.604 AC	75.6 %
PROPOSED IMPERVIOUS AREA	30065	0.690 AC	86.4 %
TOTAL OUTDOOR PARKING SPACES	28		
OUTDOOR ADA PARKING SPACES	2		
TOTAL UNDERGROUND PARKING SPACES	39		
UNDERGROUND ADA PARKING SPACES	2		
TOTAL PARKING PROVIDED	71		

LEGEND:

- B C401 — 5" THICK CONCRETE WALK
- C C401 — HEAVY DUTY CONCRETE PAVEMENT
- D C401 — ASPHALT SURFACE
- A C401 — CURB & GUTTER (ACCEPT)
- A C401 — CURB & GUTTER (REJECT)

GRAPHIC SCALE
0 20 40

GENERAL NOTES:

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5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
6. WORK WITHIN THE PUBLIC RIGHT OF WAY, INCLUDING BUT NOT LIMITED TO DRIVEWAY OPENINGS, SIDEWALK AND RAMPS, PAVING, AND CURB AND GUTTER SHALL BE COMPLETED PER MUNICIPAL AND/OR COUNTY REQUIREMENTS AND STANDARDS.
7. EARTHWORK SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

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MILW. AREA 259-1181

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114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

SITE PLAN

PRELIMINARY NOT FOR CONSTRUCTION

SCALE:	1"=20'
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
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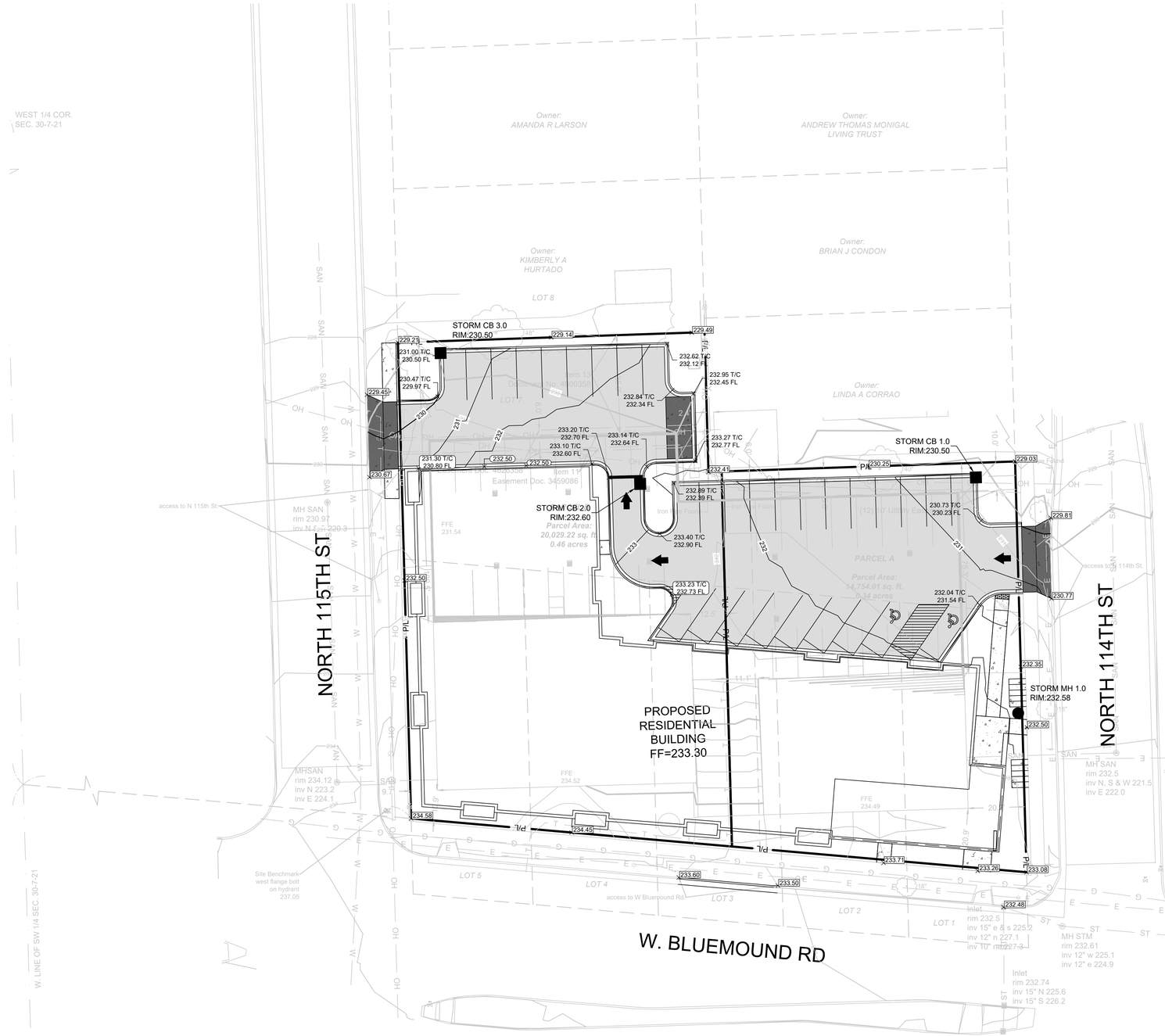
SHEET NO:	C100



LEGEND:

- B C401 — 5" THICK CONCRETE WALK
- C C401 — HEAVY DUTY CONCRETE PAVEMENT
- D C401 — ASPHALT SURFACE
- A C401 — CURB & GUTTER (ACCEPT)
- A C401 — CURB & GUTTER (REJECT)
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- 100.50 T/C 100.00 FL — PROPOSED CURB & GUTTER SPOT GRADE T/C: TOP OF CURB GRADE FL: FLOW LINE CURB GRADE
- 100.00 — PROPOSED ASPHALT SPOT GRADE
- 100.00 — EXISTING SURFACE SPOT GRADE (MATCH)

GENERAL NOTES:

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GRAPHIC SCALE
0 20 40

114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

GRADING PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

SCALE:	1"=20'
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DESIGN DATE:	----
PLOT DATE:	1/31/2023
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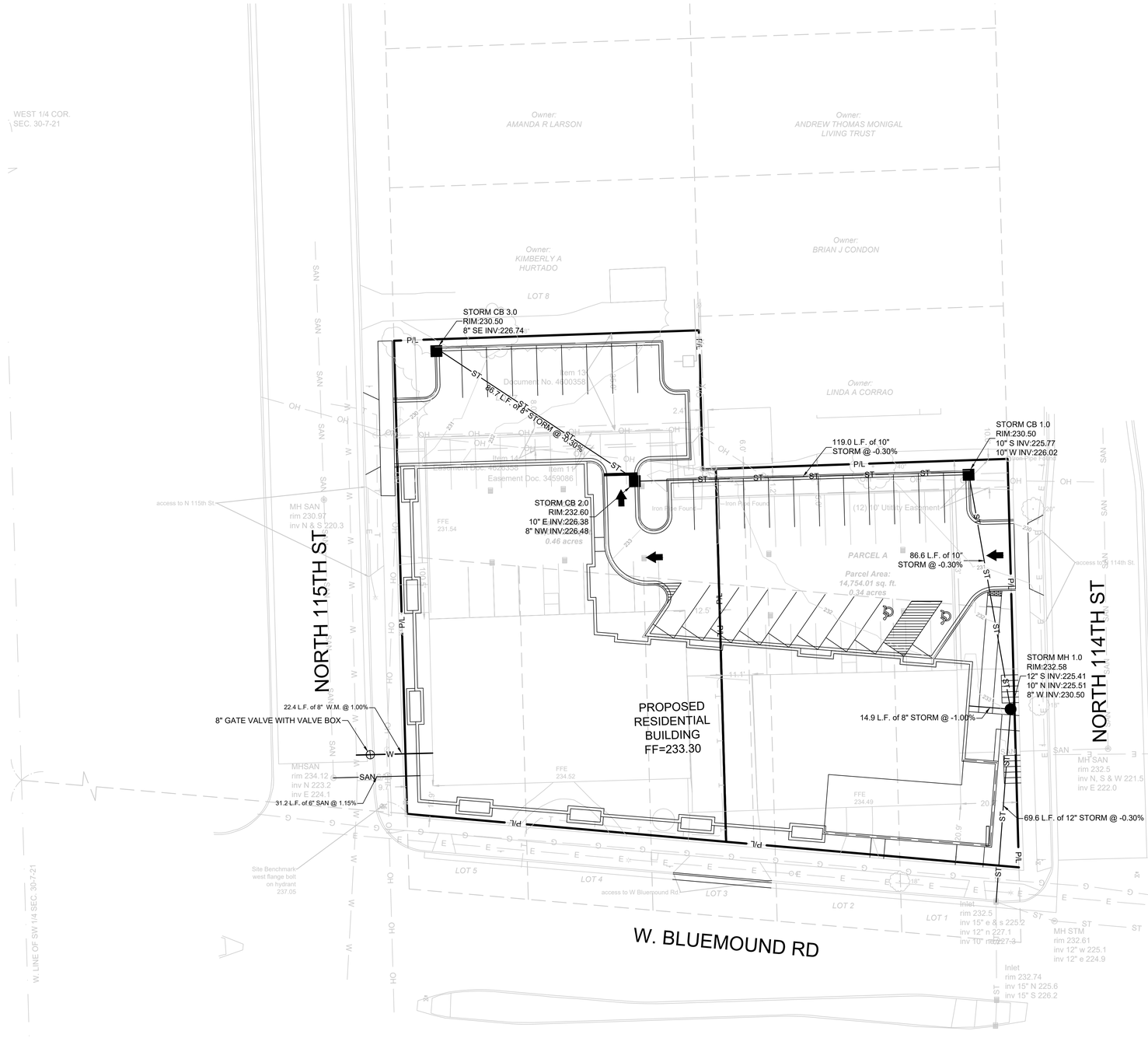
SHEET NO:	C200



LEGEND:

—W—	PROPOSED WATER SERVICE
—SAN—	PROPOSED SANITARY SERVICE
—ST—	PROPOSED STORM SEWER
■ F C401	PROPOSED STORM INLET
● G C401	PROPOSED STORM MANHOLE

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5. ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
6. PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUBS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
7. WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
8. PRIVATE STORM SEWER 12-INCH DIAMETER OR LARGER SHALL BE HDPE. BELOW 12-INCH DIAMETER SHALL BE PVC SDR-35 ASTM D3034. PRIVATE WATER MAIN SHALL BE CLASS 235 DR 18 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
9. COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES.
10. IF PROJECT IS DESIGN BUILD MEP, THE GENERAL CONTRACTOR IS REQUIRED TO PROVIDE FINAL SEWER AND WATER DESIGN SHOWING LOCATION, INVERTS AND SIZES TO THE ENGINEER FOR FINAL REVIEW AND VERIFICATION PRIOR TO STARTING UNDERGROUND UTILITY CONSTRUCTION.
11. WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS HALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGA-LUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS.
12. INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGA-LUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER FILE NO'S:44,45,46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS.

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GRAPHIC SCALE
0 20 40

114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

UTILITY PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

SCALE:	1"=20'
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----

SHEET NO:
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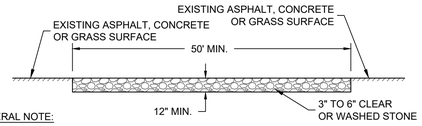
C300
21393

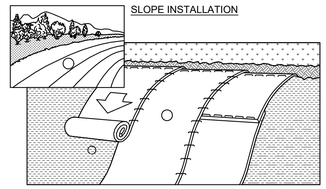
I:\Altius Building\21393 - 114th and Bluemound\060 CAD\030_Production Sheets\100_Civil\C300 Utility Plan.dwg



GENERAL NOTE:

1. STONE TRACKING PAD SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1057
2. AN APPROVED MANUFACTURED TRACKOUT CONTROL DEVICE SYSTEM CONFORMING TO WDNR TECHNICAL STANDARD #1057 MAY BE USED AS AN ALTERNATIVE TO A STONE TRACKING PAD

A CONSTRUCTION ENTRANCE - WDNR TS-1057
SCALE:NTS

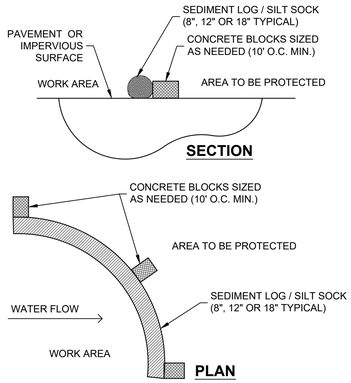


1. ECRMs (EROSION CONTROL REVEGATIVE MATS) SHALL BE INSTALLED AFTER ALL TOPSOILING, FERTILIZING, LIMING, AND SEEDING IS COMPLETE.
2. THE MAT SHALL BE IN FIRM AND INTIMATE CONTACT WITH THE SOIL. IT SHALL BE INSTALLED AND ANCHORED PER THE MANUFACTURER'S RECOMMENDATION.
3. TRMs (TURF-REINFORCEMENT MAT) SHALL BE INSTALLED INCONJUCTION WITH THE TOPSOILING OPERATION AND SHALL BE FOLLOWED BY ECRM INSTALLATION.
4. AT TIME OF INSTALLATION, DOCUMENT THE MANUFACTURER AND MAT TYPE BY RETENTION OF MATERIAL LABELS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. RETAIN THIS DOCUMENTATION UNTIL THE SITE HAS BEEN STABILIZED.

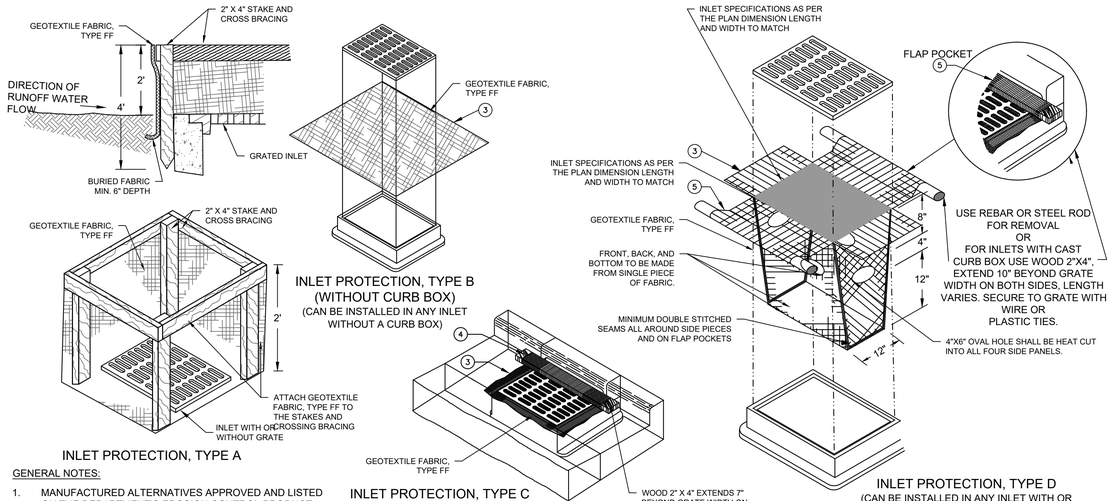
NOTES:

1. EROSION MATTING SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1052.
2. INSTALL PER MANUFACTURERS SPECIFICATIONS.

D EROSION MATTING - WDNR TS-1052
SCALE:NTS



B SEDIMENT LOG - SILT SOCK ON PAVEMENT
SCALE:NTS



GENERAL NOTES:

1. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
2. 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.

(3) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

(4)

(5) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

C INLET PROTECTION - WDNR TS-1060
SCALE:NTS

INSTALLATION NOTES

TYPE B & C
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACES AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

GENERAL NOTE
INLET PROTECTION SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1060

THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 10-2

EROSION CONTROL NOTES:

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.
2. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY. DOCUMENT AND MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH WDNR NR216 REQUIREMENTS.
4. SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
5. FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
6. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.
7. PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN ADJACENT STREETS FREE OF DUST AND DIRT.
8. SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ANY TOPSOIL AND FILL STOCKPILES.
9. SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE MEASURES SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
10. WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
11. TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING, TO THE SATISFACTION OF THE MUNICIPALITY, BEFORE THE END OF THE WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR PRACTICE SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. NOTIFY MUNICIPALITY OF ANY CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.
12. SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORKDAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORKDAY.
13. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT PRACTICE FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.
14. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILES. IF REMAINING FOR MORE THAN THIRTY DAYS, PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS OR OTHER MEANS.
15. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY PRACTICES, SUCH AS FILTER FABRIC FENCES, STRAW BALES, SEDIMENT AND SEDIMENT TRAPS, FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS SHALL BE REMOVED.
16. NOTIFY THE LOCAL MUNICIPALITY HAVING JURISDICTION WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.
17. OBTAIN PERMISSION FROM THE LOCAL MUNICIPALITY HAVING JURISDICTION PRIOR TO MODIFYING THE EROSION CONTROL PLAN.
18. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
19. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.
20. CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE DISTURBANCE OF EXISTING VEGETATION DURING CONSTRUCTION.
21. CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE COMPACTION OF TOPSOIL AND PRESERVE TOPSOIL IN GREENSPACE AREAS.
22. WASH WATER FROM VEHICLES AND WHEEL WASHING SHALL BE CONTAINED AND TREATED PRIOR TO DISCHARGE.
23. CONTRACTOR SHALL MAINTAIN SPILL KITS ON-SITE.
24. PERMANENT TURF SEEDING OF DISTURBED AREA MUST OCCUR PRIOR TO SEPTEMBER 15TH. IF ADEQUATE TIME IS NOT AVAILABLE TO APPLY PERMANENT SEEDING PRIOR TO SEPTEMBER 15TH, THEN DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH AN ANNUAL RYE GRASS PER WDNR TECHNICAL STANDARD 1059, WHERE THE TEMPORARY SEEDING MUST OCCUR PRIOR TO OCTOBER 15TH.
25. IF TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED TO DISTURBED AREA PER WDNR TECHNICAL STANDARD 1050. INSPECT ANIONIC PAM APPLICATION AT A MINIMUM FREQUENCY OF EVERY TWO MONTHS AND REAPPLY AS NECESSARY

CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCING AND INLET PROTECTION.
3. INITIATE STOCKPILING OF IMPORTED MATERIAL. PLACE SILT FENCE AROUND STOCKPILE(S).
4. STRIP TOPSOIL FROM STORM WATER BASIN LOCATION AND STOCKPILE.
5. CONSTRUCT STORM WATER BASIN AND INSTALL TEMPORARY OUTLET AND EMERGENCY OVERFLOW. BASIN IS TO BE USED AS A SEDIMENTATION BASIN DURING THE COURSE OF CONSTRUCTION.
6. CONSTRUCT DIVERSION SWALES, DIRECT RUNOFF TO STORM BASIN. INSTALL ASSOCIATED DITCH CHECKS.
7. INSTALL RIP-RAP AT STORM WATER BASIN AS SHOWN ON THE PLANS.
8. STRIP TOPSOIL FROM REMAINDER OF SITE IN A PROGRESSIVE MANNER, AND STOCKPILE.
9. PERFORM ROUGH SITE GRADING. STABILIZE FINISHED AREAS AS THE WORK PROGRESSES. USE EROSION MATTING WHERE CALLED FOR ON THE PLANS. PER WDNR TECHNICAL STANDARD 1059: AREAS THAT RECEIVE TEMPORARY SEEDING SHALL HAVE A MINIMUM TOPSOIL DEPTH OF 2 INCHES. AREAS THAT RECEIVE PERMANENT SEEDING SHALL HAVE A MINIMAL TOPSOIL DEPTH OF 4 INCHES.
10. PREPARE BUILDING PAD AND BEGIN FOUNDATIONS WORK FOR BUILDING.
11. INSTALL UTILITIES. INSTALL ANY ADDITIONAL INLET PROTECTION ON NEW STORM SEWER AND INSTALL RIP-RAP AT NEW STORM SEWER OUTFALLS.
12. REMOVE TEMPORARY OUTLET CONTROL STRUCTURE ON BASIN AND INSTALL PAVEMENTS.
13. STABILIZE AREAS REMAINING AREAS WITHIN 7 DAYS OF COMPLETION OF FINAL GRADING AND TOPSOILING.
14. REMOVE EXCESS SEDIMENT FROM STORMWATER BASINS AND RETURN BASINS TO THEIR DESIGN DIMENSIONS AND VOLUMES.
15. REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED.

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114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

EROSION CONTROL DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

SCALE:	
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----

SHEET NO:
C400

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C400
21393

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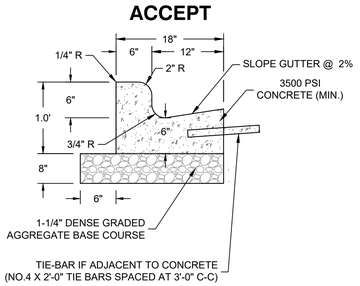
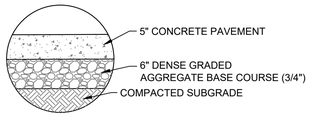
WAUWATOSA, WISCONSIN

DETAILS

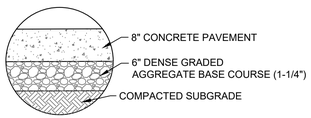
PRELIMINARY NOT FOR CONSTRUCTION



A 18 INCH CONCRETE CURB AND GUTTER
SCALE:NTS



B CONCRETE SIDEWALK SECTION
SCALE:NTS



C CONCRETE PAVEMENT SECTION
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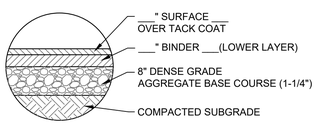
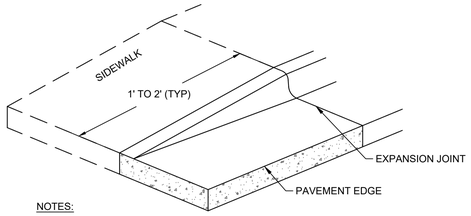
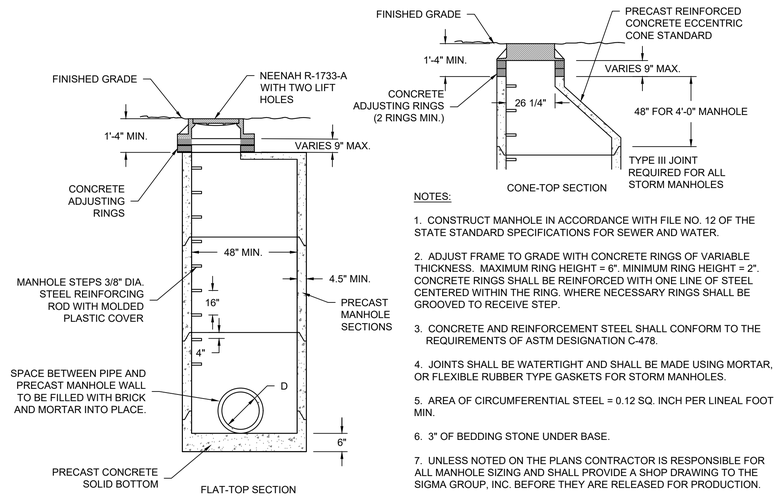


D ASPHALT PAVEMENT SECTION
SCALE:NTS



NOTES:
IF SIDEWALK IS ADJACENT TO CURB TAPER, TAPER SHALL BE EXTENDED TO 10' TO MAINTAIN 5% MAX SLOPE ON WALK FOR ADA ACCESS

E CURB TAPER
SCALE:NTS

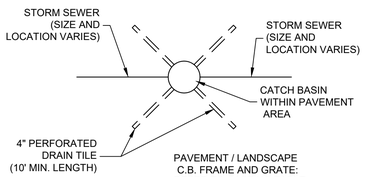


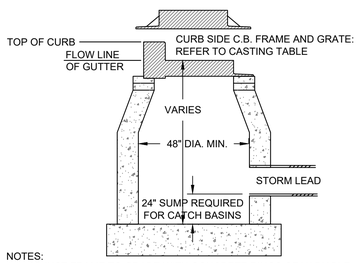
NOTES:

1. CONSTRUCT MANHOLE IN ACCORDANCE WITH FILE NO. 12 OF THE STATE STANDARD SPECIFICATIONS FOR SEWER AND WATER.
2. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6". MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY RINGS SHALL BE GROOVED TO RECEIVE STEP.
3. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
4. JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING MORTAR, OR FLEXIBLE RUBBER TYPE GASKETS FOR STORM MANHOLES.
5. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT MIN.
6. 3" OF BEDDING STONE UNDER BASE.
7. UNLESS NOTED ON THE PLANS CONTRACTOR IS RESPONSIBLE FOR ALL MANHOLE SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.

G PRECAST STORM MANHOLE
SCALE:NTS

CATCH BASIN
WITHIN LOW POINT OF PAVEMENT AREA

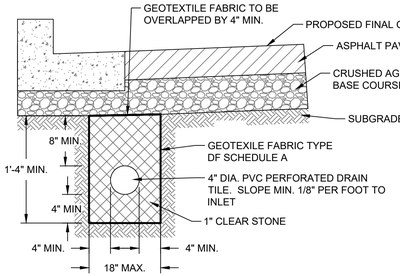




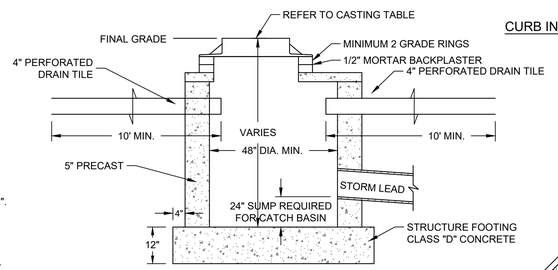
NOTES:

1. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6". MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING.
2. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
3. 3" BEDDING OF STONE UNDER BASE REQUIRED ON WET SUB-GRADE.
4. UNLESS NOTED ON THE PLANS CONTRACTOR IS RESPONSIBLE FOR ALL CATCH BASIN SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.

F INLET AND CATCH BASIN
SCALE:NTS



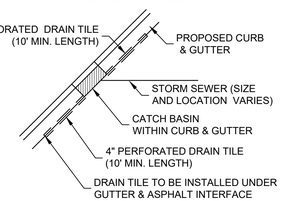
CURB INLET LOCATION
SECTION



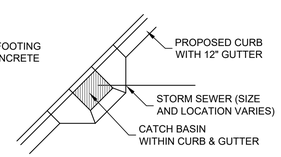
CATCH BASIN / INLET CASTING TABLE

	IF 18" CURB & GUTTER		IF 24" CURB & GUTTER		IF 30" CURB AND GUTTER	
	CASTING	GRATE	CASTING	GRATE	CASTING	GRATE
CURB INLET	NEENAH R-3067	A	NEENAH R-3067	A	NEENAH R-3228H	C
AREA INLET	NEENAH R-2050	C				

NOTE:
DRAIN TILE SHALL HAVE TWO (2) SEGMENTS POSITIONED ALONG THE GUTTER & ASPHALT INTERFACE.



CURB INLET WITHIN CURB & GUTTER
PLAN



CONCRETE BUMP OUT TO BE
APPLIED FOR 12" GUTTER PAN

SCALE:	
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----
SHEET NO:	C401

GENERAL:

1. EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, AND NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR ENGINEER FOR THEIR ACCURACY OR COMPLETENESS.
2. CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR SHALL HAVE SITE MARKED BY DIGGER'S HOTLINE AND SHALL HAVE PRIVATE UTILITIES MARKED BY A PRIVATE UTILITY LOCATOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS, AND SIZES OF EXISTING UTILITIES AND SHALL CHECK ALL UTILITY CROSSINGS AND PROPOSED CONNECTIONS FOR CONFLICTS/DISCREPANCIES PRIOR TO INITIATING CONSTRUCTION. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE ENGINEER SO REDESIGN MAY OCCUR IF NEEDED.
3. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLANS. LENGTHS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

SITE CLEARING:

1. EXCEPT FOR STRIPPED TOPSOIL OR OTHER MATERIALS INDICATED TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
2. MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.
3. SALVABLE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNER'S PREMISES WHERE INDICATED.
4. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
5. DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
6. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
7. LOCATE AND CLEARLY FLAG TREES AND VEGETATION TO REMAIN OR TO BE RELOCATED.
8. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION; RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.
9. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES INDICATED TO BE REMOVED; ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
10. EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY THE OWNER AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES.
11. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED; PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.
12. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
13. STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
14. STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.
15. REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
16. SAWCUT ALL PAVEMENTS FULL DEPTH PRIOR TO REMOVAL; SAWCUTS SHALL BE IN STRAIGHT LINES PERPENDICULAR AND/OR PARALLEL TO EXISTING PAVEMENT JOINTS AND PAVEMENT EDGES.
17. REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
18. SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NONRECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

SITE WATER SERVICE:

1. COMPLY WITH STANDARDS OF STATE PLUMBING CODE (SPS CH. 382, 384), LOCAL WATER UTILITY REQUIREMENTS AND STANDARDS OF AUTHORITIES HAVING JURISDICTION FOR FIRE-SUPPRESSION AND WATER SERVICE PIPING INCLUDING MATERIALS, FITTINGS, APPURTENANCES, INSTALLATION, TESTING, SERVICE TAPS, ETC. IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND STATE PLUMBING CODE OR LOCAL JURISDICTIONAL AUTHORITY, STATE PLUMBING CODE AND LOCAL JURISDICTIONAL AUTHORITY REQUIREMENTS GOVERN.
2. DO NOT INTERRUPT SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY OWNERS OF SUCH FACILITIES AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER-DISTRIBUTION SERVICE.
3. WATER SERVICE PIPING MAY BE EITHER DUCTILE IRON WATER PIPE OR PVC WATER PIPE AS ALLOWED BY THE LOCAL WATER UTILITY.
4. DUCTILE IRON WATER PIPE CONFORMING TO THE REQUIREMENTS OF THE AMERICAN NATIONAL STANDARD FOR DUCTILE IRON PIPE, CENTRIFUGALLY CAST, AWWA C151/A21.51 - LATEST REVISION AND REQUIREMENTS OF CHAPTER 8.18.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
    a. CLASS 52
    b. CEMENT MORTAR LINING AND INTERNAL AND EXTERNAL BITUMINOUS COATS IN ACCORDANCE WITH SECTION 51.8 OF AWWA C151.
    c. PUSH-ON GASKET PIPE
    d. PLAIN RUBBER GASKETS
    e. BONDING STRAPS TO PROVIDE ELECTRICAL CONDUCTIVITY WITHOUT FIELD TESTING
5. JOINTS FOR DUCTILE IRON PIPE: JOINTS SHALL BE RUBBER GASKET JOINTS; CONFORM TO THE REQUIREMENTS OF AMERICAN NATIONAL STANDARD FOR RUBBER GASKET JOINTS FOR DUCTILE IRON PRESSURE PIPE AND FITTINGS (ANSI/AWWA C111/A21.11, LATEST EDITION)
6. FITTINGS FOR DUCTILE IRON PIPE: CONFORM TO THE REQUIREMENTS OF AMERICAN NATIONAL STANDARD FOR DUCTILE IRON AND GRAY IRON FITTINGS, 3" THROUGH 48" FOR WATER ANSI/AWWA C110/A21.10, LATEST EDITION); CLASS 250 MECHANICAL JOINT PIPE FITTINGS; CEMENT LINED; ALL BELLS; ENTIRE FITTING TARRED; CONDUCTIVE MECHANICAL JOINT (NO LEAD) RUBBER GASKETS, FLANGES, AND BOLTS.
7. PVC AWWA PIPE: AWWA C900, CLASS 235 WITH BELL END WITH GASKET AND WITH SPIGOT END AND MEETING REQUIREMENTS OF CHAPTER 8.20.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. FITTINGS SHALL BE IN ACCORDANCE WITH CHAPTER 8.22.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. MECHANICAL -JOINT, DUCTILE IRON FITTINGS: AWWA C153, DUCTILE-IRON COMPACT PATTERN. GLANDS, GASKETS AND BOLTS: AWWA C111, DUCTILE IRON GLANDS, RUBBER GASKETS AND STEEL BOLTS.
8. GATE VALVES: CONFORM TO AWWA C-500 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN SUITABLE FOR DIRECT BURY.
9. VALVE BOXES: CAST IRON CONFORMING TO ASTM DESIGNATION A-48, CLASS 20 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
10. FIRE HYDRANTS: TO MEET LOCAL STANDARDS.
11. WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS HALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGA-LUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS
12. GENERAL WATER PIPE INSTALLATION: IN ACCORDANCE WITH CHAPTER 4.3.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
13. INSTALL DUCTILE-IRON, WATER-SERVICE PIPING ACCORDING TO AWWA C600 AND CHAPTER 4.4.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
14. ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C105, LATEST EDITION AND IN ACCORDANCE WITH CHAPTER 4.4.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. ALL JOINTS AND FITTINGS SHALL HAVE POLYETHYLENE ENCASEMENT INSTALLED PER MANUFACTURER'S REQUIREMENTS AND PROCEDURES.
15. INSTALL PVC AWWA PIPE ACCORDING TO ASTM F645 AND AWWA M23 AND CHAPTER 4.6.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
16. INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGA-LUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER FILE NO'S:44,45,46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS.INSTALL WATER SERVICE PIPING SUCH THAT THERE IS A MINIMUM OF 6' OF COVER OVER THE TOP OF THE WATER SERVICE PIPING.

SITE WATER SERVICE CONT.:

17. BEDDING AND COVER FOR WATER SERVICE PIPING SHALL BE IN ACCORDANCE WITH SECTION 4.3.3 AND FILE NO. 36 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. TRENCH BACKFILL SHALL BE GRANULAR B BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION ON-SITE.
18. INSTALL TRACER WIRE FOR NON-METALLIC WATER SERVICES IN ACCORDANCE WITH SPS SECTION 382.40(8)(K). TRACER WIRE INSULATION COLOR SHALL BE BLUE FOR POTABLE WATER SERVICE PIPING.
19. DUCTILE-IRON PIPING, RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 4.4.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
20. PVC PIPING GASKETED JOINTS: USING JOINING MATERIALS ACCORDING TO AWWA C900. CONSTRUCT JOINTS WITH ELASTOMERIC SEALS AND LUBRICANTS ACCORDING TO ASTM D2774 OR ASTM D3139 AND PIPE MANUFACTURER'S WRITTEN INSTRUCTIONS.
21. CONDUCT HYDROSTATIC TESTS IN ACCORDANCE WITH CHAPTER 4.15.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
22. CLEAN AND DISINFECT WATER SERVICE PIPING IN ACCORDANCE WITH SPS CHAPTER 82.40(8)(I) AND AWWA C651.

SANITARY SEWERAGE:

1. ALL PRIVATE SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DSPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
2. ALL PUBLIC SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION (STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS.
3. PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
4. MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS. DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
5. MANHOLES DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
6. SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
7. PIPE JOINT CONSTRUCTION: FOLLOW PIPING MANUFACTURER'S RECOMMENDATIONS; JOIN PVC SEWER PIPE ACCORDING TO ASTM D2321 AND ASTM D 3212 FOR ELASTOMERIC GASKET JOINTS. JOIN DISSIMILAR PIPE MATERIALS WITH NONPRESSURE-TYPE, FLEXIBLE COUPLINGS
7. PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FORM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE LIGHT DUTY, TOP LOADING CLASSIFICATION CLEANOUTS IN EARTH OR UNPAVED FOOT TRAFFIC AREAS; USE MEDIUM DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN PAVED FOOT TRAFFIC AREAS; USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN VEHICULAR TRAFFIC AREAS. SET CLEANOUT FRAMES AND COVERS IN PAVEMENT AREAS FLUSH WITH PAVEMENT SURFACE.
8. CLASS B COMPACTED TRENCH SECTION (FILE NO. NO. 4 OF STANDARD SPECIFICATIONS) SHALL BE UTILIZED. BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF THE STANDARD SPECIFICATIONS.
9. TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
10. MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
11. AFTER INSTALLATION OF SEWER PIPE CLEAN ALL DEBRIS FROM SEWER AND INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. CONDUCT DEFLECTION TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SECTION 3.2.6(I)4 OF THE STANDARD SPECIFICATIONS; REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS. TEST NEW BUILDING SEWER IN ACCORDANCE WITH SECTION 5.4.0 OF THE STANDARD SPECIFICATIONS. REPLACE LEAKING PIPE USING NEW PIPE MATERIALS AAND REPEAT TESTING UNTIL LEAKAGE IS WITHIN ALLOWANCES SPECIFIED.

STORM DRAINAGE:

1. ALL PRIVATE STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DSPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
2. ALL PUBLIC STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION (STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS.
3. PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
4. REINFORCED CONCRETE PIPE: ASTM C76 WITH BELL AND SPIGOT ENDS AND GASKETED JOINTS WITH ASTM C443 RUBBER GASKETS IN ACCORDANCE WITH CHAPTER 8.6.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
5. HDPE PIPE: ADS N12 PIPE AS APPROVED ON THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCT REGISTER.
6. CATCH BASINS: STANDARD PRECAST CONCRETE CATCH BASINS CONFORMING TO CHAPTER 3.6.0 OF THE STANDARD SPECIFICATIONS AND IN GENERAL CONFORMANCE WITH FILE NO. 26 OF THE STANDARD SPECIFICATIONS. DEPTH AND DIAMETER AS INDICATED ON PLANS. CATCH BASIN SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
7. FRAMES AND GRATES: AS INDICATED ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SPECIFIED FRAME/GRATE IS COMPATIBLE WITH STRUCTURE; IF NOT, NOTIFY ENGINEER.
8. MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS. DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
9. MANHOLES AND CATCH BASINS DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
10. SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORDANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
11. PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FORM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE LIGHT DUTY, TOP LOADING CLASSIFICATION CLEANOUTS IN EARTH OR UNPAVED FOOT TRAFFIC AREAS; USE MEDIUM DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN PAVED FOOT TRAFFIC AREAS; USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN VEHICULAR TRAFFIC AREAS. SET CLEANOUT FRAMES AND COVERS IN PAVEMENT AREAS FLUSH WITH PAVEMENT SURFACE.
12. CLASS B COMPACTED TRENCH SECTION (FILE NO. NO. 4 OF STANDARD SPECIFICATIONS) SHALL BE UTILIZED. BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF THE STANDARD SPECIFICATIONS.
13. TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
14. MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
15. CATCH BASIN INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.6 OF THE STANDARD SPECIFICATIONS. CATCH BASIN EXCAVATION AND PREPARATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.4(A) AND (B) OF THE STANDARD SPECIFICATIONS. FRAMES AND GRATES SHALL BE SET TO THE ELEVATIONS SHOWN ON THE PLANS.
16. AFTER INSTALLATION OF SEWER PIPE CLEAN ALL DEBRIS FROM SEWER AND INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. CONDUCT DEFLECTION TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SECTION 3.2.6(I)4 OF THE STANDARD SPECIFICATIONS; REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS.

EARTH MOVING:

1. ALL EARTH WORK SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER PRESENTED IN THE SITE GEOTECHNICAL REPORT, GEOTECHNICAL ENGINEER RECOMMENDATIONS MADE IN THE FIELD AND THESE SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER SHALL GOVERN.
2. CONTRACTOR SHALL PROVIDE MATERIAL TEST REPORTS FROM A QUALIFIED TESTING AGENCY INDICATING TEST RESULTS FOR CLASSIFICATION ACCORDING TO ASTM D2487 AND LABORATORY COMPACTION CURVES ACCORDING TO ASTM D 1557 FOR EACH ON-SITE AND OFF-SITE SOIL MATERIAL PROPOSED FOR FILL AND BACKFILL.
3. CONTRACTOR SHALL PROVIDE PREEXCAVATION PHOTOS OR VIDEOS SHOWING EXISTING CONDITIONS OF ADJOINING STRUCTURES AND SITE IMPROVEMENTS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY EARTHWORK OPERATIONS.
4. OLD BUILDING FOUNDATIONS, BUILDING REMNANTS OR UNSUITABLE BACKFILL MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND THE NEW BUILDING PAD AREAS. THE RESULTING EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL.
5. FOUNDATIONS, FOUNDATION WALLS OR CONCRETE FLOOR SLABS SHALL BE REMOVED TO A MINIMUM OF TWO FEET BELOW PROPOSED SUBGRADE WITHIN PROPOSED PARKING AND GREENSPACE AREAS. BASEMENT SLABS LOCATED BELOW 2 FEET FROM PLANNED SUBGRADE ELEVATION MAY BE LEFT IN PLACE BUT SHALL BE BROKEN INTO MAXIMUM 6 INCH PIECES TO FACILITATE DRAINAGE.
6. SATISFACTORY SOILS FOR FILL: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER OR ANY SOIL GROUP OR COMBINATION OF GROUPS APPROVED OF BY THE PROJECT GEOTECHNICAL ENGINEER.
7. UNSATISFACTORY SOILS FOR FILL: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487 OR A COMBINATION OF THESE GROUPS UNLESS DEEMED SATISFACTORY BY THE PROJECT GEOTECHNICAL ENGINEER. UNSATISFACTORY SOILS ALSO INCLUDE SOILS NOT MAINTAINED WITHIN 3 PERCENT OF OPTIMUM SOIL MOISTURE CONTENT AT THE TIME OF COMPACTION.
8. AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION.
9. ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; WITH AT LEAST 90 PERCENT PASSING A 1-1/2-INCH (37.5-MM) SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 SIEVE OR ANY SOIL DEEMED ACCEPTABLE FOR ENGINEERED FILL BY THE PROJECT GEOTECHNICAL ENGINEER. ENGINEERED FILL SHALL BE FREE OF ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIAL AND HAVE A MAXIMUM PARTICLE SIZE LESS THAN 3 INCHES. CLAY FILLS SHALL HAVE A LIQUID LIMIT OF LESS THAN 49 AND PLASTICITY INDEX BETWEEN 11 AND 25.
10. BEDDING COURSE FOR SEWERS AND WATER SERVICE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND CONFORMING TO THE REQUIREMENTS OF SECTION 8.43.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
11. DRAINAGE COURSE BENEATH BUILDING SLABS: NARROWLY GRADED MIXTURE OF WASHED, CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL; ASTM D 448; COARSE-AGGREGATE GRADING SIZE 57; WITH 100 PERCENT PASSING A 1-1/2-INCH (37.5-MM) SIEVE AND 0 TO 5 PERCENT PASSING A NO. 8 SIEVE.
12. TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
13. PIPE COVER MATERIAL: CONFORM TO SECTION 8.43.3 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
14. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
15. SHORING, SHEETING AND BRACING: SHORE, BRACE OR SLOPE BANKS OF EXCAVATION TO PROTECT WORKMEN, BANKS, ADJACENT PAVING, STRUCTURES, AND UTILITIES TO MEET OSHA REQUIREMENTS. DESIGN OF TEMPORARY SUPPORT OF EXCAVATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
16. EXCAVATE TO SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. UNCLASSIFIED EXCAVATED MATERIALS MAY INCLUDE ROCK, SOIL MATERIALS, AND OBSTRUCTIONS. NO CHANGES IN THE CONTRACT SUM OR THE CONTRACT TIME WILL BE AUTHORIZED FOR ROCK EXCAVATION OR REMOVAL OF OBSTRUCTIONS.
17. PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH FULLY LOADED TANDEM AXLE DUMP TRUCK OR RUBBER TIRED VEHICLE OF SIMILAR SIZE AND WEIGHT, TYPICALLY 9 TONS/AXLE, WHERE COHESIVE SOILS ARE ENCOUNTERED OR WITH A SMOOTH DRUMMED VIBRATORY ROLLER WHERE GRANULAR SOILS ARE PRESENT. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES AND PROOFROLL IN DRY WEATHER. PROOF ROLL IN PRESENCE OF PROJECT GEOTECHNICAL ENGINEER OR TECHNICIAN. SOILS THAT ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD (TYPICALLY >1") SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED ENGINEERED FILL. IN PAVEMENT AREAS WHERE UNDERCUTS ARE PERFORMED, THE EDGES OF THE OVEREXCAVATIONS SHALL BE FEATHERED INOT THE SURROUNDING SUITABLE SOIL SO THAT EDGE FAILURE OF THE OVEREXCAVATED AREA DOES NOT OCCUR.
18. DUE TO CLAYEY SOILS, IF UNDERCUTS OCCUR WITHIN PAVEMENT AREAS AND THEY ARE BACKFILLED WITH GRANULAR SOILS, THE BOTTOM OF THE OVEREXCAVATION SHALL BE SLOPED TO A DRAINTILE THAT IS IN KIND SLOPED TOWARD THE NEAREST STORM SEWER. MINIMUM SLOPES OF SUCH DRAINTILES SHALL BE 0.5%.
19. CONVENTIONAL DISKING AND AERATION TECHNIQUES SHALL BE USED TO DRY SOILS BEFORE PROOF ROLLING. ALLOT FOR PROPER DRYING TIME IN PROJECT SCHEDULE.
20. ENGINEERED FILL SHALL BE PLACED IN MAXIMUM LIFTS OF EIGHT INCHES OF LOOSE MATERIAL AND COMPACTED WITHIN 3% OF OPTIMUM SOIL MOISTURE CONTENT VALUE AND A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D1557. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
21. EXISTING OLD FILL MATERIAL SHALL BE REMOVED BELOW FOOTINGS OR FOUNDATION SUPPORTING FILL. ENGINEERED FILL BELOW FOOTINGS SHOULD HAVE AN IN-PLACE DENSITY OF 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. ENGINEERED FILL BELOW FOOTINGS SHALL BE EVALUATED BY IN-FIELD DENSITY TESTS DURING CONSTRUCTION.
22. WHERE UNSUITABLE BEARING SOILS ARE ENCOUNTERED IN A FOOTING EXCAVATION, THE EXCAVATION SHALL BE DEEPENED TO COMPETENT BEARING SOIL AND THE FOOTING LOWERED OR AN OVEREXCAVATION AND BACKFILL PROCEDURE PERFORMED. OVEREXCAVATION AND BACKFILL TREATMENT REQUIRES WIDENING THE DEEPENED EXCAVATION IN ALL DIRECTIONS AT LEAST 6 INCHES BEYOND THE EDGE OF THE FOOTING FOR EACH 12 INCHES OF OVEREXCAVATION DEPTH. THE OVEREXCAVATION SHALL BE BACKFILLED UP TO FOOTING BASE ELEVATION IN MAXIMUM 8 INCH LOOSE LIFTS WITH SUITABLE GRANULAR FILL MATERIAL AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. SOILS AT FOUNDATION BEARING ELEVATION IN THE FOOTING EXCAVATIONS SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
23. A MINIMUM OF FOUR INCHES OF DRAINAGE COURSE MAT SHALL BE PLACED BELOW BUILDING FLOOR SLABS. DRAINAGE COURSE SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557)
24. UTILITY TRENCHES FOR SEWER AND WATER SHALL CONFORM TO CLASS B COMPACTED TRENCH SECTION IN ACCORDANCE WITH FILE NO. 4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
25. BACKFILL UTILITY TRENCHES IN 4 TO 6 INCH LOOSE LIFTS COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE MOISTURE CONDITIONED TO BE WITH 3% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.
26. UTILITY BEDDING PLACEMENT: CONFORM TO SECTION 3.2.6 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. BEDDING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557).
27. COMPACTION TESTING OF UTILITY TRENCHES SHALL BE PERFORMED ONE FOR EVERY 200 CUBIC YARDS OF BACKFILL PLACED OR ONE FOR TEST PER 200 LINEAR FEET OF TRENCH FOR EACH LIFT, WHICHEVER IS LESS.
28. AGGREGATE BASE COURSE BENEATH PAVEMENTS SHALL BE PLACED AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. AGGREGATE BASE SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
29. GRADING GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED. SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
30. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY-CONTROL TESTING.
31. FOOTING SUBGRADE TESTING: EACH ISOLATED FOOTING SHALL INCLUDE AT LEAST ONE TEST PROBE. TEST PROBES SHALL BE PERFORMED EVERY 20 LINEAR FEET IN CONTINUOUS FOOTINGS.
32. BUILDING SLAB AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EVERY 2500 SQ. FT. OR LESS OF BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
33. PAVEMENT AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY LIFT FOR EVERY 2,500 SQUARE FEET OF PAVEMENT AREA, BUT IN NO CASES FEWER THAN 3 TESTS.
34. FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EACH 50 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
35. WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
36. DISPOSAL: REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNER'S PROPERTY.

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114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

SPECIFICATIONS

**PRELIMINARY
NOT FOR
CONSTRUCTION**

SCALE:	NTS
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----

SHEET NO:
C500

CONCRETE PAVING:

1. THE COMPOSITION, PLACING AND CONSTRUCTION OF CONCRETE PAVEMENTS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTIONS 415, 416, 501, 601, AND 602 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS AND SPECIFICATIONS.
2. CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES; JOB-MIX DESIGNS: CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS; AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
3. MANUFACTURER QUALIFICATIONS: MANUFACTURER OF READY-MIXED CONCRETE PRODUCTS WHO COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT AND APPROVED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
4. CONCRETE GRADE: GRADE A, GRADE A-2, OR A-FA CONFORMING TO SECTION 501.3.1.3 OF THE WISDOT STANDARD SPECIFICATIONS
5. AGGREGATES: CONFORM TO SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS. PROVIDE AGGREGATES FROM A SINGLE SOURCE.
6. WATER: ASTM C 94/C 94M AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
7. AIR-ENTRAINING ADMIXTURE: ASTM C 260 AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
8. CHEMICAL ADMIXTURES: PER SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
9. CURING MATERIALS IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
10. EXPANSION JOINT MATERIAL: CONFORM TO SECTION 415.2.3 OF THE WISDOT STANDARD SPECIFICATIONS.
11. MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE IN ACCORDANCE WITH SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
12. GENERAL EXECUTION: CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS.
13. PROOFROLL SUBGRADE AND AGGREGATE BASE AS OUTLINED IN EARTH MOVING SPECIFICATION PRIOR TO PLACEMENT OF PAVEMENTS.
14. SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
15. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.
16. JOINTS GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE INDICATED. CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS
17. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS.
18. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED.
19. CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS TO MATCH JOINTING OF EXISTING ADJACENT CONCRETE PAVEMENT.
20. EDGING: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.
21. CURBING: COMPLY WITH SECTION 601 OF THE WISDOT STANDARD SPECIFICATIONS.
22. SIDEWALKS: COMPLY WITH SECTION 602 OF THE WISDOT STANDARD SPECIFICATIONS.
23. MOISTEN AGGREGATE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED.
24. FINISH CURBING IN ACCORDANCE WITH SECTION 601.3.5 OF THE WISDOT STANDARD SPECIFICATIONS.
25. FINISH SIDEWALK AND PATIO IN ACCORDANCE WITH SECTION 602.3.2.3 OF THE WISDOT STANDARD SPECIFICATIONS (LIGHT BROOM FINISH).
26. FINISH CONCRETE VEHICULAR PAVEMENTS AND PADS IN ACCORDANCE WITH SECTION 415.3.8 OF THE WISDOT STANDARD SPECIFICATIONS (ARTIFICIAL TURF DRAG FINISH).
27. PROTECT AND CURE SIDEWALK IN ACCORDANCE WITH SECTION 602.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
28. PROTECT AND CURE CURBING IN ACCORDANCE WITH SECTION 601.3.7 OF THE WISDOT STANDARD SPECIFICATIONS.
29. PROTECT AND CURE VEHICULAR CONCRETE PAVING IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
30. REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION.
31. PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 7 DAYS AFTER PLACEMENT.
32. MAINTAIN CONCRETE PAVEMENT FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE PAVEMENT NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

ASPHALTIC PAVING:

1. THE COMPOSITION, PLACING AND CONSTRUCTION OF ASPHALTIC PAVEMENTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460, 465, AND 475 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS).
2. CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES; JOB-MIX DESIGNS: CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS; AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
3. MANUFACTURER QUALIFICATIONS: MANUFACTURER SHALL BE REGISTERED WITH AND APPROVED BY THE DOT OF THE STATE IN WHICH PROJECT IS LOCATED.
4. ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF BASE COURSE IS WET OR EXCESSIVELY DAMP OR IF THE FOLLOWING CONDITIONS ARE NOT MET: APPLY TACK COAT WHEN AMBIENT TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES FAHRENHEIT FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION; PLACE ASPHALTIC CONCRETE SURFACE COURSE WHEN TEMPERATURE IS ABOVE 40 DEGREES FAHRENHEIT; BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30 DEGREES FAHRENHEIT AND RISING. PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES. DO NOT APPLY BELOW THE MINIMUM PAVEMENT TEMPERATURE AS RECOMMENDED BY THE MANUFACTURER.
5. AGGREGATES SHALL BE IN ACCORDANCE WITH SECTION 460.2.2 OF THE WISDOT STANDARD SPECIFICATIONS.
6. ASPHALT MATERIALS SHALL BE IN ACCORDANCE WITH CHAPTER 455 OF THE WISDOT STANDARD SPECIFICATIONS.
7. PAVEMENT MARKING PAINT: PROVIDE PAINT FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCTS LIST. COLOR SHALL BE WHITE UNLESS INDICATED OTHERWISE ON PLANS.
8. HOT-MIX ASPHALT: ASPHALTIC BINDER COURSE AND SURFACE COURSE SHALL BE MIXTURE LT FOR REGULAR DUTY PAVEMENT AND LT FOR HEAVY DUTY PAVEMENT COMPLYING WITH THE WISDOT STANDARD SPECIFICATIONS. ASPHALTIC BINDER SHALL BE 58-28 S UNLESS NOTED.
9. AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE WISDOT STANDARD SPECIFICATIONS.
10. PAVEMENT PLACEMENT GENERAL: ASPHALT CONCRETE PAVING EQUIPMENT, WEATHER LIMITATIONS, JOB-MIX FORMULA, MIXING, CONSTRUCTION METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS.
11. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS.
12. SWEEP LOOSE GRANULAR PARTICLES FROM SURFACE OF AGGREGATE BASE COURSE PRIOR TO PAVEMENT PLACEMENT. DO NOT DISLODGE OR DISTURB AGGREGATE EMBEDDED IN COMPACTED SURFACE OF BASE COURSE.
13. SPREAD AND FINISH ASPHALTIC MIXTURE IN ACCORDANCE WITH SECTION 450.3.2.5 OF THE WISDOT STANDARD SPECIFICATIONS. PAVEMENT THICKNESSES SHALL BE AS INDICATED ON THE PLANS.
14. PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.
15. COMPACT ASPHALTIC PAVEMENT IN ACCORDANCE WITH SECTION 450.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
16. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.
17. THICKNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS ¼ INCH FOR BINDER COURSE AND PLUS ¼ INCH FOR SURFACE COURSE, NO MINUS.
18. SURFACE SMOOTHNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS: BINDER COURSE: ¼ INCH; SURFACE COURSE: 1/8 INCH. REMOVE AND REPLACE ALL HUMPS OR DEPRESSIONS EXCEEDING THE SPECIFIED TOLERANCES.
19. DO NOT APPLY PAVEMENT-MARKING PAINT UNTIL LAYOUT, COLORS, AND PLACEMENT HAVE BEEN VERIFIED WITH ENGINEER.
20. APPLY MARKINGS TO A DRY SURFACE FREE FROM FROST. REMOVE DUST, DIRT, OIL, GREASE, GRAVEL, DEBRIS OR OTHER MATERIAL THAT MAY PREVENT BONDING TO THE PAVEMENT.
21. APPLY PAINT AS THE MANUFACTURER SPECIFIES WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES AT A MINIMUM RATE OF 17.6 GALLONS/MILE FOR A CONTINUOUS 4" LINE.
22. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS AND TO PREPARE TEST REPORTS.

SEGMENTAL RETAINING WALL:

1. WORK SHALL CONSIST OF FURNISHING DETAILED DESIGN, MATERIALS, LABOR, EQUIPMENT AND SUPERVISION TO INSTALL A SEGMENTAL RETAINING WALL SYSTEM IN ACCORDANCE WITH PLANS AND SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON PLANS.
2. MATERIALS SUBMITTALS: THE CONTRACTOR SHALL SUBMIT MANUFACTURERS' CERTIFICATIONS TWO WEEKS PRIOR TO START OF WORK STATING THAT THE SRW UNITS AND GEOSYNTHETIC REINFORCEMENT MEET THE REQUIREMENTS OF THE DESIGN.
3. DESIGN SUBMITTAL: THE CONTRACTOR SHALL SUBMIT TWO SETS OF DETAILED DESIGN CALCULATIONS AND FINAL RETAINING WALL PLANS FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO THE BEGINNING OF WALL CONSTRUCTION. ALL CALCULATIONS AND DRAWINGS SHALL BE PREPARED AND SEALED BY A PROFESSIONAL CIVIL ENGINEER (P.E.) - (WALL DESIGN ENGINEER) EXPERIENCED IN SRW DESIGN AND LICENSED IN THE STATE WHERE THE WALL IS TO BE BUILT.
4. SEGMENTAL RETAINING WALL (SRW) UNITS SHALL BE MACHINE FORMED, PORTLAND CEMENT CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS. SRW UNITS SHALL BE VERSA-LOK STANDARD RETAINING WALL UNITS, KEYSTONE RETAINING WALL UNITS, ROCKWOOD RETAINING WALL UNITS OR APPROVED EQUAL.
5. COLOR AND STYLE OF SRW UNITS SHALL BE AS SELECTED BY ARCHITECT AND OWNER FROM MANUFACTURER'S FULL RANGE.
6. SRW UNITS SHALL BE CAPABLE OF BEING ERECTED WITH THE HORIZONTAL GAP BETWEEN ADJACENT UNITS NOT EXCEEDING 1/8 INCH.
7. SRW UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERMANENCE OF THE STRUCTURE. ANY CRACKS OR CHIPS OBSERVED DURING CONSTRUCTION SHALL FALL WITHIN THE GUIDELINES OUTLINED IN ASTM C 1372.
8. CONCRETE SRW UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM 1372 AND HAVE A MINIMUM NET AVERAGE 28 DAYS COMPRESSIVE STRENGTH OF 3000 PSI. COMPRESSIVE STRENGTH TEST SPECIMENS SHALL CONFORM TO THE SAW-CUT COUPON PROVISIONS OF ASTM C140.
9. SRW UNITS' MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN + 1/8 INCH FROM THAT SPECIFIED, AS MEASURED IN ACCORDANCE WITH ASTM C 140. THIS TOLERANCE DOES NOT APPLY TO ARCHITECTURAL SURFACES, SUCH AS SPLIT FACES.
10. SRW UNITS SHALL BE INTERLOCKED WITH CONNECTION PINS. THE PINS SHALL CONSIST OF GLASS-REINFORCED NYLON MADE FOR THE EXPRESSED USE WITH THE SRW UNITS SUPPLIED.
11. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF HIGH-TENACITY PET GEOGRIDS, HDPE GEOGRIDS, OR GEOTEXTILES MANUFACTURED FOR SOIL REINFORCEMENT APPLICATIONS. THE TYPE, STRENGTH AND PLACEMENT OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE DETERMINED BY PROCEDURES OUTLINED IN THIS SPECIFICATION AND THE NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS (3RD EDITION 2009) AND MATERIALS SHALL BE SPECIFIED BY WALL DESIGN ENGINEER IN THEIR FINAL WALL PLANS AND SPECIFICATIONS. THE MANUFACTURERS/SUPPLIERS OF THE GEOSYNTHETIC REINFORCEMENT SHALL HAVE DEMONSTRATED CONSTRUCTION OF SIMILAR SIZE AND TYPES OF SEGMENTAL RETAINING WALLS ON PREVIOUS PROJECTS.
12. THE TYPE, STRENGTH AND PLACEMENT OF THE REINFORCING GEOSYNTHETIC SHALL BE AS DETERMINED BY THE WALL DESIGN ENGINEER, AS SHOWN ON THE FINAL, P.E.-STAMPED RETAINING WALL PLANS.
13. MATERIAL FOR LEVELING PAD SHALL CONSIST OF COMPACTED SAND, GRAVEL, OR COMBINATION THEREOF (USCS SOIL TYPES GP,GW, SP, & SW) AND SHALL BE A MINIMUM OF 6 INCHES IN DEPTH. LEAN CONCRETE WITH A STRENGTH OF 200-300 PSI AND 3 INCHES THICK MAXIMUM MAY ALSO BE USED AS A LEVELING PAD MATERIAL. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
14. DRAINAGE AGGREGATE SHALL BE ANGULAR, CLEAN STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D422:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
3/4 INCH	75-100
NO. 4	0-60
NO. 40	0-50
NO. 200	0-5

15. THE DRAINAGE COLLECTION PIPE SHALL BE A PERFORATED OR SLOTTED PVC, OR CORRUGATED HDPE PIPE. THE DRAINAGE PIPE MAY BE WRAPPED WITH A GEOTEXTILE TO FUNCTION AS A FILTER. DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR ASTM F 758.
16. THE REINFORCED SOIL MATERIAL SHALL BE FREE OF DEBRIS. UNLESS OTHERWISE NOTED ON THE FINAL, P.E.-SEALED, RETAINING WALL PLANS PREPARED BY THE WALL DESIGN ENGINEER, THE REINFORCED MATERIAL SHALL CONSIST OF THE INORGANIC USCS SOIL TYPES GP, GW, SW, SP, SM, MEETING THE FOLLOWING GRADATION, AS DETERMINED IN ACCORDANCE WITH ASTM D422:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
NO. 4	20-100
NO. 40	0-60
NO. 200	0-35

17. THE MAXIMUM PARTICLE SIZE OF POORLY-GRADED GRAVELS (GP) (NO FINES) SHOULD NOT EXCEED 3/4 INCH UNLESS EXPRESSLY APPROVED BY THE WALL DESIGN ENGINEER AND THE LONG-TERM DESIGN STRENGTH (LTDS) OF THE GEOSYNTHETIC IS REDUCED TO ACCOUNT FOR ADDITIONAL INSTALLATION DAMAGE FROM PARTICLES LARGER THAN THIS MAXIMUM.
18. THE PLASTICITY OF THE FINE FRACTION SHALL BE LESS THAN 20.
19. THE PH OF THE BACKFILL MATERIAL SHALL BE BETWEEN 3 AND 9 WHEN TESTED IN ACCORDANCE WITH ASTM G 51.
20. DRAINAGE GEOTEXTILE SHALL CONSIST OF GEOSYNTHETIC SPECIFICALLY MANUFACTURED FOR USE AS A PERMEABLE SOIL FILTER THAT RETAINS SOIL WHILE STILL ALLOWING WATER TO PASS THROUGHOUT THE LIFE OF THE STRUCTURE. THE TYPE AND PLACEMENT OF THE GEOTEXTILE FILTER MATERIAL SHALL BE AS REQUIRED BY THE WALL DESIGN ENGINEER IN THEIR FINAL WALL PLANS AND SPECIFICATIONS.
21. THE DESIGN ANALYSIS FOR THE FINAL, P.E.-STAMPED RETAINING WALL PLANS PREPARED BY THE WALL DESIGN ENGINEER SHALL CONSIDER THE EXTERNAL STABILITY AGAINST SLIDING AND OVERTURNING, INTERNAL STABILITY AND FACIAL STABILITY OF THE REINFORCED SOIL MASS, AND SHALL BE IN ACCORDANCE WITH ACCEPTABLE ENGINEERING PRACTICE AND THESE SPECIFICATIONS. THE INTERNAL AND EXTERNAL STABILITY ANALYSIS SHALL BE PERFORMED IN ACCORDANCE WITH THE "NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3RD EDITION" USING THE RECOMMENDED MINIMUM FACTORS OF SAFETY IN THIS MANUAL.
22. EXTERNAL STABILITY ANALYSIS FOR BEARING CAPACITY, GLOBAL STABILITY, AND TOTAL AND DIFFERENTIAL SETTLEMENT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE OWNER'S GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PERFORM BEARING CAPACITY, SETTLEMENT ESTIMATES, AND GLOBAL STABILITY ANALYSIS BASED ON THE FINAL WALL DESIGN PROVIDED BY THE WALL DESIGN ENGINEER AND COORDINATE ANY REQUIRED CHANGES WITH THE WALL DESIGN ENGINEER.
23. THE GEOSYNTHETIC PLACEMENT IN THE WALL DESIGN SHALL HAVE 100% CONTINUOUS COVERAGE PARALLEL TO THE WALL FACE. GAPPING BETWEEN HORIZONTALLY ADJACENT LAYERS OF GEOSYNTHETIC (PARTIAL COVERAGE) WILL NOT BE ALLOWED.
24. CONTRACTOR'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.
25. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION. OVER-EXCAVATION SHALL BE FILLED WITH COMPACTED INFILL MATERIAL, OR AS DIRECTED BY THE WALL DESIGN ENGINEER, AT THE CONTRACTOR'S EXPENSE.
26. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR.
27. FOLLOWING THE EXCAVATION, THE FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S ENGINEER TO ASSURE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH. SOILS NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH INFILL SOILS, AS DIRECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.
28. FOUNDATION SOIL SHALL BE PROOF-ROLLED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY AND INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF LEVELING PAD MATERIALS.
29. LEVELING PAD SHALL BE PLACED AS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLANS WITH A MINIMUM THICKNESS OF 6 INCHES. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
30. GRANULAR LEVELING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A FIRM, LEVEL BEARING SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. WELL-GRADED SAND CAN BE USED TO SMOOTH THE TOP 1/4 INCH TO 1/2 INCH OF THE LEVELING PAD. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO ACHIEVE 95% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D 698).
31. ALL SRW UNITS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE FINAL, P.E.-SEALED WALL PLANS AND DETAILS OR AS DIRECTED BY THE WALL DESIGN ENGINEER. THE SRW UNITS SHALL BE INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SPECIFICATIONS AND DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE TWO REQUIREMENTS.
32. FIRST COURSE OF SRW UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE LEVELED SIDE-TO-SIDE, FRONT-TO-REAR AND WITH ADJACENT UNITS, AND ALIGNED TO ENSURE INTIMATE CONTACT WITH THE LEVELING PAD. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS. NO GAPS SHALL BE LEFT BETWEEN THE FRONT OF ADJACENT UNITS. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO THE BACK OF THE UNITS.
33. ALL EXCESS DEBRIS SHALL BE CLEANED FROM TOP OF UNITS AND THE NEXT COURSE OF UNITS INSTALLED ON TOP OF THE UNITS BELOW.

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114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

SPECIFICATIONS

PRELIMINARY NOT FOR CONSTRUCTION

SCALE:	NTS
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/31/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----
SHEET NO:	C501

14:02

PLANT KEY (SEE SHEET L300 FOR FULL PLANT SCHEDULE)

DECIDUOUS TREES	CODE	BOTANICAL / COMMON NAME
	GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Maidenhair Tree
CONIFEROUS TREES	**CODE**	**BOTANICAL / COMMON NAME**
	TD	Taxodium distichum 'Shawnee Brave' / Shawnee Brave Bald Cypress
EVERGREEN TREES	**CODE**	**BOTANICAL / COMMON NAME**
	JT	Juniperus virginiana 'Taylor' / Taylor Eastern Redcedar
	TH	Thuja occidentalis 'Holmstrup' / Holmstrup Arborvitae
	TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae

DECIDUOUS SHRUBS	CODE	BOTANICAL / COMMON NAME
	AB2	Aronia melanocarpa 'UCONNAM165' / Low Scape Mound® Black Chokeberry
	HA	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea
	HB	Hydrangea paniculata 'ILVOBO' / Bobo® Panicle Hydrangea
	SB	Spiraea betulifolia 'Tor Gold' / Glow Girl Birchleaf Spirea
	SF	Spiraea x bumalda 'Froebelii' / Frobel Spirea
EVERGREEN SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**
	JY	Juniperus horizontalis 'Youngstown' / Creeping Juniper
	JB	Juniperus squamata 'Blue Star' / Blue Star Juniper
	TE	Taxus x media 'Everlow' / Everlow Anglo-Japanese Yew

ORNAMENTAL GRASSES	CODE	BOTANICAL / COMMON NAME
	CP	Carex pensylvanica / Pennsylvania Sedge
	PN2	Panicum virgatum 'Northwind' / Northwind Switch Grass
	ST	Sporobolus heterolepis `Tara` / Tara Prairie Dropseed
PERENNIALS	**CODE**	**BOTANICAL / COMMON NAME**
	AF	Agastache x 'Blue Fortune' / Blue Fortune Anise Hyssop
	AB3	Ajuga reptans 'Bronze Beauty' / Bronze Beauty Carpet Bugle
	AN	Athyrium niponicum pictum / Japanese Painted Fern
	HG	Hemerocallis x 'Little Grapette' / Little Grapette Daylily
	HO	Heuchera x 'Obsidian' / Obsidian Coral Bells
	NW	Nepeta x faassenii "Walker's Low" / Walker's Low Catmint

LANDSCAPE LEGEND:

INTERIOR PARKING LOT PAVED AREA

PROVIDED INTERIOR PARKING LOT LANDSCAPE AREA

(9) HO
(8) JY
(3) SF
(3) HB
18.0'
11.1'
18.0'
13.3'
200 SF
(I) GP
(I) TD
115TH ST PERIMETER VEHICLE LANDSCAPING
PROPERTY LINE, TYP.
(6) SF
(3) HB
(21) TS
13.5'
19.3'
200 SF
(5) JY
(I) GP
(5) HO
WE ENERGIES EASEMENT (PER DOC NO. 3459086)
(7) TS
19.0'
(4) HO
(3) TE
35' BUILDING SETBACK (PER DOC NO. 4600358)
24.6'
615 SF
(3) HA
(25) TS
(2) GP
N88° 02' 29"E 4.69'
N88° 02' 29"E 141.99'
18.0'
WE ENERGIES EASEMENT (PER DOC NO. 4626358)
10' UTILITY EASEMENT
(5) JT
(8) ST
(3) SF
(3) AB2
(5) TE
(I) TD
(II) HG
(16) HO
18.0'
11.0'
NORTH 114TH ST.
114TH ST PERIMETER VEHICLE LANDSCAPING
(6) HO
(3) HB
(12) PN2
(6) AF
(5) JT
(2) HB
(9) PN2
(6) HO
(6) AF
(5) JT
(15) PN2
(6) HO
(6) HB
(5) JT
(7) AF
NORTH 115TH ST.
(6) HO
(5) AN
(II) TE
(9) AN
(II) HA
(5) AB2
MULCH PLANTING BED, TYP.
27.5'
200 SF
9.9'
(17) HO
(2) GP
(10) TE
(6) AB3
(5) HO
10.0'
23.6'
(3) NW
(5) ST
(5) PN2
DECORATIVE STONE, TYP.
(30) CP
(10) AB2
(I) TD
(9) HG
(5)BIKE PARKING STALLS SEE L200 FOR DETAIL
PROPOSED RESIDENTIAL BUILDING
(9) PN2
(6) JB
(3) SB
(3) PN2
(22) HG
(5) HB
(3) JB
(15) HG
(4) NW
(6) NW
(6) NW
(9) PN2
(6) JB
(3) SB
(3) PN2
(22) HG
(9) PN2
(6) JB
(3) SB
(3) PN2
(22) HG
(4) SB
(6) PN2
(3) JB
RAISED PLANTER, TYP.
N85° 00' 54"W 126.58'
(4) JB
(24) HG
(I) TH
(6) PN2
(4) SB
(5) AB2
(I) TH
(5) PN2
(12) AB3
(3) TE
(12) HG
(9) ST
(3) AB2
(13) AB3
(5) AF
EXISTING TREE, TYP.
W. BLUEMOUND RD.

CITY OF WAUWATOSA - BIKE PARKING REQUIREMENTS		
BUILDING TOTAL: 41 UNITS	REQUIRED	PROPOSED
SHORT TERM BIKE PARKING	9 SPACES	10 SPACES

CITY OF WAUWATOSA LANDSCAPE CODE - INTERIOR VEHICULAR USE LANDSCAPE AREA	
TOTAL INTERIOR PARKING LOT PAVED AREA	11,010 SF
REQUIRED INTERIOR PARKING LANDSCAPE AREA	1,101 SF
PROVIDED INTERIOR PARKING LANDSCAPE AREA	1,215 SF
REQUIRED INTERIOR PARKING TREES	6 TREES
PROVIDED INTERIOR PARKING TREES	6 TREES

CITY OF WAUWATOSA LANDSCAPE CODE - PERIMETER VEHICLE LANDSCAPING (114TH ST)	
TOTAL PERIMETER VEHICLE AREA	42 LF
REQUIRED TREES	2 TREE
PROVIDED TREES	2 TREES
REQUIRED SHRUBS	6 SHRUBS
PROVIDED SHRUBS	29 SHRUBS

CITY OF WAUWATOSA LANDSCAPE CODE - PERIMETER VEHICLE LANDSCAPING (115TH ST)	
TOTAL PERIMETER VEHICLE AREA	18 LF
REQUIRED TREES	1 TREE
PROVIDED TREES	1 TREE
REQUIRED SHRUBS	3 SHRUBS
PROVIDED SHRUBS	11 SHRUBS

LANDSCAPE GENERAL NOTES:

1. VERIFY EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES, AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
2. INSPECT THE SITE PRIOR TO COMMENCING WORK. DOCUMENT IN WRITING AND PHOTOGRAPH EXISTING CONDITIONS WITHIN, AND IN AREAS ADJACENT TO THE LIMITS OF CONSTRUCTION. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES NOT DOCUMENTED IN THE PHOTOGRAPHS PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
3. COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ADJACENT PAVEMENTS, DRAINAGE, CURB RELATED STRUCTURES WITH OTHER TRADES.
4. RESTORE AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. DAMAGE CAUSED DURING LANDSCAPE INSTALLATION TO EXISTING CONDITIONS AND IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
5. CONTRACTOR SHALL THOROUGHLY REVIEW ALL SPECIFICATIONS RELATED TO TREE PROTECTION, SOIL PREPARATION, TURF, GRASSES AND PLANTS. THESE SECTIONS PROVIDE ADDITIONAL INFORMATION ON MATERIALS AND SET STANDARDS FOR QUALITY AND INSTALLATION REQUIREMENTS.
6. PROVIDE 3" DOUBLE SHREDDED BARK MULCH FOR ALL PLANTED TREES, SHRUBS AND LANDSCAPE BEDS.

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N

GRAPHIC SCALE
0 10 20

114TH AND BLUEMOUND

11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

OVERALL LANDSCAPE PLAN

PRELIMINARY NOT FOR CONSTRUCTION

SCALE:	1"=10'
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	2/23/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----
SHEET NO:	L100

H:\JOHN
L100
21393

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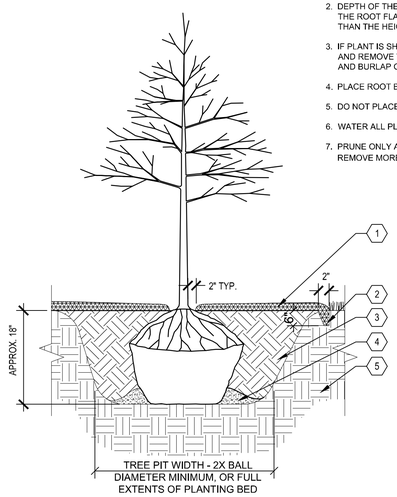
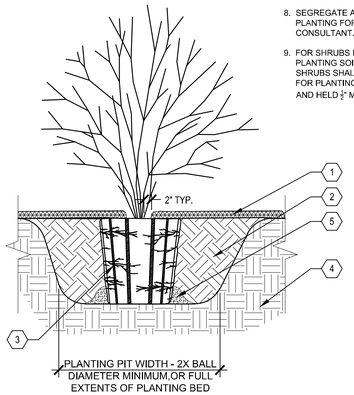
NOTES:
1. PLANT EACH TREE SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
2. DEPTH OF THE PLANTING HOLE SHOULD BE DETERMINED AND DUG AFTER THE ROOT FLARE IS LOCATED. PLANTING HOLE MUST BE NO DEEPER THAN THE HEIGHT OF THE ROOT BALL.
3. IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT AND REMOVE THE WIRE BASKET ENTIRELY. REMOVE ALL TWINE, ROPE, AND BURLAP COMPLETELY FROM ALL ROOT BALLS.
4. PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.
5. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
6. WATER ALL PLANTS WITHIN 2 HOURS OF INSTALLATION.
7. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY BRANCHES. DO NOT REMOVE MORE THAN ⅓ OF THE ORIGINAL PLANT MASS.



KEYED LEGEND
1. 3" DEPTH SHREDDED HARDWOOD BARK MULCH. PROVIDE 4'-0" DIAMETER MULCH RINGS AT THE BASE OF ANY TREES PLANTED IN LAWN.
2. PROVIDE SPADED EDGE, 2" WIDE, 6" DEEP FOR ENTIRE PERIMETER OF BARK MULCH RINGS AT BASE OF TREES PLANTED IN LAWNS
3. PLANTING SOIL. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED.
4. PREPARED SUBGRADE
5. TAMP SOIL AROUND BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT BALL DOES NOT SHIFT

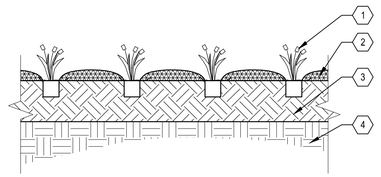
A TREE PLANTING
SCALE: 1"= 1'-0"

NOTES:
1. MAKE 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND THE CIRCUMFERENCE OF THE ROOT BALL BEFORE PLANTING TO LOOSEN POT-BOUND ROOTS.
2. PLANT EACH SHRUB SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
3. PLANTING HOLE MUST NOT BE DEEPER THAN THE HEIGHT OF THE ROOT BALL.
4. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
5. PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.
6. WATER ALL PLANTS WITHIN 2 HOURS OF INSTALLATION.
7. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY BRANCHES. DO NOT REMOVE MORE THAN ⅓ OF THE ORIGINAL PLANT MASS.
8. SEGREGATE ANY SOIL FROM BELOW WARNING LAYER EXCAVATED DURING PLANTING FOR OFF-SITE DISPOSAL. COORDINATE DISPOSAL WITH ENVIRONMENTAL CONSULTANT.
9. FOR SHRUBS PLANTED WITHIN PLANTING BEDS, CONTRACTOR SHALL PROVIDE PLANTING SOIL CONTINUOUSLY FOR THE ENTIRE PLANTING BED AND INDIVIDUAL SHRUBS SHALL BE PLANTED INTO THE PREPARED PLANTING SOIL. MULCH SURFACE FOR PLANTING BEDS SHALL ALSO BE CONTINUOUS ACROSS THE ENTIRE SURFACE AND HELD ¾" MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.



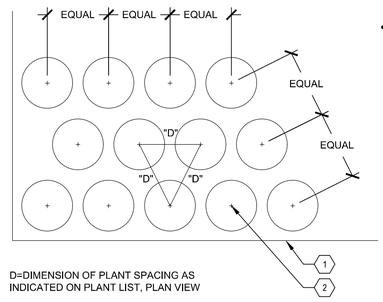
KEYED LEGEND
1. 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE INDICATED, KEEP 2" CLEAR OF STEMS
2. PLANTING SOIL AS SPECIFIED, PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED
3. 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND PERIMETER
4. PREPARED SUBGRADE
5. TAMP SOIL AROUND BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT BALL DOES NOT SHIFT

B SHRUB PLANTING
SCALE: 1"= 1'-0"



KEYED LEGEND
1. PERENNIAL, ORNAMENTAL GRASS, OR GROUNDCOVER PLUG, SEE LANDSCAPE PLAN SHEETS L100-L104
2. 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE INDICATED, KEEP 3" CLEAR OF STEMS
3. PLANTING SOIL, PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED
4. PREPARED SUBGRADE

C PERENNIAL PLANTING
SCALE: 1"= 1'-0"

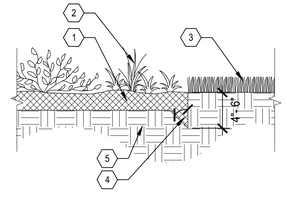


D=DIMENSION OF PLANT SPACING AS INDICATED ON PLANT LIST, PLAN VIEW

NOTES
- SET FINISH GRADE OF PLANTING AREA 2" BELOW FINISH SURFACE OF PAVING, CURB, OR HEADER
- SEE PLANTING SCHEDULE FOR SPACING OF ALL SHRUBS AND GROUNDCOVERS
- ALL SHRUBS / GROUNDCOVER TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS.
- TO DETERMINE APPROPRIATE PLANT QUANTITIES REFER TO THE PLANTING SCHEDULE OR PLAN.

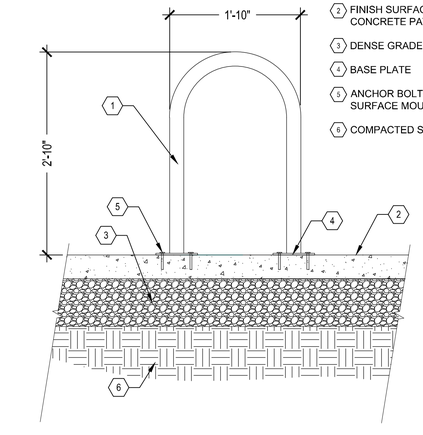
KEYED LEGEND
1. EDGE OF ADJACENT PAVEMENT
2. SHRUB, PERENNIAL OR ORNAMENTAL GRASS PLANT CENTER LOCATION

E PLANT SPACING
SCALE: 1"= 1'-0"



KEYED LEGEND
1. 3" DEPTH OF MULCH LAYER
2. SHRUB PLANTING BED
3. LAWN ADJACENT TO PLANTING BED
4. 45 DEGREE ANGLE SHOVEL CUT EDGE TOWARD PLANTING BED
5. COMPACTED SUBGRADE

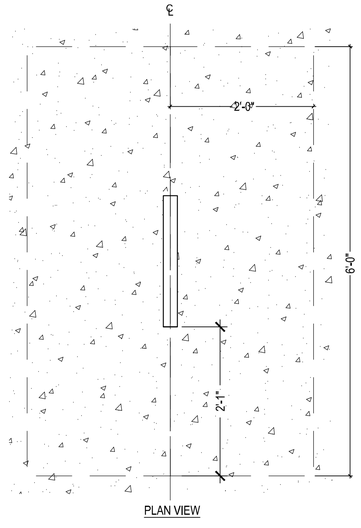
F SHOVEL CUT EDGE
SCALE: 1"= 1'-0"



1. BIKE RACK
2. FINISH SURFACE OF CONCRETE PAVING
3. DENSE GRADED BASE
4. BASE PLATE
5. ANCHOR BOLTS FOR SURFACE MOUNT
6. COMPACTED SUBGRADE

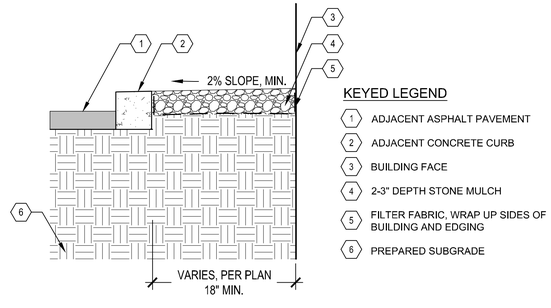
NOTE:
1. BASIS OF DESIGN: 1 LOOP WAVE STYLE BIKE RACK AS MANUFACTURED BY ULINE
2. COLOR AND FINISH : GALVANIZED BLACK POWDER COAT
3. MOUNTING: SURFACE MOUNT.
4. INSTALL PRE MANUFACTURER'S RECOMMENDATION.
5. BIKE STALLS SHALL BE A MINIMUM OF 2' BY 6'. PLACEMENT SHALL NOT RESULT IN A BICYCLE OBSTRUCTING A WALKWAY.
6. RACKS SHALL BE SPACED MIN. 3'-0" APART & 3'-0" FROM EDGE OF PAVEMENT

SECTION VIEW - SURFACE MOUNT



PLAN VIEW

D BIKE PARKING
SCALE: 1"= 1'-0"



KEYED LEGEND
1. ADJACENT ASPHALT PAVEMENT
2. ADJACENT CONCRETE CURB
3. BUILDING FACE
4. 2-3" DEPTH STONE MULCH
5. FILTER FABRIC, WRAP UP SIDES OF BUILDING AND EDGING
6. PREPARED SUBGRADE

G STONE MAINTENANCE STRIP
SCALE: 1"= 1'-0"

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114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

LANDSCAPE DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

SCALE:	
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	2/23/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----

SHEET NO: L200

PLANTING QUALITY ASSURANCE

1. PLANTS ARE TO BE INSPECTED UPON DELIVERY TO PROJECT SITE AND THE LANDSCAPE ARCHITECT OR OWNER'S PROJECT REPRESENTATIVE MAY REJECT ANY SPECIMENS NO LONGER MEETING THE SPECIFIED STANDARDS OR THAT HAVE BEEN DAMAGED IN TRANSIT.
2. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES AND VARIETY/HYBRID/CULTIVAR SPECIFIED, AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE OF THE SITE LOCATION. SPECIMENS NURSERY-DUG TO BE REPLANTED SHALL HAVE BEEN FRESHLY DUG AND PROPERLY PREPARED FOR PLANTING.
3. TREES:
   - 3.1. SHALL BE TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, COMPACTNESS AND SYMMETRY. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED OTHERWISE, AND SHRUBS WITH DAMAGED OR CUT MAINSTEM(S), WILL BE REJECTED.
   - 3.2. WITH A DAMAGED, CUT OR CROOKED LEADER, ABRASION OF BARK, SUNSCALD, FROST CRACK, DISFIGURING KNOTS, INSECTS (INCLUDING EGGS AND LARVAE) OR INSECT DAMAGE, CANKERS/CANKEROUS LESIONS OR FUNGAL MATS, MOLD, PREMATURELY-OPENED BUDS, OR CUTS OF LIMBS OVER ¾" DIAMETER THAT ARE NOT COMPLETELY CALLUSED WILL BE REJECTED.
   - 3.3. SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS, AND BE FREE FROM PHYSICAL DAMAGE OR OTHER HINDRANCES TO HEALTHY GROWTH.
   - 3.4. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH SOLID BALLS OF A DIAMETER NOT LESS THAN THAT RECOMMENDED BY THE AMERICAN STANDARDS FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE BOTH FIBROUS AND FEEDING ROOTS. BALLS SHALL BE SECURELY WRAPPED WITH BURLAP, AND TIGHTLY BOUND WITH ROPE OR TWINE. NO PLANTS SHALL BE BOUND WITH ROPE OR WIRE IN SUCH A MANNER AS TO DAMAGE BARK OR BREAK BRANCHES. THE ROOT FLARE SHOULD BE WITHIN THE TOP 2" OF THE SOIL BALL. BALLED AND BURLAPPED PLANTS WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED, OR BROKEN BEFORE OR DURING PLANTING.
4. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED WITHIN THE PLANT SCHEDULE.
5. PER THE CITY OF WAUWATOSA CODE 'PERFORMANCE GUARANTEE'
   - 5.1. IMMEDIATELY FOLLOWING INSTALLATION
     - 5.1.1. LANDSCAPE ARCHITECT SHALL PROVIDE AN AFFIDAVIT STATING THAT THE LANDSCAPING IS INSTALLED PER THE APPROVED PLAN.
   - 5.2. ONE-YEAR OR THREE-YEARS FOLLOWING INSTALLATION
     - 5.2.1. LANDSCAPE ARCHITECT SHALL PERFORM FINAL INSPECTION AND PROVIDE AFFIDAVIT THAT THE LANDSCAPING HAS BEEN MAINTAINED AND ESTABLISHED PER APPROVED PLAN.
     - 5.2.2. FISCAL SECURITY WILL BE RELEASED FOLLOWING INSPECTION BY THE CITY LANDSCAPE ARCHITECT.

PLANTING PROJECT CONDITIONS:

1. VERIFY SERVICE AND UTILITY LOCATIONS, AND DIMENSIONS OF CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK.
2. INTERRUPTION OF EXISTING SERVICES OR UTILITIES; DO NOT INTERRUPT SERVICES OR UTILITIES UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY SERVICES OR UTILITIES ACCORDING TO REQUIREMENTS INDICATED:
   - 2.1. NOTIFY OWNER'S PROJECT REPRESENTATIVE NO FEWER THAN TWO DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF EACH SERVICE OR UTILITY.
   - 2.2. DO NOT PROCEED WITH INTERRUPTION OF SERVICES OR UTILITIES WITHOUT REPRESENTATIVE'S WRITTEN PERMISSION.
3. PLANTING RESTRICTIONS: PLANTING SHALL OCCUR DURING THE FOLLOWING ACCEPTABLE INSTALLATION PERIODS:
   - 3.1. DECIDUOUS TREES AND SHRUBS - APRIL 1 TO OCTOBER 15.
4. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS.
5. CONTRACTOR SHALL PROTECT ALL EXISTING AND/OR NEWLY INSTALLED PLANTS, LAWNS, AND GRASS AREAS FROM DAMAGE AT ALL TIMES. DAMAGED PLANTS, LAWNS OR GRASS AREAS SHALL BE REPLACED OR TREATED AS REQUIRED TO CONFORM TO SPECIFICATIONS HEREIN FOR FRESH STOCK. WORK AREA SHALL BE KEPT CLEAN AND ORDERLY DURING THE INSTALLATION PERIOD. UNDER NO CONDITION SHALL DEBRIS FROM PLANTING ACTIVITIES RESULT IN A SAFETY HAZARD ON-SITE OR ADJACENT OFF-SITE PROPERTY. DAMAGE TO SITE IMPROVEMENTS OR ADJACENT LANDSCAPES INCURRED AS A RESULT OF PLANTING OR REPLACEMENT OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR THAT CAUSES THE DAMAGE AT NO COST TO THE OWNER.
6. EXAMINE AREAS TO RECEIVE PLANTS FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
   - 6.1. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN PLANTING AREAS.
   - 6.2. DO NOT MIX OR PLACE SOILS IN FROZEN, WET, OR MUDDY CONDITIONS.

PLANTING DELIVERY, STORAGE, & HANDLING:

1. BULK MATERIALS:
   - 1.1. DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
2. DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.
3. HANDLE PLANTING STOCK BY ROOT BALL.
4. DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN SHADED LOCATION, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
   - 4.1. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
   - 4.2. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

EXCAVATION FOR TREES & SHRUBS

1. EXCAVATE CIRCULAR PLANTING PITS AS INDICATED IN DRAWINGS. TRIM PERIMETER OF BOTTOM LEAVING CENTER AREA OF BOTTOM RAISED SLIGHTLY TO SUPPORT ROOT BALL AND ASSIST IN DRAINAGE AWAY FROM CENTER. DO NOT FURTHER DISTURB BASE. ENSURE THAT ROOT BALL WILL SIT ON UNDISTURBED BASE SOIL TO PREVENT SETTLING. SCARIFY SIDES OF PLANTING PIT SMEARED OR SMOOTHED DURING EXCAVATION.
   - 1.1. EXCAVATE APPROXIMATELY THREE TIMES AS WIDE AS BALL DIAMETER FOR BALLED AND BURLAPPED STOCK.
   - 1.2. DO NOT EXCAVATE DEEPER THAN DEPTH OF THE ROOT BALL, MEASURED FROM THE ROOT FLARE TO THE BOTTOM OF THE ROOT BALL.
   - 1.3. IF AREA UNDER THE PLANT WAS INITIALLY DUG TOO DEEP, ADD SOIL TO RAISE IT TO CORRECT LEVEL AND THOROUGHLY TAMP THE ADDED SOIL TO PREVENT SETTLING.
   - 1.4. MAINTAIN REQUIRED ANGELS OF REPOSE OF ADJACENT MATERIALS AS SHOWN IN DRAWINGS. DO NOT EXCAVATE SUBGRADES OF ADJACENT PAVING, STRUCTURES, HARDSCAPES, OR OTHER NEW OR EXISTING IMPROVEMENTS.
   - 1.5. MAINTAIN SUPERVISION OF EXCAVATIONS DURING WORKING HOURS.
   - 1.6. KEEP EXCAVATIONS COVERED OR OTHERWISE PROTECTED WHEN UNATTENDED BY INSTALLER'S PERSONNEL.
2. SUBSOIL AND TOPSOIL REMOVED FROM EXCAVATIONS MAY BE USED AS PLANTING SOIL IF IT IS USED AS PART OF THE ENVIRONMENTAL CAP MATERIAL PLACED AS PART OF CIVIL SITE CONSTRUCTION (SEE DETAIL D ON C402). ANY SUBSOIL OR TOPSOIL REMOVED FROM EXCAVATIONS WHICH IS NOT A PART OF THE ENVIRONMENTAL CLEAN CAP, SHALL BE HANDLED IN ACCORDANCE WITH THE SITE SOIL MANAGEMENT PLAN.
3. NOTIFY OWNER'S PROJECT REPRESENTATIVE IF UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED IN EXCAVATIONS.
4. NOTIFY OWNER'S PROJECT REPRESENTATIVE IF SUBSOIL CONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.

TREE & SHRUB PLANTING

1. BEFORE PLANTING VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL TO EXPOSE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS. PLANT MATERIAL WITHOUT ROOT FLARE VISIBLE OR PLANTED TOO LOW WILL BE RE-PLANTED AT THE REQUEST OF THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
2. PLANTS FOUND TO HAVE STEM GIRDLING ROOTS AND/OR KINKED ROOTS AT THE TIME OF PLANTING WILL BE REJECTED AND REPLACEMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
3. REMOVE ALL TWINE, STRING, WIRE, AND ALL OTHER NON-BIODEGRADABLE MATERIAL ENTIRELY FROM ROOT BALL AREA.
4. REMOVE ONLY DEAD, DYING, OR BROKEN BRANCHES. DO NOT PRUNE FOR SHAPE. DO CUT TREE LEADERS.
5. SET BALLED AND BURLAPPED STOCK PLUMB AND IN CENTER OF PLANTING PIT OR TRENCH WITH ROOT FLARE 2 INCHES ABOVE ADJACENT FINISH GRADES.
   - 5.1. USE SOIL MATERIALS FROM EXCAVATION FOR BACKFILL.
   - 5.2. CAREFULLY CUT AND REMOVE BURLAP, ROPE, AND WIRE BASKETS FROM THE ENTIRE ROOT BALL. REMOVE PALLETS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF ROOT BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
   - 5.3. BACKFILL AROUND ROOT BALL IN LAYERS, TAMPING TO SETTLE SOIL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN PLANTING PIT IS APPROXIMATELY ONE-HALF FILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE WATER IS ABSORBED.
   - 5.4. CONTINUE BACKFILLING PROCESS. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF SOIL.

TREE & SHRUB MATERIAL:

1. GENERAL: FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN AND DRAWINGS.; AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.
   - 1.1. TREES WITH DAMAGED, CROOKED, OR MULTIPLE LEADERS; TIGHT VERTICAL BRANCHES WHERE BARK IS SQUEEZED BETWEEN TWO BRANCHES OR BETWEEN BRANCH AND TRUNK ("INCLUDED BARK"); CROSSING TRUNKS; CUT-OFF LIMBS MORE THAN ¾" IN DIAMETER; OR WITH STEM GIRDLING ROOTS WILL BE REJECTED.
   - 1.2. COLLECTED STOCK: DO NOT USE PLANTS HARVESTED FROM THE WILD, FROM NATIVE STANDS, FROM AN ESTABLISHED LANDSCAPE PLANTING, OR NOT GROWN IN A STATE CERTIFIED NURSERY.
   - 1.3. PLANT MATERIAL SHALL BE PROVIDED IN THE CONTAINER TYPE INDICATED IN THE DRAWINGS (B&B, CONTAINER, BARE ROOT, ETC.), UNLESS THE CONTRACTOR RECEIVES WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT THAT SUBSTITUTION OF CONTAINER TYPE IS ACCEPTABLE.
2. FURNISH TREES WITH ROOT BALLS MEASURED FROM TOP OF ROOT BALL. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING.
3. SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD.

PLANTING SOIL:

SOIL
1. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE WIDTH OF LANDSCAPE AREAS.
2. CONTRACTOR SHALL PROVIDE HIGH-QUALITY TOPSOIL FOR ALL NEW TURFGRASS LAWN AND PLANTING BED AREAS IN THE FOLLOWING DEPTHS:
   - 2.1. FOR SEEDED LAWNS: 4-INCHES MINIMUM; 8-INCHES IN AREAS WHERE HIGH BEDROCK IS PRESENT
   - 2.2. FOR PLANTING BEDS: 12-INCHES
   - 2.3. FOR TREE PITS AND/OR TREES PLANTED IN PLANTING BEDS: 24-INCHES OR THE DEPTH OF THE ROOTBALL, WHICHEVER IS GREATER.
   - 2.4. NO TOPSOIL IS REQUIRED UNDER ANY AREAS THAT ARE EXCLUSIVELY STONE COBBLES/STONE MATERIALS.
   - 2.5. TOPSOIL SHALL BE LOAM TO SANDY LOAM AND FREE OF ROCKS, GRAVEL, WOOD, DEBRIS, LITTER, AND OF NOXIOUS WEEDS AND THEIR SEEDS. IT SHALL BE CLEANED, SALVAGED OR IMPORTED MATERIAL CAPABLE OF PASSING THE 1" SIEVE.
3. DO NOT APPLY PLANTING SOIL TO SATURATED OR FROZEN SUBGRADES.
4. PLANTING SOIL SHALL BE A MIX OF 6-PARTS TOPSOIL, 1-PART COMPOST (APPROVED FOR USE ON THE PROJECT). THOROUGHLY BLEND PLANTING SOIL OFF-SITE BEFORE SPREADING.
   - 4.1. THE PROJECT WILL ACCEPT ONLY CLEAN, SALVAGED OR IMPORTED TOPSOIL CAPABLE OF PASSING THE 1" SIEVE, FREE OF ROCKS, DEBRIS, AND OF NOXIOUS WEEDS.
   - 4.2. STRIPPED, SALVAGED, OR MINED TOPSOIL MUST BE TAKEN FROM THE TOP 6-INCHES OF THE A-HORIZON, HAVING A DARK BROWN TO BLACK COLOR WITH A GRANULAR STRUCTURE AND CLAY CONTENT OF LESS THAN 25%, VERIFIED WITH A RIBBON TEST THAT YIELDS NO MORE THAN 1-INCH.
5. ALL TOPSOIL SHALL BE VERIFIED BY FIELD REVIEW AT THE LOCATION OF THE TOPSOIL STOCKPILE PRIOR TO DELIVERY OR SPREADING ON THE SITE. FIELD REVIEW MAY CONSIST OF VISUAL INSPECTION, HAND TEST FOR CLAY, ETC. EACH DIFFERENT SOIL SOURCE (STOCKPILED FROM EXISTING SITE, IMPORTED, STOCKPILED OFF-SITE, ETC) IS SUBJECT TO A SEPARATE INSPECTION AND APPROVAL.
6. REFER TO CIVIL PLANS FOR SUBTERRANEAN BIORETENTION SOIL MATERIALS AND CONSTRUCTION.
7. FINISH GRADE TOPSOIL SURFACES TO THE FOLLOWING TOLERANCES WHERE TOPSOILED AREA(S) MEETS ADJACENT PAVEMENTS:
   - 7.1. FOR SEEDED LAWNS: HOLD TOPSOIL 1/2-INCH BELOW TOP SURFACE OF ADJACENT PAVEMENT.
   - 7.2. FOR PLANTING BEDS: HOLD TOPSOIL 2-INCHES BELOW TOP SURFACE OF ADJACENT PAVEMENT AND TAPER BARK MULCH DOWN SO THAT TOP SURFACE OF BARK MULCH IS HELD EVEN OR SLIGHTLY BELOW TOP SURFACE OF ADJACENT PAVEMENT.

BARK MULCH MATERIAL & INSTALLATION

1. TWICE-SHREDDED HARDWOOD BARK MULCH TO BE PROVIDED AS TOP-DRESSING FOR AT-GRADE PLANTING BEDS IN LOCATIONS INDICATED ON DETAILED PLANTING PLANS.
   - 1.1. SIZE RANGE: MAXIMUM 2.5" TO 3"
   - 1.2. COLOR: NATURAL, UN-DYED
   - 1.3. PROVIDE 3" DEPTH MULCH FOR ALL PLANTING BEDS INDICATED AS BARK MULCH PLANTING BED.
2. KEEP BARK MULCH 2" CLEAR OF ALL STEMS OF PLANT MATERIAL.

CLEAN-UP AND PROTECTION

1. DURING PLANTING, KEEP ADJACENT PAVING AND CONSTRUCTION CLEAN AND WORK AREA IN AN ORDERLY CONDITION.
2. PROTECT PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND OPERATIONS OF OTHER CONTRACTORS AND TRADES. MAINTAIN PROTECTION DURING INSTALLATION. TREAT, REPAIR, OR REPLACE DAMAGED PLANTINGS.
3. AFTER INSTALLATION REMOVE ALL NURSERY TAGS, NURSERY STAKES, TIE TAPE, LABELS, WIRE, STRING, AND OTHER DEBRIS FROM PLANT MATERIAL, PLANTING AREAS, AND PROJECT SITE.

STONE MULCH EDGE MATERIAL & INSTALLATION:

1. SHALL BE HARD, DURABLE, STONE, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN SUBSTANCES, OF THE FOLLOWING TYPE, SIZE RANGE, AND COLOR:
   - 1.1.1. TYPE: STONE MULCH EDGE
   - 1.1.2. MATERIAL: ROUNDED WASHED STONE
   - 1.1.3. SIZE: 1-1/2"
   - 1.1.4. DEPTH: 3" MINIMUM IN (2) LIFTS
   - 1.1.5. COLOR RANGE: BLEND OF TAN, GREY & RED TONES
   - 1.1.6. BASIS OF DESIGN: 1-1/2" 'AMERICAN HERITAGE' AGGREGATE BY COUNTY MATERIALS
2. COMPACT AREAS TO RECEIVE STONE MULCH IN (2) LIFTS MINIMUM
3. INSTALL WEED BARRIER FABRIC IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS: COMPLETELY COVER AREA TO BE MULCHED, OVERLAPPING EDGES OF FABRIC LENGTHS A MINIMUM OF 6-INCHES AND SECURING SEAMS WITH GALVANIZED PINS. WEED BARRIER FABRIC SHALL BE WRAPPED VERTICALLY UP THE OUTSIDE EDGES OF SURROUNDING CONCRETE FLATWORK OR CURB AND SECURED IN PLACE. HOLD FABRIC 2" CLEAR OF TOP OF ADJACENT CURB AND CONCRETE FLATWORK SO IT IS NOT VISIBLE FROM SURFACE.
4. PLACE AND FINISH STONE MULCH AS INDICATED IN DRAWINGS, ENSURING A SMOOTH, LEVEL TOP SURFACE FOR ALL STONE MULCH AREAS HELD APPROXIMATELY 1/2" BELOW THE TOP SURFACE OF ADJACENT PAVED AREAS OR ALUMINUM EDGING.

TURF SEEDING:

1. DELIVERY:
   - 1.1. DELIVER PACKAGED SEED MATERIALS IN ORIGINAL, UNOPENED CONTAINERS LABELED AS TO NAME AND ADDRESS OF SUPPLIER; SPECIFIC BLEND OF SEED; AND INDICATION OF CONFORMANCE WITH STATE AND FEDERAL LAWS, AS APPLICABLE.
2. PROJECT CONDITIONS:
   - 2.1. SEED DURING ONE OF THE FOLLOWING PERIODS.
     - 2.1.1. SPRING SEEDING SEASON: APRIL 1 TO JUNE 15.
     - 2.1.2. FALL SEEDING SEASON: AUGUST 15 TO OCTOBER 1.
3. PRODUCTS
   - 3.0.1. PROVIDE THE FOLLOWING FOR TURFGRASS SEED BASIS OF DESIGN: REINDEERS DELUXE 50 SEED MIX OR APPROVED EQUAL
   - 3.0.2. TURFGRASS SEED MIX TO BE FERTILIZED WITH 'SCOTT'S STARTER FERTILIZER' BY THE 'SCOTTS MIRACLE-GRO COMPANY' OR APPROVED EQUAL.
4. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN MET.
5. REMOVE ANY AND ALL UNDESIRABLE VEGETATION THAT HAS GERMINATED IN THE AREAS TO BE SEEDED OR SODDED. CONTRACTOR SHALL EVALUATE THE USE OF A BROAD SPECTRUM, NON-PERSISTENT GLYSOPHATE-BASED HERBICIDE BASED ON SITE CONDITIONS.
   - 5.1. DO NOT APPLY SEED UNTIL FIVE TO SEVEN DAYS AFTER LAST HERBICIDE TREATMENT.
6. FINISH GRADING: GRADE AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS ½ INCH OF FINISH ELEVATION. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISH GRADING TO AREAS THAT CAN BE IMMEDIATELY SEEDED AND STABILIZED WITH EROSION CONTROL MATERIAL
7. MOISTEN PREPARED AREA BEFORE SEEDING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE DRY BEFORE SEEDING OR SODDING. DO NOT CREATE MUDDY SOIL.
8. NO SEEDING SHALL OCCUR ON FROZEN GROUND OR AT TEMPERATURES LOWER THAN 32 DEGREES FARENHEIT OR IN THE FOLLOWING 5 DAYS AFTER PLANNED SEEDING OR SODDING.
9. SEEDING RATES TO BE PERFORMED IN ACCORDANCE WITH SEED SUPPLIER RECOMMENDATIONS.

PLANT SCHEDULE

DECIDUOUS TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Maidenhair Tree	4" Cal.	B&B	6
CONIFEROUS TREES	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	TD	Taxodium distichum 'Shawnee Brave' / Shawnee Brave Bald Cypress	2" Cal.	B&B	3
EVERGREEN TREES	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	JT	Juniperus virginiana 'Taylor' / Taylor Eastern Redcedar	#15	Cont.	20
	TH	Thuja occidentalis 'Holmstrup' / Holmstrup Arborvitae	#7	Cont.	2
	TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae	5` Ht.	B&B	52
DECIDUOUS SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	AB2	Aronia melanocarpa 'UCONNAM165' / Low Scape Mound® Black Chokeberry	2 gal.	Cont.	26
	HA	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea	2 gal.	Cont.	14
	HB	Hydrangea paniculata 'ILVOBO' / Bobo® Panicle Hydrangea	2 gal.	Cont.	22
	SB	Spiraea betulifolia 'Tor Gold' / Glow Girl Birchleaf Spirea	2 gal.	Cont.	17
	SF	Spiraea x bumalda 'Froebelii' / Frobel Spirea	2 gal.	Cont.	12
EVERGREEN SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	JY	Juniperus horizontalis 'Youngstown' / Creeping Juniper	5 gal.	Cont.	13
	JB	Juniperus squamata 'Blue Star' / Blue Star Juniper	5 gal.	Cont.	28
	TE	Taxus x media 'Everlow' / Everlow Anglo-Japanese Yew	5 gal.	Cont.	32
ORNAMENTAL GRASSES	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	CP	Carex pensylvanica / Pennsylvania Sedge	1 gal.	Cont.	30
	PN2	Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.	103
	ST	Sporobolus heterolepis `Tara` / Tara Prairie Dropseed	1 gal.	Cont.	22
SHRUB AREAS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	AF	Agastache x 'Blue Fortune' / Blue Fortune Anise Hyssop	4.5"	Pot	24
	AB3	Ajuga reptans 'Bronze Beauty' / Bronze Beauty Carpet Bugle	4.5"	Pot	36
	AN	Athyrium niponicum pictum / Japanese Painted Fern	4.5"	Pot	14
	HG	Hemerocallis x 'Little Grapette' / Little Grapette Dayily	4.5"	Pot	129
	HO	Heuchera x 'Obsidian' / Obsidian Coral Bells	4.5"	Pot	80
	NW	Nepeta x faassenii 'Walker's Low' / Walker's Low Catmint	4.5"	Pot	25
GROUND COVERS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**
	TH3	Turf Seed / Drought Tolerant Fescue Blend			

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

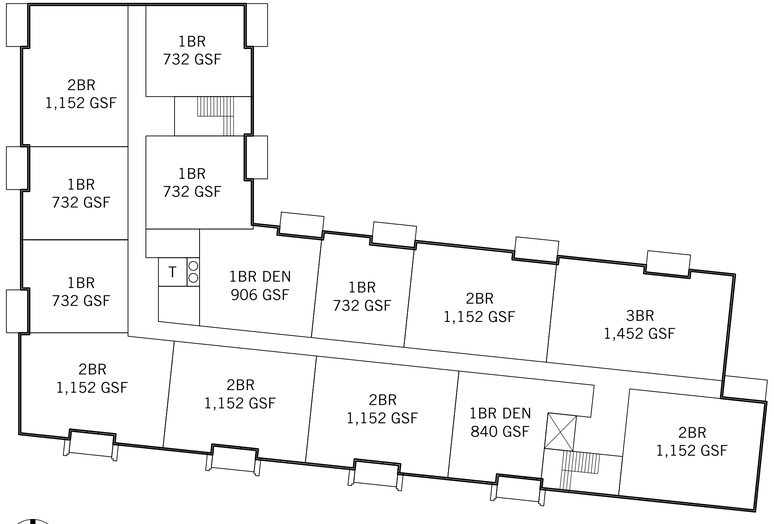
114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

LANDSCAPE SPECIFICATIONS

PRELIMINARY NOT FOR CONSTRUCTION

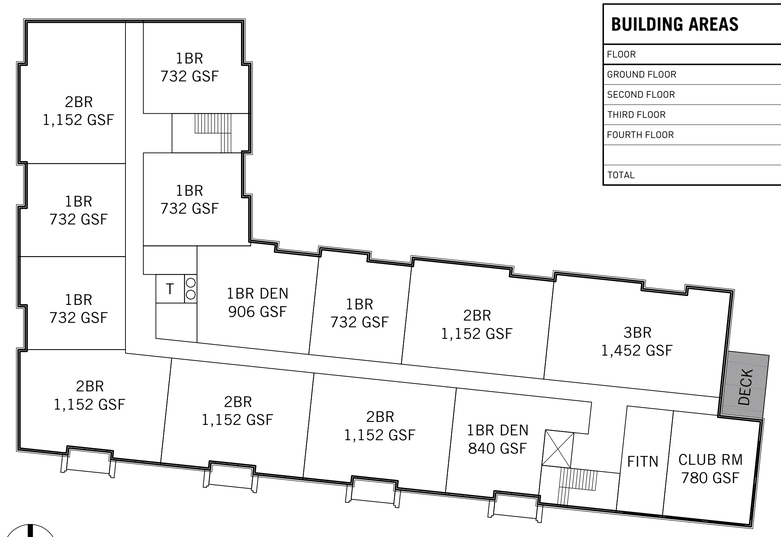
SCALE:	
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	2/23/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----

SHEET NO:
L300

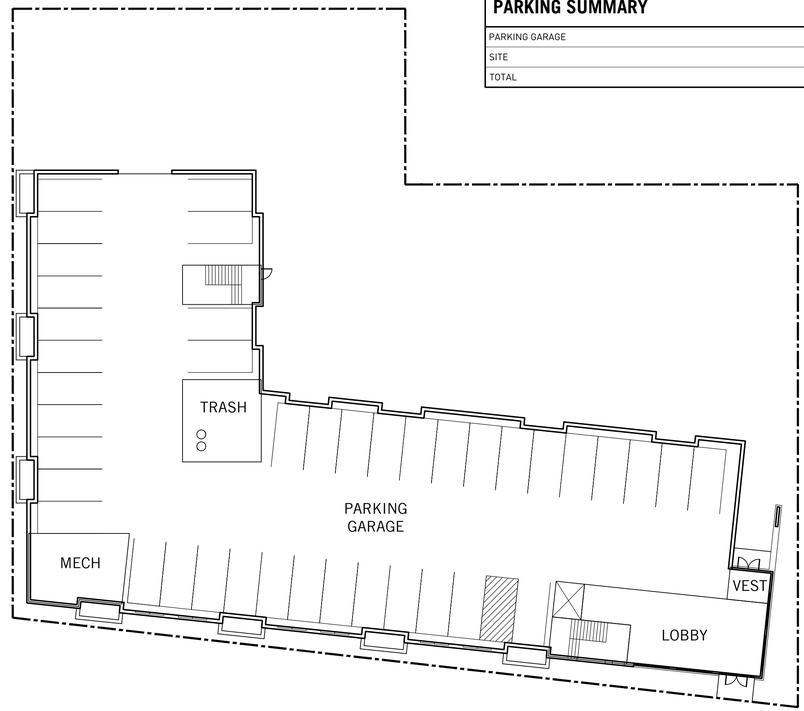


FOURTH FLOOR PLAN

THIRD FLOOR PLAN



SECOND FLOOR PLAN



GROUND FLOOR PLAN

UNIT MATRIX

UNIT TYPE	UNITS PER FLOOR					TOTALS
	1ST	2ND	3RD	4TH		
ONE BEDROOM	-	5	5	5		15
ONE BEDROOM + DEN	-	2	2	2		6
TWO BEDROOM	-	5	6	6		17
THREE BEDROOM	-	1	1	1		3
TOTAL		13	14	14		41

BUILDING AREAS

FLOOR	AREA (GSF)
GROUND FLOOR	16,916
SECOND FLOOR	16,340
THIRD FLOOR	16,340
FOURTH FLOOR	16,340
TOTAL	65,936

PARKING SUMMARY

PARKING GARAGE	41
SITE	30
TOTAL	71

Haydin Thacker Architecture
131 W SEEBOTH ST. SUITE 230
MILWAUKEE, WI 53204
T/ 414-526-7359
HAYDINTHACKER.COM

GALBRAITH CARNAHAN ARCHITECTS

PROJECT NAME
BLUEMOUND ROAD
MULTI-FAMILY DEVELOPMENT

WAUWATOSA, WISCONSIN

DRAWING REVISION HISTORY

SHEET TITLE
CONCEPTUAL ARCHITECTURAL DRAWINGS

PROJECT NUMBER
22008

DRAWING DATE
02-01-2023

SET AND SUBMITTAL TYPE
WAUWATOSA PUD SUBMITTAL

SHEET NUMBER
A200

VIEW OF NEW BUILDING FROM BLUE MOUND ROAD

VIEW OF NEW BUILDING FROM INTERSECTION OF 114TH AND BLUE MOUND ROAD

VIEW OF EXISTING BUILDING FROM INTERSECTION OF 114TH AND BLUE MOUND ROAD

Haydin Thacker Architecture
131 W SEEBOTH ST. SUITE 230
MILWAUKEE, WI 53204
T/ 414-526-7359
HAYDINTHACKER.COM

GALBRAITH CARNAHAN ARCHITECTS

ALTIUS
BUILDING COMPANY

PROJECT NAME

BLUEMOUND ROAD

MULTI-FAMILY

DEVELOPMENT

WAUWATOSA,

WISCONSIN

DRAWING REVISION HISTORY

REVISION 1 (TITLE)
REVISION 2 (TITLE)
REVISION 3 (TITLE)
REVISION 4 (TITLE)

SHEET TITLE

CONCEPTUAL ARCHITECTURAL

DRAWINGS

PROJECT NUMBER

22008

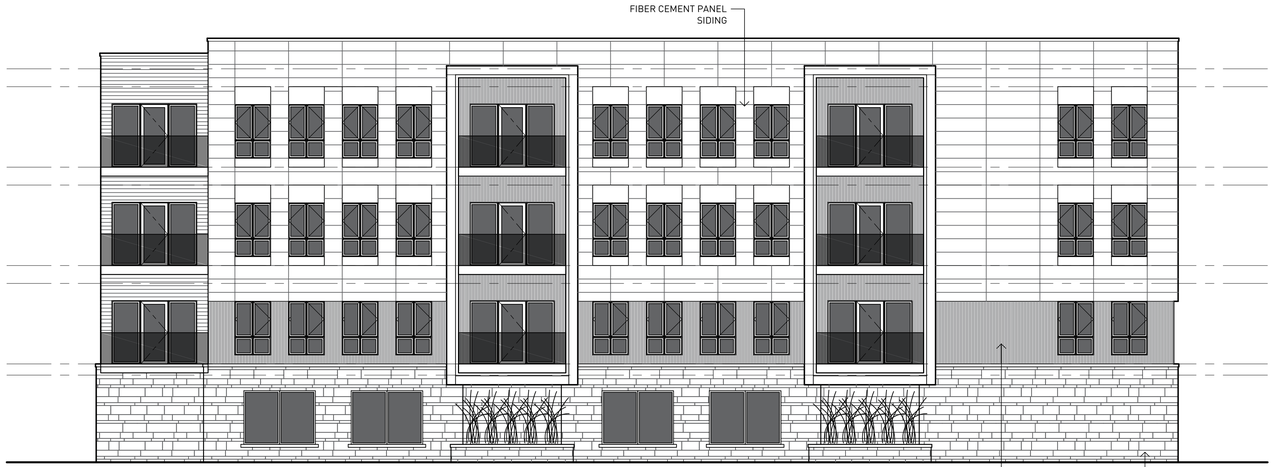
DRAWING DATE

01-25-2023

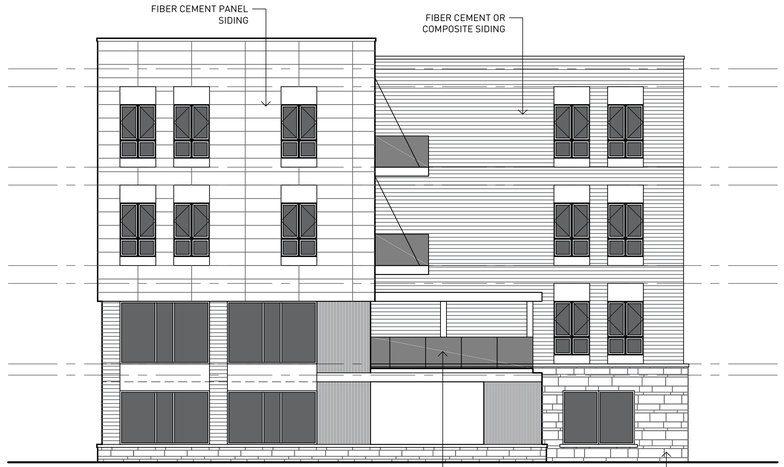
SET AND SUBMITTAL TYPE

NEIGHBORHOOD MEETING

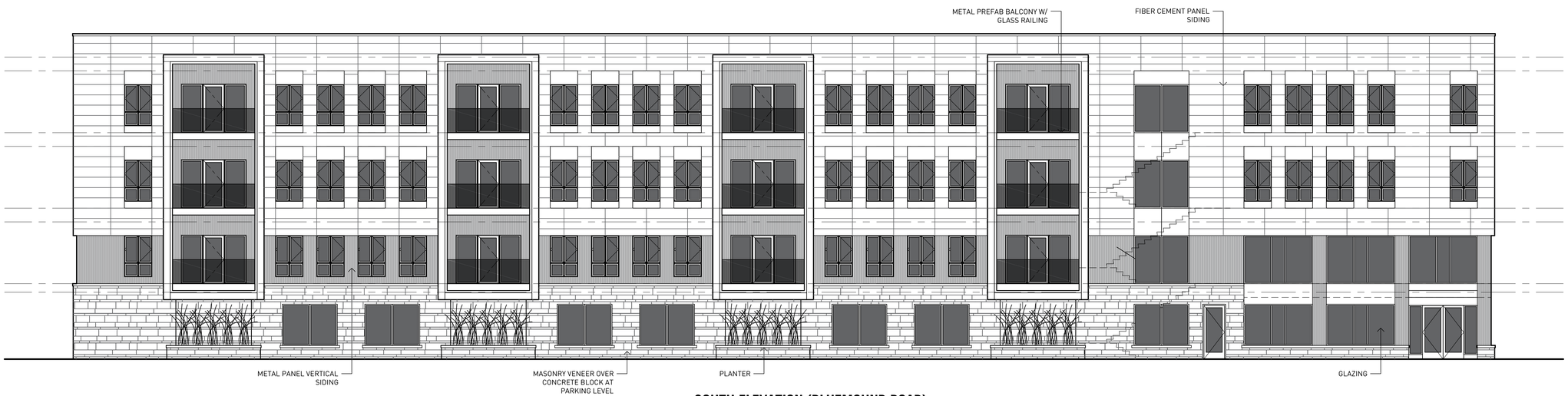
SHEET NUMBER



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



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



SOUTH ELEVATION (BLUEMOUND ROAD)
1/8" = 1'-0"

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HAYDINTHACKER.COM

GALBRAITH CARNAHAN ARCHITECTS

PROJECT NAME
BLUEMOUND ROAD
MULTI-FAMILY DEVELOPMENT

WAUWATOSA, WISCONSIN

DRAWING REVISION HISTORY

SHEET TITLE
CONCEPTUAL ARCHITECTURAL DRAWINGS

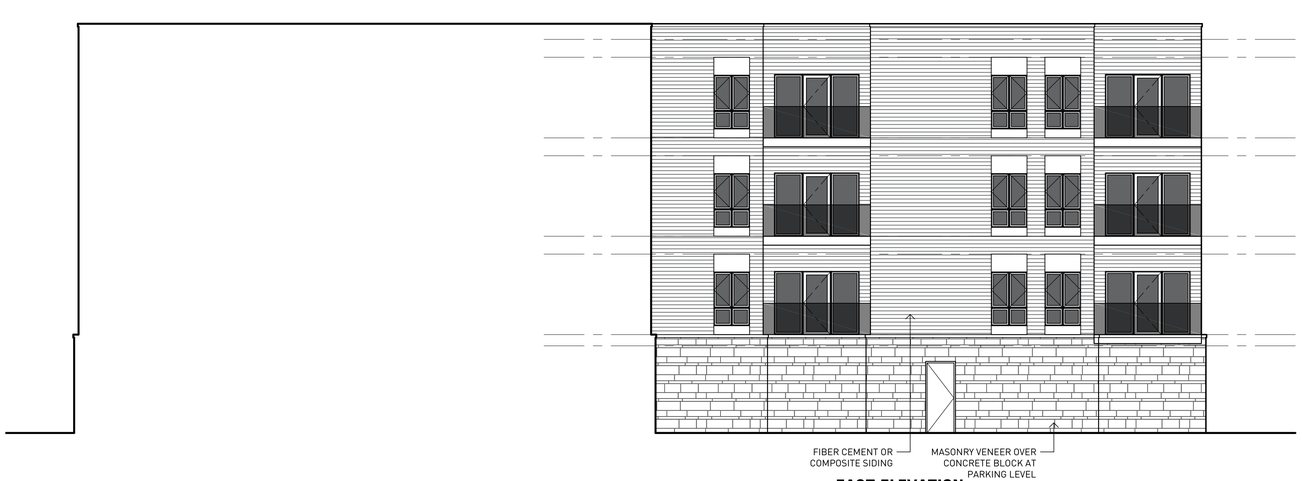
PROJECT NUMBER
22008

DRAWING DATE
02-01-2023

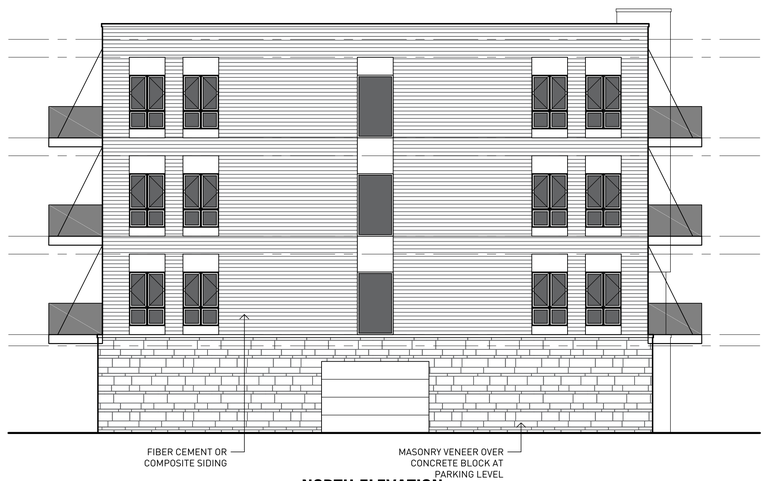
SET AND SUBMITTAL TYPE
WAUWATOSA PUD SUBMITTAL

SHEET NUMBER
A400

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



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



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

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GALBRAITH CARNAHAN ARCHITECTS

PROJECT NAME
BLUEMOUND ROAD
MULTI-FAMILY DEVELOPMENT

WAUWATOSA, WISCONSIN

DRAWING REVISION HISTORY

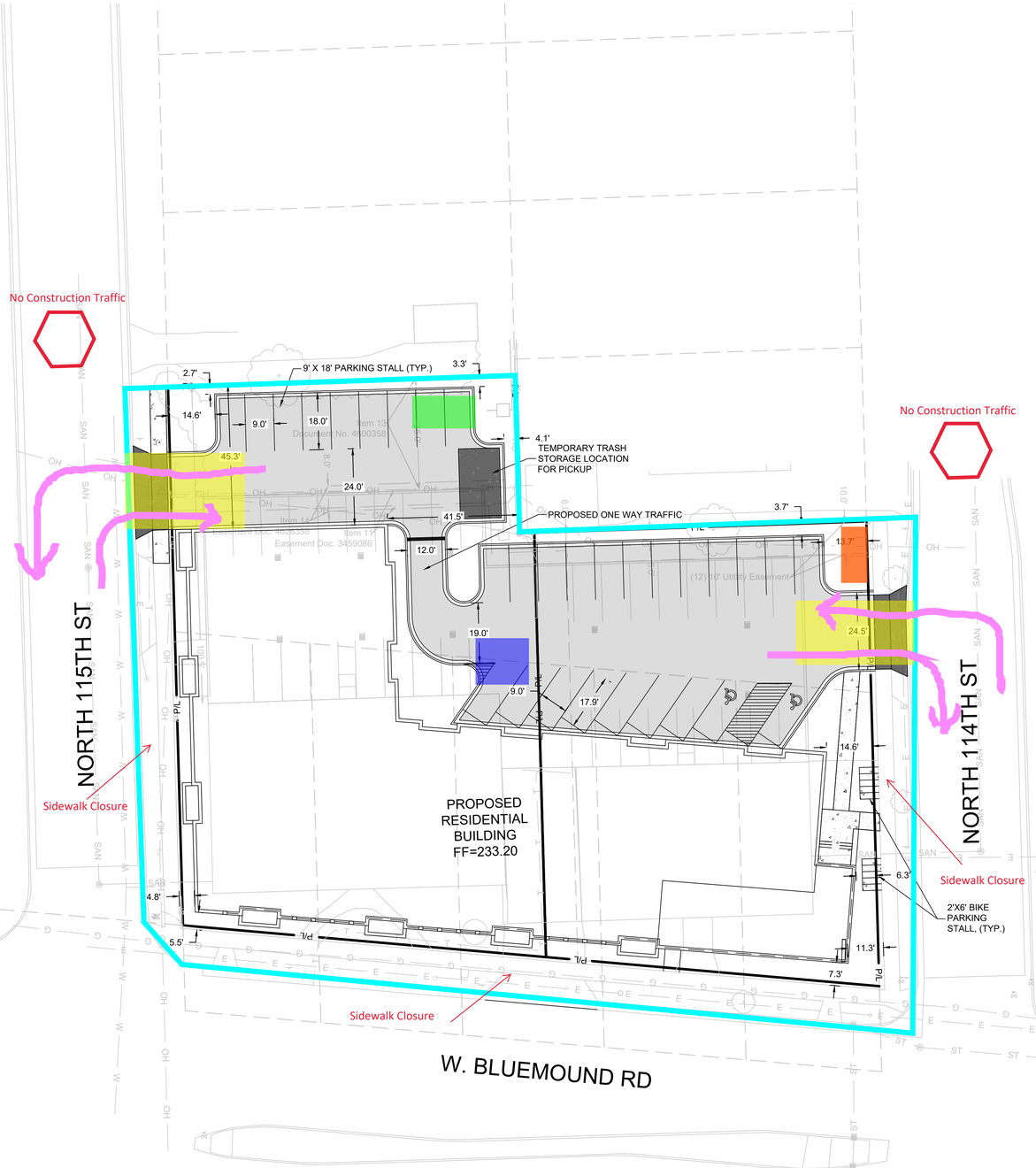
SHEET TITLE
CONCEPTUAL ARCHITECTURAL DRAWINGS

PROJECT NUMBER
22008

DRAWING DATE
02-01-2023

SET AND SUBMITTAL TYPE
WAUWATOSA PUD SUBMITTAL

SHEET NUMBER
A402



SITE INFORMATION			
SITE AREA	34804	0.799 AC	
SITE DISTURBED AREA	43036	0.988 AC	
EXISTING IMPERVIOUS AREA	26310	0.604 AC	75.6 %
PROPOSED IMPERVIOUS AREA	29688	0.682 AC	85.3 %
TOTAL PARKING SPACES	71		
ADA PARKING SPACES	2		

LEGEND:

- B C401 — 5" THICK CONCRETE WALK
- C C401 — HEAVY DUTY CONCRETE PAVEMENT
- D C401 — ASPHALT SURFACE
- A C401 — CURB & GUTTER (ACCEPT)
- A C401 — CURB & GUTTER (REJECT)
- Dumpster
- Construction Office
- Fence
- Tracking Pad
- Construction Traffic
- Crane

GENERAL NOTES:

1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
6. WORK WITHIN THE PUBLIC RIGHT OF WAY, INCLUDING BUT NOT LIMITED TO DRIVEWAY OPENINGS, SIDEWALK AND RAMPS, PAVING, AND CURB AND GUTTER SHALL BE COMPLETED PER MUNICIPAL AND/OR COUNTY REQUIREMENTS AND STANDARDS.
7. EARTHWORK SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WIS STATUTE 182.0175(1974)
REQUIRES MIN. 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE
MILW. AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

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Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

GRAPHIC SCALE
0 20 40

114TH AND BLUEMOUND
11430 - 11400 BLUEMOUND ROAD
WAUWATOSA, WISCONSIN

SITE PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

SCALE:	1"=20'
PROJECT NO:	21393
DESIGN DATE:	----
PLOT DATE:	1/17/2023
DRAWN BY:	----
CHECKED BY:	----
APPROVED BY:	----
SHEET NO:	C100

Jonathan Ward

From: Christopher Carr, P.E. <ccarr@thesigmagroup.com>
Sent: Tuesday, January 31, 2023 1:39 PM
To: Jonathan Ward
Subject: 114 and Bluemound- Stormwater

Jonathon,

The proposed residential project is not disturbing more than 1 acre of land nor is it adding more than 5,000 square feet of impervious area, so it is exempt from any local or State stormwater requirements.

Thanks,

Christopher Carr, PE
Vice President
The Sigma Group, Inc.
414.643.4163
414.517.6724
1300 W. Canal Street, Milwaukee, WI 53233
www.thesigmagroup.com | ccarr@thesigmagroup.com