

Tuesday, April 25, 2023	7:00 PM	Council Chambers and Zoom: https://servetosa.zoom.us/j/82923188685, Meeting ID: 829 2318 8685
	Desseles Mester	

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

COMMUNITY AFFAIRS COMMITTEE ITEMS

1.	Committee interview of candidate Christopher Due for Plan Commission appointment	<u>23-997</u>
2.	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	<u>23-900</u>
	Recommendation: No action needed. Action is with item #3	
3.	Ordinance amending the Official Zoning Map of the City of Wauwatosa from C2 District to C2 District/Planned Unit Development Overlay at 11400 W Blue Mound Road and 11430 W Blue Mound Road	<u>23-1231</u>
	Recommendation: Introduced on April 18, 2023, for adoption consideration	
4.	Request by Jonathan Ward, Altius Building Company, for Planned Unit Development preliminary plans at 11400 W. Blue Mound Road for a multi-unit building	<u>23-1002</u>
5.	Youth Commission Annual Report	<u>23-1155</u>
6.	Resolution approving a Conditional Use Permit in the M1 District at 1435 N 113th Street for a sports and recreation participant establishment, Bron Launsby, Innovative Heights Wauwatosa, LLC, applicant	<u>23-1222</u>
	Recommendation: Referred from Council	

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.

CITY OF WAUWATOSA Amended Resolution

By: Community Affairs Committee

WHEREAS, pursuant to Section 2.24.020 (b) of the Wauwatosa Municipal Code, the Community Affairs Committee shall interview candidates for appointment to the Plan Commission.

NOW, THEREFORE, BE IT RESOLVED that the Committee shall ask the following questions of the candidates at the interview:

- What relevant or pertinent education or work experience do you have that would be of value on the Plan Commission?
- Why do you want to serve on the Plan Commission or what interests you about serving on the Plan Commission?
- What recommendations do you have to move Wauwatosa forward as a leader in the region?
- Talk about your familiarity with the Comprehensive Plan and highlight the City's priority issues

BE IT FINALLY RESOLVED that the Committee is free to ask additional questions.

Passed	and Dated	October	4, 2016	
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		-		Clerk
Approv	ved Octob	er 5, 2016	5	25
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Adopted: October 4, 2016 Page: 445 Journal: 112 R-16-177



Staff Report

File #: 23-900

Agenda Date: 4/25/2023

Agenda #: 2.

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

Submitted by: Tamara Szudy Department: Planning Division

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 along Blue Mound Road and 115th Street, and reduce the lot area per unit requirement.

The Plan Commission reviewed the project at the March meeting and recommended approval 7-0. The required public hearing before the Common Council was held April 18, 2023 with one person speaking in support of the project and two people providing comment including a concern about the proposed building setback from the Blue Mound Road property line.

Attached to this report is the applicant's project statement and zoning information. The next agenda item provides the plans for about the proposed development. The Plan Commission item is linked for reference.

B. Staff comments

Planning/Zoning Division:

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

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Agenda Date: 4/25/2023

supplied through multi-family developments. The Housing Study is found here: <<u>https://www.wauwatosa.net/home/showpublisheddocument/4879/638125711998330000></u>

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 existing buildings.

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

Building Division: No issues.

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

City Clerk's Office: No issues.

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.

Recommendation: No action needed. Action is with item #3

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

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 twobedroom, 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 41unit 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 setback 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, <u>and effectively promote, direct, and manage reinvestments in underused and functionally obsolete properties</u>." – 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 are	ea)		·		
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	

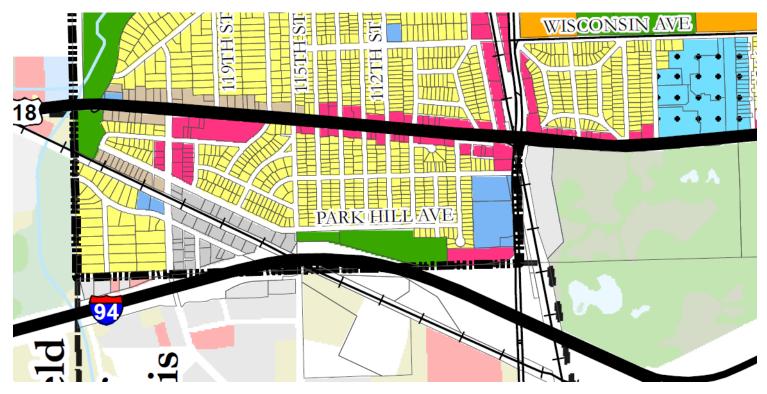
Explanation: We will provide sufficient parking for our tenants and guests so they will not park along the street in the neighborhood; with no overnight street parking allowed, we must ensure we have adequate parking to accommodate all of our residents or we may not be able to market/lease some units.

	Permitted Uses: Multi-	Unit Building -		Mixed-Use Vertical Buildings are a permitted use
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Estimate of Vehicle Trips Per Day for Existing Office vs. Proposed Multi-Unit Residential

uilding 1	6,560			VTPD
ulding				
manig	9,100			
2	25,660		11.03	283
			VTPD Projected (Low Est.)	VTPD Projected (High Est.)
5.	.44	6.65	223	273
	VTPI ts (Low	VTPD/Unit VTPD ts (Low Est.)	VTPD/Unit VTPD/Unit (High ts (Low Est.) Est.)	VTPD/Unit VTPD/Unit (High Projected (Low Est.) Est.) (Low Est.)

Excerpt from 2008-2030 Comprehensive Plan Future Land Use Map



City of Wauwatosa Comprehensive Plan

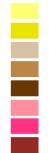
Map 2.1 - 1: Future Land Use

Wauwatosa Municipal Boundary

Other Municipal Boundaries

- Parcels
- Major Roads

Secondary Roads



Neighborhood Conservation		Campus
Single Family Residential		Institutional
Two-Family/Townhouse Residential		Public Utility
Mixed Residential-Moderate Density		Light Production
Mixed Residential-High Density		General Production &
Multi-Family-Urban Density		Distribution Employment Area
Neighborhood Commercial		Public Parks &
Planned Commercial		Open Space
Downtown		Right of Way
Planned Mixed Use	0 0.25	0.5 1



Staff Report

File #: 23-1231

Agenda Date: 4/25/2023

Agenda #: 3.

Ordinance amending the Official Zoning Map of the City of Wauwatosa from C2 District to C2 District/Planned Unit Development Overlay at 11400 W Blue Mound Road and 11430 W Blue Mound Road

The Common Council of the City of Wauwatosa ordains as follows:

Part 1. The Official Zoning Map of the City of Wauwatosa is hereby amended to reflect a Zoning Map Amendment from C2 District to C2 District/Planned Unit Development Overlay at 11400 W Blue Mound Road and 11430 W. Blue Mound Road described as follows:

11400 W. Blue Mound Road - SE QUAR SEC 30-7-21 PARCEL 2 & E 10FT OF PARCEL 1 CERT SURVEY MAP

11430 W. Blue Mound Road - SE QUAR SEC 30-7-21 PARCEL 2 CERT SURV MAP NO 1588

Part II. The City Administrator is hereby directed to change the Official Zoning Map of the City of Wauwatosa to conform to the provisions of the Ordinance, and said Map is declared amended accordingly.

Part III. This ordinance shall take effect on and after its date of publication.

By: Plan Commission

Recommendation: Introduced on April 18, 2023, for adoption consideration



Staff Report

File #: 23-1002

Agenda Date: 4/25/2023

Agenda #: 4.

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: Tamara Szudy 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 Street 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 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. Surrounding land uses include single-family residential uses to the north and commercial uses to the east, west, and south.

The Plan Commission reviewed the project at the March meeting and recommended approval 6-1. The required public hearing before the Common Council was held April 18, 2023 with one person speaking in support of the project and two people providing comment including a concern about the proposed building setback from the Blue Mound Road property line.

Attached to this report are the development plans. The Plan Commission item is linked.

B. Staff comments

<u>Planning/Zoning Division</u>: This request is contingent upon approval of the zoning map amendment and the certified survey map applications. Filing the certified survey map to combine the two properties 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.

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

<u>Assessor's Office</u>: 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.

<u>Engineering Division</u>: 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 Blue Mound 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).

Agenda Date: 4/25/2023

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.

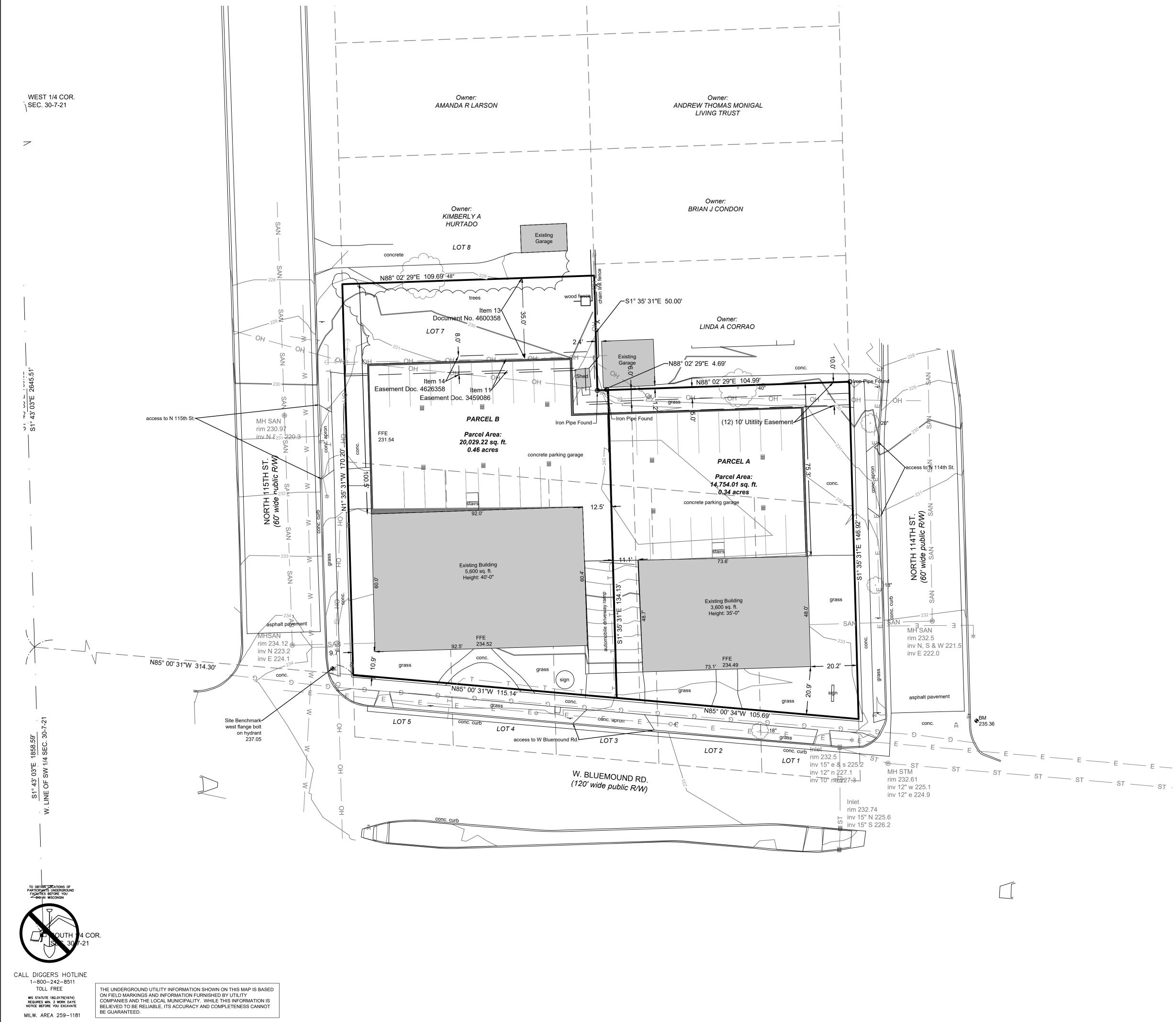
Health Department: No comments provided.

Police Department: No comments provided.

C. Recommendation

Staff recommends approval subject to:

- 1. Approval of the CSM and zoning map amendment applications. Filing the CSM prior to issuing building permits.
- 2. Approval from the Design Review Board is required prior to submitting for Final PUD approval.
- 3. 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.
- 4. Providing detailed costs of any alterations and/or new construction as well as income and expense information as requested by the Assessor's office.
- 5. 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.
- 6. Fire and domestic water demand calculations must be submitted prior filing Final PUD application.
- 7. Final plans must meet all requirements pertaining to landscaping and screening in WMC 24.12.
- 8. Filing application for Final PUD approval within 12 months of the date of Preliminary PUD approval.
- 9. Obtaining all necessary approvals, licenses, and permits.



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<i>Single So</i> www.th 1300 W Milwaul Phone:	burce. Sour nesigmag /est Cana kee, WI 414-643 14-643-4	roup.com I Street 53233 -4200	GROUP
114TH AND BLUEMOUND	11430 - 11400 BLUEMOUND ROAD	WAUWATOSA, WISCONSIN	SITE SURVEY
PP	ELIN COT	INAR STRI	Action

—Х— — — OH — — — — – E – – — — — TEL— — — — — FO — — — — -CTV- - — — -SAN- - — — — FM — — — — — ST — — — — — W — — — — — G — — — ----- WET ------

——FP———

- MANHOLE
- 🛍 CATCH BASIN
- CATCH BASIN (ROUND)
- ROOF DRAIN
- 🐹 HYDRANT
- 🛱 WATER VALVE
- 🕅 🛛 GAS VALVE
- \emptyset UTILITY POLE
- \leftarrow GUY WIRE
- GM GAS METER
- EM ELECTRIC METER
- P UTILITY PEDESTAL
- TRAFFIC SIGNAL
- SOIL BORING
- MONITORING WELL

LEGEND:

SECTION 1/4 SECTION LINE PROPERTY LINE EASEMENT CHAIN LINK FENCE TREE LINE OVERHEAD UTILITY LINE ELECTRIC TELEPHONE FIBER OPTIC CABLE TV SANITARY SEWER FORCE MAIN STORM SEWER WATER MAIN GAS EXISTING CONTOUR WETLAND FLOODPLAIN

- IRON PIPE FOUND/SET
- REBAR FOUND/SET
- ⊗ CHISELED CROSS FOUND/SET
- ☉_{PK} PK NAIL FOUND/SET
- SPIKE/NAIL
- MONUMENT
- 🕀 BENCHMARK
- ⊸ SIGN
- $\left\{\cdot\right\}$ DECIDUOUS TREE
- BUSH O POST

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.

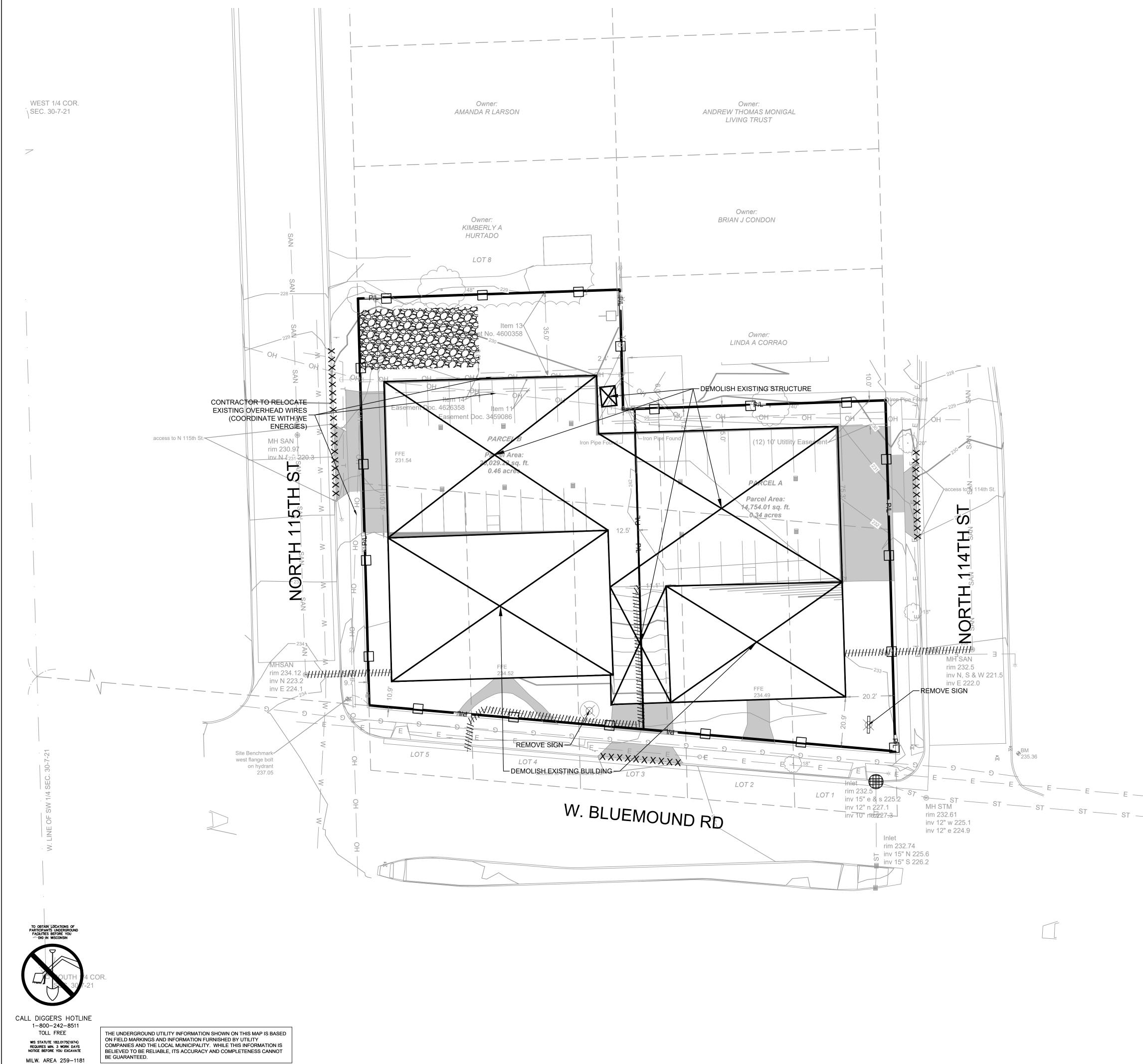
2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

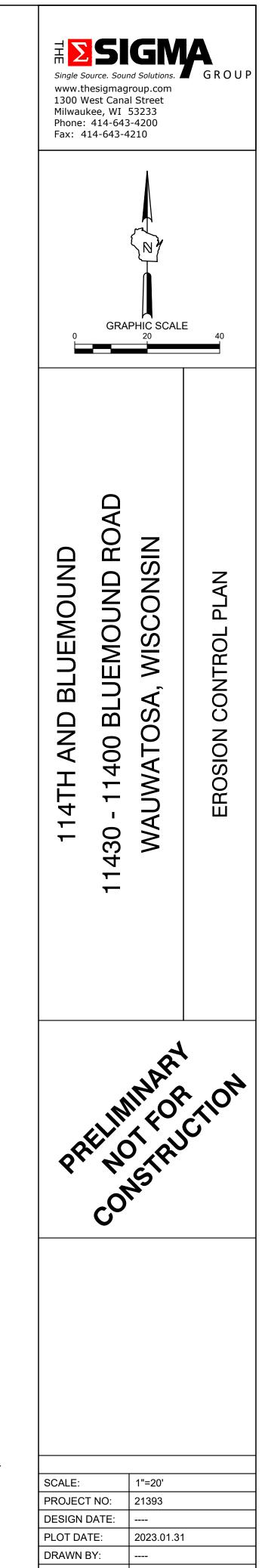
3. DRAWING IS BASED ON FIELD SURVEY COMPLETED BY THE SIGMA GROUP ON OCTOBER 5TH, 2022.

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.

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





<u>B</u> C400 PROPOSED SILT SOCK PROPOSED INLET PROTECTION C400 PROPOSED TRACKING PAD C400 PROPOSED EROSION MATTING WISDOT APPROVED CLASS 1 TYPE B \C409 EXISTING CONTOUR PROPOSED CONTOUR UTILITY REMOVAL ΧΧΧΧΧΧΧΧΧΧ CURB REMOVAL STRUCTURE REMOVAL

LEGEND:

— 5

PAVEMENT REMOVAL

GENERAL NOTES:

- 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.
- VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY 2. 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.

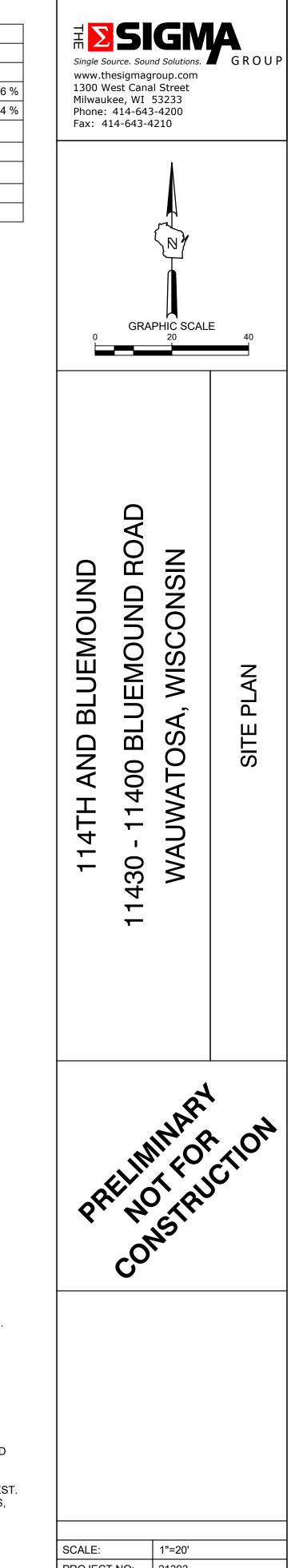
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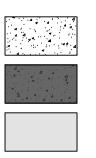
C002



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SITE INFORMA	TION		
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:

5" THICK CONCRETE WALK HEAVY DUTY CONCRETE PAVEMENT

D C401

ΆÌ

ASPHALT SURFACE



A CURB & GU C401 (ACCEPT) CURB & GUTTER CURB & GUTTER C401 (REJECT)

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.
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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. 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.

PROJECT NO: 21393 DESIGN DATE: PLOT DATE: 1/31/2023 DRAWN BY: CHECKED BY: APPROVED BY: ---SHEET NO: C100



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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.

LEGEND:

D ASPHALT SURFACE

CURB & GUTTER

CURB & GUTTER

EXISTING CONTOUR

PROPOSED CONTOUR

PROPOSED ASPHALT

EXISTING SURFACE

SPOT GRADE (MATCH)

SPOT GRADE

T/C: TOP OF CURB GRADE

FL: FLOW LINE CURB GRADE

PROPOSED CURB & GUTTER SPOT GRADE

(ACCEPT)

C401 (REJECT)

 $\langle A \rangle$

C401

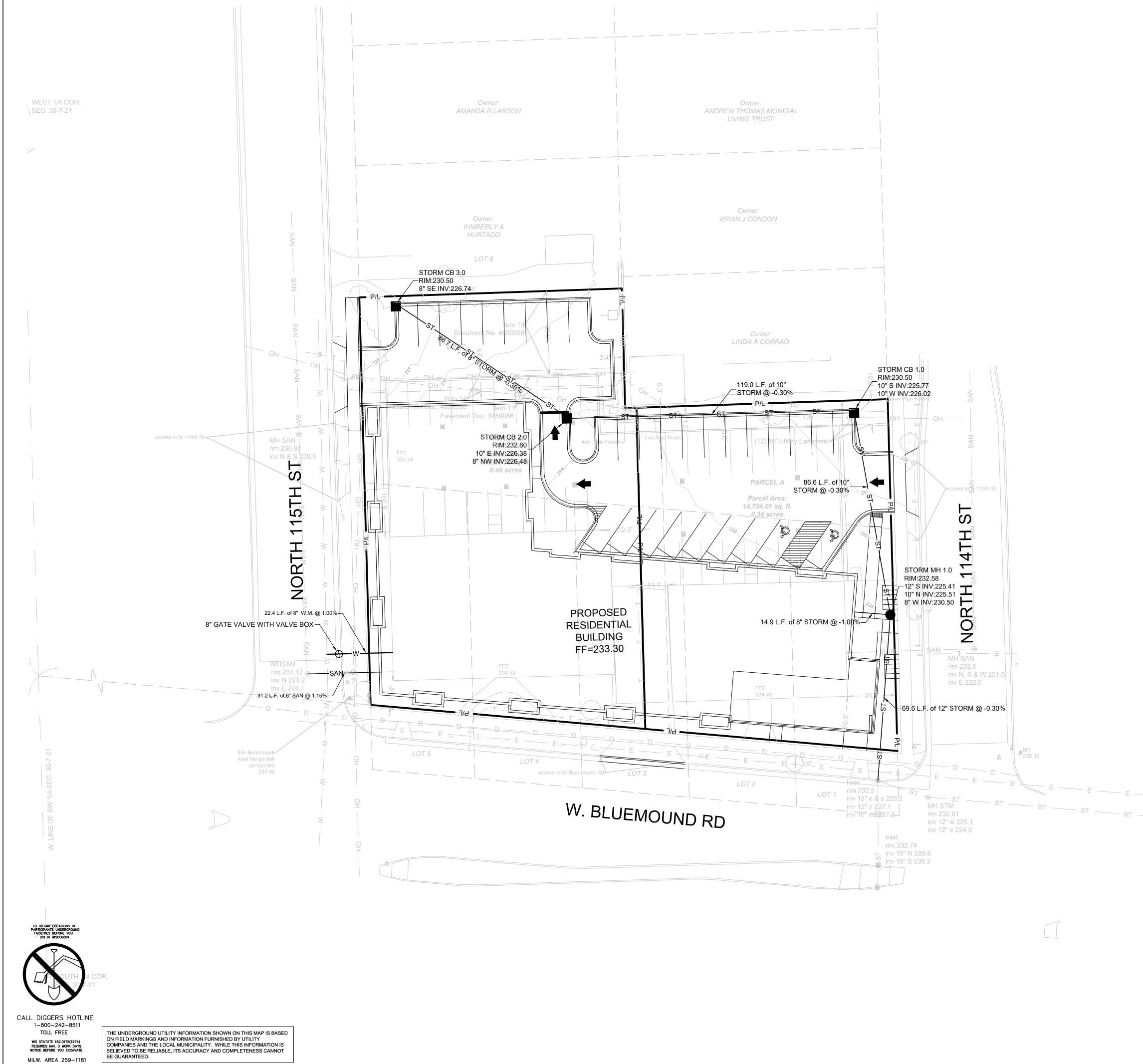
A

5" THICK CONCRETE WALK

HEAVY DUTY CONCRETE PAVEMENT

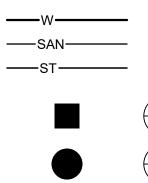
- VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY 2 POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
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- 5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
- 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.

1"=20' SCALE: PROJECT NO: 21393 DESIGN DATE: PLOT DATE: 1/31/2023 DRAWN BY: CHECKED BY: APPROVED BY: SHEET NO: C200



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LEGEND:



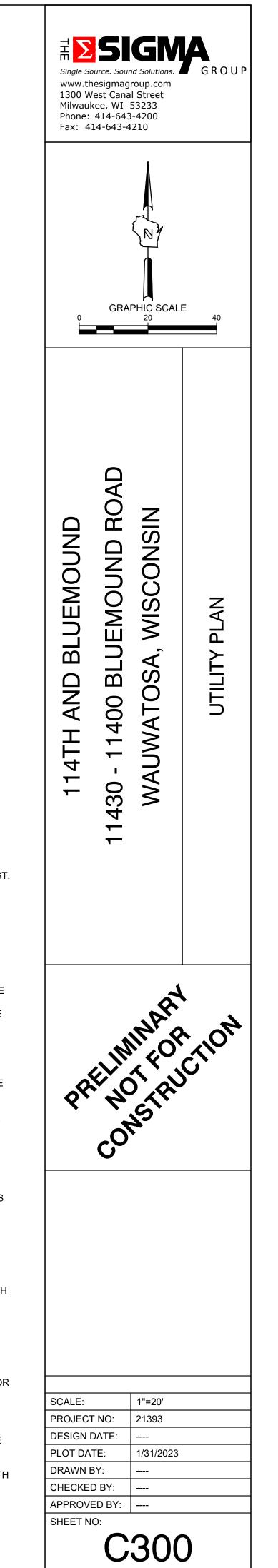
PROPOSED WATER SERVICE PROPOSED SANITARY SERVICE PROPOSED STORM SEWER

PROPOSED STORM INLET

PROPOSED STORM 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.
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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.
- 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.



	EXISTING ASPHALT, CONCRETE	SEDIMENT L / (8", 12" OR 1
	OR GRASS SURFACE	PAVEMENT OR IMPERVIOUS // AS NEEDED
		SURFACE
	GENERAL NOTE: 12" MIN. 3" TO 6" CLEAR OR WASHED STONE	
	1. STONE TRACKING PAD SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1057	SECTIO
	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	CONCRETE BLOCKS SI
	CONSTRUCTION ENTRANCE - WDNR TS-1057	
	A SCALE:NTS	AREA TO BE P
	SLOPE INSTALLATION	SEDIM
		WATER FLOW (8", 12"
	LIF A Hannel	
		B SEDIMENT LOG - SILT SOCK ON F
	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.	
	 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:	
	 EROSION MATTING SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1052. 	
	2. INSTALL PER MANUFACTURERS SPECIFICATIONS.	
	D EROSION MATTING - WDNR TS-1052	
	U SUALL.NTS	
	OSION CONTROL NOTES: CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENT	
	EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENT EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOUR ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCT	RCES TECHNICAL STANDARDS.
	OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAI	
5.	ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE IN SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION C	TENDED PURPOSE IS ACCOMPLISHED. CONTRACTOR
4	AT END OF EACH WORK DAY. DOCUMENT AND MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH WDN SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSI	R NR216 REQUIREMENTS.
	WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESS/ FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT PER INLET PROTECTION DETAI	ARY TO MAINTAIN A BARRIER.
	PLANS. 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.	
-	SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ANY TOPSOIL AND FILL STOCKPILES. SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPRO	
40	DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. WATER MAY NOT BE DISCHARGED IN A MANNE OR RECEIVING CHANNELS.	
	WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RU	JNOFF OR WIND.
11.	TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WII 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 UNLE BASIN OR PRACTICE SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDAR	
12.	STABILIZED CONSTRUCTION ENTRANCE LOCATION. SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE	
13.	OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEAN ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR P	ERMANENT SEEDING, MULCHING, SODDING, COVERING
	WITH TARPS, OR EQUIVALENT PRACTICE FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TEC PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDIN	,
14.	STABILIZATION. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE RO	
	STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILES. IF REMAIN STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS OR OTHER MEANS.	
15.	WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORAR BALES, SEDIMENT AND SEDIMENT TRAPS, FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TEC	
	NOTIFY THE LOCAL MUNICIPALITY HAVING JURISDICTION WITHIN TWO WORKING DAYS OF COMMENCING ANY LAN OBTAIN PERMISSION FROM THE LOCAL MUNICIPALITY HAVING JURISDICTION PRIOR TO MODIFYING THE EROSION	D DEVELOPMENT OR LAND DISTURBING ACTIVITY.
18.	REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.	
20.	CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE DISTURBANCE OF EXISTING VEGETATION DURING CON CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE COMPACTION OF TOPSOIL AND PRESERVE TOPSOIL IN	
22.	WASH WATER FROM VEHICLES AND WHEEL WASHING SHALL BE CONTAINED AND TREATED PRIOR TO DISCHARGE CONTRACTOR SHALL MAINTAIN SPILL KITS ON-SITE.	
	PERMAMENT TURF SEEDING OF DISTURBED AREA MUST OCCUR PRIOR TO SEPTEMBER 15TH. IF ADEQUATE TIME PRIOR TO SEPTEMBER 15TH, THEN DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH AN ANNUAL RYE GF	
25	THE TEMPORARY SEEDING MUST OCCUR PRIOR TO OCTOBER 15TH. IF TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED T	
_0.	1050. INSPECT ANIONIC PAM APPLICATION AT A MINIMUM FREQUENCY OF EVERY TWO MONTHS AND REAPPLY AS	

I:\Altius Building\21393 - 114th and Bluemound\060 CAD\030_Production Sheets\100_Civil\C400 Erosion Control Details.dwg

SEDIMENT LOG / SILT SOCK (8", 12" OR 18" TYPICAL) CONCRETE BLOCKS SIZED AS NEEDED (10' O.C. MIN.)

AREA TO BE PROTECTED

SECTION

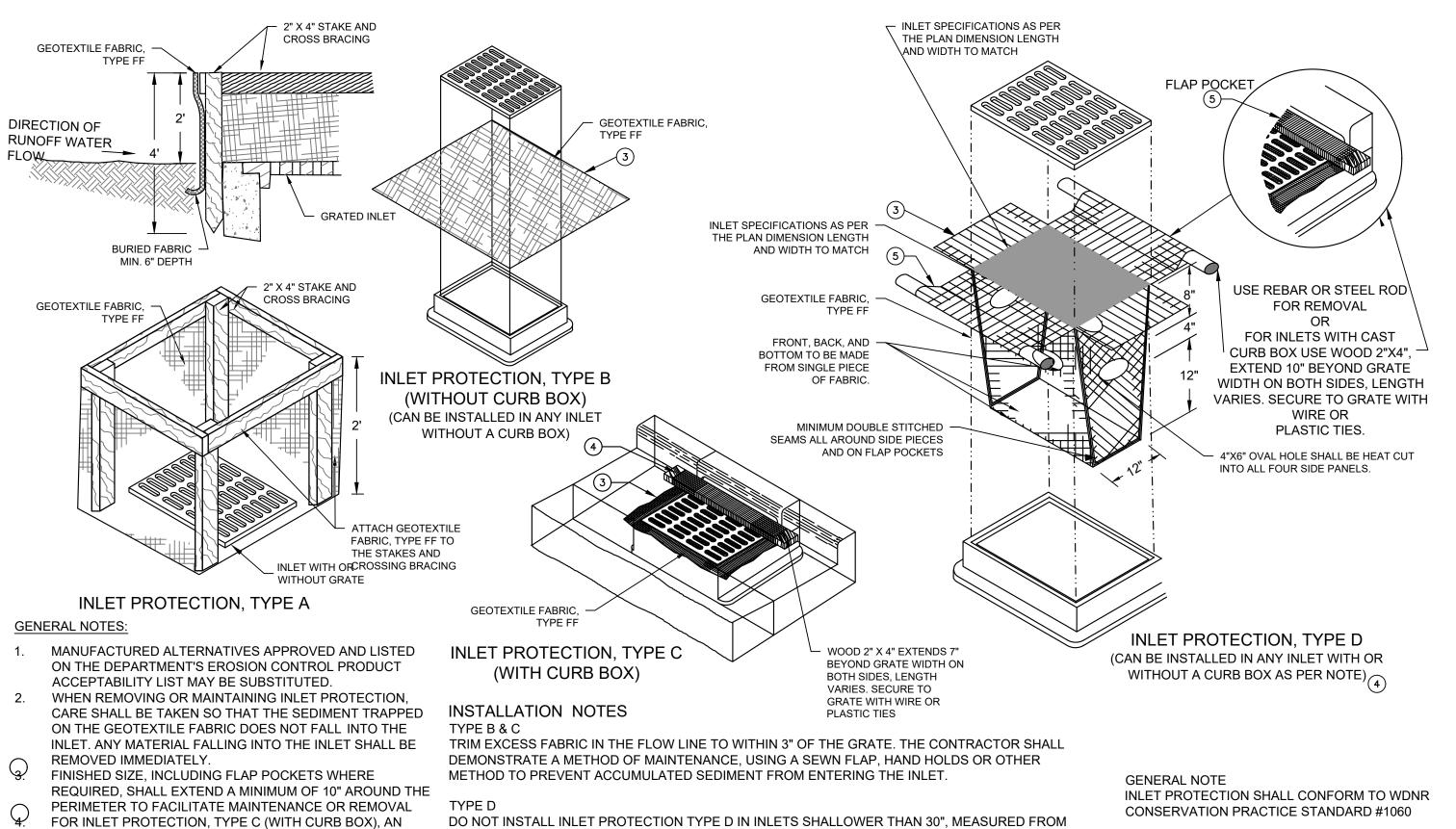
E BLOCKS SIZED ED (10' O.C. MIN.)

REA TO BE PROTECTED

SEDIMENT LOG / SILT SOCK (8", 12" OR 18" TYPICAL)

PLAN

OCK ON PAVEMENT



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.

WOOD 2X4. **INLET PROTECTION - WDNR TS-1060**

OPENING.

ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE

NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX

FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT

WOOD AND SECURED WITH STAPLES. THE WOOD SHALL

VOLUMES. 15. REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED.

12. REMOVE TEMPORARY OUTLET CONTROL STRUCTURE ON BASIN AND INSTALL PAVEMENTS.

CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:

IS USED, A 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE. 2. INSTALL SILT FENCING AND INLET PROTECTION.

STORM SEWER OUTFALLS.

- 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.

10. PREPARE BUILDING PAD AND BEGIN FOUNDATIONS WORK FOR BUILDING.

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.

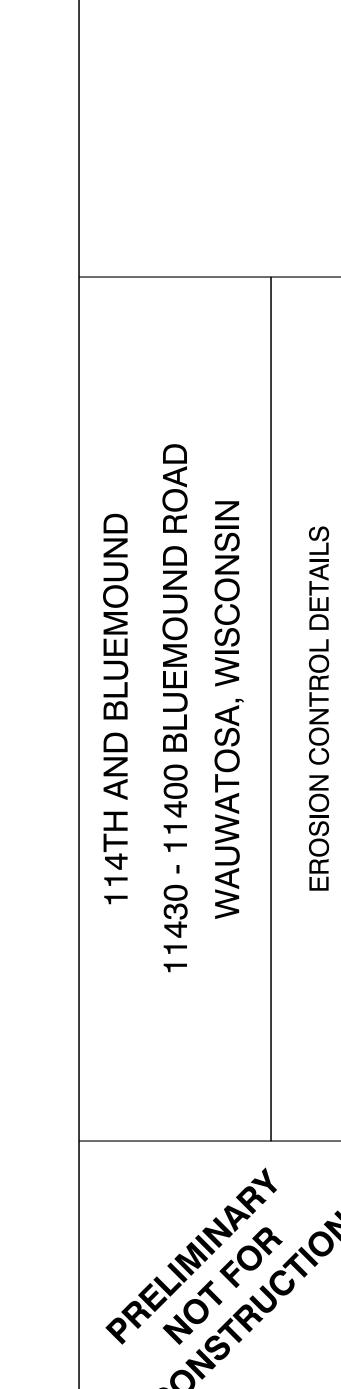
13. STABILIZE AREAS REMAINING AREAS WITHIN 7 DAYS OF COMPLETION OF FINAL GRADING AND TOPSOILING.

11. INSTALL UTILITIES. INSTALL ANY ADDITIONAL INLET PROTECTION ON NEW STORM SEWER AND INSTALL RIP-RAP AT NEW

14. REMOVE EXCESS SEDIMENT FROM STORMWATER BASINS AND RETURN BASINS TO THEIR DESIGN DIMENSIONS AND

THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING

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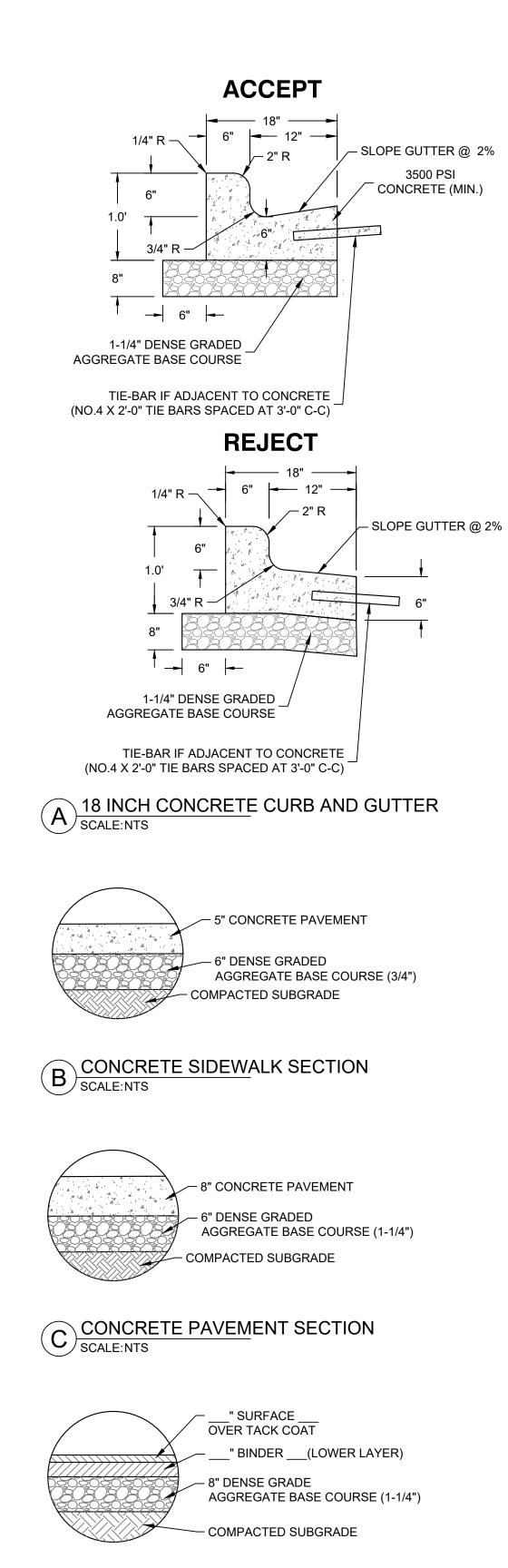
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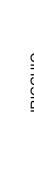
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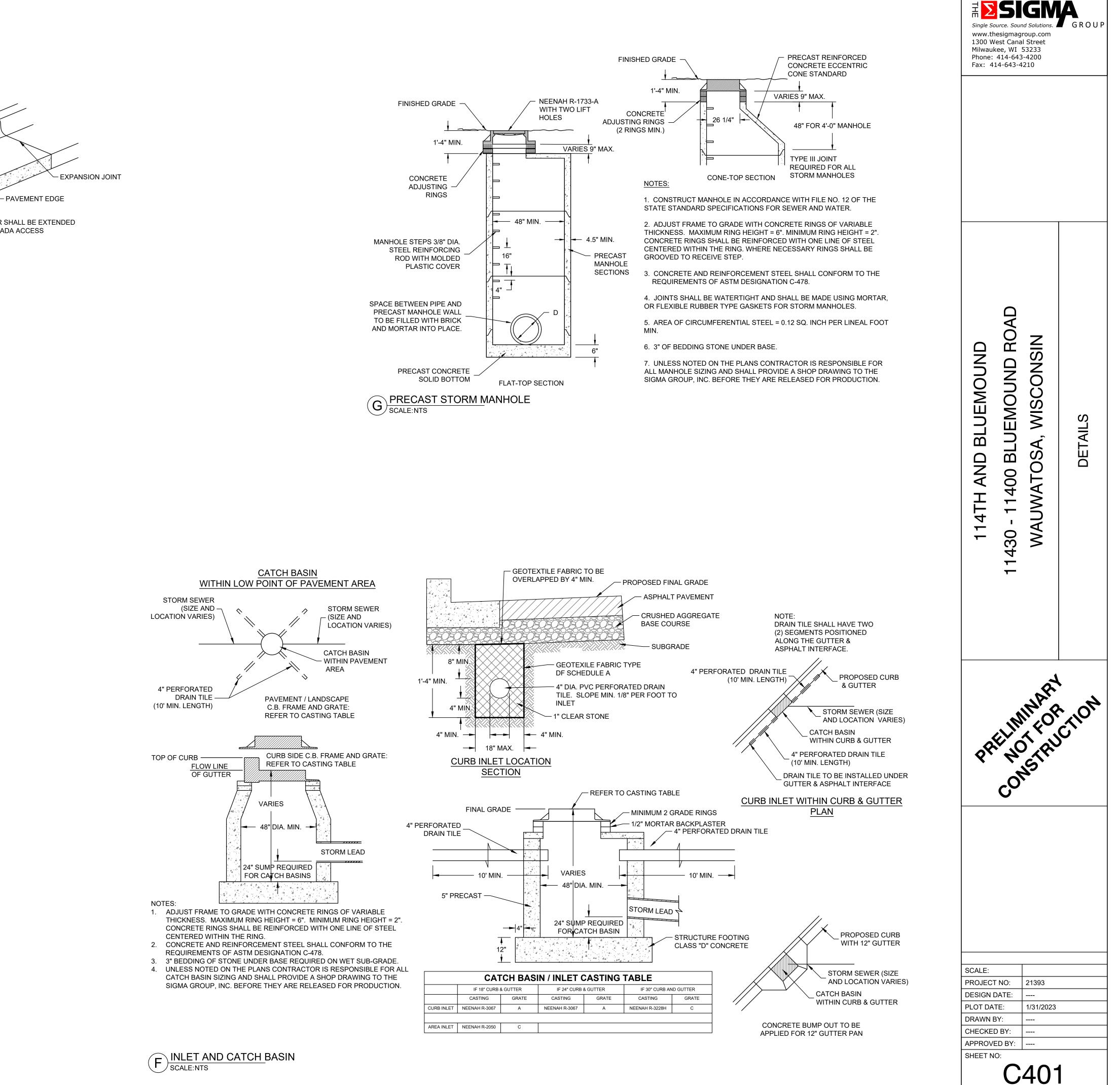


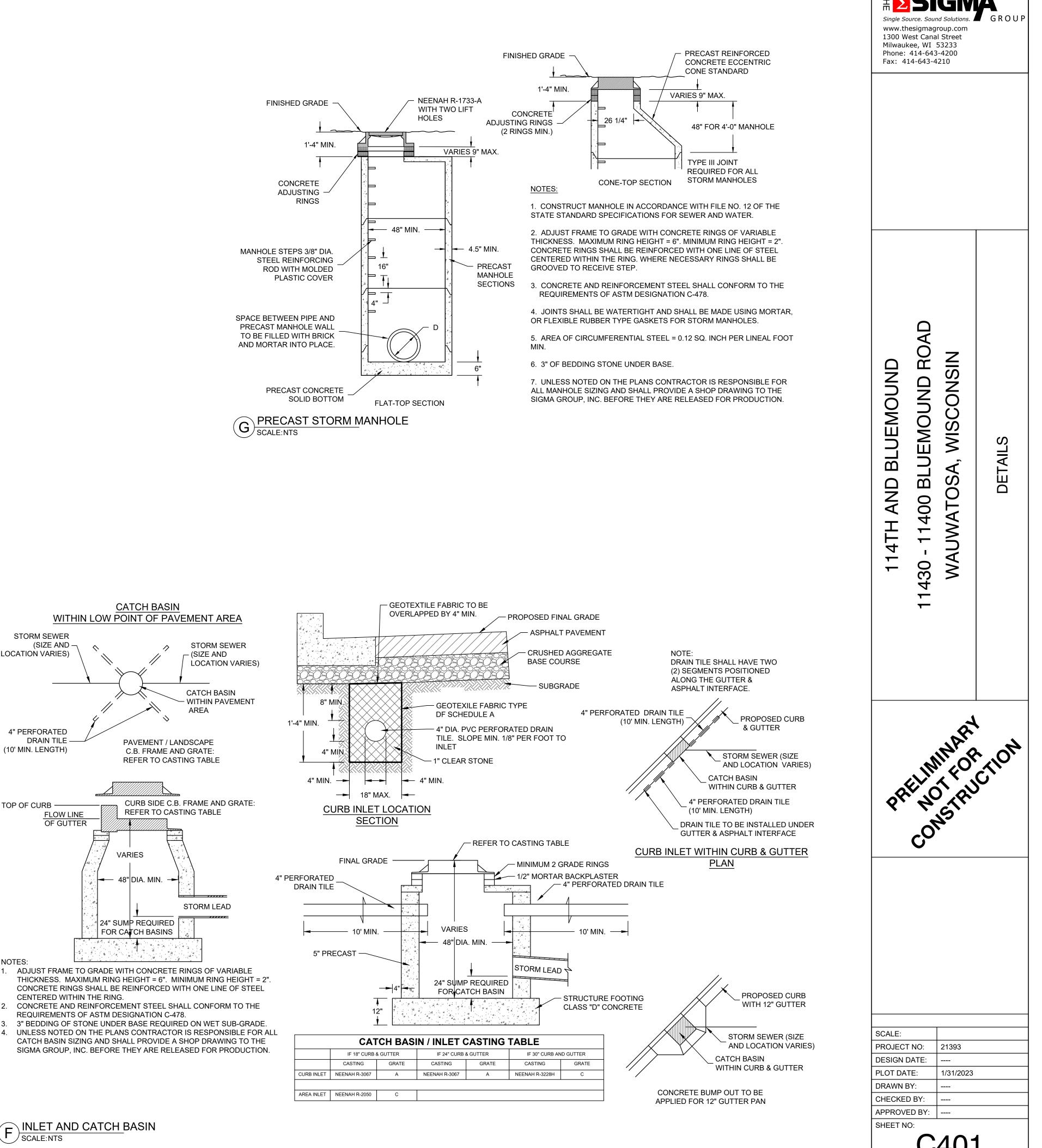
1' TO 2' (TYP) NOTES: IF SIDEWALK IS ADJACENT TO CURB TAPER, TAPER SHALL BE EXTENDED TO 10' TO MAINTAIN 5% MAX SLOPE ON WALK FOR ADA ACCESS E CURB TAPER SCALE:NTS



ASPHALT PAVEMENT SECTION (D) ASPHAL SCALE:NTS

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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.
- 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 7 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.
- 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 2. ALL PUBLIC STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER 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.

- SANITARY SEWERAGE:
- 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.

- 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. 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.
- 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.
- 17. REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS 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:

- LATEST EDITION.
- REGISTER.

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

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.

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.

MANHOLES DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.

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).

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

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

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,

5. HDPE PIPE: ADS N12 PIPE AS APPROVED ON THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCT

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:

- GEOTECHNICAL ENGINEER SHALL GOVERN.
- MATERIAL PROPOSED FOR FILL AND BACKFILL.
- ENGINEERED FILL.

- SHALL HAVE A LIQUID LIMIT OF LESS THAN 49 AND PLASTICITY INDEX BETWEEN 11 AND 25.
- SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- PASSING A NO. 8 SIEVE.
- SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
- WISCONSIN, LATEST EDITION.
- FLOODING PROJECT SITE AND SURROUNDING AREA.
- CONTRACTOR.
- SURROUNDING SUITABLE SOIL SO THAT EDGE FAILURE OF THE OVEREXCAVATED AREA DOES NOT OCCUR.
- SUCH DRAINTILES SHALL BE 0.5%.
- N PROJECT SCHEDULE.
- TECHNICIAN.
- SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.

- PROCTOR (ASTM D1557).
- PER 200 LINEAR FEET OF TRENCH FOR EACH LIFT, WHICHEVER IS LESS.
- QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- BUILDINGS AND TO PREVENT PONDING. FIELD QUALITY-CONTROL TESTING.
- EVERY 20 LINEAR FEET IN CONTINUOUS FOOTINGS.
- SQ. FT. OR LESS OF BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
- 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.
- AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
- OFF OWNER'S PROPERTY.

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

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

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

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

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

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

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

13. PIPE COVER MATERIAL: CONFORM TO SECTION 8.43.3 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN

14. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM

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

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

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

19. CONVENTIONAL DISKING AND AERATION TECHNIQUES SHALL BE USED TO DRY SOILS BEFORE PROOF ROLLING. ALLOT FOR PROPER DRYING TIME

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

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

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

27. COMPACTION TESTING OF UTILITY TRENCHES SHALL BE PERFORMED ONE FOR EVERY 200 CUBIC YARDS OF BACKFILL PLACED OR ONE FOR TEST

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

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

30. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM

31. FOOTING SUBGRADE TESTING: EACH ISOLATED FOOTING SHALL INCLUDE AT LEAST ONE TEST PROBE. TEST PROBES SHALL BE PERFORMED

32. BUILDING SLAB AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EVERY 2500

33. PAVEMENT AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY LIFT FOR EVERY

35. WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY

36. DISPOSAL: REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT

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

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.	1.
2.		2.
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.	3.
4. 5.		4.
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. CHEMICAL ADMIXTURES: PER SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.	5.
8. 9.		6. 7.
	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.	8.
	. GENERAL EXECUTION: CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS. . PROOFROLL SUBGRADE AND AGGREGATE BASE AS OUTLINED IN EARTH MOVING SPECIFICATION PRIOR TO PLACEMENT OF PAVEMENTS.	9.
	. 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.	10.
	 CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE. 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 	11.
17.	. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT	
18.	OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES,	12.
19.	INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED. 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.	13.
	 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. CURBING: COMPLY WITH SECTION 601 OF THE WISDOT STANDARD SPECIFICATIONS. 	14.
	. SIDEWALKS: COMPLY WITH SECTION 602 OF THE WISDOT STANDARD SPECIFICATIONS.	
	. MOISTEN AGGREGATE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED. . FINISH CURBING IN ACCORDANCE WITH SECTION 601.3.5 OF THE WISDOT STANDARD SPECIFICATIONS.	
	. 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).	15.
	. PROTECT AND CURE SIDEWALK IN ACCORDANCE WITH SECTION 602.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.	
	. PROTECT AND CURE CURBING IN ACCORDANCE WITH SECTION 601.3.7 OF THE WISDOT STANDARD SPECIFICATIONS. . PROTECT AND CURE VEHICULAR CONCRETE PAVING IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.	16.
	. REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION.	
	 PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 7 DAYS AFTER PLACEMENT. 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. 	
<u>AS</u>	SPHALTIC PAVING: THE COMPOSITION, PLACING AND CONSTRUCTION OF ASPHALTIC PAVEMENTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF	17.
	SECTIONS 450, 455, 460, 465, AND 475 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS).	18.
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.	19.
3.	MANUFACTURER QUALIFICATIONS: MANUFACTURER SHALL BE REGISTERED WITH AND APPROVED BY THE DOT OF THE STATE IN WHICH PROJECT IS LOCATED.	20.
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.	21.
5. 6.	AGGREGATES SHALL BE IN ACCORDANCE WITH SECTION 460.2.2 OF THE WISDOT STANDARD SPECIFICATIONS. ASPHALT MATERIALS SHALL BE IN ACCORDANCE WITH CHAPTER 455 OF THE WISDOT STANDARD SPECIFICATIONS.	22.
о. 7.	PAVEMENT MARKING PAINT: PROVIDE PAINT FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCTS LIST. COLOR	
8.		23.
9.	HEAVY DUTY PAVEMENT COMPLYING WITH THE WISDOT STANDARD SPECIFICATIONS. ASPHALTIC BINDER SHALL BE 58-28 S UNLESS NOTED. AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE WISDOT STANDARD SPECIFICATIONS.	24.
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.	25.
11.	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS	25. 26.
	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO	26.
12.	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS. 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. SPREAD AND FINISH ASPHALTIC MIXTURE IN ACCORDANCE WITH SECTION 450.3.2.5 OF THE WISDOT STANDARD SPECIFICATIONS. PAVEMENT	
12. 13.	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS. 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. 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. 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	26.
12. 13. 14.	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS. 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. 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. PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL	26. 27.
12. 13. 14. 15.	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS. 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. 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. 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. COMPACT ASPHALTIC PAVEMENT IN ACCORDANCE WITH SECTION 450.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED. ERECT	26. 27. 28.
12. 13. 14. 15. 16.	METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS. 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. 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. 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. COMPACT ASPHALTIC PAVEMENT IN ACCORDANCE WITH SECTION 450.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS. 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. THICKNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS ¼ INCH FOR BINDER COURSE	26. 27. 28.
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21393

SEGMENTAL RETAINING WALL:

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.

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.

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.

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.

COLOR AND STYLE OF SRW UNITS SHALL BE AS SELECTED BY ARCHITECT AND OWNER FROM MANUFACTURER'S FULL RANGE.

SRW UNITS SHALL BE CAPABLE OF BEING ERECTED WITH THE HORIZONTAL GAP BETWEEN ADJACENT UNITS NOT EXCEEDING 1/8 INCH. 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.

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.

SRW UNITS' MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN <u>+</u> 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. 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. 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.

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.

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.

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

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.

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

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.

THE PLASTICITY OF THE FINE FRACTION SHALL BE LESS THAN 20.

THE PH OF THE BACKFILL MATERIAL SHALL BE BETWEEN 3 AND 9 WHEN TESTED IN ACCORDANCE WITH ASTM G 51.

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.

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.

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.

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.

CONTRACTOR'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.

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.

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.

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. 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. 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.

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).

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.

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.

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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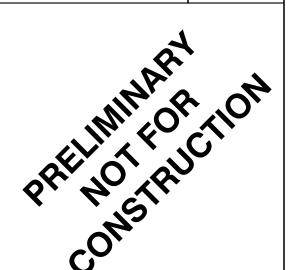
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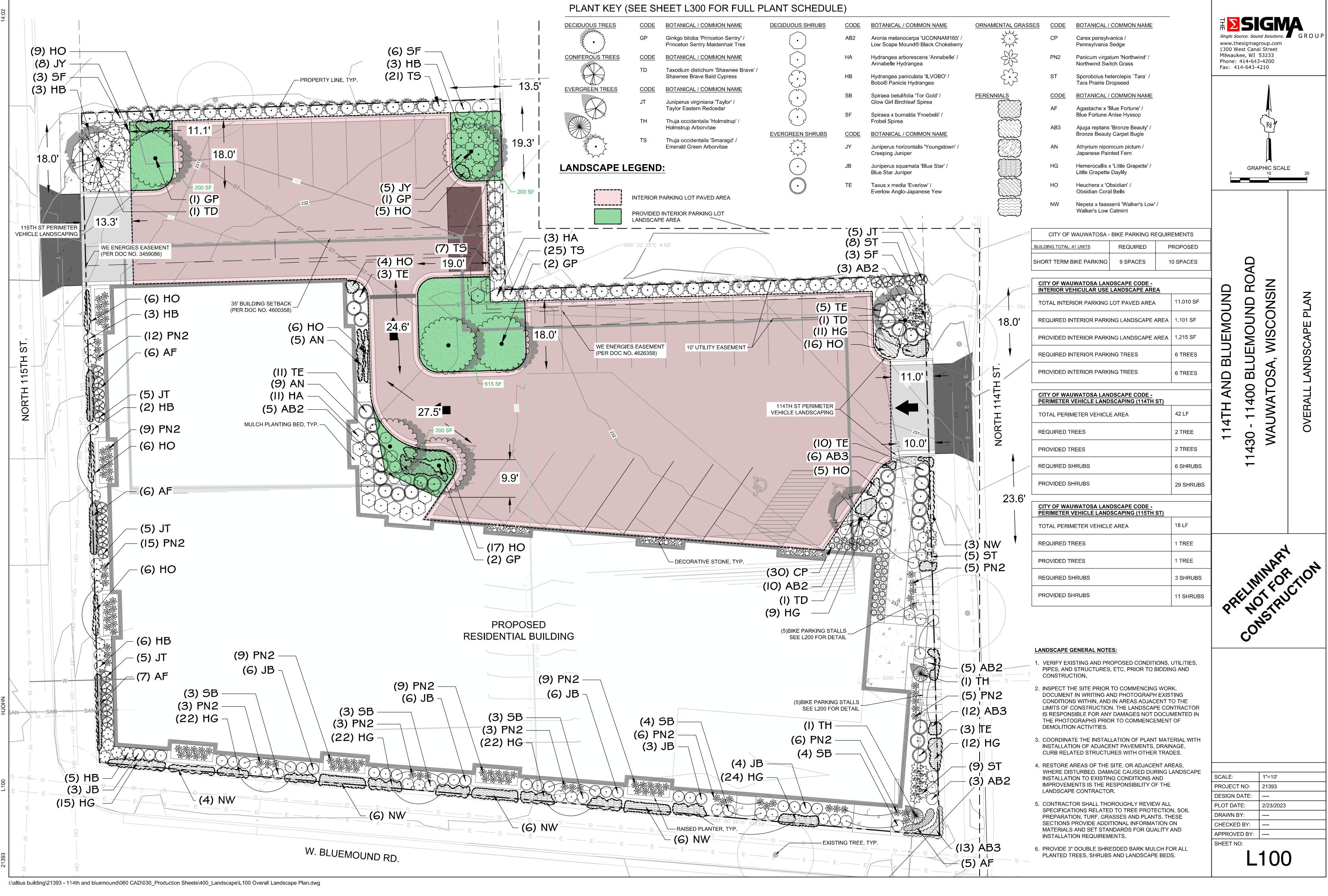
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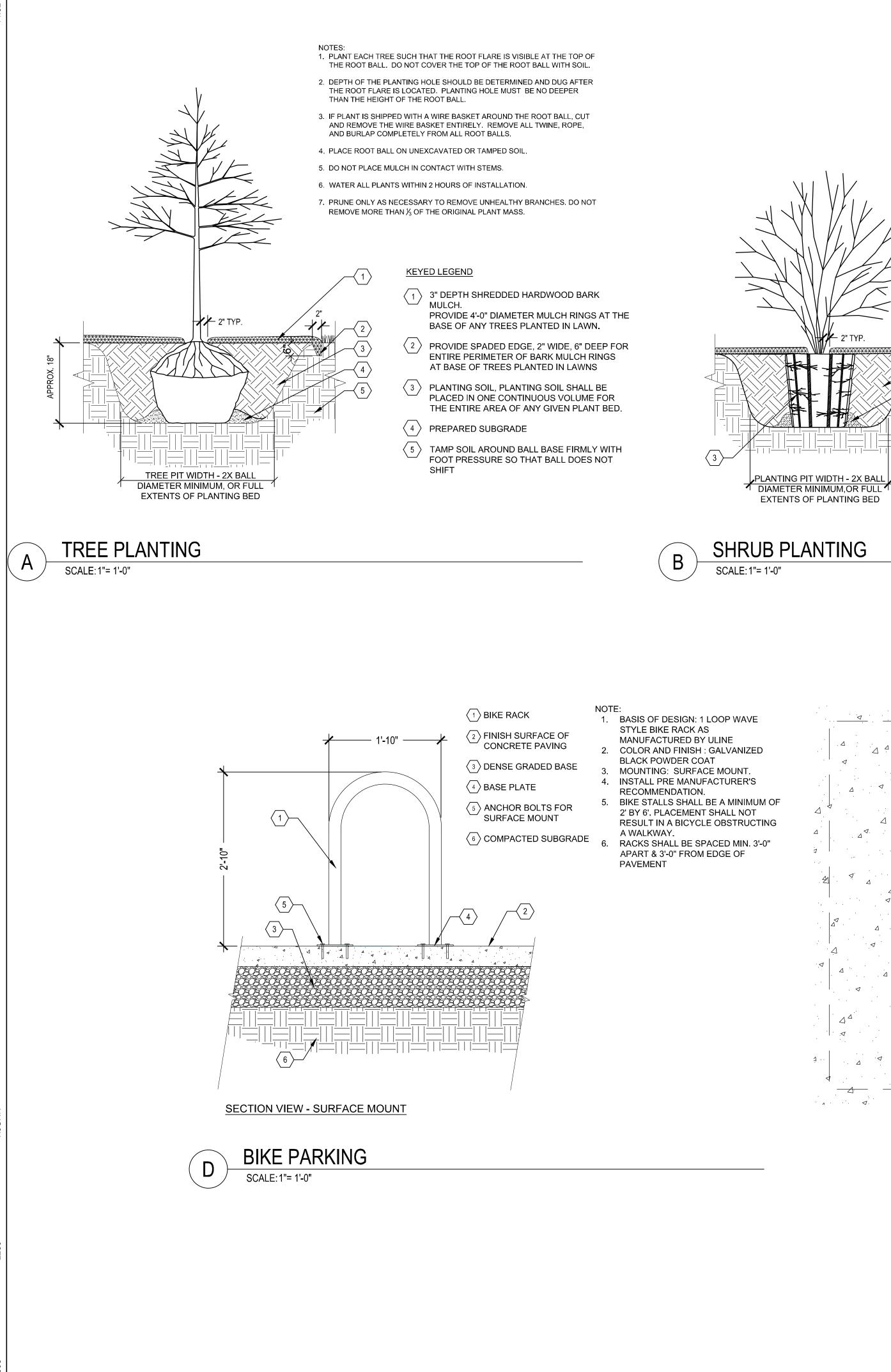
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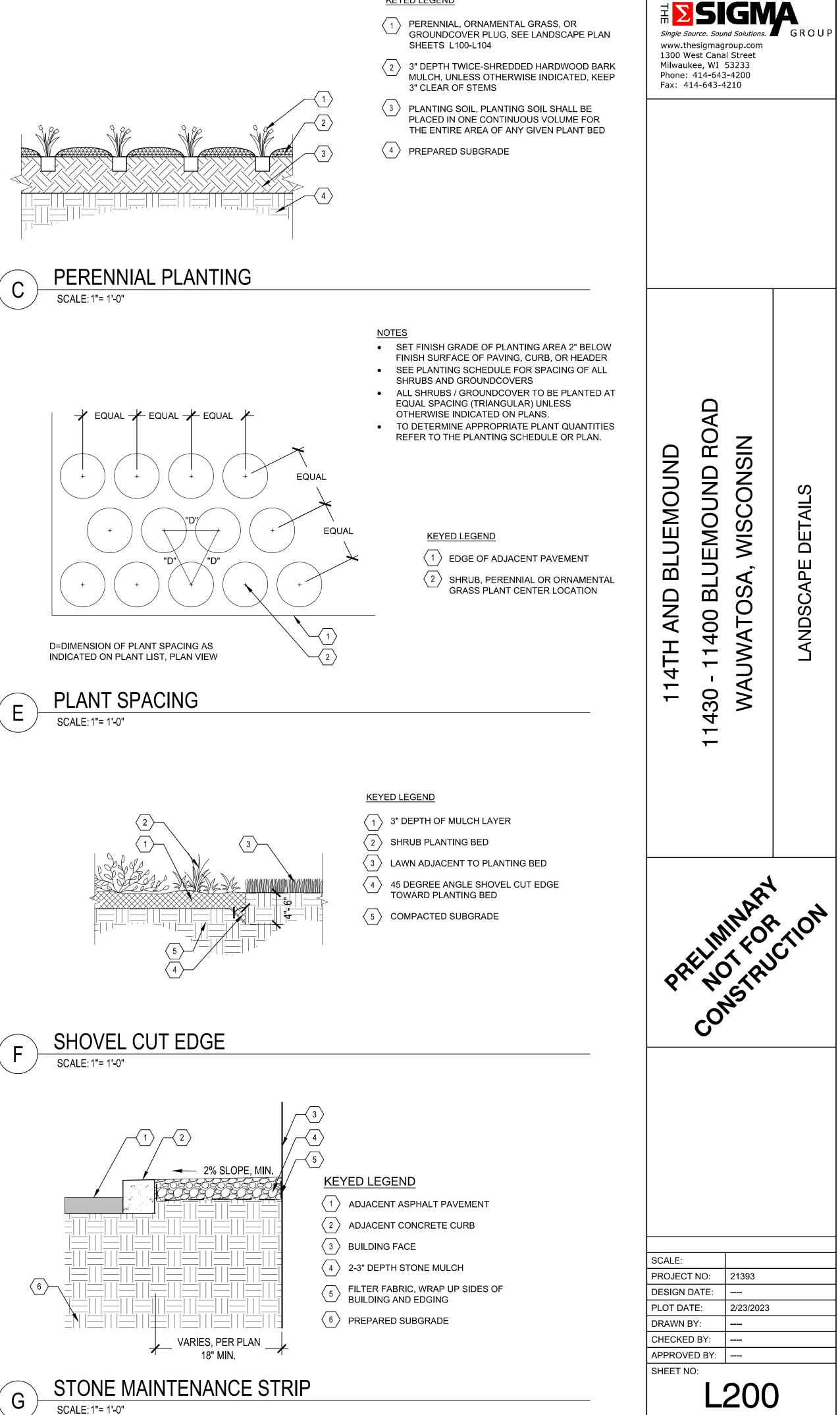
- NOTES
- 1. MAKE 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND THE CIRCUMFERENCE OF THE ROOT BALL BEFORE PLANTING TO LOOSEN POT-BOUND ROOTS.
- 2. PLANT EACH SHRUB SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
- 3. PLANTING HOLE MUST NOT 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 $\frac{1}{3}$ 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 ¹/₂" MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.

KEYED LEGEND

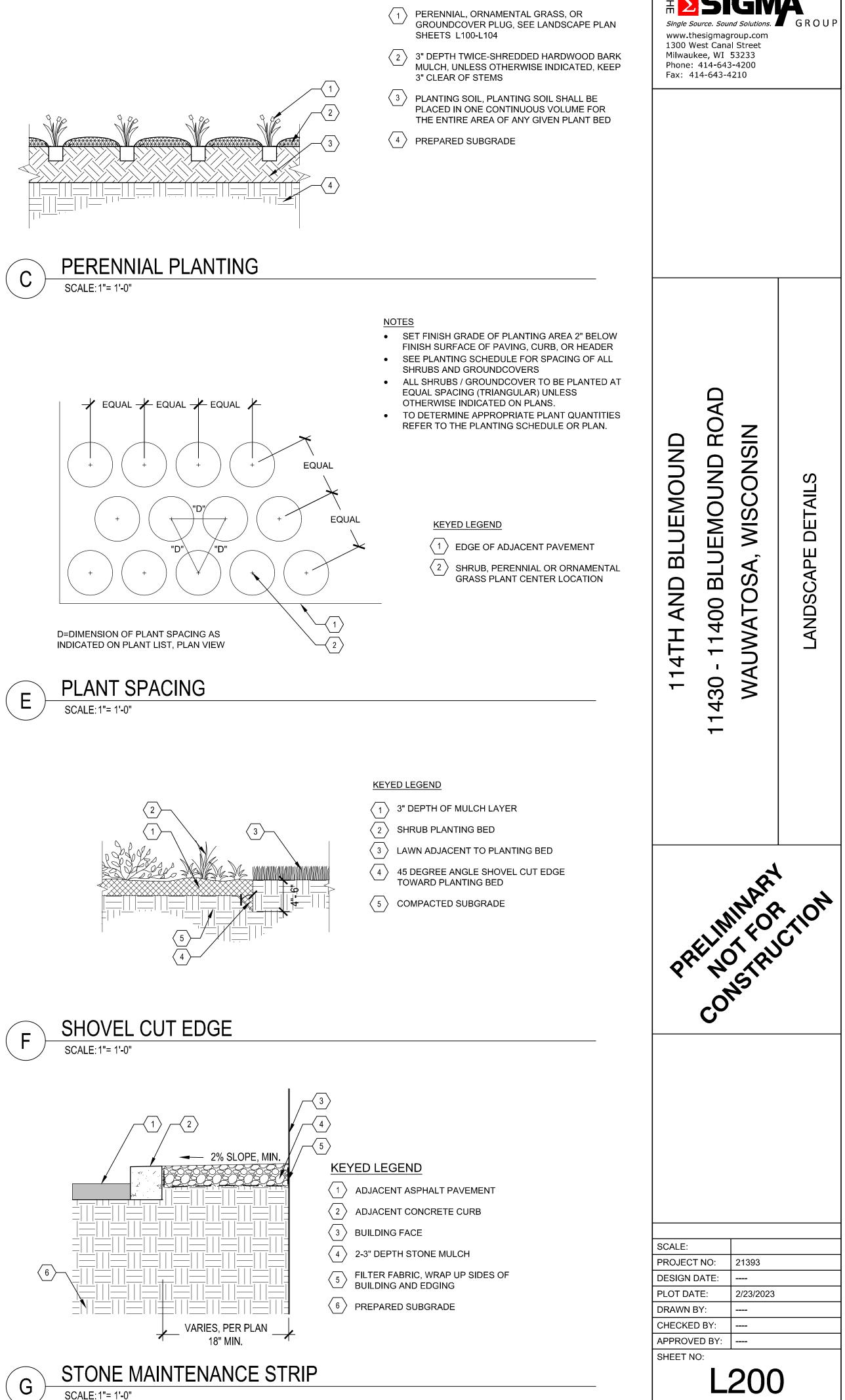
- $\binom{1}{1}$ 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE INDICATED, KEEP 2" CLEAR OF STEMS
- > PLANTING SOIL AS SPECIFIED, PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR
- THE ENTIRE AREA OF ANY GIVEN PLANT BED 1" TO 2" DEEP VERTICAL CUTS EVERY 6"
- AROUND PERIMETER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

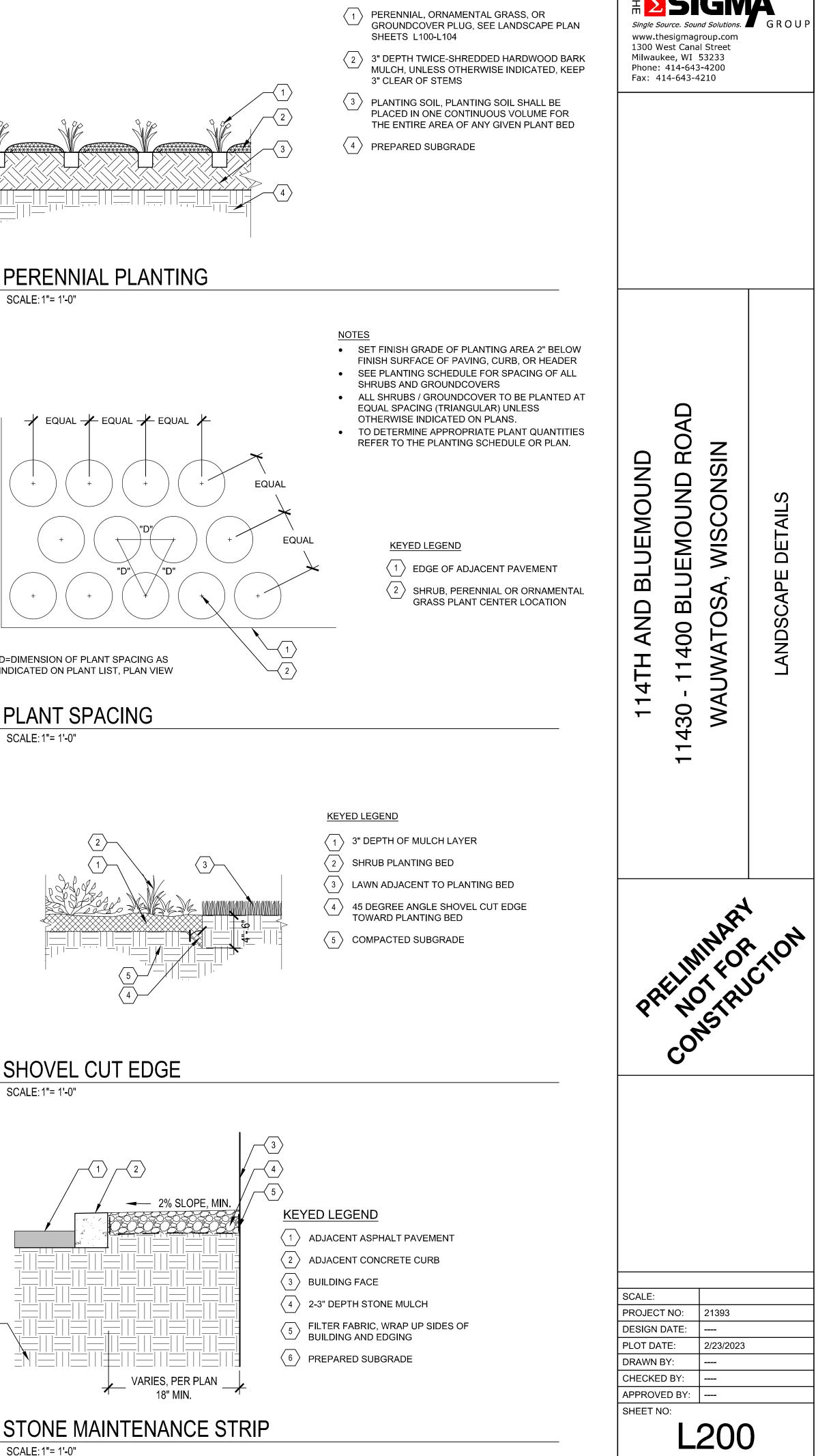
SHRUB PLANTING

SCALE: 1"= 1'-0"

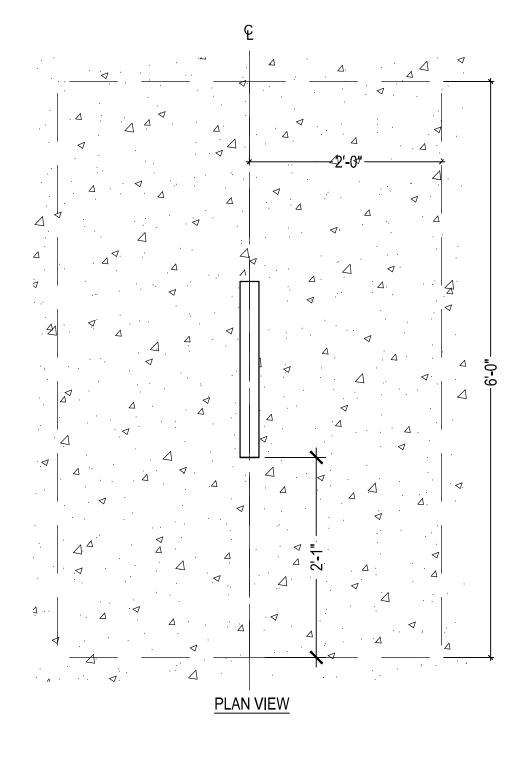


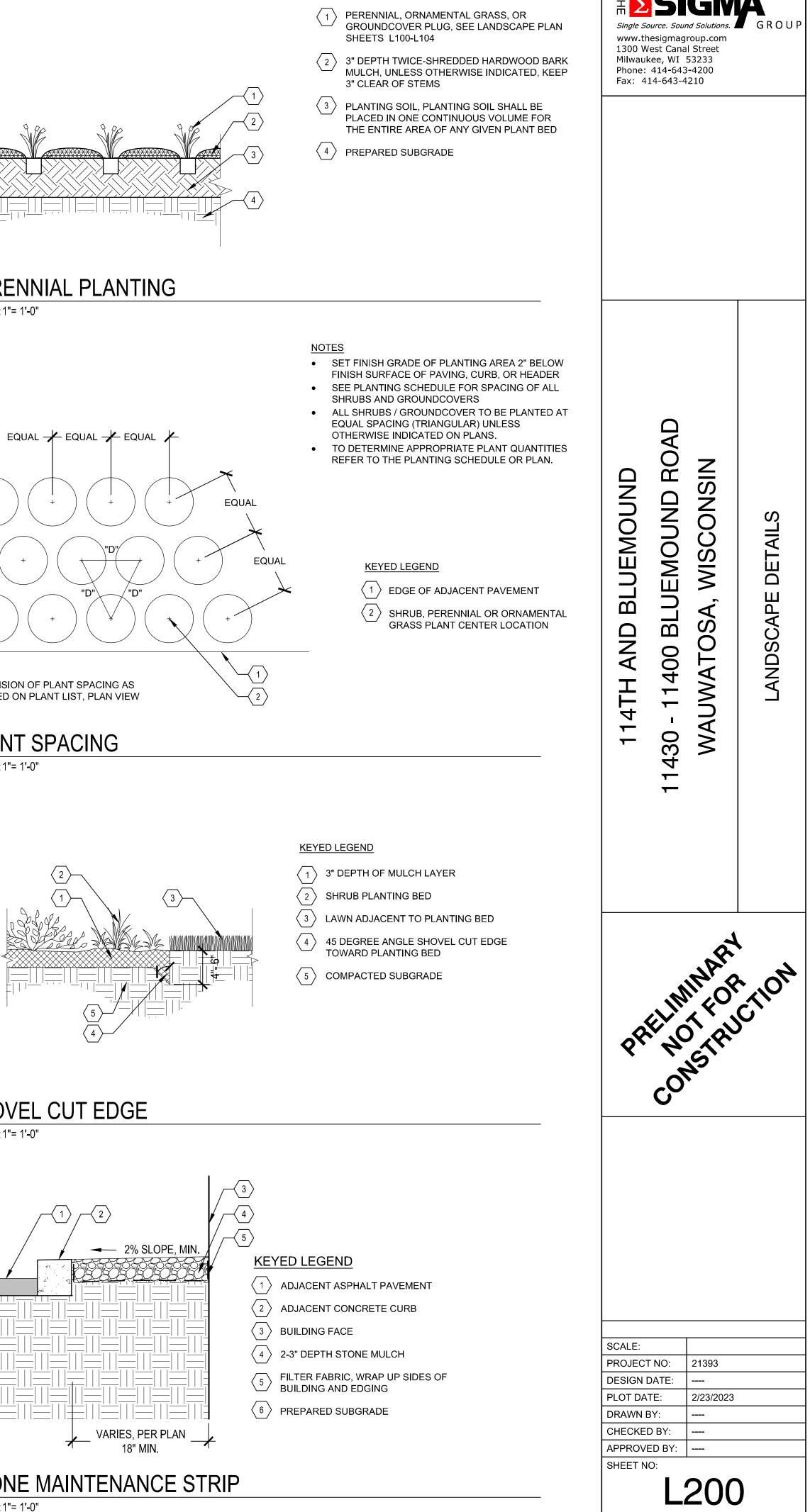
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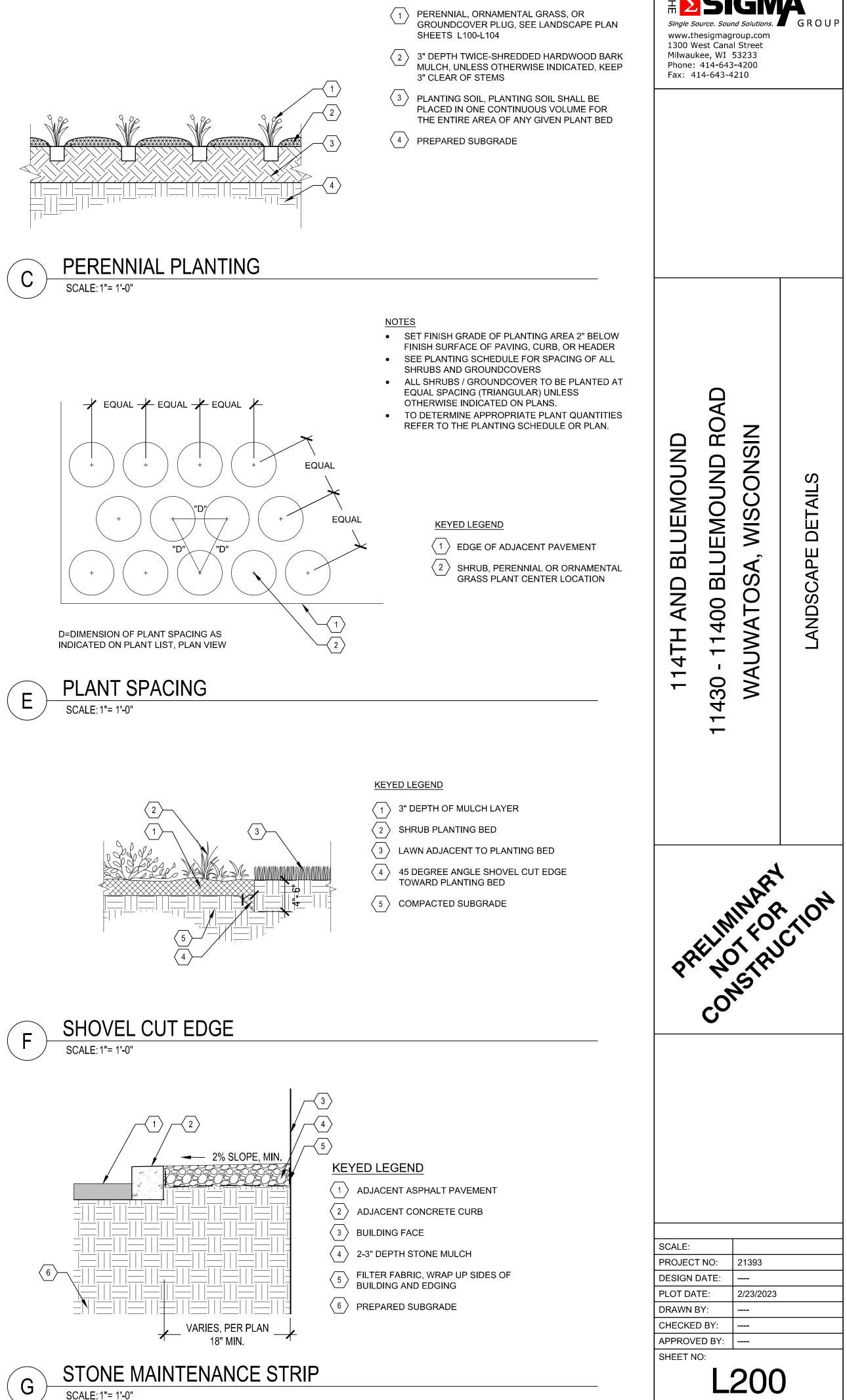


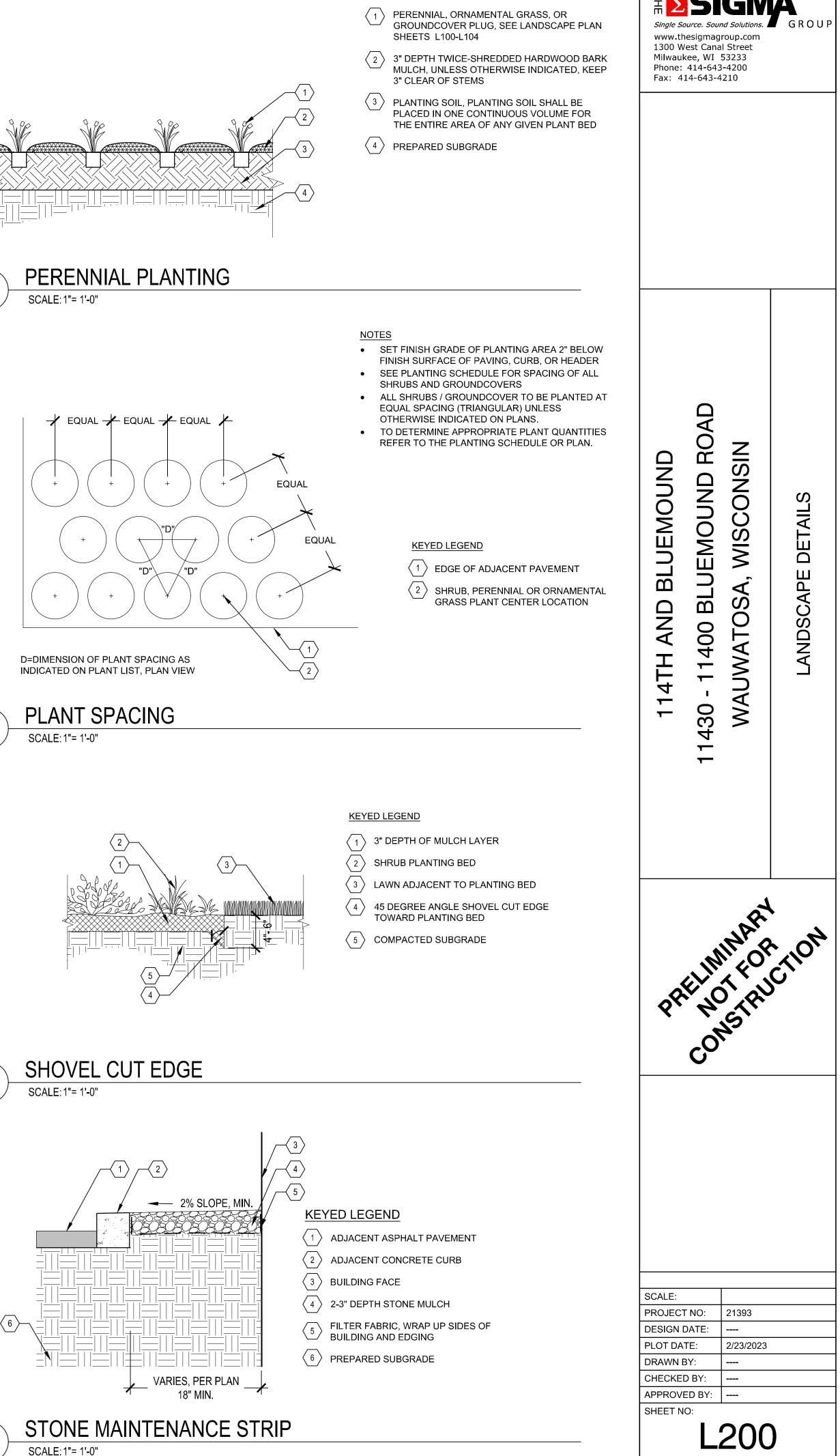


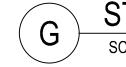


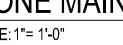












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PLANTING QUALITY ASSURANCE

- 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.
- 32 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 ³/₄" DIAMETER THAT ARE NOT COMPLETELY CALLUSED WILL BE REJECTED. SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS, AND BE FREE FROM PHYSICAL DAMAGE OR 3.3. OTHER HINDRANCES TO HEALTHY GROWTH.
- BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH SOLID BALLS OF A DIAMETER NOT LESS THAN THAT 3.4. 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.
- 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
- LANDSCAPE ARCHITECT SHALL PERFORM FINAL INSPECTION AND PROVIDE AFFIDAVIT THAT THE 5.2.1. LANDSCAPING HAS BEEN MAINTAINED AND ESTABLISHED PER APPROVED PLAN. FISCAL SECURITY WILL BE RELEASED FOLLOWING INSPECTION BY THE CITY LANDSCAPE ARCHITECT. 5.2.2.

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.
- 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.
- DO NOT MIX OR PLACE SOILS IN FROZEN, WET, OR MUDDY CONDITIONS.

PLANTING DELIVERY, STORAGE, & HANDLING:

- 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

WET CONDITION.

- 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

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. DO NOT EXCAVATE DEEPER THAN DEPTH OF THE ROOT BALL, MEASURED FROM THE ROOT FLARE TO 1.2. 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.
- MAINTAIN REQUIRED ANGELS OF REPOSE OF ADJACENT MATERIALS AS SHOWN IN DRAWINGS. DO NOT 1.4. EXCAVATE SUBGRADES OF ADJACENT PAVING, STRUCTURES, HARDSCAPES, OR OTHER NEW OR EXISTING IMPROVEMENTS.
- MAINTAIN SUPERVISION OF EXCAVATIONS DURING WORKING HOURS. 1.5 1.6. KEEP EXCAVATIONS COVERED OR OTHERWISE PROTECTED WHEN UNATTENDED BY INSTALLER'S PERSONNEL
- 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.
- 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

- BALL AREA.

2 INCHES ABOVE ADJACENT FINISH GRADES.

- 5.1. USE SOIL MATERIALS FROM EXCAVATION FOR BACKFILL. CAREFULLY CUT AND REMOVE BURLAP, ROPE, AND WIRE BASKETS FROM THE ENTIRE ROOT BALL. 5.2. REMOVE PALLETS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF ROOT BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION. BACKFILL AROUND ROOT BALL IN LAYERS, TAMPING TO SETTLE SOIL AND ELIMINATE VOIDS AND AIR 5.3. POCKETS. WHEN PLANTING PIT IS APPROXIMATELY ONE-HALF FILLED, WATER THOROUGHLY BEFORE
- 54

TREE & SHRUB MATERIAL:

- DISFIGUREMENT
- REJECTED
- PLANT MATERIAL SHALL BE PROVIDED IN THE CONTAINER TYPE INDICATED IN THE DRAWINGS (B&B. 1.3.
- LANDSCAPE ARCHITECT THAT SUBSTITUTION OF CONTAINER TYPE IS ACCEPTABLE.
- BEFORE PLANTING.
- 3. SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD.

PLANTING SOIL

- AREAS
- AREAS IN THE FOLLOWING DEPTHS:
- 2.2. FOR PLANTING BEDS: 12-INCHES FOR TREE PITS AND/OR TREES PLANTED IN PLANTING BEDS: 24-INCHES OR THE DEPTH OF THE 2.3. ROOTBALL, WHICHEVER IS GREATER. NO TOPSOIL IS REQUIRED UNDER ANY AREAS THAT ARE EXCLUSIVELY STONE COBBLES/STONE MATERIALS
- 2.5. 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.
- PROJECT). THOROUGHLY BLEND PLANTING SOIL OFF-SITE BEFORE SPREADING. THE PROJECT WILL ACCEPT ONLY CLEAN, SALVAGED OR IMPORTED TOPSOIL CAPABLE OF PASSING THE 4.1.
- 1" SIEVE, FREE OF ROCKS, DEBRIS, AND OF NOXIOUS WEEDS. 4.2. THAN 25%, VERIFIED WITH A RIBBON TEST THAT YIELDS NO MORE THAN 1-INCH.
- OFF-SITE, ETC) IS SUBJECT TO A SEPARATE INSPECTION AND APPROVAL 6. REFER TO CIVIL PLANS FOR SUBTERRANEAN BIORETENTION SOIL, MATERIALS AND CONSTRUCTION.
- ADJACENT PAVEMENTS: 7.1. FOR SEEDED LAWNS: HOLD TOPSOIL 1/2-INCH BELOW TOP SURFACE OF ADJACENT PAVEMENT.
- 7.2 TOP SURFACE OF ADJACENT PAVEMENT.

BARK MULCH MATERIAL & INSTALLATION

- BEDS IN LOCATIONS INDICATED ON DETAILED PLANTING PLANS.
- 1.1. SIZE RANGE: MAXIMUM 2.5" TO 3"

- CONDITION.
- CONTRACTORS AND TRADES. MAINTAIN PROTECTION DURING INSTALLATION. TREAT, REPAIR, OR REPLACE
- DAMAGED PLANTINGS.

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 MATERIAL: ROUNDED WASHED STONE 1.1.2.
- 1.1.3. SIZE: 1-1/2" DEPTH: 3" MINIMUM IN (2) LIFTS 1.1.4.
- COLOR RANGE: BLEND OF TAN, GREY & RED TONES 1.1.5.
- 2. COMPACT AREAS TO RECEIVE STONE MULCH IN (2) LIFTS MINIMUM
- 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.

- - 1.2. COLOR: NATURAL, UN-DYED

2. KEEP BARK MULCH 2" CLEAR OF ALL STEMS OF PLANT MATERIAL CLEAN-UP AND PROTECTION

OTHER DEBRIS FROM PLANT MATERIAL, PLANTING AREAS, AND PROJECT SITE.

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

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

PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE WATER IS ABSORBED. CONTINUE BACKFILLING PROCESS. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF SOIL.

. 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

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 ³/₄" IN DIAMETER; OR WITH STEM GIRDLING ROOTS WILL BE

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.

CONTAINER. BARE ROOT, ETC.), UNLESS THE CONTRACTOR RECEIVES WRITTEN APPROVAL FROM THE

2. FURNISH TREES WITH ROOT BALLS MEASURED FROM TOP OF ROOT BALL. ROOT FLARE SHALL BE VISIBLE

PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE WIDTH OF LANDSCAPE

2. CONTRACTOR SHALL PROVIDE HIGH-QUALITY TOPSOIL FOR ALL NEW TURFGRASS LAWN AND PLANTING BED

2.1. FOR SEEDED LAWNS: 4-INCHES MINIMUM; 8-INCHES IN AREAS WHERE HIGH BEDROCK IS PRESENT

TOPSOIL SHALL BE LOAM TO SANDY LOAM AND FREE OF ROCKS, GRAVEL, WOOD, DEBRIS, LITTER, AND

4. PLANTING SOIL SHALL BE A MIX OF 6-PARTS TOPSOIL, 1-PART COMPOST (APPROVED FOR USE ON THE

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

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

7. FINISH GRADE TOPSOIL SURFACES TO THE FOLLOWING TOLERANCES WHERE TOPSOILED AREA(S) MEETS

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

TWICE-SHREDDED HARDWOOD BARK MULCH TO BE PROVIDED AS TOP-DRESSING FOR AT-GRADE PLANTING

1.3. PROVIDE 3" DEPTH MULCH FOR ALL PLANTING BEDS INDICATED AS BARK MULCH PLANTING BED.

1. DURING PLANTING, KEEP ADJACENT PAVING AND CONSTRUCTION CLEAN AND WORK AREA IN AN ORDERLY

PROTECT PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND OPERATIONS OF OTHER

3. AFTER INSTALLATION REMOVE ALL NURSERY TAGS, NURSERY STAKES, TIE TAPE, LABELS, WIRE, STRING, AND

1.1.6. BASIS OF DESIGN: 1-1/2" 'AMERICAN HERITAGE' AGGREGATE BY COUNTY MATERIALS

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

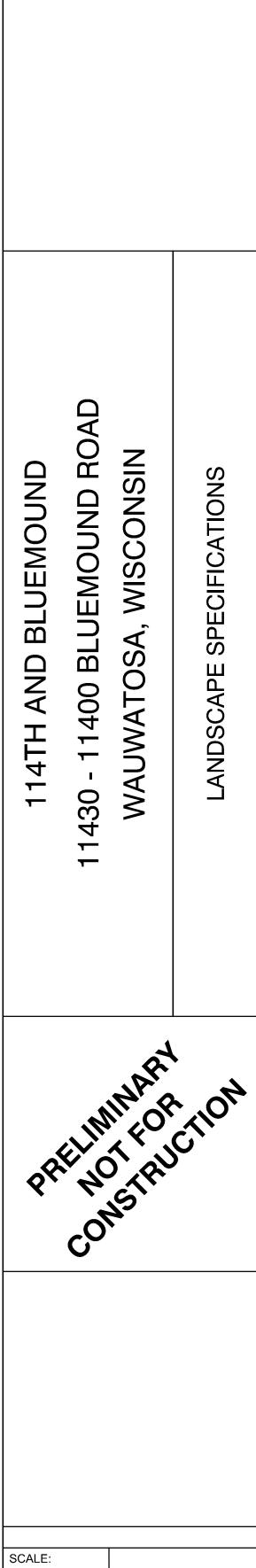
TURF SEEDING:

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.

- 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
- PROVIDE THE FOLLOWING FOR TURFGRASS SEED BASIS OF DESIGN: REINDEERS DELUXE 50 SEED 3.0.1. MIX OR APPROVED EQUA TURFGRASS SEED MIX TO BE FERTILIZED WITH 'SCOTT'S STARTER FERTILIZER' BY THE 'SCOTTS 3.0.2
- MIRACLE-GRO COMPANY' OR APPROVED EQUAL. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN MET.
- 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 $\frac{1}{2}$ 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 SCHEDU	i				1.
ECIDUOUS TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Maidenhair Tree	4" Cal.	B&B	6
ONIFEROUS TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	тр	Taxodium distichum 'Shawnee Brave' / Shawnee Brave Bald Cypress	2" Cal.	B&B	3
/ERGREEN TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	JT	Juniperus virginiana 'Taylor' / Taylor Eastern Redcedar	#15	Cont.	20
	тн	Thuja occidentalis 'Holmstrup' / Holmstrup Arborvitae	#7	Cont.	2
· · · · · · · · · · · · · · · · · · ·	тѕ	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae	5` Ht.	B&B	52
ECIDUOUS SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
\bigcirc	AB2	Aronia melanocarpa 'UCONNAM165' / Low Scape Mound® Black Chokeberry	2 gal.	Cont.	26
\bigcirc	на	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea	2 gal.	Cont.	14
\bigcirc	НВ	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
VERGREEN SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	JY	Juniperus horizontalis 'Youngstown' / Creeping Juniper	5 gal.	Cont.	13
$\overline{\bigcirc}$	JB	Juniperus squamata 'Blue Star' / Blue Star Juniper	5 gal.	Cont.	28
SUNNANNANNANNANNANNANNANNANNANNANNANNANNA	TE	Taxus x media 'Everlow' / Everlow Anglo-Japanese Yew	5 gal.	Cont.	32
RNAMENTAL GRASSES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	СР	Carex pensylvanica / Pennsylvania Sedge	1 gal.	Cont.	30
	PN2	Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.	103
2.3	ST	Sporobolus heterolepis `Tara` / Tara Prairie Dropseed	1 gal.	Cont.	22
HRUB 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
19 - 5 - 19 - 19 - 19 - 19 - 19 - 19 - 1	AN	Athyrium niponicum pictum / Japanese Painted Fern	4.5"	Pot	14
	HG	Hemerocallis x 'Little Grapette' / Little Grapette Dayily	4.5"	Pot	129
	но	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
		· · · · · · · · · · · · · · · · · · ·			



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

www.thesigmagroup.com

1300 West Canal Street

Milwaukee, WI 53233

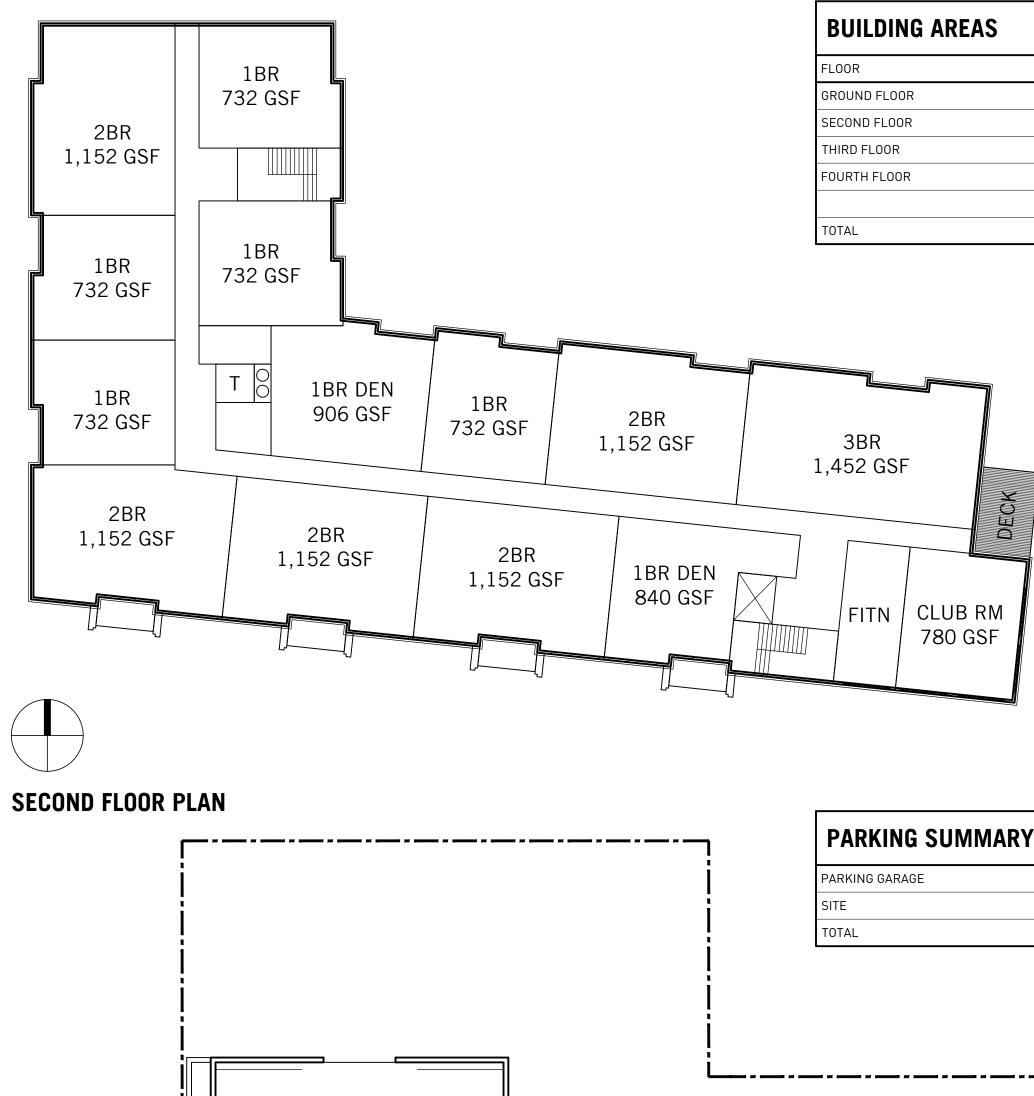
Phone: 414-643-4200

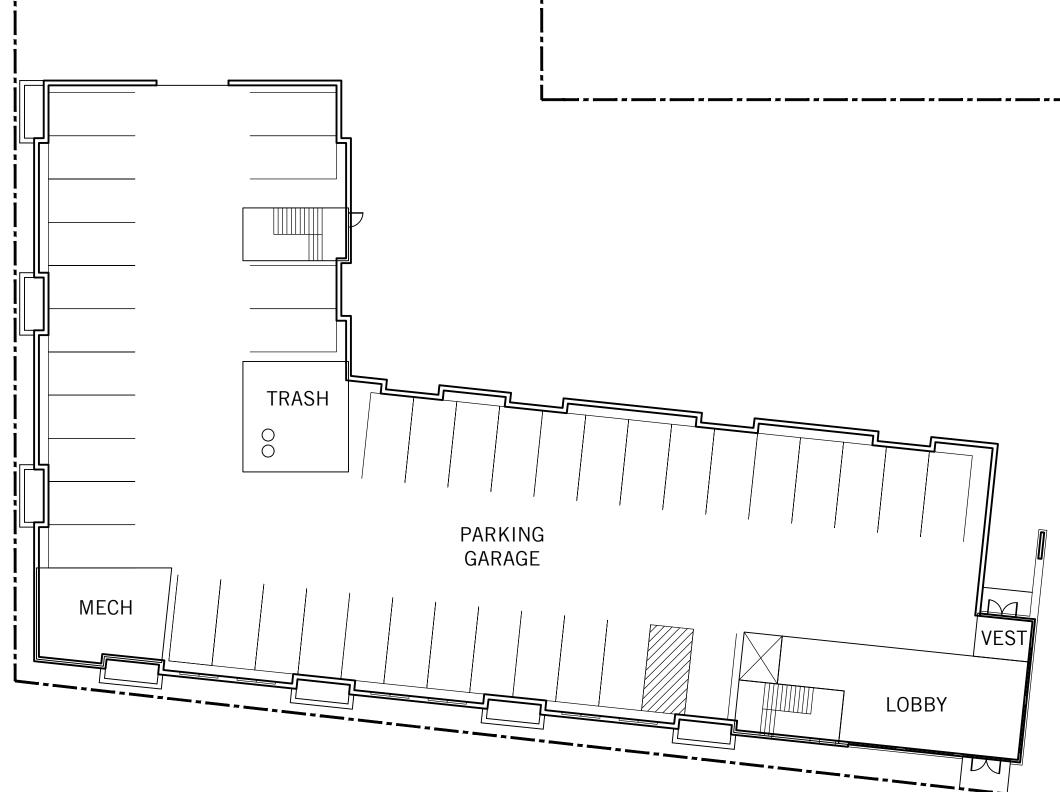
Fax: 414-643-4210



FOURTH FLOOR PLAN









	UNITS PER FLOOR				TOTAL
UNIT TYPE	1ST	2ND	3RD	4TH	TOTALS
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 AR	EAS	13	14	14	41 AREA (GSF)
BUILDING AR	EAS	13	14	14	
BUILDING AR	EAS	13	14	14	AREA (GSF)
BUILDING AR FLOOR GROUND FLOOR	EAS	13	14	14	AREA (GSF) 16,916



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



PROJECT NAME

BLUEMOUND ROAD MULTI-FAMILY DEVELOPMENT WAUWATOSA, WISCONSIN

DRAWING REVISION HISTORY

PARKING SUMMARY	
PARKING GARAGE	41
SITE	30
TOTAL	71

SHEET TITLE Conceptual Architectural Drawings

PROJECT NUMBER

22008 DRAWING DATE 02-01-2023

SET AND SUBMITTAL TYPE Wauwatosa Pud Submittai

SHEET NUMBER









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





PROJECT NAME BLUEMOUND ROAD

MULTI-FAMILY

DEVELOPMENT

WAUWATOSA,

WISCONSIN

DRAWING REVISION HISTORY

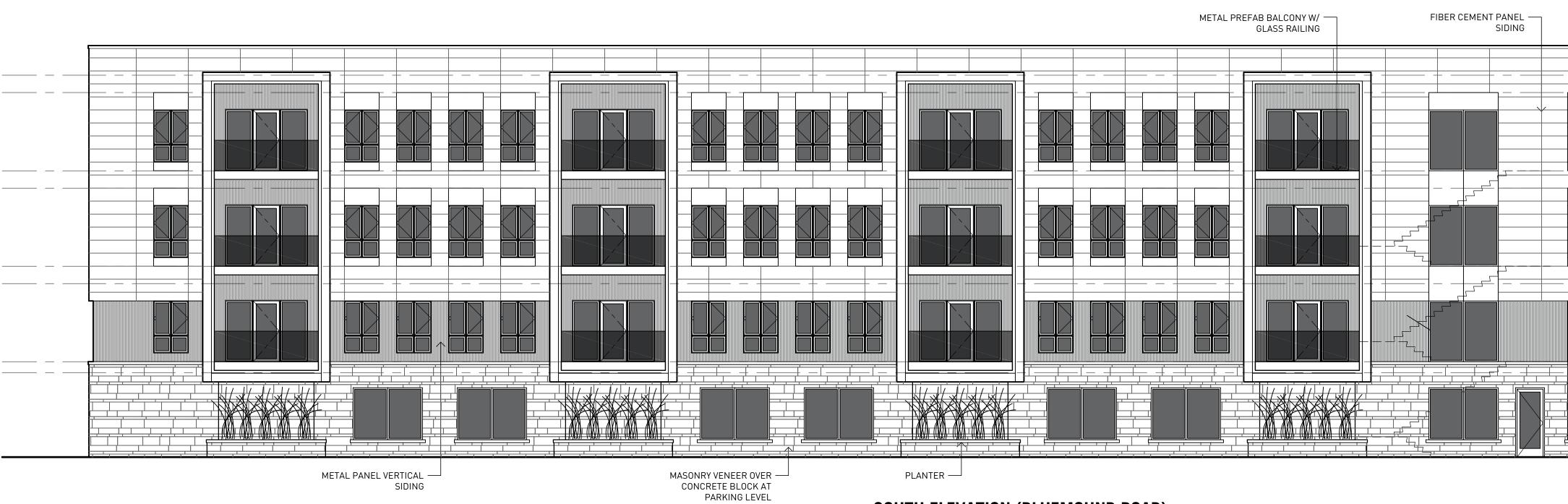
REVISION 1 (TITLE) REVISION 2 (TITLE) REVISION 3 (TITLE) REVISION 4 (TITLE)

SHEET TITLE CONCEPTUAL ARCHITECTURAL DRAWINGS

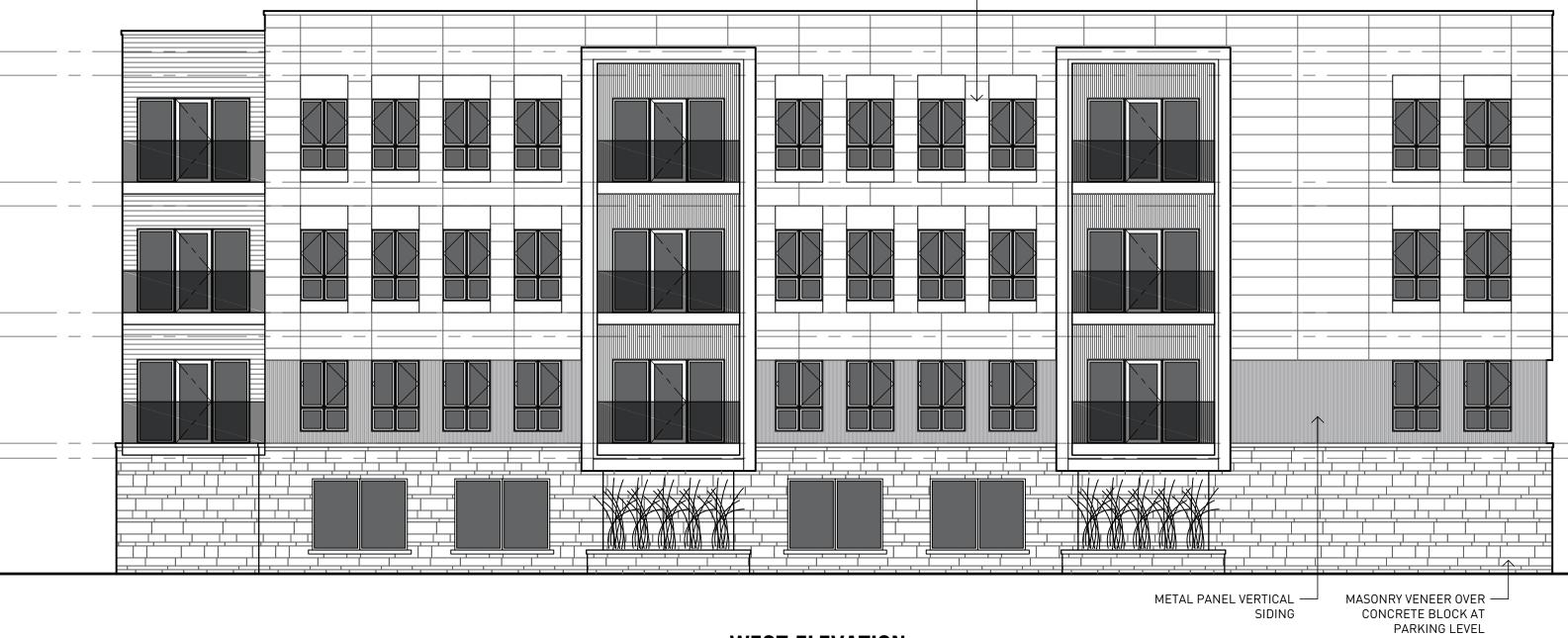
PROJECT NUMBER 22008 DRAWING DATE 01-25-2023 SET AND SUBMITTAL TYPE NEIGHBORHOOD MEETING

SHEET NUMBER

_____ _____



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

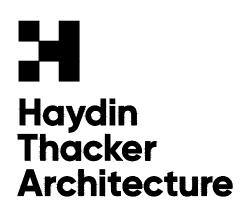


FIBER CEMENT PANEL — SIDING

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



GLAZING —



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PROJECT NAME

BLUEMOUND ROAD MULTI-FAMILY DEVELOPMENT WAUWATOSA, WISCONSIN

DRAWING REVISION HISTORY

CONCEPTUAL ARCHITECTURAL DRAWINGS

SHEET TITLE

PROJECT NUMBER

22008 DRAWING DATE 02-01-2023 SET AND SUBMITTAL TYPE

WAUWATOSA PUD SUBMITTAL

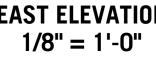
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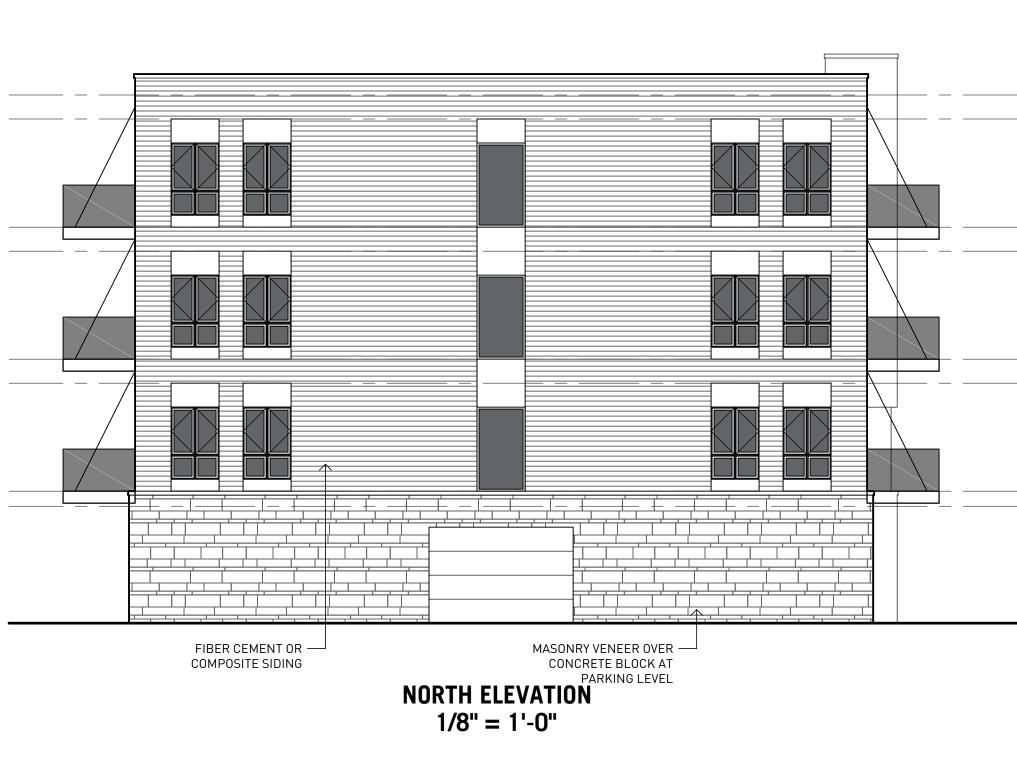














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FIBER CEMENT OR				

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SHEET NUMBER

22008 DRAWING DATE 02-01-2023 SET AND SUBMITTAL TYPE WAUWATOSA PUD SUBMITTAL

PROJECT NUMBER

SHEET TITLE

CONCEPTUAL ARCHITECTURAL DRAWINGS

DRAWING REVISION HISTORY

WAUWATOSA, WISCONSIN

MULTI-FAMILY DEVELOPMENT

PROJECT NAME

BLUEMOUND ROAD



H Haydin Thacker Architecture 131 W SEEBOTH ST. SUITE 230 Milwaukee, wi 53204 T/ 414-526-7359 Haydinthacker.com

Jonathan Ward

From:Christopher Carr, P.E. <ccarr@thesigmagroup.com>Sent:Tuesday, January 31, 2023 1:39 PMTo:Jonathan WardSubject: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.

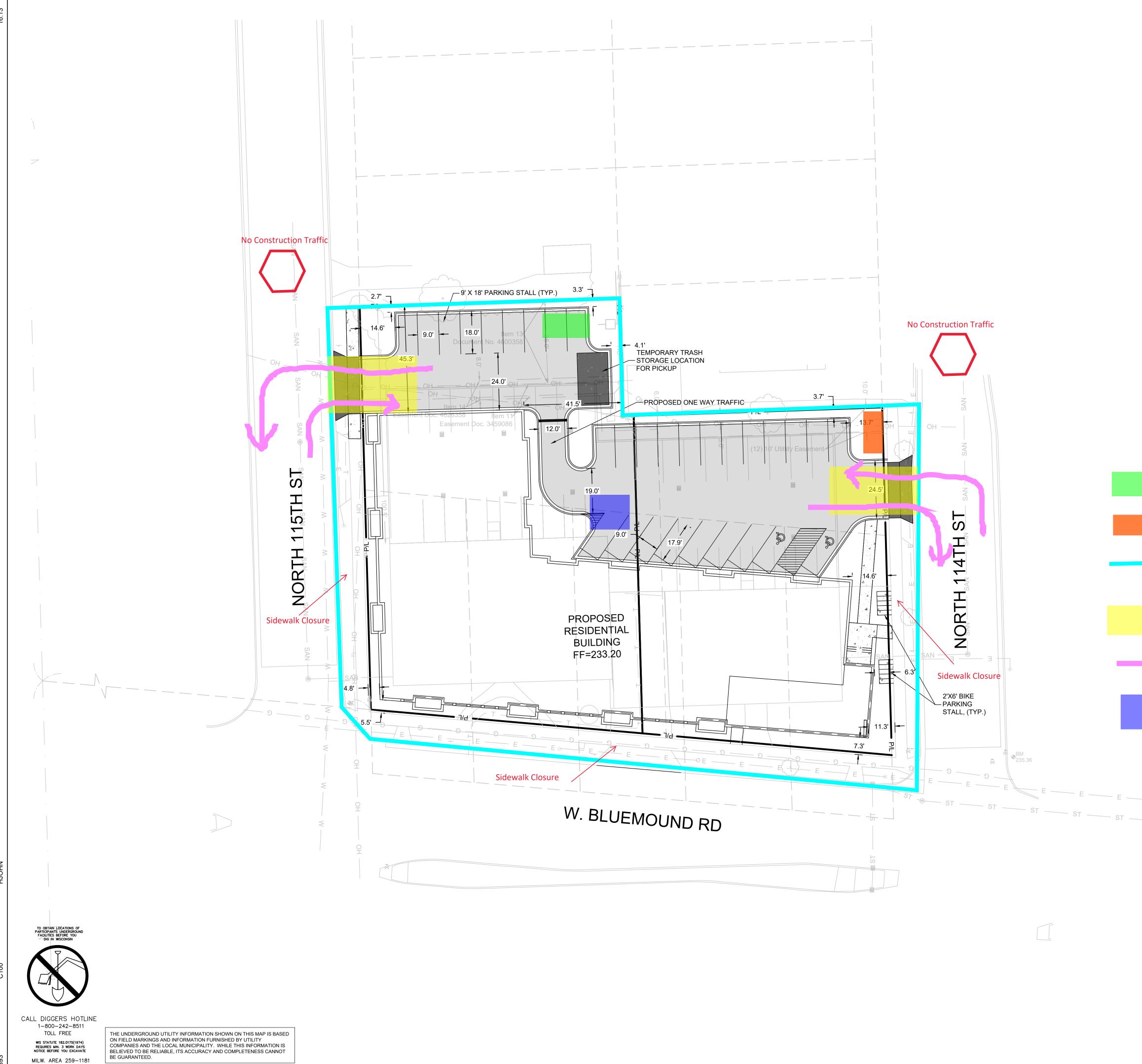
Thanks,

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

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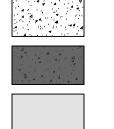


I:\altius building\21393 - 114th and bluemound\060 CAD\030_Production Sheets\100_Civil\C100 Site Plan.dwg

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)



5" THICK CONCRETE WALK

HEAVY DUTY CONCRETE PAVEMENT



ASPHALT SURFACE

CURB & GUTTER

A CURB & GL (ACCEPT) A CURB & GUTTER (REJECT)

Dumpster

Construction Office

Fence

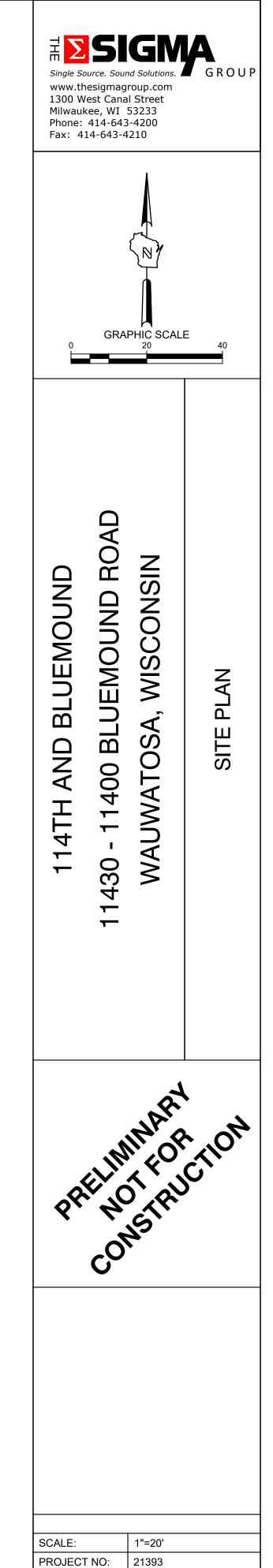
Tracking Pad

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.



DESIGN DATE:

1/17/2023

C100

PLOT DATE:

DRAWN BY:

SHEET NO:

CHECKED BY:

APPROVED BY:

Wauwatosa Youth Commission

Report to the Community Affairs Committee of the City of Wauwatosa

April 25, 2023 and Budget Committee in August 2023

Mission of Wauwatosa Youth Commission

- A. To act as an advisory body to the Common Council and the Mayor of Wauwatosa and to provide comment and recommendations on proposed policies and ordinances affecting youth.
- B. To encourage, develop and implement activities and services that promote a positive environment for youth in the City of Wauwatosa.
- C. To serve and represent a broad spectrum of youth from diverse backgrounds and all geographic areas of Wauwatosa.
- D. To report annually to the Mayor and the Common Council on the interests, needs and recommendations concerning matters that affect the youth of Wauwatosa.
- E. To cooperate and coordinate with other organizations that have in common the interests of Youth.

Meetings:

- The Commission meets on the second Wednesday of each month, September-May.
 - Youth and Adult Members now meet at 6:15 PM -7:30 PM in the Lower Civic Center
 - In March of 2020, our meetings were put on hold due to the pandemic and other circumstances occurring in the City beyond our control. Our first meeting was one year later on February 12, 2021 and it was a Zoom meeting which continued through our Commission year 2021-2022.
 - This year, Commission year 2022 2023, was when we resumed meeting in person (initially in the Upper Civic Center and then beginning in April 2023, we moved to the Lower Level Civic Center).

2021-2022 Goals for Commission Year and Progression (As presented to the Committee on March 29, 2022)

- Continue to strengthen the relationship between the Wauwatosa Youth Commission and Executive Branch of Wauwatosa government (ex. Mayor, Alderperson, Mayor's Office and Staff).
- Birthday mailings to all identified Wauwatosa youth during the month of their 18-birthday to congratulate them and remind students to register to vote and for boys, register for the Selective Service duty.
- Implement the findings of the School District's Youth Perception Survey. The Youth Commission was able to advocate for 5 additional questions to be placed on the School District's Youth Perception Survey the prior year, we were finally able to see the efforts come to fruition once the results from the October 2020 survey came to publication in March of 2021. However, due to concerns about the mental health of students because of the challenges over the past year, the commission will continue to work towards achieving a greater focus on the needs of our community in this area in 2021 2022. More information on this initiative to be provided in the section below.

As a result of the findings for the 5 questions the Youth Commission created for the Youth At Risk Perception Survey, we developed a flyer listing Mental Health Resources and Coping Skills which were distributed electronically in an Eblast to all the School Families by the School District in May of 2021 and were placed on the City Health Department's website. Hard copies of the flyers were hung on the inside of doors of bathroom stalls in the Middle Schools and High Schools as well as in doctor's offices, the City Community Bulletin Board, resource shelf in the Public Library and Health Department and coffee shop bulletin boards when the COVID-19 restrictions were lifted.

- Continue Community Service and Outreach opportunities for youth of Wauwatosa. Members continue to look for service opportunities and events to increase the visibility of the Youth Commission as permitted with COVID-19 precautions in place.
- Continue to offer recreation events to youth of Wauwatosa. We look forward to being able to Resume our efforts to encourage the youth in Wauwatosa to experience community events in 2020 2021 as possible with following CDC guidelines and social distancing.
- Continue to recruit youth and adult members for the Wauwatosa Youth Commission. This past year has been challenging on this front. Former means of being able to recruit new members were put on hold due to the pandemic. The Youth Commission plans to reignite the member drive through acts of community service, public health initiatives, and word of mouth this upcoming year.
- Participate in the 4th of July Parade with an auto displaying the Youth Commission's Name and distributing candy to children watching the parade to bring awareness of The Youth Commission
- Supported local high schools with donations to the theatre programs and APPSE Teams as a way to advertise the Youth Commission and possible membership. We will participate in the City's first Tosa Takes the Trash Day on April 30, 2022.
- We gained 2 Adult Member and 5 Youth Members in 2021 2022

2021 – 2022 Guests/Presenters:

We had Officer Andy Yothsakda, Tosa East High School School Resource Officer as a guest speaker, and our Ex-Officio Member, Officer Dan Kane give a presentation on Bullying, focusing mainly on Cyber Bullying. The presentation was on December 8, 2021 during our Zoom meeting which gave the Youth ideas of how to manage this issue of concern they wanted to address this year.

2022 - 2023 Current Plans in Process and Achievements

- Continue to strengthen the relationship between the Wauwatosa Youth Commission and Executive Branch of Wauwatosa government (ex. Mayor, Alderperson and the Common Council, Mayor's Office and Staff). We would also like to partner with other City Commissions and Committees on projects in the upcoming year.
- The Youth felt many other groups were focusing on ways of providing information to reduce Bullying and Cyber Bullying in the schools and community, so they decided to concentrate on re-distributing the informational flyer they had created in May of 2021 addressing Mental Health Resources and Ways to Reduce Stress and list of coping skills. School District Representative, Emilie O'Connor, (Director of Student Success) helped by resending the flyer in a district wide eblast message to families and posting the flyers in the Middle Schools and High Schools bathroom stalls again.

Community and Promotion Events:

- Birthday mailings to all identified Wauwatosa youth during the month of their 18birthday to congratulate them and remind students to register to vote and for boys, register for the Selective Service duty
- Supported local high schools with donations to the theatre programs by purchasing Ad Space in the Playbills to promote the Youth Commission and possible membership in it.
- The Youth planned to Participate in the 4th of July Parade with an auto displaying the Youth Commission's Name and distributing candy to children watching the parade to bring awareness of The Youth Commission. Unfortunately, the logistics of this idea proved to be something they were unable to carry out.
- Continue Community Service and Outreach opportunities for youth of Wauwatosa. Members continue to look for service opportunities and events to increase the visibility of the Youth Commission.
- We plan to participate in a food collection/distribution event in October, 2023 in conjunction with the Tosa Cares Food Pantry and possibly again in the Spring.
- Continue to recruit youth and adult members for the Wauwatosa Youth Commission. This past year has been challenging on this front. Former means of being able to recruit new members were put on hold due to the pandemic. The Youth Commission plans to reignite the member drive through acts of community service, public health initiatives, and word of mouth this upcoming year. We will have a table at the High School Registration days in August, 2023. We also had an information table at the Incoming Freshman and Course Information nights at the High Schools in January.
- Revived this year, from years prior to COVID shut down, we offered the opportunity to community members to nominate a youth who put forth outstanding volunteer effort in serving the Wauwatosa community. We didn't have any nominations this year and hope to promote this Award earlier next year, beginning in December 2023.
- We gained 2 Adult Member and 3 Youth Members in 2022 2023 (and unfortunately, lost 1 Adult Member)

Guests in 2022 - 2023:

Mrs. Eva Ennamorato, Wauwatosa City Communications Manager, came to our December 14th, meeting to discuss ways and venues the Youth Commission could use to promote our Commission and stay within the Open Meeting Laws in doing so.

On March 8th, 2023 the Wauwatosa West High School APPSE (American Public Policy Special Emphasis class) Team came and gave their presentation to the Youth Commission so we could become better acquainted with and/or better understand what the group would be presenting and how they present their material at the National Competition in Washington D.C. at the end of April this year. On April 12th, 2023 the APPSE Team from Wauwatosa East High School came and presented the topics they would be covering at the National Competition.

2022-2023 Goals and 2023 – 2024 Proposed Budget	2022 – 2023 Expense	2023 - 2024 Proposed Exp.
• Stay in touch with the School District Director of Secondary Education for results to the 5 questions we created and the School District added to the Youth Perception Survey (replenish our flyers	\$ 85.00	\$ 100.00
 Keep an active role in Tosa Takes out the Trash Day 4th of July Parade Trunk or Treat Continue to recruit youth and adult members for the Wauwatosa 	\$ none \$ none \$none \$ 80.00	<pre>\$ none \$ none \$ none \$ 100.00</pre>
 Youth Commission (membership post cards) Update Coroplast Sign Board Contact Information Continue Birthday mailings to all identified Wauwatosa youth during the month of their 18th birthday to congratulate them and remind students to register to vote and Selective Service duty 	\$ 85.00 \$750.00	\$ none \$ 800.00
 Purchased Program/Playbill Ad Space in Tosa East High School And Tosa West High School Theatre Programs (Fall & Spring Productions) Continue to present community service awards in May 2024 to students from Wauwatosa that volunteer to serve our community. (Put this on hold until January of 2022 due to pandemic and timing 	\$ 590.00 \$ none	\$ 650.00 \$1,000.00
 of needing to start preparing before we could hold meeting). Create an idea/s of how to use our carry over balance of over \$6,000 (?) and carry the plan out Purchase more Youth Commission T-Shirts Total = 	\$ none <u>\$ 400.00</u> \$1,905.00	\$2,000.00 <u>\$ 400.00</u> \$5,050.00



Staff Report

File #: 23-1222

Agenda Date: 4/25/2023

Agenda #: 6.

Resolution approving a Conditional Use Permit in the M1 District at 1435 N 113th Street for a sports and recreation participant establishment, Bron Launsby, Innovative Heights Wauwatosa, LLC, applicant

WHEREAS Bron Launsby, Innovative Heights Wauwatosa, LLC., applied for a Conditional Use Permit in the M1 District at 1435 N 113th Street for a sports and recreation participant establishment, and;

WHEREAS, this request was reviewed and recommended by the City Plan Commission to be necessary for the public convenience at that location; located and proposed to be operated in such manner which will protect the public health, safety, and welfare; and was found to be compatible with surrounding uses;

NOW, THEREFORE, BE IT RESOLVED by the Common Council of the City of Wauwatosa, Wisconsin hereby grants a Conditional Use Permit to Bron Launsby, Innovative Heights Wauwatosa, LLC., subject to:

- 1. Hours of operation Monday through Thursday from 1:00 pm to 8:30 pm; Friday 11:00 am to 10:00 pm; Saturday from 10:00 am to 10:00 pm; and Sunday from 11:00 am to 8:30 pm.
- 2. If the City receives complaints regarding parking, the applicant shall take corrective action to resolve all parking issues to the satisfaction of the Planning Manager and Public Works Director.
- 3. Providing detailed costs of any alterations and/or new construction, as well as income & expense as requested by the Assessor's office.
- 4. Short- and long-term bicycle parking must be provided in compliance with City Code 24.11.080.
- 5. Prior to occupancy permit issuance, submitting a site plan/parking lot plan for Engineering approval that provides pedestrian accessibility to the public right-of-way and provides trash container screening. If any modifications to parking lot lighting are proposed, a photometric plot must be submitted to Engineering for review and approval.
- 6. Any building project 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.
- 7. 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.
- 8. Obtaining other required licenses, permits, and approvals.
- 9. Installation of a 6-foot fence with arborvitaes on the northern border of the property.
- 10. Adoption of a policy and posting signage prohibiting the presence of firearms,
- 11. Installation of exterior security cameras. Adding security guards if determined needed by Wauwatosa Police Department
- 12. Installation of right-turn-only signs and painted directional arrows at the driveway exits along N 113th Street.

By: Plan Commission

Recommendation: Referred from Council