

Planning Department

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

PLAN COMMISSION MEETING NOTICE AND AGENDA Thursday, September 19, 2024 6:00 PM

Pewaukee City Hall Common Council Chambers W240 N3065 Pewaukee Rd., Pewaukee, WI 53072

- 1. Call to Order and Pledge of Allegiance
- 2. Discussion and Action Regarding the Revised Building Elevations, Shed, and Trash Enclosure Plans for The Courtyard at Pewaukee Property Located at the Northwest Corner of Golf Road and Meadowbrook Road (PWC 0940999001)
- 3. Discussion and Action Regarding a Recommendation to the Common Council for a Comprehensive Master Plan Amendment to Change the Year 2050 Land Use/Transportation Plan Use Designation for the City of Pewaukee for Shorepoint Church for Property Located on the Southwest Corner of Duplainville Road and Capitol Drive From Medium Density Residential (6,500 Sq. Ft. - 1/2 AC./D.U.) and Floodplains, Lowland and Upland Conservancy, and Other Natural Areas to Government/Institutional and Floodplains, Lowland and Upland Conservancy, and Other Natural Areas (PWC 0912983, PWC 0912984, PWC 0912985)
- 4. Discussion and Action and Public Hearing for Shorepoint Church to Rezone Vacant Property Located at the Southwest Corner of Duplainville Road and Capitol Drive and Property Located at N34 W22407 Capitol Drive from Rs-1 Single-Family Residential to I-1 Urban Institutional, and to Rezone Property Located at W223 N3481 Duplainville Road from B-3 General Business to I-1 Urban Institutional for the Purpose of Constructing an Approximately 27,000 Square Foot Church (PWC 0912983, PWC 0912984, PWC 0912985)
- 5. Discussion and Action Regarding a Certified Survey Map for Shorepoint Church for Property Located at the Southwest Corner of Duplainville Road and Capitol Drive for the Purpose of Combining Three Existing Parcels in Order to Construct an Approximately 27,000 Square Foot Church (PWC 0912983, PWC 0912984, PWC 0912985)
- Discussion and Action Regarding the Site and Building Plans for Shorepoint Church for Property Located at the Southwest Corner of Duplainville Road and Capitol Drive for the Purpose of Constructing an Approximately 27,000 Square Foot Church (PWC 0912983, PWC 0912984, PWC 0912985)
- 7. Discussion and Action Regarding a Recommendation to the Common Council for a Comprehensive Master Plan Amendment to Change the Year 2050 Land Use/Transportation Plan Use Designation for the City of Pewaukee for Ken Weber Towing Service and Crossroads Church of Pewaukee, Inc. for Property Located at N27 W26541 Prospect Avenue from Government/Institutional to Retail/Service Commercial (PWC 0930985, PWC 0930984001)
- 8. Discussion and Action and Public Hearing for Ken Weber Towing Service and Crossroads Church

of Pewaukee, Inc. to Rezone a Portion of Property Located at N27 W26541 Prospect Avenue from I-1 Urban Institutional to B-5 Highway Business (PWC 0930985, PWC 0930984001)

- 9. Discussion and Action Regarding a Certified Survey Map for Property Located at N27 W26541 Prospect Avenue and N27 W26560 Prospect Avenue for the Purpose of Attaching a Portion of the Crossroads Church of Pewaukee, Inc. Property to the Ken Weber Towing Service Property (PWC 0930985, PWC 0930984001)
- 10. Discussion Regarding a Conceptual Review for Doug Kiser for the Review of a Proposed Private Park and Event Space for Property Located on Bluemound Road (PWC 0951995001)
- Discussion and Action and Public Hearing Regarding Revisions to Permitted Accessory Uses Within the Rs-1 District (Section 340-4.5B.), Rs-2 District (Section 340-4.6B.), Rs-3 District (Section 340-4.7B.), and Rs-4 District (Section 340-4.8B.), and Adding Section 340-2.9B.(2)(1) to the City's Accessory Use and Structure Regulations, and Amending Section 126-3.A. Animal Regulations of the City's Municipal Code
- 12. Adjournment

Ami Hurd Deputy Clerk

9/12/2024

NOTICE

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

Any person who has a qualifying disability under the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible format must contact the City Planner, Nick Fuchs, at (262) 691-6007 three business days prior to the meeting so that arrangements may be made to accommodate your request.

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 2.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action Regarding the Revised Building Elevations, Shed, and Trash Enclosure Plans for The Courtyard at Pewaukee Property Located at the Northwest Corner of Golf Road and Meadowbrook Road (PWC 0940999001)

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

Courtyard at Pewaukee staff report 9.19.24 Courtyard at Pewaukee narrative Courtyard at Pewaukee site & building plans Courtyard at Pewaukee architectural site plan Courtyard at Pewaukee paving plan



REPORT TO THE PLAN COMMISSION

Meeting of September 19, 2024

Date: September 11, 2024

Project Name: The Courtyard at Pewaukee Site & Building Plan Review

Project Address/Tax Key No.: Not Assigned / PWC 0940999001

Applicant: ANDEV Group, LLC

Property Owner: Pewaukee Golf Road LLC

Current Zoning: Rm-3 Multiple-Family Residential District and LC Lowland Conservancy District

2050 Land Use Map Designation: High Density Residential and Floodplains, Lowland & Upland Conservancy and Other Natural Areas

Use of Surrounding Properties: Golf Rd to the south, Lake Country Trail to the north, Oak Spring subdivision and Lakewood Baptist Church to the west, and Meadowbrook Rd to the east

Project Description/Analysis

The applicant is proposing site and building changes from the previously approved plans for the Courtyard at Pewaukee senior living facility. This project was previously approved at the April 20, 2023, Plan Commission and May 1, 2023, Common Council meetings.

The proposed development consists of a 76-unit senior living facility. The proposed building will consist of 40 apartments in an assisted living section, 36 units in a memory care section, and two courtyards, with one in each section of the building.

The site plan and building footprint are not changing significantly. However, the applicant is now proposing a separate accessory structure and dumpster enclosure, which were previously proposed as a single structure.

The applicant has provided the proposed building elevations along with those previously approved for Plan Commission review. There are changes to rooflines, building materials and the appearance of the entrance and center of the building. The applicant is requesting to replace stone on the building with siding. For example, stone on the building that extended into the gables has been replaced with horizontal and shake siding. Stone does remain at the base of the building.

Recommendation

A motion to approve the revised site and building plans for the Courtyard at Pewaukee project.



T. 920.426.4774 | F. 920.426.4788 | 4825 County Road A, Oshkosh, WI 54901 | Ganther.com

7-29-2024

City of Pewaukee Attn: Nick Fuchs Planner and Community Development Director W240N3065 Pewaukee Road Pewaukee, WI 53072

RE: The Courtyard at Pewaukee Revision to Approved site plan elevations.

The proposed Courtyard at Pewaukee assisted living project had site and building plans approved at Plan Commission on 4-20-2023 and at Common Council on 5-1-2023. In the time since these approvals were made, the plans have been further developed into construction documents. The design has been adjusted to meet building code and final owner approvals. The overall building footprint is similar to the previously approved building footprint. The building elevations are also similar, but effort was made to create less linear roof lines, as well as to create a consistency in appearance of all 4-sides of the building. The monolithic stone gables were changed to a stone/siding/shake appearance to match the side gables, as well as create more visual interest and a better scale of materials. The central area of the building was reworked to improve internal functionality and maintain visual consistency with the rest of the building while highlighting the main entrance.

We request approval for the provided changes which we feel improves the overall appearance of the building from what was approved previously.

Thank You,

Kiku

Kenneth J. Koziczkowski, AIA Architect Ganther Construction/Architecture, Inc.



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RC-CHANNEL TO BE PLACED ON SIDE OF WALL W/ WALL TAG. SHEAR WALL SHEATHING / SCREW PATTERNS TO BE ON SIDE OF WALL OPPOSITE RC-CHANNEL.

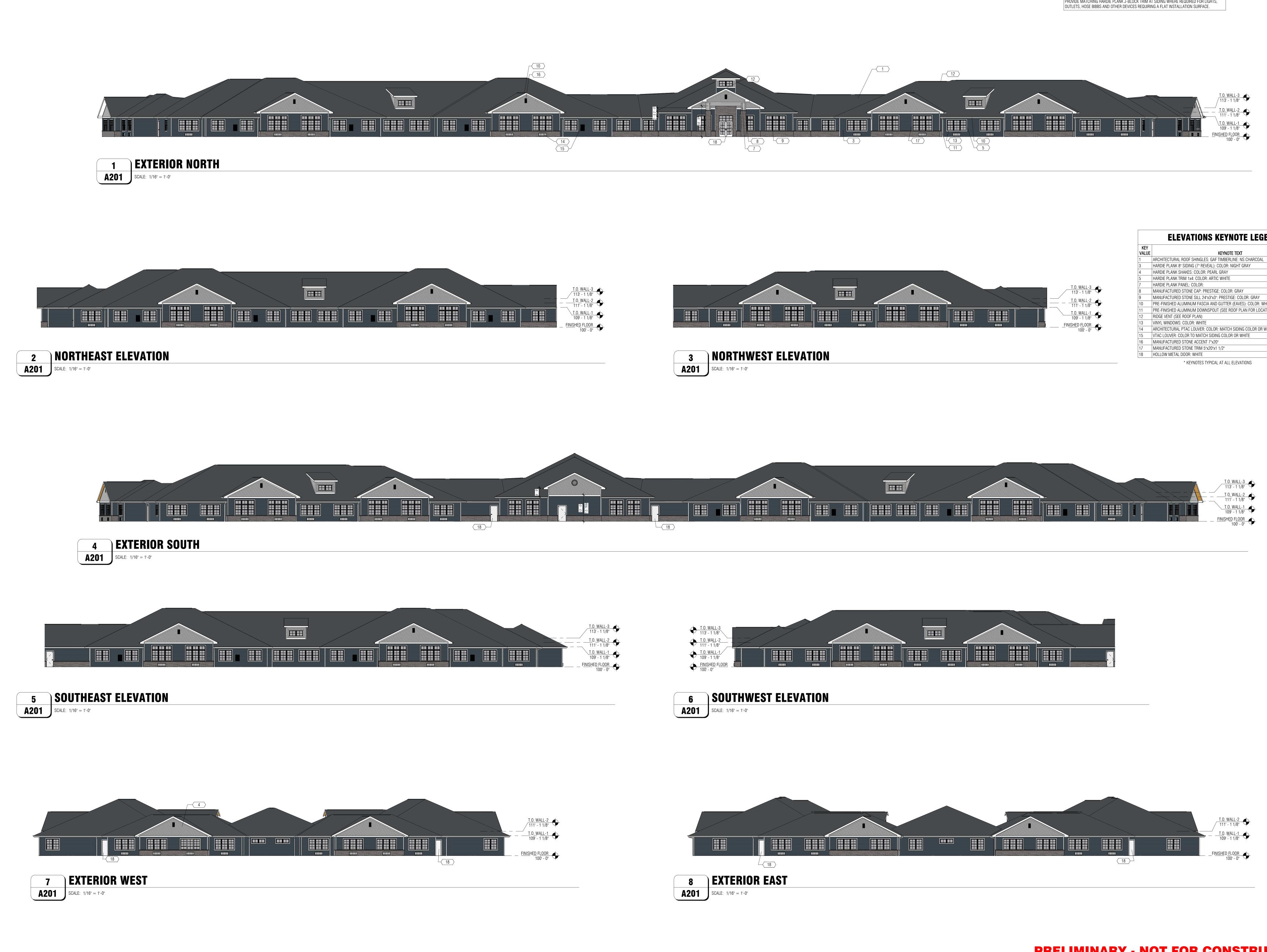
FLOOR PLAN GENERAL NOTES

- ALL WALLS TO BE TYPE 'A' UNLESS NOTED OTHERWISE. 2. ALL EXTERIOR DIMENSIONS ARE FACE OF SHEATHING TO FACE OF SHEATHING. 3. ALL INTERIOR DIMENSIONS ARE FRAMING TO FRAMING UNLESS NOTED OTHERWISE.
- 4. SEE LIFE SAFETY PLAN TO CONFIRM FIRE RATINGS. 5. WALL TYPE INDICATORS FOR WALL TYPES THAT INCLUDE RESILIENT CHANNEL ARE PLACED ON THE
- SIDE OF THE WALL TO INSTALL THE RESILIENT CHANNEL. 6. HANDRAIL (TYP. AT BOTH SIDES OR CORRIDORS) SEE DETAILS 18/A501, 19/A501 AND 20/A501.

BUILDING INFORMATION

OVERALL BUILDING FIRST FLOOR S.F. = 67,519 s.f. CANOPY & PORCHES S.F. = 2,108 s.f. MAINTENANCE BUILDING S.F. = 808 s.f. TOTAL S.F. = 70,435 s.f. TOTAL UNITS = 78MEMORY CARE UNITS: 36 (18) UNIT A1 - MC STUDIO @ 384 s.f.
(10) UNIT A2 - MC STUDIO @ 384 s.f.
(2) UNIT A3 - MC ADA STUDIO @ 414 s.f. (2) UNIT A4 - MC ADA STUDIO @ 414 s.f. (4) UNIT A5 - MC STUDIO @ 385 s.f. ASSISTED LIVING UNITS: 42 (18) UNIT B1 - AL STUDIO @ 414 s.f. (6) UNIT B2 - AL STUDIO @ 431 s.f. (4) UNIT B3 - AL STUDIO @ 404 s.f. (14) UNIT C1 - AL 1 BED @ 696 s.f.





PRELIMINARY - NOT FOR CONSTRUCTION

		<u>T.O. WALL-2</u> 111' - 1 1/8"

			<u>T.O. WALL-3</u> 113' - 1 1/8" <u>T.O. WALL-2</u> 111' - 1 1/8"
			T.O. WALL-1 109' - 1 1/8"

		T.O. WALL-3 113' - 1 1/8" - T.O. WALL-2 111' - 1 1/8"
		T.O. WALL-1 109' - 1 1/8"

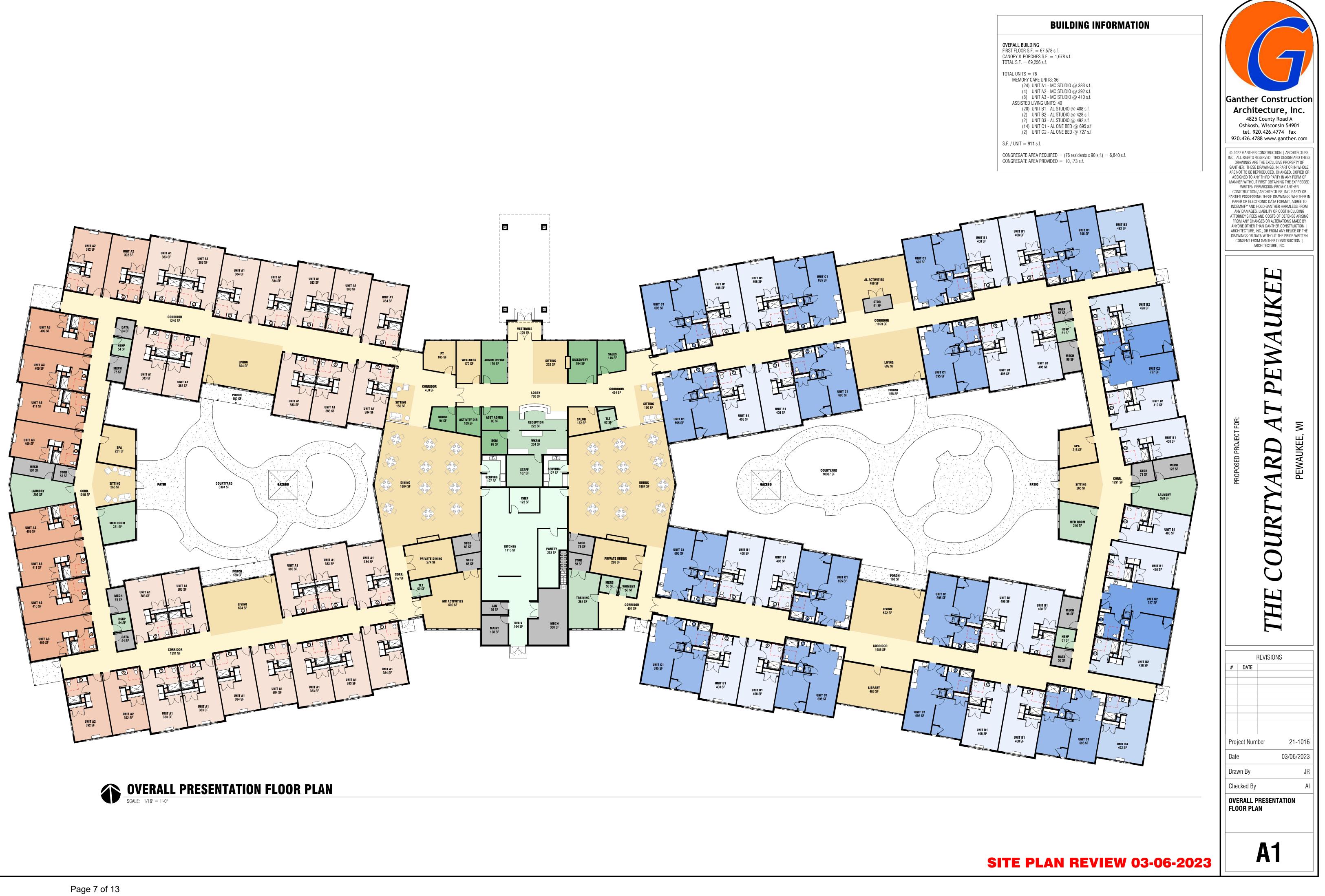
	ELEVATIONS KEYNUTE LEGEND			
KEY VALUE	KEYNOTE TEXT			
1	ARCHITECTURAL ROOF SHINGLES: GAF TIMBERLINE: NS CHARCOAL			
3	HARDIE PLANK 8" SIDING (7" REVEAL): COLOR: NIGHT GRAY			
4	HARDIE PLANK SHAKES: COLOR: PEARL GRAY			
5	HARDIE PLANK TRIM 1x4: COLOR: ARTIC WHITE			
7	HARDIE PLANK PANEL: COLOR:			
8	MANUFACTURED STONE CAP: PRESTIGE: COLOR: GRAY			
9	MANUFACTURED STONE SILL 24"x3"x3": PRESTIGE: COLOR: GRAY			
10	PRE-FINISHED ALUMINUM FASCIA AND GUTTER (EAVES): COLOR: WHITE			
11	PRE-FINISHED ALUMINUM DOWNSPOUT (SEE ROOF PLAN FOR LOCATIONS): COL			
12	RIDGE VENT (SEE ROOF PLAN)			
13	VINYL WINDOWS: COLOR: WHITE			
14	ARCHITECTURAL PTAC LOUVER: COLOR: MATCH SIDING COLOR OR WHITE			
15	VTAC LOUVER: COLOR TO MATCH SIDING COLOR OR WHITE			
16	MANUFACTURED STONE ACCENT 7"x20"			
17	MANUFACTURED STONE TRIM 5"x20"x1 1/2"			
18	HOLLOW METAL DOOR: WHITE			

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PROPOSED PROJECT FOR:	THE COURTYARD AT PEWAUKEE	GOLF ROAD PEWAUKEE, WI 53072
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IX.



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STREET ENTRANCE RENDERING

SCALE: NOT TO SCALE



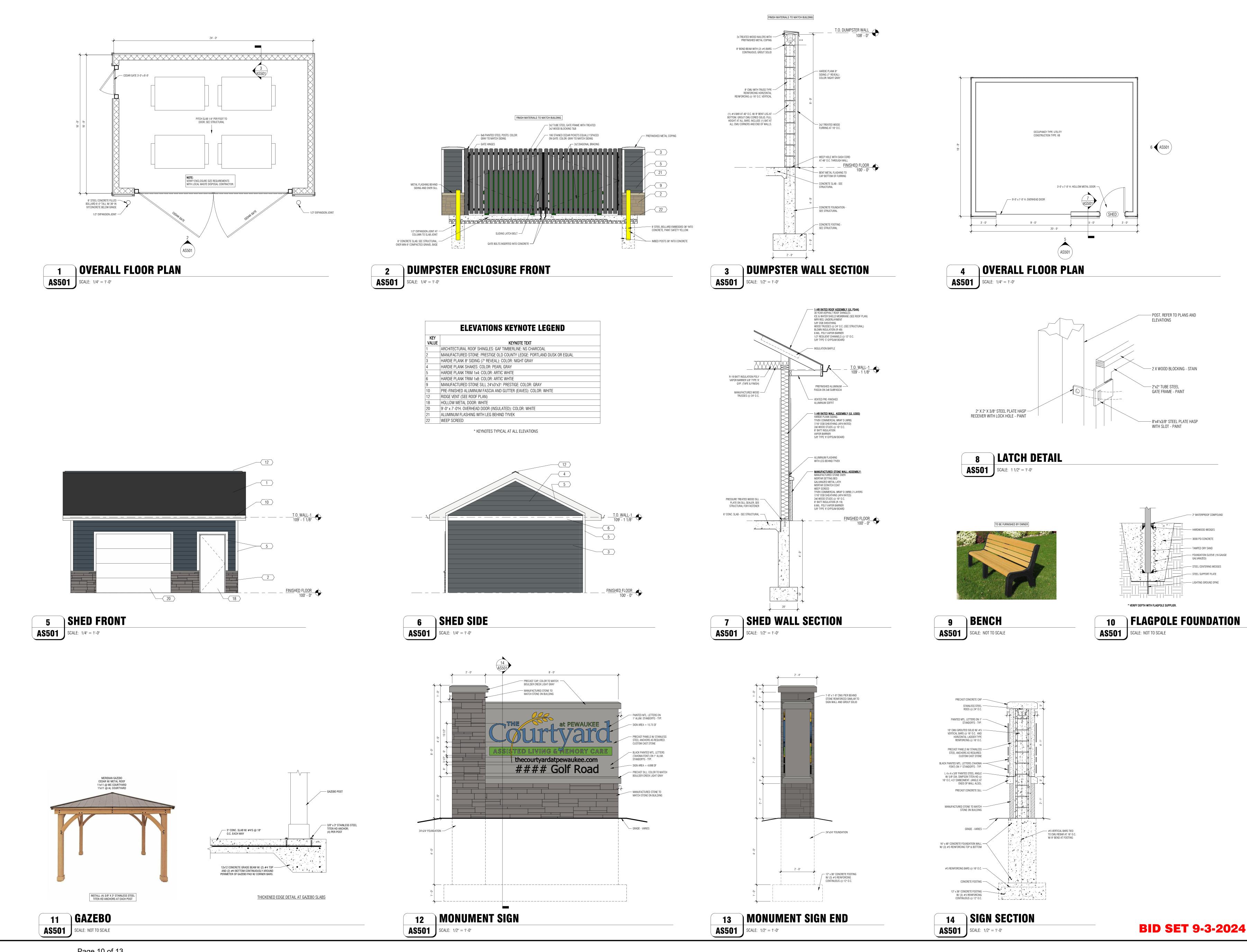
MAIN ENTRANCE RENDERING

3/6/2023 10:33:52 AM

Ganther Construction Architecture, Inc. 4825 County Road A Oshkosh, Wisconsin 54901 tel. 920.426.4774 fax 920.426.4788 www.ganther.com © 2022 GANTHER CONSTRUCTION | ARCHITECTURE, INC. ALL RIGHTS RESERVED. THIS DESIGN AND THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF GANTHER. THESE DRAWINGS, IN PART OR IN WHOLE, ARE NOT TO BE REPRODUCED, CHANGED, COPIED OR ASSIGNED TO ANY THIRD PARTY IN ANY FORM OR MANNER WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION FROM GANTHER CONSTRUCTION / ARCHITECTURE, INC. PARTY OR PARTIES POSSESSING THESE DRAWINGS, WHETHER IN PAPER OR ELECTRONIC DATA FORMAT, AGREE TO INDEMNIFY AND HOLD GANTHER HARMLESS FROM ANY DAMAGES, LIABILITY OR COST INCLUDING ATTORNEY'S FEES AND COSTS OF DEFENSE ARISING ATTORNEY'S FEES AND COSTS OF DEFENSE ARISING FROM ANY CHANGES OR ALTERATIONS MADE BY ANYONE OTHER THAN GANTHER CONSTRUCTION | ARCHITECTURE, INC., OR FROM ANY REUSE OF THE DRAWINGS OR DATA WITHOUT THE PRIOR WRITTEN CONSENT FROM GANTHER CONSTRUCTION | ARCHITECTURE, INC. Ш P Ш \geq K R PEWA ∇ COUR THE REVISIONS # DATE 21-1016 Project Number 03/06/2023 Date Drawn By Author Checked By Checker PRESENTATION RENDERINGS

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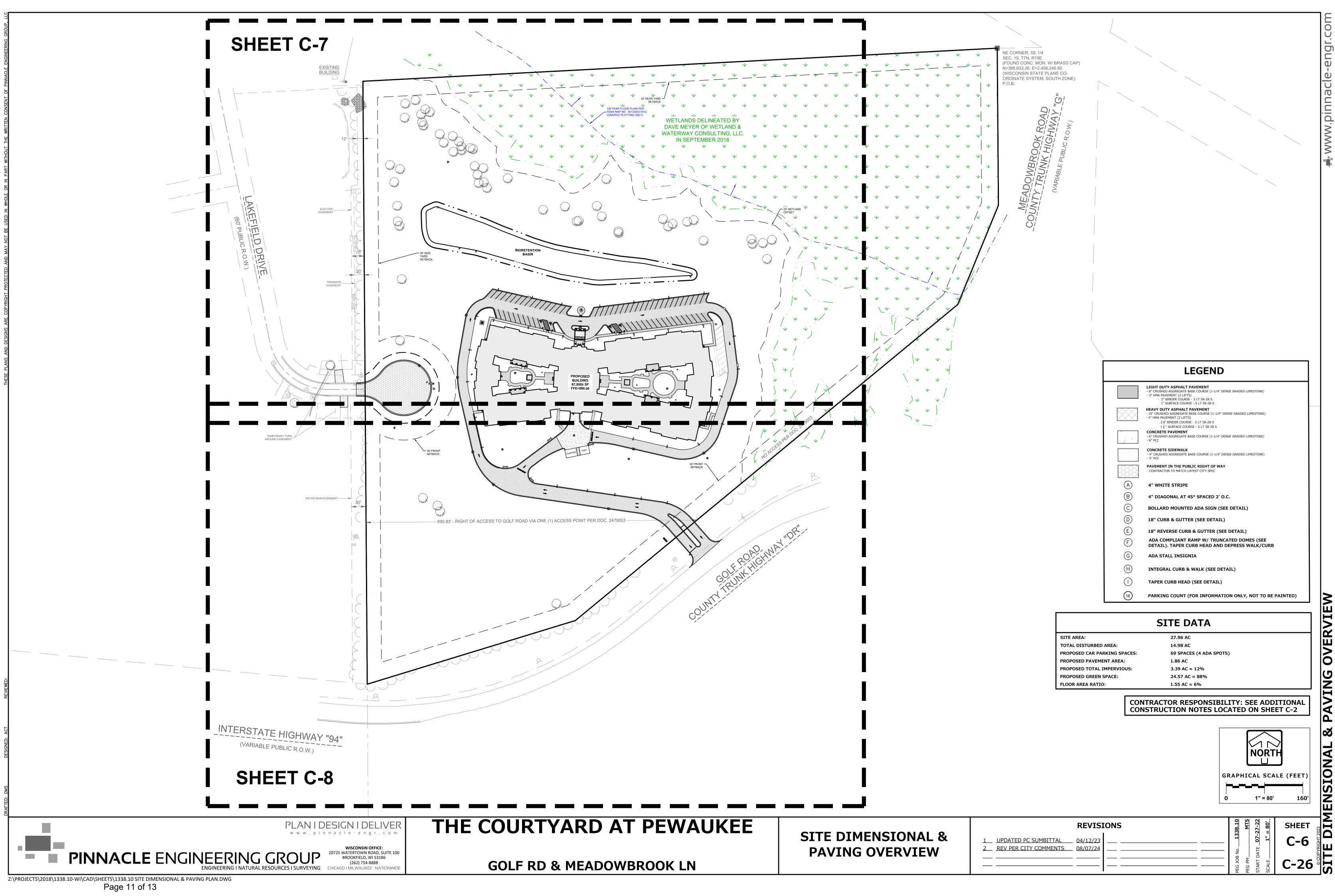
SITE PLAN REVIEW 03-06-2023



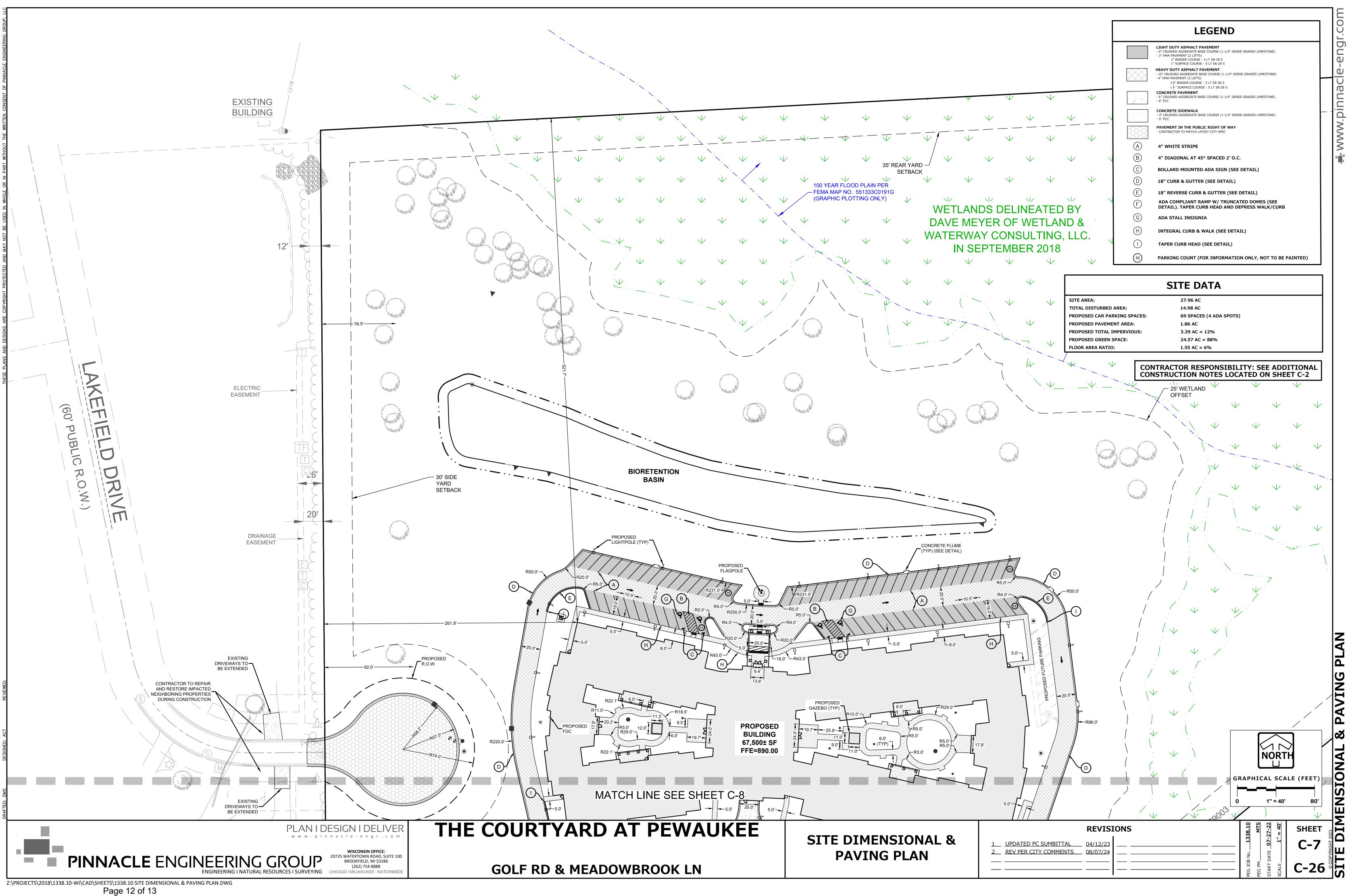
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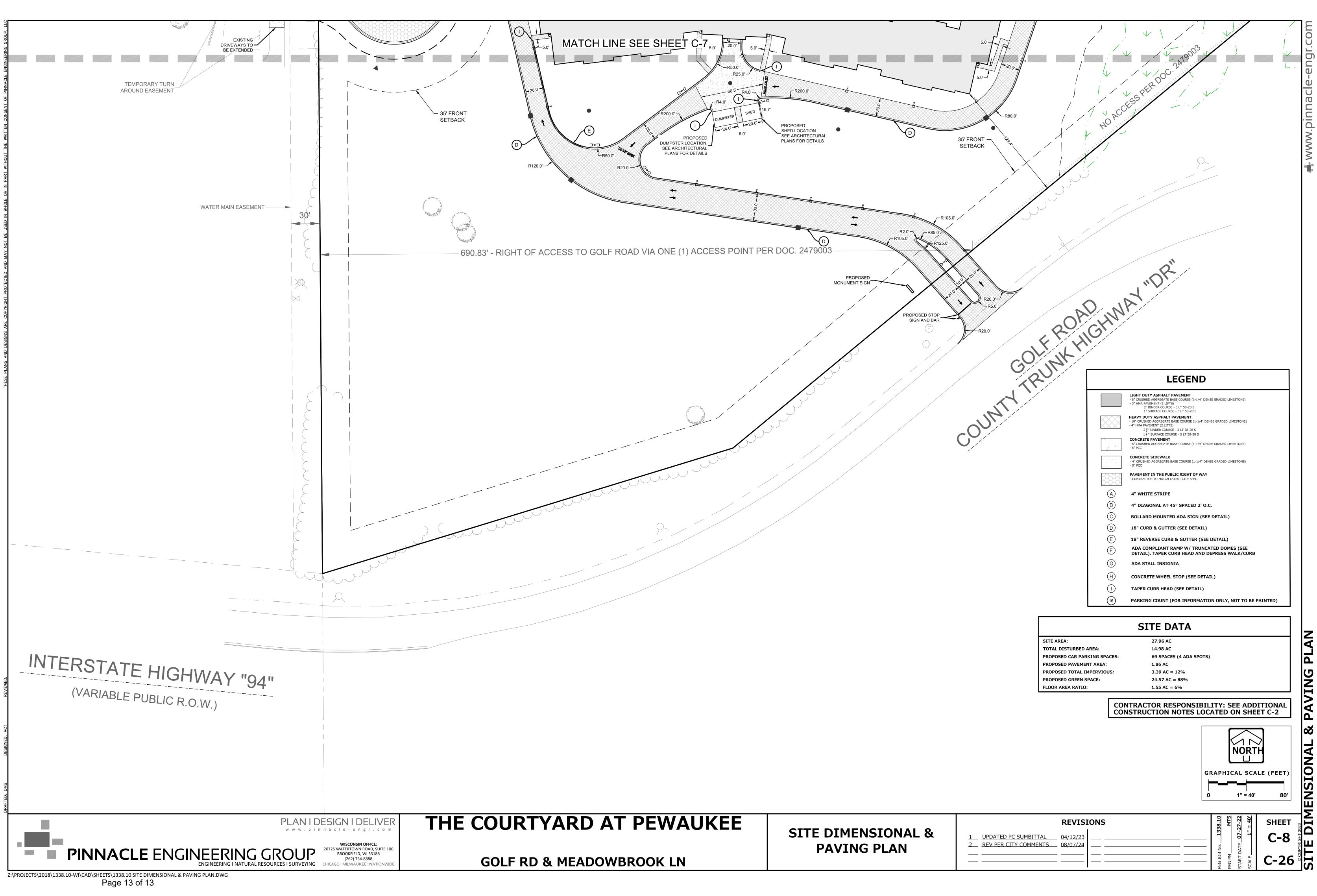
 2" WATERPROOF COMPOUND - FOUNDATION SLEEVE (16 GAUGE - STEEL CENTERING WEDGES



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CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 3.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action Regarding a Recommendation to the Common Council for a Comprehensive Master Plan Amendment to Change the Year 2050 Land Use/Transportation Plan Use Designation for the City of Pewaukee for Shorepoint Church for Property Located on the Southwest Corner of Duplainville Road and Capitol Drive From Medium Density Residential (6,500 Sq. Ft. - 1/2 AC./D.U.) and Floodplains, Lowland and Upland Conservancy, and Other Natural Areas to Government/Institutional and Floodplains, Lowland and Upland Conservancy, and Other Natural Areas (PWC 0912983, PWC 0912984, PWC 0912985)

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

Shorepoint Church project narrative Shorepoint Church staff comment responses Shorepoint Church comp plan exhibit Shorepoint Church staff report 9.19.24



September 9, 2024

City of Pewaukee Attn: Nick Fuchs, Planner and Community Development Director W240N3065 Pewaukee Road Pewaukee, WI 53072 MN 5427

RE: Project Narrative Concerning Shorepoint Church

A. CONTACT INFORMATION:

Shorepoint Church Contact: **Pastor Brian Engl** PO Box 41 Pewaukee, WI 53072 <u>brian@shorepoint.cc</u> 262-444-3806

Vanman Architects and Builders Contact: **Angie Knodel, AIA** 6701 West 23rd Street St. Louis Park, MN 55426 <u>angie@vanmanab.com</u> 612-965-8570

B. LEGAL DESCRIPTION / SITE DATA:

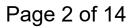
The site is located at the corner of Capitol Drive and Duplainville Road. This consists of three separate properties to be combined as one.

PWC 0912983 (8.1878 Acres) Current Zoning is RS-1 Residential District

PWC 0912984 (1.2244 Acres) Current Zoning is B-3 General Business

PWD 0912985 (1.3061 Acres) Current Zoning is RS-1 Residential District

The church would like to combine the (3) properties to be one property and Re-Zone that property to be I-1 Urban Institutional District with a south portion of the property to be Re-Zoned Upland Conservancy.





C. HISTORY NARRATIVE:

Pastor Brian and his wife Bethany started Shorepoint Church in 2015, almost 20 years after God gave them a dream to plant a life-giving church in the Milwaukee area. Their heart is that everyone that walks through the doors of Shorepoint would find true community and a place to call home. They are currently holding services at Sharon Lynn Wilson Center for the Arts and with the current growth, they are ready to build their own building in Pewaukee.

D. PROPOSED PROJECT AND USES:

The proposed plan for Shorepoint Church is to construct a slab-on-grade building on the southwest corner of Capitol Drive and Duplainville Road. The building will be approximately 27,000 sf and will include a 600-seat worship space. As you enter the main entry a spacious lobby/fellowship space will provide an opportunity to enjoy a coffee or sit by the fireplace to connect with others before and/or after services. The building will include five classrooms, a bank of offices and a multi-purpose space for classes and meetings. Utility spaces including ADA toilets, storage and mechanical rooms will be included in this new building.

The building would be occupied primarily on Sunday Mornings, from 8 am to 1 pm. The building would also be used throughout the week for classes and events. Office hours would be kept during the week from 8 am to 5 pm.

E. BUILDING AESTHETICS:

The building exterior façade is shown in attached documents and will provide a welcoming, inviting entry with a large outdoor patio next to the main entry. The Worship Auditorium is intended to have parapet walls at approximately thirty feet tall while the adjacent classroom and lobby exterior walls will be approximately twenty-five feet tall. The office wing will have walls approximately twenty feet tall. Exterior materials are still being determined and anticipated to be glass and wood materials as well as precast concrete panels. The building will have a forty foot cross projecting above the roof line.

F. EXISTING SITE AND PARKING

The new site plan will accommodate 300 parking spaces and a drop-off at the main entry. In conversations with the City of Pewaukee we understand the concerns regarding access to and from this site.



After Church Traffic Loads

The Shorepoint Church community has a vibrant culture of fellowship and gathering following services enjoying coffee, donuts and conversation. After-services departures are currently more of a gradual stream of traffic rather than everyone leaving at about the same time.

Max Site Load and Supporting Future Growth

Shorepoint is planning to maximize its capacity at this site with the construction of this initial project. Shorepoint's plan for future growth is to launch additional locations in neighboring communities rather than expand the future capacity of this location by acquiring adjacent parcels. The only consideration of future expansion at this site is possibly the children's classrooms depending on needs. Shorepoint's model is to create a 600-seat worship auditorium, offer multiple services and then launch additional campus locations in adjacent communities as we continue to grow. Our strategy is to continue to foster the mid-sized community feel that comes with this size auditorium and replicate that in other locations rather than grow to a much larger main location.

Capitol Drive Access

In conversation with the Wisconsin Department of Transportation their only concern was that we move the access drive 50 feet to the west to create adequate space for an acceleration lane before reaching the Duplainville Road bridge. This has been accommodated in the plan we are submitting today. Our long-term objective is to move our Capitol Drive access point even farther to the west and connect to Wethersfield Road whenever the property to the west is developed.

Duplainville Access

We understand there is a moratorium for access to utilities in this road until the summer of 2026. We have listened to additional concerns and would like to work with the City to create a safe way to both allow fire and safety access and also mitigate concerns regarding cut-through traffic that may occur with this access. We have heard multiple options and are looking forward to working with the City to identify and select the best overall approach.





G. SHOREPOINTS GOALS AND VISION

Shorepoint has a heart to be in this community and will enhance this section of Capitol Drive. Since it began in 2015, Shorepoint has earned the reputation of being a positive presence both as a renter at the Wilson Center and as a member of the community. Shorepoint's involvement in local projects and events geared toward strengthening the community has been consistent and something they look forward to continuing in Pewaukee. Those projects include:

- Providing a place for connection and personal growth within our more than 55 different small groups that currently meet throughout the week in homes and convenient locations within our community.
- Providing a safe, drug and alcohol-free space for teenagers to build relationships and find a sense of community through organized gatherings and events.
- Providing marriage strengthening resources from pastoral counseling and seminars to small groups.
- Providing resources and direct support to help people struggling with addiction from pastoral counseling and appropriate referrals to small groups and courses offered.
- Providing resources and direct support for those in our community who are in a financial struggle through our benevolence program and Dave Ramsey's Financial Peace course.
- Providing resources and direct support for those involved in Foster Care through partnership with local and statewide non-profits.
- Providing a place for people to use their God-given gifts and abilities to serve others in a wide variety of ways. We currently have over 185 people actively serving in different capacities at and through the church.
- Three unique "Serve Weeks" throughout the year where countless hours are invested in local service initiatives within our community.

Studies have shown that greater connection to a faith community leads to healthier people in multiple categories. Healthier people lead to stronger communities. As Pewaukee grows in homes and commerce, Shorepoint sees this land as an opportunity to help Pewaukee grow in its options for a healthy faith community.

END OF NARRATIVE



Office of the Planner & Community Development Director

Attn: Nick Fuchs, Planner & Community Development Director W240 N3065 Pewaukee Road Pewaukee, Wisconsin 53072



Below are responses for the staff comments dated August 10, 2024 for the proposed development application for Shorepoint Church and the properties bearing Tax Key Nos. PWC 0912983,0912984, and 0912985.

- 1. General
 - a. The project narrative states that exterior building materials are still being determined. Please note that the expectation is that building permit plans will be in substantial conformance with the Plan Commission plans. Any changes considered to be significant or a downgrade in quality will have to go back to the Plan Commission for review and approval.
 See attached Exterior Building Materials sheet A-8 showing more specific material information.
 - b. Is the exhibit provided showing estimated traffic counts for other churches in the area the extent of the traffic analysis completed? Was a full Traffic Impact Analysis completed by a traffic/transportation engineer? Note that traffic was a significant concern discussed at the Conceptual Review and completion of a TIA was mentioned.

The initial exhibit provided is only showing adjacent churches and their parking lot capacity to illustrate how many cars could be on those properties. TADI is currently working on a traffic study analysis. See attached exhibit.

The exhibit showing current traffic counts is not the extent of the traffic analysis. It only represents a portion of the required WisDOT TIA, which is in progress. Due to requesting access to STH 190, a WisDOT permit is required, thereby requiring a WisDOT TIA process consisting of a two phase TIA report submittal. The first phase, the TIA Initial Review Report, has been submitted and we are currently awaiting comments on the Phase 1 submittal from WisDOT. Once TADI receives comments from WisDOT, phase 2 of the TIA will be conducted, which includes a full traffic analysis and recommendations of the study area intersections and will be included in the Full TIA.

 c. Does the church plan to abide by the moratorium for access to utilities? Does that timing work with the anticipated construction timeframe?
 We currently understand the moratorium to be lifted in March of 2026 and our construction timeline will work with the moratorium.

- 2. Comprehensive Master Plan Amendment
 - a. Please reference the 2050 Comprehensive Master Plan, not 2035. Note the current land use designation is Medium Density Residential (6,500 Sq. Ft. 1/2 Ac. / D.U.) and Floodplains, Lowland, & Upland Conservancy and Other Natural Areas.

This is noted in the Comprehensive Master Plan Exhibit dated 8-15-2024. The proposed land use plan exhibit should also include the Floodplains, Lowland, & Upland Conservancy and Other Natural Areas designation. Staff recommends that this designation include all the remaining woodland area on the property.

This is noted in the Comprehensive Master Plan Exhibit dated 8-15-2024.

- 3. Rezoning
 - a. Staff recommends that the wooded area of the site be rezoned to UC Upland Conservancy and revising the rezoning exhibit as such.
 This is shown to be rezoned to UC in the attached revised Re-Zoning Exhibit.
- 4. Certified Survey Map
 - a. Please provide all information as required by Section 18.0603b. of the City's Land Division Ordinance, including the following:
 - i. Setbacks or Building Setback Lines required by the Plan Commission or other City or County Ordinances;

This is documented in the Revised Certified Survey Map.

- Utility, drainage, and access easements;
 Utitily, drainage and access easements will be provided in the final Certified Survey Map.
- iii. A Required Preliminary CSM shall include existing and proposed contours as set forth in Section 18.0601.
 This is documented in the Revised Certified Survey Map.
- iv. The Elevation at each lot; and,
- v. Utilities, showing their exact location and depth. This is documented in the Revised Certified Survey Map.
- b. Please revise Ami Hurd, Deputy Clerk on Sheet 4 of the CSM to Colleen Brown, Plan Commission Secretary for the Plan Commission Approval signature line and to Kelly Tarczewski, City Clerk for the Common Council Approval signature line.

This has been revised in the Certified Survey Map.

- 5. Site & Building Plan Review
 - a. Please illustrate building and parking setbacks on the site plan. These required minimum setbacks are noted below.
 - i. Building Setbacks and Yards
 - 1. There shall be a minimum building (or street) setback from the right-of-way of all streets, roads, or highways equal to the average setback on each side of the use parcel or districts but not less than 25 feet.
 - 2. There shall be a minimum side yard equal to the side yard on adjacent use parcels or districts but not less than 20 feet.
 - 3. There shall be a rear yard of not less than 25 feet.
 - 4. All structures shall be set back a minimum of 75 feet from the designated 100-year recurrence interval (base flood) floodplain of all navigable streams and bodies of water and 25 feet from any designated wetland. (Also see sub-section 17.0435)

See building and parking setbacks shown in the attached sheet by The Sigma Group.

- ii. Off-street Parking Setbacks
 - 1. There shall be no parking or loading area within 30 feet of a street right-of-way.

Compliant

- Each such parking area shall be bounded by a grassed or landscaped greenbelt of at least ten (10) feet in width between the parking area and all property boundaries.
 See revised Parking plan.
- b. Note paving must be in conformance with Section 17.0601c. of the Zoning Code.

This has been noted and will be in compliance – currently showing one parking space for each two seats in worship space. Parking stalls shown are not less than 180 sf.

c. Staff recommends submittal of a landscape plan for Plan Commission review and approval. The landscape plan must include all proposed planting locations as well as a corresponding table indicating planting type, quantity provided, and size.

See attached Landscape Plan provided by The Sigma Group.

- d. Regarding landscaping, staff recommends:
 - i. that landscaping be utilized to screen the drive and parking lot from Capitol Drive and Duplainville Road (see Section 17.0603c. of the Zoning Code), particularly as concerns were expressed during the Conceptual Review with much of the parking being located in front of the building.

The revised parking lot has added islands to soften the parking lot in front of the building. The additional parking spaces to maintain 300 spots has now been located at the rear or south side of the building.

ii. that additional landscape islands be provided within the parking lot to breakup longer rows of parking.

See revised Site Plan attached.

e. Please provide details regarding the proposed retaining wall, such as material and height.

Retaining Wall shown on the south side of the building is intended to be constructed of large retaining wall blocks. Height of wall at the tallest point is 12' high. Average wall height is about 6' to 8' tall.

- f. Is lighting proposed? Staff recommends submittal of a Lighting Plan that includes location, photometrics, fixture details, and peak height of poles and fixtures as well as mounting height for any proposed building lighting. See attached Photometrics of the site provided by The Sigma Group.
- g. Note the peak height of light poles and fixtures may not exceed 20-feet as measured from grade.
 NOTED. All exterior light poles and fixtures will not exceed 20-feet in height as measured from grade.
- h. On the Site Plan, please illustrate the future cross access location with a note stating that access is to be provided upon availability and development of the property to the west. This is an anticipated condition of approval (to require construction in the future and removal of the existing access).
 - See attached exhibit Anticipated Future Access Exhibit.
- Staff suggests lowering the height of the cross.
 The cross has been lowered to 40'-0" See sheet A-2 and A-3 Elevations.
- j. How will mechanical equipment be screened? Roof top units will be screened by a unit attached direct mounted screen with panels to match building materials. See attached sheet A-8 showing screen material.

Thanks again for your time and consideration on this project. Please reach out with any questions or any items of concern.

Sincerely,

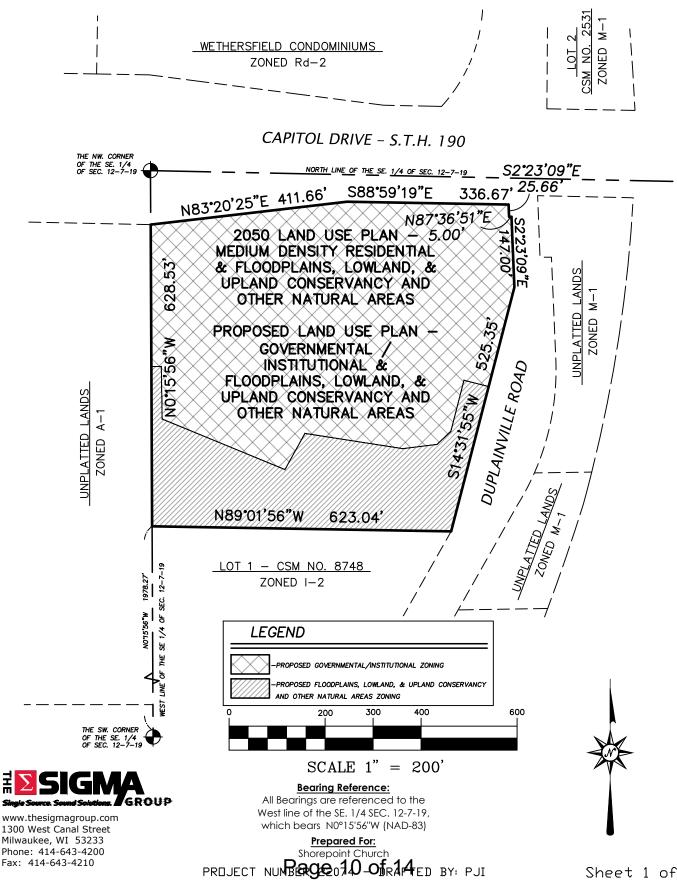
Je Knodle

Angie Knodel, AIA Vanman Architects and Builders





DATED 8-15-2024



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REPORT TO THE PLAN COMMISSION

Meeting of September 19, 2024

Date: September 13, 2024

Project Name: Comprehensive Master Plan Amendment, Rezoning, Certified Survey Map, and Site & Building Plan Review Application

Project Address/Tax Key No.: Not Assigned/PWC 0912983, W223N3481 Duplainville Road/PWC 0912984, and N34W22407 Capitol Drive/PWC 0912985

Applicant: Pastor Brian Engl, Shorepoint City Church, Inc.

Property Owner: Duplainville LLC (PWC 0912983), Shorepoint City Church Inc. (PWC 0912984), and Oscar E. Picado Diaz (PWC 0912985)

Current Zoning: Rs-1 Single Family Residential (PWC 0912983 & 0912985) and B-3 General Business District (PWC 0912984)

2050 Land Use Map Designation: Medium Density Residential (6,500 Sq. Ft. - 1/2 Ac. / D.U.) and Floodplains, Lowland, & Upland Conservancy and Other Natural Areas

Use of Surrounding Properties: Capitol Drive and Two-Family Residential to the north, Quad Graphics to the south, M-1 District properties to the east, and agricultural land to the west.

Introduction

Shorepoint City Church, Inc. has filed applications for a Comprehensive Master Plan Amendment, Rezoning, Certified Survey Map, and Site & Building Plan Review. This submission follows the Conceptual Review Application, which was reviewed at the March 21, 2024, Plan Commission meeting.

At that meeting, much of the discussion revolved around traffic concerns and the potential access to Duplainville Road. Several members also commented on a preference for these properties to remain with their current land use plan designation of Medium Density Residential.

Project Description/Analysis

The proposed church use and development utilizes three existing properties located at the southwest corner of Capitol Drive and Duplainville Road. The three properties consist of an old vacant residential home, a single-family home, and vacant land. The applicant would raze all existing structures.

Comprehensive Master Plan Amendment

To accommodate the proposed development and rezoning, the applicant is requesting that the properties bearing Tax Key Nos. 0912984 and 0912985 are changed <u>from</u> Medium Density Residential <u>to</u> Governmental/Institutional and the property bearing Tax Key No. 0912983 is changed <u>from</u> Medium Density Residential and Floodplains, Lowland, & Upland Conservancy and Other Natural Areas <u>to</u> Governmental/Institutional and Floodplains, Lowland, & Upland Conservancy and Other Natural Areas.

Note the boundary of the Floodplains, Lowland, & Upland Conservancy and Other Natural Areas designation will follow the remaining wooded area located on the southern portion of the site.

The request to change the land use designation to Governmental/Institutional is consistent with the concurrent rezoning request described below.

Rezoning

The subject properties are currently zoned Rs-1 Single Family Residential (PWC 0912983 & 0912985) and B-3 General Business District (PWC 0912984). The applicant is requesting to change the zoning of all three properties to the I-1 Institutional District and UC Upland Conservancy District. The UC District will match the boundary of the Floodplains, Lowland, & Upland Conservancy and Other Natural Areas designation noted above.

Note a church is a Permitted Use in the I-1 District.

Certified Survey Map

The Certified Survey Map Application combines the three existing properties into a single lot. The total area of Lot 1 is 10.814 acres. The combined parcel conforms to the minimum lot size of 2-acres and minimum lot width of 200-feet of the I-1 District.

The applicant will need to revise the signature lines of the CSM to include Colleen Brown as the Plan Commission Secretary for the Plan Commission Approval signature line and Kelly Tarczewski, City Clerk for the Common Council Approval signature line.

Site & Building Plans

The building has an area of approximately 27,745 square feet and includes a 600-capacity worship space, office space, a 1,350 square foot multi-purpose room with a stage, and classrooms. The plans provided illustrate the building location, exterior parking areas, landscaping, lighting, and storm water management facilities. A retaining wall is also shown to the south of the building and parking lot, which has a maximum height of about 12 feet and an average height of about 6 to 8 feet.

Any dumpster enclosure kept onsite shall have its location and materials reviewed and approved by the *City Planner*.

Access

The site plan includes a driveway extending through the north end of the site connecting a Duplainville Road access point and a Capitol Drive access location. The Wisconsin Department of Transportation (WisDOT) has indicated that one right-in/right-out access location that is located a minimum of 450 feet from the center line of Duplainville Road will be allowed on Capitol Drive. <u>Staff recommends that the applicant provide a revised site plan, for Engineering Department review and approval, that shifts the Duplainville Road access location further south on the property.</u>

The applicant has also provided an exhibit that illustrates a future access location onto Capitol Drive, which is located on the property to the west and across from Wethersfield Road. <u>Staff recommends that</u> the future cross-access location shall be provided and constructed upon availability and development

of the property to the west along with the removal of the existing access to Capitol Drive as well as the abandonment of the Duplainville Road access.

<u>Traffic</u>

As noted above, the site is proposed to be accessible from both Capitol Drive and Duplainville Road. Traffic exiting onto Capitol Drive must turn right and head east. If a car wishes to travel west on Capitol Drive, a U-turn is needed at Springdale Road. During the Conceptual Review, staff expressed traffic concerns with this in consideration of the traffic on Capitol Drive, particularly Spring Creek Church traffic, which likely has similar peak traffic times.

A Traffic Impact Analysis is currently under review by WisDOT. The applicant hopes to be able to provide WisDOT review comments prior to the September 19th meeting. If any action is taken by the Plan Commission, staff recommend including a condition that <u>all improvements as required by</u> <u>WisDOT in accordance with the Traffic Impact Analysis be completed prior to occupancy.</u>

<u>Parking</u>

The Zoning Ordinance suggests a minimum parking ratio of one space for each two seats. In addition, one space for each two employees for school use.

The 600-seat worship space requires 300 parking spaces. Staff would not recommend additional parking for the classrooms as the classrooms are primarily utilized at different times than the worship space. With a large amount of parking already proposed, staff generally prefer areas of the site be designated as future parking and only improved if necessary.

Natural Resources

In review of aerials and the DNR Surface Water Data Viewer, no wetlands exist onsite and only a small portion of the northwest corner of the site shows hydric soils. The southern portion of the site is wooded, and the site is steeply sloped. Moreover, no portion of the site is identified as a SEWRPC environmental corridor, and no floodplain is located on the property.

The applicant has agreed to preserve and zone the wooded area of the site to UC Upland Conservancy, which provides protection and limited allowed uses for that portion of the property.

Landscaping

The Landscape Plan includes 37 deciduous trees, 41 evergreens, 35 decorative trees, and 272 shrubs. The applicant has addressed staff comments and there are no objections to the proposed landscape plan.

It can also be noted that the site complies with the City's requirement of maintaining a minimum of 40% greenspace onsite.

<u>Lighting</u>

A Lighting Plan, including a photometric plan, has been provided illustrating exterior light poles throughout the site. The light poles and fixtures are noted to not exceed 20-feet in height, in conformance with City standards. Staff have no objections to the proposed Lighting Plan.

I-1 District

The proposed uses are permitted under the I-1 District. The I-1 District development standards also appear to be met with this development.

Architecture

The building primarily consists of precast panels and EIFS. The proposed building height is approximately 30-feet. The applicant is also proposing a 40-foot-tall cross that will extend about 10-feet above the roofline. *The applicant shall verify that the proposed height of the cross complies with height regulations of the Capitol Airport*.

Staff suggests that the south elevation be revised to include windows or other architectural features.

Recommendation

Staff does not object to the proposed use or land combination; however, staff continues to have concerns with access and traffic. A review of WisDOT comments and the final TIA is needed prior to making a recommendation.

Staff also recommends that the applicant pursue cross-access with the adjacent property owner for construction as part of this development, opposed to in the future.

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 4.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action and Public Hearing for Shorepoint Church to Rezone Vacant Property Located at the Southwest Corner of Duplainville Road and Capitol Drive and Property Located at N34 W22407 Capitol Drive from Rs-1 Single-Family Residential to I-1 Urban Institutional, and to Rezone Property Located at W223 N3481 Duplainville Road from B-3 General Business to I-1 Urban Institutional for the Purpose of Constructing an Approximately 27,000 Square Foot Church (PWC 0912983, PWC 0912984, PWC 0912985)

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

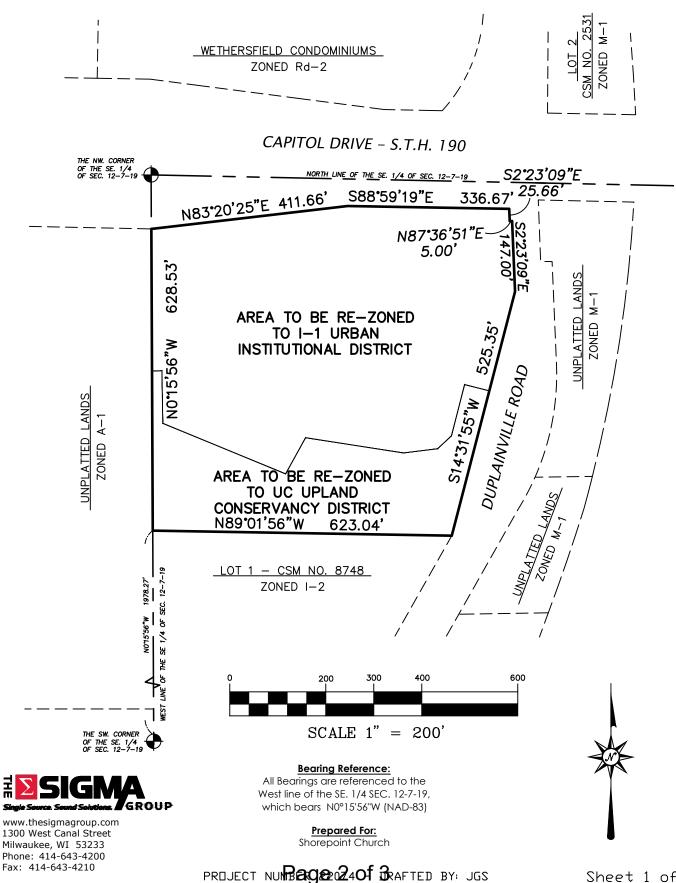
ATTACHMENTS:

Description Shorepoint Church rezoning exhibit

RE-ZONING - EXHIBIT

PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 12, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

DATED 8-15-2024



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RE-ZONING - EXHIBIT

PART DF THE NDRTHWEST 1/4 DF THE SDUTHEAST 1/4 DF SECTION 12, TOWNSHIP 7 NDRTH, RANGE 19 EAST, CITY DF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

LEGAL DESCRIPTION

All of Certified Survey Map No. 1295, and Lands, all being part of the Northwest 1/4 of the Southeast 1/4 of Section 12, Town 7 North, Range 19 East, in the City of Pewaukee, Waukesha County, Wisconsin, bounded and described as follows:

Commencing at the Southwest corner of the Southeast 1/4 of said Section 12; thence N0°15′56″W along the West line of said 1/4 Section, 1978.27 feet to the point of beginning of lands to be described; thence continuing N0°15′56″W along the West line of said 1/4 Section, 628.53 feet to a point in the South right of way line of Capitol Drive (S.T.H. 190); thence N83°20′25″E along said South right of way line, 411.66 feet; thence S88°59′19″E along said South right of way of Duplainville Road, said point also being the Northeasterly corner of Certified Survey Map (CSM) No. 1295, thence S2°23′09″E along said Westerly right of way line and the Easterly line of said CSM, 25.66 feet; thence N87°36′51″E along said Westerly right of way line and the Easterly line of said CSM, 5.00 feet, thence S2°23′09″E along said Westerly right of way line and the Easterly line of said CSM, 147.00 feet to a point; thence S14°31′55″W along said Westerly right of way line and the Easterly line of said CSM, 525.35 feet, thence N89°01′56″W, 623.04 feet to the point of beginning.

Said lands containing 10.814 acres of land, more or less.

DATED 8-15-2024



www.thesigmagroup.com 1300 West Canal Street Milwaukee, WI 53233 Phone: 414-643-4200 Fax: 414-643-4210

<u>Prepared For:</u> Shorepoint Church

PROJECT NUNBERGE 034 Of BRAFTED BY: JGS

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 5.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

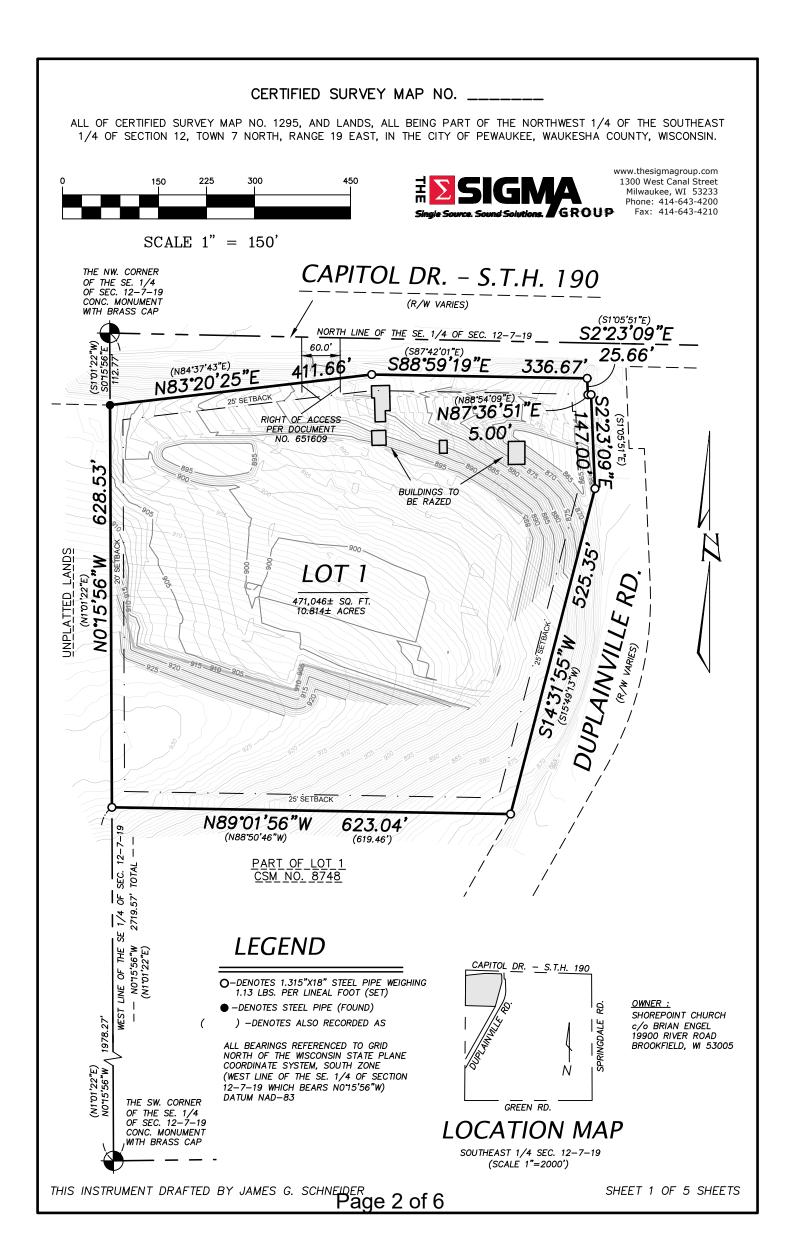
Discussion and Action Regarding a Certified Survey Map for Shorepoint Church for Property Located at the Southwest Corner of Duplainville Road and Capitol Drive for the Purpose of Combining Three Existing Parcels in Order to Construct an Approximately 27,000 Square Foot Church (PWC 0912983, PWC 0912984, PWC 0912985)

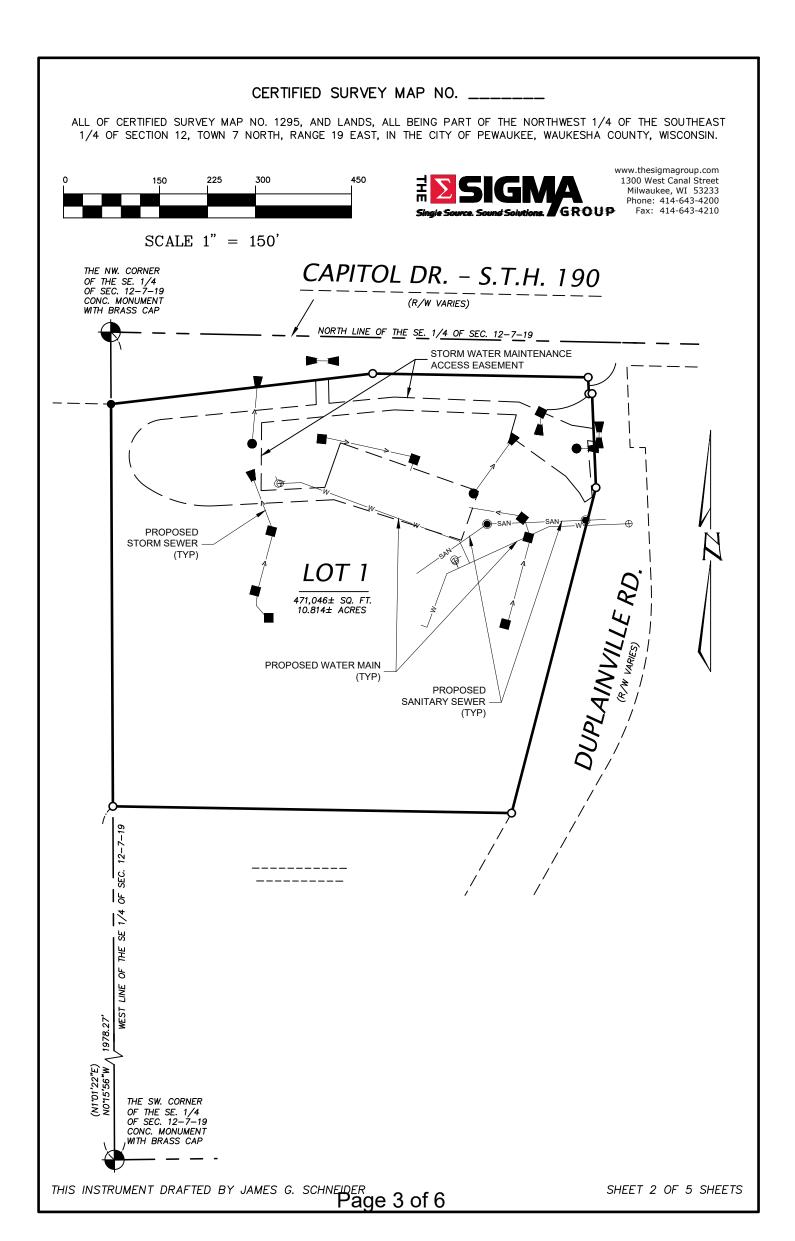
BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS: Description Shorepoint Church CSM





CERTIFIED SURVEY MAP NO.

ALL OF CERTIFIED SURVEY MAP NO. 1295, AND LANDS, ALL BEING PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 12, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

SURVEYOR'S CERTIFICATE

I, James G. Schneider, Professional Land Surveyor, do hereby certify:

THAT I have surveyed, divided and mapped the following parcel of land:

All of Certified Survey Map No. 1295, and Lands, all being part of the Northwest 1/4 of the Southeast 1/4 of Section 12, Town 7 North, Range 19 East, in the City of Pewaukee, Waukesha County, Wisconsin, bounded and described as follows:

Commencing at the Southwest corner of the Southeast 1/4 of said Section 12; thence N0°15'56"W along the West line of said 1/4 Section, 1978.27 feet to the point of beginning of lands to be described; thence continuing N0°15'56"W along the West line of said 1/4 Section, 628.53 feet to a point in the South right of way line of Capitol Drive (S.T.H. 190); thence N83°20'25"E along said South right of way line, 411.66 feet; thence S88°59'19"E along said South right of way line, 336.67 feet to a point in the Westerly right of way of Duplainville Road, said point also being the Northeasterly corner of Certified Survey Map (CSM) No. 1295, thence S2°23'09"E along said Westerly right of way line and the Easterly line of said CSM, 25.66 feet; thence N87°36'51"E along said Westerly right of way line and the Easterly line of said CSM, 147.00 feet to a point; thence S14°31'55"W along said Westerly right of way line and the Easterly line of said CSM, 525.35 feet, thence N89°01'56"W, 623.04 feet to the point of beginning.

Said lands containing 10.814 acres of land, more or less.

That I have made such survey, land division, and plat at the direction of Shorepoint Church, OWNER of said lands.

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

That I have complied with Chapter 236.34 of the Wisconsin Statutes and the Regulations of the City of Pewaukee in surveying, dividing, and mapping the same.

James G. Schneider S-2127

This instrument was drafted by James G. Schneider

Sheet 3 of 5 Sheets

CERTIFIED SURVEY MAP NO.

ALL OF CERTIFIED SURVEY MAP NO. 1295, AND LANDS, ALL BEING PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 12, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

CORPORATE OWNER'S CERTIFICATE

I, Brian Engel (Pastor) of Shorepoint Church, OWNER, do hereby certify: THAT, I have caused the lands described in the foregoing certificate of James G. Schneider, Surveyor, to be surveyed, divided, and mapped.

WITNESS the hand and seal of said OWNERS on this _____ day of _____, 20___.

Witness

Brian Engel (Pastor)

STATE OF WISCONSIN) WAUKESHA COUNTY)^{ss} PERSONALLY came before me on this _____ day of _____, 20___ the above named Brian Engel (Pastor) to me known to be the person who executed the foregoing certificate and acknowledged the same.

Notary Public

My Commission expires _____

This instrument was drafted by James G. Schneider

Sheet 4 of 5 Sheets

CERTIFIED SURVEY MAP NO.

ALL OF CERTIFIED SURVEY MAP NO. 1295, AND LANDS, ALL BEING PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 12, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

<u>CITY OF PEWAUKEE PLAN COMMISSION APPROVAL</u> APPROVED by the City of Pewaukee Plan Commission on this _____ day of _____ 20 .

Steve Bierce, Chairman

Date

Ami Hurd, Deputy Clerk

Date

COMMON COUNCIL CERTIFICATE OF APPROVAL

I certify that this Certified Survey Map was approved under Resolution File No.______, adopted by the Common Council of the City of Pewaukee on ______, and is hereby approved.

Steve Bierce, Village President

Date

Ami Hurd, Deputy Clerk

Date

This instrument was drafted by James G. Schneider

Sheet 5 of 5 Sheets

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 6.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action Regarding the Site and Building Plans for Shorepoint Church for Property Located at the Southwest Corner of Duplainville Road and Capitol Drive for the Purpose of Constructing an Approximately 27,000 Square Foot Church (PWC 0912983, PWC 0912984, PWC 0912985)

BACKGROUND:

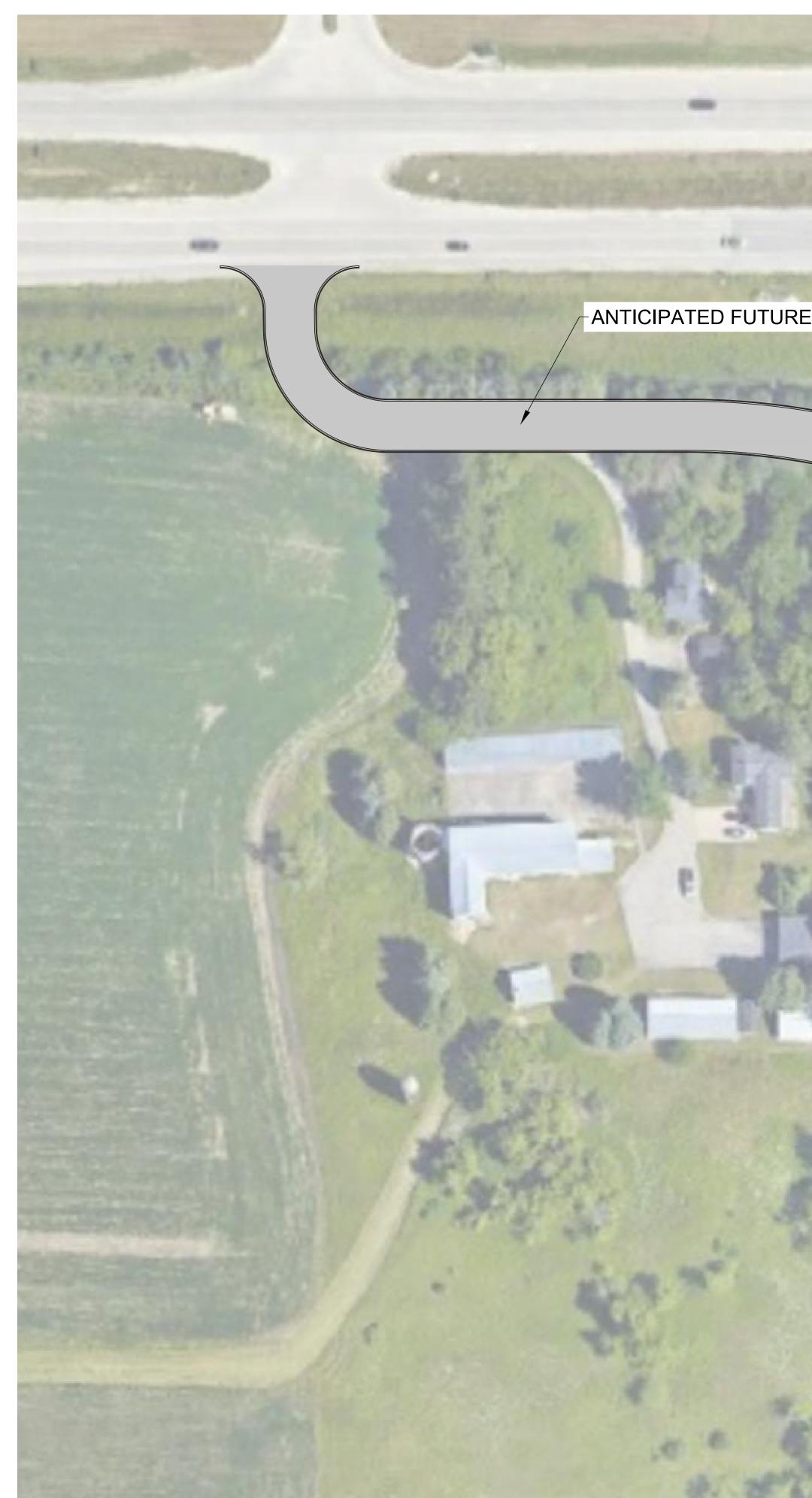
FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

Shorepoint Church future access exhibit Shorepoint Church site graphic - area churches Shorepoint Church civil engineering Shorepoint Church architectural plans & elevations Shorepoint Church lighting plan Shorepoint Church landscape plan Shorepoint Church updated TIA Shorepoint Church responses



SHOREPOINT CHURCH - ANTICIPATED FUTURE ACCESS

VANMAN ARCHITECTS

Page 2 of 78

CAPITOL DRIVE ANTICIPATED FUTURE CAPITOL DRIVE ACCESS * * * * * * * * * * * * * * * * * * SHOREPOINT 27,745 SF FFE: 900.00







1,157 CARS MAX

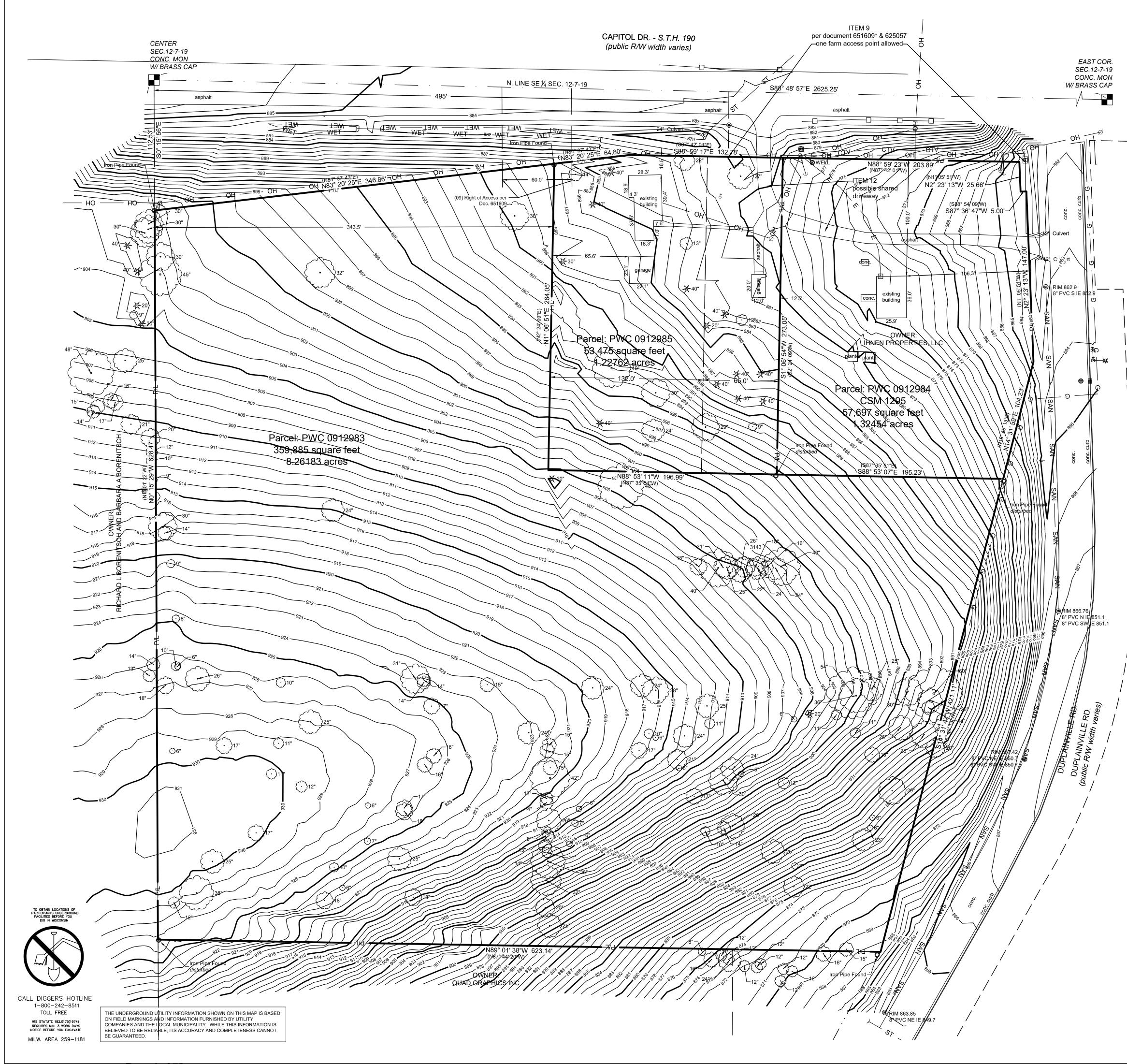
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LEGEND: SECTION 1/4 SECTION LINE PROPERTY LINE EASEMENT CHAIN LINK FENCE GUARD RAIL METAL FENCE WOOD FENCE TREE LINE OVERHEAD UTILITY LINE ELECTRIC TELEPHONE FIBER OPTIC CABLE TV SANITARY SEWER FORCE MAIN STORM SEWER WATER MAIN GAS EXISTING CONTOUR WETLAND FLOODPLAIN IRON PIPE FOUND/SET REBAR FOUND/SET ⊗ CHISELED CROSS FOUND/SET OPK PK NAIL FOUND/SET SPIKE/NAIL MONUMENT BENCHMARK ---- SIGN PARKING METER **FLAG POLE** (·)[®] DECIDUOUS TREE 8"CONIFEROUS TREE BUSH POST SOIL BORING TRAFFIC SIGNAL C LIGHT POLE \emptyset UTILITY POLE

GUY POLE

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.

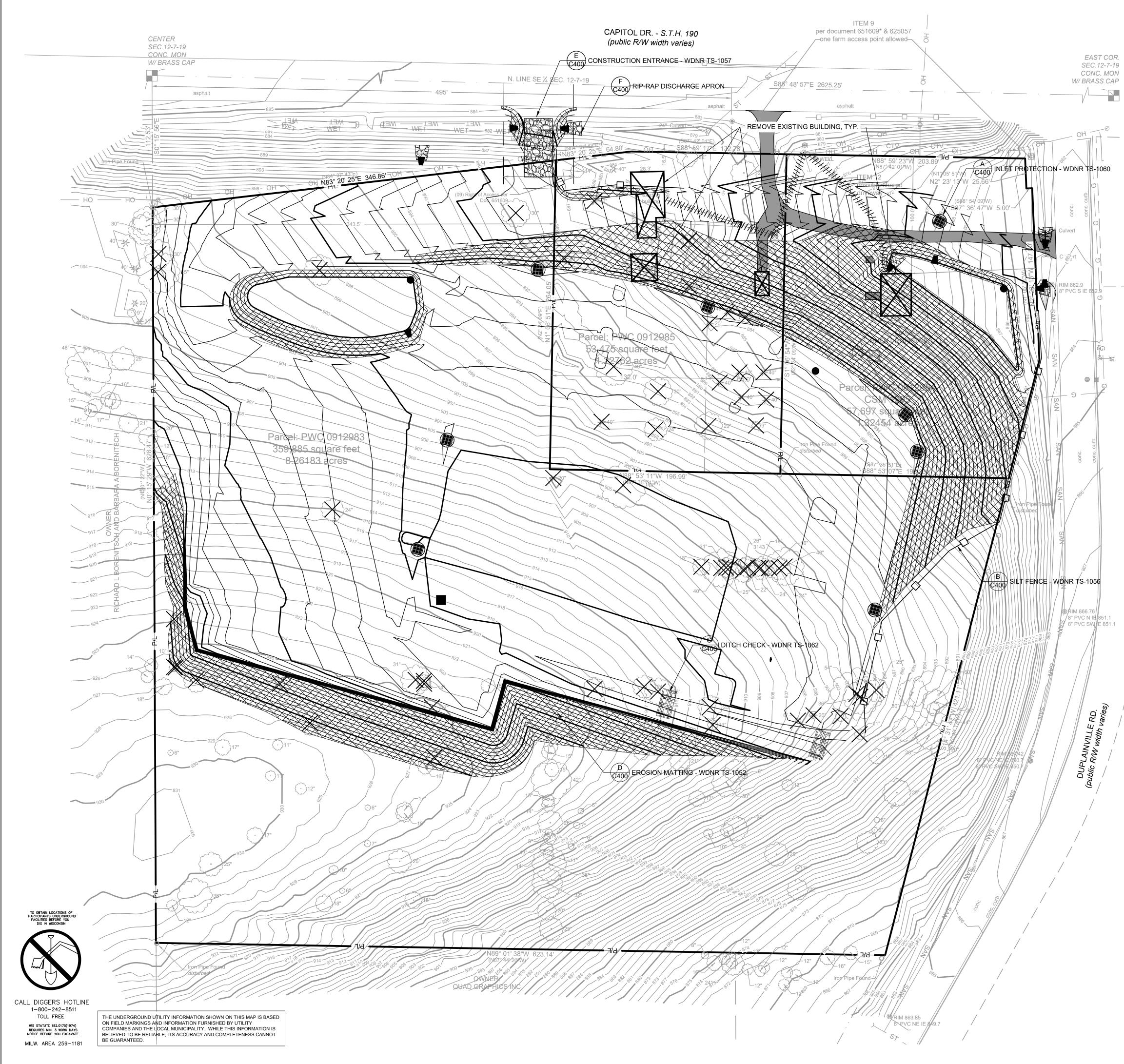
2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

3. DRAWING IS BASED ON FIELD SURVEY COMPLETED BY ---- ON 09/18/2023.

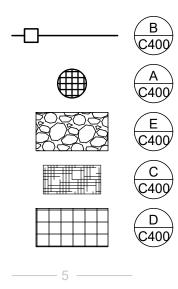
4. DATUM FOR THE PROJECT SURVEY IS USGS NAVD 88. BENCHMARK FOR THE PROJECT SURVEY IS ----.

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

www.th 1300 W Milwaul Phone:		roup.com I Street 53233 -4200	GROUP
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SHOREPOINT CHURCH	N34W22407 CAPITOL DRIVE	PEWAUKEE, WI 53072	SITE SURVEY
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LEGEND:



PROPOSED SILT FENCE

PROPOSED INLET PROTECTION

PROPOSED TRACKING PAD

PROPOSED DITCH CHECK EROSION BALES

D PROPOSED EROSION MATTING WISDOT APPROVED CLASS 1 TYPE B

EXISTING CONTOUR

PROPOSED CONTOUR

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CURB REMOVAL

SAWCUT

UTILITY REMOVAL

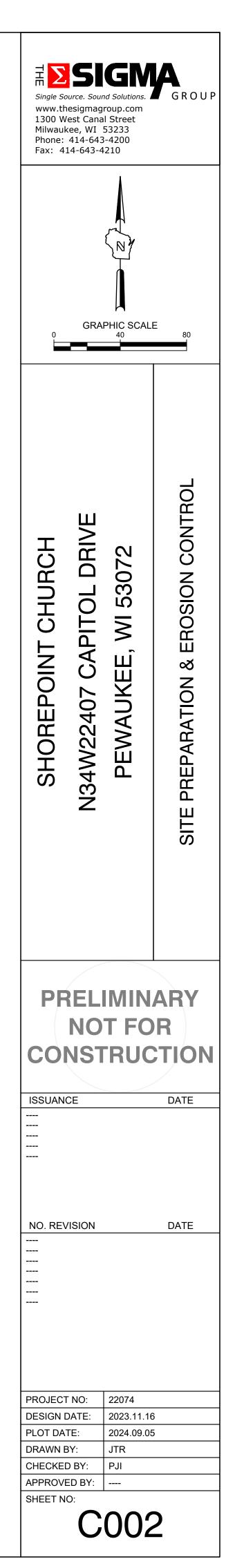
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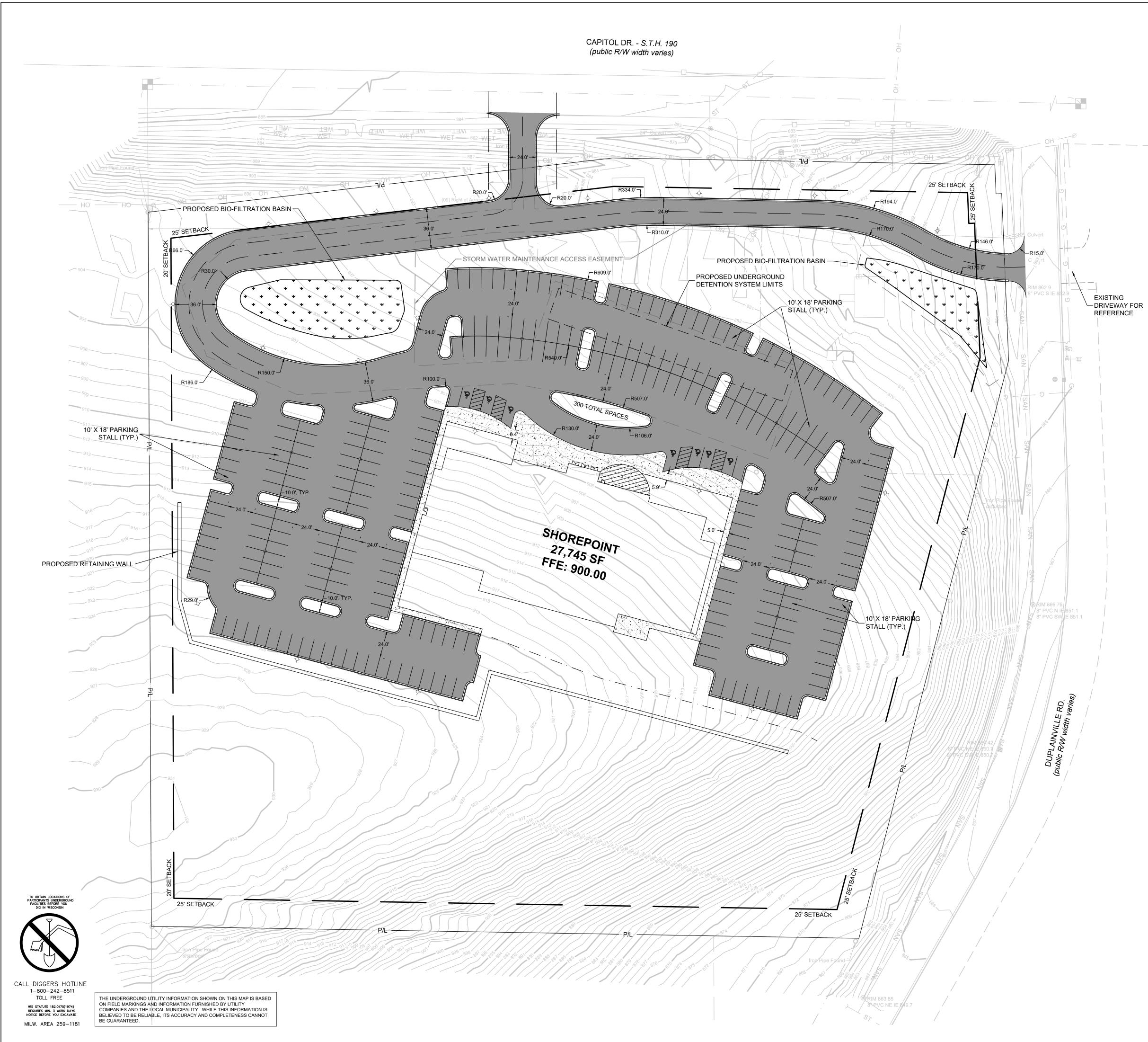
STRUCTURE REMOVAL

PAVEMENT REMOVAL



- 1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
- 4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
- 5. SEE SHEET C400 FOR A COMPLETE LIST OF EROSION CONTROL NOTES AND DETAILS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO START OF LAND DISTURBING ACTIVITIES.
- 6. DO NOT BEGIN LAND DISTURBING ACTIVITIES UNTIL AN EROSION CONTROL PERMIT IS OBTAINED FROM LOCAL JURISDICTION.

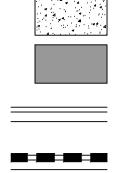




SITE INFOR	MATION		
SITE AREA	471061	10.814 AC	
SITE DISTURBED AREA	363493	8.345 AC	
EXISTING IMPERVIOUS AREA	6756	0.155 AC	1.4 %
PROPOSED IMPERVIOUS AREA	173609	3.986 AC	36.9 %
TOTAL PARKING SPACES	298		
ADA PARKING SPACES	7		

LEGEND:

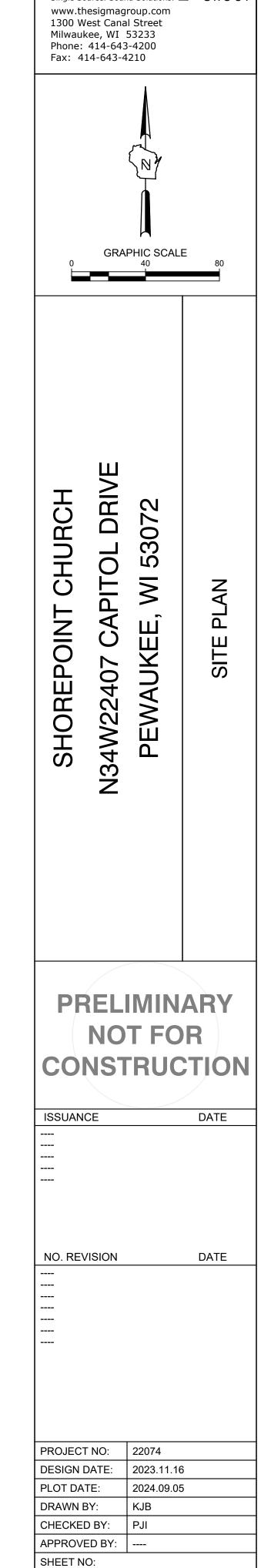
5" THICK CONCRETE WALK



ASPHALT SURFACE

A CURB & GUTTER (ACCEPT)

> A CURB & GUTTER (REJECT)

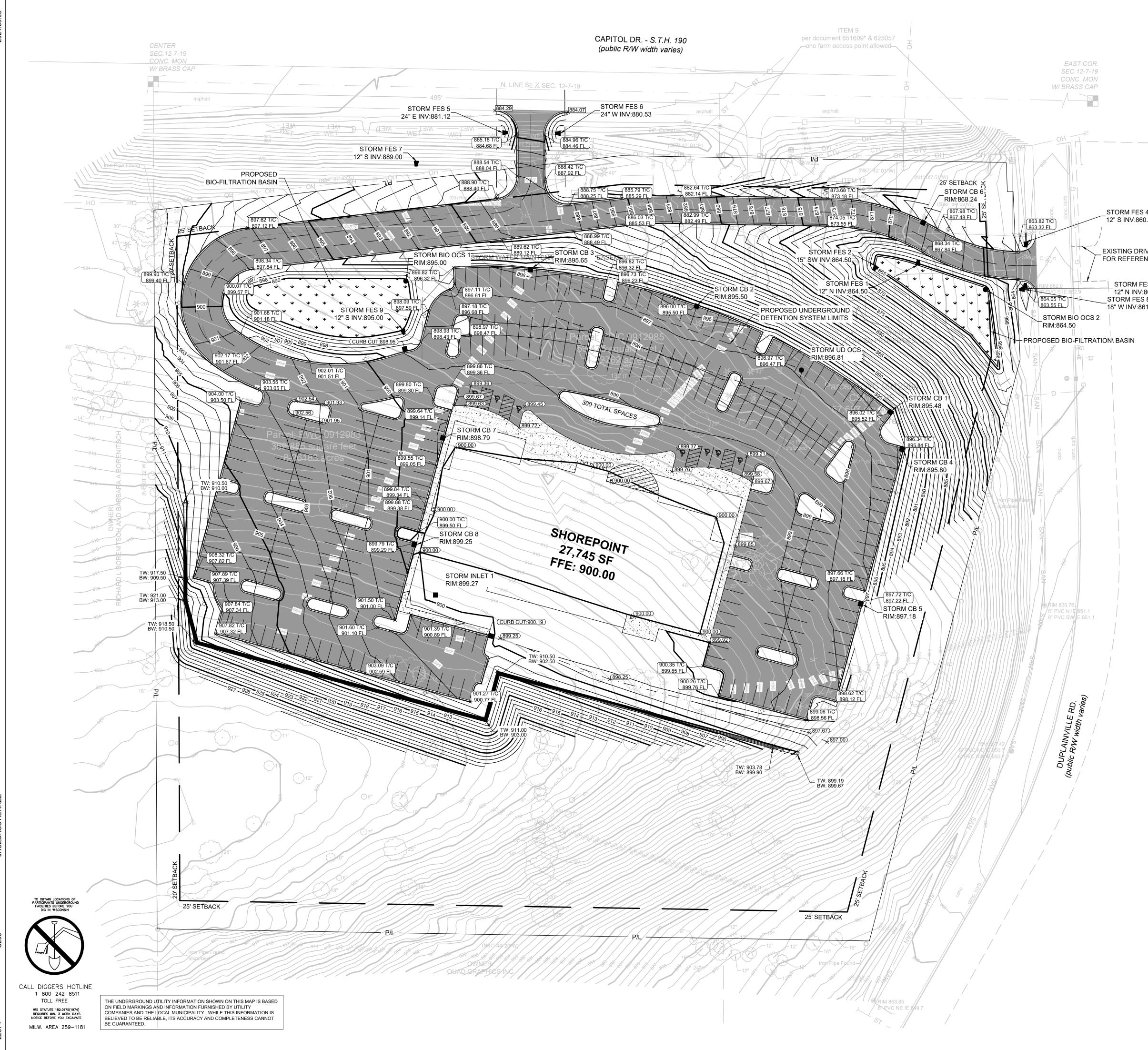


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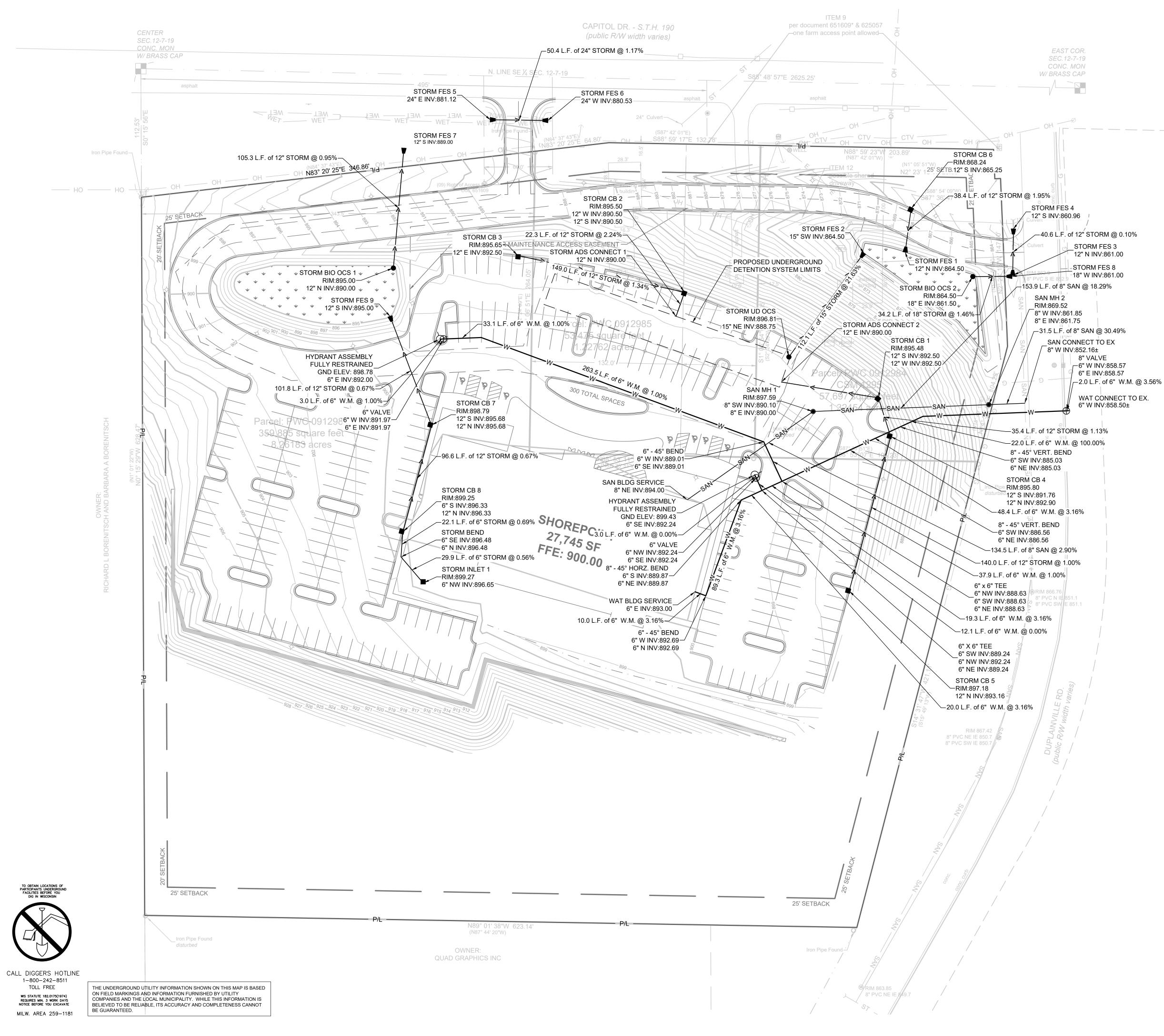
Single Source. Sound Solutions. GROUP

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.

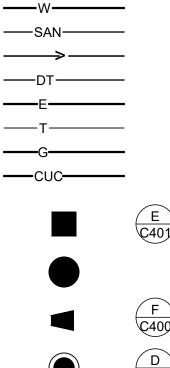


_	B C401 C C C C C C 0 C 0 C C C C C C C C C C	LEGEND: 5" THICK CONCRETE WALK ASPHALT SURFACE CURB & GUTTER		<i>Single So</i> www.th 1300 W Milwauk Phone:	urce. Sour	53233 -4200	GROUP
96	(401) (401) (401) (401) (401) (401) (401) (5) (5) (5) (100.50 T/C) (100.00 FL) (100.00)	(ACCEPT) CURB & GUTTER (REJECT) GRADE BREAK LINE EXISTING CONTOUR PROPOSED CONTOUR PROPOSED CURB & GUTTER SPOT G T/C: TOP OF CURB GRADE FL: FLOW LINE CURB GRADE PROPOSED SURFACE SPOT GRADE	RADE	0	GRA		80
EWAY CE 3 3 11.00 00	TW: 100.00 BW: 100.00	PROPOSED TOP OF WALL AT FINISHE PROPOSED BOTTOM OF WALL AT FIN EXISTING SURFACE SPOT GRADE (MATCH)					
				SHOREPOINT CHURCH	N34W22407 CAPITOL DRIVE	PEWAUKEE, WI 53072	GRADING PLAN
			-		NO NST	IMIN T FO RUC	
1.	DRAWING IS BASED ON FURNISHED BY MUNICIF LOCATION AND ACCURA THERE MAY BE ADDITIO WITHIN THE PROJECT A VERIFY ACTUAL LOCATI	TILITY INFORMATION SHOWN ON THIS FIELD LOCATIONS AND/OR RECORDS PALITIES AND UTILITY COMPANIES. TH ACY OF WHICH CANNOT BE GUARANTE NAL UNDERGROUND UTILITY INSTALL REA THAT ARE NOT SHOWN. ONS AND INVERTS IN THE FIELD. ANY	ATIONS	<u>NO. REV</u>	<u>'ISION</u>		DATE
3.	BROUGHT TO THE ATTE PROCEEDING WITH CON WORK TO BE COMPLETE	AISSIONS, OR DISCREPANCIES SHALL NTION OF THE ENGINEER PRIOR TO ISTRUCTION. ED IS INDICATED IN BOLD TYPE LINES ARE INDICATED BY LIGHT TYPE LINES.	AND				
	ELECTRONIC CIVIL FILES DO NOT USE ELECTRON COLUMN LINES, LIGHT F REFER TO ARCHITECTU BUILDING AND ARCHITE	S ARE AVAILABLE UPON WRITTEN REC IIC CIVIL FILES TO LAYOUT FOUNDATIO POLES, OR OTHER NON CIVIL SITE WO RAL DRAWINGS FOR DIMENSIONS OF	QUEST. DNS, RK.	PROJECT DESIGN [DATE:	22074 2023.11.16	
	LIMITED TO DRIVEWAY (AND CURB AND GUTTER AND/OR COUNTY REQU	LIC RIGHT OF WAY, INCLUDING BUT NO DPENINGS, SIDEWALK AND RAMPS, PA S SHALL BE COMPLETED PER MUNICIP REMENTS AND STANDARDS. IN ACCORDANCE WITH GEOTECHNICA	AL	PLOT DAT DRAWN B CHECKEE APPROVE	3Y: D BY:	2024.09.05 JTR PJI 	<u>.</u>
	ENGINEER'S RECOMMEN			SHEET NO		200)



LEGEND:

PROPOSED WATER SERVICE



PROPOSED SANITARY SERVICE PROPOSED STORM SEWER PROPOSED DRAIN TILE (UNDERDRAIN) PROPOSED ELECTRICAL SERVICE PROPOSED TELEPHONE SERVICE PROPOSED GAS SERVICE PROPOSED CITY UNDERGROUND CONDUIT PROPOSED STORM INLET PROPOSED OUTLET CONTROL STRUCTURE

PROPOSED FLARED END SECTION

PROPOSED SANITARY MANHOLE

 G_{C401} PROPOSED HYDRANT ASSEMBLY

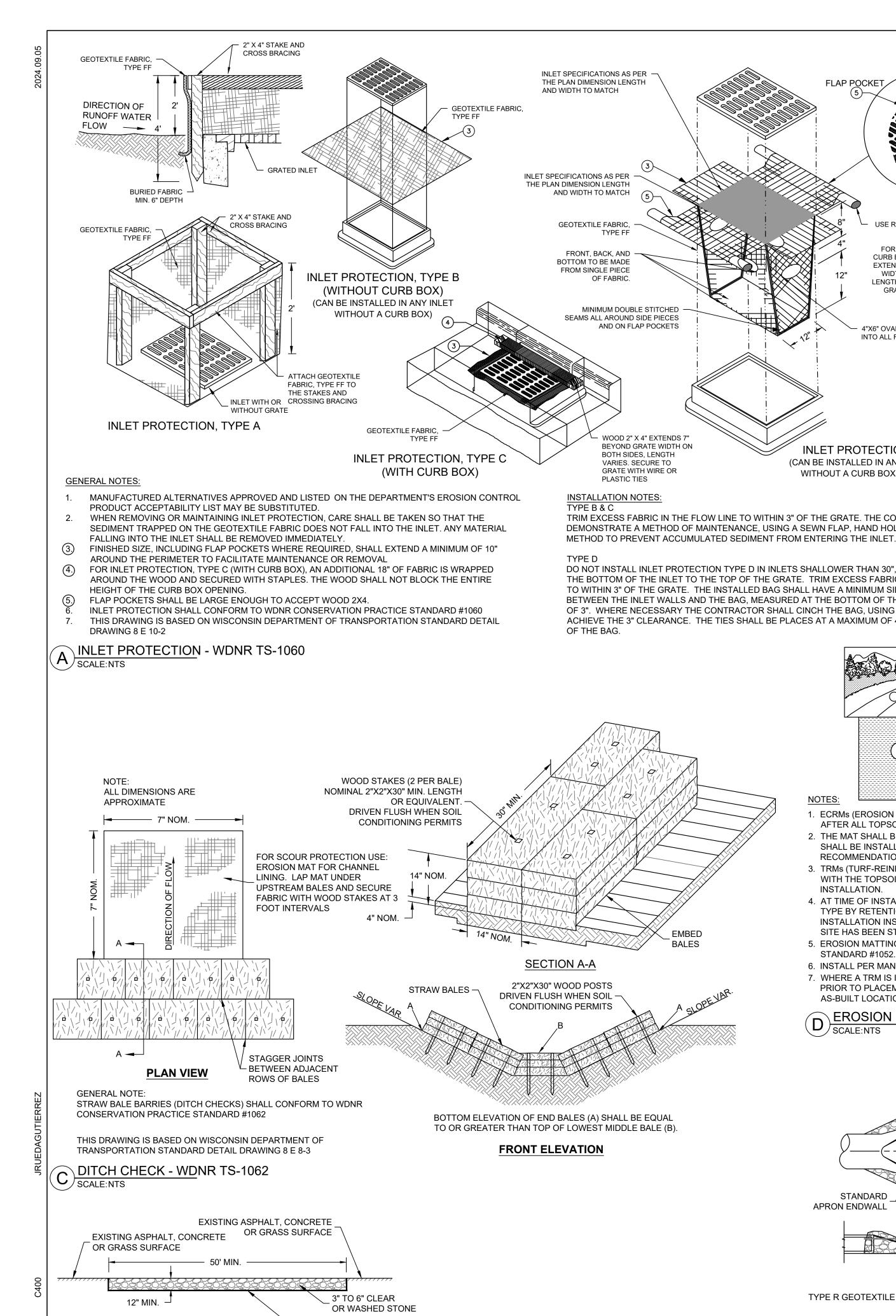
GENERAL NOTES:

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

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

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

www.th 1300 W Milwauk Phone:		roup.com I Street 53233 3-4200	GROUP
	GRA		E80
SHOREPOINT CHURCH	N34W22407 CAPITOL DRIVE	PEWAUKEE, WI 53072	UTILITY PLAN
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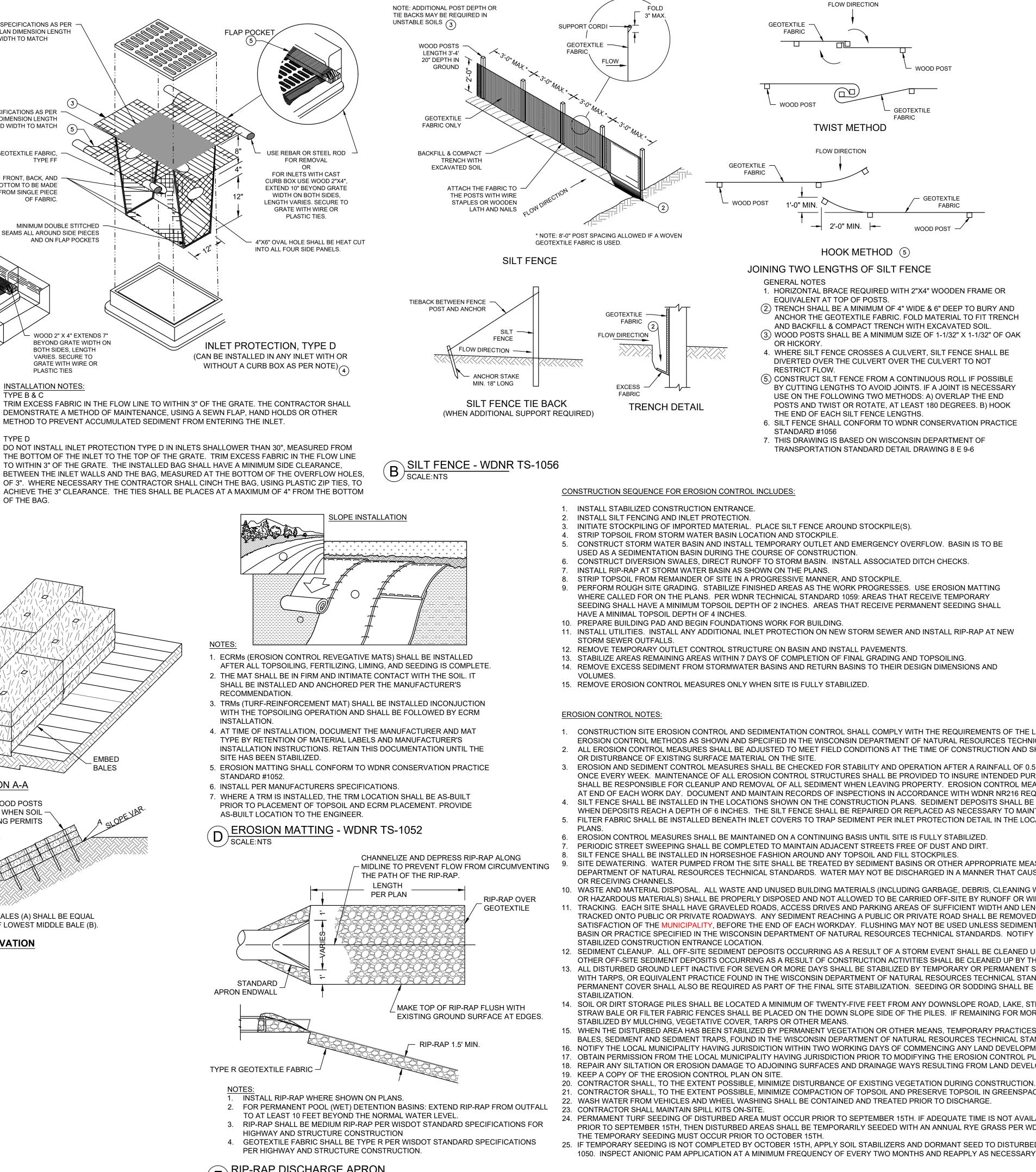


[.] STONE TRACKING PAD SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1057 2. AN APPROVED MANUFACTURED TRACKOUT CONTROL DEVICE SYSTEM CONFORMING TO WDNR TECHNICAL STANDARD #1057 MAY BE USED AS AN ALTERNATIVE TO A STONE TRACKING PAD E CONSTRUCTION ENTRANCE - WDNR TS-1057 SCALE:NTS

GENERAL NOTE

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WIDOT TYPE R GEOTEXTILE FABRIC



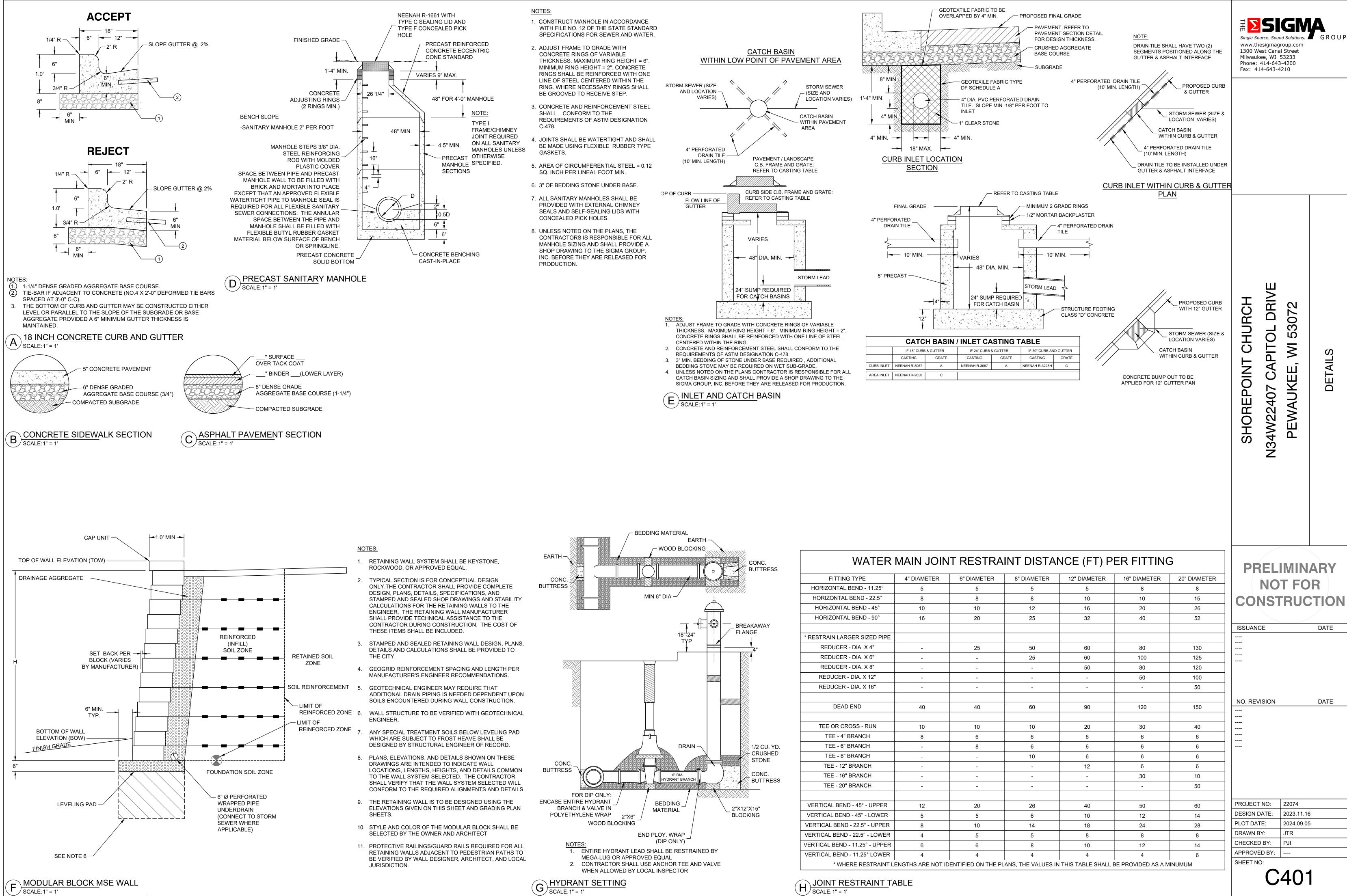
FLOW DIRECTION			
		SIGN	
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WOOD POST	Milwaukee	t Canal Street e, WI 53233	
	Phone: 41 Fax: 414-	L4-643-4200 -643-4210	
GEOTEXTILE FABRIC			
TWIST METHOD			
FLOW DIRECTION			
N. FABRIC			
→ 2-0 [™] MIN. → WOOD POST →			
HOOK METHOD 5			
LENGTHS OF SILT FENCE			
TES AL BRACE REQUIRED WITH 2"X4" WOODEN FRAME OR			
NT AT TOP OF POSTS. HALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND			
THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH FILL & COMPACT TRENCH WITH EXCAVATED SOIL.			
STS SHALL BE A MINIMUM SIZE OF 1-1/32" X 1-1/32" OF OAK RY.			
LT FENCE CROSSES A CULVERT, SILT FENCE SHALL BE OVER THE CULVERT OVER THE CULVERT TO NOT			
FLOW. CT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE		Щ (
IG LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY IE FOLLOWING TWO METHODS: A) OVERLAP THE END	ーエ	DRIVE 072	
D TWIST OR ROTATE, AT LEAST 180 DEGREES. B) HOOK DF EACH SILT FENCE LENGTHS.	S S	DF 72	
E SHALL CONFORM TO WDNR CONSERVATION PRACTICE		IM	
VING IS BASED ON WISCONSIN DEPARTMENT OF	CHURCH	01	
RTATION STANDARD DETAIL DRAWING 8 E 9-6		CAPIT(EE, WI	လု
		Ч П	DETAIL
		С Ш	
		Р К	
NCE AROUND STOCKPILE(S).		AL	
CKPILE. JTLET AND EMERGENCY OVERFLOW. BASIN IS TO BE	Ц Ц Ц	X 22	
ISTRUCTION. ASIN. INSTALL ASSOCIATED DITCH CHECKS.	SHOREPOINT	4W22407 CP PEWAUKEE	
ANS. ANNER, AND STOCKPILE.	$\overline{\mathbf{O}}$	N34W22407 PEWAUK	
S THE WORK PROGRESSES. USE EROSION MATTING ANDARD 1059: AREAS THAT RECEIVE TEMPORARY		ž	
AREAS THAT RECEIVE PERMANENT SEEDING SHALL			
UILDING. I ON NEW STORM SEWER AND INSTALL RIP-RAP AT NEW			
AND INSTALL PAVEMENTS. TION OF FINAL GRADING AND TOPSOILING.			
ETURN BASINS TO THEIR DESIGN DIMENSIONS AND			
LLY STABILIZED.			
CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND SHALL EMPLOY E WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.	DDD		
ET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING			
ED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. CONTRACTOR		IOT FO	R
EDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION DS OF INSPECTIONS IN ACCORDANCE WITH WDNR NR216 REQUIREMENTS.	CON	STRUC	TION
THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.			
) TRAP SEDIMENT PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION	ISSUANCE		DATE
ITINUING BASIS UNTIL SITE IS FULLY STABILIZED. IN ADJACENT STREETS FREE OF DUST AND DIRT.			
JND ANY TOPSOIL AND FILL STOCKPILES. REATED BY SEDIMENT BASINS OR OTHER APPROPRIATE MEASURES SPECIFIED IN THE WISCONSIN			
S. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES,			
DING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, ID NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.			
DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING T REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING, TO THE			
H WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT F OF NATURAL RESOURCES TECHNICAL STANDARDS. NOTIFY MUNICIPALITY OF ANY CHANGES IN	NO. REVIS	ION	DATE
RRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORKDAY. ALL			
F OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORKDAY. DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, MULCHING, SODDING, COVERING			
SIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD. IF TEMPORARY SEEDING IS USED, A FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE			
TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL.			
THE DOWN SLOPE SIDE OF THE PILES. IF REMAINING FOR MORE THAN THIRTY DAYS, PILES SHALL BE ER MEANS.			
ENT VEGETATION OR OTHER MEANS, TEMPORARY PRACTICES, SUCH AS FILTER FABRIC FENCES, STRAW			
TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY. IRISDICTION PRIOR TO MODIFYING THE EROSION CONTROL PLAN.			
RFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.	PROJECT N	O: 22074	

21. CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE COMPACTION OF TOPSOIL AND PRESERVE TOPSOIL IN GREENSPACE AREAS.

24. PERMAMENT TURF SEEDING OF DISTURBED AREA MUST OCCUR PRIOR TO SEPTEMBER 15TH. IF ADEQUATE TIME IS NOT AVAILABLE TO APPLY PERMANENT SEEDING PRIOR TO SEPTEMBER 15TH, THEN DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH AN ANNUAL RYE GRASS PER WDNR TECHNICAL STANDARD 1059, WHERE

25. IF TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED TO DISTURBED AREA PER WONR TECHNICAL STANDARD

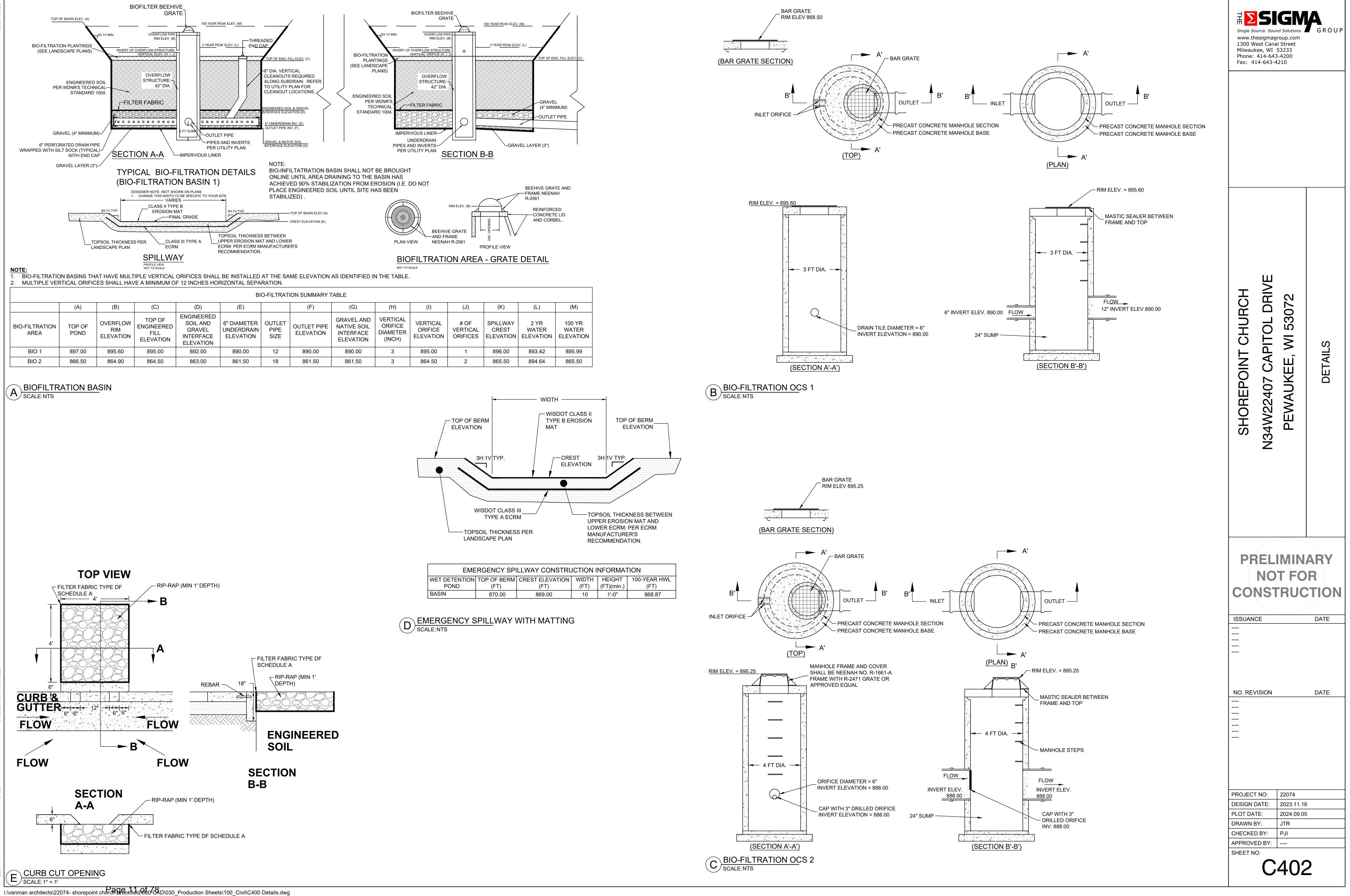
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	/ BEDDING MATERIAL	
	EARTH -	
		*
		XXXXX
SHALL BE KEYSTONE,		CONC.
D EQUAL.		BUTTRESS
ONCEPTUAL DESIGN		
HALL PROVIDE COMPLETE	BUTTRESS	
PECIFICATIONS, AND		~~~~~
OP DRAWINGS AND STABILITY ETAINING WALLS TO THE		,
G WALL MANUFACTURER		<u> </u>
L ASSISTANCE TO THE		
ISTRUCTION. THE COST OF		BREAKAWAY
CLUDED.	· · · · · · · · · · · · · · · · · · ·	FLANGE
	18"-24"	
TAINING WALL DESIGN, PLANS,	ТҮР	Y
IS SHALL BE PROVIDED TO		4"
SPACING AND LENGTH PER		
ER RECOMMENDATIONS.		
MAY REQUIRE THAT		
IS NEEDED DEPENDENT UPON		
ING WALL CONSTRUCTION.		
ERIFIED WITH GEOTECHNICAL		
SOILS BELOW LEVELING PAD		
ROST HEAVE SHALL BE		
_ ENGINEER OF RECORD.		1/2 CU. YD.
DETAILS SHOWN ON THESE		STONE
GHTS, AND DETAILS COMMON ECTED. THE CONTRACTOR	N N N N N N N N N N N N N N N N N N N	CONC.
ALL SYSTEM SELECTED WILL		/ A BUTTRESS
ED ALIGNMENTS AND DETAILS.		
-	FOR DIP ONLY: / / / /	
BE DESIGNED USING THE	ENCASE ENTIRE HYDRANT _/ BEDDING / /	\setminus
S SHEET AND GRADING PLAN	BRANCH & VALVE IN / MATERIAL /	\2"X12"X15"
	POLYETHYLENE WRAP 2"X6" _/	BLOCKING
MODULAR BLOCK SHALL BE AND ARCHITECT		
ARD RAILS REQUIRED FOR ALL	NOTES: (DIP ONLY)	

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



GENERAL

- 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.

18

17.	BEDDING ANI SPECIFICATIO BACKFILL IN / WISCONSIN,
18.	INSTALL TRA
19.	DUCTILE-IRO
20.	PVC PIPING C SEALS AND L
21.	CONDUCT HY CONSTRUCT

- 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.:

ID COVER FOR WATER SERVICE PIPING SHALL BE IN ACCORDANCE WITH SECTION 4.3.3 AND FILE NO. 36 OF THE STANDARD IONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. TRENCH BACKFILL SHALL BE GRANULAR B ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN , LATEST EDITION ON-SITE.

ACER WIRE FOR NON-METALLIC WATER SERVICES IN ACCORDANCE WITH SPS SECTION 382.40(8)(K). TRACER WIRE COLOR SHALL BE BLUE FOR POTABLE WATER SERVICE PIPING.

ON PIPING, RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 4.4.2 OF THE STANDARD SPECIFICATIONS FOR WATER CONSTRUCTION IN WISCONSIN.

GASKETED JOINTS: USING JOINING MATERIALS ACCORDING TO AWWA C900. CONSTRUCT JOINTS WITH ELASTOMERIC LUBRICANTS ACCORDING TO ASTM D2774 OR ASTM D3139 AND PIPE MANUFACTURER'S WRITTEN INSTRUCTIONS. YDROSTATIC TESTS IN ACCORDANCE WITH CHAPTER 4.15.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER TION 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(1)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.

- WISCONSIN, LATEST EDITION. BEDDING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% COMPACTION WITH RESPECT TO THE MODIFIED 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

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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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. \ F (
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.	2. M 3. [
3. 4.	REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT AND APPROVED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.	J. I.
ч. 5.		4. S
6.	WATER: ASTM C 94/C 94M AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.	F
7. 8.	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. (6. S
0. 9.		7. 9
10.	EXPANSION JOINT MATERIAL: CONFORM TO SECTION 415.2.3 OF THE WISDOT STANDARD SPECIFICATIONS.	l
11.	MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE IN ACCORDANCE WITH SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.	8. (
12.	GENERAL EXECUTION: CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS.	(F
	PROOFROLL SUBGRADE AND AGGREGATE BASE AS OUTLINED IN EARTH MOVING SPECIFICATION PRIOR TO PLACEMENT OF PAVEMENTS.	9. S
14.	SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER	10. \$
15.	CONCRETE PLACEMENT. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.	E 11. (
	JOINTS GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES	
	PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE INDICATED. CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS	
17.	CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS.	[
18.	ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES,	12. ⁻ E
10	INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED. CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT	13. N
	CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS TO MATCH JOINTING OF EXISTING ADJACENT CONCRETE PAVEMENT.	с Г (
20.	EDGING: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.	14. [/
	CURBING: COMPLY WITH SECTION 601 OF THE WISDOT STANDARD SPECIFICATIONS.	
	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.	
25.	FINISH SIDEWALK AND PATIO IN ACCORDANCE WITH SECTION 602.3.2.3 OF THE WISDOT STANDARD SPECIFICATIONS (LIGHT BROOM FINISH).	
26.	FINISH CONCRETE VEHICULAR PAVEMENTS AND PADS IN ACCORDANCE WITH SECTION 415.3.8 OF THE WISDOT STANDARD SPECIFICATIONS (ARTIFICIAL TURF DRAG FINISH).	15. ⁻
27.	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.	16.
	PROTECT AND CURE VEHICULAR CONCRETE PAVING IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS. REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN	F
	THIS SECTION.	
31.	PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 7 DAYS AFTER PLACEMENT.	
32.	MAINTAIN CONCRETE PAVEMENT FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE PAVEMENT NOT	
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22. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS AND TO PREPARE TEST REPORTS.

SEGMENTAL RETAINING WALL:

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 + 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.

SEGMENTAL RETAINING WALL CONT.:

- ANY LOOSENESS IN THE UNIT-TO-UNIT CONNECTION.
- NEEDED.
- BY OVERLAPPING SUCCESSIVE COURSES.
- INSTALLATION.
- TO THE WALL FACE.
- SPEEDS (LESS THAN 5 MPH).
- REINFORCEMENT IS COVERED BY 6 INCHES OF FILL.
- OTHERWISE NOTED ON THE FINAL WALL PLANS).
- 50-FOOT SPACING ALONG THE WALL FACE.
- MECHANICAL TAMPER, PLATE, OR ROLLER.
- WALL IS COMPLETED.
- CORRECT ALIGNMENT AT THE TOP OF THE WALL.

BIOFILTRATION BASIN

- CONCRETE SAND).

- PLANTING OR MAINTENANCE.
- PERFORATIONS OF THE UNDERDRAIN PIPE.
- BEEHIVE INLET: NEENAH R-256I, OR EQUAL
- WISCONSIN.
- HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION
- 13. EXCAVATE TO GRADES AS INDICATED ON PLANS. THE BIORETENTION AREA.

- SHALL BE DEEP TILLED PRIOR TO PLANTING.

34. CONNECTION PINS SHALL BE INSERTED THROUGH THE PIN HOLES OF EACH UPPER-COURSE UNIT INTO RECEIVING SLOTS IN LOWER-COURSE UNITS. PINS SHALL BE FULLY SEATED IN THE PIN SLOT BELOW. UNITS SHALL BE PUSHED FORWARD TO REMOVE

35. PRIOR TO PLACEMENT OF NEXT COURSE, THE LEVEL AND ALIGNMENT OF THE UNITS SHALL BE CHECKED AND CORRECTED WHERE

36. LAYOUT OF CURVES AND CORNERS SHALL BE INSTALLED IN ACCORDANCE WITH THE WALL PLAN DETAILS OR IN GENERAL ACCORDANCE WITH SRW MANUFACTURER'S INSTALLATION GUIDELINES. WALLS MEETING AT CORNERS SHALL BE INTERLOCKED

37. PROCEDURES ABOVE SHALL BE REPEATED UNTIL REACHING TOP OF WALL UNITS, JUST BELOW THE HEIGHT OF THE CAP UNITS. GEOSYNTHETIC REINFORCEMENT, DRAINAGE MATERIALS, AND REINFORCED BACKFILL SHALL BE PLACED IN SEQUENCE WITH UNIT

38. ALL GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE FINAL P.E.-SEALED RETAINING WALL PLAN PROFILES AND DETAILS, OR AS DIRECTED BY THE WALL DESIGN ENGINEER. 39. AT THE ELEVATIONS SHOWN ON THE FINAL PLANS, (AFTER THE UNITS, DRAINAGE MATERIAL AND BACKFILL HAVE BEEN PLACED TO

THIS ELEVATION) THE GEOSYNTHETIC REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED INFILL AND ON TOP OF THE CONCRETE SRW UNITS, TO WITHIN 1 INCH OF THE FRONT FACE OF THE UNIT BELOW. EMBEDMENT OF THE GEOSYNTHETIC IN THE SRW UNITS SHALL BE CONSISTENT WITH SRW MANUFACTURER'S RECOMMENDATIONS. CORRECT ORIENTATION OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOSYNTHETIC MANUFACTURER'S RECOMMENDATIONS. THE HIGHEST-STRENGTH DIRECTION OF THE GEOSYNTHETIC MUST BE PERPENDICULAR

40. GEOSYNTHETIC REINFORCEMENT LAYERS SHALL BE ONE CONTINUOUS PIECE FOR THEIR ENTIRE EMBEDMENT LENGTH. SPLICING OF THE GEOSYNTHETIC IN THE DESIGN-STRENGTH DIRECTION (PERPENDICULAR TO THE WALL FACE) SHALL NOT BE PERMITTED. ALONG THE LENGTH OF THE WALL, HORIZONTALLY ADJACENT SECTIONS OF GEOSYNTHETIC REINFORCEMENT SHALL BE BUTTED IN A MANNER TO ASSURE 100% COVERAGE PARALLEL TO THE WALL FACE.

41. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM OF 6 INCHES OF BACKFILL IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC. TURNING SHOULD BE KEPT TO A MINIMUM. RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SLOW

42. THE GEOSYNTHETIC REINFORCEMENT SHALL BE FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL. THE NOMINAL TENSION SHALL BE APPLIED TO THE REINFORCEMENT AND SECURED IN PLACE WITH STAPLES. STAKES OR BY HAND TENSIONING UNTIL

43. DRAINAGE AGGREGATE SHALL BE INSTALLED TO THE LINE, GRADES AND SECTIONS SHOWN ON THE FINAL P.E.-SEALED RETAINING WALL PLANS. DRAINAGE AGGREGATE SHALL BE PLACED TO THE MINIMUM THICKNESS SHOWN ON THE CONSTRUCTION PLANS BETWEEN AND BEHIND UNITS (A MINIMUM OF 1 CUBIC FOOT FOR EACH EXPOSED SQUARE FOOT OF WALL FACE UNLESS

44. DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE THE REINFORCED-SOIL ZONE. THE DRAINAGE COLLECTION PIPE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE FINAL CONSTRUCTION DRAWINGS. THE DRAINAGE COLLECTION PIPE SHALL DAYLIGHT INTO A STORM SEWER OR ALONG A SLOPE, AT AN ELEVATION BELOW THE LOWEST POINT OF THE PIPE WITHIN THE AGGREGATE DRAIN. DRAINAGE LATERALS SHALL BE SPACED AT A MAXIMUM

45. THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN THE FINAL WALL PLANS IN THE MAXIMUM COMPACTED LIFT THICKNESS OF 8 INCHES AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D 698) AT A MOISTURE CONTENT WITHIN -1% POINT TO +3% POINTS OF OPTIMUM. THE BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SRW UNITS.

46. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE BACK OF THE WALL UNITS. COMPACTION WITHIN THE 3 FEET BEHIND THE WALL UNITS SHALL BE ACHIEVED BY AT LEAST THREE PASSES OF A LIGHTWEIGHT

47. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING AND REINFORCED BACKFILL TO DIRECT WATER RUNOFF AWAY FROM THE WALL FACE.

48. AT COMPLETION OF WALL CONSTRUCTION, BACKFILL SHALL BE PLACED LEVEL WITH FINAL TOP OF WALL ELEVATION. IF FINAL GRADING, PAVING, LANDSCAPING AND/OR STORM DRAINAGE INSTALLATION ADJACENT TO THE WALL IS NOT PLACED IMMEDIATELY AFTER WALL COMPLETION, TEMPORARY GRADING AND DRAINAGE SHALL BE PROVIDED TO ENSURE WATER RUNOFF IS NOT DIRECTED AT THE WALL NOR ALLOWED TO COLLECT OR POND BEHIND THE WALL UNTIL FINAL CONSTRUCTION ADJACENT TO THE

49. SRW CAPS SHALL BE PROPERLY ALIGNED AND GLUED TO UNDERLYING UNITS WITH VERSA-LOK ADHESIVE, A FLEXIBLE, HIGH-STRENGTH CONCRETE ADHESIVE. RIGID ADHESIVE OR MORTAR ARE NOT ACCEPTABLE.

50. CAPS SHALL OVERHANG THE TOP COURSE OF UNITS BY 3/4 INCH TO 1 INCH. SLIGHT VARIATION IN OVERHANG IS ALLOWED TO

51. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION BY OTHERS ADJACENT TO THE WALL DOES NOT DISTURB THE WALL OR PLACE TEMPORARY CONSTRUCTION LOADS ON THE WALL THAT EXCEED DESIGN LOADS, INCLUDING LOADS SUCH AS WATER PRESSURE, TEMPORARY GRADES, OR EQUIPMENT LOADING. HEAVY PAVING OR GRADING EQUIPMENT SHALL BE KEPT A MINIMUM OF 3 FEET BEHIND THE BACK OF THE WALL FACE. EQUIPMENT WITH WHEEL LOADS IN EXCESS OF 150 PSF LIVE LOAD SHALL NOT BE OPERATED WITHIN 10 FEET OF THE FACE OF THE RETAINING WALL DURING CONSTRUCTION ADJACENT TO THE WALL. CARE SHOULD BE TAKEN BY THE GENERAL CONTRACTOR TO ENSURE WATER RUNOFF IS DIRECTED AWAY FROM THE WALL STRUCTURE UNTIL FINAL GRADING AND SURFACE DRAINAGE COLLECTION SYSTEMS ARE COMPLETED.

BIOFILTRATION BASIN SHALL BE CONSTRUCTED IN GENERAL ACCORDANCE WITH WDNR TECHNICAL STANDARD 1004: BIORETENTION FOR INFILTRATION AND THESE SPECIFICATIONS.

2. ENGINEERED SOIL MIX SHALL CONSIST OF A MIX OF 70 TO 85% SAND AND 15 TO 30% COMPOST BASED ON VOLUME. SAND SHALL MEET THE REQUIREMENTS FOR FINE AGGREGATE SAND SPECIFIED SECTION 501.2.5.3.4 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION OR MEET ASTM C33 (FINE AGGREGATE

3. PRIOR TO PLACEMENT IN THE BIOFILTRATION BASIN, THE ENGINEERED SOIL SHALL BE PREMIXED AND THE MOISTURE CONTENT SHALL BE LOW ENOUGH TO PREVENT CLUMPING AND COMPACTION DURING PLACEMENT.

4. THE ENGINEERED SOIL SHALL BE PLACED IN MULTIPLE LIFTS, EACH APPROXIMATELY 12 INCHES IN DEPTH.

5. ENGINEERED SOIL MIX SHALL BE FREE OF ROCKS, STUMPS, ROOTS, BRUSH OR OTHER MATERIAL OVER ONE INCH IN DIAMETER, NO OTHER MATERIALS SHALL BE MIXED WITH THEE PLANTING SOIL THAT MAY BE HARMFUL TO PLANT GROWTH OR BE A HINDRANCE TO

6. ENGINEERED SOIL AND GRAVEL SHALL BE IN ACCORDANCE WITH THE LATEST WDNR TECHNICAL STANDARD 1004. 7. PEA GRAVEL SHALL BE GRADED SUCH THAT MINIMUM PARTICLE SIZE IS LARGE ENOUGH TO PREVENT FALLING THROUGH

8. BIOFILTRATION BASIN DRAIN PIPE: 6-INCH SCHEDULE 40 PVC PIPE MEETING PERFORATION REQUIREMENTS OF AASHTO M278 HIGHWAY UNDERDRAIN SPECIFICATIONS WITH 3/8" PERFORATIONS ON 6" CENTERS WITH 4 HOLES PER ROW.

10. RISER STRUCTURE: 36" DIAMETER PRECAST CATCH BASIN STRUCTURE WITH 24" TOP OPENING TO ACCOMMODATE BEEHIVE INLET. IN GENERAL ACCORDANCE WITH FILE NO. 26 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN

11. GRAVEL STORAGE LAYER (IF INDICATED ON PLANS): COURSE AGGREGATE #2 IN ACCORDANCE WITH SECTION 501.2.5.4.4 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

12. FILTER FABRIC: GEOTEXTILE FABRIC IN ACCORDANCE WITH SECTION 645.2.2.4 OF WISCONSIN STANDARD SPECIFICATIONS FOR

14. CONSTRUCT TEMPORARY DIVERSION SWALES OR PROVIDE OTHER MEANS AS NECESSARY TO PREVENT CONSTRUCTION SITE RUNOFF FROM DISTURBED AREAS, AND RUNOFF FROM PERVIOUS AREAS WHICH HAVE NOT YET BEEN STABILIZED, FROM ENTERING

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

16. COMPACTION AND SMEARING OF THE ENGINEERED SOIL AND TOP SOIL BENEATH THE FLOORS, IN THE SOIL PLANTING BED, AND THE SIDE SLOPES OF THE BASIN, AND COMPACTION OF THE ENGINEERED SOILS IN THE BASIN SHALL BE MINIMIZED. DURING SITE DEVELOPMENT, THE AREA DEDICATED TO THE BIOFILTRATION BASIN SHALL BE CORDONED OFF TO PREVENT ACCESS BY HEAVY EQUIPMENT. ACCEPTABLE EQUIPMENT FOR CONSTRUCTING THE BIOFILTRATION BASIN INCLUDES EXCAVATION HOES, LIGHT EQUIPMENT WITH TURF TYPE TIRES, MARSH EQUIPMENT OR WIDE-TRACK LOADERS.

17. IF COMPACTION OCCURS AT THE BASE OF THE BIOFILTRATION BASIN. THE SOIL SHALL BE REFRACTURED TO A DEPTH OF AT LEAST 12 INCHES. IF SMEARING OCCURS, THE SMEARED AREAS OF THE INTERFACE SHALL BE CORRECTED BY RAKING OR ROTO-TILLING. 18. STEPS MAY BE TAKEN TO INDUCE MILD SETTLING OF THE ENGINEERED SOIL BED AS NEEDED TO PREPARE A STABLE PLANTING MEDIUM AND TO STABILIZE THE PONDING DEPTH. VIBRATING PLATE-STYLE COMPACTORS SHALL NOT BE UTILIZED.

19. ANY SEDIMENT ACCUMULATED IN THE BASIN DUE TO CONSTRUCTION ACTIVITIES SHOULD BE REMOVED AND THE ENGINEERED SOIL

20. IMPERVIOUS LINER SHALL BE 45 MIL FIRESTONE EPDM (GSI PRODUCTS), OR 30 MIL PVC (GSI PRODUCTS), OR EQUAL.



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PRELIMINARY **NOT FOR** CONSTRUCTION

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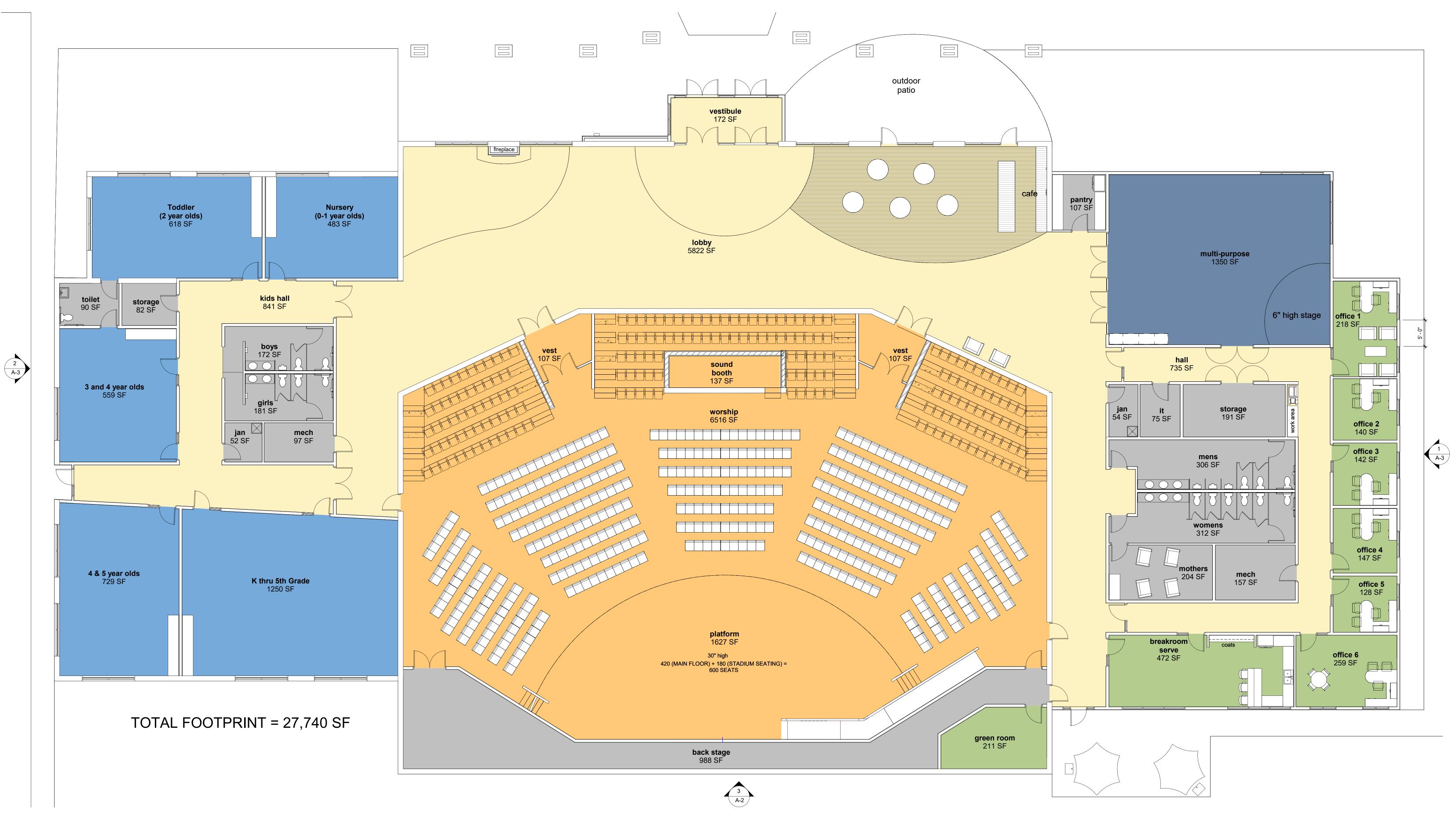
NO. REVISION

DATE

DATE

PROJECT NO: 22074 DESIGN DATE: 2023.11.16 PLOT DATE: 2024.09.05 DRAWN BY: JTR CHECKED BY: PJI APPROVED BY: SHEET NO:

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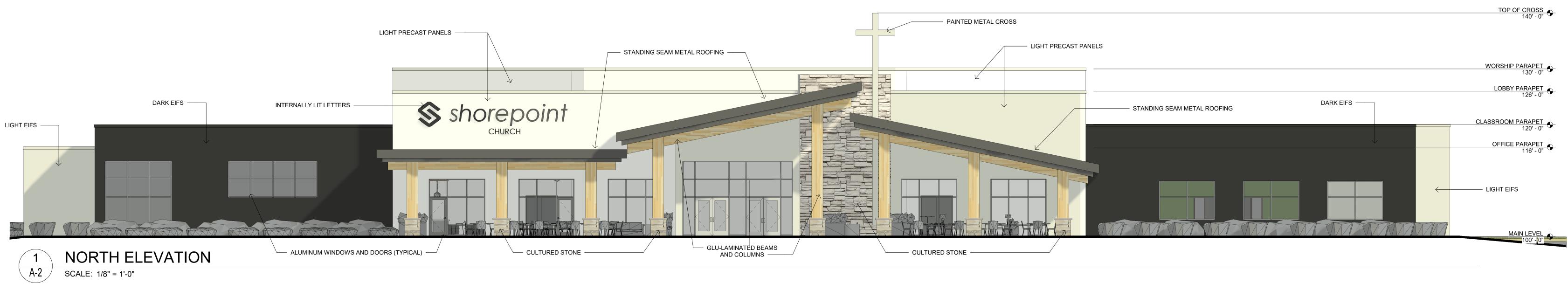


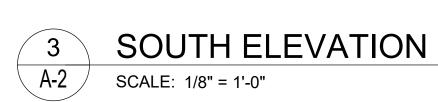
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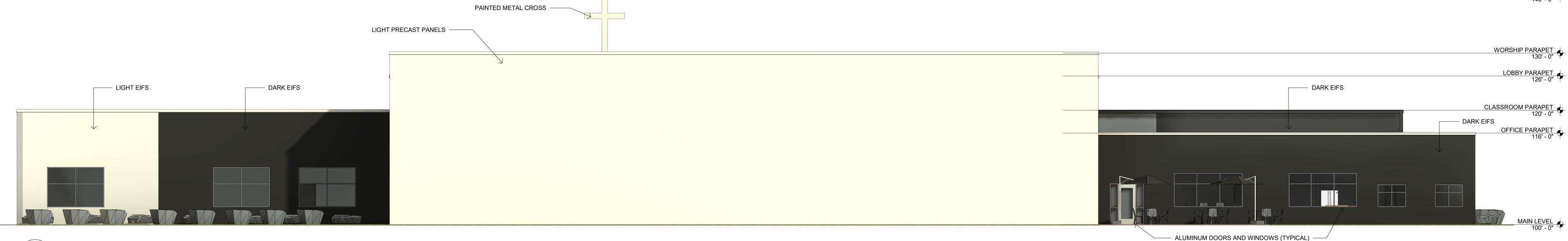














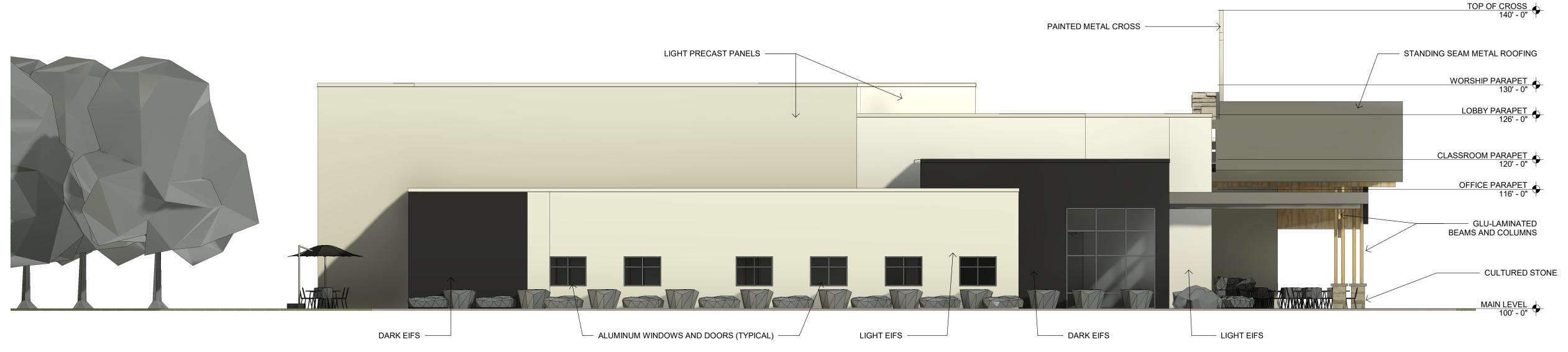


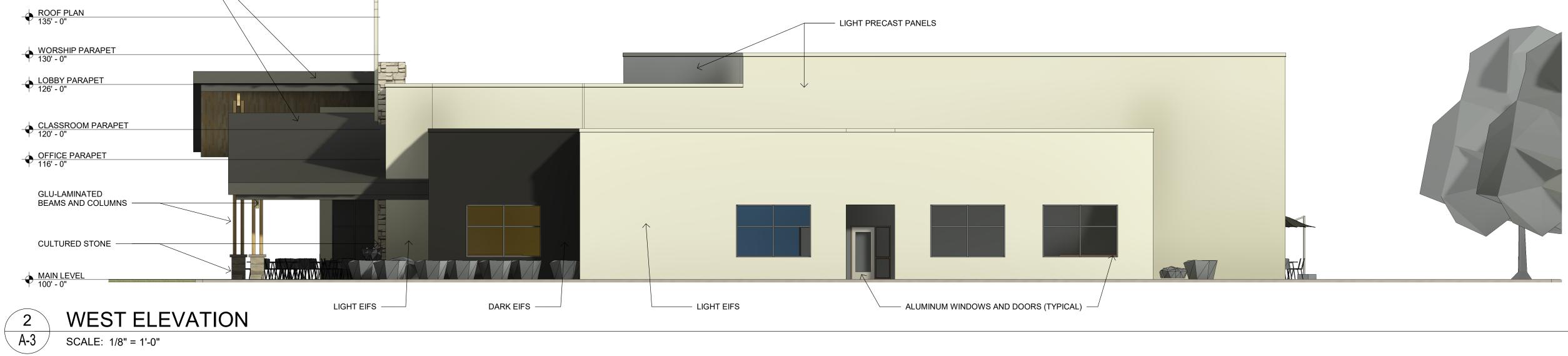
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SHOREPOINT CHURCH







- PAINTED METAL CROSS







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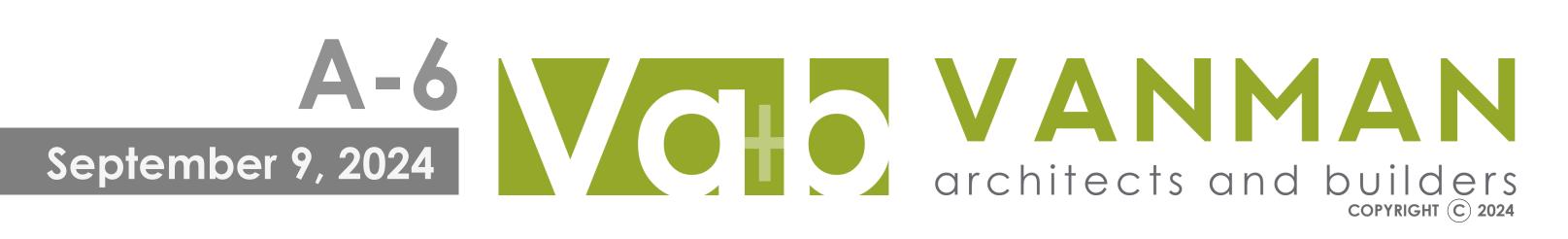






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ARCHITECTURAL PRECAST PANELS

SHOREPOINT CHURCH





EIFS (EXTERIOR INSULATION FINISHING SYSTEM)



METAL ROOFING AT SLOPED ROOFS

S Architectural/structural panel Ø Pencil ribs upon request Sectory-applied sealant available

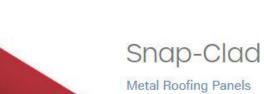
warranty

- Striations upon request
- 35-year non-prorated finish

- G Weathertightness warranty

available

- w/factory for longer lengths)
- Maximum factory-produced panel length is 64' (check



Features

Ocontinuous interlock

Subor-saving one-piece design





ROOF TOP EQUIPMENT SCREENS





CULTURED STONE OR NATURAL STONE



GLU-LAMINATED BEAMS AND COLUMNS



ENVISOR® **ROOF SCREENS ROOF SCREENS WITH SOARING GOOD LOOKS**

Elevate standards with Envisor®, combining durability and aesthetics. Envisor® offers affordability and sophistication, streamlining code adherence and harmonizing with diverse designs. Moreover, its installation doesn't necessitate rooftop penetration, granting a sleek, contemporary appearance.

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EASY MAINTENANCE

UV and rust resistant finishes for tough environments, with sliding panels for easy service access

CODE COMPLIANT

Practical solution for municipal screening requirements of HVAC units, chillers, air handlers, and more

ARCHITECTURAL DESIGN Meticulously crafted to echo the building's aesthetic

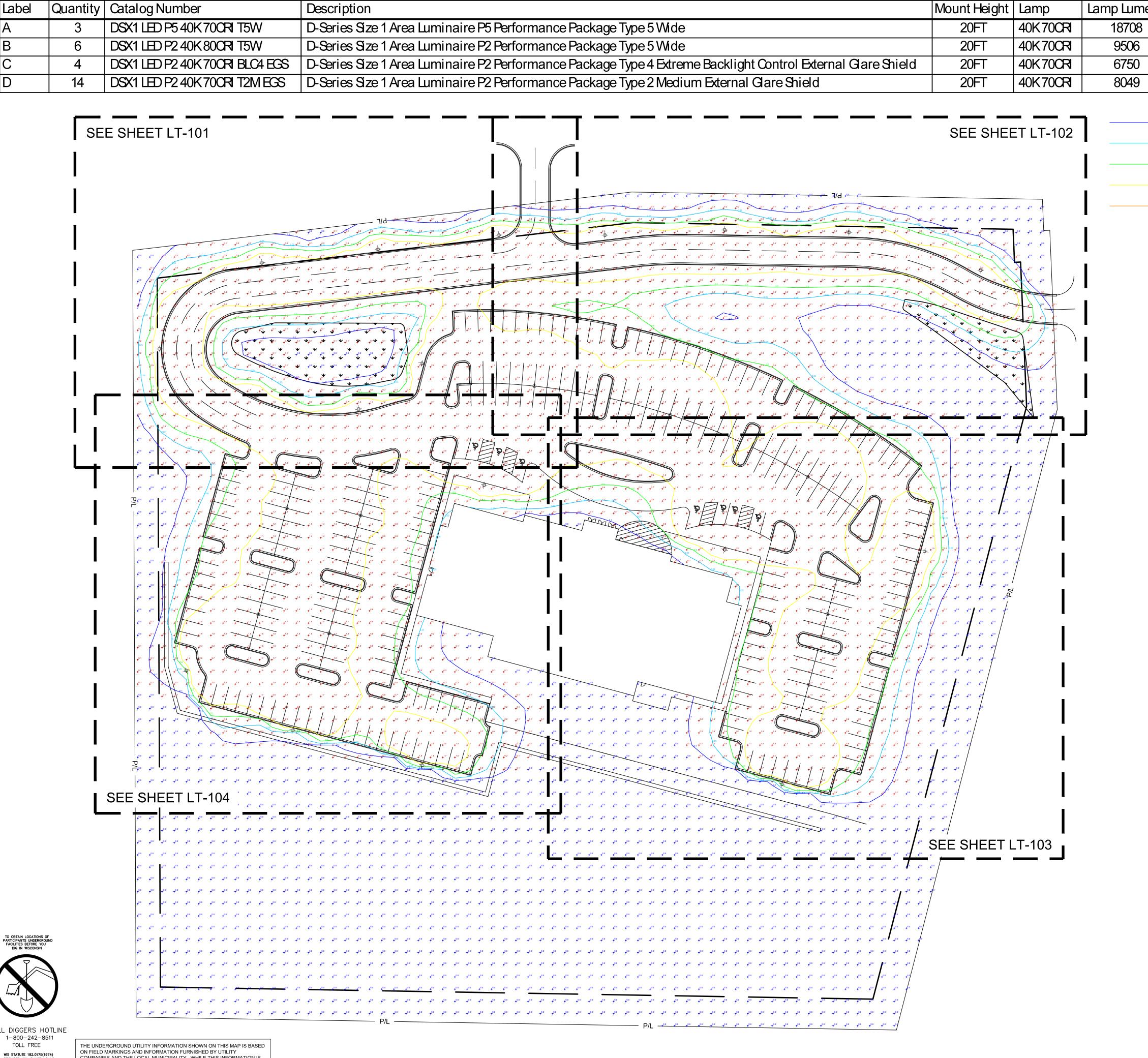


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ROOF TOP SCREENS TO MATCH BUILDING MATERIALS / COLORS



Label	Quantity	Catalog Number	Description
A	3	DSX1 LED P5 40K 70CRI T5W	D-Series Size 1 Area Luminaire P5 Perform
В	6	DSX1 LED P2 40K 80CRI T5W	D-Series Size 1 Area Luminaire P2 Perform
С	4	DSX1 LED P2 40K 70CRI BLC4 EGS	D-Series Size 1 Area Luminaire P2 Perform
D	14	DSX1 LED P2 40K 70CRI T2M EGS	D-Series Size 1 Area Luminaire P2 Perform



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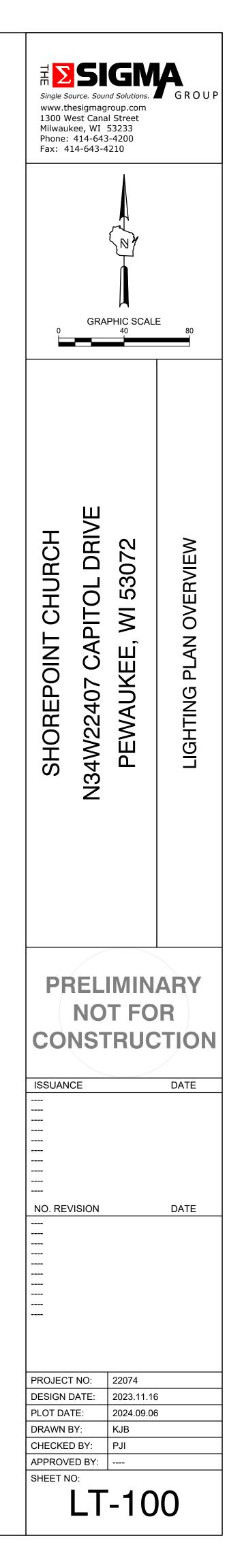
COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

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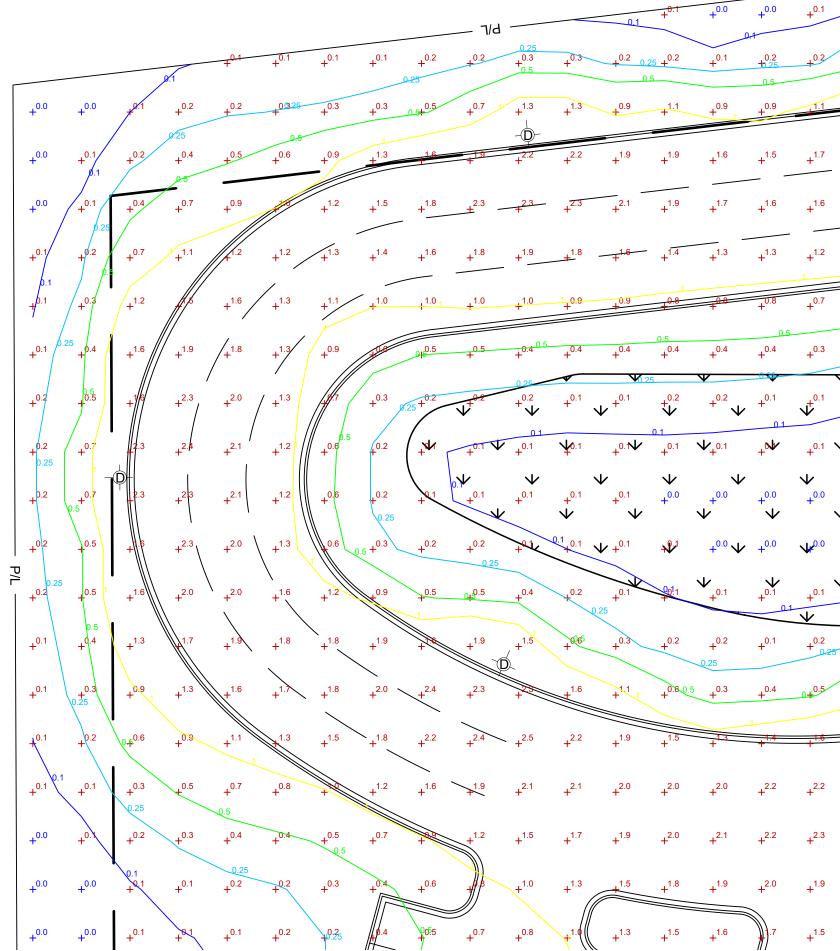
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Avera	ge: 1.3FC	
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Label	Quantity	Catalog Number	Description	Mount Height	Lamp	Lamp Lumens	Watts
A	3	DSX1 LED P5 40K 70CRI T5W	D-Series Size 1 Area Luminaire P5 Performance Package Type 5 Wide	20FT	40K70CR	18708	138
В	6	DSX1 LED P2 40K 80CRI T5W	D-Series Size 1 Area Luminaire P2 Performance Package Type 5 Wide	20FT	40K70CR	9506	68
С	4	DSX1 LED P2 40K 70CRI BLC4 EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 4 Extreme Backlight Control External Gare Shield	20FT	40K70CR	6750	68
D	14	DSX1 LED P2 40K 70CRI T2M EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 2 Medium External Gare Shield	20FT	40K70CR	8049	68

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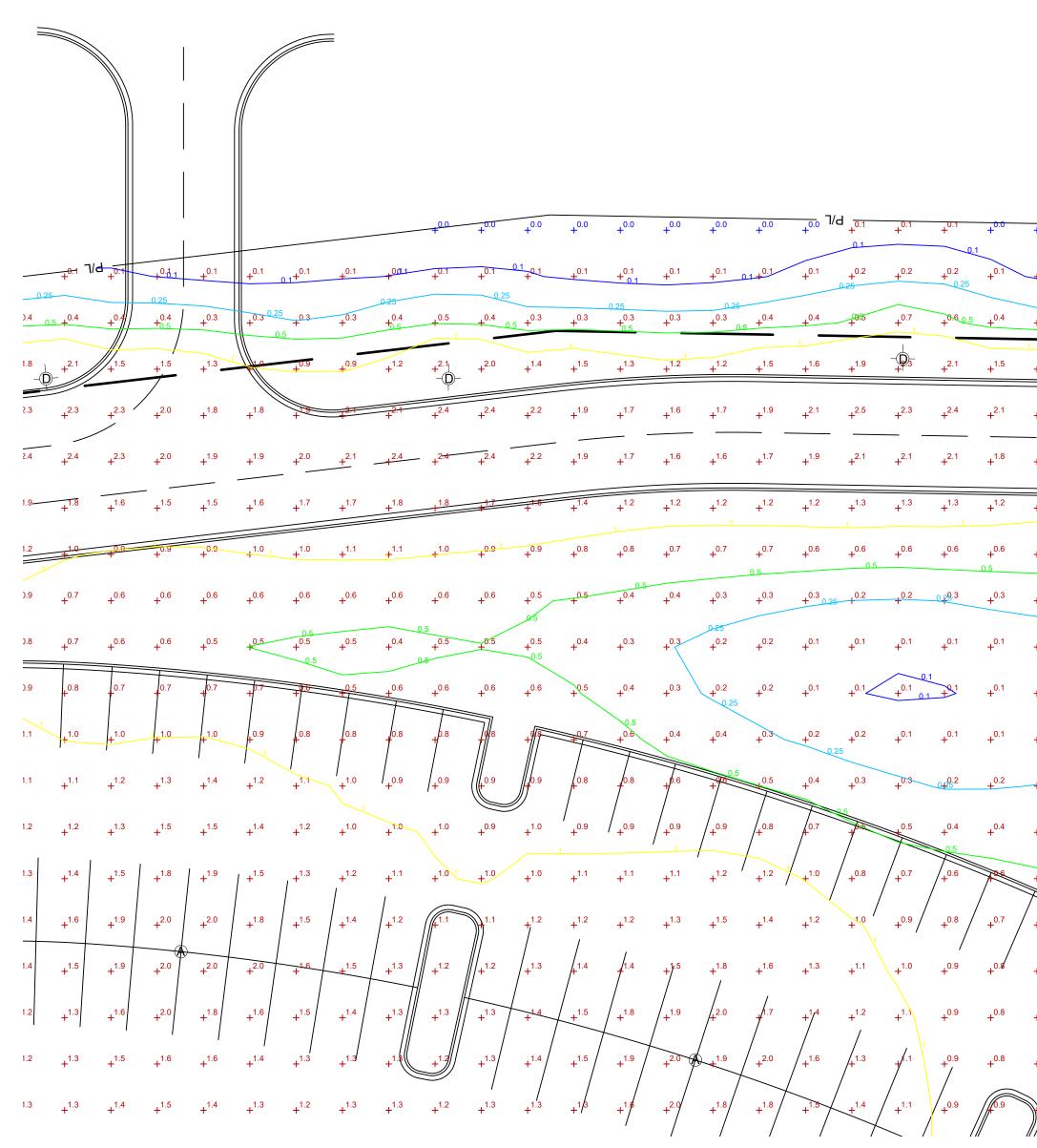
THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

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18	+1.7	+ ^{2.2}	+2.2	+ ^{2.2}	+ ^{1.9}	+ ^{1.7}	+ ^{1.5}	+ ^{1.5}	+1.7	- + ^{1.9}	+ ^{2.2}	+ ^{2.4}	+ ^{2.4}	+ ^{2.3}	+ ^{2.0}	+ ^{1.9}	+ ^{1.9}	+ ^{2.0}	4
+ ^{1.8}	+ ^{2.1} -	<u></u>	+ ^{2.3}	+ ^{2.3}	+ ^{1.9}	+ ^{1.7}	+ ^{1.6}	+ ^{1.6}	+ ^{1.7}	+ ^{1.8}	+1.8	- + ^{1.9}	+ ^{1.8}	+ ^{1.6}	+ ^{1.5}	+ ^{1.5}	+ ^{1.6}	+ ^{1.7}	+
+ ^{1.7}	+ ^{1.8}	+ ^{1.9}	1.8	+1.8	+ ^{1.4}	+ ^{1.3}	+ ^{1.2}	+ ^{1.3}	+ ^{1.4}	+ ^{1.4}	+ ^{1.3}	+1.2	1.0	<u>0.9</u>	+ +	+0.9	1.0	+ ^{1.0}	4
+ ^{1.2}	+ ^{1.1}	+1.0	+0.9	0.8	<mark>≠^{0.8}</mark>	+0.7	+0.8	+1.0	+ ^{1.1}	+ ^{1.1}	+1.0	+0.9	+ ^{0.7}	+ ^{0.6}	+ ^{0.6}	+ ^{0.6}	+ ^{0.6}	+ ^{0.6}	4
+ ^{0.7}	+ ^{0.6} 0.5	0.5	+ ^{0.5}	+ ^{0.4}	+ ^{0.4}	<u>0.5</u> + ^{0.4}	+ ^{0.6}	1.0	+ ^{1.1}	+ ^{1.1}	+1.0	+ ^{0.8}	+ ^{0.7}	+ ^{0.6}	+ ^{0.6}	+ ^{0.5}	+0.5	0.5 + ^{0.5} 0.5	+
+0.3	25 + ⁰² ▼	+ ^{0.2}	0.25 + ^{0.2}	+ ^{0.2}	+0.2	5 0.2 0.25	.5 +0.7	+ ^{1.3}	+ ^{1.4}	+ ^{1.3}	+ ^{1.1}	+ ^{0.9}	+ ^{0.8}	0.7	0.7	0.7	+0.7	0.6 +	Ē
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↓ + ^{0.1}	¥ ^{2.1}	+ ^{0.1} \/	+ ^{0.1}	¥ <u>1</u> 8.1 ↓	0.2	0.5 9.5	+ ^{1.5}	+2.0	+ ^{1.9}	+ ^{1.5}	+ ^{1.2}	+ ^{1.1}	+ ^{1.1}	+ ^{1.2}	+ ^{1.3}	+ ^{1.4}	+ ^{1.2}	+1.1	 +
↓ ^{+0.0}	+ ^{0.0} V	+ ^{0.0}	+ ^{0.1}	↓+ ^{0.1}	0.25 d 3 +	+1.2	+2.2	+ ^{2.4}	+ ^{2.0}	+ ^{1.5}	+ ^{1.2}	+ ^{1.2}	+ ^{1.2}	+ ^{1.3}	+ ^{1.5}	+ ^{1.5}	+ ^{1.4}	+ ^{1.2}	+
+ ^{0.} V	+ ^{0.0}	√+ ^{0.1}	+91	+ ^{0.1} \	0.5	+ ^{2.0}	+ ^{2.2}	+ ^{2.4}	2.0	+	+ ^{1.3}	+ ^{1.3}	+ ^{1.4}	+ ^{1.5}	+ ^{1.8}	+ ^{1.9}	+ ^{1.5}	+ ^{1.3}	+
↓0.1 ↓	0 <u>+</u> 0.1	+ ^{0.1}	+ ^{0.1}	0.2	+0.4	+1/6	+ ^{2.3}	+ ^{2.3}	+ ^{1.8}	+14	+ ^{1.3}	+ ^{1.4}	+ ^{1.6}	+ ^{1.9}	+2.0	+ ^{2.0}	+ ^{1.8}	+ ^{1.5}	4
+0.3	+0.4	+ ^{0.4}	+ ^{0.3}	0.5 + 0.4	+0.7	1.8	+ ^{2.1}	+ ^{2.0} //	+ ^{1,6}	+ ^{1.3}	+ ^{1.2}	+ ^{1.4}	+ ^{1.5}	+ ^{1.9}	+ ^{2.0}	+ ^{2.0}	+ ^{2.0}	+ 1.6	-#
+0.7	+ ^{1.4}	+ ^{1.4}	+ ^{1.2}		+1.5	+ ^{2.1}	+ ^{2.1}	+	+1,	+ ^{1.2}	+ ^{1.2}	+ ^{1.2}	+ ^{1.3}	+ ^{1.6}	+ ^{2.0}	+ ^{1.8}	+ ^{1.6}	+ ^{1.5}	4
+20	+ ^{2.3}	+ ^{2.3}	+ ^{2.0}	+ ^{1.9}	+ ^{1.9}	+ ^{2.1}	+ ^{2.0}	+ ^{1.8}	+ ^{1.5}	+ ^{1.3}	+ ^{1.2}	+ ^{1.2}	+ ^{1.3}	+ ^{1.5}	+ ^{1.6}	+ ^{1.6}	+ ^{1.4}	+ ^{1.3}	+
+ ^{2.6}	+ ^{2.5}	+ ^{2.5}	+ ^{2.2}	+ ^{1.9}	+ ^{1.9}	+ ^{1.9}	+ ^{1.9}	+ ^{1.8}	+ ^{1.7}	+ ^{1.5}	+ ^{1.4}	+ ^{1.3}	+ ^{1.3}	+ ^{1.4}	+ ^{1.5}	+ ^{1.4}	+ ^{1.3}	+ ^{1.2}	+
+ ^{2.3}	+ ^{2.3}	+ ^{2.1}	+ ^{1.8}	+ ^{1.5}	+ ^{1.5}	+ ^{1.6}	+ ^{1.8}	+ ^{1.9}	× 0	+1.9	+1.8		+ ^{1.5}	+ ^{1.5}	+ ^{1.4}	+ ^{1.3}	+ ^{1.3}	+ ^{1.2}	+
+ ^{1.8}	+ ^{1.6}	+1.4		+	+ ^{1.2}	+ ^{1.3}		+ ^{2.0}	12 .2	12.3			+1.9	1.7	+ ^{1.5}	+ ^{1.3}	+ ^{1.2}	+(1 ²	+
+ ^{1.5}	13	+ ^{1.2}	/ ^{1.0}	+ ^{0,#} //	+ ^{0.9}	+1.0	+ ^{1.4}	+	+2.2	+ ^{2.5}	+2.7	2.6	+2.4]+ ^{2.0}]	+12 +12	+ ^{1.4}	+ ^{1.1}	+1.0	_=

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Label	Quantity	Catalog Number	Description	Mount Height	Lamp	Lamp Lumens	Watts
A	3	DSX1 LED P5 40K 70CRI T5W	D-Series Size 1 Area Luminaire P5 Performance Package Type 5 Wide	20FT	40K70CR	18708	138
В	6	DSX1 LED P2 40K 800RI T5W	D-Series Size 1 Area Luminaire P2 Performance Package Type 5 Wide	20FT	40K70CR	9506	68
С	4	DSX1 LED P2 40K 700RI BLC4 EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 4 Extreme Backlight Control External Gare Shield	20FT	40K70CR	6750	68
D	14	DSX1 LED P2 40K 70CRI T2M EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 2 Medium External Gare Shield	20FT	40K70CR	8049	68



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+ ^{1.5}	+1.1	+ ^{0.9}	+0.9	+ ^{1.2}	+ ^{1.4}	+ ^{1.6}	+20-	+ ^{2.1}	+ ^{1.4}	+ ^{1.4}	+1.0	+0.7	0.5 + 0.5	+0.3	0.2 + 0.2 0.25	1	+0.1	+0.1	+0.0	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0]
+ ^{1.8}	+ ^{1.5}	+ ^{1.4}	+ ^{1.4}	+ ^{1.7}	+ ^{1.9}	+ ^{2.3}	+ ^{2.3}	+ ^{2.3}	+ ^{2.1}	+ ^{1.8}	4 <u>5</u> +	12	+1.0	+1.0	+0.8	0.5 +0.5	+0.3 0	25 +0.2	0.1 T	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	
+ ^{1.7}	+ ^{1.5}	+ ^{1.4}	+ ^{1.5}	+ ^{1.6}	+ ^{1.8}	+2.1	+ ^{2.2}	+ ^{2.2}	+2.0	+	1.5	+ ^{1.3}	+ ^{1.3}	+1.4	1.6	+ ^{1.6}	0.9	0.5 + +	+0.3	0.1 0.25	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	
+ ^{1.2}	+ ^{1.1}	+ ^{1.1}	+ ^{1.1}	+ ^{1.2}	+ ^{1.3}	+ ^{1.4}	+ ^{1.4}	+	1.3 Ŧ	1.2	+ ^{1.2}	+ ^{1.2}	+ ^{1.3}	+1.5	+ ^{1.8}	+2.1	2.1	-D-	1 +1.0	0.3 0.5	+0.1	+ ^{0.1}	+ ^{0.0}	
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+ ^{0.3}	+ ^{0.3}	+ ^{0.3}	+ ^{0.3}	+ ^{0.3}	+0.3	+ ^{0.3}	+0.3	0.2 ^{0.3}	+ ^{0.3}	+0.3	0.5 + ^{0.3}	+0.4	+0.5	+0.8	+1.1	+1.6	+ ^{2.1}	+2.3	+ ^{2.0}	+ ^{1.7}	1.0 T	375 <u></u>	0.1	
+ ^{0.2}	+ ^{0.1}	+ ^{0.2}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1} 01	+0.1	+0.1	0.1 ^{0.1}	+ ^{0.1}	+ ^{0.1}	(+ ^{0.2} /	0.250.2	₩ ₩ +	+0.6	+0.9	+	+1.6	+1.7	+ ^{1.5}	+11	+0.6	Q.052	0.1
+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+0.1	0.1 + ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+0.1	+0.1	₩ <u>0.1</u> +	0.1 0.1	002	+0.4	+0:6	0.9	+ ^{1.1}	+	0.9	+0.6	+ ^{0.3}	V 0.1 ₽/4
+ ^{0.2}	+ ^{0.2}	+ ^{0.1}	+0.1	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0	+ 20	↓ + ^{0,1}	↓ ↓ ↓ ↓	+0.3	♦ <u>00</u> 55 +	k + ^{0.6}	0.7 +	+0.6	+0.5	+0.30.25	5 +0.2
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+0.5	0.5 0.5	+ ^{0.4}	+0.3	+ ^{0.2}	0.1 + ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}		V + ^{0.1}	0.1	+ ^{0.1}	+ ^{0.1}	0.1+0.1	+ ^{0.1}
+0.7	+	+0.5	0.5 + ^{0.4}	+0.25	+0.2	+0.1	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0	+0.0	₩ _{+^{0.1}}	0.1	+ ^{0.1}	+ ^{0.1}
+ ^{0.7}	+ ^{0.7} //	+ ^{0.7}	+0.6	+ ^{0.4}	+0.3	+0.2	+0.1	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0	↓ ¥ ^{+0.0}	+0.0	+ ^{0.0}	+ ^{0.0}
+ ^{0.7}	+0.0		+0.7	+0.6	+	+ ^{0.4}	+0.3	+0.2	0.1 + ^{0.2}	+0.1	+0.1	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}
+ ^{0.8}	+ ^{0.8}	+ ^{0.9}	+ ^{0.9}	+0.9	0.8	+017	05 1	+ ^{0.4}	+0.3	+ ^{0.2}	+ ^{0.2}	+ ^{0.1}	+0.1	0.1	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+00	+ ^{0.0}	+0.0
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Label	Quantity	Catalog Number	Description	Mount Height	Lamp	Lamp Lumens	Watts
А	3	DSX1 LED P5 40K 70CRI T5W	D-Series Size 1 Area Luminaire P5 Performance Package Type 5 Wide	20FT	40K70CR	18708	138
В	6	DSX1 LED P2 40K 80CR T5W	D-Series Size 1 Area Luminaire P2 Performance Package Type 5 Wide	20FT	40K70CR	9506	68
С	4	DSX1 LED P2 40K 70CRI BLC4 EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 4 Extreme Backlight Control External Gare Shield	20FT	40K70CR	6750	68
D	14	DSX1 LED P2 40K 70CRI T2M EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 2 Medium External Gare Shield	20FT	40K70CR	8049	68

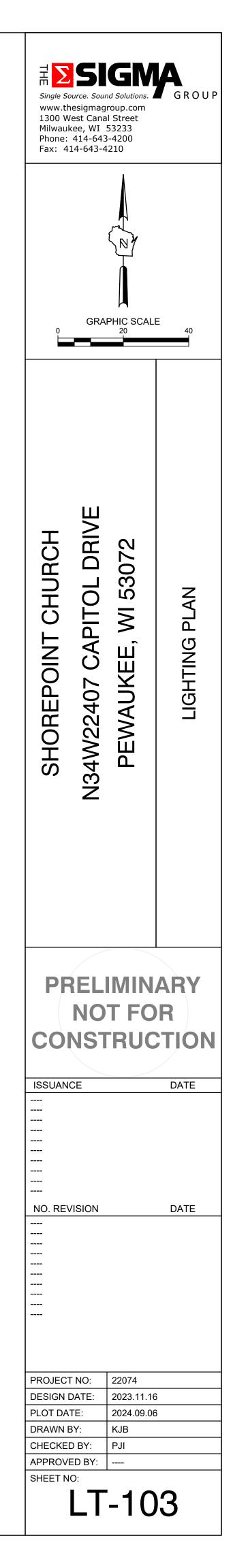
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+1.1 +1.0	+0.8 +0.6 +0.5	0.25 + $^{0.4}$ + $^{0.3}$ + $^{0.3}$ + $^{0.2}$	+ ^{0.1} + ^{0.1} + ^{0.1}	+ ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0} + ^{0.0}	+0.0 +0.0	 0.1
+ ^{1.4} + ^{1.3}	+11 +0.8 +0.7	$\begin{array}{c} 0.25 \\ + 0.5 \\ + 0.5 \\ + 0.4 \\ + 0.3 \end{array}$	$+^{0.2}$ $+^{0.1}$ $+^{0.1}$ $+^{0.1}$	+ ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0} + ^{0.0}	+0.0 +0.0	 0.5
+ ^{1.6} + ^{1.4}	+ ^{1.2} + ^{1.0} + ^{0.9}	+0.8 +0.7 +0.5 +0.4	+0.3 +0.1 +0.1	+ ^{0.0} + ^{0.0}	+0.0 +0.0 +0.0	+0.0 +0.0	1
+ ^{1.9} + ^{1.5}	+ ^{1.2} + ^{1.0} + ^{0.9}	+0.9 +0.7 +0.6 0.5	+ ^{0.3} + ^{0.2} + ^{0.1}	+ ^{0.0} + ^{0.0}	+0.0 +0.0 +0.0	+0.0 +00	 3
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+2.0 +1.6	f ^{1.4} + ^{1.1} + ^{0.9}	+0.8 +0.9 +0.9 +0.9	$+^{0.0.5}$ $0^{+0.2}$ $+^{0.0}$		+0.0 +0.0 +0.0	+0.0	
$+^{1.6}$ $+^{1.5}$ $+^{1.4}$ $+^{1.3}$	+1.4 $+1.1$ $+0.9$ $+0.8$	$+^{0.9}$ $+^{1.0}$ $+^{1.2}$ $+^{1.6}$ $+^{1.6}$	+0.9 $+0.3$ 0.1 $+0.1$ $+0.1$ $+0.1$ $+0.1$ $+0.1$		+ ^{0.0}	+0.0	
$+$ $+$ $+$ $^{1.4}$ $+$ $^{1.3}$	+ + + + ¹⁰ + ^{0.8} + ^{0.7}	$+0/9$ $+^{1.5}$ $+^{1.9}$ $+^{1.9}$	$+$ $+$ $+$ $+$ $+$ $0.5_{0.25}$ $+$ 1.2 $+$ 0.3 $+$ 0.1			+/	
+ ^{1.4} + ^{1.2}	+1.0 9.8	+ ^{1.1} + ^{1.8} + ^{2.4} + ^{2.2}	$+^{1.3}$ $+^{0.3}$ $+^{0.1}$	+ ^{0.1} + ^{0.0}	ی ب.0. +0.0 + 0.0 /	₹	
+ ^{1.3} + ^{1.2}	+1.0 +0.8 +0.9	+ ^{1.2} + ^{2.0} + ^{2.4} + ^{2.4}	$+^{1.5}$ $+^{0.50.4}$ $+^{0.25}$ $+^{0.1}$	+ ^{0.0} + ^{0.0}	+0.0 +0.0 +0.0		
1.2 +1.2	+1.0 +0.9 +1.0	+ ^{1.5} + ^{2.1} + ^{2.5} + ^{2.2}	+ ^{0.8} + ^{0.3} + ^{0.1}	+ ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0} + ^{0.0}		
1.1 + ^{1.1}	+ ^{1.1} + ^{1.1}	+ ^{1.5} + ^{2.0} + ^{2.1} + ^{1.5}	$\begin{array}{c} 0.5 \\ 0.5 \\ 0.25 \end{array} + 0.2 \\ + 0.1 \\ \end{array}$	+ ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0}		
+1.1 +1/1	+1.1 +1.0 +1.2	+ ^{1.5} + ^{1.8} + ^{1.4} + ^{1.2}	$+^{0.3}$ $+^{0.1}$ $+^{0.1}$ $+^{0.1}$	+ ^{0.0}	+ ^{0.0} + ^{0.0}		
+1.2 +1.3	+ ^{1.1} + ^{1.1} + ^{1.2}	+ ^{1.4} + ^{1.4} + ³ + ^{0.7}	0.25 +0.1 +0.0		+0.0 +0.0		
+ ^{1.3} + ^{1.3}	$+^{1.3}$ $+^{1.2}$ $+^{1.2}$ $+^{1.2}$ $+^{1.2}$	$+^{1.2}$ $+^{1.1}$ $+^{0.9}$ $+^{0.4}$ $+^{1.0}$ $+^{0.8}$ $+^{0.6}$ $+^{0.3}$	$+^{0.1}$ $+^{0.1}$ $+^{0.0}$ $+^{0.0}$		+0.0 +0.0		
$+^{1.5}$ $+^{1.4}$	$+^{1.4}$ $+^{1.2}$ $+^{1.2}$ $+^{1.3}$ $+^{1.2}$ $+^{1.1}$	$+^{1.0}$ $+^{0.8}$ $+^{0.6}$ $+^{0.3}$ $+^{0.9}$ $+^{0.7}$ $+^{0.4}$ $+^{20.2}$	$+^{0.1}$ $+^{0.1}$ $+^{0.0}$	/	+ ^{0.0}		
+ ^{1.5} + ^{1.4}	+ ^{1.2} + ^{1.2} + ^{1.0}	+0.8 +0.6 +0.3 +0.2	b.1 + 0.1 + 0.0 + 0.0	/	+0.0		
+ ^{1.5} + ^{1.3}	+ ^{1.2} + ^{1.1}	$+^{0.7}$ $+^{0.5}$ $+^{0.3}$ $+^{0.1}$	+0.1 +0.0 +0.0	+ ^{0.0} + ^{0.0}			
+ ^{1.5} + ^{1.3}	+ ^{1.2} + ^{1.1} + ^{0.9}	+ ^{0.6} + ^{0.4} + ^{0.2} 0.1	+0.0 +0.0 +0.0	+ ^{0.0} + ^{0.0}			
+ ^{1.4} + ^{1.3}	+ ^{1.1} + ^{1.0} + ^{0.8}	$+^{0.1}_{0.5}$ $+^{0.2}_{0.25}$ $+^{0.1}_{0.1}$	+ ^{0.0} + ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0}			
	+ ^{1.0} + ^{0.9} + ^{0.7}	0.5 + ^{0.3} + ^{0.1} + ^{0.1}	+ ^{0.0} + ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0}			
	+0.9 +0.8 +0.6	$+^{0.4}$ $+^{0.2}$ $+^{0.1}$ $+^{0.1}$	+0.0 +0.0 +0.0	+0.0			
	$+^{0.8}$ $+^{0.7}$ $+^{0.8}$	$+^{0.4}$ $0.3^{0.2}$ $+^{0.1}$ $+^{0.1}$ $+^{0.1}$	$+^{0.0}$ $+^{0.0}$ $+^{0.0}$	+0.0			
+ ^{1.3} + ^{1.1}	+ + + + + + + + + + + + + + + + + + + +	$+^{0,3}$ $+^{0.2}$ $+^{0.1}$ $+^{0.1}$	+0.0 +0.0 +0.0	+0.0			
+ ^{1.4} + ^{1.2} +	+0.8 +0.6 +0.4	$+^{0.25}$ $+^{0.2}$ $+^{0.1}$ $+^{0.1}$ $+^{0.0}$	+ ^{0.0} + ^{0.0} + ^{0.0}				
+ ^{1.5} + ^{1.1}	<u>+0.7</u> +0.3	$+^{0.2} +^{0.1} +^{0.1} +^{0.0}$	+90 +0.0 +0.0				
1.2 0.8	4 ^{0.5} + ^{0.3} + ^{0.2}	+0.1 +0.1 +0.1 +0.0					
025 + 0.3 + 0.3	+0.2 +0.2 +0.2	+0.1 + ^{0.1} + ^{0.0} + ^{0.0}	+0.0 +0.0 +0.0				
+0.0 +0.0	+ ^{0.0} + ^{0.1} + ^{0.1}	+0.1 +0.0 +0.0 +0.0	+0.0 +0.0				
+0.0 +0.0		$+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$	+0.0 +0.0				
+ ^{0.0} + ^{0.0}	+0.0 +0.0 +0.0 +0.0 +0.0 +0.0	$+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$	$+^{0.0}$ $+^{0.0}$				
+ ^{0.0} + ^{0.0}	+ ^{0.0} + ^{0.0} + ^{0.0}	$+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$	+0.0				
		·	1				

Minimum: 0.3FC Maximum: 2.8FC Average: 1.3FC



Label	Quantity	Catalog Number	Description	Mount Height	Lamp	Lamp Lumens	Watts
А	3	DSX1 LED P5 40K 70CRI T5W	D-Series Size 1 Area Luminaire P5 Performance Package Type 5 Wide	20FT	40K70CR	18708	138
В	6	DSX1 LED P2 40K 800RI T5W	D-Series Size 1 Area Luminaire P2 Performance Package Type 5 Wide	20FT	40K70CR	9506	68
С	4	DSX1 LED P2 40K 700RI BLC4 EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 4 Extreme Backlight Control External Gare Shield	20FT	40K70CR	6750	68
D	14	DSX1 LED P2 40K 70CRI T2M EGS	D-Series Size 1 Area Luminaire P2 Performance Package Type 2 Medium External Glare Shield	20FT	40K70CR	8049	68

+2.5 +0.0 +0. +1.5 +1.7 +^{0.0} +^{0.0} +1.0 +^{1.8} +1.5 +^{1.6} +^{0.0} +^{0.0} $+^{1.3}$ $+^{1.5}$ $+^{1.6}$ +0.8 +1.5 +0.0 +0.0 +0.7 +0.8 +0.2 $+^{0.9}$ $+^{1.1}$ $+^{0.8}$ $+^{0.9}$ $+^{0.0}$ $+^{0.0}$ 0.6 +0.1 +0.2 +^{1.0} +^{1.2} +1.4 +0.8 **υ** +^{0.0} +^{1.2} $+^{1.5}$ +^{0.0} +^{0.0} +0.0 +0.2 +0.8 +0.3 +1.2 +1.5 $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ +0.8 +0.2 +0.8 +1.2 +^{1.4} +0.3 +1.5 +0.0 +0.0 +0.1 +^{1.3} +^{0.0} +^{0.0} $+^{0.2}$ 0.3 ⊥^{1.0} +^{1.4} $+^{0.0}$ $+^{0.0}$ 1.3 +0.2 +0.3 +1.5 +1.5 +1 $+^{0.0}$ $+^{0.0}$ +^{0.9} +^{1.3} $+^{1.5}$ $+^{1.5}$ +^{0.0} +^{0.0} $+^{0.8}$ $+^{1.0}$ $+^{1.0}$ +^{1.4} 1.1 +^{1.3} +1.4 $+^{0.0}$ $+^{0.0}$ +1.2 1.0 +^{1.5} +^{1.4} +0.3 +^{1.4} +1.4 +^{0.0} +^{0.0} ⊥^{1.3} 1 0.25 0.4 +1.6 / +^{1.6} +^{1.7} +^{1.7} +^{1.6} +^{1.6} +^{1.5} +1.5 +1.5 +^{0.0} +^{0.1} $+^{1.1}$ (1 $+^{0.9}$ +^{1.6} +^{1.5} ₽/ +^{0.0} $+^{1.6}$ $+^{1.5}$ $+^{1.6}$ $+^{1.6}$ $+^{1.6}$ $+^{1.6}$ +^{1.6} +^{1.6} +0.1 +1.8 $+^{1.6}$ $+^{1.5}$ $+^{1.5}$ $+^{1.5}$ $+^{1.5}$ +0.1 +2.2 +1.2 +0.1 $+^{1.7}$ $+^{1.6}$ $+^{1.6}$ $+^{1.5}$ +1.4 ^{0.9} +1.7 +0.2 60.4 +0.1 +^{1.7} $+^{1.8}$ $+^{1.8}$ $+^{1.8}$ +2.6 +0.9 +2.1 +1.7 +^{1.6} +0.1 +0.1 +2.0 +^{1.8} +^{1.6} +^{1.6} +^{1.8} +^{1.9} $+^{0.0}$ $+^{0.0}$ $+^{1.7}$ +1.4 +2.0 +2.2 $+^{1.5}$ $+^{1.3}$ $+^{1.3}$ $+^{0.0}$ $+^{0.0}$ +0.0 $+^{0.0}$ $+^{0.0}$ +^{0.0} +^{0.0} +^{0.0} +^{0.0} $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ +0.1 $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$).1 010.1 +0.10.23 0.1 +0.1 $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ +0.0 $+^{0.0}$ $+^{0.0}$ +^{0.0} +^{0.0} $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ $+^{0.0}$ +0.0 $+^{0.0}$ $+^{0$



TOLL FREE WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE MILW. AREA 259-1181

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

L I:\Vanman Architects\22074- Shorepoint ChurceBrockfield 060 AD\030_Production Sheets\100_Civil\LT-100 Lighting Plan.dwg

22074

	+ ^{1.4}	+1.2		+1.5	+ ^{2.1}	+ ^{2.1}	+	+1.0	+ ^{1.2}	+ ^{1.2}	+ ^{1.2}	+ ^{1.3}	+ ^{1.6}	+ ^{2.0}	+ ^{1.8}	+ ^{1.6}	_
	+2.3	+2.0	+ ^{1.9}	+ ^{1.9}	+ ^{2.1}	+ ^{2.0}	+ ^{1.8}	+ ^{1.5}	+ ^{1.3}	+ ^{1.2}	+ ^{1.2}	+ ^{1.3}	+ ^{1.5}	 + ^{1.6}	+ ^{1.6}	 + ^{1.4}	_
	+ ^{2.5}	+ ^{2.2}	+ ^{1.9}	+ ^{1.9}	+ ^{1.9}	+ ^{1.9}	+ ^{1.8}	+ ^{1.7}	+ ^{1.5}	+ ^{1.4}	+ ^{1.3}	+ ^{1.3}	+ ^{1.4}	+ ^{1.5}	+ ^{1.4}	+ ^{1.3}	
	+ ^{2.1}	+ ^{1.8}	+ ^{1.5}	+ ^{1.5}	+ ^{1.6}	+ ^{1.8}	+ ^{1.9}	X 0	+ ^{1.9}	+ ^{1.8}	 + ^{1.6}	+ ^{1.5}	+ ^{1.5}	+ ^{1.4}	+ ^{1.3}	+ ^{1.3}	
	+ ^{1.4}	13	+	+ ^{1.2}	+ ^{1.3}	1.6	+ ^{2.0}	1.2	2.3) +1 <u>9</u>	1.7	+ ^{1.5}	+ ^{1.3}	+ ^{1.2}	
	+ ^{1.2}	+1.0	+0,0	+0.9	+ ^{1.0}	+ ^{1.4}	+	+2.2	+ ^{2.5}	+2.7	2.6	+2.4]+ ^{2.0} }		+ ^{1.4}	+ ^{1.1}	
	+1.1	+0.9	+0.8	+ ^{0.7}	+ ^{0.7}	+0.9	+	/+ ^{4.7}	+ ^{1.9}	+ ^{2.4}	+ ^{2.4}	+2.4	2.0	+ ^{1.6}	+1.3	+1.0	
	+ ^{1.1}	1+0.9	- + ^{0.8}	+ ^{0.7}	+ ^{0.6}	+0.6	1.6	+0.6	+0.8	-D- + ^{1.7/}		1.5	+ ^{1.7}	+ ^{1.4}	T ^{1.0}	+0.7	
	+ ^{1.3}	+0.9	+ ^{0.7}	+ ^{0.7}	+0.6	0.5 ^{+0.5}	+0.4	<u>0.5</u> + ^{0.3}	+0.3	↓ 	+0.5	1 +0.4	0.5 0.5	0.5		+0.4	
	+1.2	+1/1	+ ^{0.8}	+ ^{0.7}	+0.5	+0.4	±0.3				0.25	+ ^{0.1}	0.2 + ^{0.1}	, .1		0.25 0.1 ^{+0.1}	
	+ ^{1.2}	+10	+ ^{0.8}	+ ^{0.7}	+0.5	+04	0.25	/									
	+1.0	+ ^{0.9}	+ ^{0.8}	+ ^{0.6}	0.5 +0.5	0.3	25										
\rightarrow	+0.9	+ ^{0.8}	+ ^{0.7}	+0.6	+ ^{0.4}	+0.3											
		+ ^{0.8}	+ ^{0.7}	+ ^{0.50.5}	+ ^{0.4}	+ ^{0.3}											
	+ ^{0.9}	+ ^{0.8}	+ ^{0.7}	+ ^{0.6}	+94	4 .25											
	+ ^{0.9}	+ ^{0.8}	+0.7	+0.6	0.4	/											
<i>.</i>	+ ^{0.8}	+ ^{0.7}	0.7	+0.6	+0.4												
	+ ^{0.8}	+ ^{0.7} ~	+0.6	+0.5	/ /												
	+ ^{0.8}	+ ^{0.7}	+0.6	.5	+0.3	+0.2	0.1										
	+ ^{0.8}	₽ 0.7	+0.5	+0.4	0.25	+ ^{0.2}	^{0.1} 0.1	+ ^{0.1}	+0.0	+0.0							
	+ ^{0.9}	0.7	+0.5	+03	+ ^{0.2}	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}							
	+ ^{0.8} ~	0.7	+0.5	+0.3	0.2 0.25	+ ^{0.2}	+0.1	0.1 + ^{0.1}	+ ^{0.1}	+ ^{0.1}	+0.0						
	+ ^{0.8}	+0.7		+0.4	+0.3	+ ^{0.2}	+ ^{0.2}	+0.1	+0.1	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+0.0	+0.0	+00		
(109	0.8	+0.6	0.5	0.4	+0.3	5 0.2	+0.2	+ ^{0.2}	0.1 + ^{0.1}	+0.1	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	
	19	+0.8	+ ^{0.7}	+0.6	+0.5_0	5+0.5	+0.4		0.25 0.3	+0.2	+0.2	0.1 + ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	
	+ ^{0.8}	+ ^{0.9}	+1.0	+ ^{0.9}	/ + ^{0.8} /	+ ^{0.7}	+0.6	0.50.5 F	+0.4	+0.3	0,053 T	+ ^{0.2}	+ ^{0.1}	+ ^{0.1} 0.1	+ ^{0.1}	+ ^{0.0}	
	+ ^{0.7}	+ ^{0.9}	+ ^{1.2}	+ ^{1.2}	+ ^{1.2}	1 1.0	+ ^{0.9}	+ ^{0.8} /	+0.7	+0:5	+ ^{0.4}	+0.2	+ ^{0.1}	+ ^{0.1}	+ ^{0.1}	+ ^{0.0}	
	/ + ^{0.6}	/+ ^{0.9}	/+ ^{1.4}	+ ^{1.6}	+ ^{1.8}	+ ^{1.8}	+ ^{1.5}	+1.1	+ ^{0.9}	+ ^{0.7}	+ ^{0.4}	0 ₅ 2	+0.1	0.1	+0.0	+ ^{0.0}	
	+0.3	+0.7	+1.4	+1.7	+2.3	/+ ^{2.5}	/ + ^{2.0}	+ ^{1.4}	+1.1	+ ^{0.7}	+ ^{0.4}	+	+0.1	+ ^{0.1}	+0.0	+0.0	
0.1	- <u>0.1</u> +	0.20	101 101 101		+1.8	+ ^{1.8}	/ + ^{1.7} /	+ ^{1.5}	1.0	- 1 0.5	+0.3	+ ^{0.2}	+0.1	+ ^{0.1}	0.0	0	
	+0.0	+00	+0.0	0.5 0.25 +	+ 0.00.1 +	0.1		0.8	+0.6	+ ^{0.3}	0.2	+0.1.0.1	+ ^{0.1}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	
	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0	+0.0	0.0	+00	2.1 +	+0.0	01 + ^{0.0}	+0.0	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	
	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+0.0	0.0	+0.0	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	
	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	+ ^{0.0}	

Minimum: 0.3FC Maximum: 2.8FC Average: 1.3FC

0.1

0.25

0.5

www.t 1300 Milwau Phone	Source. Source	roup.com l Street 53233 -4200	GROUP
	GRA		E40
SHOREPOINT CHURCH	N34W22407 CAPITOL DRIVE	PEWAUKEE, WI 53072	LIGHTING PLAN
	NO	IMIN T FO RUC	
ISSUAN NO. RE			DATE
PROJEC DESIGN PLOT D/ DRAWN CHECKE APPROV SHEET I	DATE: ATE: BY: D BY: (ED BY: NO:	22074 2023.11.16 2024.09.06 KJB PJI)

D-Series Size 1 LED Area Luminaire



d"series

Specifications 0.69 ft² EPA: (0.06 m²) 32.71" Length: (83.1 cm) 14.26" Width: (36.2 cm) 7.88" Height H1: (20.0 cm) 2.73" Height H2: (6.9 cm) 34 lbs Weight: (15.4 kg)

Catalog Number Notes Туре

Introduction

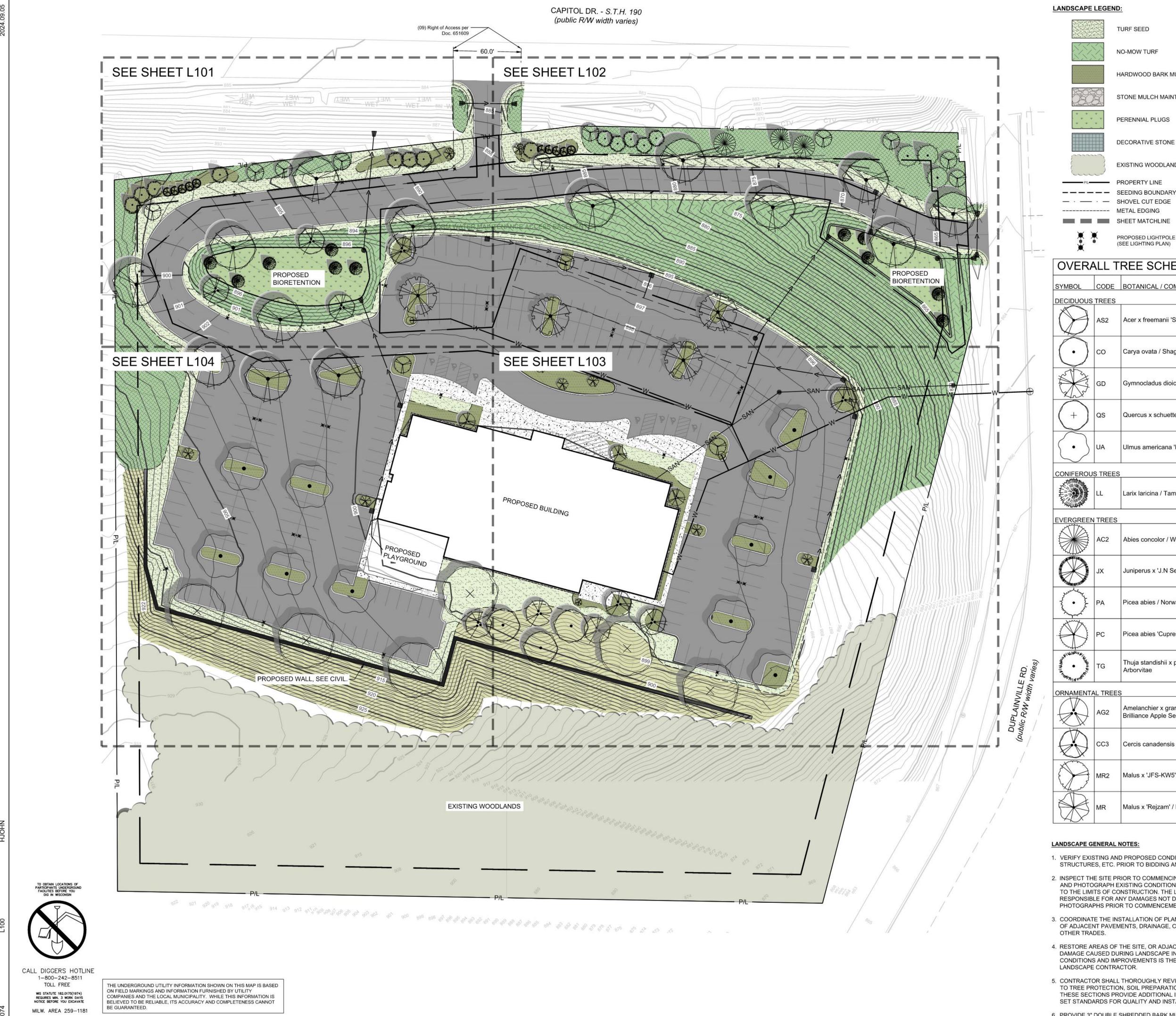
The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Order	ing Informa	tion	EXA	MPLE: DSX1 LED P7 40K 70CRI T3N	I MVOLT SPA NLI	AIR2 PIRHN DDBXD
DSX1 LED						
Series	LEDs	Color temperature ²	Color Rendering Index ²	Distribution	Voltage	Mounting
DSX1 LED	Forward optics P1 P6 P2 P7 P3 P8 P4 P9 P5 Rotated optics P10 ¹ P12 ¹ P11 ¹ P13 ¹	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFRAutomotive front rowTSMType V mediumT1SType I shortT5LGType V low glareT2MType II mediumT5WType V wideT3MType III mediumBLC3Type III backlight control³T3LGType IV mediumBLC4Type IV backlight control³T4MType IV mediumSLC4Type IV backlight control³T4LGType IV low glare³LCC0Left corner cutoff³TFTMForward throw mediumRCC0Right corner cutoff³	MV0LT (120V-277V) ⁴ HV0LT (347V-480V) ^{5,6} XV0LT (277V - 480V) ^{7,8} 120 ^{16,26} 208 ^{16,26} 240 ^{16,26} 277 ^{16,26} 347 ^{16,26} 480 ^{16,26}	Shipped included SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting #5 drilling? RPA5 Round pole mounting #5 drilling? SPA8N Square narrow pole mounting #8 drilling WBA Wall bracket ¹⁰ MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options			Other optio	ons	Finish (required)		
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. ^{11,12,20,21} PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. ^{13,20,21} PER NEMA twist-lock receptacle only (controls ordered separate) ¹⁴ PER5 Five-pin receptacle only (controls ordered separate) ^{14,21}	PER7 FAO BL30 BL50 DMG DS	Seven-pin receptacle only (controls ordered separate) ^{14,21} Field adjustable output ^{15,21} Bi-level switched dimming, 30% ^{16,21} Bi-level switched dimming, 50% ^{16,21} 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) ¹⁷ Dual switching ^{18,19,21}	Shipped in SPD20KV HS L90 R90 CCE HA BAA SF DF Shipped s EGSR BSDB	nstalled 20KV surge protection Houseside shield (black finish standard) ²² Left rotated optics ¹ Right rotated optics ¹ Coastal Construction ²³ 50°C ambient operation ²⁴ Buy America(n) Act Compliant Single fuse (120, 277, 347V) ²⁶ Double fuse (208, 240, 480V) ²⁶ reparately External Glare Shield (reversible, field install required, matches housing finish) Bird Spikes (field install required)	DDBXD DBLXD DNAXD DWHXD DDBTXD DBLBXD DNATXD DWHGXD	Dark Bronze Black Natural Aluminum White Textured dark bronze Textured black Textured natural aluminum Textured white	





TURF SEED

NO-MOW TURF

HARDWOOD BARK MULCH PLANT BED

STONE MULCH MAINTENANCE EDGE

PERENNIAL PLUGS

DECORATIVE STONE DRY CREEK BED

EXISTING WOODLANDS

METAL EDGING

PROPOSED LIGHTPOLE (SEE LIGHTING PLAN)

OVERALL TREE SCHEDULE

-	2000-000				
	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
s	TREES				
	AS2	Acer x freemanii 'Sienna' / Sienna Glen® Maple	2.5" Cal.	B&B	14
	со	Carya ovata / Shagbark Hickory	3" Cal.	B&B	3
22	GD	Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	2.5" Cal.	B&B	4
	QS	Quercus x schuettei / Swamp Bur Oak	2.5" Cal.	B&B	6
2	UA	Ulmus americana 'Princeton' / Princeton American Elm	2.5" Cal.	B&B	10
	S TREES				
	LL	Larix Iaricina / Tamarack	2.5" Cal.	B&B	11
N	TREES				2. 01.
	AC2	Abies concolor / White Fir	6` Ht.	B&B	3
	JX	Juniperus x 'J.N Select Blue' / Star Power® Juniper	6` Ht.	B&B	10
	PA	Picea abies / Norway Spruce	6` Ht.	B&B	3
	PC	Picea abies 'Cupressina' / Cupressina Norway Spruce	6` Ht.	B&B	1
	TG	Thuja standishii x plicata 'Green Giant' / Green Giant Arborvitae	6` Ht.	B&B	13
ΓA	L TREES				
	AG2	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry	8` Ht. (Multi-Stem)	B&B	3
2	CC3	Cercis canadensis / Eastern Redbud	8` Ht. (Multi-Stem)	B&B	10
•3	MR2	Malus x 'JFS-KW5' / Royal Raindrops® Crabapple	2" Cal.	B&B	13
	MR	Malus x 'Rejzam' / Rejoice™ Crabapple	2" Cal.	B&B	9

VERIFY EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES, AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.

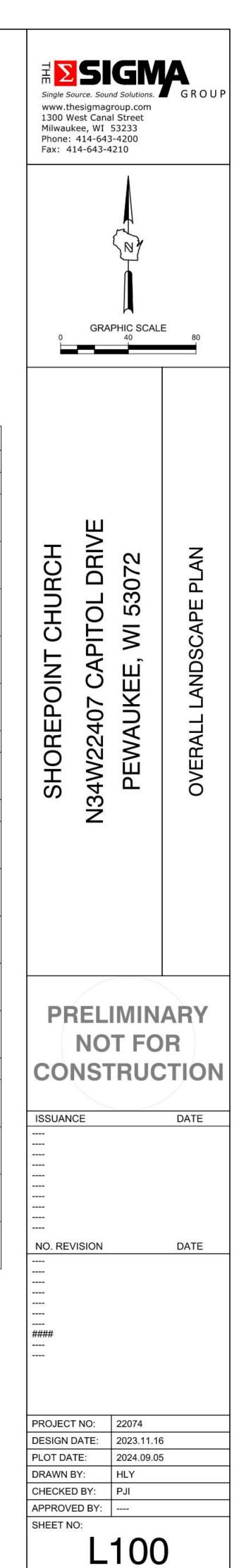
2. INSPECT THE SITE PRIOR TO COMMENCING WORK. DOCUMENT IN WRITING AND PHOTOGRAPH EXISTING CONDITIONS WITHIN, AND IN AREAS ADJACENT TO THE LIMITS OF CONSTRUCTION. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES NOT DOCUMENTED IN THE PHOTOGRAPHS PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.

3. COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ADJACENT PAVEMENTS, DRAINAGE, CURB RELATED STRUCTURES WITH

4. RESTORE AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. DAMAGE CAUSED DURING LANDSCAPE INSTALLATION TO EXISTING CONDITIONS AND IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

5. CONTRACTOR SHALL THOROUGHLY REVIEW ALL SPECIFICATIONS RELATED TO TREE PROTECTION, SOIL PREPARATION, TURF, GRASSES AND PLANTS. THESE SECTIONS PROVIDE ADDITIONAL INFORMATION ON MATERIALS AND SET STANDARDS FOR QUALITY AND INSTALLATION REQUIREMENTS.

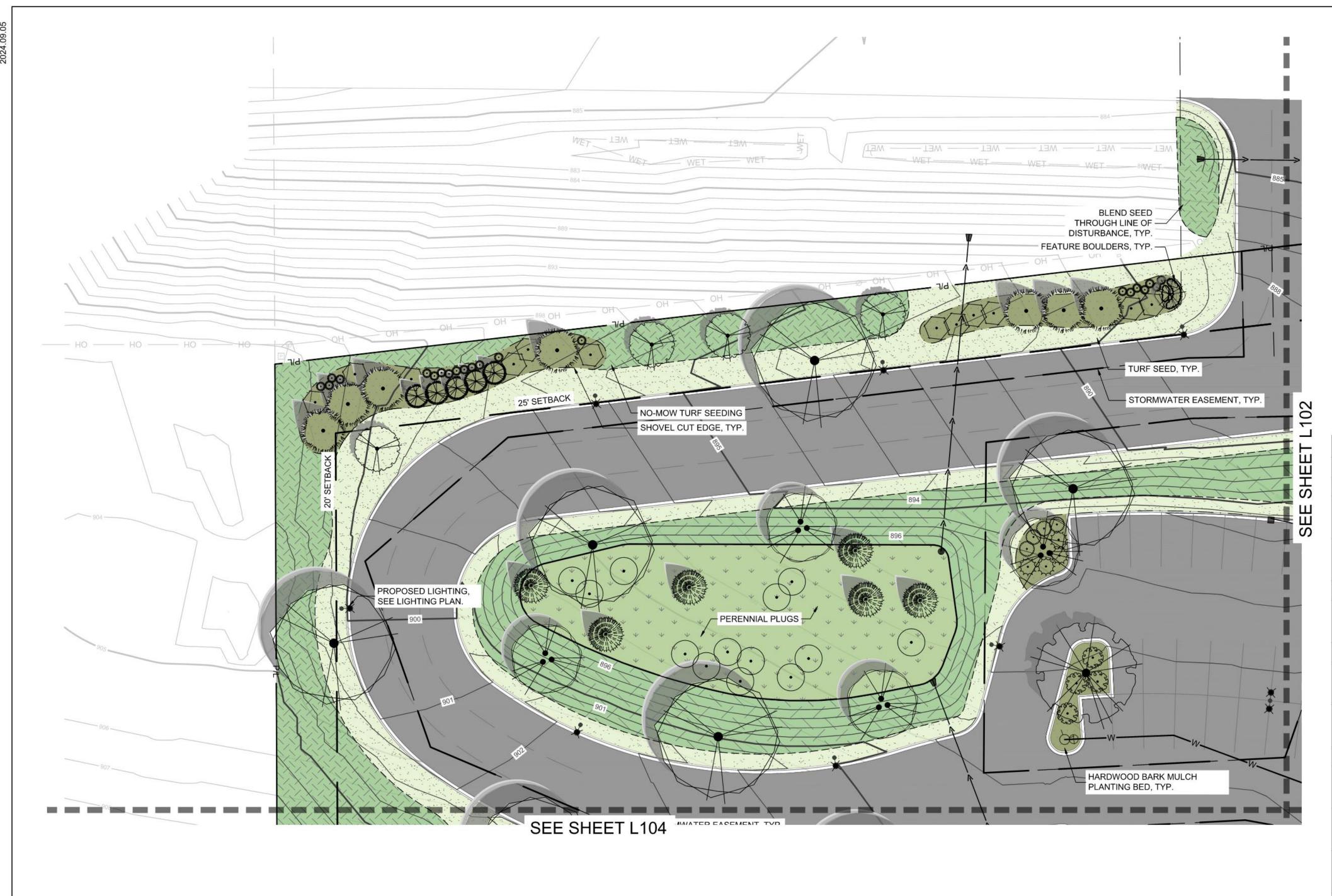
6. PROVIDE 3" DOUBLE SHREDDED BARK MULCH FOR ALL PLANTED TREES, SHRUBS AND LANDSCAPE BEDS.



5" THICK CONCRETE WALK

C401 ASPHALT SURFACE

LEGEND:





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LANDSCAPE GENERAL NOTES:

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- 6. PROVIDE 3" DOUBLE SHREDDED BARK MULCH FOR ALL PLANTED TREES, SHRUBS AND LANDSCAPE BEDS.

							ΞŢ		GM	Λ
LANDSCAP	ELEGEN	ND:		LEGEND:						GROUF
		TURF SEED		HICK CONCRETE	WALK		www.the 1300 We Milwauk	esigmagr est Canal ee, WI 5	oup.com Street 3233	
		NO-MOW TURF	C ASP	HALT SURFACE				414-643 4-643-42		
		HARDWOOD BARK MULCH PLANT BED							l l	
	Ż	STONE MULCH MAINTENANCE EDGE								
· · ·	* *	PERENNIAL PLUGS						i	No Y	
		DECORATIVE STONE DRY CREEK BED							Î	
	3	EXISTING WOODLANDS						GRAF		
		PROPERTY LINE SEEDING BOUNDARY SHOVEL CUT EDGE METAL EDGING SHEET MATCHLINE							20	40
×	¥.	PROPOSED LIGHTPOLE								
×	•	(SEE LIGHTING PLAN)								
PLANT	SCH	IEDULE L101						тт		
SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER		QTY	T	N		⊢
	TREES						S S	DR	072	IEN
\bigcirc	AS2	Acer x freemanii 'Sienna' / Sienna Glen® Maple	2.5" Cal.	B&B		5	CHURCH	OL DRIV	53072	IGEN
A Contraction	GD	Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	2.5" Cal.	B&B		1		CAPIT	щ К	ANDSCAPE ENLARGEMENT
ONIFEROU	S TREES		Ĩ	1	1				Ξ	ш
	LL	Larix laricina / Tamarack	2.5" Cal.	B&B		6	SHOREPOINT	N34W22407	PEWAUKEE	CAP
VERGREEN	TREES				1	9-51. S	Ь	122	\geq	DS
	JX	Juniperus x 'J.N Select Blue' / Star Power® Juniper	6` Ht.	B&B		5	SH	34W	Ч	LAN
NUM IN	тg	Thuja standishii x plicata 'Green Giant' / Green Giant Arborvitae	6` Ht.	B&B		7		Ż		
	L TREES	S	T	1						
\bigcirc	CC3	Cercis canadensis / Eastern Redbud	8` Ht. (Multi-Stem)	B&B		4				
$\langle \gamma \rangle$	MR2	Malus x 'JFS-KW5' / Royal Raindrops® Crabapple	2" Cal.	B&B		4				
	MR	Malus x 'Rejzam' / Rejoice™ Crabapple	2" Cal.	B&B		1			RAINI	
		\ 、							MIN	
·	CS2	Cornus sericea 'Cardinal' / Cardinal Red Twig Dogwood	3 gal.	Cont.		13			T FO	R TION
$\langle \cdot \rangle$	HL	Hydrangea paniculata 'Limelight' / Limelight Panicle Hydrangea	7 gal.	Cont.		12	001		noo	
· · · · · · · · · · · · · · · · · · ·	RA	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	Cont.		4	ISSUANC	E		DATE
£.,	SM	Syringa patula 'Miss Kim' / Miss Kim Korean Lilac	3 gal.	Cont.		4				
		S			1					
<u>}•</u> }	JY	Juniperus horizontalis 'Youngstown' / Creeping Juniper	3 gal.	Cont.		4				
		 SES					NO. REV	ISION		DATE
RNAMEN 17	PN	Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.		21				
		BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY				
	ES	Echinacea x 'G0052Y' / Summersong™ Firefinch™ Coneflower	10 Flat		18" o.c.	5				
0.0.0.0.0.0.0.0	LG	Leucanthemum x superbum 'Goldfinch' / Goldfinch Shasta Daisy	10 Flat		18" o.c.	13				

							1			
				LEGEND:			Ξ	S	GN	Δ
			В 5"Т	HICK CONCRETE	WALK		Single S	ource. Soui		GROUI
		TURF SEED			WALK		1300 W Milwau	/est Cana kee, WI 414-643	ll Street 53233	
\leq		NO-MOW TURF	C401 ASP	PHALT SURFACE				14-643-4		
		HARDWOOD BARK MULCH PLANT BED							٨	
		STONE MULCH MAINTENANCE EDGE							A	
**	* * * * * *	PERENNIAL PLUGS							< BY	
		DECORATIVE STONE DRY CREEK BED							Ń	
$\left[\right]$	3	EXISTING WOODLANDS						CRA	PHIC SCAL	F
		PROPERTY LINE SEEDING BOUNDARY					0	GRA		40
_ · _	·	SHOVEL CUT EDGE METAL EDGING								Î
	-	SHEET MATCHLINE								
X	¥	PROPOSED LIGHTPOLE (SEE LIGHTING PLAN)								
PLANT	Γ SCH	EDULE L101	1	1		_		Щ		
SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	2	QTY	노	NN	N	Ę
	S TREES						L R		53072	ME
\square	AS2	Acer x freemanii 'Sienna' / Sienna Glen® Maple	2.5" Cal.	B&B		5	CHURCH	OL		GEI
The second second	GD	Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	2.5" Cal.	B&B		1		APIT	, M	ENLARGEMEN
CONIFEROL			1	1				CAPI	Ш	130 - <u>1</u> 21
	LL	Larix laricina / Tamarack	2.5" Cal.	B&B		6	SHOREPOINT	N34W22407	PEWAUKEE	ANDSCAPE
EVERGREE		pos-	10				H H	222	MA	DSC
	JX	Juniperus x 'J.N Select Blue' / Star Power® Juniper	6` Ht.	B&B		5	ΗĔ	₹ N	Ш	ANI
WILLIAM AND							0	Z 32		
A HAVE A LAND	ΤG	Thuja standishii x plicata 'Green Giant' / Green Giant Arborvitae	6` Ht.	B&B		7		_		
ORNAMENT	AL TREE	S	I							
\bigotimes	CC3	Cercis canadensis / Eastern Redbud	8' Ht. (Multi-Stem)	B&B		4				
ES -	MR2	Malus x 'JFS-KW5' / Royal Raindrops® Crabapple	2" Cal.	B&B		4				
X								_		
	MR	Malus x 'Rejzam' / Rejoice™ Crabapple	2" Cal.	B&B		1	PF	REI	MIN	ARY
DECIDUOUS	SHRUB	5 	1	1	I				T FC	
(\cdot)	CS2	Cornus sericea 'Cardinal' / Cardinal Red Twig Dogwood	3 gal.	Cont.		13	co			CTION
$\langle \cdot \rangle$	HL	Hydrangea paniculata 'Limelight' / Limelight Panicle Hydrangea	7 gal.	Cont.		12	00		nov	
Constraint of the second	RA	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	Cont.		4	ISSUAN 	CE		DATE
E.	SM	Syringa patula 'Miss Kim' / Miss Kim Korean Lilac	3 gal.	Cont.		4				
EVERGREE		ş	T	1						
1.5	JY	Juniperus horizontalis 'Youngstown' / Creeping Juniper	3 gal.	Cont.		4				
ORNAMENT	AL GRAS	SES					NO. RE	VISION		DATE
•	PN	Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.		21				
SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY				
PERENNIAL			40 51 4	1	40"					
	ES	Echinacea x 'G0052Y' / Summersong [™] Firefinch [™] Coneflower Leucanthemum x superbum 'Goldfinch' / Goldfinch Shasta Daisy	10 Flat		18" o.c. 18" o.c.	5 13				
000000000000000000000000000000000000000				00 0	10 0.0.	13				

APPROVED BY: ----L101

2024.09.05

HLY

PROJECT NO: 22074

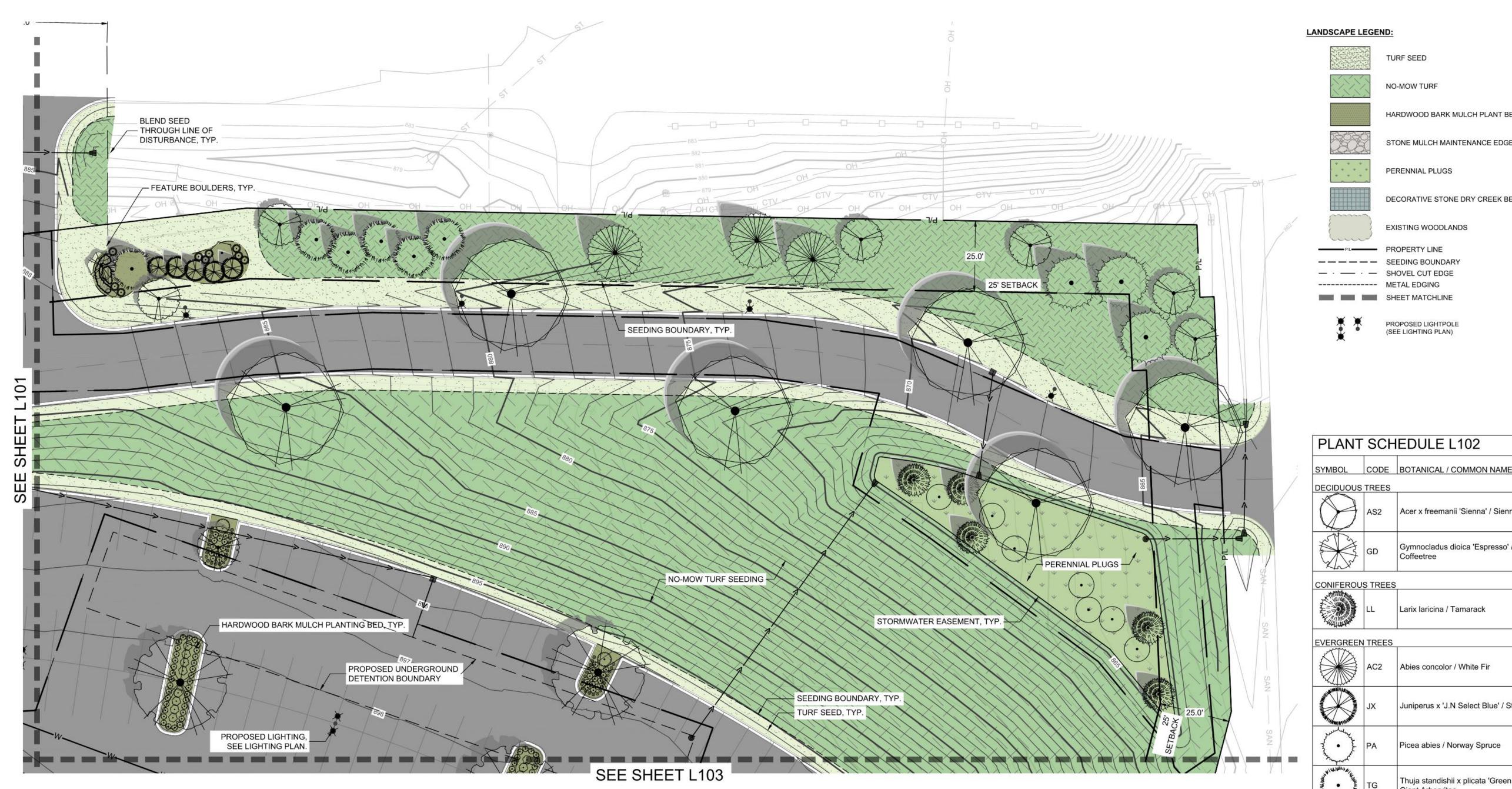
CHECKED BY: PJI

PLOT DATE:

DRAWN BY:

SHEET NO:

DESIGN DATE: 2023.11.16





MILW. AREA 259-1181

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I:\Vanman Architects\22074- Shorepoint Churce Brockfield 000 CAD\030_Production Sheets\400_Landscape\L100 Overall Landscape Plan.dwg

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- 6. PROVIDE 3" DOUBLE SHREDDED BARK MULCH FOR ALL PLANTED TREES, SHRUBS AND LANDSCAPE BEDS.

NO-MOW TURF

TURF SEED

HARDWOOD BARK MULCH PLANT BED

STONE MULCH MAINTENANCE EDGE

PERENNIAL PLUGS

DECORATIVE STONE DRY CREEK BED

Acer x freemanii 'Sienna' / Sienna Glen® Maple

EXISTING WOODLANDS

PROPERTY LINE - - - - - SEEDING BOUNDARY SHOVEL CUT EDGE METAL EDGING SHEET MATCHLINE

PROPOSED LIGHTPOLE (SEE LIGHTING PLAN)

AS2

JX

PA

TG

MR2

MR

CS2

HB

HL

SM

HR

HX

ES

ORNAMENTAL GRASSES

DECIDUOUS SHRUBS

minne

 \rightarrow

•

•

PERENNIALS

•

•

PERENNIAL

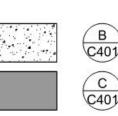
ORNAMENTAL TREES

Dogwood

Hydrangea

Daylily

SYMBOL CODE BOTANICAL / COMMON NAME



5" THICK CONCRETE WALK ASPHALT SURFACE

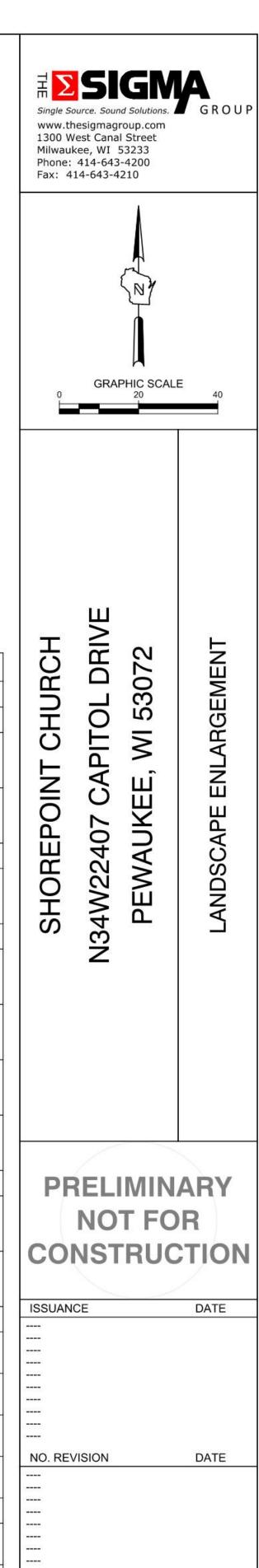
CONTAINER

YTC

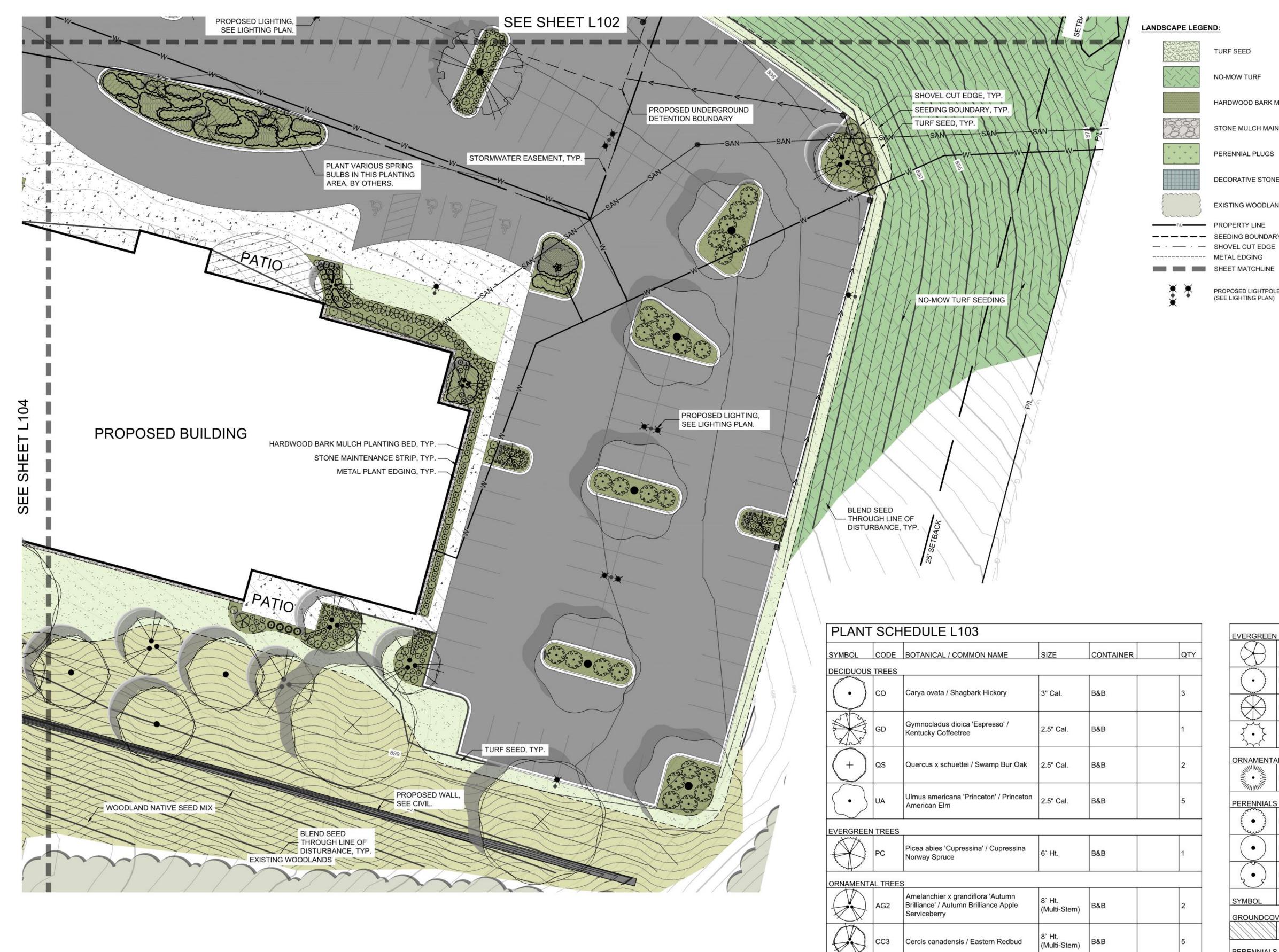
SIZE

2.5" Cal. B&B

LEGEND:



Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	2.5" Cal.	B&B	n 2	2	07 (UKE	
					1 1 2	R	
Larix laricina / Tamarack	2.5" Cal.	B&B		5	SHOREPO N34W22407 (PEV	
	8 L				<u><u></u></u>		
Abies concolor / White Fir	6` Ht.	B&B		3			
Juniperus x 'J.N Select Blue' / Star Power® Juniper	6` Ht.	B&B		5			
Picea abies / Norway Spruce	6` Ht.	B&B		3			
Thuja standishii x plicata 'Green Giant' / Green Giant Arborvitae	6` Ht.	B&B		6			
				-	PREL		Δ
Malus x 'JFS-KW5' / Royal Raindrops® Crabapple	2" Cal.	B&B		7	NO	T FO	F
Malus x 'Rejzam' / Rejoice™ Crabapple	2" Cal.	B&B		1	CONST	RUC	2
					ISSUANCE		_
Cornus sericea 'Cardinal' / Cardinal Red Twig Dogwood	3 gal.	Cont.		7			
Hydrangea paniculata 'ILVOBO' / Bobo® Panicle Hydrangea	3 gal.	Cont.		8			
Hydrangea paniculata 'Limelight' / Limelight Panicle Hydrangea	7 gal.	Cont.		1	 NO. REVISION		
Syringa patula 'Miss Kim' / Miss Kim Korean Lilac	3 gal.	Cont.		2	 		
SES							
Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.		9			
	-				·		
Hemerocallis x 'Rosy Returns' / Rosy Returns Daylily	1 gal.	Cont.		42			
Hemerocallis x 'Sunday Gloves' / Sunday Gloves Daylily	1 gal.	Cont.		62	PROJECT NO:	22074	
BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY	DESIGN DATE: PLOT DATE:	2023.11.16 2024.09.05	
Echinacea x 'G0052Y' / Summersong™ Firefinch™	10 Flat		18" o.c.		DRAWN BY:	HLY	
Coneflower Leucanthemum x superbum 'Goldfinch' / Goldfinch	TO Flat		18 O.C.	8	CHECKED BY:	PJI	
Shasta Daisy	10 Flat		18" o.c.	15	APPROVED BY:	122220	
					SHEET NO:	102)







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TURF SEED

NO-MOW TURF

HARDWOOD BARK MULCH PLANT BED

STONE MULCH MAINTENANCE EDGE

PERENNIAL PLUGS

DECORATIVE STONE DRY CREEK BED

EXISTING WOODLANDS

PROPOSED LIGHTPOLE (SEE LIGHTING PLAN)

Malus x 'JFS-KW5' / Royal Raindrops®

Hydrangea arborescens 'Annabelle' /

Rhus aromatica 'Gro-Low' / Gro-Low

Syringa patula 'Miss Kim' / Miss Kim

Hydrangea paniculata 'ILVOBO' / Bobo®

Annabelle Hydrangea

Panicle Hydrangea

Fragrant Sumac

Korean Lilac

Malus x 'Rejzam' / Rejoice™ Crabapple 2" Cal.

Crabapple

2" Cal.

3 gal.

3 gal.

3 gal.

3 gal.

B&B

B&B

Cont.

Cont.

Cont.

Cont.

39

26

MR2

MR

HA

HB

RA

SM

AX

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20.30

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· · 5

DECIDUOUS SHRUBS

LEGEND:

5" THICK CONCRETE WALK

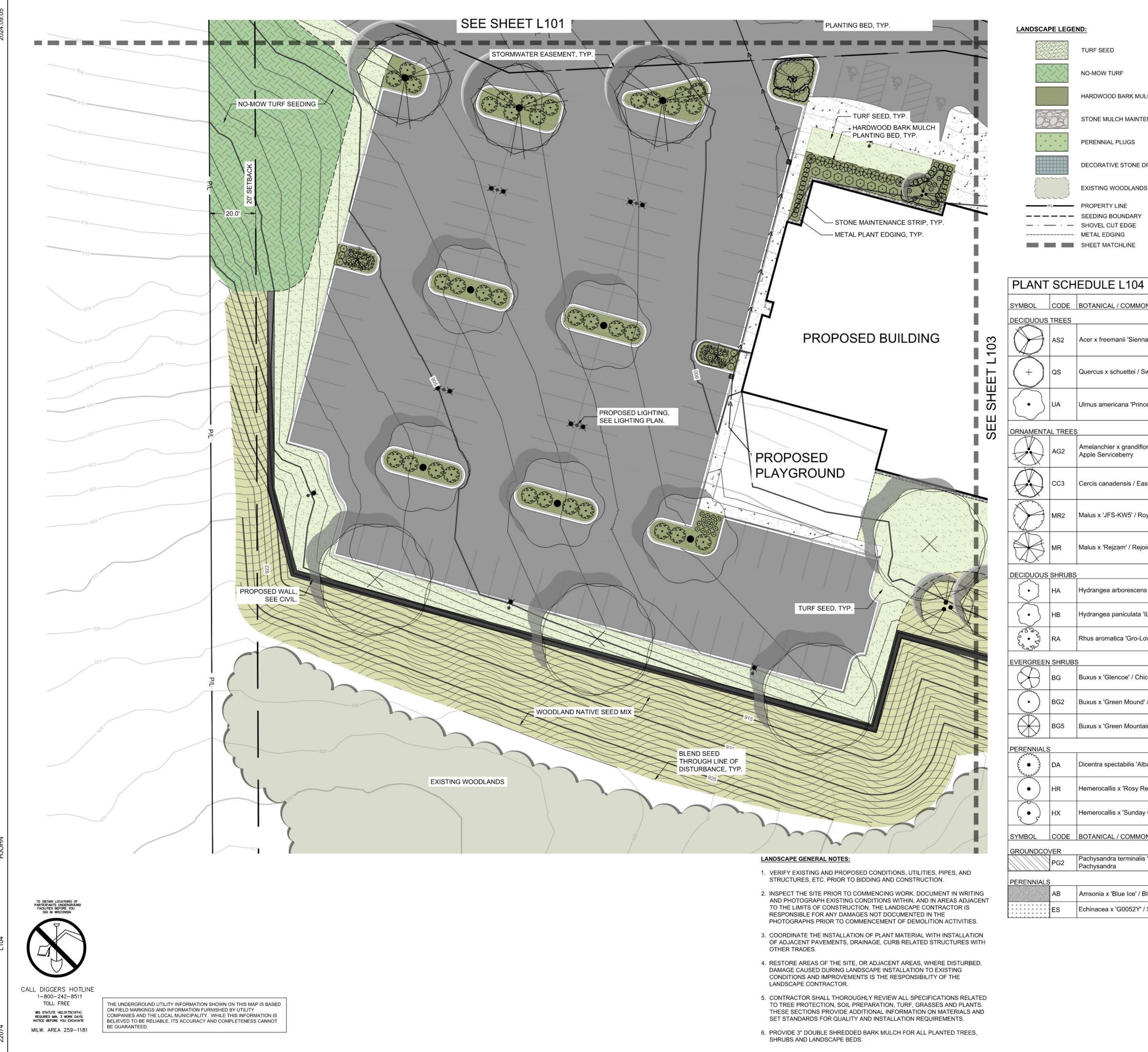
C401 ASPHALT SURFACE

C40

🗄 🔁 SIGMA Single Source. Sound Solutions. GROUP www.thesigmagroup.com 1300 West Canal Street Milwaukee, WI 53233 Phone: 414-643-4200 Fax: 414-643-4210 GRAPHIC SCALE DRIVE CHURCH ENLARGEMENT 2 307 PITOL ù $\overline{\mathbf{x}}$ **UIN** \triangleleft ш Ú Щ APE 2407 ۵ WAUI ш LANDSC/ SHOR N34W2 Ы PRELIMINARY **NOT FOR** CONSTRUCTION ISSUANCE DATE --------DATE NO. REVISION PROJECT NO: 22074 DESIGN DATE: 2023.11.16 PLOT DATE: 2024.09.05 DRAWN BY: HLY CHECKED BY: PJI APPROVED BY: ----SHEET NO:

L103

EVERGREE	N SHRUB	<u>s</u>				-
\otimes	BG	Buxus x 'Glencoe' / Chicagoland Green® Boxwood	5 gal.	Cont.		19
\odot	BG2	Buxus x 'Green Mound' / Green Mound Boxwood	3 gal.	Cont.		20
\bigotimes	BG5	Buxus x 'Green Mountain' / Green Mountain Boxwood	3 gal.	Cont.		2
J. E	JY	Juniperus horizontalis 'Youngstown' / Creeping Juniper	3 gal.	Cont.		6
ORNAMENT	AL GRAS	SES				
•	PN	Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.		4
PERENNIAL	s		•			10
£	DA	Dicentra spectabilis 'Alba' / White Japanese Bleeding heart	1 gal.	Cont.		9
$\overline{\bullet}$	HR	Hemerocallis x 'Rosy Returns' / Rosy Returns Daylily	1 gal.	Cont.		68
(•)	нх	Hemerocallis x 'Sunday Gloves' / Sunday Gloves Daylily	1 gal.	Cont.		115
SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY
GROUNDCO	VER					
	PG2	Pachysandra terminalis 'Green Carpet' / Green Carpet Japanese Pachysandra	10 Flat		12" o.c.	207
PERENNIAL	S					
	AB	Amsonia x 'Blue Ice' / Blue Ice Bluestar	10 Flat		24" o.c.	151
*****	ES	Echinacea x 'G0052Y' / Summersong™ Firefinch™ Coneflower	10 Flat		18" o.c.	172
	LG	Leucanthemum x superbum 'Goldfinch' / Goldfinch Shasta Daisy	10 Flat		18" o.c.	138



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HARDWOOD BARK MULCH PLANT BED

STONE MULCH MAINTENANCE EDGE

DECORATIVE STONE DRY CREEK BED

EXISTING WOODLANDS

AL / COMMON NAME	SIZE	CONTAINER		QTY
emanii 'Sienna' / Sienna Glen® Maple	2.5" Cal.	B&B		3
schuettei / Swamp Bur Oak	2.5" Cal.	B&B		4
ericana 'Princeton' / Princeton American Elm	2.5" Cal.	B&B		5
ier x grandiflora 'Autumn Brilliance' / Autumn Brilliance viceberry	8` Ht. (Multi-Stem)	B&B		1
adensis / Eastern Redbud	8` Ht. (Multi-Stem)	B&B		1
FS-KW5' / Royal Raindrops® Crabapple	2" Cal.	B&B		1
ejzam' / Rejoice™ Crabapple	2" Cal.	B&B		2
a arborescens 'Annabelle' / Annabelle Hydrangea	3 gal.	Cont.		8
a paniculata 'ILVOBO' / Bobo® Panicle Hydrangea	3 gal.	Cont.		6
natica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	Cont.		34
		а Ж		3
Blencoe' / Chicagoland Green® Boxwood	5 gal.	Cont.		10
Green Mound' / Green Mound Boxwood	3 gal.	Cont.		29
Green Mountain' / Green Mountain Boxwood	3 gal.	Cont.		3
pectabilis 'Alba' / White Japanese Bleeding heart	1 gal.	Cont.		7
llis x 'Rosy Returns' / Rosy Returns Daylily	1 gal.	Cont.		38
llis x 'Sunday Gloves' / Sunday Gloves Daylily	1 gal.	Cont.		37
AL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY
dra terminalis 'Green Carpet' / Green Carpet Japanese dra	10 Flat		12" o.c.	170
'Blue Ice' / Blue Ice Bluestar	10 Flat		24" o.c.	49
x 'G0052Y' / Summersong™ Firefinch™ Coneflower	10 Flat		18" o.c.	26

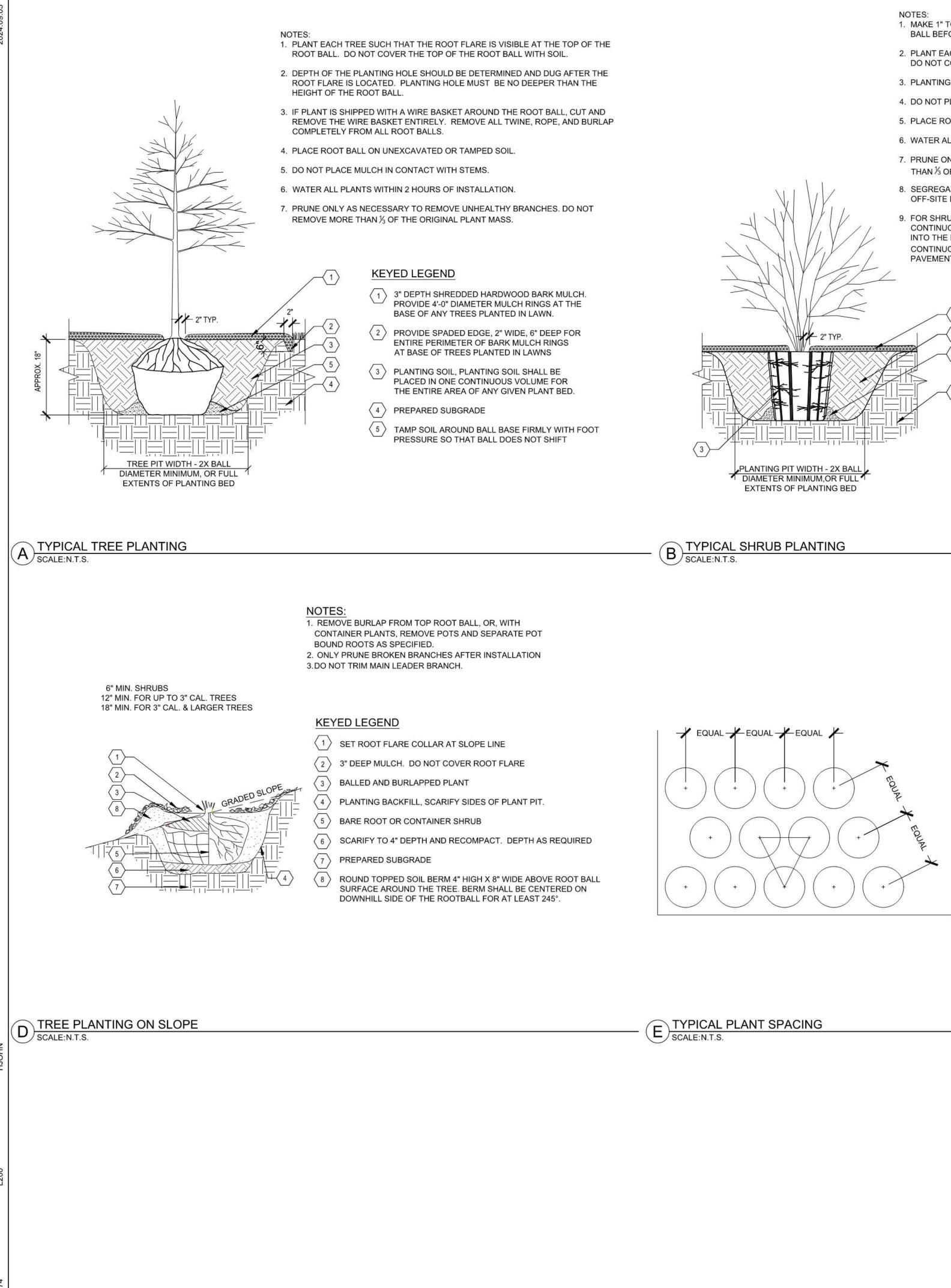
LEGEND:

B 5" THICK CONCRETE WALK

C C401 ASPHALT SURFACE



L104



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- 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 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.

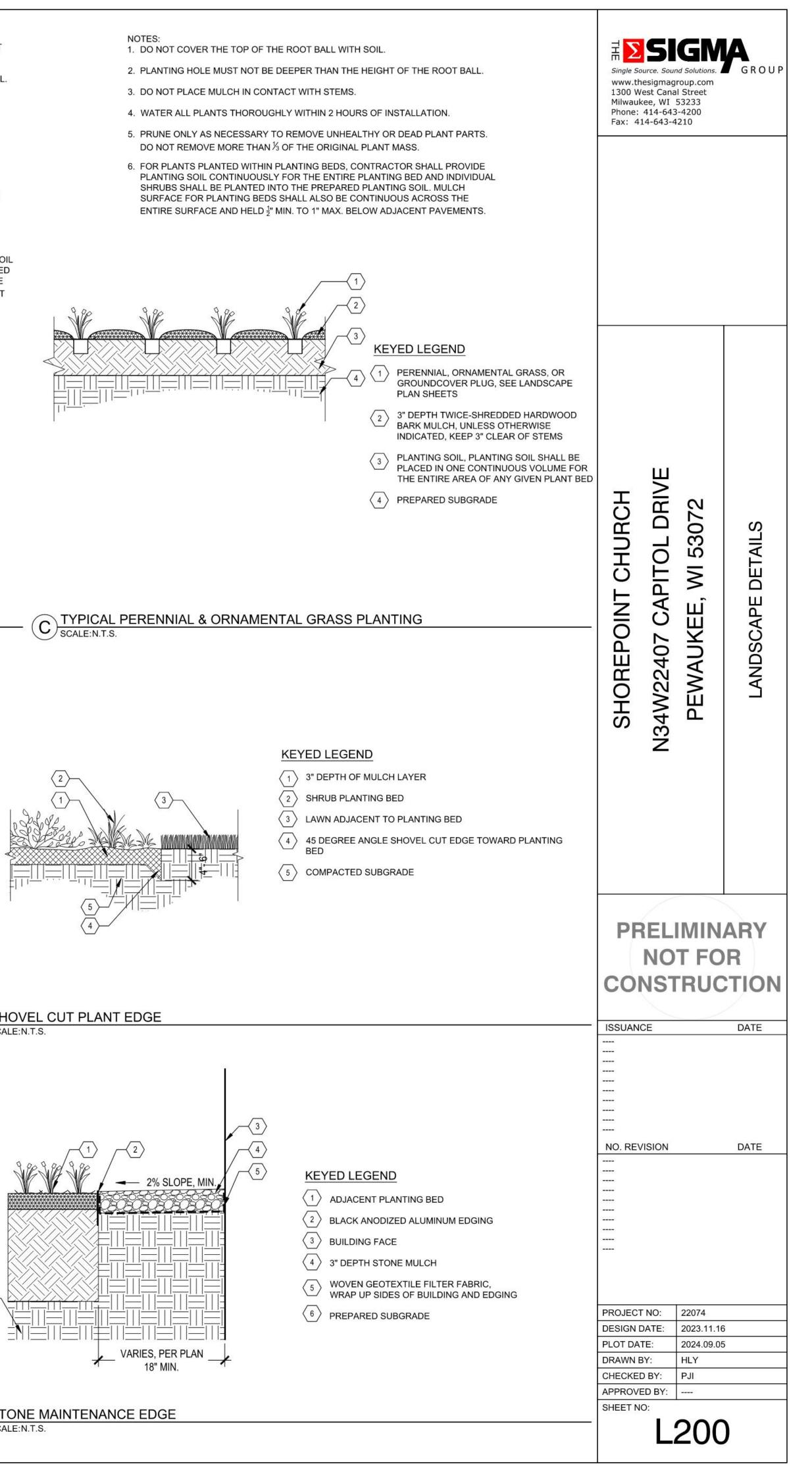
KEYED LEGEND

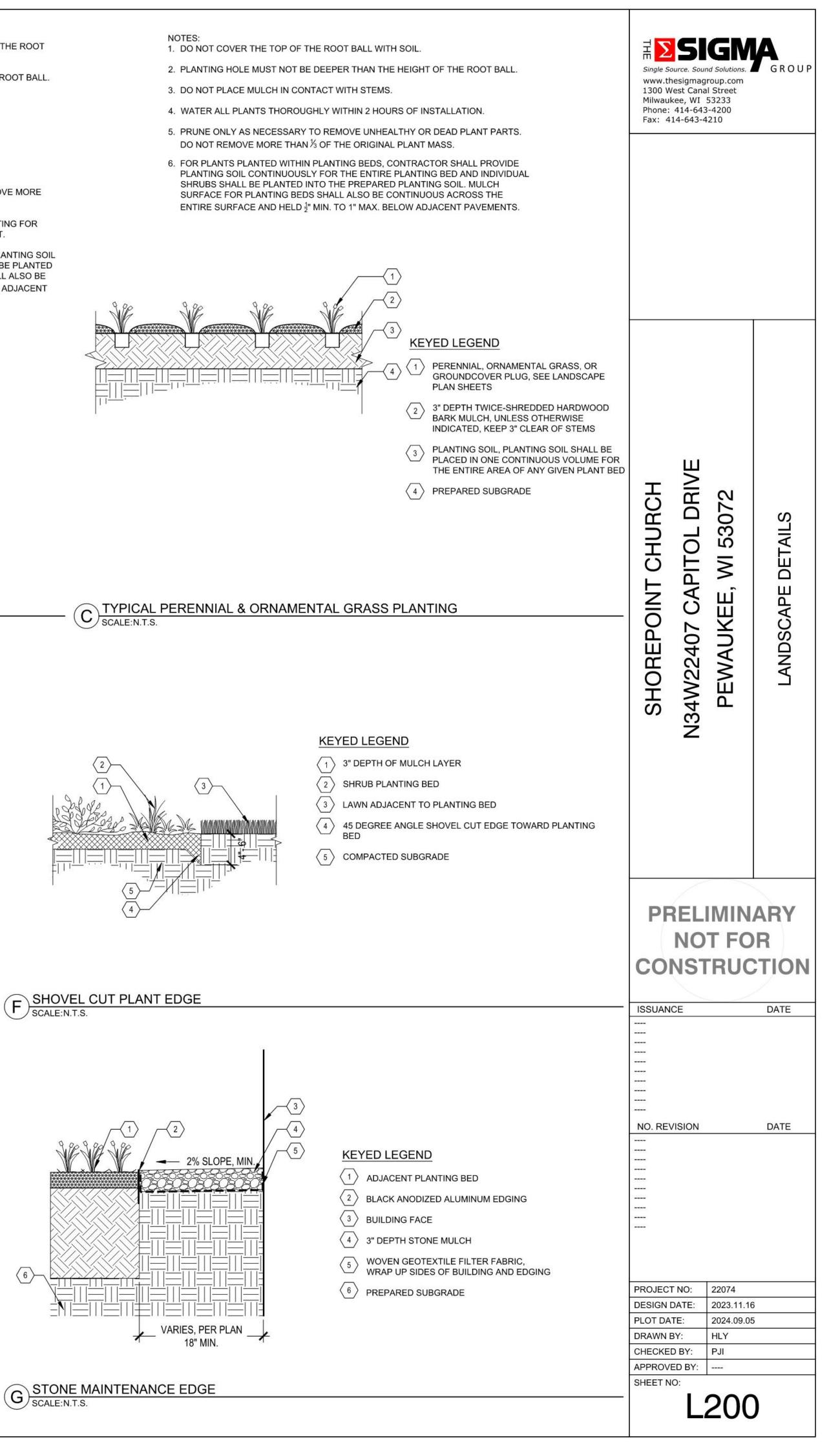
- (1) 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE INDICATED, KEEP 2" CLEAR OF STEMS
- 2 PLANTING SOIL AS SPECIFIED, PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED
- 3 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND PERIMETER
- (4) PREPARED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

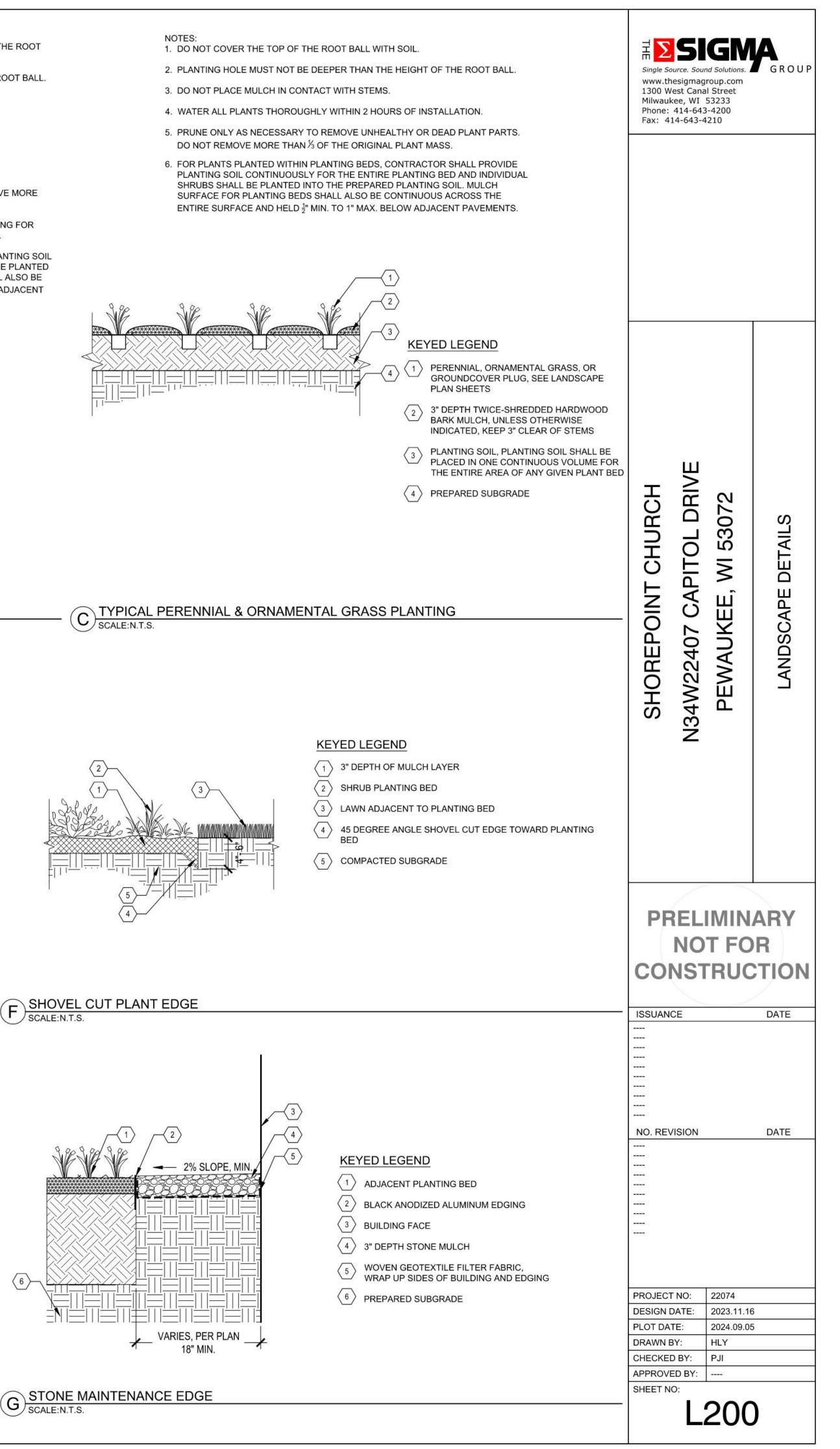
- NOTES
- 1. SET FINISH GRADE OF PLANTING AREA 2" BELOW FINISH SURFACE OF PAVING, CURB, OR HEADER
- 2. SEE PLANTING SCHEDULE FOR SPACING OF ALL
- SHRUBS AND GROUNDCOVERS
- 3. ALL SHRUBS / GROUNDCOVER TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS.
- 4. TO DETERMINE APPROPRIATE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

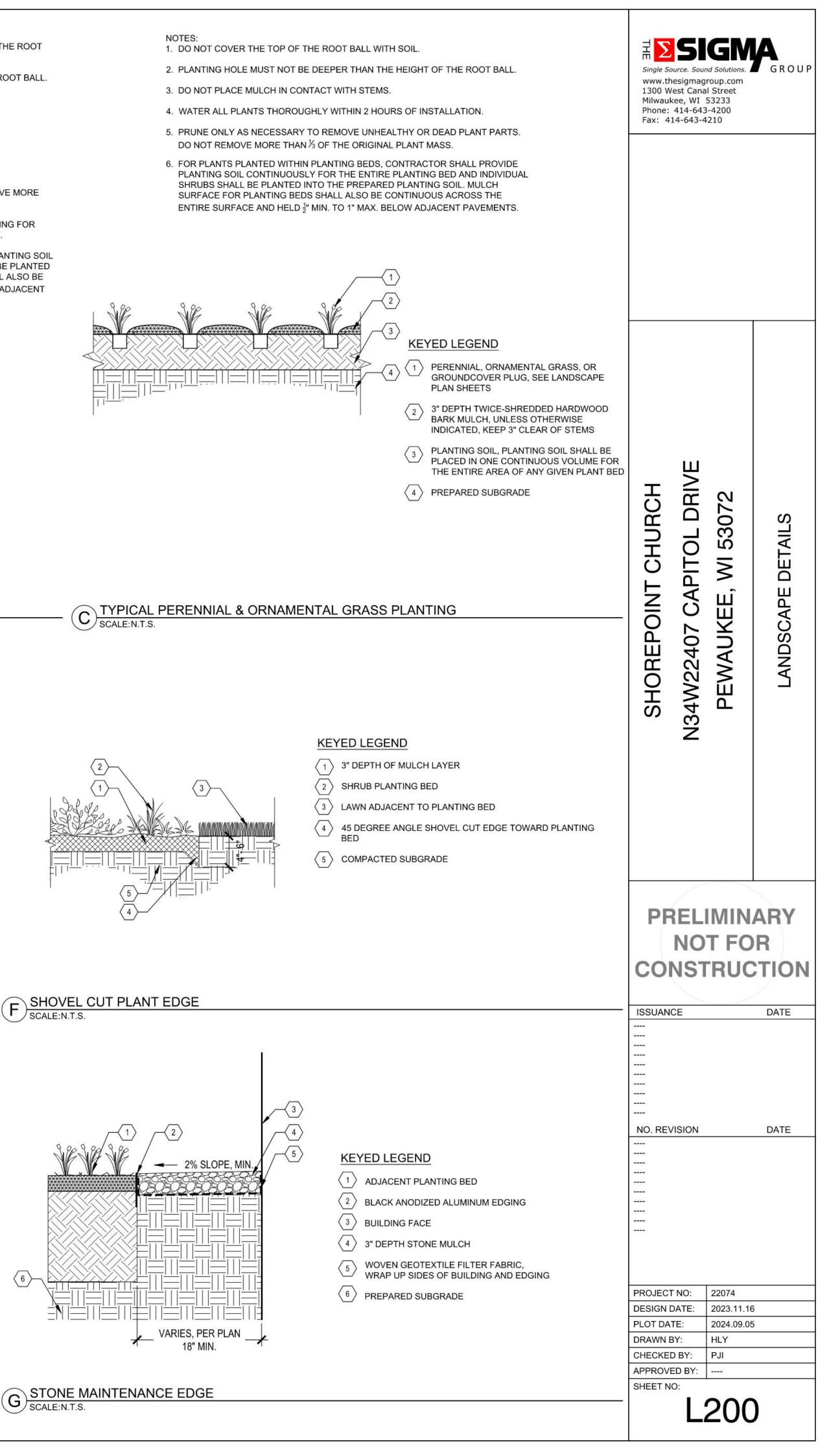
KEYED LEGEND

- (1) EDGE OF ADJACENT PAVEMENT
- 2 SHRUB, PERENNIAL OR ORNAMENTAL
- GRASS PLANT CENTER LOCATION









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.
- TREES:
- 3.1. SHALL BE TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, COMPACTNESS AND SYMMETRY. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED OTHERWISE, AND SHRUBS WITH DAMAGED OR CUT MAINSTEM(S), WILL BE REJECTED.
- 3.2. WITH A DAMAGED, CUT OR CROOKED LEADER, ABRASION OF BARK, SUNSCALD, FROST CRACK, DISFIGURING KNOTS, INSECTS (INCLUDING EGGS AND LARVAE) OR INSECT DAMAGE, CANKERS/CANKEROUS LESIONS OR FUNGAL MATS, MOLD, PREMATURELY-OPENED BUDS, OR
- CUTS OF LIMBS OVER 3/4" DIAMETER THAT ARE NOT COMPLETELY CALLUSED WILL BE REJECTED. 3.3. SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS, AND BE FREE FROM PHYSICAL DAMAGE OR OTHER HINDRANCES TO HEALTHY GROWTH.
- BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH SOLID BALLS OF A DIAMETER NOT LESS THAN THAT RECOMMENDED BY THE AMERICAN STANDARDS FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE BOTH FIBROUS AND FEEDING ROOTS. BALLS SHALL BE SECURELY WRAPPED WITH BURLAP, AND TIGHTLY BOUND WITH ROPE OR TWINE. NO PLANTS SHALL BE BOUND WITH ROPE OR WIRE IN SUCH A MANNER AS TO DAMAGE BARK OR BREAK BRANCHES. THE ROOT FLARE SHOULD BE WITHIN THE TOP 2" OF THE SOIL BALL. BALLED AND BURLAPPED PLANTS WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED, OR BROKEN BEFORE OR DURING PLANTING.

4. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED WITHIN THE PLANT SCHEDULE.

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 15 TO OCTOBER 15. 3.2. NATIVE SEEDING AND TURFGRASS: APRIL 15 - OCTOBER 15
- 4. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS.
- 5. CONTRACTOR SHALL PROTECT ALL EXISTING AND/OR NEWLY INSTALLED PLANTS, LAWNS, AND GRASS AREAS FROM DAMAGE AT ALL TIMES. DAMAGED PLANTS, LAWNS OR GRASS AREAS SHALL BE REPLACED OR TREATED AS REQUIRED TO CONFORM TO SPECIFICATIONS HEREIN FOR FRESH STOCK. WORK AREA SHALL BE KEPT CLEAN AND ORDERLY DURING THE INSTALLATION PERIOD. UNDER NO CONDITION SHALL DEBRIS FROM PLANTING ACTIVITIES RESULT IN A SAFETY HAZARD ON-SITE OR ADJACENT OFF-SITE PROPERTY. DAMAGE TO SITE IMPROVEMENTS OR ADJACENT LANDSCAPES INCURRED AS A RESULT OF PLANTING OR REPLACEMENT OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR THAT CAUSES THE DAMAGE AT NO COST TO THE OWNER.
- 6. EXAMINE AREAS TO RECEIVE PLANTS FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 6.1. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN PLANTING AREAS.
- 6.2. DO NOT MIX OR PLACE SOILS IN FROZEN, WET, OR MUDDY CONDITIONS.

PLANTING DELIVERY, STORAGE, & HANDLING:

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

EXCAVATION FOR TREES & SHRUBS

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

TREE & SHRUB PLANTING

- NO ADDITIONAL COST TO THE OWNER.
- TO THE OWNER.
- FROM ROOT BALL AREA.
- LEADERS.
- ROOT FLARE 2 INCHES ABOVE ADJACENT FINISH GRADES.
- 5.2. BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
- MORE WATER IS ABSORBED.
- OF SOIL.

TREE & SHRUB MATERIAL:

- KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.
- STEM GIRDLING ROOTS WILL BE REJECTED.
- NURSERY
- ACCEPTABLE.
- VISIBLE BEFORE PLANTING.
- 3. SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD.

PLANTING SOIL:

PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE WIDTH OF LANDSCAPE AREAS, AND A MINIMUM OF 3X THE DIAMETER OF THE ROOT BALL LENGTHWISE INSTALL PLANTING SOIL FOR PLANT BEDS IN 6" LIFTS, MINIMUM 8" DEPTH.

- DO NOT APPLY PLANTING SOIL TO SATURATED OR FROZEN SUBGRADES.
- THE PROJECT WILL ACCEPT ONLY CLEAN, SALVAGED OR IMPORTED TOPSOIL CAPABLE OF 3.1.
 - 3.2. CLAY CONTENT OF LESS THAN 25%, VERIFIED WITH A RIBBON TEST THAT YIELDS NO MORE THAN 1-INCH.

METAL EDGING

- SECTIONS TO RECEIVE STAKES.
- 1.1. BASIS OF DESIGN: CLEANLINE BY PERMALOC OR APPROVED EQUAL.
- 1.2. EDGING SIZE: 3/16-INCH-WIDE BY 5.5 INCHES DEEP 1.3. STAKES: ALUMINUM, ASTM 221, ALLOY 6061-T6, 18-INCHES LONG.
- 1.4. FINISH: BLACK DURAFLEX
- 1.5. CORPORATION, RUSSELL, J.D. COMPANY (THE), SURE-LOC EDGING CORPORATION
- 2. INSTALL METAL EDGE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- MULCH.

STONE MULCH MATERIAL & INSTALLATION:

- SUBSTANCES, OF THE FOLLOWING TYPE, SIZE RANGE, AND COLOR: 1.1. MATERIAL: ANGULAR WASHED STONE.
- 1.2. SIZE: 1-1/2" DIAMETER
- 1.3. DEPTH: 3" MINIMUM DEPTH PLACED IN ONE LIFT 1.4. COLOR RANGE: BLEND OF DARK GREY & BLUE TONES
- 2. LIGHTLY COMPACT AREAS TO RECEIVE STONE MULCH
- 3. INSTALL WEED BARRIER FABRIC IN ACCORDANCE WITH MANUFACTURER'S WRITTEN AND CONCRETE FLATWORK SO IT IS NOT VISIBLE FROM SURFACE.
- OF ADJACENT PAVED AREAS OR METAL EDGING.

BARK MULCH MATERIAL & INSTALLATION

1. TWICE-SHREDDED HARDWOOD BARK MULCH TO BE PROVIDED AS TOP-DRESSING FOR ALL AT-GRADE PLANTING BEDS IN LOCATIONS INDICATED ON PLANTING PLANS.

- 1.1. SIZE RANGE: MAXIMUM 2.5" TO 3"
- 1.2. COLOR: NATURAL, UN-DYED
- 2. KEEP BARK MULCH 2" CLEAR OF ALL STEMS OF PLANT MATERIAL

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

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

3. REMOVE ALL TWINE, STRING, WIRE, AND ALL OTHER NON-BIODEGRADABLE MATERIAL ENTIRELY

4. REMOVE ONLY DEAD, DYING, OR BROKEN BRANCHES. DO NOT PRUNE FOR SHAPE. DO CUT TREE

5. SET BALLED AND BURLAPPED STOCK PLUMB AND IN CENTER OF PLANTING PIT OR TRENCH WITH

5.1. USE SOIL MATERIALS FROM EXCAVATION FOR BACKFILL

CAREFULLY CUT AND REMOVE BURLAP, ROPE, AND WIRE BASKETS FROM THE ENTIRE ROOT BALL. REMOVE PALLETS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF ROOT

5.3. BACKFILL AROUND ROOT BALL IN LAYERS, TAMPING TO SETTLE SOIL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN PLANTING PIT IS APPROXIMATELY ONE-HALF FILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO

5.4. CONTINUE BACKFILLING PROCESS. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER

1. GENERAL: FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN AND DRAWINGS.; AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS

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

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

1.3. PLANT MATERIAL SHALL BE PROVIDED IN THE CONTAINER TYPE INDICATED IN THE DRAWINGS (B&B, CONTAINER, BARE ROOT, ETC.), UNLESS THE CONTRACTOR RECEIVES WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT THAT SUBSTITUTION OF CONTAINER TYPE IS

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

3. PLANTING SOIL SHALL BE A MIX OF 6-PARTS TOPSOIL, 1-PART COMPOST (APPROVED FOR USE ON THE PROJECT). THOROUGHLY BLEND PLANTING SOIL OFF-SITE BEFORE SPREADING.

PASSING THE 1" SIEVE, FREE OF ROCKS, DEBRIS, AND OF NOXIOUS WEEDS. 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

1. STANDARD PROFILE, COMMERCIAL-GRADE, EXTRUDED ALUMINUM EDGING, FABRICATED IN STANDARD LENGTHS WITH INTERLOCKING SECTIONS WITH LOOPS STAMPED FROM FACE OF

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: CURV-RITE, INC., PERMALOC

ENSURE THAT METAL EDGING IS PROPERLY INSTALLED AND SECURED BEFORE INSTALLING STONE

1. SHALL BE HARD, DURABLE, STONE, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN

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

INSTRUCTIONS; COMPLETELY COVER AREA TO BE MULCHED, OVERLAPPING EDGES OF FABRIC LENGTHS A MINIMUM OF 6-INCHES AND SECURING SEAMS WITH GALVANIZED PINS. WEED BARRIER FABRIC SHALL BE WRAPPED VERTICALLY UP THE OUTSIDE EDGES OF SURROUNDING CONCRETE FLATWORK OR CURB AND SECURED IN PLACE. HOLD FABRIC 2" CLEAR OF TOP OF ADJACENT CURB

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

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

TURF SEEDING:

DE	ELIVERY:	
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.	
PF	ROJECT CONDITIONS:	
2.1.	SEED DURING ONE OF THE FOLLOWING PERIODS.	
2.1.	1. SPRING SEEDING SEASON: APRIL 1 TO JUNE 15.	1
2.1.	2. FALL SEEDING SEASON: AUGUST 15 TO OCTOBER 1.	

PRODUCTS

PROVIDE THE FOLLOWING FOR TURFGRASS SEED BASIS OF DESIGN: REINDEERS DELUXE 50 SEED 3.0.1. MIX OR APPROVED EQUAL

TURFGRASS SEED MIX TO BE FERTILIZED WITH 'SCOTT'S STARTER FERTILIZER' BY THE 'SCOTTS MIRACLE-GRO COMPANY' OR APPROVED EQUAL.

- 4. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN MET 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 1 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.

NATIVE SEEDING:

- PROVIDE THE FOLLOWING SEED TYPES FROM: AGRECOL LLC 10101 N. CASEY ROAD EVANSVILLE, WISCONSIN 53536:
- 1.1. AGRECOL'S 'XXXXXX' MIX' FOR AREAS SHOWN AS 'XXXXXXX SEED MIX'
- 1.2. AGRECOL'S 'XXXXXX' SEED MIX' FOR AREAS SHOWN AS 'XXXXXXXX SEED MIX'
- 1.3. REFER TO DETAIL XXXXXX ON SHEET L2XX, FOR SEED MIX COMPOSITION.
- REFER TO CIVIL PLANS FOR LOCATIONS AND EXTENTS OF EROSION CONTROL MAT. IN GENERAL, PROVIDE CURLEX NET FREE FOR SEEDED AREAS WITH SLOPES OF 4:1 OR LESS AND CURLEX II EROSION CONTROL MAT IN ALL OTHER SEEDED AREAS. PROVIDE MANUFACTURER'S STANDARD BIODEGRADABLE ANCHORING STAKES (OR ALTERNATIVE SOURCE FOR BIODEGRADABLE STAKES, IF APPROVED IN WRITING BY OWNER'S REPRESENTATIVE). INSTALL PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
- WITHIN 4 WEEKS FOLLOWING THE ISSUANCE OF THE NOTICE TO PROCEED, SUBMIT NAME AND LOCATION OF SEED SUPPLIER(S) AND A COMPLETE LIST OF EACH SEED MIX BY WEIGHT AND PROPORTION THAT IS BEING SUPPLIED BEFORE THE SEED MIX IS ORDERED. SUBSTITUTIONS WILL NOT BE PERMITTED. PROVIDE GEOGRAPHIC ORIGINS OF EACH SEED SPECIES.
- ALL SEED MATERIAL SHALL ORIGINATE FROM LOCAL SOURCES TO THE EXTENT POSSIBLE, SPECIFICALLY FROM USDA PLANT HARDINESS ZONE 4 OR LOWER.
- 5. ALL SEEDING ZONE BOUNDARIES SHALL BE SURVEYED AND STAKED ON THE PROJECT SITE BY THE CONTRACTOR. NO SEED MIX SHALL BE INSTALLED UNTIL THE GRADE PREPARATION AND LAYOUT HAVE BEEN APPROVED.
- 6. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST SEED LIMITS WITHOUT ADJUSTING TOTAL SEEDED AREAS, TO MEET FIELD CONDITIONS, AT NO ADDITIONAL COST TO THE OWNER.
- 7. COORDINATION IS REQUIRED TO ENSURE RAINFALL/GROUNDWATER SEEPAGE DOES NOT RESULT IN SOIL MOISTURE CONDITIONS THAT WILL CAUSE EXCESSIVE RUTTING DURING SEEDING AND MULCHING OPERATIONS. FAILURE TO MEET THIS REQUIREMENT WILL NOT BE AN ACCEPTABLE REASON FOR NOT INSTALLING THE SEED AS SPECIFIED.
- 8. WHERE SEEDING OCCURS IN CLOSE PROXIMITY TO OTHER SITE IMPROVEMENTS OR AREAS TO REMAIN UNDISTURBED SUCH AS EXISTING WETLANDS AND UPLANDS AREAS, CARE SHALL BE TAKEN TO NOT DISTURB THE EXISTING CONDITIONS. ANY AREAS DAMAGED DURING PLANTING OPERATIONS SHALL BE PROMPTLY RESTORED TO THEIR ORIGINAL CONDITION AT NO COST TO THE OWNER.
- 9. FOLLOWING NATIVE SEED MIX INSTALLATION. THE LANDSCAPE ARCHITECT AND CONTRACTOR SHALL CONDUCT A SUBSTANTIAL COMPLETION INSPECTION ON ALL SEEDED AREAS. (SEE WARRANTY, MAINTENANCE AND ACCEPTANCE PERIOD)
- 10. GENERAL INSTALLATION:
- 10.1. SEEDING OF NATIVE SEED MIXES SHALL OCCUR IN THE EARLY SPRING:
- 10.1.1. APRIL 15 THROUGH MAY 31. 10.2. DO NOT SOW SEED DURING ADVERSE WEATHER OR WHEN WIND SPEEDS EXCEED TEN MILES PER HOUR.
- 10.3. DO NOT SOW SEED IN AREAS WHERE STANDING WATER IS PRESENT.
- 11. GRADE PREPARATION:
- 11.1. SUBGRADE AND FINISH GRADE PREPARATION SHALL BE IN ACCORDANCE WITH SITE EARTHWORK REQUIREMENTS, AND TOPSOIL SHALL BE A MINIMUM 4 INCHES DEEP IN NON-BIORETENTION AREAS AFTER LIGHT COMPACTION TO PREVENT SETTLEMENT. BIORETENTION AREAS SHALL HAVE SOIL MIX PLACED PER DETAIL.
- 11.2. PRIOR TO SEEDING, REPAIR ANY RUTS, RILLS, OR GULLIES GREATER THAN 2 INCHES IN DEPTH TO CREATE SMOOTH CONTINUOUS GRADES.
- 11.3. IF THE PREPARED GRADE IS ERODED OR COMPACTED BY RAINFALL OR OTHER REASONS, REWORK THE TOPSOIL TO THE FULL 4-INCH DEPTH.
- IMMEDIATELY BEFORE SEEDING, SCARIFY, LOOSEN, FLOAT, AND DRAG TOPSOIL AS NECESSARY 11.4. TO BRING IT TO THE PROPER CONDITION. REMOVE FOREIGN MATTER LARGER THAN 1-INCH DIAMETER
- 11.5. NO FURTHER GRADE PREPARATION IS REQUIRED.
- 12. IF REQUIRED DUE TO CONSTRUCTION SEQUENCING, SEED THE SITE WITH A TEMPORARY COVER CROP TO HOLD IT FOR SPRING SEEDING AS FOLLOWS:
- 12.1. IF SEEDED MAY 15 THROUGH SEPTEMBER 1: MIX OF 32 POUNDS PER ACRE OF SEED OATS (AVENA SATIVA) AND 5 POUNDS PER ACRE OF ANNUAL RYE (LOLLIUM MULTIFLORUM).
- IF SEEDED SEPTEMBER 1 THROUGH OCTOBER 15: 20 POUNDS PER ACRE WINTER WHEAT 12.2. (TRITICUM AESTIVUM) OR REGREEN STERILE WHEAT/WHEATGRASS HYBRID (TRITICUM AESTIVUM X ELYTRIGIA ELONGATAFROM).
- 13. BROADCASTING:
- 13.1. FOR SPRING SEEDING OF NATIVE SEED, SOW SEED DIRECTLY ONTO BARE GROUND OR GROUND WHERE THE PREVIOUS YEAR'S PLANT STUBBLE HAS BEEN CUT TO 2-INCH HEIGHT
- INCREASE THE VOLUME OF THE BROADCASTED SEED MIX BY MIXING IT WITH AN APPROVED 13.2. CARRIER. ACCEPTABLE CARRIER MATERIAL INCLUDES MOISTENED COMPOST, PEAT MOSS, CORN COB BLAST MEDIA, OR COARSE-GRADE VERMICULITE. SAND AND SAWDUST ARE UNACCEPTABLE CARRIER MATERIALS. USE ONE BUSHEL BASKET OF CARRIER PER 1,000 SQUARE FEET OF AREA TO BE SEEDED (A BUSHEL EQUALS 8 GALLONS OR 1.24 CUBIC FEET).
- USE HALF OF THE TOTAL SEED QUANTITY AND CROSS THE ENTIRE AREA TO BE SEEDED. 13.2.1. EVENLY SPREADING THE SEED. WALK PERPENDICULAR TO THE ORIGINAL SEEDING AND EVENLY BROADCAST THE SECOND HALF OF THE SEED.
- LIGHT SEEDS, AWNED SEEDS, OR BEARDED SEEDS TEND TO RISE TO THE TOP OF THE 13.2.2. SPREADER, THEREFORE, MIX SEED ACCORDINGLY AS PLANTING COMMENCES.
- RAKE OR DRAG THE SEED INTO THE SOIL, BUT NOT MORE THAN 1/4-INCH DEEP. ROLL THE 13.2.3. AREA WITH A ROLLER TO FIRM THE SEED INTO THE SOIL. ROLLING IS NOT NECESSARY ON DORMANT SEEDINGS.
- 14. DRILL SEEDER OR DROP SEEDER/SPREADER:
- 14.1. FOR SPRING DRILL SEEDING, SOW SEED DIRECTLY ONTO BARE GROUND OR GROUND WHERE THE PREVIOUS YEAR'S PLANT STUBBLE HAS BEEN CUT TO 2-INCH HEIGHT; FOR SPRING DROP
- SEEDING, CULTIVATE THE GROUND BEFORE INSTALLING SEED MIX. 14.2. CHECK THE EQUIPMENT FREQUENTLY TO ENSURE THE SEED IS DISPERSING EVENLY AND IS NOT CLOGGING.

MOWING FREQUENCIES WILL DEPEND ON FIELD CONDITIONS. THE NATIVE SEEDLING/GRASS AREAS SHOULD NEVER BE MOWED SHORTER THAN SIX (6) INCHES. GROWTH OF THE VEGETATION ALONG THE WATER'S EDGE (WHERE APPLICABLE) WILL PROVIDE BANK STABILIZATION. THE VEGETATION SHOULD PREVENT NUISANCE LEVELS OF GEESE IN WATERWAYS, WHICH WOULD ADD TO THE NUTRIENT LEVEL IN THE WATER AND FURTHER DEGRADE THE WATER QUALITY. IN ADDITION, THE GROUND SLOPE ABOVE NORMAL WATER ELEVATION SHOULD PROVIDE GOOD DRAINAGE OF THE SURFACE SOILS REDUCE PONDING, AND THUS MOSQUITO HABITAT. THE NATIVE VEGETATION WILL PROVIDE HABITAT CONDUCIVE TO THE BREEDING AND ESTABLISHMENT OF EFFECTIVE MOSQUITO PREDATORS SUCH AS DRAGONFLIES. MOWING SHOULD BE DONE THREE (3) TIMES DURING THE ESTABLISHMENT PERIOD:

HOWEVER, SHOULD BE DONE ANNUALLY. BURNING (IF APPROPRIATE FOR SITE): PRIOR TO BURNING, CONTACT WITH THE LOCAL MUNICIPALITY / FIRE DEPARTMENT IS REQUIRED. SOME MUNICIPALITIES MAY HAVE RESTRICTIONS ON OPEN BURNING, OR ONLY ALLOW SUCH PRACTICES AT CERTAIN TIMES. ADDITIONALLY, A PERMIT TO BURN MAY BE REQUIRED IN SOME MUNICIPALITIES. THE SUPERVISING CREW SHOULD BE COMPRISED OF EXPERIENCED PROFESSIONALS WHO ARE TRAINED AND CERTIFIED IN THESE TYPES OF PRESCRIBED BURNS.

IF ALLOWED BY LOCAL CODE AND ORDINANCES, ONLY BURN WHEN THE DEAD VEGETATION MATTER CAN SUSTAIN FIRE. WET OR DAMP PLANT MATTER IS NOT EFFECTIVE IN A CONTROL BURN SETTING. IT MAY TAKE UP TO THREE (3) YEARS FOR A NEWLY PLANTED PRAIRIE TO HAVE ENOUGH "FUEL" TO STAGE AN EFFETIVE CONTROLLED BURN.

14.3. IF THE EQUIPMENT IS NOT EQUIPPED WITH A ROLLER, PASS OVER THE SEEDED AREA WITH A ROLLER TO FIRM THE SEED INTO THE SOIL. ROLLING IS NOT NECESSARY WITH DORMANT SEEDING

14.3.1. DO NOT MIX THE NATIVE SEED WITH ANY CARRIER MATERIAL.

- 14.3.2. EVENLY DISTRIBUTE THE SEED ACROSS THE ENTIRE SITE TO BE SEEDED
- 14.4. KEEP THE TOPSOIL MOIST (TO A DEPTH OF 3 INCHES) FOR 3-6 WEEKS FOLLOWING SEEDING AFTERWARD, APPLY ONE INCH OF WATER DURING THE GROWING SEASON IF RAIN HAS NOT OCCURRED FOR MORE THAN ONE WEEK. DO NOT APPLY WATER WITH SUCH A FORCE AS TO DISTURB SEED, SEEDLINGS, AND/OR TOPSOIL, OR THAT WOULD RUN OFF SOIL SURFACE. 15. ALL AREAS OVER WHICH HAULING OPERATIONS HAVE BEEN CONDUCTED SHALL BE KEPT CLEAN ON
- A DAILY BASIS. PROMPTLY REMOVE ALL MATERIALS SPILLED ON PAVEMENT. 16. UPON COMPLETION OF SEED INSTALLATION, REMOVE FROM THE SITE AND LEGALLY DISPOSE OF ALL TRASH AND DEBRIS INCLUDING ANY MATERIAL REMOVED DURING GRADE PREPARATION.
- 17. RESTORE ANY EXISTING AREAS DAMAGED BY OPERATIONS UNDER THE CONTRACT. RESTORATION SHALL INCLUDE FINISH GRADING AND SEEDING AS REQUIRED TO MATCH EXISTING GRADE AND/OR
- 18. ANY DAMAGE BY THE CONTRACTOR TO ESTABLISHED OR NEWLY SEEDED AREAS NOT WITHIN THE PROJECT SCOPE OF WORK SHALL BE REPAIRED AND RESEEDED AT NO COST TO THE OWNER.

CLEAN-UP AND PROTECTION

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

VEGETATION MONITORING AND MANAGEMENT

WETLANDS, AND MAINTENANCE OF RESTORED AREAS.

MANAGEMENT AND MONITORING:

THE MANAGEMENT AND MONITORING OF NATIVE PLANTINGS (INCLUDING SEED MIXES, FORBS AND PLUGS) SHOULD BE DIRECTED TOWARD THE GOAL OF CREATING A STABLE, NATIVE PLANT COMMUNITY. INVASIVE AND WEEDY PLANT SPECIES WILL NEED TO BE CONTROLLED UNTIL THE DESIRED NATIVE PLANT COMMUNITIES ARE ESTABLISHED. THIS TYPICALLY WILL TAKE THREE (3) TO FIVE (5) YEARS AFTER SOWING OR PLUG INSTALLATION.

UNDESIRABLE PLANT CONTROL:

OVERALL MANAGEMENT OF VEGETATED AREAS MAY INCLUDE, BUT ARE NOT LIMITED TO: RESEEDING OR REPLANTING DAMAGED OR NON-ACTIVE GROWTH AREAS, IRRIGATION, STRATEGIC MOWING TO REDUCE WEED COVER AND PREVENT WEED SEED SET, REMOVAL OF TREE SEEDLINGS, TARGETED HERBICIDE APPLICATION(S), AND MECHANICAL WEED CONTROL (HAND PULLING AND SEED HEAD REMOVAL). SELECTED HERBICIDE APPLICATIONS SHOULD BE DONE SPARINGLY AND ONLY WHEN NECESSARY. SELECTION OF HERBICIDE FOR USE MUST CONSIDER THE PROXIMITY TO THE WATERWAY, IN COMPLIANCE WITH STATE AND APPLICABLE FEDERAL LAW.

SHORT-TERM VEGETATION MANAGEMENT:

SHORT-TERM VEGETATION MANAGEMENT (MAINTENANCE PERIOD AFTER SEEDING/PLUG INSTALLATION) OCCURS WHILE THE LANDSCAPE CONTRACTOR OR SPECIALTY SEEDING/ RESTORATION CONTRACTOR IS RESPONSIBLE TO THE PROJECT OWNER FOR THE GUARANTEE OF ALL PLANTINGS TO BE ALIVE AND IN VIGOROUS GROWING CONDITIONS. SEEDING SHOULD ACHIEVE AN AVERAGE OF 80% VEGETATION COVERAGE FROM SPECIFIED SEED MIXES. IF UNSATISFACTORY PLANTS ARE FOUND ON SITE, THEY SHOULD BE REPLACED BY THE LANDSCAPE CONTRACTOR OF SPECIALTY SEEDING/RESTORATION CONTRACTOR DURING THE FIRST MONTH OF THE NEXT FAVORABLE PLANTING SEASON. SUPPLEMENTAL SEEDING WILL BE NEEDED TO FILL IN BARE SPOTS WHERE NATIVE SEED GERMINATION IS POOR. IT IS ALSO THE LANDSCAPE CONTRACTOR / SPECIALTY SEEDING/RESTORATION CONTRACTOR'S RESPONSIBILITY TO ELIMINATE ALL NOXIOUS WEED GROWTH FROM THE SITE DURING THIS GUARANTEE PERIOD.

INSPECTIONS SHOULD BE MADE FREQUENTLY DURING THE GROWING SEASON TO PROPERLY DOCUMENT ANY INVASIVE SPECIES, WEEDS, DEHYDRATION, DAMAGE, EROSION, DISEASES, BARE AREAS, AND PESTS. THE NECESSARY REPAIRS, TREATMENTS, SEEDING AND PLANTING SHOULD BE DONE AS SOON AS WEATHER CONDITIONS ARE APPROPRIATE. THE INSPECTIONS AND SUBSEQUENT ACTIONS SHOULD BE PROPERLY DOCUMENTED AND GRAPHICALLY IDENTIFIED ON THE APPROVED LANDSCAPE PLAN FOR THE PROJECT.

LONG TERM VEGETATION MANAGEMENT:

LONG-TERM MANAGEMENT (AFTER MAINTENANCE AGREEMENT ENDS) WILL BE THE RESPONSIBILITY OF THE PROJECT OWNER/MANAGEMENT ASSOCIATION. LONG-TERM VEGETATION MANAGEMENT TASKS WILL INCLUDE MOWING, RESEEDING OR REPLANTING DAMAGED AREAS, REMOVAL OF TREE SEEDLINGS, TARGETED HERBICIDE APPLICATION AND MECHANICAL WEED CONTROL (HAND-PULLING AND SEED HEAD REMOVAL) AND REPAIR OF EROSION AREAS. SELECTIVE HERBICIDE APPLICATIONS SHOULD BE DONE SPARINGLY. INSPECTIONS SHOULD BE MADE FREQUENTLY DURING THE GROWING SEASON TO IDENTIFY ANY INVASIVE SPECIES, WEEDS, DEHYDRATION DAMAGE, EROSION, DISEASES, BARE AREAS, AND PESTS. THE NECESSARY REPAIRS, TREATMENTS, SEEDING AND PLANTING SHOULD BE DONE AS SOON AS WEATHER AND GROWING CONDITIONS ARE APPROPRIATE.

MOWING FREQUENCIES:

ACTIVITY	TIMING	SUGGESTED MOWING HEIGHTS	REASON
FIRST MOWING	LATE MAY- EARLY JUNE	NO LESS THAN (6) INCHES	TARGET EARLY WEEDS
SECOND MOWING	EARLY AUGUST	NO LESS THAN (12) INCHES	CONTROL WARM SEASON WEED GROWTH
THIRD MOWING	LATE OCTOBER		VEGETATION SHOULD BE DORMANT

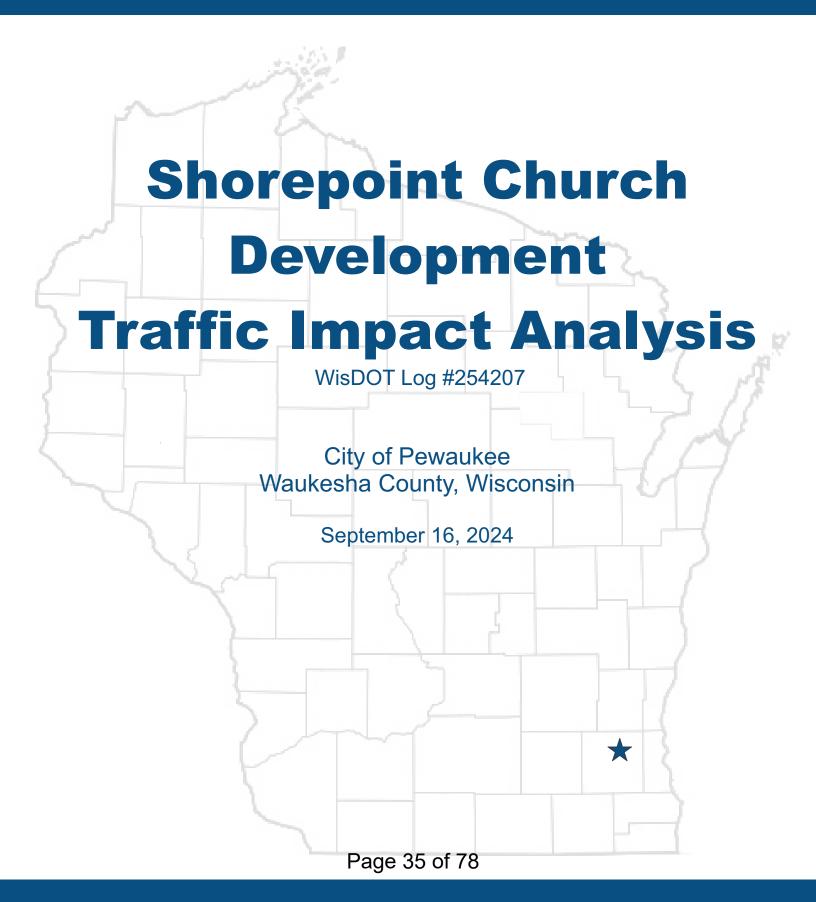
MOWING TIMES ARE APPROXIMATE; ACTUAL MOWING TIMES SHOULD BE BASED ON THE GROWTH OF NATURAL GRASSES AND UNDESIRABLE WEEDS.

AFTER THE DESIRED VEGETATION HAS BECOME ESTABLISHED THE FIRST AND SECOND MOWINGS (MAY, AUGUST) MAY NOT BE NECESSARY. THE THIRD MOWING (OCTOBER),

www.th 1300 W Milwauk Phone:		roup.com I Street 53233 -4200	A GROUP
SHOREPOINT CHURCH	N34W22407 CAPITOL DRIVE	PEWAUKEE, WI 53072	LANDSCAPE SPECIFICATIONS
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P.O. Box 128 Cedarburg, WI 53012 800.605.3091 www.tadi-us.com



TRAFFIC IMPACT ANALYSIS FOR:

SHOREPOINT CHURCH DEVELOPMENT

CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN (WisDOT Log #254207)

DATE SUBMITTED: September 16, 2024

PREPARED FOR:

Vanman Architects and Builders 6701 W 23rd Street Minneapolis, MN 55426 Phone: (763) 541-9552 Contact Persons: Angie Knodel

PREPARED BY:

Traffic Analysis & Design, Inc. P.O. Box 128 Cedarburg, WI 53012 Phone: (800) 605-3091 Contact Persons: Don Lee, P.E. John Bieberitz, P.E., PTOE

(WisDOT TIA Certification # SE05-804-046) (WisDOT TIA Certification # SE05-804-044)

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

Donald J. Lee, P.E. Wisconsin Registration #35214-006 Traffic Analysis & Design, Inc.

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Year 2026 Full Build (Both Access Driveways) Traffic – with Modifications Year 2026 Full Build (West Access Driveway Only) Traffic – with Modifications

CHAPTER I – INTRODUCTION & EXECUTIVE SUMMARY

PART A – PURPOSE OF REPORT AND STUDY OBJECTIVES

A church development is being proposed to be located along the south side of the State Trunk Highway (STH) 190, west of Duplainville Road in the City of Pewaukee, Wisconsin. Traffic Analysis & Design, Inc. has been retained to determine the additional traffic expected to be generated by the development and to identify roadway modifications, if any, attributed to the new development for the opening year (2026) full build traffic scenario.

This report documents the procedures, findings, and conclusions of the traffic impact analysis. The analysis identifies recommended modifications based on existing intersection geometrics and additional traffic expected to be generated by the proposed development within the limits of the study area.

PART B – EXECUTIVE SUMMARY

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

B1. Location of Study Site with Respect to Area Roadway Network

Based on discussions with WisDOT and the City of Pewaukee and as shown in Exhibit 1-1, the study area for the proposed church development includes the following intersections:

- Node 100: STH 190 with Wethersfield Road (one-way stop control)
- Node 200: STH 190 with Proposed West Driveway (one-way stop control)
- Node 300: STH 190 with Springdale Road/Gumina Road (traffic signal control)
- Node 400: Duplainville Road with Proposed East driveway (one-way stop control)

B2. On-Site Development Description and Timings

As shown on the conceptual site plans in Exhibit 1-2A, the following land uses are assumed for the proposed development site:

• Church – 350 attendees per service (27,745 square feet with 600 total seats)

A floor plan for the proposed church is also provided in Exhibit 1-2B. As shown, in addition to the worship space, the church is expected to include classrooms, meeting rooms and common spaces for gathering before and after services. The classrooms are not intended for weekday school use. Parking is proposed along the north, east and west sides of the building with 300 total spaces provided.

Based on discussions with the church administration, service schedules are planned for Sunday mornings at 9:00am and 10:30am with services lasting 60 to 70 minutes. This is the same schedule as the adjacent Spring Creek Church located at the Capitol Drive intersection with Springdale Road. Attendance at the two services for the proposed church are expected to be similar.

It is anticipated that the full buildout will occur in Year 2026; therefore, full build out of the church development site is included in the year 2026 full build traffic scenario.

B3. Off-Site Development Description and Timings

No off-site developments were identified within the study area.

B4. Generated Traffic

Upon full build-out, the proposed church development is expected to generate 305 new trips (150 entering/155 exiting) during each of the Sunday morning services.

B5. Site Access

As shown on the conceptual site plan in Exhibit 1-2A, two access driveways are proposed for the church development. A right-in/right-out driveway is proposed along Capitol Drive, located about 1,200-feet east of Wethersfield Road. A second potential full access driveway is proposed along Duplainville Road, located immediately south of the Capitol Drive overpass bridge. The TIA analyzed the study intersections with and without the second access on Duplainville Road.

B6. Year 2024 Existing Traffic – Recommended Modifications

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual* (HCM), 6th *Edition*. Intersection operation is defined by "level of service." Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A,' to very poor, represented by LOS 'F.' For the purpose of this study, LOS D or better was used to define desirable peak hour operating conditions.

The Year 2024 existing traffic volumes do not include any proposed development. The analysis was conducted using existing intersection geometrics and traffic control. No modifications are recommended to accommodate the Year 2024 existing traffic volume conditions.

All movements at the study area intersections are currently operating acceptably at LOS D or better under the Year 2024 existing traffic volume conditions under current traffic volume conditions during the two Sunday morning peak periods except the southbound movements at the Capitol Drive intersection with Wethersfield Road which are currently operating at LOS F during the typical Sunday morning 11:30 am peak hour.

B7. Year 2026 Full Build Traffic – Recommended Modifications

Year 2026 full build (with development) traffic volumes include full build out of the church development site located along the south side of the STH 190 immediately west of Duplainville Road. The following modifications, as shown in Exhibit 1-3, are recommended to accommodate the full build traffic volumes.

Node 100: STH 190 & Wethersfield Road

• No modifications recommended.

Node 200: STH 190 & Proposed West Driveway

- Provide a new right-in/right-out driveway on the south approach as shown on the site plan.
- Provide stop sign control on the south approach of the new access driveway.
- Provide a dedicated right-turn lane on the west approach.

Node 300: STH 190 & Springdale Road/Gumina Road

• No modifications recommended.

Node 400: Duplainville Road & Proposed East Driveway

- Provide a full access driveway on the west approach as shown on the site plan.
- Provide stop sign control on the west approach of the new access driveway.

Higher delays are currently being experienced for the southbound movements at the Capitol Drive intersection with Wethersfield Road during the typical late Sunday morning service discharge peak hour. However, with excess capacity at the intersection (V/C less than 0.25), relatively low volumes on this southbound approach (less than 20 vehicles during any peak hour) and queues of only about 1 vehicle, no modifications are recommended for this condition.

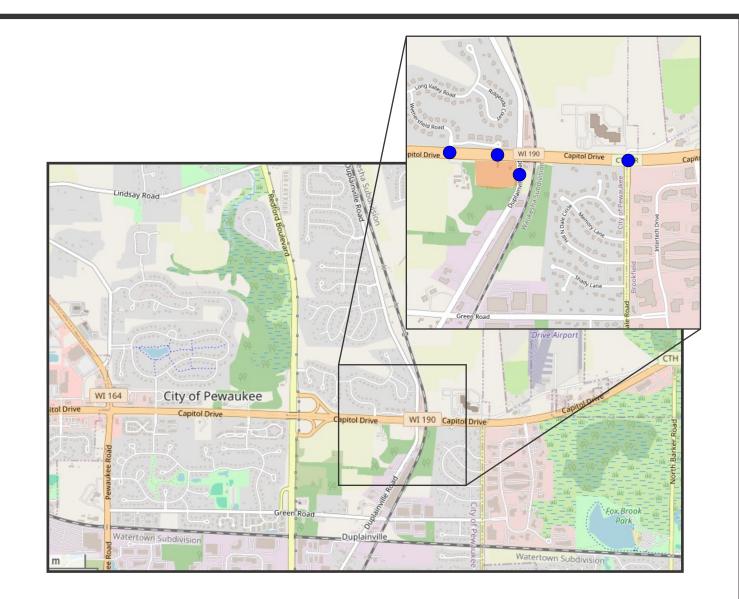
Under the full build traffic conditions, regardless of the access scenario constructed, delays for the southbound movements on Wethersfield Road are expected to increase during both Sunday morning service peak periods. However, under both peak periods, the capacity ratios are still less than 0.31 with queues of about 1 vehicle reported. No modifications are recommended for this condition.

Most members are expected to utilize Capitol Drive to access the site with very little traffic expected to use Duplainville Road. However, acceptable operational delays with minimal queuing are expected at both access driveways under either access option (with or without the additional access driveway onto Duplainville Road). Therefore, providing two access driveways to allow for additional access options is recommended.

Sight distance was also evaluated at the Capitol Drive intersection with the proposed access drive and all required sight distance requirements are expected to be met. Except as noted, all movements at the study area intersections are expected to continue to operate at acceptable levels at LOS D or better under the year 2026 full build (with proposed development) traffic conditions.

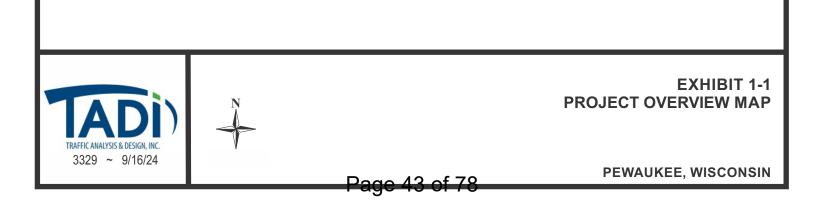
B8. Conclusion

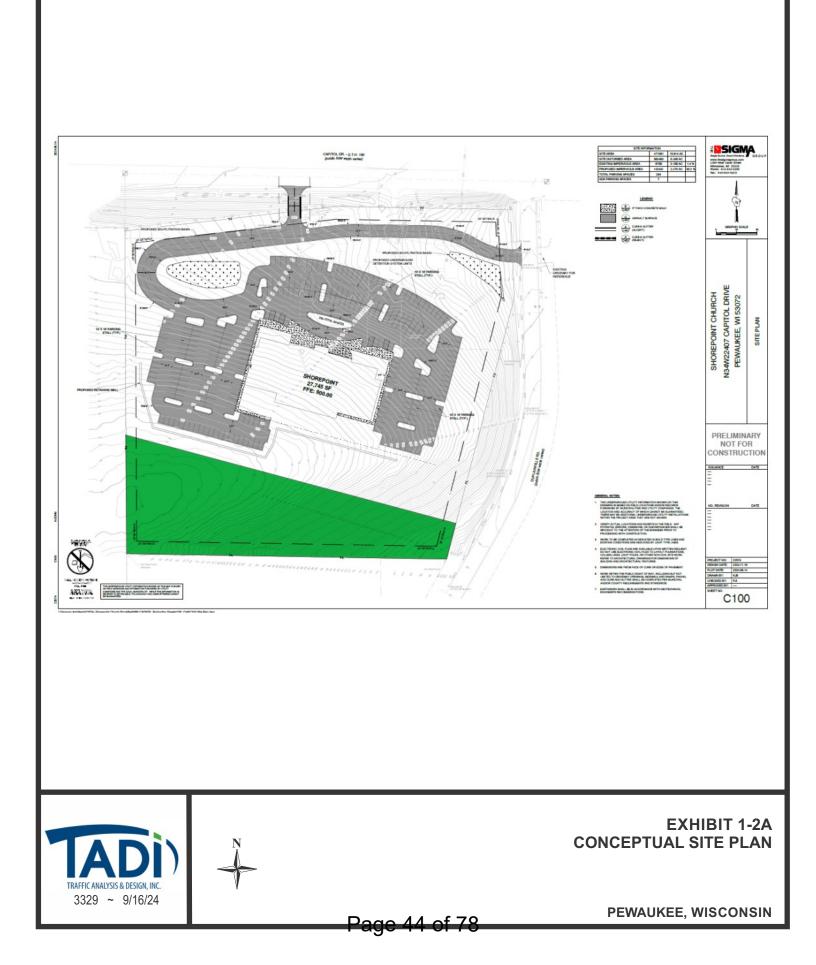
Except as noted, all movements at the study area intersections are expected to operate safely and efficiently through the opening year with the full build out of the development and the modifications identified in this TIA.

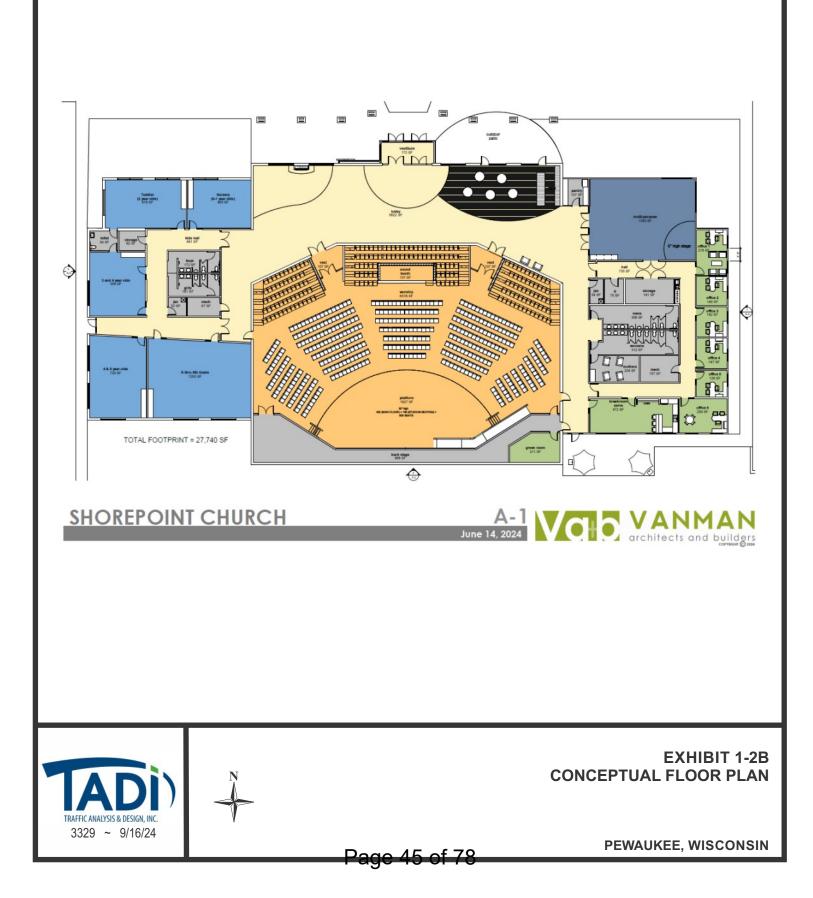


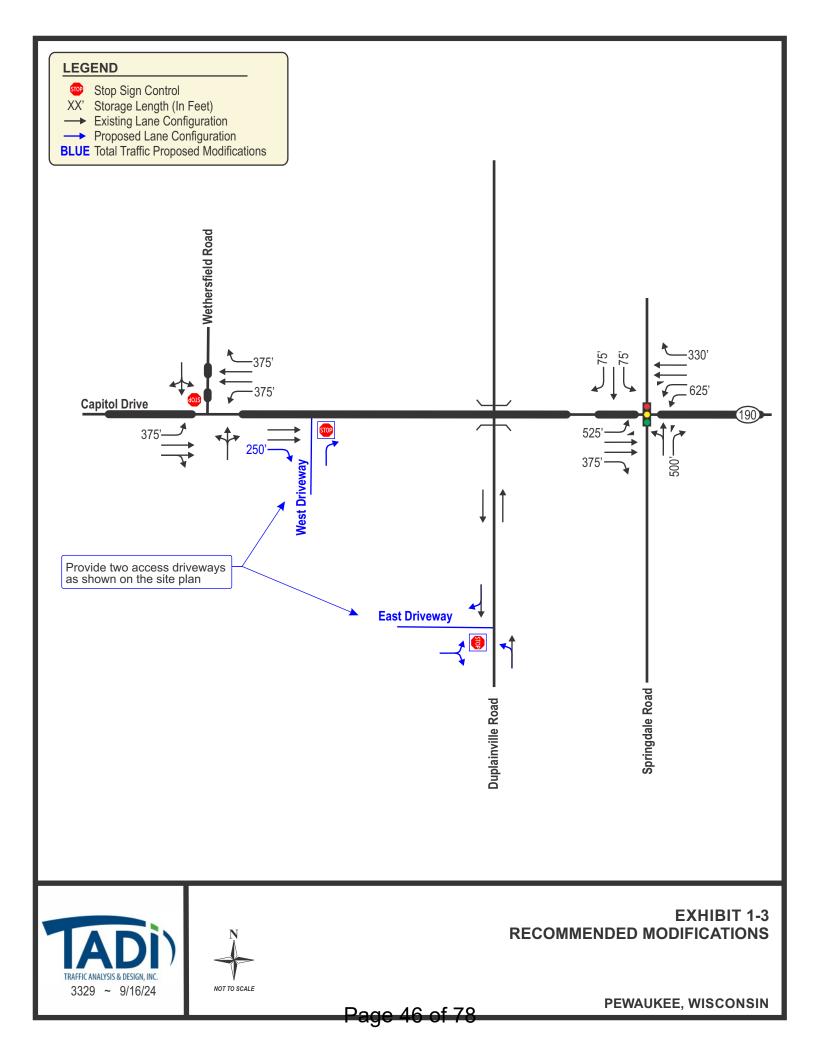












CHAPTER II – PROPOSED DEVELOPMENT

PART A – ON-SITE DEVELOPMENT

A1. Development Description and Site Location

A church development is being proposed to be located along the south side of STH 190, west of Duplainville Road in the City of Pewaukee, Wisconsin. Two access driveways are proposed for the church development. A right-in/right-out driveway is proposed along Capitol Drive, located about 1,200-feet east of Wethersfield Road. A second potential full access driveway is proposed along Duplainville Road, located immediately south of the Capitol Drive overpass bridge. The TIA analyzed the study intersections with and without the second access on Duplainville Road. A street map illustrating the location of the proposed development is shown in Exhibit 2-1.

A2. Land Use and Development Timing

The existing development site currently consists of a single residential property with an access driveway onto Capitol Drive and a second access driveway onto Duplainville Road. The western and southern portion of the parcel consist of an open field with trees along the western and southern edges of the parcel. A residential property is located immediately to the west of the site with agricultural land uses surrounding (south and west) this western neighbor parcel. Additional residential land uses also exist on the north side of Capitol Drive and further to the east along the south side of Capitol Drive. A large congregation church (Spring Creek Church) is also located to the east, on the north side of Capitol Drive at Springdale Road/Gumina Road. Finaly, light industrial properties are located along both sides of Duplainville Road to the south and southeast of the site.

As shown on the conceptual site plans in Exhibit 2-2A, the following land uses are assumed for the proposed development site:

• Church – 350 attendees per service (27,745 square feet with 600 total seats)

A floor plan for the proposed church is also provided in Exhibit 2-2B. As shown, in addition to the worship space, the church is expected to include classrooms, meeting rooms and common spaces for gathering before and after services. The classrooms are not intended for weekday school use. Parking is proposed along the north, east and west sides of the building with 300 total spaces provided.

Based on discussions with the church administration, service schedules are planned for Sunday mornings at 9:00am and 10:30am with services lasting 60 to 70 minutes. This is the same schedule as the adjacent Spring Creek Church located at the Capitol Drive intersection with Springdale Road. Attendance at the two services for the proposed church are expected to be similar.

It is anticipated that the full buildout will occur in Year 2026. A staging detail is provided in Exhibit 2-3.

PART B – STUDY AREA

B1. Influence Area

The proposed church is located along STH 190 and in close proximity to STH 164, STH 16 and CTH F to the west. The majority of the new traffic is expected to be either local or regional traffic.

B2. Area of Significant Traffic Impact

Based on discussions with WisDOT and the City of Pewaukee, the study area for the proposed church development includes the following intersections, as shown on Exhibit 2-1:

- Node 100: STH 190 with Wethersfield Road (one-way stop control)
- Node 200: STH 190 with Proposed West Driveway (one-way stop control)
- Node 300: STH 190 with Springdale Road/Gumina Road (traffic signal control)
- Node 400: Duplainville Road with Proposed East driveway (one-way stop control)

PART C – OFF-SITE LAND USE AND DEVELOPMENT

No off-site developments were identified within the study area.

PART D – SITE ACCESSIBILITY

D1. Study Area Roadways

The study area roadways are discussed below:

Capitol Drive (STH 190) is a four-lane divided Principal Arterial that runs east/west through the study area with a posted speed limit of 45 miles per hour (mph) to the west of Springdale Road and 55 mph to the east. The 2022 Average Annual Daily Traffic (AADT) volume along STH 190 was 24,300 vehicles per day (vpd) immediately west of Wethersfield Road and 29,600-vpd east of Springdale Road.

Wethersfield Road is a two-lane north/south undivided local roadway that intersects Capitol Drive as the north approach of a conventional one-way stop controlled "T" intersection and provides access to a residential neighborhood to the north. The posted speed limit on Wethersfield Road is 25 mph. There are currently no WisDOT AADT volumes along Wethersfield Road.

Duplainville Road is a two-lane north/south undivided Major Collector with a posted speed limit of 35 mph within the limits of the study area. There is no access between Duplainville Road and Capitol Drive. Duplainville Road has a 2009 AADT of 2,100-vpd immediately south of Capitol Drive and 2,300 (2015 count) to the north of Capitol Drive.

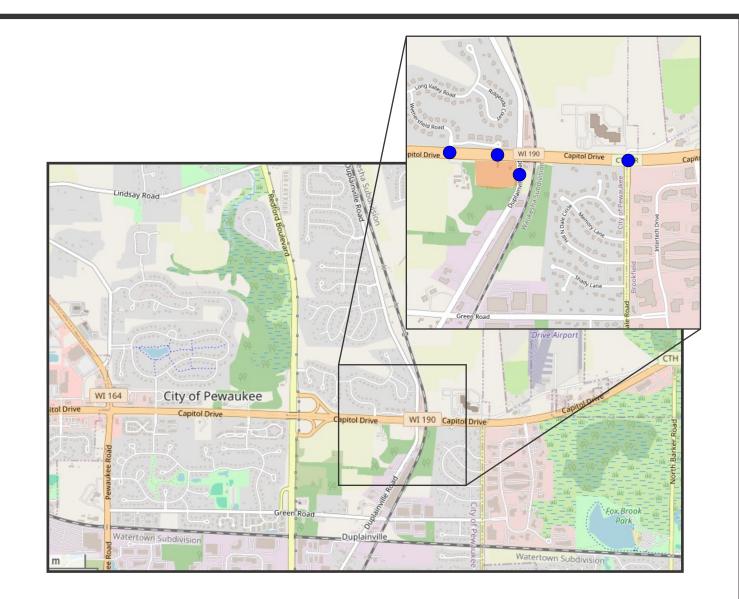
Springdale Road (CTH SR) is a two-lane north/south undivided Minor Arterial that intersects Capitol Drive from the south. North of Capitol Drive, the roadway is designated as Gumina Road. The posted speed limit on Springdale Road is 35 mph within the limits of the study area. Springdale Road has a 2022 AADT of 6,400-vpd immediately south of Capitol Drive.

Based on the WisDOT Improvement Program GIS maps, resurfacing of Capitol Drive is currently occurring to the west of CTH F, located about 1.0-miles west of the proposed development site. The work is planned to occur in the 2024 construction season (<u>https://wisdot.maps.arcgis.com/home/index.html</u>). No other improvement projects are currently anticipated within the general area.

D2. Alternative Modes of Transportation

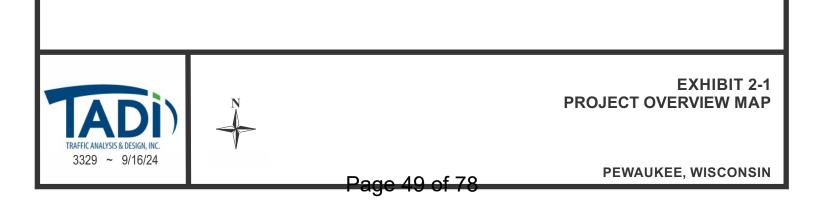
The development site is in a generally suburban area with no sidewalks along the study area roadways; however, a multi-use trail is located along the east side of Duplainville Road. No onstreet bicycle accommodations exist along the study area roadways; however wider paved shoulders are provided along Capitol Drive and narrow paved shoulders are provided along Duplainville Road and Springdale Road.

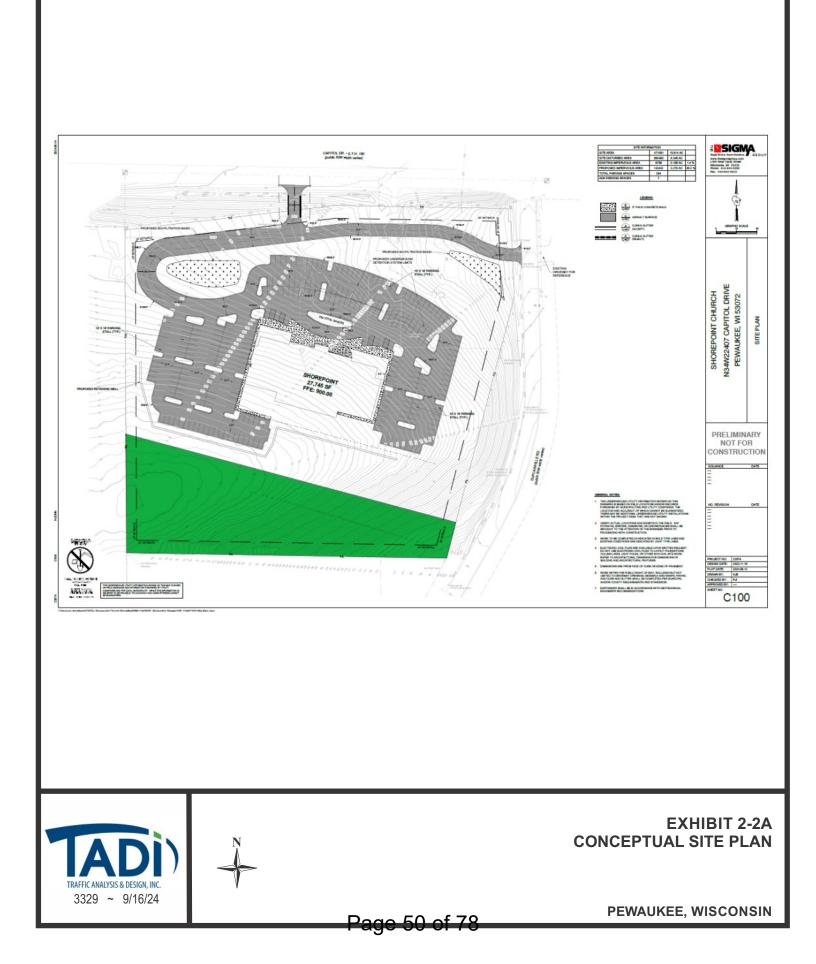
No regularly scheduled bus service exists in the study area.

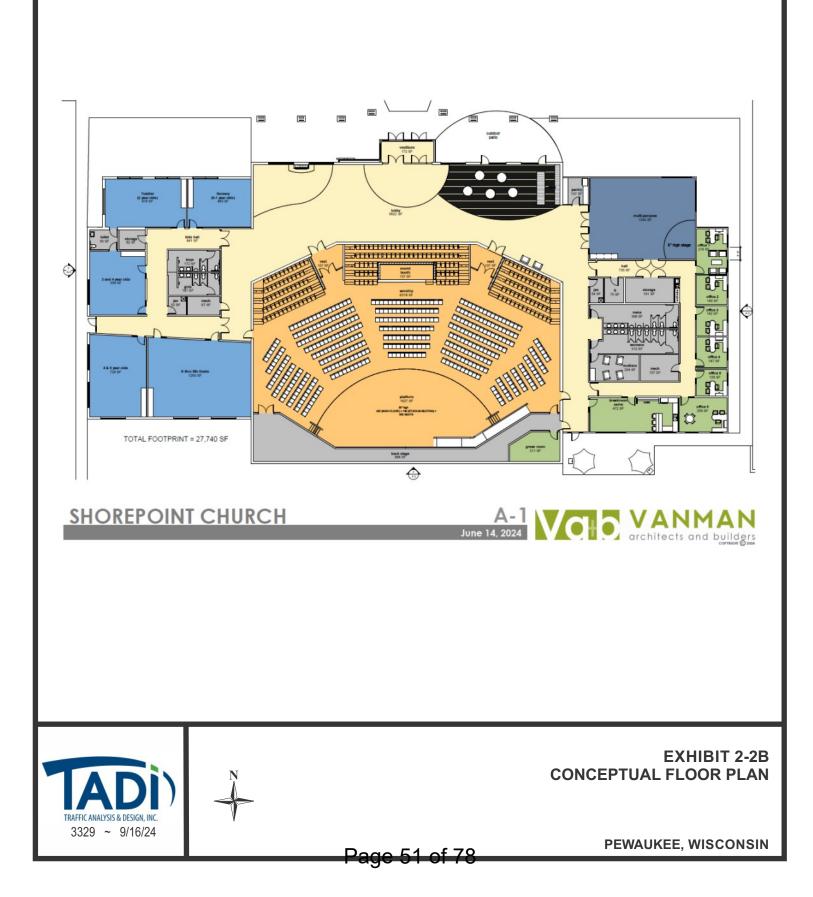




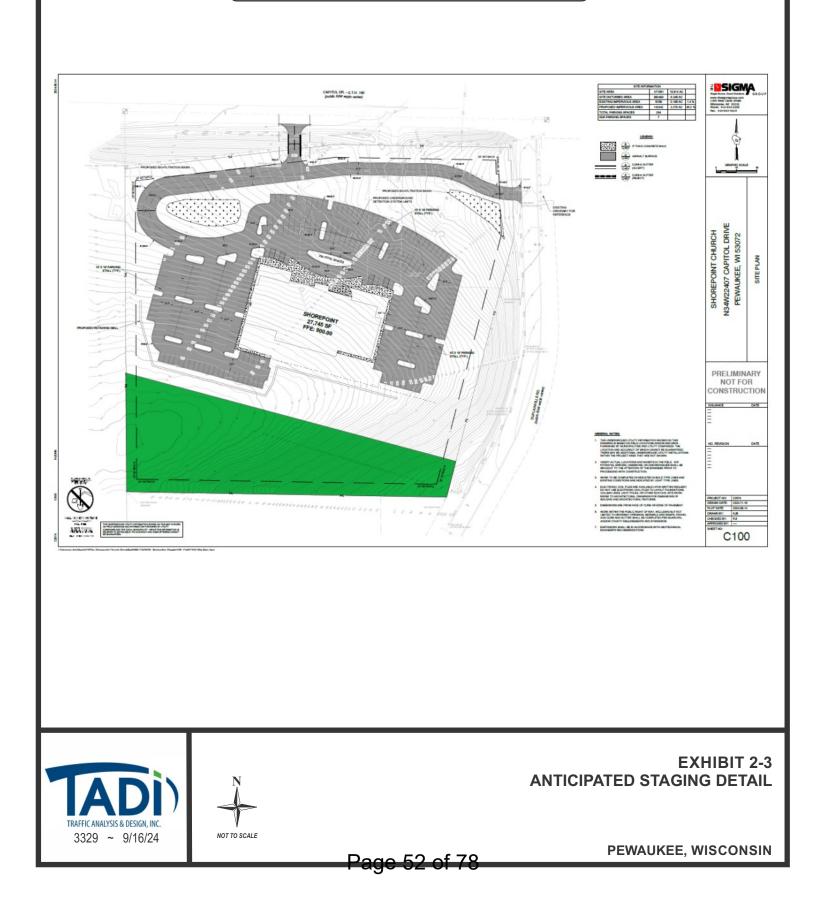








TO BE CONSTRUCTED IN ONE SINGLE STAGE



CHAPTER III – ANALYSIS OF EXISTING CONDITIONS

PART A – PHYSICAL CHARACTERISTICS

Exhibit 3-1 shows the existing transportation detail for the study area intersections. More specifically, the exhibit illustrates intersection lane configurations, intersection traffic controls, posted speed limits and approximate intersection spacing.

PART B – TRAFFIC VOLUMES

As previously stated, service schedules at the proposed church are planned for Sunday mornings at 9:00am and 10:30am with services lasting 60 to 70 minutes. Therefore, Sunday morning (8:30am to 12:30pm) turning movement counts were conducted by TADI at the STH 190 intersections with Wethersfield Road and Springdale Road in mid-August of 2024. To collect bidirectional traffic along Duplainville Road, a Wavetronix radar count was also completed on Duplainville Road, immediately south of Capitol Drive during this same time period.

Based on the August 2024 turning movement count data collected and coinciding with the proposed church service schedule departure times, the weekend/Sunday peak hours were determined to occur during the following times:

- Sunday morning (AM) peak hour: 10:15am 11:15am
- Sunday afternoon (PM) peak hour: 11:30am 12:30pm

The existing peak hour traffic volumes, balanced along the STH 190 corridor, are shown in Exhibit 3-2. All traffic count data used to determine peak hour factors and truck percentages have been included in the appendix of this study.

PART C – CAPACITY LEVEL OF SERVICE

C1. Level of Service Definitions

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual* (HCM), 6th *Edition*. Intersection operation is defined by "level of service." Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A,' to very poor, represented by LOS 'F.' For the purpose of this study, LOS D or better was used to define desirable peak hour operating conditions. Descriptions of the various levels of service are as follows:

	Signalized Intersections	Unsignalized Intersections	
	Control Delay/Vehicle	Avg. Control Delay	Relative
LOS	(sec/veh)	(sec/veh)	Delay
	≤10	≤10	
А	Free-flow traffic operations at avearge tra	avel speeds. Vehicles completely	
	unimpeded in ability to maneuver. Minima	l delay at signalized intersections.	
	> 10 - 20	> 10 - 15	Short
В	Reasonably unimpeded traffic operations		Delays
	maneuverability slightly restricted. Low tr > $20 - 35$	> 15 - 25	
С	Stable traffic operations. Lane changes be		
	reduced to half of average free flow trave		
	> 35 - 55	> 25 - 35	
D	Small increases in traffic flow can cause	increased delays. Delays likely	
	attributable to increased traffic, reduced s	ignal progression, and adverse timing.	Moderate
	> 55 - 80	> 35 - 50	Delays
Е	Significant delays. Travel speeds reduced	to one-third of average free flow travel	
	speed.		
	> 80	> 50	Long
F	Extremely low speeds. Intersection congequeues at intersections.	Delays	

Level of Service Definitions

Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010

C2. Year 2024 Existing Traffic Operations – No Modifications

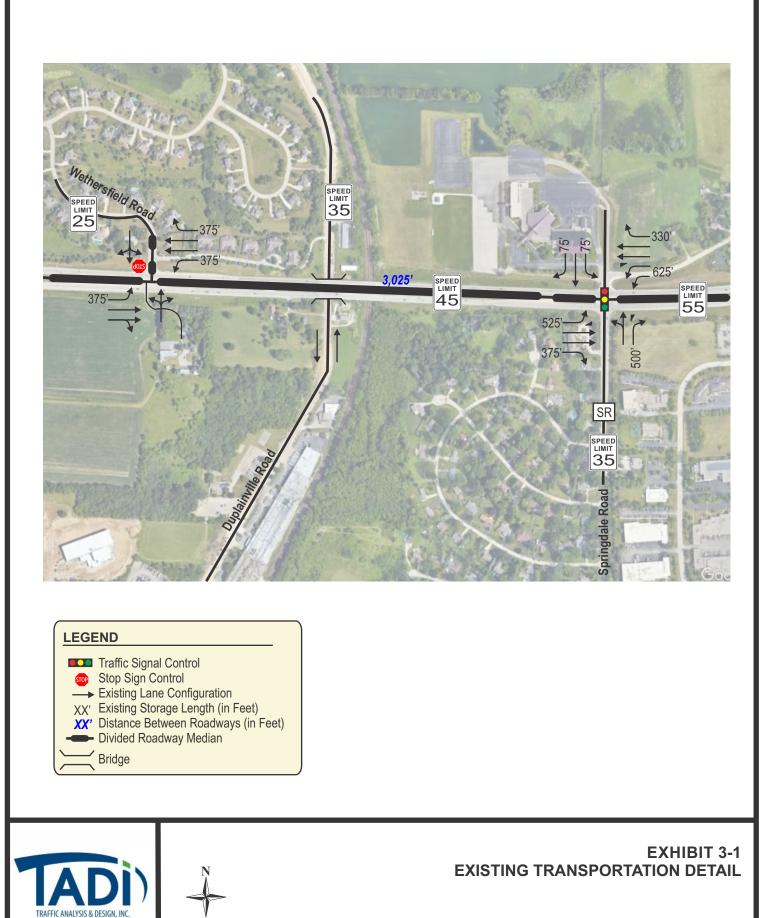
Exhibit 3-3 shows the Year 2024 existing traffic peak hour operating conditions at the study area intersections. The Year 2024 existing traffic analysis was conducted using the existing lane configurations shown in Exhibit 3-1 and the Year 2024 existing traffic volumes shown in Exhibit 3-2.

As shown in Exhibit 3-3, all study area intersections are currently operating acceptably at LOS D or better operations under the Year 2024 existing traffic volumes and current conditions during the identified Sunday peak periods except the southbound movements at the Capitol Drive intersection with Wethersfield Road which are currently operating at LOS F during the typical Sunday morning 11:30 am peak hour.

PART D – SOURCES OF DATA

The following sources of data were obtained for use in conducting this traffic study:

- Turning movement traffic counts TADI
- Existing transportation detail TADI and Google[™] Earth
- Existing sight distance imagery GoogleTM Earth
- Existing traffic signal plans and timings WisDOT
- On-site development information Vanman Architects and Builders

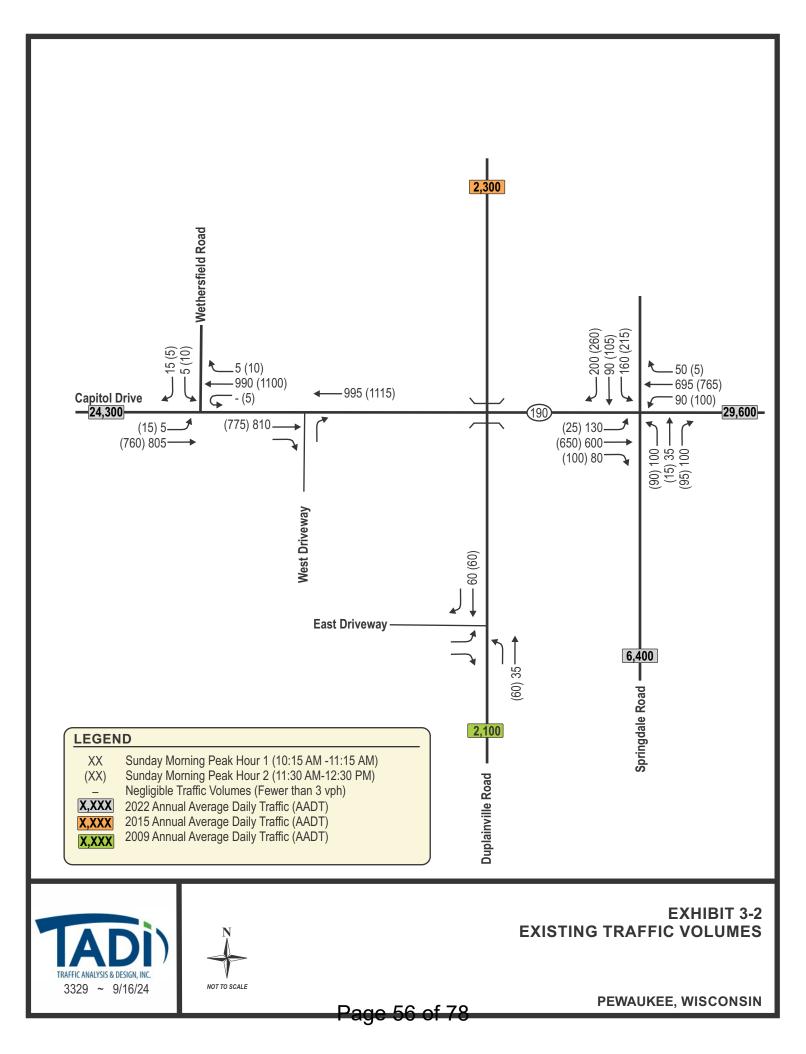


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NOT TO SCALE

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PEWAUKEE, WISCONSIN



			Level of Service (LOS) per Movement by Approach											
	Peak		Ea	stbou	nd	We	estbou	ind	Northbo	und	So	uthbo	und	LOS &
Intersection	Hour	Metric	F	→	R	۷	÷	Л	► ↑	7	R	→	R	Delay
		Lanes->	1	4		1	2	1	-			1		
Node 100: Capitol Drive/STH190 &	AM	LOS	С		*	В	*	*	-			D		
Wethersfield Road	10:15	Delay	16.3		k	10.2	*	*	-			32.0		
One-Way Stop Control	10.10	Queue	25'		ł	25'	*	*	-			25'		
		LOS	В		*	В	*	*	-			F		
	AM	Delay	12.0	3	k	14.3	*	*	-			70.3		
	11:30	v/c	-		-	-	-	-	-			0.24		
		Queue	25'		k K	25'	*	*	-			25'		
		Lanes->	-		2		2		1			-		
Node 200: Capitol Drive/STH190 &	AM	LOS	-		*		*		-			-		
Proposed West Driveway	10:15	Delay	-		*				-			-		
One-Way Stop Control		Queue	-		*		*		-			-		
	AM	LOS	-		*		*		-			-		
	11:30	Delay	-		*		*		-			-		
		Queue	-		_	_	-		-			-		
		Lanes->	1	2	1	2	2	1	1	1	1	1	1	
Node 300: Capitol Drive/STH190 &	AM	LOS	C	C	C	C	C	C	D 39.9	C	C	C	C	C
Springdale Road/Gumina Road	10:15	Delay	24.6	26.3	20.6	20.2	30.8	22.3		29.7	29.6	21.0	22.2	27.9
Traffic Signal Control		Queue	140'	335' C	65' C	45'	455'	55'	215'	90'	170'	100'	135'	С
	AM	LOS	B 19.3	-	21.0	B 18.9	C 25.8	B 18.1	36.2	27.6	C 26.0	B 18.0	B 19.5	25.3
	11:30	Delay Queue	30'	26.9	21.0 75'	45'	25.8 395'	25'	155'	80'	26.0 190'	100'	19.5	25.3
			30	330 1	75	45		20	100		190		150	
Node 400: Duplainville Road &		Lanes-> LOS		-			-		*	-	-		*	
Proposed East Driveway	AM	Delay							*	-	-		*	
One-Way Stop Control	10:15	Queue							*		-		*	
Che-way Stop Control		LOS							*	-	-		*	
	AM	Delay							*		-		*	
	11:30	Queue		-			-		*	-	-		*	
	1	Queue		-			-			-	-			

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Exhibit 3-3 Existing Traffic Peak Hour Operating Conditions With Existing Geometrics and Traffic Control

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

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



EXHIBIT 3-3 EXISTING TRAFFIC OPERATIONS

PEWAUKEE, WISCONSIN

CHAPTER IV – DEVELOPMENT TRAFFIC

PART A – TRAFFIC FORECASTING

The expected traffic volumes generated by the proposed on-site church development were calculated based on trip rates or equations for land use "Church" published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 11th Edition. The use of trip rates or equations was determined based on procedures listed in the trip generation manual and in the ITE *Trip Generation Handbook*, 3rd Edition. A comparison of the new trips generated was completed looking at the three different units provided by ITE; specifically: seats, attendees and building square footage. Since the seats and square footage units show very similar results, the "seats" unit was utilized for this study. The comparison table is included in the appendix of this study.

A1. On-Site Trip Generation

The proposed church development trip generation and distribution tables under the full build out traffic scenario are shown on Exhibit 4-3. Under the full buildout, the proposed church development is expected to generate 305 new trips (150 entering/155 exiting) during each of the Sunday morning services.

A2. Linked and Pass-by Trip Reductions

Based on the church land use for the proposed site, none of the new trips are expected to include linked or pass-by trip reductions. A linked trip occurs when a patron of one tenant visits another tenant prior to exiting the site. Pass-by trips occur when a motorist already on the roadway system stops at a development prior to continuing on their intended route.

A3. Trip Distribution

The trip distribution for the proposed on-site church development is listed below, shown in table format in Exhibit 4-3 and graphically in Exhibit 4-4. The trip distribution was determined based on the existing traffic counts, the type of proposed land use and the location of existing populations within the immediate study area. The trip distribution for the proposed development is as follows:

- 46% to/from the east on STH 190
- 48% to/from the west on STH 190
- 3% to/from the north on Duplainville Road
- 3% to/from the south on Duplainville Road

A4. Trip Assignment

The new trips assigned to the study area intersections for the proposed church development are shown as follows:

- On-Site New Trips with both access driveways Exhibit 4-5A
- On-Site New Trips with the west access driveway only Exhibit 4-5B

PART B –BUILD TRAFFIC

Full Build (Both Access Driveways) traffic volumes, which add the existing traffic volumes (Exhibit 3-2) to the proposed church new trips with both access driveways (Exhibit 4-5A) are shown on Exhibit 4-11A.

Full Build (West Access Driveway Only) traffic volumes, which add the existing traffic volumes (Exhibit 3-2) to the proposed church new trips with the west access driveway only (Exhibit 4-5B) are shown on Exhibit 4-11B.

Exhibit 4-3 On-Site Trip Generation Table¹

	ITE		S	UN Pea	k
Land Use	Code	Proposed Size	In	Out	Total
Church	560	600 Seats	150	155	305
Church	300	000 Seals	(49%)	(51%)	(0.51)
Total New Trips			150	155	305

¹ ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual,

TRIP DISTRIBUTION (New Trips	- Both Acces	<u>ss Driveways)</u>	
East on Capitol Drive	46%	70	70
West on Capitol Drive	48%	70	75
North on Duplainville Road	3%	5	5

South on Duplainville Road	3%	5	5	
	100%	150	155	

TRIP DISTRIBUTION (New Trips - West Access Driveway Only)

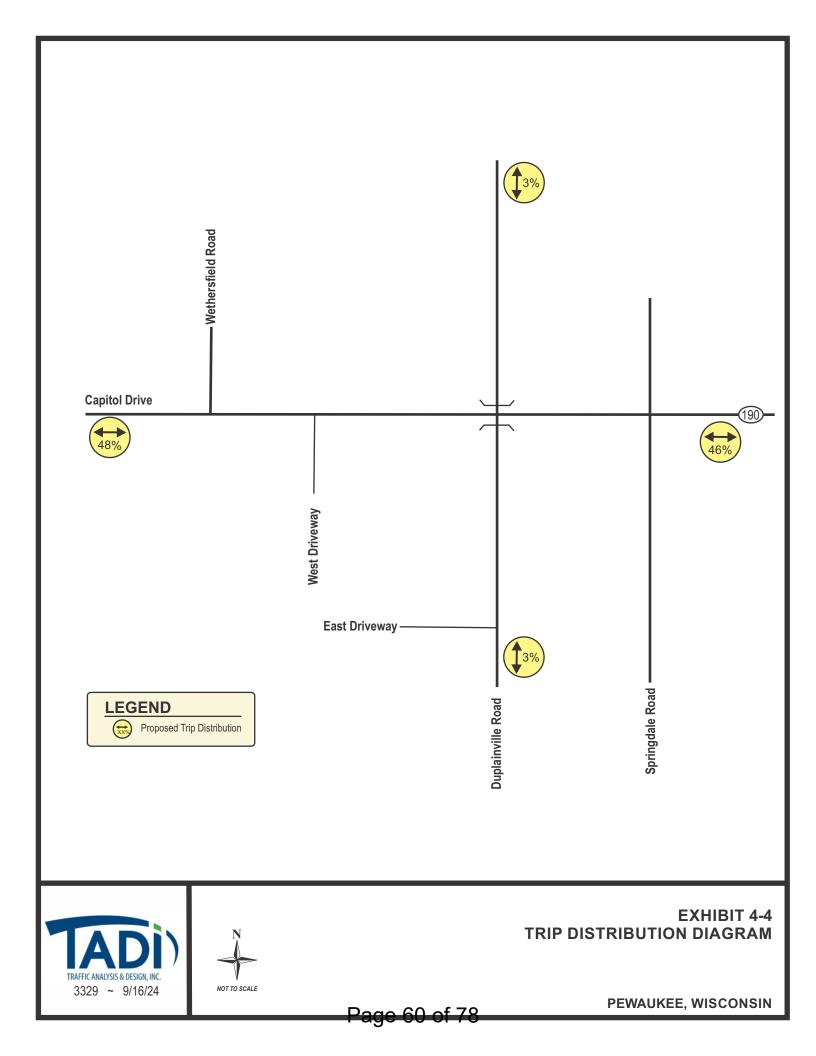
East on Capitol Drive	49%	75 75
West on Capitol Drive	51%	75 80
	100%	150 155

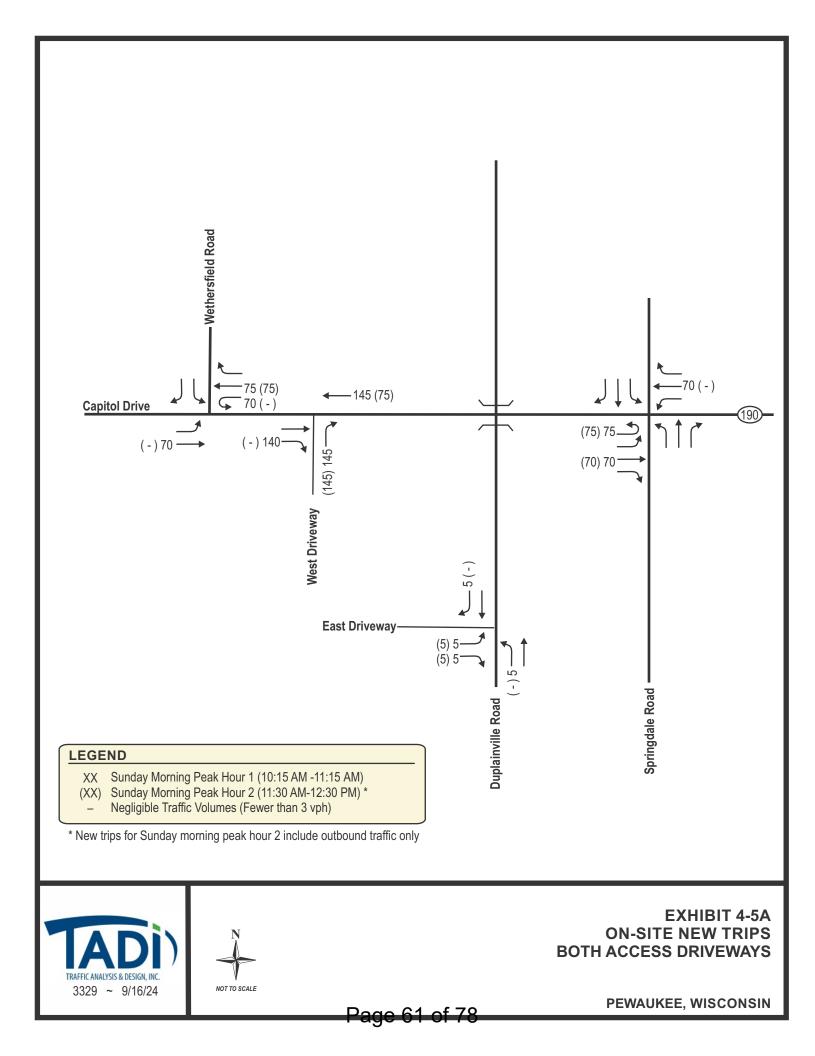


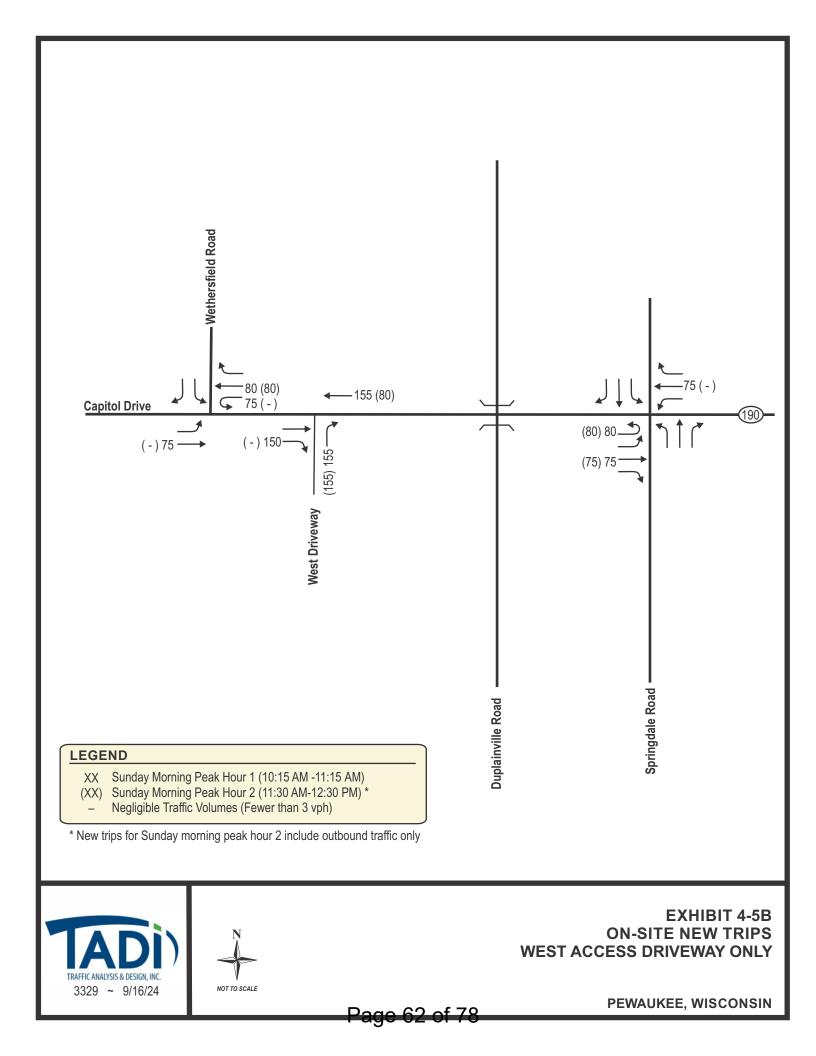
EXHIBIT 4-3 ON-SITE DEVELOPMENT TRIP GENERATION AND DISTRIBUTION TABLES

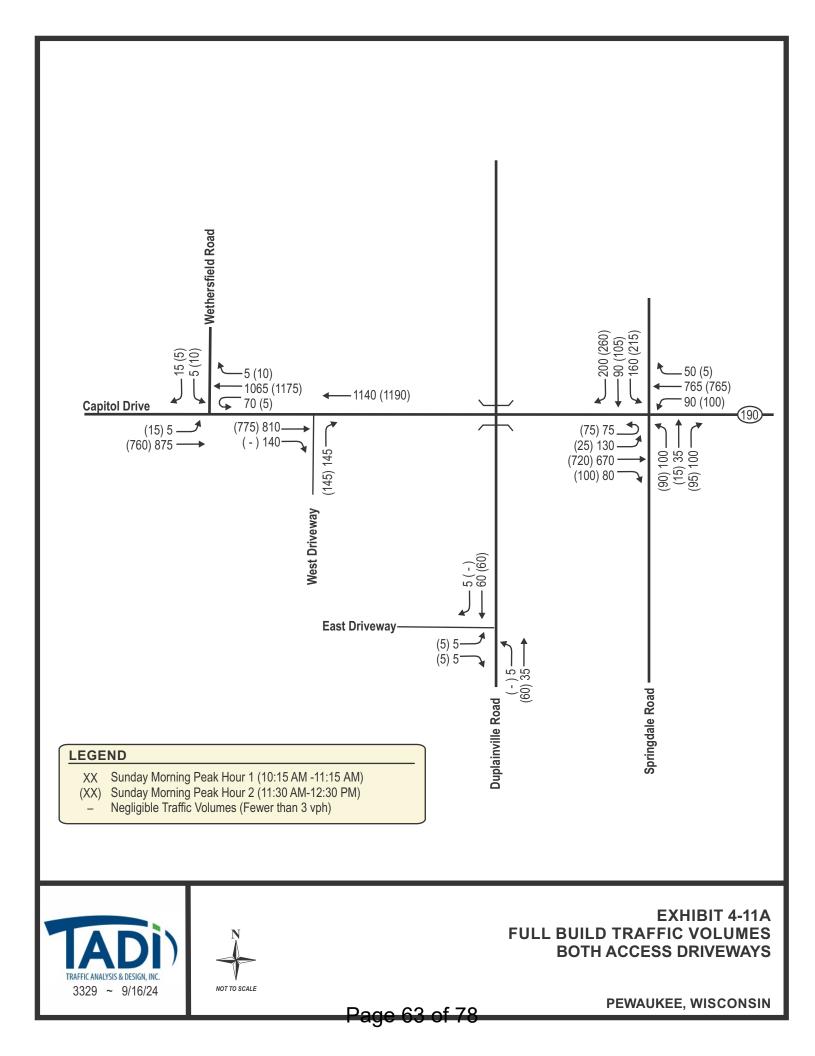
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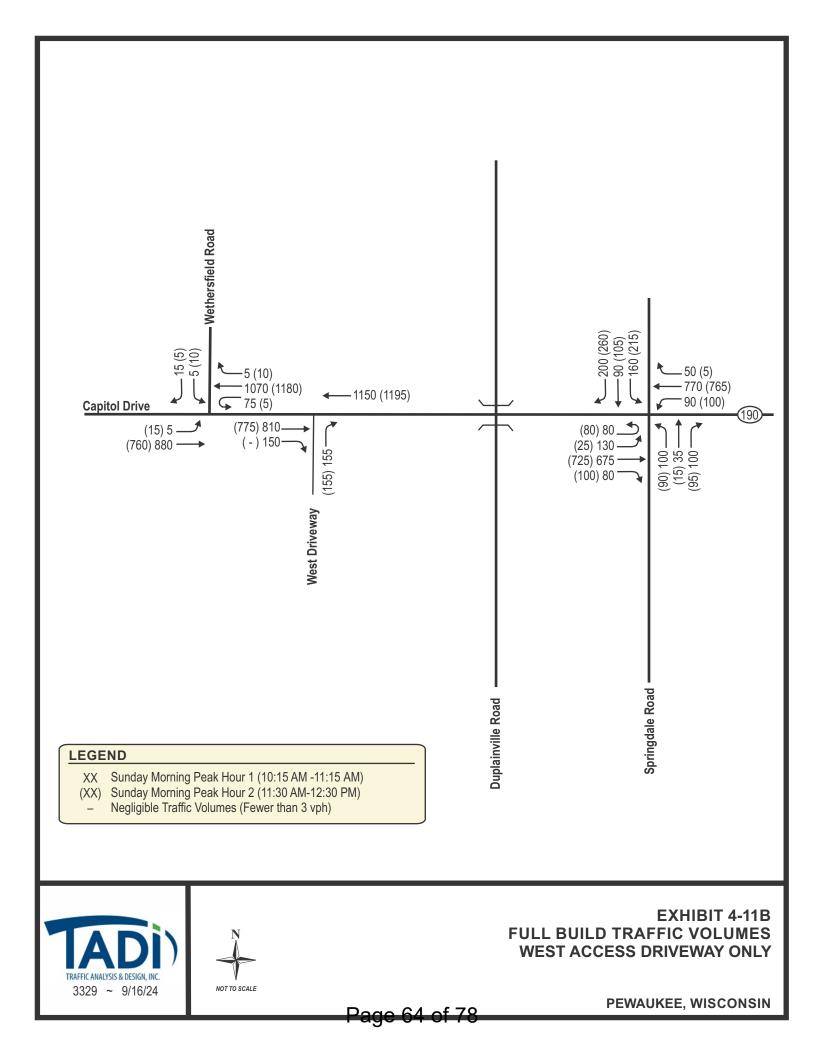
PEWAUKEE, WISCONSIN











CHAPTER V – TRAFFIC AND IMPROVEMENT ANALYSIS

PART A – SITE ACCESS

Two access driveways are proposed for the church development. A right-in/right-out driveway is proposed along Capitol Drive, located about 1,200-feet east of Wethersfield Road. A second potential full access driveway is proposed along Duplainville Road, located immediately south of the Capitol Drive overpass bridge. The TIA analyzed the study intersections with and without the second access on Duplainville Road.

PART B – CAPACITY LEVEL OF SERVICE ANALYSIS

B1. Year 2026 Full Build (Both Access Driveways) Traffic Operating Conditions

Exhibit 5-3A shows the year 2026 Full Build (Both Access Driveways) traffic peak hour operating conditions at the study area intersections under the access scenario allowing both access driveways. Year 2026 Full Build (Both Access Driveways) traffic volumes include full build out of the church development site. The year 2026 Full Build (Both Access Driveways) traffic analysis was conducted using existing intersection configurations and traffic control.

As shown, all movements are expected to continue to operate at LOS D or better conditions during the identified Sunday peak periods under the year 2026 Full Build (Both Access Driveways) traffic volume scenario except the southbound movements at the Capitol Drive intersection with Wethersfield Road which are expected to operate at LOS F during both Sunday morning service peak hours.

Exhibit 5-12A shows the year 2026 Full Build (Both Access Driveways) traffic peak hour operating conditions, with recommended driveway modifications (as described in Chapter VI), at the study area intersections. As shown, no changes to the operations are shown.

B2. Year 2026 Full Build (West Access Driveway Only) Traffic Operating Conditions

Exhibit 5-3B shows the year 2026 Full Build (West Access Driveway Only) traffic peak hour operating conditions at the study area intersections under the access scenario allowing only the west access driveway. Year 2026 Full Build (West Access Driveway Only) traffic volumes include full build out of the church development site. The year 2026 Full Build (West Access Driveway Only) traffic analysis was conducted using existing intersection configurations and traffic control.

As shown, all movements are expected to continue to operate at LOS D or better conditions during the identified Sunday peak periods under the year 2026 Full Build (West Access Driveway Only) traffic volume scenario except the southbound movements at the Capitol Drive intersection with Wethersfield Road which are expected to operate at LOS F during both Sunday morning service peak hours.

Exhibit 5-12B shows the year 2026 Full Build (West Access Driveway Only) traffic peak hour operating conditions, with recommended driveway modifications (as described in Chapter VI), at the study area intersections. As shown, no changes to the operations are shown.

PART C – QUEUEING ANALYSIS

To estimate storage length requirements for turn bays at the study area intersections with modifications, a queuing analysis has been conducted. Note that the 95th percentile probable queue lengths were used for the design of turn bay storage at stop sign controlled intersections. The following is a list of where the results of the queuing analysis can be found.

- Year 2024 Existing Traffic Expected Maximum Queues Exhibit 3-3 & 5-18
- Year 2026 Full Build (Both Access Driveways) Traffic Expected Maximum Queues Exhibit 5-12A & 5-19A
- Year 2026 Full Build (West Access Driveway Only) Traffic Expected Maximum Queues

 Exhibit 5-12B & 5-19B

PART D – PEDESTRIAN, BICYCLE AND TRANSIT CONSIDERATIONS

The development site is in a generally suburban area with no sidewalks along the study area roadways; however, a multi-use trail is located along the east side of Duplainville Road. No onstreet bicycle accommodations exist along the study area roadways; however wider paved shoulders are provided along Capitol Drive and narrow paved shoulders are provided along Duplainville Road and Springdale Road.

No regularly scheduled bus service exists in the study area.

PART E – SPEED CONSIDERATIONS/SIGHT DISTANCE

Note that the sight distance measurements and photographs discussed in this report are based on on-line aerial and street view imagery at the proposed new driveway location. The party responsible for designing the intersection is responsible for cross-checking, verifying, and designing for all applicable sight distances.

The proposed access drive to Capitol Drive/STH 190 should be designed for intersection sight distance (ISD) in accordance with the latest edition of the American Association of State Highway Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* and in accordance with the latest WisDOT FDM design guidelines (Procedure 11-10-5).

Sight distance evaluation for the proposed access drive was completed using a design speed of 5 mph above the posted speed limit on Capitol Drive/STH 190, which equals 50 mph for right-turn movements (looking left) at the proposed right-in/right-out driveway. WisDOT minimum intersection sight distance calculations for the proposed access drive are provided in Appendix A.

The controlling intersection sight distances for the proposed access drive are shown on Exhibit 5-27. For the Capitol Drive/STH 190 intersection, the actual visibility for a vehicle at the proposed access drive is more than 800-feet when looking left onto Capitol Drive/STH 190. Since the actual visibility is greater than the AASHTO minimum ISD of 785-feet, right-turns from the proposed access drive can be made safely and with no restrictions. The pertinent photos taken from on-line street view imagery at the proposed access drive are shown on Exhibit 5-27.

			J						Movemen	t by Ap	proacl	า		I/S
	Peak		Ea	stbou	nd	We	estbou	ind	Northbo	ound	So	South bound \downarrow \checkmark 1 1 64.8 0.29 25' - 84.4 0.28 25' - - -	LOS &	
Intersection	Hour	Metric	7	\rightarrow	К	Ľ	←	Γ	下个	7	К	\checkmark	Ľ	Delay
		Lanes->	1		2	1	2	1	-			1		
Node 100: Capitol Drive/STH190 &		LOS	С		*	С	*	*	-			F		
Wethersfield Road	AM	Delay	17.9		*	22.0	*	*	-			64.8		
One-Way Stop Control	10:15	v/c	1		-	-	1	-	-			0.29		
		Queue	25'		*	30'	*	*	-			25'		
		LOS	В		*	В	*	*	-					
	AM	Delay	12.6		*	14.3	*	*	-			84.4		
	11:30	v/c	-		-	-	-	-	-					
		Queue	25'		*	25'	*	*	-			25'		
		Lanes->	-		2		2		1			-		
Node 200: Capitol Drive/STH190 &	АМ	LOS	-		*		*		С			-		
Proposed West Driveway	10:15	Delay	-		*		*		18.0			-		
One-Way Stop Control	10.10	Queue	-		*		*		50'			-		
	АМ	LOS	-		*		*		В			-		
	11:30	Delay	-		*		*		14.3	6		-		
		Queue	-			_			35'	1.	<u> </u>	-		
		Lanes->	1	2	1	2	2	1	1	1	1			
Node 300: Capitol Drive/STH190 &	AM	LOS	D	C	C	С	D	C	D	D	D	-	-	С
Springdale Road/Gumina Road	10:15	Delay	35.4	27.3	20.4	23.5	39.2	26.1	48.4	36.8	36.9			33.6
Traffic Signal Control		Queue	280'	405'	70'	45'	600'	60'	235'	100'	195'			
	AM	LOS	C	C	C	B	C	C	39.2	C	<u>С</u>	_	-	C
	11:30	Delay	22.3	27.5	20.8	19.8	28.6	20.0	39.2 165'	30.1	28.5			27.0
		Queue	95'	380' 1	75'	45'	445'	25'	105	85'	210'	110	165	
Node 400: Duplainville Road &		Lanes->		A					/ A	-	-		/ *	
Proposed East Driveway	AM	LOS		9.0			-		7.4	-	-		*	
One-Way Stop Control	10:15	Delay		9.0 25'			-		25'	-	-		*	
One-way Stop Control		Queue LOS		25 A			-		25 A		-	, ,	*	
	AM	Delay		9.0			-		7.4	+	-		*	
	11:30	Queue		25'					25'	-	-		*	
	1	Queue		25			-		25	-				

Exhibit 5-3A Full Build (Both Access Driveways) Traffic Peak Hour Operating Conditions With Existing Geometrics and Traffic Control

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement. Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.



EXHIBIT 5-3A FULL BUILD TRAFFIC OPERATIONS BOTH ACCESS DRIVEWAYS WITHOUT MODIFICATIONS

PEWAUKEE, WISCONSIN

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		With Exi	sting												I/S				
			$\overline{\lambda}$ \rightarrow $\underline{\nu}$ \leftarrow $\overline{\kappa}$ $\overline{\Lambda}$ $\overline{\lambda}$ $\underline{\nu}$ $\underline{\nu}$ 1 2 1 2 1 - 1																
	Peak		Ea	stbou	nd	We	estbou	Ind	Northbound			Southbound			LOS &				
Intersection	Hour	Metric	R	\rightarrow	R	Ľ	÷	R	ĸ	1	7	R	\rightarrow	R	Delay				
		Lanes->	1	2		2		2		1	2	1		-			1		
Node 100: Capitol Drive/STH190 &		LOS	C		*	С	*	*		-			F						
Wethersfield Road	AM	Delay	18.0		*	22.7	*	*		-			70.1						
One-Way Stop Control	10:15	v/c	-		-	-	-	-		-			0.31						
		Queue	25'		*	35'	*	*		-			30'						
		LOS	В		*	В	*	*		-			F						
	AM	Delay	12.6		*	14.3	*	*		-			86.1						
	11:30	v/c	-		-			-			0.29								
		Queue	25' *		25'	*	*	-		25'									
		Lanes->	-	- 2			2			1			-						
Node 200: Capitol Drive/STH190 &	АМ	LOS	-	*		*			С				-						
Proposed West Driveway	10:15	Delay	-		*	*			18.8			-							
One-Way Stop Control	10.10	Queue	-		*	*			55'			-							
	АМ	LOS	-		*		*		В			-							
	11:30	Delay	-		*		*		14.5										
	11.00	Queue	-	:	*		*			35'			-						
		Lanes->	1	2	1	2	2	1		1	1	1	1	1					
Node 300: Capitol Drive/STH190 &	AM	LOS	D	С	С	С	D	С		D	D	D	С	С	С				
Springdale Road/Gumina Road	10:15	Delay	37.0	27.3	20.4		40.4	26.6		9.4	37.6	37.7	27.1	28.7	34.3				
Traffic Signal Control	10.10	Queue	285'	425'	70'	45'	615'	60'		35'	100'	195'	115'	160'					
	АМ	LOS	С	С	С	В	С	С		D	С	С	С	С	С				
	11:30	Delay	22.6	27.6	20.7	19.9	28.8	20.2		9.5	30.4	28.7	20.0	21.7	27.2				
	11.00	Queue	95'	385'	75'	45'	450'	25'	16	65'	85'	215'	110'	165'					

Exhibit 5-3B Full Build (West Access Driveway Only) Traffic Peak Hour Operating Conditions With Existing Geometrics and Traffic Control

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

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



EXHIBIT 5-3B FULL BUILD TRAFFIC OPERATIONS WEST ACCESS DRIVEWAY ONLY WITHOUT MODIFICATIONS

PEWAUKEE, WISCONSIN



										ement	by Ap	proacł	า		I/S
	Peak		Ea	stbou	nd	We	estbou	ind	N	orthboi	und	So	uthboi	und	LOS &
Intersection	Hour	Metric	7	\rightarrow	К	Ľ	←	Γ	R	1	7	К	\downarrow	Ľ	Delay
		Lanes->	1	2	1	1	2	1		-			1		
Node 100: Capitol Drive/STH190 &		LOS	С		*	С	*	*		-			F		
Wethersfield Road	AM	Delay	17.9		*	22.0	*	*		-			64.8		
One-Way Stop Control	10:15	v/c	-		-	-	-	-		-			0.29		
		Queue	25'		*	30'	*	*		-			25'		
		LOS	В		*	В	*	*		-			F		
	AM	Delay	12.6		*	14.3	*	*		-			84.4		
	11:30	v/c	-		-	-	-	-		-			0.28		
		Queue	25'		*	25'	*	*		-			25'		
		Lanes->	-		2		2			1			-		
Node 200: Capitol Drive/STH190 &	АМ	LOS	-		*		*			С			-		
Proposed West Driveway	10:15	Delay	-		*		*			18.0			-		
One-Way Stop Control		Queue	-				*			50'			-		
	AM	LOS	-		*		*			B			-		
	11:30	Delay	-		*		*			14.3			-		
		Queue	-			0		4		35' 1			-	4	
Node 300: Capitol Drive/STH190 &		Lanes-> LOS	1 D	2 C	1 C	2 C	2 D	1 C		D	1 D	1 D	1 C	1 C	С
Springdale Road/Gumina Road	AM		35.4	27.3	20.4	23.5	39.2	26.1		8.4	36.8	_	26.4	28.0	33.6
Traffic Signal Control	10:15	Delay Queue	280'	405'	20.4	23.5 45'	<u> </u>	20.1 60'		235'	100'	195'	20.4	26.0	33.0
Traine Signal Control		LOS	200 C	403 C	C	43 B	000 C	C		D	100 C	195 C	B	C	С
	AM	Delay	22.3	27.5	20.8	19.8	28.6	20.0	3	9.2	30.1	28.5	19.8	21.6	-
	11:30	Queue	95'	380'	75'	45'	445'	25'	-	65'	85'	210'	110'	165'	27.0
		Lanes->	00	1	10	-10	-	20		1	-	-		1	
Node 400: Duplainville Road &		LOS		Å			-			A	-	-		*	
Proposed East Driveway	AM	Delay		9.0			-			7.4	-	-		*	
One-Way Stop Control	10:15	Queue		25'			-			25'	-	-	;	*	
		LOS		A			-			A	-	-		*	
	AM	Delay		9.0			-		-	7.4	-	-		*	1
	11:30	Queue		25'			-			25'	-	-		*	1

Exhibit 5-12A Full Build (Both Access Driveways) Traffic Peak Hour Operating Conditions With Modified Geometrics and Traffic Control

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement. Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.



EXHIBIT 5-12A FULL BUILD TRAFFIC OPERATIONS BOTH ACCESS DRIVEWAYS WITH MODIFICATIONS

PEWAUKEE, WISCONSIN

Page 69 of 78

		With Mo	aified						-						I/S
			Level of Service (LOS) per Movement by Approach												
	Peak		Ea	stbou	nd	We	estbou	Ind	Northbound			Southbound			LOS &
Intersection	Hour	Metric	R	↑	К	Ľ	÷	R	R	\uparrow	Z	R	\rightarrow	L ا	Delay
		Lanes->	1 2 1		1 2 1			-			1				
Node 100: Capitol Drive/STH190 &		LOS	С		*	С	*	*		-			F		
Wethersfield Road	AM	Delay	18.0		*	22.7	*	*		-			70.1		
One-Way Stop Control	10:15	v/c	-		-	-	-	-		-			0.31		
		Queue	25'		*	35'	*	*		-			30'		
		LOS	В		*	В	*	*		-			F		
	AM	Delay	12.6		*	14.3	*	*		-			86.1		
	11:30	v/c	-		-	-	-	-		-			0.29		
		Queue	25' *		25' * *		-			25'					
		Lanes->	-	2	2		2		1				-		
Node 200: Capitol Drive/STH190 &		LOS	- *				*			С			-		
Proposed West Driveway	AM	Delay	-		*	*			18.8			-			
One-Way Stop Control	10:15	Queue	-		*	*			55'			-			
		LOS	-		*		*			В		-			
	AM	Delay	-		*		*		14.5			-			
	11:30	Queue	-		*		*			35'			-		
		Lanes->	1	2	1	2	2	1	1		1	1	1	1	
Node 300: Capitol Drive/STH190 &		LOS	D	С	С	С	D	С	D		D	D	С	С	С
Springdale Road/Gumina Road	AM	Delay	37.0	27.3	20.4	23.9	40.4	26.6	49.4	1	37.6	37.7	27.1	28.7	34.3
Traffic Signal Control	10:15	Queue	285'	425'	70'	45'	615'	60'	235	;'	100'	195'	115'	160'	
-		LOS	С	С	С	В	С	С	D		С	С	С	С	С
	AM	Delay	22.6	27.6	20.7	19.9	28.8	20.2	39.5	5	30.4	28.7	20.0	21.7	27.2
	11:30	Queue	95'	385'	75'	45'	450'	25'	165	;'	85'	215'	110'	165'	

Exhibit 5-12B Full Build (West Access Driveway Only) Traffic Peak Hour Operating Conditions With Modified Geometrics and Traffic Control

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

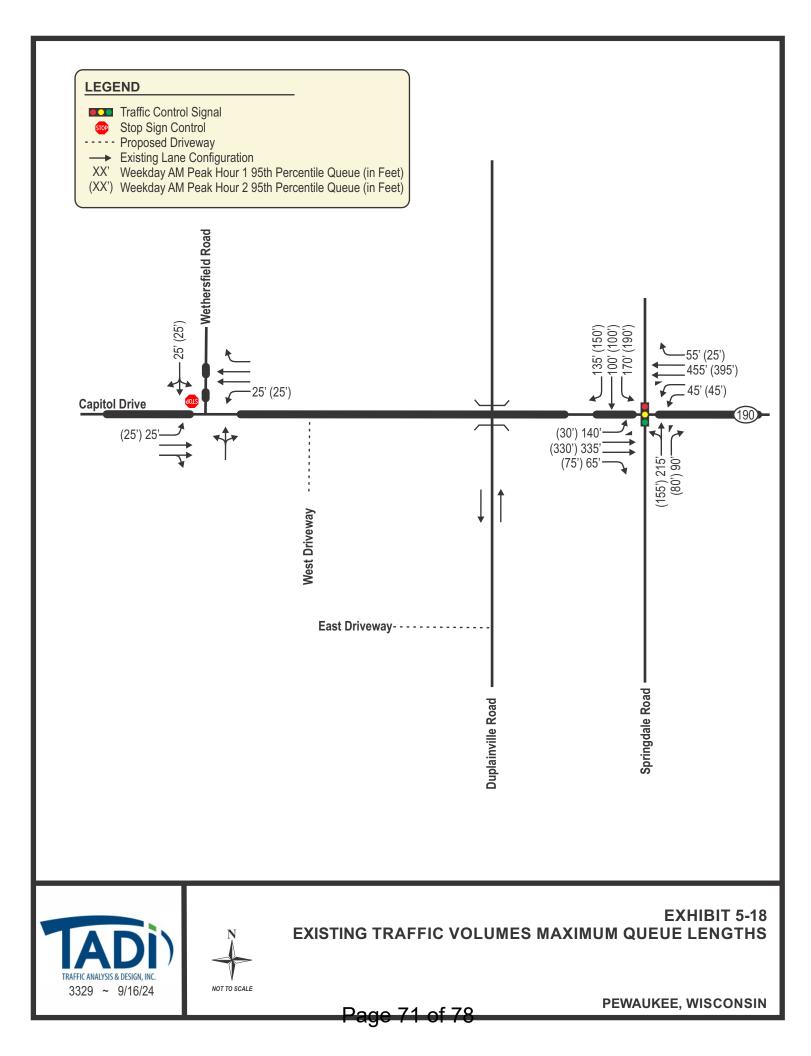
Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

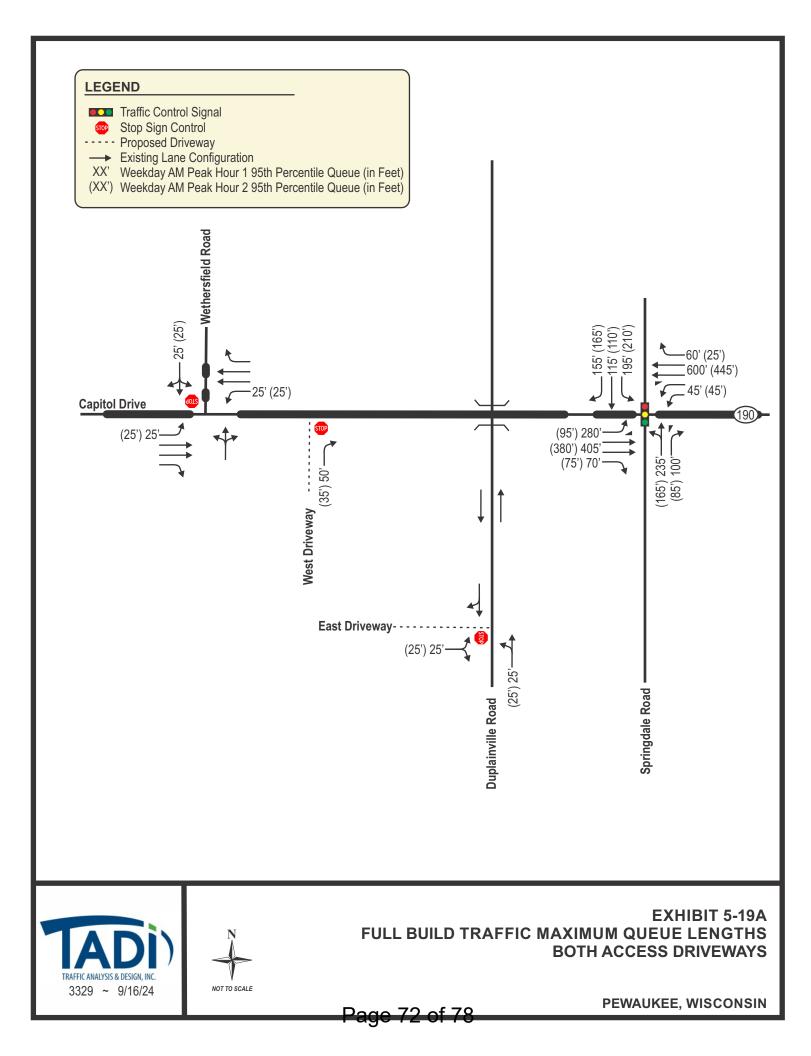


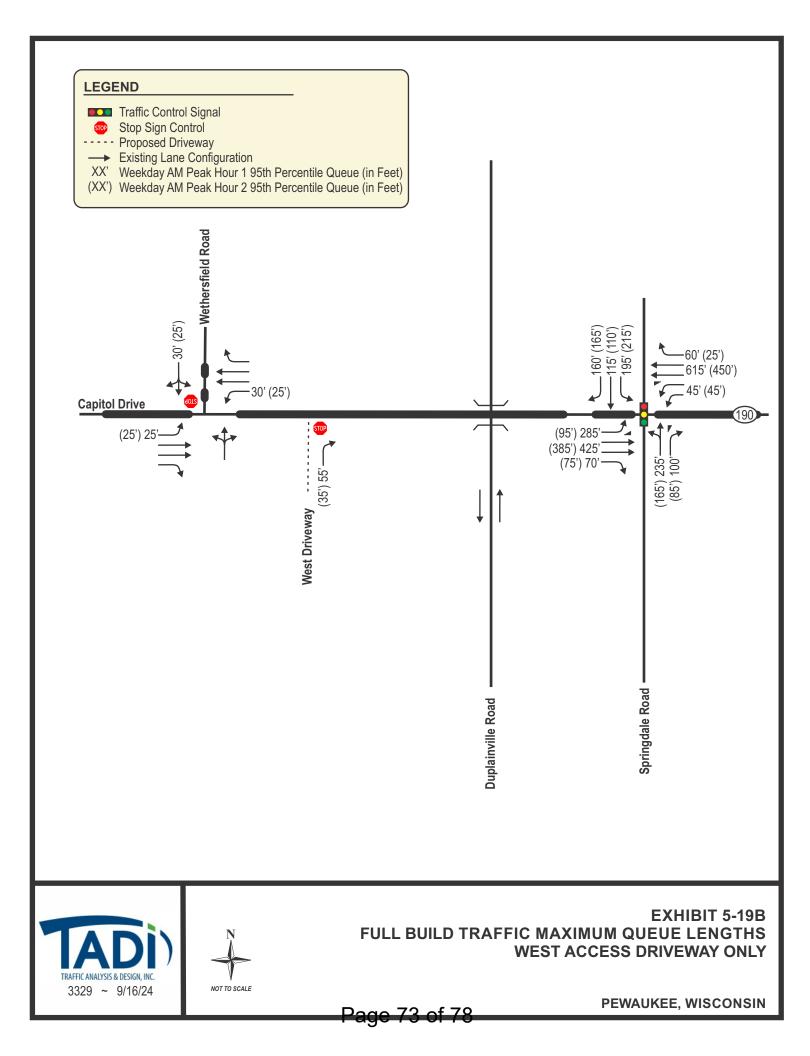
EXHIBIT 5-12B FULL BUILD TRAFFIC OPERATIONS WEST ACCESS DRIVEWAY ONLY WITH MODIFICATIONS

PEWAUKEE, WISCONSIN

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Aerial View Image: Google Earth (August 2022)

ISD MET



Street View Image: Google Earth (June 2024)

CAPITOL DRIVE - NB RIGHT-TURN OUT OF SITE Looking left at EB traffic on Capitol Drive

Minimum WisDOT ISD distances at 50 mph Design Speed:

Passenger Car: 665 feet Single-unit Truck: 785 feet





EXHIBIT 5-27 INTERSECTION SIGHT DISTANCE ANALYSIS

PEWAUKEE, WISCONSIN



CHAPTER VI – RECOMMENDATIONS AND CONCLUSION

PART A – RECOMMENDATIONS

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual* (HCM), 6th *Edition*. Intersection operation is defined by "level of service." Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A,' to very poor, represented by LOS 'F.' For the purpose of this study, LOS D or better was used to define desirable peak hour operating conditions.

A1. Year 2024 Existing Traffic – Recommended Modifications

The Year 2024 existing traffic volumes do not include any proposed development. The analysis was conducted using existing intersection geometrics and traffic control. No modifications are recommended to accommodate the Year 2024 existing traffic volume conditions.

All movements at the study area intersections are currently operating acceptably at LOS D or better under the Year 2024 existing traffic volume conditions under current traffic volume conditions during the two Sunday morning peak periods except the southbound movements at the Capitol Drive intersection with Wethersfield Road which are currently operating at LOS F during the typical Sunday morning 11:30 am peak hour.

A2. Year 2026 Full Build Traffic – Recommended Modifications

Year 2026 full build (with development) traffic volumes include full build out of the church development site located along the south side of the STH 190 immediately west of Duplainville Road. The following modifications, as shown in Exhibit 1-3, are recommended to accommodate the full build traffic volumes.

Node 100: STH 190 & Wethersfield Road

• No modifications recommended.

Node 200: STH 190 & Proposed West Driveway

- Provide a new right-in/right-out driveway on the south approach as shown on the site plan.
- Provide stop sign control on the south approach of the new access driveway.
- Provide a dedicated right-turn lane on the west approach.

Node 300: STH 190 & Springdale Road/Gumina Road

• No modifications recommended.

Node 400: Duplainville Road & Proposed East Driveway

- Provide a full access driveway on the west approach as shown on the site plan.
- Provide stop sign control on the west approach of the new access driveway.

Higher delays are currently being experienced for the southbound movements at the Capitol Drive intersection with Wethersfield Road during the typical late Sunday morning service discharge peak hour. However, with excess capacity at the intersection (V/C less than 0.25), relatively low volumes on this southbound approach (less than 20 vehicles during any peak hour) and queues of only about 1 vehicle, no modifications are recommended for this condition.

Under the full build traffic conditions, regardless of the access scenario constructed, delays for the southbound movements on Wethersfield Road are expected to increase during both Sunday morning service peak periods. However, under both peak periods, the capacity ratios are still less than 0.31 with queues of about 1 vehicle reported. No modifications are recommended for this condition.

Most members are expected to utilize Capitol Drive to access the site with very little traffic expected to use Duplainville Road. However, acceptable operational delays with minimal queuing are expected at both access driveways under either access option (with or without the additional access driveway onto Duplainville Road). Therefore, providing two access driveways to allow for additional access options is recommended.

Sight distance was also evaluated at the Capitol Drive intersection with the proposed access drive and all required sight distance requirements are expected to be met. Except as noted, all movements at the study area intersections are expected to continue to operate at acceptable levels at LOS D or better under the year 2026 full build (with proposed development) traffic conditions.

PART B – CONCLUSION

Except as noted, all movements at the study area intersections are expected to operate safely and efficiently through the opening year with the full build out of the development and the modifications identified in this TIA.



Office of the Planner & Community Development Director

Attn: Nick Fuchs, Planner & Community Development Director W240 N3065 Pewaukee Road Pewaukee, Wisconsin 53072

Below are responses for the staff report to the Plan Commission dated September 13, 2024 for the proposed development application for Shorepoint Church and the properties bearing Tax Key Nos. PWC 0912983,0912984, and 0912985.

1. <u>Certified Survey Map</u>

The applicant will need to revise the signature lines of the CSM to include Colleen Brown as the Plan Commission Secretary for the Plan Commission Approval signature line and Kelly Tarczewski, City Clerk for the Common Council Approval signature line. **This will be modified and resubmitted as requested.**

2. <u>Site & Building Plans</u>

Any dumpster enclosure kept onsite shall have its location and materials reviewed and approved by the City Planner.

This has been noted and trash enclosure intended to be the same materials as the exterior building.

3. Access

Staff recommends that the applicant provide a revised site plan, for Engineering Department review and approval, that shifts the Duplainville Road access location further south on the property.

Staff recommends that the future cross-access location shall be provided and constructed upon availability and development of the property to the west along with the removal of the existing access to Capitol Drive as well as the abandonment of the Duplainville Road access.

See attached letter from Shorepoint Church.

4. <u>Traffic</u>

All improvements as required by WisDOT in accordance with the Traffic Impact Analysis be completed prior to occupancy.

Shorepoint Church will be in compliance with WisDOTs requirements and regulations.

5. Architecture

The applicant shall verify that the proposed height of the cross complies with height regulations of the Capitol Airport. A review package has been sent to the FAA for consideration.

Thanks again for your time and consideration on this project. Please reach out with any guestions or any items of concern.

Sincerely,

e Knodle

Angie Knodel, AIA Vanman Architects and Builders

262.444.3806

shorepoint

brian@shorepoint.cc

PO Box 41, Pewaukee, WI 53072

The City of Pewaukee Attn: Planning and Community Development W240 N3065 Pewaukee Road Pewaukee, WI 53072

Re: Shorepoint Church - Future Access to Capitol Drive at Wethersfield Road

To: Planning and Community Development

Shorepoint Church will agree to move our Capitol Drive entrance to the west location aligned with Wethersfield Road when the land directly west of our property is developed and allows for access to our property from this location. Further, Shorepoint Church agrees to remove the old access to Capitol Drive at it's current location after the new access is granted and construction is completed.

Shorepoint Church has made in-person contact with the property owner of the land directly to the west of the church's property. The property owner has stated that they currently have no intention of selling the property and are not willing to grant easement or access to Capitol Drive at the Wethersfield location at this time.

It is the intent and desire of Shorepoint Church to work with WisDOT, City of Pewaukee and adjacent landowner, to provide safe access to all parties involved.

Sincerely, Pastor Brian Engl

Shorepoint Church

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 7.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action Regarding a Recommendation to the Common Council for a Comprehensive Master Plan Amendment to Change the Year 2050 Land Use/Transportation Plan Use Designation for the City of Pewaukee for Ken Weber Towing Service and Crossroads Church of Pewaukee, Inc. for Property Located at N27 W26541 Prospect Avenue from Government/Institutional to Retail/Service Commercial (PWC 0930985, PWC 0930984001)

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description Ken Weber staff report 9.19.24 Ken Weber narrative Ken Weber comp plan exhibit



REPORT TO THE PLAN COMMISSION

Meeting of September 19, 2024

Date: September 11, 2024

Project Name: Ken Weber Towing/Crossroads Church development project

Project Address/Tax Key No.: N27W26541 and N27W26560 Prospect Avenue/0930985 and 0930984001

Applicant: Ken Weber Towing and Crossroads Church

Property Owner: SUNDANCE LAND CO INC and FIRST BAPTIST CHURCH OF PEWAUKEE

Current Zoning: B-5 Highway Business District (PWC 0930984001) and I-1 Urban Institutional District (PWC 0930985)

2050 Land Use Map Designation: Retail/Service Commercial (PWC 0930984001) and Governmental/Institutional (PWC 0930985)

Use of Surrounding Properties: Single-family residential to the north and west, single-family residential and a BP gas station to the south, and multi-family residential to the east.

Project Description/Analysis

The applicants filed a Comprehensive Master Plan Amendment Application, Rezoning, and Certified Survey Map Application related to a request for Ken Weber Towing to acquire a portion of the adjacent Crossroads Church property.

Ken Weber Towing has indicated that they plan to expand the existing outdoor parking and storage area onto the portion of property being acquired; however, that is not being proposed at this time. Any future site or building modifications will require review and approval of a Site & Building Plan Review Application when proposed.

Comprehensive Master Plan Amendment

The Crossroads Church property is designated as Governmental/Institutional on the City's Year 2050 Land Use/Transportation Plan map. The Ken Weber Towing property is designated as Retail/Service Commercial.

As such, the portion of land to be acquired by Ken Weber Towing is proposed to be changed to Retail/Service Commercial to be consistent with the concurrent rezoning request described below.

Rezoning

The Crossroads Church property is currently zoned I-1 Urban Institutional District. The Ken Weber Towing property is zoned B-5 Highway Business District. As such, the portion of land to be acquired by Ken Weber Towing is proposed to be changed to B-5 Highway Business District. The rezoning is contingent upon and would be consistent with the approval of the Comprehensive Master Plan Amendment request.

Note that Ken Weber Towing is a Permitted Use in the B-5 Highway Business District.

Certified Survey Map

The Certified Survey Map Application is a reconfiguration of the Crossroads Church and Ken Weber Towing properties to allow Ken Weber Towing to acquire approximately 1.245 acres of the church property.

The area to be acquired is located to the west of Ken Weber Towing and is currently vacant. The site is wooded; however, in review of Wisconsin Department of Natural Resources and Southeastern Wisconsin Regional Planning Commission mapping, the property does not contain any wetlands or environmental corridor designations.

The CSM results in the Ken Weber Towing property having an area of 2.499-acres and the remaining Crossroads church property has an area of 2-acres, which meets the 2-acre minimum lot area standard of the I-1 District.

The B-5 District requires a minimum 15-foot side yard and 25-foot rear yard setback. Considering the adjacent single-family residential uses, *staff recommends that a 40-foot bufferyard be established adjacent to abutting residentially zoned and used properties. The bufferyard shall be shown on the CSM with restrictions stating that this area shall be preserved unless otherwise approved by the Plan Commission. The bufferyard shall be reserved for plantings only; no structures or impervious surfaces shall be allowed. Note the Plan Commission may require increased setbacks per Section 17.0207a.(1) of the City's Zoning Code.*

The proposed CSM moves the property line to the south of the church parking lot further north. This results in a setback that is less than 10-feet, which is not allowed per Section 17.0601c. Therefore, *staff recommends that sufficient asphalt be removed to establish a minimum 10-foot setback for the parking lot located on the Crossroads Church property*. The applicant is also requesting a setback for the playground located adjacent to the building closer to that property line than what currently exists.

With the above condition and site modification, both lots will conform to their respective zoning districts, including setbacks and minimum lot area and width requirements.

Staff is also recommending the two technical corrections below:

- 1. <u>the Plan Commission Secretary for the Plan Commission Approval should be Colleen Brown,</u> <u>not Kelly Tarczewski.</u>
- 2. Building and parking setbacks shall be shown on the Certified Survey Map.

Recommendation

A motion to recommend approval of the Comprehensive Master Plan Amendment to amend the future land use designation for a portion of the property located at N27W26541 Prospect Avenue from Government/Institutional to Retail/Service Commercial.

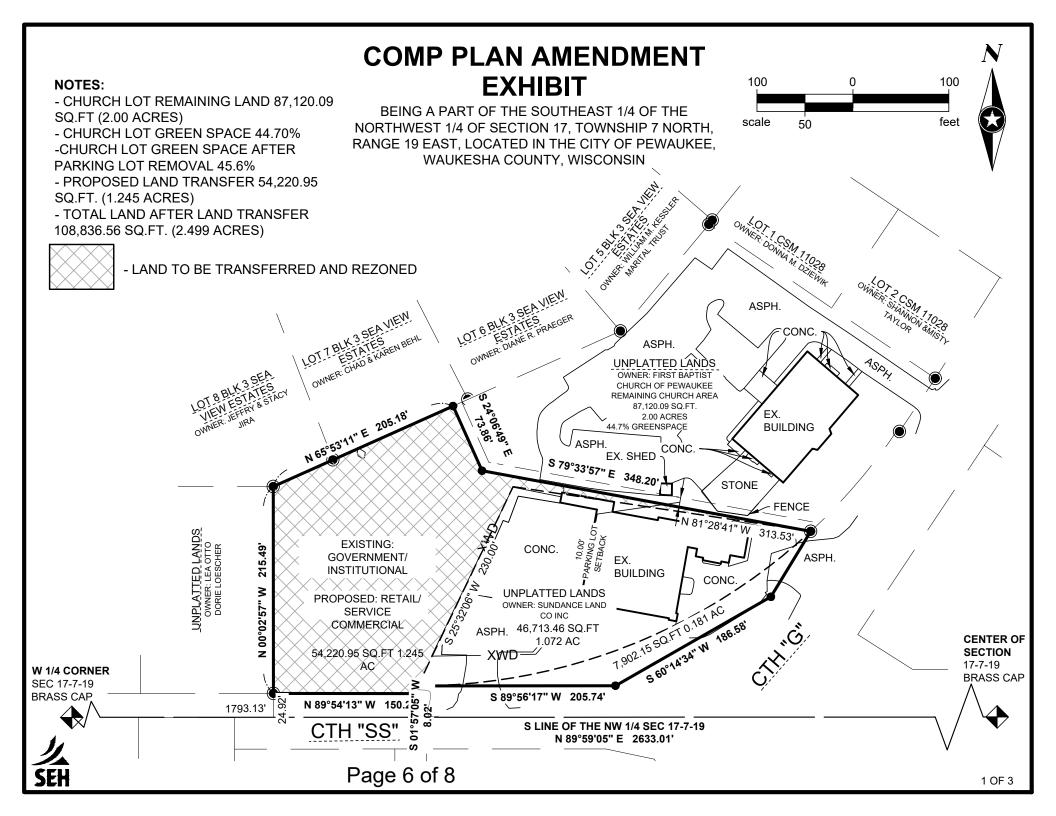
A motion to recommend approval of the Rezoning request to change the zoning from I-1 Urban Institutional District to B-5 Highway Business District for a portion of the property located at N27W26541 Prospect Avenue. A motion to recommend approval of the Certified Survey Map to create a 2.499-acre parcel located at approximately N27W26560 Prospect Avenue.

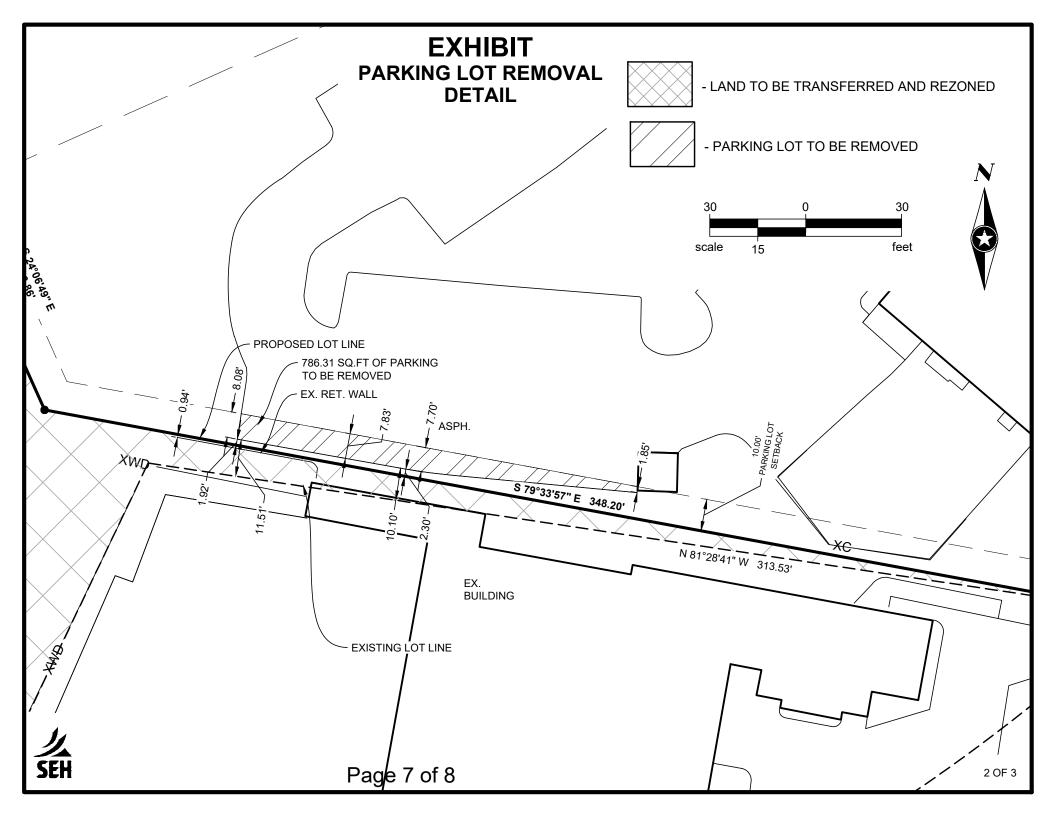
PROJECT NARRATIVE:

WEBER TOWING ACQUISITION OF PART OF CROSSROADS CHURCH

Sundance Land Company, Inc. is the owner of the land occupied by Ken Weber Towing Service at N27 W26560 Prospect Avenue (Weber Land). Immediately north and west of the Weber Land is the Crossroads Church Property located at N27 W26541 Prospect Avenue (Church Land). Ken Weber seeks to acquire the portion of the Church Land lying westerly of the Weber Land ("Acquired Property"). The Acquired Property and the Weber Land would then be combined into a single lot ("Lot 1"). This lot would be occupied solely by Ken Weber Towing Service for its purposes.

In order to complete this process, the Acquired Property will have to be rezoned from I-1 zoning, to B-5 zoning (same as the Weber Land). Upon approval of this zoning change and the proposed CSM, Weber intends to occupy the premises in compliance with all applicable zoning. No site plan approvals or building permits are sought at this time; but if improvements are needed permits will be requested in compliance with City ordinances.





EXHIBIT

BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST, LOCATED IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN

LAND TRANSFER AND REZONING

BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST, LOCATED IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST 1/4 CORNER OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST; THENCE NORTH 89°59'05" EAST ALONG THE SOUTH LINE OF THE NORTHWEST 1/4 OF SAID SECTION, A DISTANCE OF 1,793.13 FEET ; THENCE NORTH 0°02'57" WEST, 24.92 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF COUNTY HIGHWAY "SS" ALSO THE POINT OF BEGINNING; THENCE NORTH 0°02'57" WEST, 215.49 FEET TO A 1 INCH IRON PIPE ON THE SOUTH LINE OF BLOCK 3 OF SEA VIEW ESTATES; THENCE NORTH 65°53'11" EAST ALONG THE SOUTHERLY LINE OF BLOCK 3 OF SEA VIEW ESTATES, A DISTANCE OF 205.18 FEET TO A POINT ON THE SOUTH LINE OF BLOCK 3 OF SEA VIEW ESTATES; THENCE SOUTH 24°06'49" EAST, 73.86 FEET; THENCE SOUTH 79°33'57" EAST, 348.20 FEET TO THE WESTERLY RIGHT OF WAY OF COUNTY HIGHWAY "G"; NORTH 81°28'41" WEST, 313.53 FEET; THENCE SOUTH 25°32'06" WEST, 230.00 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF COUNTY HIGHWAY "SS"; THENCE SOUTH 1°57'05" WEST, 8.02 FEET TO A POINT ALONG THE NORTHERLY RIGHT OF WAY LINE OF COUNTY HIGHWAY "SS"; THENCE NORTH 89°54'13" WEST ALONG SAID NORTHERLY LINE, A DISTANCE OF 150.23 FEET TO THE POINT OF BEGINNING.

SAID LANDS CONTAIN 54,220.95 SQUARE FEET, 1.245 ACRES



CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 8.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

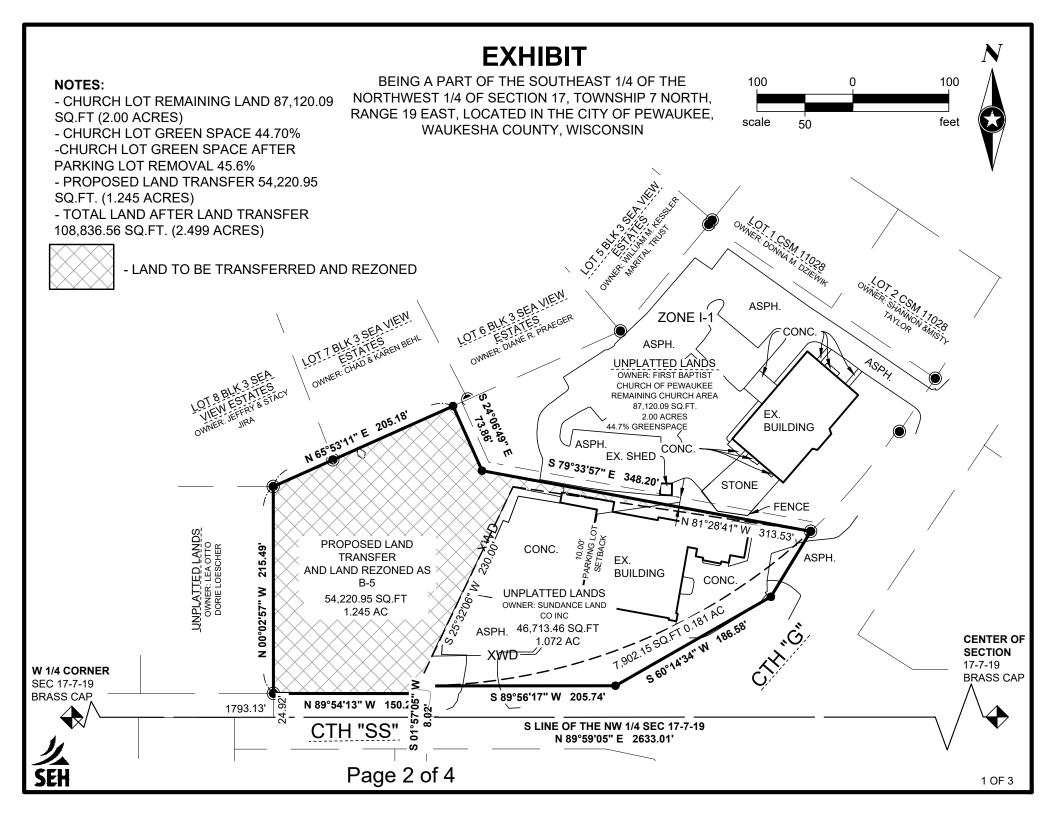
Discussion and Action and Public Hearing for Ken Weber Towing Service and Crossroads Church of Pewaukee, Inc. to Rezone a Portion of Property Located at N27 W26541 Prospect Avenue from I-1 Urban Institutional to B-5 Highway Business (PWC 0930985, PWC 0930984001)

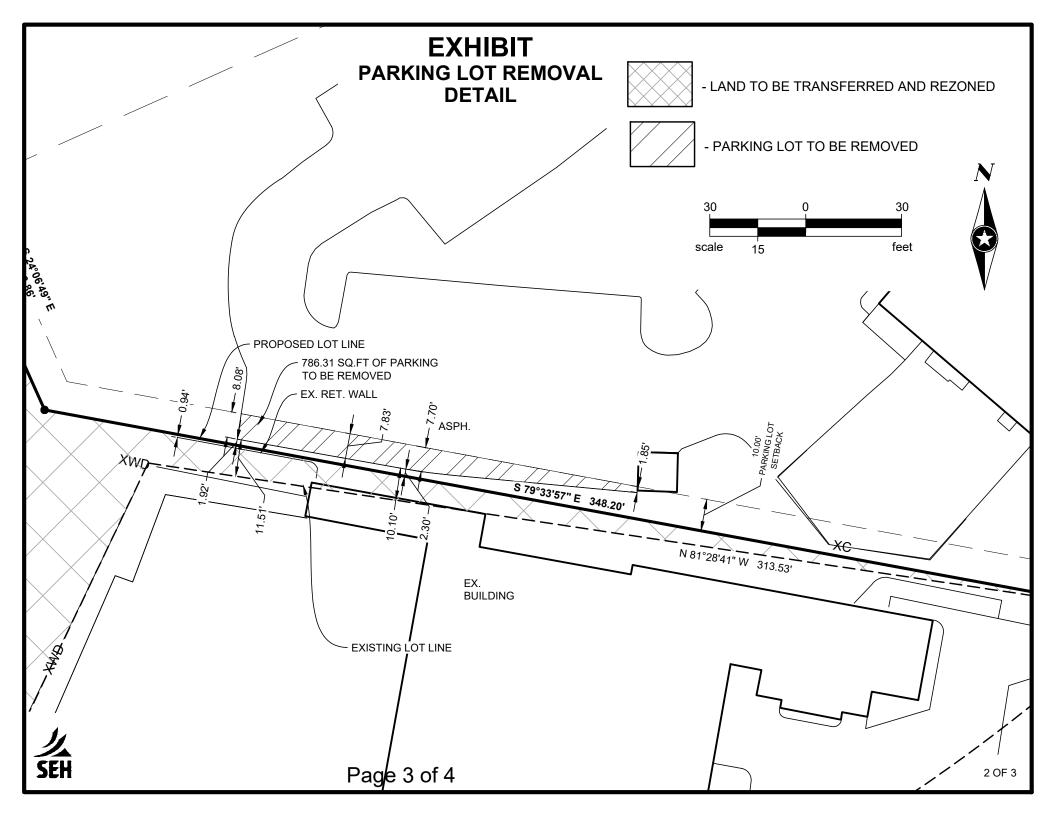
BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS: Description Ken Weber rezoning exhibit





EXHIBIT

BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST, LOCATED IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN

LAND TRANSFER AND REZONING

BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST, LOCATED IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST 1/4 CORNER OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST; THENCE NORTH 89°59'05" EAST ALONG THE SOUTH LINE OF THE NORTHWEST 1/4 OF SAID SECTION, A DISTANCE OF 1,793.13 FEET ; THENCE NORTH 0°02'57" WEST, 24.92 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF COUNTY HIGHWAY "SS" ALSO THE POINT OF BEGINNING; THENCE NORTH 0°02'57" WEST, 215.49 FEET TO A 1 INCH IRON PIPE ON THE SOUTH LINE OF BLOCK 3 OF SEA VIEW ESTATES; THENCE NORTH 65°53'11" EAST ALONG THE SOUTHERLY LINE OF BLOCK 3 OF SEA VIEW ESTATES, A DISTANCE OF 205.18 FEET TO A POINT ON THE SOUTH LINE OF BLOCK 3 OF SEA VIEW ESTATES; THENCE SOUTH 24°06'49" EAST, 73.86 FEET; THENCE SOUTH 79°33'57" EAST, 348.20 FEET TO THE WESTERLY RIGHT OF WAY OF COUNTY HIGHWAY "G"; NORTH 81°28'41" WEST, 313.53 FEET; THENCE SOUTH 25°32'06" WEST, 230.00 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF COUNTY HIGHWAY "SS"; THENCE SOUTH 1°57'05" WEST, 8.02 FEET TO A POINT ALONG THE NORTHERLY RIGHT OF WAY LINE OF COUNTY HIGHWAY "SS"; THENCE NORTH 89°54'13" WEST ALONG SAID NORTHERLY LINE, A DISTANCE OF 150.23 FEET TO THE POINT OF BEGINNING.

SAID LANDS CONTAIN 54,220.95 SQUARE FEET, 1.245 ACRES



CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 9.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action Regarding a Certified Survey Map for Property Located at N27 W26541 Prospect Avenue and N27 W26560 Prospect Avenue for the Purpose of Attaching a Portion of the Crossroads Church of Pewaukee, Inc. Property to the Ken Weber Towing Service Property (PWC 0930985, PWC 0930984001)

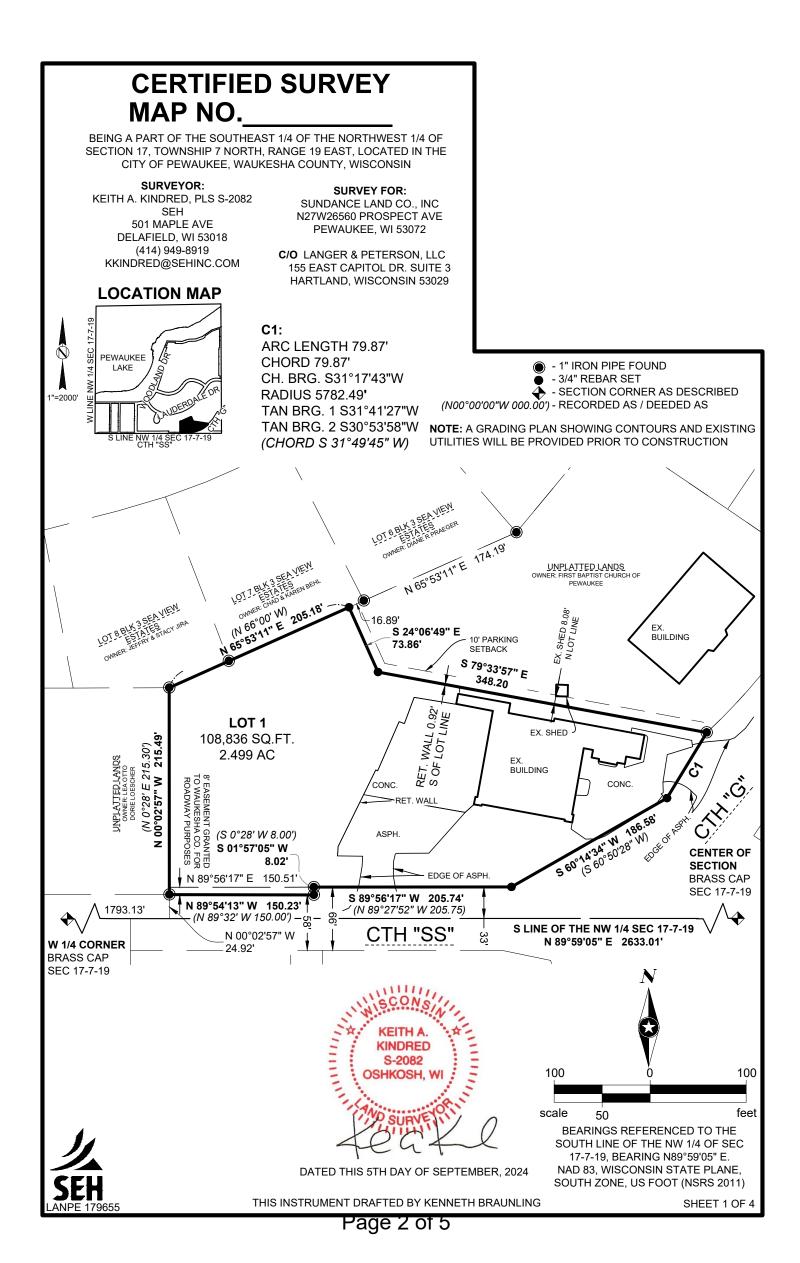
BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description Ken Weber CSM



CERTIFIED SURVEY MAP NO.

BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST, LOCATED IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN

I, Keith A. Kindred, Professional Land Surveyor hereby certify.

That I have surveyed, divided, and mapped the lands being a part of the Southeast 1/4 of the Northwest 1/4 of Section 17, Township 7 North, Range 19 East, located in the city of Pewaukee, Waukesha County, Wisconsin, more fully described as follows;

Commencing at the West 1/4 corner of Section 17, Township 7 North, Range 19 East; thence North 89°59'05" East along the South line of the Northwest 1/4 of said Section, a distance of 1,793.13 feet; thence North 0°2'57" West, 24.92 feet to a point on the Northerly right of way line of County Highway "SS" also the point of beginning; thence North 0°2'57" West, 215.49 feet to a 1 inch iron pipe found on the South line of Block 3 of Sea View Estates; thence North 65°53'11" East along the Southerly line of Block 3 of Sea View Estates, a distance of 205.18 feet; thence South 24°6'49" East, 73.86 feet; thence South 79°33'57" East, 348.20 feet to the Westerly right of way of County Highway "G"; thence 79.87 feet along said right of way also being a curve to the right whose radius is 5,782.49 feet, chord bearing South 31°17'43" West, a distance of 79.87 feet; thence continuing along said right of way South 60°14'34" West, 186.58 feet to a point along the Northerly right of way of County Highway "SS"; thence continuing along said right of way South 89°56'17" West, 205.74 feet to a jog South in the Northerly right of way line; thence South 1°57'05" West, 8.02 feet to a point along the Northerly right of way line of County Highway "SS"; thence North 89°54'13" West along said Northerly line, a distance of 150.23 feet to the point of beginning.

Said lands contain 108,836.58 square feet, 2.499 acres

That I have made such survey, land division and plat by the direction of the owner(s) of said lands. That such survey is a correct representation of all the exterior boundaries of the lands surveyed and the division thereof made. That I have fully complied with the provisions of Chapter 236.34 of the Wisconsin State Statutes and the subdivision regulations of the chapter 18.0600 of the City of Pewaukee Municipal Code in surveying, dividing and mapping the same.

Dated this 5th day of September, 2024



Keith A Kindred, PLS 2082



THIS INSTRUMENT DRAFTED BY KENNETH BRAUNLING

CERTIFIED SURVEY MAP NO		
BEING A PART OF THE SOUTHEAST 1/4 SECTION 17, TOWNSHIP 7 NORTH, RANG CITY OF PEWAUKEE, WAUKESHA	GE 19 EAST, LOCATED IN THE	
CORPORATE OWNER'S CERTIFICATE:		
SUNDANCE LAND CO, INC, AN INCORPORATE EXISTING UNDER AND BY VIRTUE OF THE LA OWNER, CERTIFIES THAT SAID INCORPORATION MAP TO BE SURVEYED, DIVIDED, AND MAPP ACCORDANCE WITH THE SUBDIVISION REG	AWS OF THE STATE OF TION HAS CAUSED THE PED AS REPRESENTED (WISCONSIN, AS LAND ON THIS DN THIS MAP IN
SUNDANCE LAND CO, INC, DOES FURTHER BY S.236.10 TO BE SUBMITTED TO THE FOLL CITY OF PEWAUKEE.		
IN WITNESS WHEREOF, SUNDANCE LAND C	O, INC , HAS CAUSED TH	IESE PRESENTS
TO BE SIGNED BY	, ON THIS DA	AY OF
, 20		
COUNTY) SS PERSONALLY CAME BEFORE ME THIS THE ABOVE NAMED SAME PERSONS WHO EXECUTED THE FORE ACKNOWLEDGED THE SAME.	TO ME KNOW	N TO BE THE
NOTARY PUBLIC		
COUNTY, WISC	CONSIN	
MY COMMISSION EXPIRES		
J.	ATED THIS 5TH DA	Y OF SEPTEMBER, 2024
THIS INSTRUMENT DRAFTED B		SHEET 3 OF 4

CERTI	FIED SURVEY MAP NO	
	EING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF CTION 17, TOWNSHIP 7 NORTH, RANGE 19 EAST, LOCATED IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN	
PLAN COMMISSION APPROVED BY THE	APPROVAL: PLAN COMMISSION OF THE CITY OF PEWAUKEE THIS	DAY
OF	,20	
STEVE BIERCE, PRE	ESIDING OFFICER	
KELLY TARCZEWSKI	I, CITY CLERK / TREASURER / CEMETERY SEXTON	
COMMON COUNCIL	APPROVAL: COMMON COUNCIL OF THE CITY OF PEWAUKEE THIS	DAY
OF	,20	
STEVE BIERCE, MAY	/OR	
KELLY TARCZEWSKI	I, CITY CLERK / TREASURER / CEMETERY SEXTON	
<u>J</u>	KEITH A. KINDRED S-2082 OSHKOSH, W	OF THE OF THE OF
SEH ANPE 179655	DATED THIS 5TH DAY OF S	SEPTEMBER, 2024 SHEET 4 OF 4

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 10.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion Regarding a Conceptual Review for Doug Kiser for the Review of a Proposed Private Park and Event Space for Property Located on Bluemound Road (PWC 0951995001)

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description Kiser staff report 9.19.24 Kiser conceptual review plan P-1 District B-3 District



REPORT TO THE PLAN COMMISSION

Meeting of September 19, 2024

Date: September 9, 2024

Project Name: Kiser Conceptual Review

Project Address/Tax Key No.: N15W24960 Bluemound Road / PWC 0951995001

Applicant: Douglas & Kim Kiser

Property Owner: ARCE HANDYMAN LLC

Current Zoning: M-1 General Wholesale Business/Warehouse District, Rs-3 Single-Family Residential District, and LC Lowland Conservancy District

2050 Land Use Map Designation: Manufacturing/Fabrication/Warehousing

Use of Surrounding Properties: Single-Family Residential to the north, south, east, and industrial and single-family to the west

Project Description/Analysis

The property owners to the north and south of the subject 7.52-acre property submitted conceptual plans for Plan Commission review of a proposed outdoor event space business use. This property is currently designated as Manufacturing/Fabrication/Warehousing on the City's Year 2050 Land Use/Transportation Plan map and zoned M-1 General Wholesale Business/Warehouse District, Rs-3 Single-Family Residential District, and LC Lowland Conservancy District. The image below illustrates those zoning boundaries.



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The property was previously rezoned upon request of the current property owner for a landscape business use and possible future residential development. That project, however, did not move forward.

Proposed Use

According to the applicant, rentals of the site will be geared toward birthday parties, family reunions, and graduation parties, although it will not necessarily be limited to those uses. The Plan Commission should consider and comment on any uses that may not be acceptable or if other limitations on uses would be recommended, such as capacity/number of guests.

Events are proposed to be allowed between 7:30 a.m. and 11:00 p.m., including set up and cleanup of the event. It is recommended that the Plan Commission consider acceptable hours for this project. Staff has concerns about extending hours too late in the evening, particularly if music is allowed given the property's location and proximity to residential uses.

The P-1 District is arguably the most appropriate district considering the intent of the district is to allow both public and private recreational uses. The Plan Commission could consider the proposed event space use to be similar to those uses listed within the district, which is attached. Alternatively, the B-3 General Business District may be an option as well (see attached).

Note that both zoning districts would require a Conditional Use Permit along with a Rezoning Application, Comprehensive Master Plan Amendment Application, and Site & Building Plan Review Application for any proposed structures or stie improvements.

Site Plan & Improvements

The application materials describe having up to two tents and eight portable restrooms.

The applicant has indicated that the existing gravel drive and parking area would be utilized for this use. Staff would anticipate recommending the driveway be paved and at least a portion of the parking lot to be in conformance with Section 17.0432g.(1) (below) and 17.0601 of the Zoning Code, which both require paved parking. The B-3 District contains similar language requiring off-street parking to be paved.

P-1

g. Parking and Loading Space

(1) There shall be sufficient paved off-street parking and loading space provided to accommodate users of the park or open space area and such parking and loading areas shall be adequately screened as determined by the Plan Commission (see section 17.0600).

(2) There shall be no parking or loading area within 30 feet of a street right-of-way.

Staff has made the applicant aware that there were no approvals granted for the gravel parking area. This area may not be in compliance with the 30-foot setback noted above in sub (2). Furthermore, any structures or impervious surfaces, including gravel, that were placed within the wetland or 25-foot wetland setback, must be removed.

Recommendation

No action required.

Generally, staff has concerns with this type of use being located within the proximity of residential properties, granted the two nearest residential properties are owned by the applicants. Concerns with these types of uses are primarily related to hours of operations and noise. Event type uses are typically not compatible with single-family uses.

It is recommended that sufficient feedback be provided to allow the applicant to determine whether to proceed or not with detailed development plans and the required applications.

Bluemound Road PWC 0951995001

Applicants

- Doug Kiser
- Kim Kiser
- Tom Krumenacher
- Karen Krumenacher



Conceptual Review

August 16, 2024

Page 5 of 20

Location

7.5 Acres undeveloped land located in the City of Pewaukee on County Hwy JJ (Bluemound Road).

Zoning

- ~3 acres RS 3 single family residential district.
- ~1.5 acres M1 General Wholesale Business/Warehouse District
- ~3 acres LC Lowland Conservancy district

Current Use

 Used for a Landscape business with outside storage of lawncare equipment, materials, and general operations.



Location

Site is irregular in shape with approximately 600 linear feet Bluemound Road frontage.

- Gravel access drive from Bluemound Road.
- Compacted gravel parking area approximately 0.75 acres.
- Tree & shrub natural screen along Bluemound for privacy.
- Municipal water & sanitary located in Bluemound road.



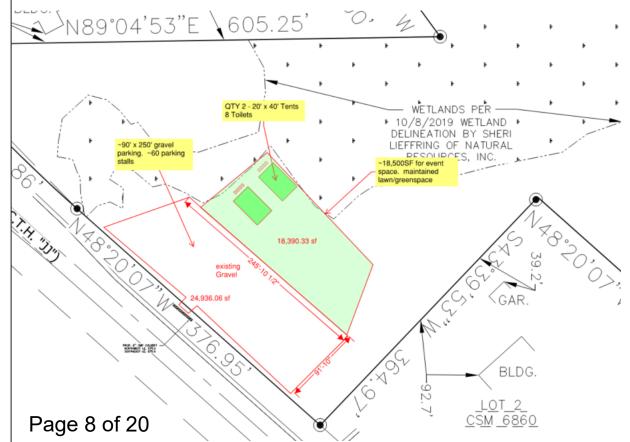


M1 Designation for existing Lawncare Business to successfully operate.

Proposed Use

Event space

- 20' x 40' tents QTY 2
- 19,000 SF of event space located in lawn with mature trees.
- 8 toilets
- Use does not require municipal water, sanitary, or site improvements.
- Existing gravel lot of approximately 25,000 square feet to accommodate 50 vehicles
- Event space rental of an outdoor park setting with two tents to assist with inclement weather.
- Reservations available year-round, winter conditions will limit use. Main rental activity to April through October.
- Applicants live in adjacent properties surrounding the proposed parcel.
- Rentals in 4-hour blocks or by the day.
- A day is considered 7:30am to 11:00pm to assist with setup and clean up for reservations.
- Target rentals for birthday parties, family reunions, and graduation parties.



Proposed Use – Comparable Sites

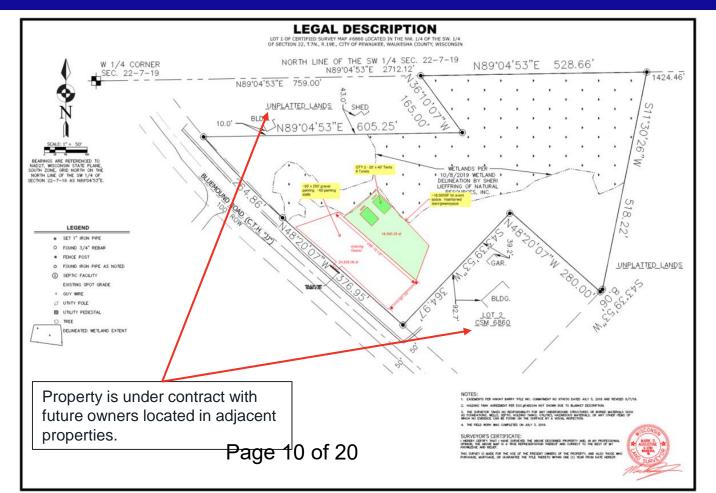
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 Ryan Park has an existing gravel parking lot with a single portable toilet.

Ryan Park 🕅



Proposed Use



Proposed Use – Possible Zoning



P-1 Park and Open Space District

...intended to provide for areas where the active and passive recreational needs, both public and private, of the populace can be met without undue disturbance of natural resources and adjacent uses."
permitted principal use (9) picnic areas.

B-3 General Business District

- ...intended to provide for the orderly continuation and revitalization of older established business areas of the city where existing uses are not exclusively of one type..."

- permitted principal use (j) places of use for the general public

Proposed Use – Surrounding Area



1. Harken Yacht Equipment

- Across the street for the parcel.
- Operates 3 shifts 7 days per week

2. ID Technology and MAS Logistics

- Across street from parcel
- Operates 2 shifts 6 days per week
- 32 dock doors

3. PM Plastics Fulfillment Center

- Across street from parcel
- Operates 2 shifts 6 days per week
- 16 dock doors

4. Lakeland Supply

- Across street from parcel
- Adding ~40,000SF
- Operates 2 shifts 5 days per week
- Expanding to 16 dock doors

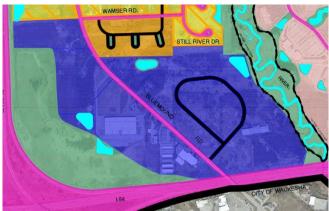
5. Scot Industries

- Adjacent to the parcel
- Adding ~20,000SF
- Operates 2 shifts 6 days per week

Conceptual Approval – Planning Commission Direction



- Rezone parcel from RS-3, M-1, and LC to either
 - P-1 and LC OR;
 - B-3 and LC
- Conditional use to operate event space rentals at the property.
- Possible update 2050 Comprehensive Master Plan since the entire area is located within the M-1 planning.



Questions

17.0432 P-1, PARK AND OPEN SPACE DISTRICT

The P-1, Park and Open Space District is intended to provide for areas where the active and passive recreational needs, both public and private, of the populace can be met without undue disturbance of natural resources and adjacent uses.

- a. Permitted Principal Uses
 - (1) Boat access sites.
 - (2) Botanical gardens and arboretums.
 - (3) Forest Preserve.
 - (4) Golf courses without country club/restaurant facilities.
 - (5) Historic and public monument sites.
 - (6) Sportsmen's clubs.
 - (7) Outdoor ice-skating and hockey rinks.
 - (8) Parks, leisure and ornamental.
 - (9) Picnic areas.
 - (10) Playfields or athletic fields.
 - (11) Playgrounds.
 - (12) Play lots or tot lots.
 - (13) Skiing and tobogganing slopes.
 - (14) Swimming beaches.
 - (15) Outdoor tennis courts.
- b. Permitted Accessory Uses
 - (1) Any structure necessary for the operation or use of a permitted use.
 - (2) Paved off-street parking areas.
 - (3) See section 17.0700.

c. Conditional Uses (See section 17.0500)

- (1) Amphitheaters.
- (2) Archery ranges.
- (3) Arenas and field houses.
- (4) Bathhouses and swimming pools.
- (5) Conservatories.
- (6) Exhibition halls.
- (7) Fairgrounds.
- (8) Golf courses with country club/restaurant facilities.
- (9) Golf driving ranges.
- (10) Gymnasiums.
- (11) Marinas.
- (12) Museums.
- (13) Music Halls.
- (14) Polo fields.
- (15) Recreation centers.
- (16) Riding academies.
- (17) Skate board parks/facilities.
- (18) Skeet and trap shooting ranges provided that the firing of rifled arms and shotgun slugs shall not be permitted directly toward or over any highway, road, or navigable water, or directly toward any building or structure, or directly toward any population concentration within one mile of the site.
- (19) Stadiums.
- (20) Wildlife preserves.
- (21) Zoological facilities.
- (22) Campgrounds, provided that such facilities shall meet the following conditions:

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CITY OF PEWAUKEE MUNICIPAL CODE CHAPTER 17 – ZONING

- (a) The minimum size of a RV, travel trailer park or campground shall be ten (10) acres.
- (b) The maximum number of individual campsites shall be four per gross acre.
- (c) Each individual campsite shall be plainly marked.
- (d) The minimum dimensions of a campsite shall be 40 feet wide by 50 feet long.
- (e) Each campsite shall be separated from other campsites within the campground by a yard area not less than 15 feet wide.
- (f) There shall be a minimum of one and one-half (1-1/2) automobile parking spaces for each individual campsite and such parking space shall be provided so as not to restrict free movement of traffic within the campground.
- (g) No individual campsite shall be located closer than 75 feet from a public highway, designated wetland, road right-of-way or designated 100 year recurrence interval (base flood) floodplain, nor closer than 40 feet to any other property boundary.
- (h) All campgrounds shall conform to the requirements of Section H78, Wisconsin Administrative Code, as amended.
- (i) Each campground shall be completely enclosed except for permitted entrances and exits by either a planting of fast-growing plant material at least 6 feet in height at the time of planting, or a permanent evergreen planting, the individual trees to be of such a number and so arranged that within five (5) years a dense screen will be formed. Such permanent planting shall be grown or maintained to a height of not less than 10 feet.
- Each RV or travel trailer camp, campground, or camping resort shall have a service building similar to that required by Section 1177, Wisconsin Administrative Code.
- (k) No RV, trailer or camping unit shall be located on one site for a period of more than 21 days in a calendar month. No unused or uninhabited RV, trailer or other enclosed vehicle shall be stored in a trailer park, campground, or camping resort. (Also see sub-section 17.0435c(12)).
- d. Lot Area and Width
 - Lots in the P-1 District shall provide sufficient area for any principal structure or accessory structures as well as necessary off-street parking and loading areas.
 - (2) Lots shall not be less than 80 feet in width at the principal street access.
- e. Building Height and Size (See subsection 17.0210)
 - (1) No building or parts of a building shall exceed 35 feet in height.
 - (2) The sum total of the floor area of all buildings shall not exceed 10 percent of the total park area.
- f. Setback and Yards
 - (1) No building or structure shall be erected, altered, or moved closer than 40 feet to a lot line.
 - (2) All structures shall be set back a minimum of 75 feet from the designated 100 year recurrence interval (base flood) floodplain of all navigable streams and bodies of water and 25 feet from any designated wetland. (Also see sub-section 17.0435).

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- g. Parking and Loading Space
 - (1) There shall be sufficient paved off-street parking and loading space provided to accommodate users of the park or open space area and such parking and loading areas shall be adequately screened as determined by the Plan Commission (see section 17.0600).
 - (2) There shall be no parking or loading area within 30 feet of a street rightof-way.
- h Minimum Utility Service

Electricity and waste water treatment and disposal facilities and water supply system as required by the Wisconsin Department of Natural Resources and/or the Waukesha County Health and Human Services Department.

i. Special Regulations

To encourage a park use environment that is compatible with the residential character of the City, Building and/or Zoning permits for permitted uses in the P-1 District shall not be issued without prior review by and approval of plans for such use by the City Plan Commission. Said review and approval shall be concerned with adjacent existing and planned uses, general site layout, operation plans, building materials, need for public waste water treatment and water supply facilities, ingress, egress, signage, lighting, storm water drainage, parking, loading and unloading, and screening and landscape plans. See subsection 17.0210.

17.0419 B-3, GENERAL BUSINESS DISTRICT

The B-3, General Business District is intended to provide for the orderly continuation and revitalization of the older established business areas of the City where existing uses are not exclusively of one type but, rather, include retail sales shops, wholesale and warehousing outlets, and institutional, recreational, and even residential uses. Many of the existing businesses in this district may not meet the requirements of the B-1 or B-2 Business Districts or may be non-conforming as described in Section 17.0800. It is the intent of this district to provide minimum requirements for all new uses of land within the district and a guide for the redevelopment or revitalization of existing uses of land within the district.

- a. <u>Permitted Principal Uses</u>
 - (1) Existing residential structures and any conforming and compatible residential additions.
 - (2) Uses existing before August 1982.
 - (3) Commercial and Hobby Kennels. (Cr. 13-09)
- b. Permitted Accessory Uses
 - (1) Garages for storage of licensed vehicles used in conjunction with the operation of a business.
 - (2) Off-street parking and loading areas.
 - (3) (See Section 17.0700).
- c. Conditional Uses (See Section 17.0500)
 - (1) Permitted and conditional uses allowed in the B-1, B-2 and B-4 districts and uses similar in character to the above-permitted uses and conducted as business on the premises and catering to the general public.
 - (2) The following general uses:
 - (a) Auto accessory sales and service.
 - (b) Auto repair shops and towing service.
 - (c) Auto and truck rental.
 - (d) Boarding houses.
 - (e) Body shops.
 - (f) Petroleum service stations selling no alcoholic beverages.
 - (g) New and used auto and truck sales and service.
 - (h) New and used marine sales and services.
 - (i) Night clubs and taverns.
 - (j) Places of entertainment for the general public.
 - (k) Public and private institutional uses such as public buildings; churches.
 - (I) Second hand stores.
 - (m) Existing residential uses or their replacement.
 - (n) Upholsterer's shop.
 - (3) Residential quarters for the owner or proprietor provided that such quarters are in the principal building, not on the ground level floor, and that entrances and exits to such quarters are direct to the exterior of the building. There shall also be a minimum floor area of 400 square feet for an efficiency unit, 600 square feet for a one (1)-bedroom unit, and 750 square feet for a two (2)-bedroom unit. A dwelling unit with more than two (2) bedrooms shall not be allowed. Residential quarters in a B-3 District shall be reviewed by the City Plan Commission in the same manner provided for in Section 17.0416 of this ordinance.
 - (4) Animal hospitals, provided all principal structures and uses are not less than 100 feet from any residential use.

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CITY OF PEWAUKEE MUNICIPAL CODE CHAPTER 17 – ZONING

- (5) Clubs, fraternities, lodges, and meeting places, provided all principal structures and uses are not less than 25 feet from any lot line.
- (6) Commercial recreation facilities, which may include arcades, bowling alleys, clubs, dance halls, driving ranges, gymnasiums, lodges, miniature golf facilities, physical culture facilities, pool and billiard halls, skating rinks, and theaters.
- (7) Construction services including general building contractors; carpentering services; masonry, stonework, tile setting and plastering services; roofing and sheet metal services, experimental testing and research laboratories, provided all principal structures and uses are not less than 100 feet from residential uses and any outside storage is screened from view.
- (8) Millwork and lumber yards screened from view from adjacent property.
- (9) Mortuaries.
- (10) Processing and manufacturing of feeds prepared for animals and fowl; wholesale and/or retail warehousing of animals feeds, fertilizer, seeds, garden and lawn supplies, animal health products, and lawn equipment provided that all operations are conducted within an enclosed building.
- (11) Rest homes, nursing homes, and elderly housing at densities not exceeding 12 units per net acre; clinics and children's nurseries provided all principal structures and uses are not less than 40 feet from any lot line.
- (12) Transmitting towers, receiving towers, relay and microwave towers without broadcast facilities or studios.
- (13) Temporary and seasonal uses on vacant or principal use parcels.
- (14) Bed and breakfast inns.
- d. Lot Area and Width
 - (1) Lots shall have a minimum area of 7,200 square feet,
 - (2) Lots shall be not less than 60 feet in width at the building setback line.
- e. Building Height and Size (See subsection 17.0210)
 - (1) No building or parts of a building shall exceed three stories or 45 feet in height.
 - (2) No individual store, shop, or business establishment shall have a total floor area of less than 300 square feet or more than 20,000 square feet.
 - (3) No accessory building shall exceed 18 feet in height.
- f. Setback and Yards
 - (1) There shall be a minimum building (or street) setback from each adjacent street equal to the average of the setback of existing buildings on either side of the proposed building, but not less than 25 feet; or, if there are no buildings on adjacent properties, not less than 25 feet. Accessory buildings or additional principal buildings on the same parcel as an existing building shall be setback no less than the existing building.
 - (2) There shall be a minimum side yard equal to the side yard on the adjacent property but not less than 20 feet; or, if there is no building on adjacent property, not less than 10 feet.
 - (3) There shall be a rear yard of not less than 25 feet.
 - (4) All structures shall be set back a minimum of 75 feet from the designated 100 year recurrence interval (base flood) floodplain of all navigable streams and bodies of water and 25 feet from any designated wetland. (Also see sub-section 17.0435)

CITY OF PEWAUKEE MUNICIPAL CODE CHAPTER 17 – ZONING

g. Parking and Loading Space.

- There shall be adequate paved <u>off</u>-street parking provided for every structure/use approved by the City Plan Commission after August 1982 (see Section 17.0600).
- (2) There shall be a minimum of two (2) indoor parking spaces for each dwelling unit erected in the district after the original (June 1982) date of adoption of this Ordinance (see Section 17.0600).
- (3) There shall be adequate paved <u>off</u>-street loading space provided for every structure/use approved after August 1982.
- (4) All parking and loading areas shall be adequately screened as determined by the Plan Commission. (Also see Section 17.0700).
- h. Minimum Utility Service

Electricity, public water supply and an approved sanitary waste water collection, treatment and/or disposal system. All uses shall be connected to public utility facilities when made available to the site.

i. Special Regulations

To encourage a business use environment that is compatible with the residential character of the City, Building and/or Zoning permits for permitted uses in the B-3 General Business District shall not be issued without prior review by and approval of the City Plan Commission. Said review and approval shall be concerned with adjacent existing and planned uses, general site layout, building and operation plans, ingress, egress, parking, drainage, lighting, signage, loading and unloading, and screening and landscape plans.

CITY OF PEWAUKEE PLAN COMMISSION AGENDA ITEM 11.

DATE: September 19, 2024

DEPARTMENT: Planning

PROVIDED BY:

SUBJECT:

Discussion and Action and Public Hearing Regarding Revisions to Permitted Accessory Uses Within the Rs-1 District (Section 340-4.5B.), Rs-2 District (Section 340-4.6B.), Rs-3 District (Section 340-4.7B.), and Rs-4 District (Section 340-4.8B.), and Adding Section 340-2.9B.(2)(1) to the City's Accessory Use and Structure Regulations, and Amending Section 126-3.A. Animal Regulations of the City's Municipal Code

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

Keeping and Raising Chickens staff report 9.19.24 Draft Ordinance - chicken & accessory structure revisions Kaitlin Miller email re chickens 7.9.24



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

REPORT TO THE PLAN COMMISSION

Meeting of September 19, 2024

Date: September 13, 2024 Project Name: Adoption of regulations related to the keeping and raising of chickens Project Address/Tax Key No.: City-wide Applicant: City of Pewaukee

Introduction

At their May 20, 2024, meeting, the Common Council directed staff to provide additional research and potential regulations related to the keeping and raising of chickens on single-family residential properties. The discussion at that meeting considered the potential of allowing chickens on parcels of one or two acres in area.

Staff returned to the Common Council at their July 15, 2024 Common Council with the below analysis and draft regulations related to keeping and raising chickens on single-family properties. At that meeting, the Common Council directed staff to prepare an ordinance that would allow the keeping and raising of chickens within the Rs-1, Rs-2, Rs-3 and Rs-4 zoning districts. In other words, the ordinance would allow chickens on single-family residential lots with an area of 20,000 square feet or more.

Analysis

Staff reviewed regulations and reached out to several adjacent communities. Below is a summary of those findings.

- Town of Delafield
 - Allows up to 8 hens maximum on a residential property as a permitted accessory use in
 - the R-1, R-2, R-3, A-2, and A-3 districts.
 - R-1 Residential District [1.5-acre min. lot]
 - R-1(A) Residential District [1.0-acre min. lot]
 - R-2 Residential District [30,000 sq. ft. min. lot]
 - R-3 Residential District [20,000 sq. ft. min. lot]
 - Annual renewal required.
 - 8 licenses were issued in 2023.
 - Hardly any complaints or enforcements over the last 5 years.
 - There is not significant staff time needed for administration. Staff send renewal letters and review the coop areas to make sure setback requirements are met.
- Village of Pewaukee

- The keeping of up to 4 chickens is allowed on a single-family residential premise of at least a 1/4 acre.
- o 7 chicken permits have been issued since 2020. Zero permits were issued in 2023.
- There have been no complaints received by staff.
- There is minimal staff time related to the administration of the ordinance.
- City of Waukesha
 - Allows no more than four chickens per parcel, except that six chickens may be kept on parcels greater than one acre.
 - Renewal is required every two years.
 - 4 applications submitted in 2023.
 - As of May 22^{nd} , 7 applications have been received in 2024.
 - There is one Property Maintenance Inspector that is responsible and able to manage the responsibilities of reviewing and inspecting applications for keeping chickens.
 - Note the ordinance has only been enforceable since September 3, 2023.
- City of Oconomowoc
 - A maximum of 4 hen chickens per property within RR-Rural Residential, TR-Traditional Residential, SR-Suburban Residential, and IP-Institutional Public Districts.
 - One-time Permit and fee required.
 - Below are the number of permits that have been approved by year:
 - 2021 6
 - 2022 6
 - 2023 3
 - 2024 2 thus far
 - There have been no complaints received from those premises that have been issued a permit.
 - Minimal staff time has been needed for those properties obtaining permits.
- Village of Mukwonago
 - Up to four domesticated chickens are allowed on residential property.
 - Licenses/Permits are renewed annually.
 - The Village issues about one chicken permit/license per year.
 - There are not many issues with complaints or enforcements regarding chickens.
 - There has been a slight increase in staff time to deal with the initial process of the license/permits. Once established, the process is similar to obtaining a dog license.

An email from a resident, Kaitlin Miller, is also attached for consideration.

Proposed Amendment

The attached ordinance amends the Zoning Code to add detailed standards for keeping and raising chickens. These standards include requirements for the care of chickens as well as regulations for chicken coops and runs.

The ordinance also adds the allowance of a certain number of chickens in each zoning district as a permitted accessory use.

Note that Section 126-3.A. of the Municipal Code must also be amended (see below).

§ 126-3. Animal regulations.

A. It shall be unlawful to keep farm animals in any zoning district except **as expressly allowed within an individual zoning district the A-1 and A-2 Districts or the Rs-1 District, which requires a conditional use permit,** as set forth in §§ 340-4.3, 340-4.4 **and 340-4.5 of** Chapter 340, Zoning.

Recommendation

A motion recommending approval to the Common Council to adopt the draft ordinance related to keeping and raising chickens.

CITY OF PEWAUKEE WAUK

WAUKESHA COUNTY

ORDINANCE NO. XX-XX

AN ORDINANCE AMENDING REQUIREMENTS FOR KEEPING AND RAISING CHICKENS AND ACCESSORY STRUCTURES IN CHAPTER 340 – ZONING

WHEREAS, the City of Pewaukee Plan Commission held a public hearing on September 19, 2024 to discuss changes to regulations related to the keeping and raising of chickens and accessory structures;

NOW THEREFORE, The Common Council of the City of Pewaukee, Waukesha County, Wisconsin do ordain sub (1) be added to Section 340-2.9B.(2) as follows:

340-2.9B.(2) Detailed standards for certain residential accessory structures and uses

(l) Keeping and raising chickens

- [1] DEFINITIONS.
 - [a] <u>Coop</u>. A cage or small structure for housing chickens.
 - [b] <u>Enclosure</u>. The entire space within which chickens are kept, including both coop and run.
 - [c] <u>Run</u>. A designated enclosed area, attached to a chicken coop, in which chickens are allowed to roam safely outdoors.
- [2] KEEPING CERTAIN FOWL PROHIBITED. Roosters shall not be permitted in any zoning district. The only fowl that may be kept in the City is chickens. If a rooster is identified on a premise, the owner shall have 10 days upon verbal or written notification by a city official to remove said rooster.
- [3] PERMIT REQUIRED. All residents must apply for and receive a Chicken Permit prior to construction of an enclosure and placement of chickens on their property. The applicant shall pay an annual non-refundable permit fee in accordance with the City's annual fee schedule, which will be established from time to time by separate resolution of the Common Council. Upon receipt of a completed application and payment of fee, the Zoning Administrator shall review the application and may approve, deny or conditionally approve the issuance of license subject to reasonable conditions.
- [4] PLANS REQUIRED. Plans for enclosures and a site plan showing the location of the enclosure in relation to property boundaries and structures on the premises must be submitted with the Chicken Permit application.
- [5] PREMISES REGISTRATION. Proof of livestock premises registration with the Wisconsin Department of Agriculture, Trade and Consumer Protection must be provided at time of application.

Ordinance 24-03 Amending Conditional Use Permit Requirements

[6] INSPECTION. All premises for which a permit has been issued shall be available for inspection by the City. A refusal to allow inspection may result in revocation of or refusal to renew the permit.

[7] GENERAL STANDARDS.

- [a] The City noise standards in Sections 126-3.E. and 253-5.J. of the Municipal Ordinance shall apply to the keeping of chickens.
- [b] The public nuisance noxious odors standards specified in Sections 126-3.D.(2) and 253-3.G. of the Municipal Ordinance shall apply to the keeping of chickens.
- [c] Chickens shall be provided with a coop affording enclosed protection against weather and adverse elements.
- [d] Chickens shall be kept within the coop and run area at all times; the free ranging of chickens is prohibited.
- [e] Chickens shall be provided with fresh water and adequate amounts of feed regularly.
- [f] No commercial activities shall be permitted upon any premise related to keeping and raising chickens, such as roadside stands, the selling of eggs, sale of live or dressed chickens, sale of live chicks, sale of feathers, and any other activity deemed similar by the Zoning Administrator.
- [g] Slaughtering of chickens shall not be allowed.
- [h] All feed must be contained in a rodent-free container.
- [i] Eggs shall not be hatched.
- [j] Manure and soiled bedding shall be removed from the enclosure regularly and frequently enough to avoid odors and attraction of insects. Manure and soiled bedding shall be disposed of in a sealed container.
- [k] Dead chickens shall be removed from the premises and disposed of in accordance with law.

[8] ENCLOSURE REQUIREMENTS.

- [a] No more than one enclosure shall be allowed on any one property. Chicken coops shall be considered accessory structures and count towards lot coverage calculations.
- [b] Enclosures shall be located within the rear yard only.
- [c] No chicken coop or run area shall be closer than fifteen (15) feet to any residential lot line.
- [d] Enclosures shall be constructed in a sturdy and workmanlike manner.
- [e] Coops shall be mounted off the ground, placed on a hard surface such

as concrete or patio blocks, or have a floor of hardware cloth, such that burrowing animals may not enter.

- [f] If an enclosure is mounted off the ground, it must be constructed so that feed cannot fall through the bottom onto the ground. Any feed falling outside of the enclosure must be cleaned up daily.
- [g] Coops shall be at least three-square feet in area per hen chicken. Run areas shall be at least sixteen square feet in area per hen chicken.
- [h] Enclosures shall be fenced in a manner to securely contain the hen chickens. Fencing for run areas shall be a minimum of 48 inches in height or higher and covered to contain chickens at all times.
- [i] Enclosures shall be enclosed on all sides, including the top and covered with solid material or hardware cloth.
- [j] Coops shall be constructed with materials and roofing to provide a clean, dry, adequately ventilated, and draft-free environment.
- [k] No open flame heating devices are allowed in enclosures.
- [1] Fencing shall meet all zoning requirements, except for the allowance of chicken wire type fencing specifically for enclosures.
- [m] A Zoning Permit shall be obtained prior to construction or installation of any coop, run or fencing. Any electrical work requires an electrical permit through the Building Services Department.
- [n] Enclosures shall be removed no later than twelve (12) months after the keeping of chickens is no longer a use on the property.
- [9] DISCLAIMER. The grant of a Chicken Permit by the City of Pewaukee does not supersede or abrogate any law or ordinance, private deed restrictions, homeowner's association regulations or bylaws, or other private restrictions that may apply and may be more restrictive. Persons requesting a permit to keep chickens are solely responsible to know and comply with any such private limitations.
- [10] COMPLIANCE AND REVOCATION OF PERMIT. It is recognized that if best management practices are not observed, the keeping of chickens can create a nuisance. Therefore, the above compliance procedures shall be applied to the keeping of chickens. Upon determination by the Zoning Administrator that the Permittee has violated any provision of this Ordinance, the Owner shall be issued one written warning of violation. Upon determination by the Zoning Administrator that the Permittee has violated any provision of this Ordinance a second time, the Zoning Administrator may revoke the Chicken Permit, in which case the Permittee shall, within 30 days, remove all chickens, chicken coop(s) and fencing. Once a Chicken Permit has been revoked, it shall not be reissued for a period of at least three years. The revocation may be appealed to the Zoning Board of Appels pursuant to Section 340-12.5 of the City's Municipal Ordinance.

Ordinance 24-03 Amending Conditional Use Permit Requirements

NOW THEREFORE, The Common Council of the City of Pewaukee, Waukesha County, Wisconsin do ordain that sub (2) below be added to Section 340-4.5.B. as follows and the section renumbered accordingly and sub (4) be revised as follows:

340-4.5B. Permitted accessory uses.

- (2) The recreational keeping and raising of a maximum of fifteen (15) hen chickens in accordance with § 340-2.9(2)((1) for eggs, meat or meat by-products for family consumption, and not for sale on the premises.
- (4) Accessory uses and structures in compliance with § 340-2.9 Use restrictions.

NOW THEREFORE, The Common Council of the City of Pewaukee, Waukesha County, Wisconsin do ordain that Section 340-4.5.C.(1) be deleted and the section renumbered accordingly;

NOW THEREFORE, The Common Council of the City of Pewaukee, Waukesha County, Wisconsin do ordain that the Rs-2 Single-Family Residential District, Section 340-4.6.B.(2), be replaced and recreated and sub (3) added to Section 340-4.6.B. as follows:

340-4.6.B. Permitted accessory uses.

- (2) Accessory uses and structures in compliance with § 340-2.9 Use restrictions.
- (3) The recreational keeping and raising of a maximum of fifteen (15) hen chickens in accordance with § 340-2.9(2)((1). for eggs, meat or meat by-products for family consumption, and not for sale on the premises.

NOW THEREFORE, The Common Council of the City of Pewaukee, Waukesha County, Wisconsin do ordain that the Rs-3 Single-Family Residential District, Section 340-4.7.B.(2), be replaced and recreated and sub (3) added to Section 340-4.7.B. as follows:

340-4.7.B. Permitted accessory uses.

- (2) Accessory uses and structures in compliance with § 340-2.9 Use restrictions.
- (3) The recreational keeping and raising of a maximum of ten (10) hen chickens in accordance with § 340-2.9(2)((1). for eggs, meat or meat by-products for family consumption, and not for sale on the premises.

NOW THEREFORE, The Common Council of the City of Pewaukee, Waukesha County, Wisconsin do ordain that the Rs-4 Single-Family Residential District, Section 340-4.8.B.(2), be replaced and recreated and sub (3) added to Section 340-4.8.B. as follows:

340-4.8.B. Permitted accessory uses.

- (2) Accessory uses and structures in compliance with § 340-2.9 Use restrictions.
- (3) The recreational keeping and raising of a maximum of five (5) hen chickens in accordance with § 340-2.9(2)((1). for eggs, meat or meat by-products for family consumption, and not for sale on the premises.

SECTION 2: Severability. The sections of this ordinance are declared to be severable. Should any sub-section, clause, or provision of this ordinance be declared by any court of competent jurisdiction to be invalid, the same shall not affect the validity of this ordinance as a whole or any part thereof, other than the part declared invalid. The remainder of the ordinance shall remain in full force and effect.

SECTION 3: Effective Date. This ordinance is effective upon publication or posting as provided by law.

This ordinance passed this _____ day of _____ 2024.

Steve Bierce, Mayor

ATTEST:

Kelly Tarczewski, City Clerk/Treasurer

Hi Nick,

Please see below & attached for information I would like shared with council members based off of my conversations with several of them. Link to references are included when PDF's were unable to be attached.

Thank you, Katie

Dear Council Members,

I am writing to you to request consideration of reducing the lot size requirements for keeping up to 3-4 chickens on residentially zoned properties to 1/2 acres or to match neighboring ordinances of ¹/₄ acre. According to the poultry extension (a USDA grant organization), laying hens for small & backyard poultry flocks require 13-14 sq. ft. of space per hen. For reference & using Wisconsin's most popular dog breed's standard size (golden retriever), the USDA requires 13-16 sq. ft. of floor space per dog (attached). The city of Pewaukee allows the keeping of multiple dogs on a property regardless of lot size although similar space allotments are required to safely keep these animals.

These calculations for space requirements are the same requirements used for indoor pet bird enclosures which the city of Pewaukee does not regulate. For example, a residential owner could keep several birds/parrots of similar size & space requirements indoors on a lot of any size.

Many animals can be considered either farm animals based on history and are also excellent companion animals. For example, rabbits are commonly raised for meat as well as kept indoors as companion animals. Chickens are similarly being recognized for their companion qualities and due to their egg-laying can also be used to produce food while simultaneously serving as companion animals. Several organizations support the use of chickens as companion animals. The organization "Happy Hen Program" provide hens for memory care units for their therapeutic value in improving quality of life & decreasing the use of sedative medications due to aggitation.

State-level activity: I have reached out to state Rep. Shae Shortwell who introduced Senate bill 912 in 2023 (attached) who shared that the bill was introduced late & ran out of time. They are planning on re-introducing in January

2024. Similar to Wisconsin's 'right to solar', this bill would establish a Wisconsinite's right to keep up to 4 chickens on residential property regardless of lot size or HOA rules. There is a similar bill regarding a right to vegetable gardens as well due to variability in city ordinances & excessively restrictive HOA rules. The USDA & the University of Wisconsin Native American Task Force consider food sovereignty to be a right of native Americans and are committed to assisting tribal nations with achieving food sovereignty through their right to produce their own food on their own land to sustain themselves. Nationally there is also a movement moving through several states regarding the right-to-food ordinances beginning with Blue Hill, Maine's passing of the food sovereignty ordinance "Local food and Community Self-Governance Ordinance".

https://poultry.extension.org/articles/getting-started-with-small-and-backyard-poultry/housing-for-small-and-backyard-poultry-flocks/space-allowances-in-housing-for-small-and-backyard-poultry-flocks/

https://www.anthemmemorycare.com/blog///happy-hens-are-delighting-memorycare-residents-and-staff?article=the-longest-day-it-s-about-caregivers-too

https://blogs.extension.wisc.edu/natf/tribal-food-sovereignty-native-nations-team/

https://minnesotalawreview.org/2023/02/13/food-for-thought-the-emergence-of-right-to-food-legislation-in-the-united-states/

Thank you,

Katie Miller 330-620-7769

Animal Care Tech Note Minimum Space Requirements for Dogs



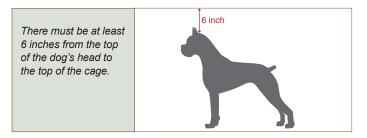
The Animal Welfare Act (AWA) sets standards of care and treatment for dogs used in research, exhibited to the public, bred for commercial sale, or transported in commerce. These standards include specific requirements for the amount of space primary enclosures must provide. The following information will help AWA licensees and registrants understand the requirements and provide housing for their dogs that meets the law's standards.

AWA Requirements

In general, all primary enclosures must have adequate space for each adult dog to turn about freely and to stand, sit, and lie down in a comfortable, normal position. Enclosures must also provide adequate space for each adult dog to walk around in a normal manner.¹ In addition, enclosures must meet specific measurements for **interior height** and **floor space**, based on the size and number of dogs housed.

Interior Height

The interior height of the primary enclosure must be at least 6 inches higher than the head of the tallest dog in the enclosure. The measurement is based on when the dog is standing comfortably in a normal position.²



Floor Space

Each dog in a primary enclosure, including weaned puppies, must have a minimum amount of floor space. This measurement is based on calculations specified in the AWA, as explained at right.³

If you have multiple dogs in group housing, the total floor space must meet or exceed the sum of each dog's minimum floor space requirement. For example, if you have four dogs that each require 9.51 square feet, you will need four times that number (38.04 square feet—to house the dogs.



Note: These are minimum requirements only. Providing more than the required space is encouraged and can improve the overall welfare of your dogs.

Calculating Minimum Floor Space

To calculate the minimum space required for a dog, follow the steps below.

Step 1: Measure the length of the dog (in inches) from the tip of its nose to the base of its tail. Add 6 inches to this number.



Example: Scout, a Dalmatian, measures 31 inches from the tip of her nose to the base of her tail.

31 inches + 6 inches = 37 inches

Step 2: Take the total number you got in step 1 and square it (multiply it by itself). This will give you the dog's minimum floor space in square inches. To convert the number to square feet *(optional)*, divide the total number in square inches by 144.

Example: For Scout, the final measurement in Step 1 was 37 inches. Multiply 37 inches by 37 inches (or 37²) to see that Scout needs 1,369 square inches of floor space (or 9.51 square feet)

> 37 inches x 37 inches = 1,369 square inches 1,369 square inches ÷ 144 = 9.51 square feet

Page 12 of 15

¹ 9 CFR 3.6(a)(2)(xi) ² 9 CFR 3.6(c)(1)(iii)

³ 9 CFR 3.6(c)(1)(i)

Dams With Nursing Puppies

Dams with nursing puppies must have additional floor space.⁴ Each puppy requires at least 5 percent of its mother's minimum floor space requirement.

Step 1: Calculate the additional minimum floor space per puppy.

1,369 square inches x 0.05 = 68.45 square inches

Step 2: Multiply the additional floor space per puppy by the number of puppies.

68.45 square inches x 9 puppies = 616.05 square inches

Step 3: Add Scout's space requirement to the space requirement for the 9 puppies. This will give you the space requirement in square inches for all 10 dogs. To convert the minimum space for all 10 dogs from square inches to square feet (*optional*), divide the total number in square inches by 144.

- 1,369 square inches + 616.05 square inches = 1,985.05 square inches
- 1985.05 square inches ÷ 144 = 13.79 square feet

Now we see that Scout and her puppies need at least 13.79 square feet of floor space.

Exercise Requirements and Floor Space

In addition to sufficient space, the AWA requires licensees and registrants to provide dogs with the opportunity for exercise. In some cases, the amount of floor space can satisfy the exercise requirements for dogs. The exercise requirements can also be met with an exercise plan that is separate from floor space. Below is a summary of how these requirements relate.

Room To Exercise for Singly Housed Dogs

To figure out how much space a singly housed dog in your care needs to meet the exercise requirement, multiply the dog's minimum floor space requirement by 2. The exception to this rule is if you have planned and documented other opportunities for exercise. To view the requirements for planning and documenting other opportunities, go to ecfr.gov and search for "9 CFR 3.8."

Exercise for Group-Housed Dogs

If the enclosure or structure meets the floor space requirements for group-housed dogs, then it also meets the floor space requirement for the dogs to exercise.⁵

Note: Exercise requirements do not apply to dams with nursing puppies or to dogs under 12 weeks of age.

Quick Reference

The table below shows the minimum floor space needed for a dog based on body length and AWA-required calculations.

Dog Length (in inches)	Square Feet Needed	Dog Length (in inches)	Square Feet Needed
7	1.17	30	9.00
8	1.36	31	9.51
9	1.56	32	10.03
10	1.78	33	10.56
11	2.01	34	11.11
12	2.25	35	11.67
13	2.51	36	12.25
14	2.78	37	12.84
15	3.06	38	13.44
16	3.36	39	14.06
17	3.67	40	14.69
18	4.00	41	15.34
19	4.34	42	16.00
20	4.69	43	16.67
21	5.06	44	17.36
22	5.44	45	18.06
23	5.84	46	18.78
24	6.25	47	19.51
25	6.67	48	20.25
26	7.11	49	21.01
27	7.56	50	21.78
28	8.03	51	22.56
29	8.51	52	23.36

For More Information

To view the full text of the AWA and the Animal Welfare Regulations, refer to the *United States Code*, Title 7, Chapter 54, Sections 2131–2159 and the *Code of Federal Regulations*, Title 9, Chapter 1, Subchapter A, Parts 1–4.

If you have questions, contact the U.S. Department of Agriculture (USDA) Animal Care staff at (970) 494-7478 or animalcare@usda.gov.

⁴ 9 CFR 3.6(c)(1)(ii)

⁵ 9 CFR 3.8



State of Misconsin 2023 - 2024 LEGISLATURE

LRB-4967/1 EVM:cdc&skw

2023 SENATE BILL 912

- January 11, 2024 Introduced by Senators TAYLOR and CABRAL-GUEVARA, cosponsored by Representatives SORTWELL, BODDEN, BEHNKE, GUSTAFSON, S. JOHNSON, MAGNAFICI, MOSES, PENTERMAN, ROZAR, SCHMIDT and TITTL. Referred to Committee on Transportation and Local Government.
- 1 AN ACT *to create* 66.0442 of the statutes; **relating to:** local regulation of fowl.

Analysis by the Legislative Reference Bureau

This bill prohibits political subdivisions and sewerage districts from prohibiting the keeping of up to four chickens, ducks, geese, quail, or guinea fowl (fowl) by property owners or certain lessors on properties zoned for residential use. The bill specifically allows political subdivisions and sewerage districts to do any of the following with regard to the keeping of fowl:

- 1. Require a keeper of fowl to obtain a permit.
- 2. Require notification of adjoining land owners.

3. Impose reasonable regulations related to the location of fowl housing on a property.

4. Prohibit the keeping of roosters.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

- 2 **SECTION 1.** 66.0442 of the statutes is created to read:
- 3 **66.0442 Local regulation of fowl. (1)** In this section:
 - (a) "Fowl" means chickens, ducks, geese, quail, or guinea fowl.
 - (b) "Local governmental unit" means a city, village, town, county, or sewerage
- 6 district.

4

5

2023 – 2024 Legislature

SENATE BILL 912

1	(2) No local governmental unit may prohibit the keeping of 4 or fewer fowl by
2	any of the following on a property zoned for residential use:
3	(a) The owner of the property.
4	(b) A lessor of the property if the property is owner-occupied.
5	(3) Notwithstanding sub. (2), a local governmental unit may do any of the
6	following with regard to the keeping of fowl:
7	(a) Require a keeper of fowl to obtain a permit.
8	(b) Require notification of owners of properties adjoining the property on which
9	fowl are to be kept.
10	(c) Impose reasonable regulations related to the location of fowl housing on a
11	property.
12	(d) Prohibit the keeping of roosters.
13	(END)