#### City of Maple Plain

#### Request for Site Plan Review, Conditional Use Permits and Preliminary and Final Plat to Allow the Construction of a New Convienence Retail Store, Fuel Station, Car Wash and Associated Site Improvements for the Property Located on Gateway Boulevard

To:	Planning Commission
From:	Mark Kaltsas, City Planner
Meeting Date:	March 7, 2025
Applicant:	Emily Helwig
Owner:	Kwik Trip, Inc.
Location:	Gateway Blvd. (PID No. 25-118-24-11-0040)

#### Request:

Emily Helwig (Applicant) and Kwik Trip, Inc. (Owner) request that the City consider the following actions for the property located between Gateway Blvd. and Highway 12 without an address (PID No. 25-118-24-11-0040):

- a. Site plan review to consider the development of a new Kwik Trip Convenience Store, Fuel Station and Car Wash.
- b. A conditional use permit to allow the fuel station and car wash.
- c. Preliminary and final plat to allow the existing Outlot to be converted into a buildable lot.
- d. A conditional use permit to allow a sign(s) that do not meet all applicable requirements of the City's sign ordinance. The applicant has submitted a full sign package specific to the requested use of the property.

#### **Property/Site Information:**

The property is located along the south north of State Highway 12 between CSAH 29 and Howard Ave. and just south of Gateway Blvd. The subject property is located within the Mixed Use – Gateway District. This property was established as an Outlot at the time that Cassia developed their building and site improvements. property has the following characteristics:

Property Information: PID No. 25-118-24-11-0040 Zoning: *Mixed Use - Gateway* Comprehensive Plan: *Mixed-Use* Acreage: <u>+</u>2.6 *Acres*  Aerial Photograph



#### Discussion:

The applicant approached the City about the possibility of developing the property and constructing a new convenience store, fuel station, car wash associated site improvements. All commercial and industrial development is required to go through the site plan review process. Site plan review requires the review of the Planning Commission and City Council. The City shall consider the proposed site plan and subsequent effects relating to evaluation criteria established in the City's ordinance.

#### 153.045 INTENT AND PROCEDURE

(I) Evaluation criteria. The Planning Commission and City Council shall evaluate the effects of the proposed site plan. This review shall be based upon, but not be limited to, compliance with the City Comprehensive Plan, provisions of this chapter (Design Guidelines and City Engineering Requirements).

In addition to site plan review, it was noted that the city considers fuel stations and car washes to be conditional uses in the MU-G zoning district. The applicant is seeking a conditional use permit to allow the fuel station and car wash. In order for the applicant to purchase and develop the property it will also be necessary to consider approval of a preliminary and final plat that will accomplish the subdivision of the Outlot into a buildable lot with the remainder staying as an Outlot.

The applicant is proposing to construct a one-story, 9,000 SF convenience store building and a 1,787 SF car wash on the subject property. The proposed building would need to comply with the City's design standards for commercial buildings in the MU-G zoning district. In addition to the buildings and site improvements, the applicant is proposing to construct an off-street parking area to support the proposed use. The parking area would consist of 57 off-street parking spaces. The following summarizes the parking, setback and architectural standards for the proposed use.

Parking is required in accordance with the city's zoning ordinance. Please note that the east bank of spaces is labeled as having nine (9) spaces but there are only eight (8) on the plan. The city does not provide a specific parking requirement for convenience stores or modern motor fuel stations. The city's ordinance notes retail requirements as 1 space per 250 SF of the building GFA. While this is an acceptable requirement, I would consider using 5 spaces per 1,000 SF of the building GFA (total of 51 spaces required). This would generate similar numbers to the total parking spaces proposed. Using both standards, the proposed plans appear to meat applicable parking requirements.

#### **REQUIRED**

Motor Fuel Station: 4 spacesConvenience Store: 1 space per 250 GFA (9,070 SF/250 = 37)Car Wash:1 spaceTOTAL:42 spaces

#### PROVIDED

35 spaces
2 spaces
20 spaces
57 spaces

Architectural Guidelines:

#### First Floor (primary elevation):

- 60% openings, window, doors, fenestration, (~60% proposed)
  - 35% wood, brick, stone, hardie board siding (100% brick)

• 5% other materials

The applicant is proposing a new commercial structure that incorporates many of the architectural aspects and building materials in an attempt to meet the intent of the City's design guidelines for the Mixed-use Gateway district. The applicant has proposed a combination of glass windows and doors and brick for the entirety of the building facade. The sides and rear of the building would be 100% brick siding with some windows as shown. The City will need to determine if the proposed building is consistent with the intent of the design guidelines.

#### Setbacks Required:

Minimum Lot Size: 6,000 SF Minimum Lot Width: 100 feet Front Yard Setback: 5 feet Side Yard Setback Building: 20-foot setback Rear Yard Setback: 20 feet minimum Parking Setback: 10 feet from collector streets, 50 feet from Highway 12, 5-foot side yard (commercial)

#### Setbacks Proposed:

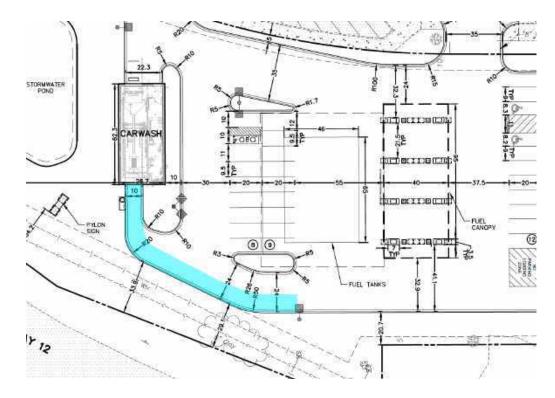
Minimum Lot Size: 113,256 SF Minimum Lot Width: 750+ Front Yard Setback: 16 feet Side Yard Setback Building: 92 feet (east) +130 feet (west) Rear Yard Setback: 59 feet Parking Setbacks: 50+ feet from Highway 12 and 5 feet from Gateway Blvd.

#### Parking Space Design:

Minimum Parking Space Width: 9 feet Minimum Parking Space Length: 20 feet Minimum Parking Aisle Width: 25 feet

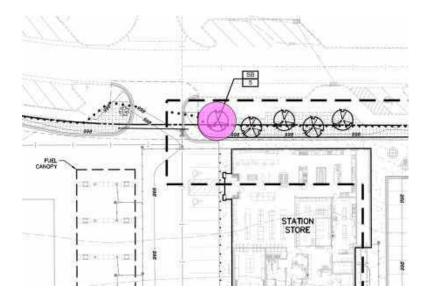
#### Site Layout and Design:

The plans include a car wash that will have an entrance on the south side of the building. It is anticipated that this car wash will have a high demand and usage due to it being the only one in the area. Staff would recommend that the applicant explore a way to provide designated stacking (striped line and signage) along the south side of the parking lot to avoid cars waiting behind designated parking spaces (see below). Staff is working on this issue with the applicant.



#### Landscape Plan:

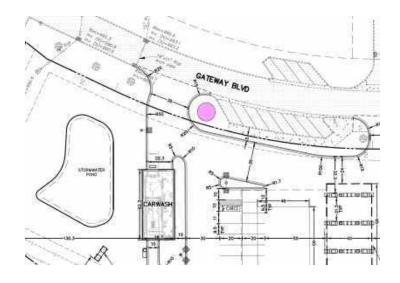
The proposed landscape plan indicates five (5) serviceberries along the north side of the building. As a result of the boulevard tree being removed to accommodate the new drive aisle entrance, it is recommended that one of the serviceberries be replaced with a shade tree (see location below).



#### Police/Fire/Engineering

The Maple Plain Fire Department has reviewed the plans and has the following comments:

- 1. Please indicate the location of the FDC on the site/utility plans.
- 2. Please indicate the location of the mechanical room on the site/utility plans.
- 3. The Fire Chief has noted that an additional fire hydrant would be needed to adequately protect this property given the proposed layout and use. MPFD would like to have a hydrant installed in the island shown below (pink circle).



#### Storm Water Management, Grading and Drainage:

The City's engineer has reviewed the plans and provided comments relating to the proposed development. There were minor comments provided that will be addressed by the applicant. It should be noted that the applicant will be constructing a new proposed stormwater basin as a part of the site development. The wet retention basin proposed has been sized adequately to limit peak runoff rates to existing and provide water quality treatment. Any additional conditions required as a result of the city's final review will be incorporated into the conditions of approval should the site plan be approved. The applicant will be required to obtain Minnehaha Creek Watershed District (MCWD) approval.

#### Lighting:

There are several areas along the north property line/Gateway Blvd. where footcandles exceed 1.0 which is the maximum permitted. The lighting plan will need to be revised to conform to applicable requirements. The city is working with the applicant to obtain all cut sheets for all proposed light fixtures. Based on review of the cut sheets, additional comments may be provided.

#### Preliminary and Final Plat:

The applicant is proposing to plat the property so that the property can be conveyed and developed. The city had purposefully left this property intact as a single Outlot when the Gateway of Maple Plain plat was established in 2019. Leaving the property as a single Outlot allows the property to eventually be split into a single or multiple parcels at a future date depending on the buyer. The proposed replat of this Outlot will establish a new Lot 1, Block 1 and Outlot A. The city has noted several additional D&U easements that will need to be added to the preliminary and final plat.

#### Car Wash and Fuel Station CUP:

The applicant is proposing to construct a fuel station and car wash along with the convenience store. Both uses require a conditional use permit. The proposed location of the fuel station and car wash in the mixed-use zoning district and directly adjacent to Highway 12, help to mitigate any potential impacts associated with the proposed use. The city has identified this property as being suitable for convenience services, goods and highway visible retail. The city has also reviewed the car wash and noted that the use is compatible with the site. The proposed entrance to the car wash is internal to the site and located adjacent to Highway 12. This will limit any potential issues relating to its compatibility with or impacts to the surrounding land uses.

#### Sign Package:

The applicant has submitted a full sign package for consideration by the city. The applicant is seeking the following signs:

**Free Standing Sign:** Located on CSAH 29. The city allows free standing signs to be a maximum of 80 SF with a maximum height of 20 feet. The applicant is proposing a changeable copy 13-foot-tall free-standing sign that has 75 SF of sign area. The sign is proposed to have a 5' tall brick bass that will match the brick of the proposed buildings. The proposed sign is an electronic message sign. Electronic message signs have the following additional requirements.

- Electronic message signs shall be limited to digital text and graphics; video messages are prohibited.
- Text messages shall contain a limited number of words to allow passing motorists to read the message with minimal distraction. Graphic images and static text shall have a minimum duration of five seconds before changing to another display.
- Message duration adjacent to state or county roadways shall comply with state and county requirements. Electronic message signs shall be calculated within the required signs allotment of the zoning district they are placed in, unless approved as part of a signs package.
- Electronic message signs shall occupy no more than 25 percent of the total signs area.

The city noted that the applicant is seeking a conditional use to allow the electronic message area to exceed the maximum of 25%. In addition to the criteria for granting a conditional use in by section 10-482, the city

has criteria specifically relating to granting a conditional use for a sign that exceeds the applicable requirements. Those criteria are provided below.

Signs allowed by a conditional use permit.

- a. A conditional use permit for the adjustment to the height, area, or location of a sign within any district may be approved by the City Council if the following criteria are met:
  - 1. There are site conditions that require a sign deviation from the district standards to allow the sign to be reasonably visible from a street;
  - 2. The sign deviation will allow a sign of exceptional design or style that will enhance the area or that is more consistent with the architecture and design of the site; or
  - 3. The sign deviation will not result in a sign that is inconsistent with the purpose of the zoning district in which the property is located.
- b. In addition to the criteria for approval as specified within the procedures for conditional use permits by section 10-482, the following standards shall also be taken into account:
  - 1. Placement of any electronic message sign could be considered within residential zoning districts where appropriate to surrounding land uses.
  - 2. The sign placement, height, or design does not create a safety hazard with regards to, from, or on a public street or roadway.
  - 3. The sign placement, height, or design does not create a safety problem or negatively affect adjoining properties or use.
  - 4. Considerations shall be given to the possible adverse effects of the proposed conditional use permit and satisfactorily address any additional requirements that may be necessary to reduce such adverse effects. The City's judgment shall be based upon, but not limited to, the following factors:
    - (i) The geographical area involved.
    - (ii) The character of the surrounding area.
    - (iii) The demonstrated need for such conditional use permit.

**Pylon Sign:** Located on Highway 12. The city allows one pylon sign for a gas station to be a maximum of 64 SF with a maximum height of 30 feet. The applicant is proposing a 20-foot-tall pylon sign that has 63 SF of sign area and is 20 feet tall. The sign is proposed to be mounted on a black painted pole. The proposed sign is an electronic message sign (see conditional use permit criteria above).

**Wall Signs:** Located on three (3) sides of the convenience store and one (1) side of the car wash. The total square footage permitted for each wall sign is 10% of the total wall area that it is attached. The size of the proposed wall signs varies, but all were found to meet applicable square footage requirements. Note that all proposed wall signs are individual letters and proposed to be internally illuminated. The city has discussed this provision before and noted that signs are encouraged to be backlit where possible, and to avoid internal lighting and neon signs. Box-lit signs are not permitted in the Gateway.

**Canopy Signs:** Located on the canopy of the fuel station. The applicant is proposing three (3) canopy signs that will be internally illuminated "Kwik Trip" signs along with an LED lit red strip down the middle of the canopy on all four sides. Each of the canopy signs are 36 SF. Canopies are considered their own structure for the purposes of signs as noted in the ordinance.

There are several considerations that should be made by the city relating to the proposed sign package:

- The proposed use is unique to the city and located within the MU-G zoning district. There are not many locations throughout the city that would accommodate a convenience store and fuel station.
- The property does have some visibility limitations due to the existing building located to the southeast
  of the proposed building. Not having full corner visibility from the Highway was noted as a limitation
  to this site by the applicant.
- The remainder of the site signs (smaller directional and building) proposed by the applicant meets applicable requirements.
- The city will need to review the criteria for granting the conditional use permit to allow the larger electronic message signs and internally illuminated signs.

#### Additional Considerations:

Staff will be seeking direction and feedback relating to the proposed application for a new convenience store, fuel station and car wash. The city has worked with the applicant for several years to find a suitable location for this use along Highway 12. The proposed location does work for the applicant and the city but does have some limitations as a result of the limited visibility.

- The plat has been submitted to Hennepin County and MNDOT for review and comment. Any comments provided will need to be addressed prior to City Council review and approval.
- The applicant is proposing to have outdoor storage between the fuel pumps. The city will want to
  understand how this will be maintained, how long products can/will be displayed and if there is a way to
  establish a requisite organization to the outdoor storage. More information will be discussed at the
  meeting relating to the outdoor storage.
- The city noted that the sidewalk surrounding the building should connect with the city's sidewalk on Gateway Blvd. It was noted by the applicant that there are grade issues that may prevent this connection. The city is continuing to work on this issue with the applicant.

#### Neighbor Comments:

The City has not received any verbal or written comments at the time this report was prepared.

#### **Recommendation:**

Staff is seeking direction from the Planning Commission relating to the requested Preliminary and Final Plat, Site Plan Review and Conditional Use Permit Should the Planning Commission recommend approval of the requested actions to the City Council, the following findings and conditions should be included:

- 1. The proposed site plan, conditional use permit and preliminary and final plat meets all applicable conditions, criteria and restrictions stated in the City of Maple Plain Zoning and Subdivision Ordinance.
- 2. Prior to City Council consideration of the application, the following items shall be completed by the applicant:
  - a. The Applicant shall revise the plans as necessary to accommodate all known or additional comments made by the City, including Fire Department comments, engineering comments, Planning Commission, and staff comments.
  - b. The applicant shall receive all applicable approvals from all outside agencies with authority over this site including:
    - MCWD
    - MNDOT
    - Hennepin County
- 3. The approval of the development and sign plan shall be in accordance with the approved plans. Any changes, expansions or alterations to the building, site and signage shall require the review and approval of the City.
- 4. The Applicant shall pay for all costs associated with the City's review of the site plan review and variance.

#### Attachments:

- 1. Application
- 2. Survey
- 3. Site Plan Package
- 4. Preliminary Plat
- 5. Building Elevations
- 6. Sign Package
- 7. City Review Letter



City of Maple Plain 5050 Independence St P.O. Box 97 Maple Plain, MN 55359 Office: (763) 479-0515 Fax: (763) 479-0519

## **ZONING & LAND USE** APPLICATION

	APPL	ICANT II	NFORMATION			
Applicant Name         Emily Helwig         Company, if applicable         Kwik Trip, Inc.						
Address 1813 Kramer St			Phone Number (608)-791-7443			
City, State, Zip La Crosse, WI, 54603			Email ehelwig@kwiktrip.com			
Are you the owner of the property?	(If not, property owner informat	ion is required.)				
Owner Name Norbert Villamil			Company, if applicable Maple		Pproperties LL	
Address 300 Lindawood Lane			Phone Number 612-743-3604			
City, State, Zip Wayzata, MN 55391			Email norbvillamil@gmail.com			
Applicant Simpeture Gaily Halling			Owner Signature (Willa			
Applicant Signature July Helwitz				imix		
Date 1-8-2025			Date 1-8-2025			
	PRO	JECT IN	FORMATION			
Site Address or Property Identification	lumber	25-118	3-24-11-0040			
Type of Request (Check all that apply.)	uniber	23-110	5-24-11-0040			
Type of Request (offect all that apply.)	Fee	Escrow				
Appeal Administration Decision	\$250	\$250	-			
Concept Plan Review	\$500	ψ200	4			
	\$300					
Residential Application	Fee	Escrow	Commercial Application	Fee	Escrow	
Conditional Use Permit	\$750	\$1500	Conditional Use Permit	\$1500	\$3000	
Interim Use Permit	\$750	\$1500	Interim Use Permit	\$1500	\$3000	
Site Plan	\$750	\$1500	Site Plan	\$1500	\$3000	
Minor Subdivision	\$750	\$1500	Minor Subdivision	\$1500	\$3000	
	\$750	\$1500		\$1500	\$3000	
	\$750	\$1500		\$1500	\$3000	
Text Amendment	\$750 \$750	\$1500	Text Amendment	\$1500 \$1500	\$3000	
Vacation of Property	\$750 \$750	\$1500	Vacation of Property	\$1500 \$1500	\$3000	
Home Occupation	\$400	\$1000	Sign Package	\$500	\$3000 \$3000	
	<b>φ400</b>	\$1000		\$300	\$3000	
Residential/Commercial						
Industrial/Office			Grading and Excavation			
Planning and Zoning Application	Fee	Escrow	Park Fees and Signs	Fee	Escrow	
Preliminary Plat	\$1000	\$3000	<100 Cubic Yards	N/C		
Subdivision Application	\$1000	\$3000	>100 Cubic Yards	\$500		
Rezoning	\$1000	\$3000	>1000 Cubic Yards	\$1000	*See below	
Comprehensive Plan Amendment	\$1000	\$3000	Right of Way Permit	\$250	\$1000	
Planned Unit Development	\$1500	\$3000		<b>,</b>		
Final Plat	\$750	\$3000	Park Dedication Fee-	10% of land		
		•	Residential	value of		
				development**		
Park Dedication Fee-     10% of land						
			Other	value of		
development						
			Signage Permanent	\$250		
			Temporary Sign	\$25		
	1			Ψ20		

\*Escrow or surety bond in amount of 150% of land alteration costs \*\* Minimum of 3,750 per unit and maximum of \$8,000 per unit

**Brief Project Narrative / Overview** (Use additional paper if necessary. Please be thorough.) Construction of a new Kwik Trip convenience store with a fueling canopy with 8 Multi-Product Dispensers. Construction of a detached 1-bay carwash.

#### NOTICE TO APPLICANT

The Maple Plain City Code guides and enables development activities within the City by ensuring proper and wellcoordinated projects. The land use application is the mechanism that allows the City to examine proposed land uses to ensure compatibility with the City Codes, design and development standards, and the surrounding land uses and natural environments. The review is intended to ensure positive growth for the community.

All applications are reviewed individually and are evaluated based on their own merit. Each land use request has an associated checklist of required items. Applicants are encouraged to participate in the City's pre-application workshop prior to submitting a formal land use application. The workshop is an opportunity to informally discuss the conceptual idea of the proposed project in an effort to reduce delays. Participation in the pre-application process does not provide approval, or guarantee of approval, of the project. The City shall not accept plans, drawings or other information related to the project except upon submittal of a formal application. The City reserves the right to reject an incomplete application.

#### **APPLICATION FEE STATEMENT**

All expenses pertaining to project reviews are the responsibility of the applicant. Planning review deposits and other applicable fees must be paid when submitting land use applications and accompanying materials. All fees, which are set annually by City ordinance, help cover costs incurred by the City to review the application. The City of Maple Plain often uses consulting firms to assist in the review of projects. City staff and consultant review costs are billed hourly; all other costs are billed at cost. Applicants shall be billed directly for incurred expenses upon receipt by the City. The City reserves the right to request an applicant to submit a development escrow in advance of the formal project review.

Please refer to the City's Fee Schedule for information on planning review fees and deposits, and other applicable costs.

By signing this form, the applicant recognizes his/her responsibility for any and all fees associated with the land use application from project review through to construction and release of financial guarantees for an approved project. All fees associated with a project that is denied or withdrawn remain the sole responsibility of the applicant and shall be paid upon receipt of invoice.

I hereby understand the fee statement and responsibilities associated with this land use application:

Applicant Signature Date 1-8-2025 Owner Signature Date 1-8-2025

Willomil

#### **REVIEW REQUIREMENTS**

Minnesota State Statute 15.99 requires local governments to review an application within 15 business days of its submission to determine if an application is complete and/or if additional information is required to complete the review. Once complete, a formal 60-day review period begins. The City has the ability to extend the review period an additional 60 days, if necessary, due to insufficient information or scheduling difficulties.

Please review the corresponding checklist that goes with the request as all materials are required unless waived by the City. All applications must be received by the deadline(s) attached hereto. Failure to submit by the date shown may result in a delay of the review by the Planning Commission and City Council.

#### DEADLINES

Planning Commission meetings are held on the first Thursday of the month at 6:00 P.M. All applications are due 30 days prior to meeting.

	OFFICE USE ONLY			
Application Type		Review Deadline     15 Business Days:		
		60 Day Review:      120 Day Review:		
Fee	s Collected	Received by		
	Application Fee Collected:	Name:		
	Escrow: \$	Signature:		
	Total Receipt: \$	Date:		
Rec	eipt	Application Complete		
	Receipt Number(s)	Are there any missing materials?		
		If yes, was the application accepted?		

AVA
MAPLE
PLAVIN
INC 1912

**City of Maple Plain** 5050 Independence St P.O. Box 97 Maple Plain, MN 55359 Office: (763) 479-0515 Fax: (763) 479-0519

## SITE PLAN CHECKLIST & PROCEDURE

#### **APPLICATION REQUIREMENTS**

The following materials are required in order for each application to receive consideration. The City reserves to waive certain requirements. An application that is missing materials may not be accepted.				
<ul> <li>Completed Land Use Application and pay all applicable fees.</li> <li>All materials as required by City Zoning Code regarding Site Plans.</li> <li>Certified survey of property (8 full size, 10 reduced) plus CAD and PDF electronic files.</li> <li>Written narrative of outlining project and purpose of request.</li> <li>Wetland report by Certified Wetland Specialist.</li> </ul>				
<ul> <li>Scaled site plan showing dimensions &amp; distances</li> <li>Existing &amp; proposed property conditions (page 2)</li> <li>Four-sided architectural plans and elevations</li> <li>Specifications for exterior finishes</li> <li>Grading, erosion control &amp; drainage plans (page 2)</li> <li>Location of fire suppression, if applicable</li> <li>Soil borings, if applicable</li> </ul>				
APPROVALS & PERMITS				
Project applications may require review and comment from the following agencies. Applicants should allow for enough time for agency review. The City encourages applicants to contact each state and county agency and the appropriate watershed district prior to submitting formal application to understand agency requirements.  City of Maple Plain Hennepin County MN Pollution Control Agency (NPDES) Minnehaha Creek Watershed District				
MN Department of Transportation Dioneer-Sarah Creek Watershed Commission Upon completion of the formal review period, the following permits may be required for an approved project. The City,				
county, state and other jurisdictional agencies each have a review period for all permit requests.				
Building Permit       Hennepin County Right of Way Permit         Demolition Permit       MnDOT Right of Way Permit         Excavation & Grading Permit       Minnehaha Creek Watershed District Permit         Right of Way Permit       Pioneer-Sarah Creek Watershed Commission         Sewer Availability Charges (SAC)       MnPCA Storm Water (NPDES) Construction Permit         Water Availability Charge (WAC)       Wetland Conservation Act requirements         Sign Permit       Sign Permit				
NOTICE TO APPLICANT				
<ol> <li>In order to receive consideration, the applicant must complete a number of steps.</li> <li>Meet with City staff to discuss the proposed use, whether permitted or conditional, obtain a land use application packet, and schedule a pre-application meeting.</li> <li>Assemble information outlining the request.</li> </ol>				

- 3. Submit a completed application packet, including all materials as required by City Zoning Code related to the type of request, to City Hall by the dates noted on the Land Use Application.
- 4. Participate in the review process by attending City staff and public meetings.
- 5. Attend all Public Hearings, and Planning Commission and City Council meetings.

By law, the City of Maple Plain must notify adjacent property owners of proposed projects that may impact their properties. This notification is mailed to property owners within 350 feet of the project area at least 10 days prior to the public hearing. A Certified List of Property Owners will be compiled by the City of Maple Plain.

#### Drawings of Existing & Proposed Conditions should include:

- gross and net acreages of the proposed development
- location, width and name of all existing streets and highway, public property, railroad, utility rights of way, & easements within the proposed development
- location and size of existing buildings & infrastructure (water, sewer and storm sewer lines)
- wetlands, wooded areas & other natural features
- tree inventory, including trees to be removed & saved
- layout of proposed streets, rights of way and appropriate street information
- layout proposed sidewalks, trails and pedestrian ways
- location and dimension of all easements
- minimum building setback lines.

#### Grading & Erosion Control & Drainage Plans must show the following:

- existing & proposed topography
- existing natural features, such as trees, wetlands, ponds, swales, drainage channels, etc.
- existing and proposed storm sewer facilities
- proposed storm water improvements
- flood elevations based on a 100-year flood plain
- spot elevations & directional arrows representing drainage patterns
- wetland delineation & mitigation plan at 2:1 ratio

#### ACKNOWLEDGEMENT

By signing this form, the applicant hereby acknowledges the receipt of the checklist and procedure for the project to be submitted for consideration. It is the responsibility of the applicant to submit all required materials. All permit requests should be submitted in a timely manner so as not to cause project delays.

Applicant Signature	Owner Signature Willamil
Date	Date 1-8-2025



#### **Store Engineering**

**PHONE** 608-793-5555 **FAX** 608-781-8960

1626 Oak St., P.O. Box 2107 La Crosse, WI 54602

www.kwiktrip.com

January 2025

City of Maple Plain Mark Kaltsas

#### **RE: Kwik Trip 1775 Maple Plain New Construction**

Dear Mr. Kaltsas:

This letter is intended to accompany the submittal for our application to the City of Maple Plain for the requested conditional use permit, plat, site plan and sign plan review. Kwik Trip request a conditional use permit for automobile fuel service and carwash.

Kwik Trip, Inc. is proposing the construction of a convenience store with 8 dispenser fueling canopy, detached carwash and detached dumpster enclosure. Included in the submittal is the is the application, civil plans, stormwater calculations, elevations, and sign plan.

#### **Operations**

The requested hours of operation will be 24 hours for all uses. The type of products that will be sold will be similar to that of our existing stores throughout the mid-west: fresh produce, bakery and dairy, hot and cold food and beverages, fresh meat and groceries, tobacco products, lotto, convenience store merchandise, alcohol, gasoline, diesel, E-85, ice and propane. The outside merchandising of products is being requested next to the store (two ice chests and one propane cage) and underneath the proposed main canopy. To ensure that the freshest products are sold in our stores, we request that daily deliveries be allowed.

#### Buildings, Architecture and Site Design

The architectural elements in this state-of-the-art building consist of a full brick cladding, standing seam metal roof, store front aluminum openings and stucco accents. Extensive landscaping, modern storm water facilities, monument and wall signage, customer and employee parking, concrete paving with curb and gutter are also included in the overall site design.

#### OUR MISSION

To serve our customers and community more effectively than anyone else by treating our customers, co-workers and suppliers as we, personally, would like to be treated, and to make a difference in someone's life.

#### Investment in the City

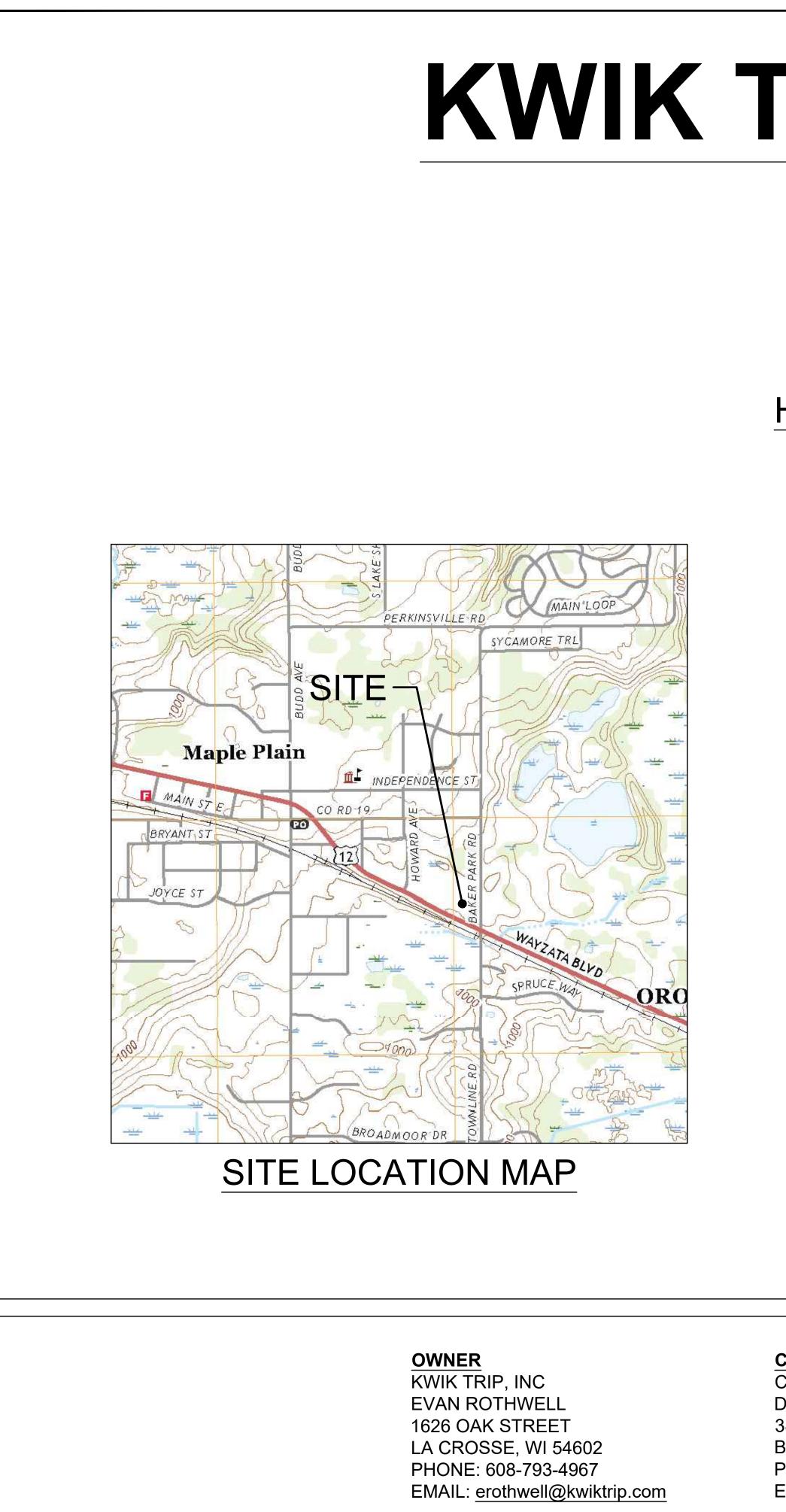
This project will be a multi-million-dollar investment in the City of Maple Plain. Not only in the physical improvements and development, but also an investment of approximately 25 to 30 new permanent jobs in the City. The projected payroll here is estimated to be approximately \$500,000 annually.

#### Community Partner

We pride ourselves in being an asset in the communities where we are located. Families can walk or ride their bikes to our stores. Retirees on fixed income can access fresh groceries like milk, eggs, bread and fruit just steps from their car. We take pride in giving back to the communities we serve with charitable donations and by partnering with local non-profits. Kwik Trip would be happy to provide any additional information or answer any questions or concerns the City of Osseo may have with our submittal. Please feel free to call or email with any questions you may have.

Sincerely,

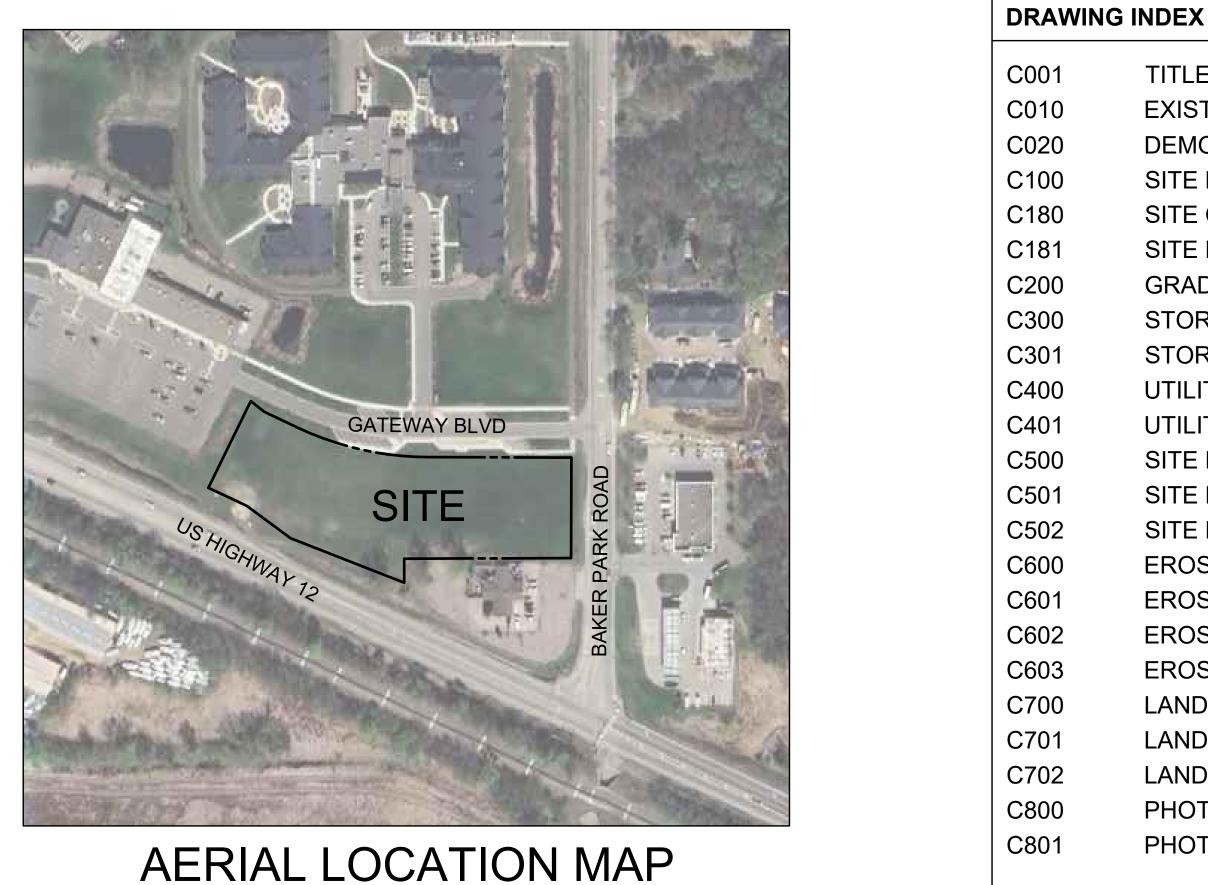
Emily Helwig Project Manager Store Engineering <u>ehelwig@kwiktrip.com</u> 608-791-7443



# **KWIK TRIP STORE #1775**

## PERMIT SET

## CITY OF MAPLE PLAIN HENNEPIN COUNTY, MINNESOTA



### **CIVIL ENGINEER**

CARLSON ENGINEERING, INC. DANIEL WILKE 3890 PHEASANT RIDGE DR NE, #100 BLAINE, MN 55449 PHONE: 952-346-3864 EMAIL: dwilke@carlsonmccain.com

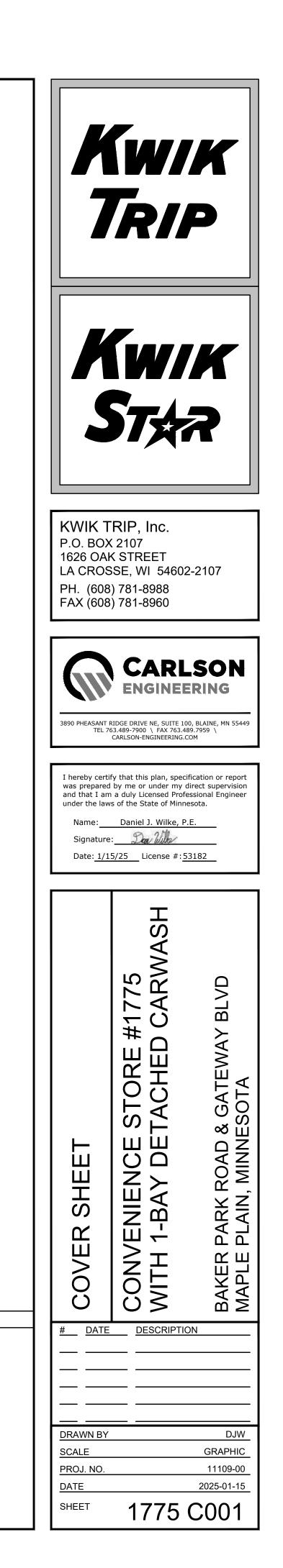
## SITE DESIGNER

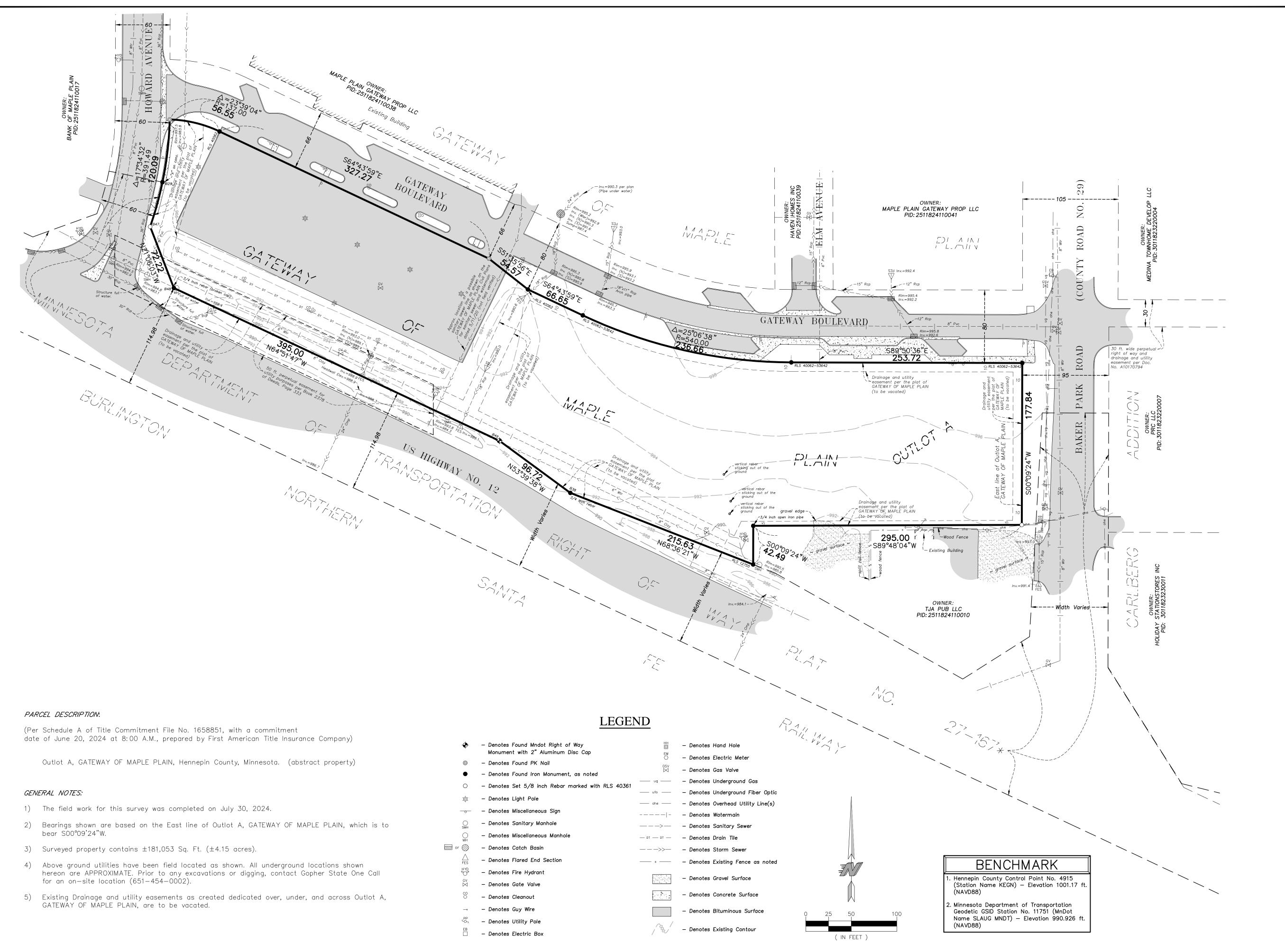
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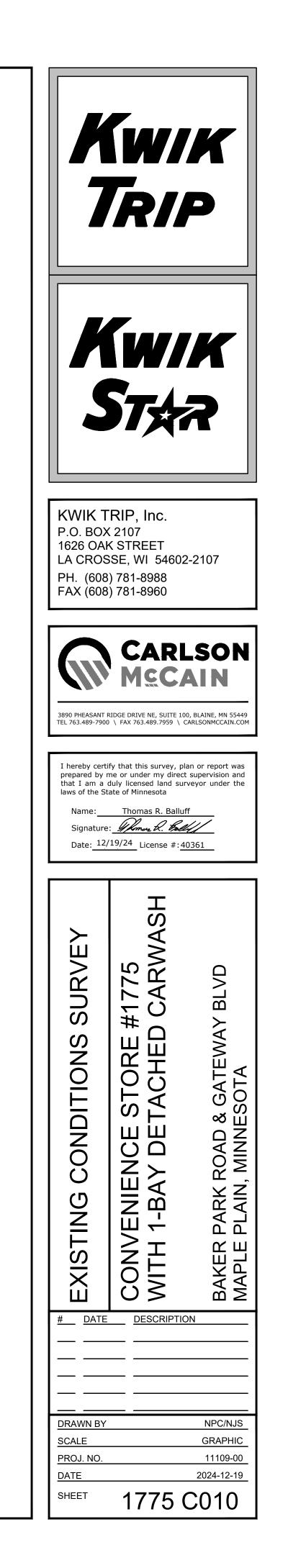
## SURVEYOR

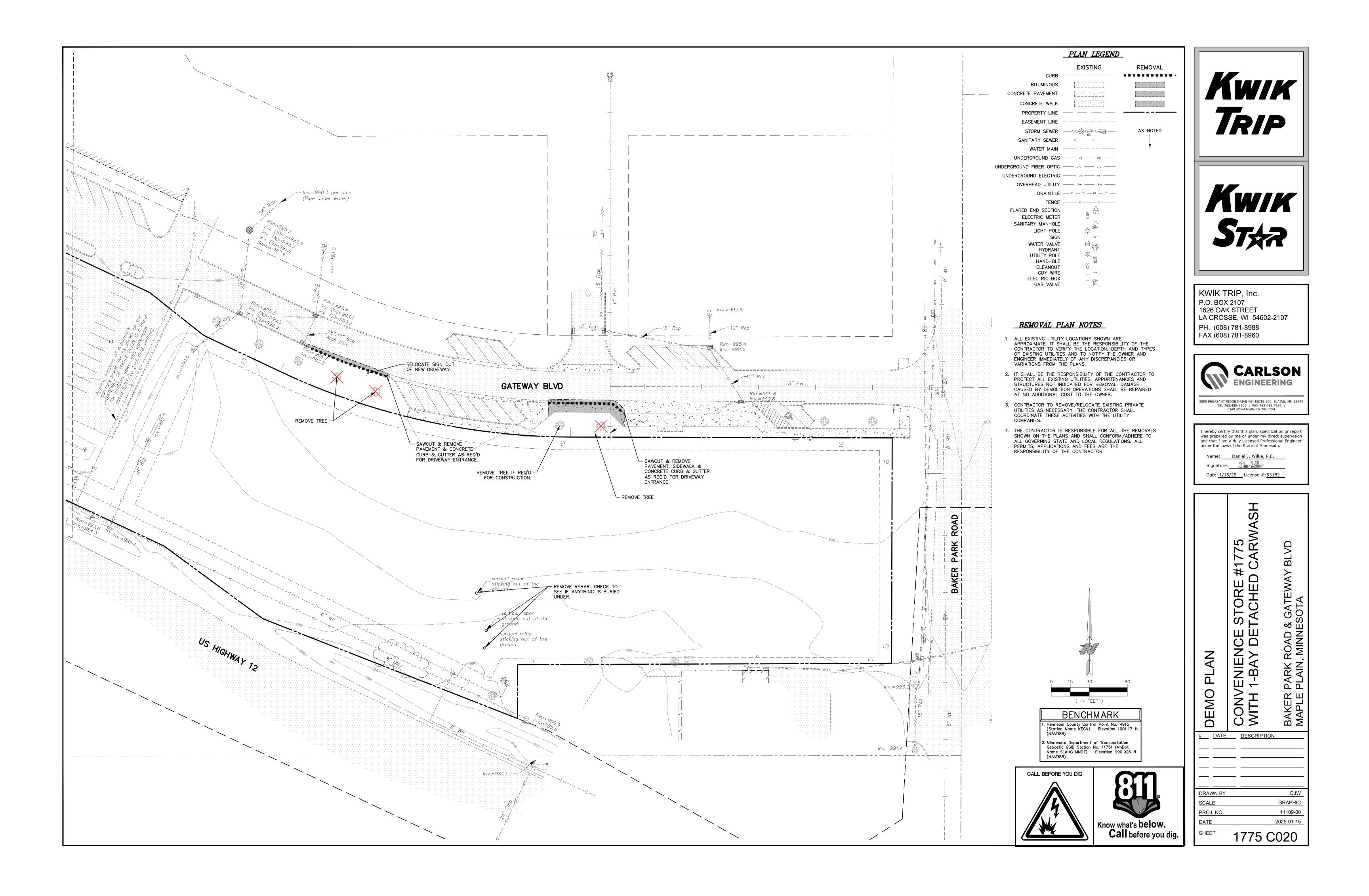
CARLSON ENGINEERING, INC. THOMAS BALLUFF 3890 PHEASANT RIDGE DR NE, #100 BLAINE, MN 55449 PHONE: 763-489-7916 EMAIL: tballuff@carlsonmccain.com

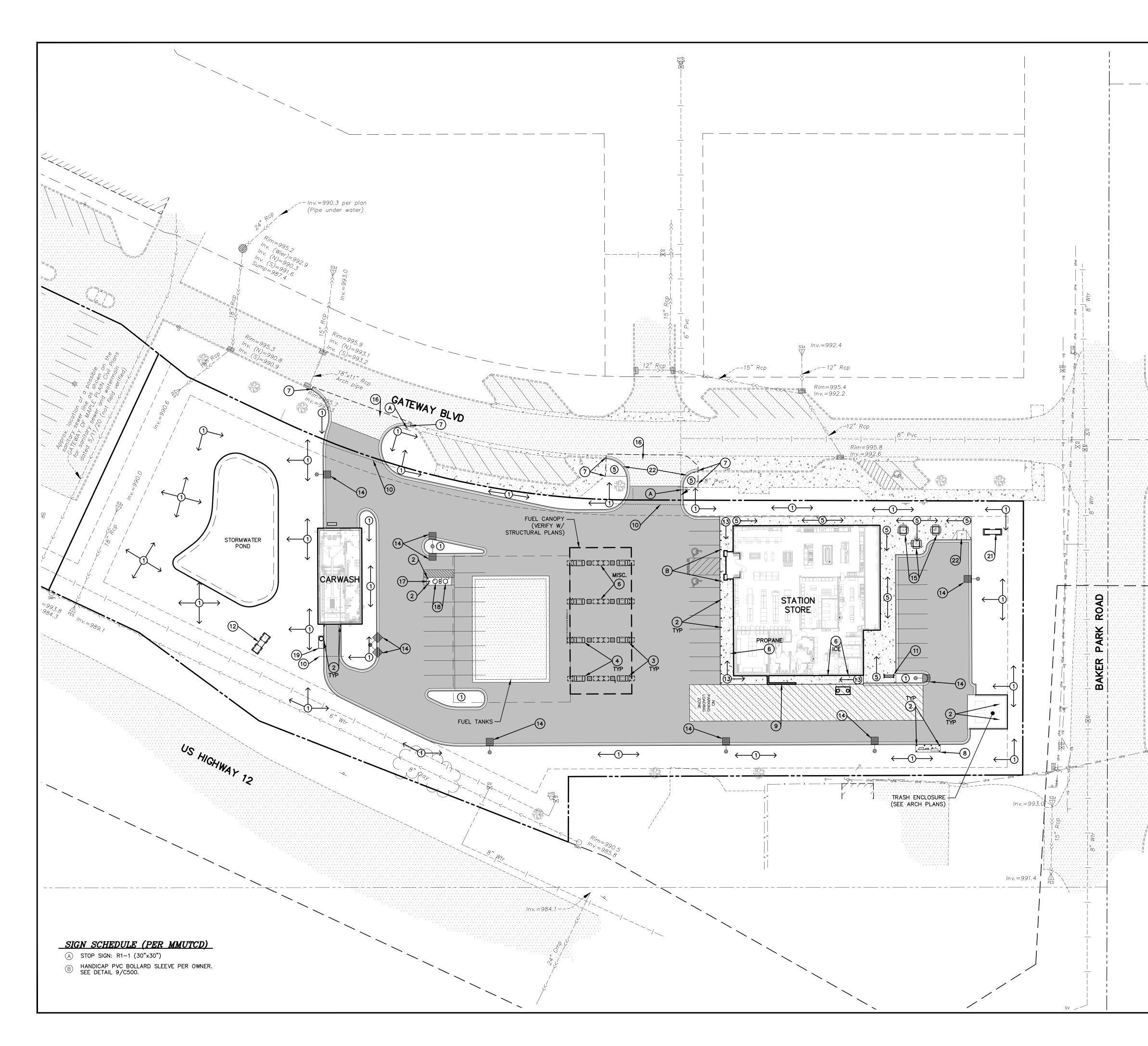
_	TITLE SHEET
	EXISTING CONDITIONS SURVEY
	DEMO PLAN
	SITE KEYNOTE PLAN
	SITE CIRCULATION PLAN
	SITE DIMENSION PLAN
	GRADE PLAN
	STORM SEWER PLAN
	STORM SEWER NOTES & DETAILS
	UTILITY PLAN
	UTILITY NOTES
	SITE PLAN DETAILS
	SITE PLAN DETAILS
	SITE PLAN DETAILS
	EROSION CONTROL PLAN
	EROSION CONTROL NOTES
	EROSION CONTROL DETAILS
	EROSION CONTROL DETAILS
	LANDSCAPE PLAN
	LANDSCAPE PLAN
	LANDSCAPE PLAN
	PHOTOMETRIC LIGHTING PLAN
	PHOTOMETRIC RENDERING PLANS



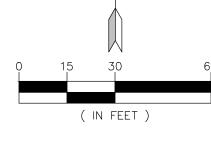


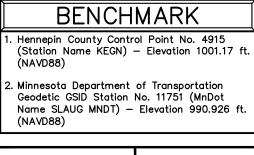






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	4" CONCRETE WALK.		
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	TRANSFORMER LOCA		
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11	. BIKE RACK PER OWN	IER.	
12	2. PYLON SIGN.		
13	3. 6" INTEGRAL CONCRI	ETE WALK/CURB.	
14	. SITE AREA LIGHT W	TH CONCRETE BASE PE	R DETAIL 5/C500.
15	5. PICNIC TABLE PER C	WNER.	
- 16	6. CONCRETE VALLEY G	UTTER PER DETAIL 13/	′C500.
			VIDE SIGNAGE PER OWNER.
18			SLAND WITH 6" EXPOSURE.
	PROVIDE TRASH CON		
			RASH CONTAINER PER OWNE
		TAND PER OWNER (LOC	ATED WITHIN FUELING CANC
	I. MONUMENTS SIGN.	I	
22	2. PEDESTRIAN RAMP.		
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Kwik Trip Kwik Star KWIK TRIP, Inc. P.O. BOX 2107 1626 OAK STREET LA CROSSE, WI 54602-2107 PH. (608) 781-8988 FAX (608) 781-8960 CARLSON ENGINEERING 3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449 TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSON-ENGINEERING.COM I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Name: Daniel J. Wilke, P.E. Signature: Day Ulle Date: 1/15/25 License #: 53182 775 ARWASH ND ND  $\sim$ ВГ # ROAD & GATEWAY MINNESOTA STOR! TACHE AN Ω шШ Ш DU NOT ENIENG-BAY I PARK | PLAIN,  $\succ$ Ш Х Щ – CONV BAKER MAPLE ш SIT

# DATE DESCRIPTION

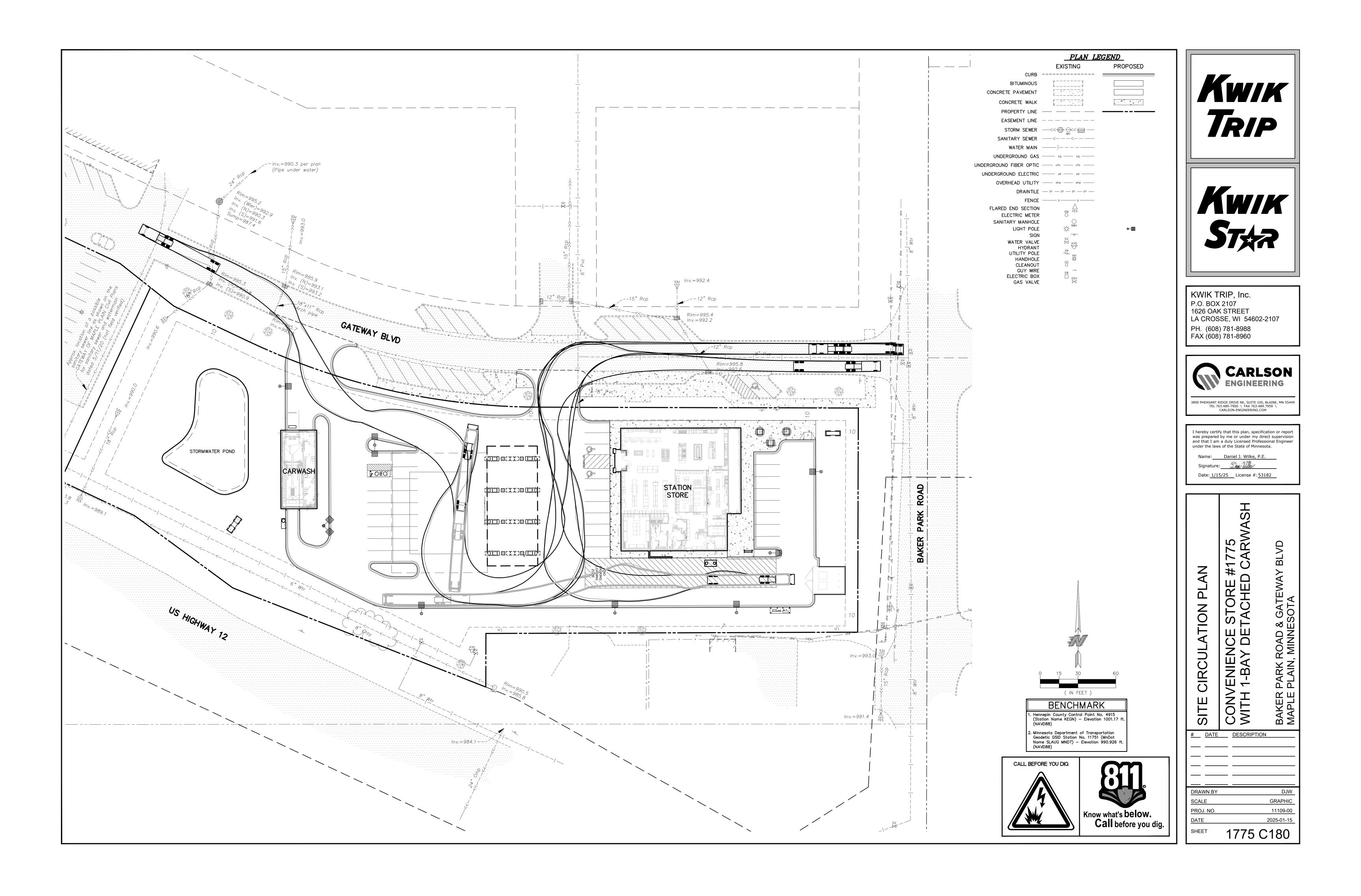
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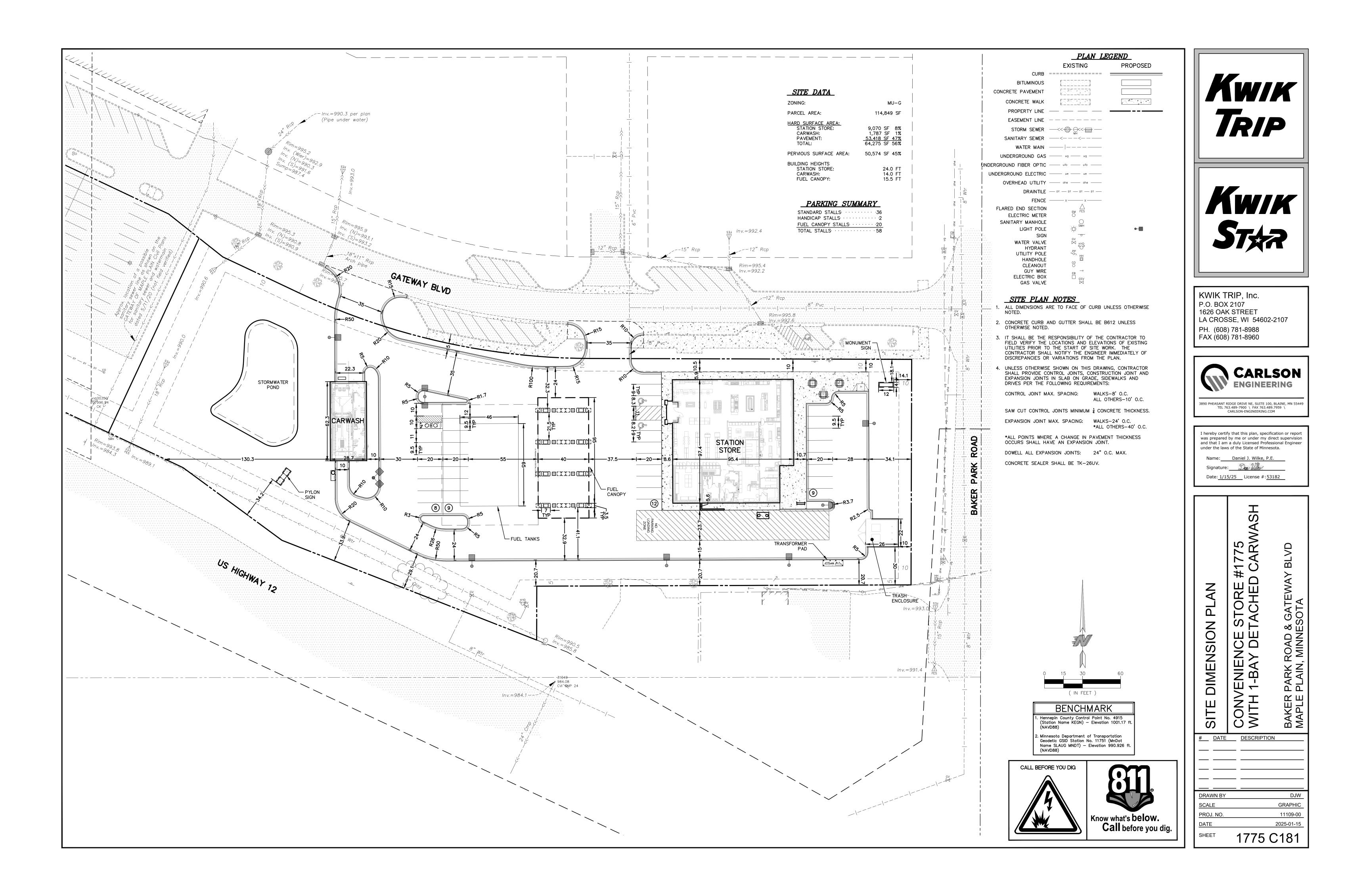
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 GRAPHIC

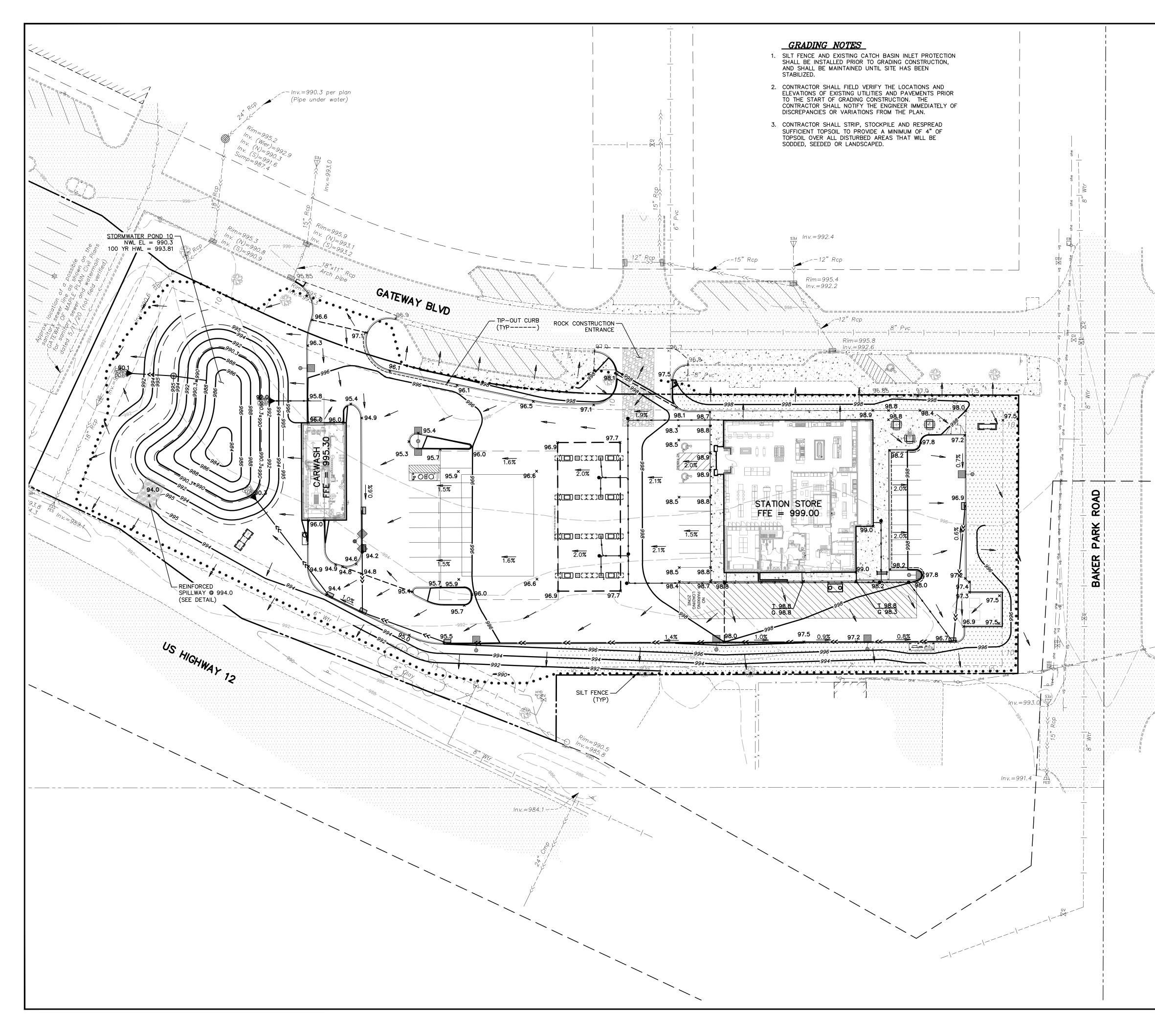
 PROJ. NO.
 11109-00

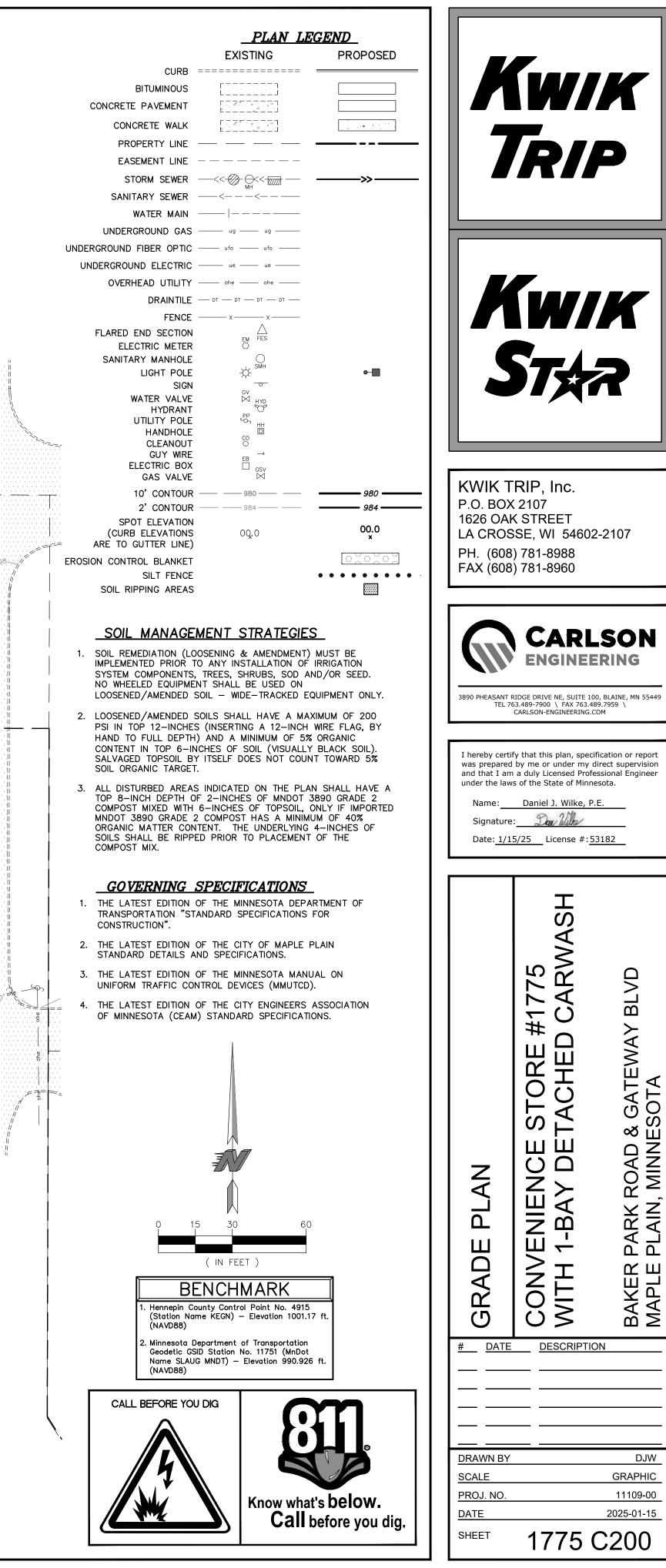
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 2025-01-15

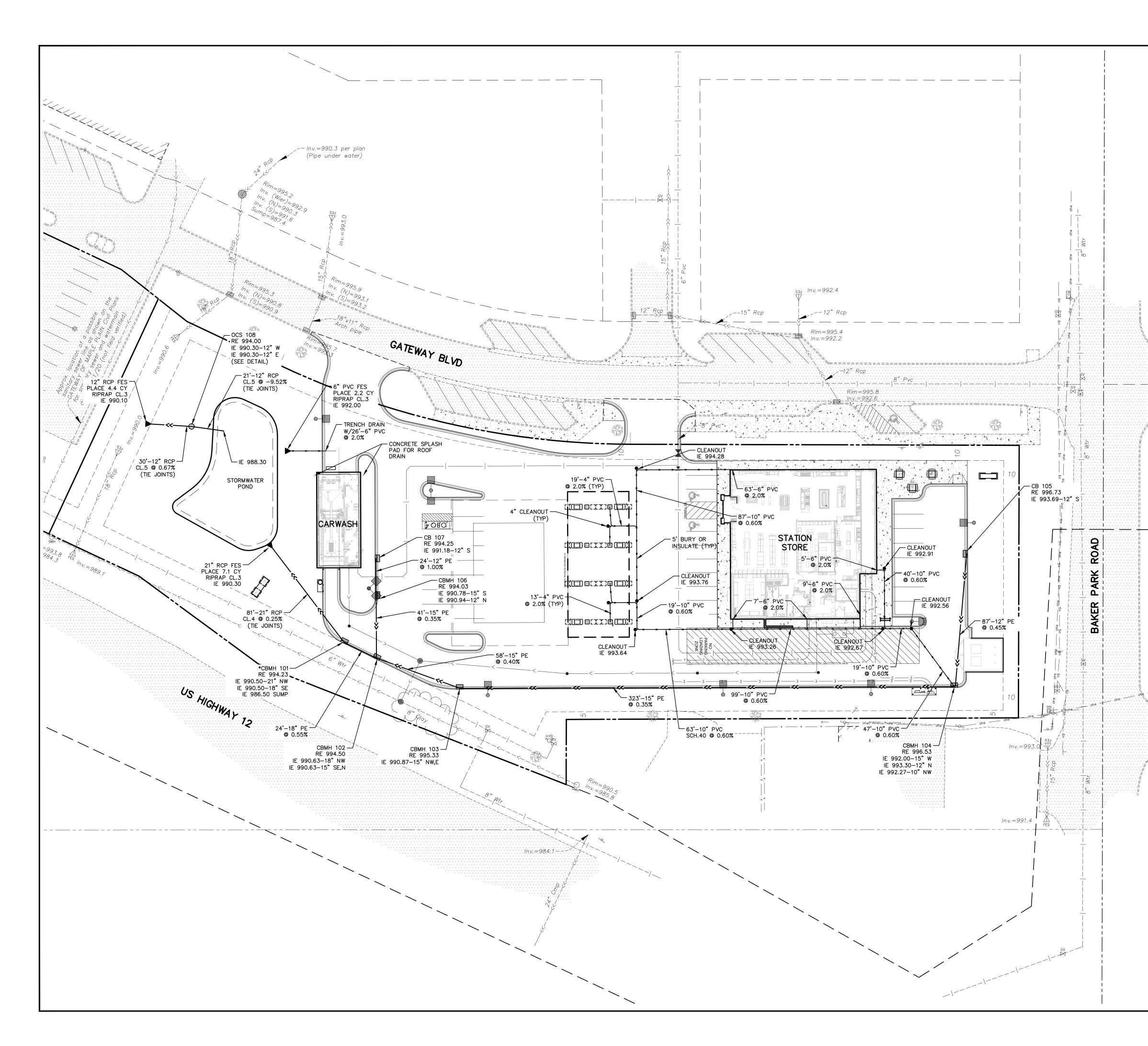
 SHEET
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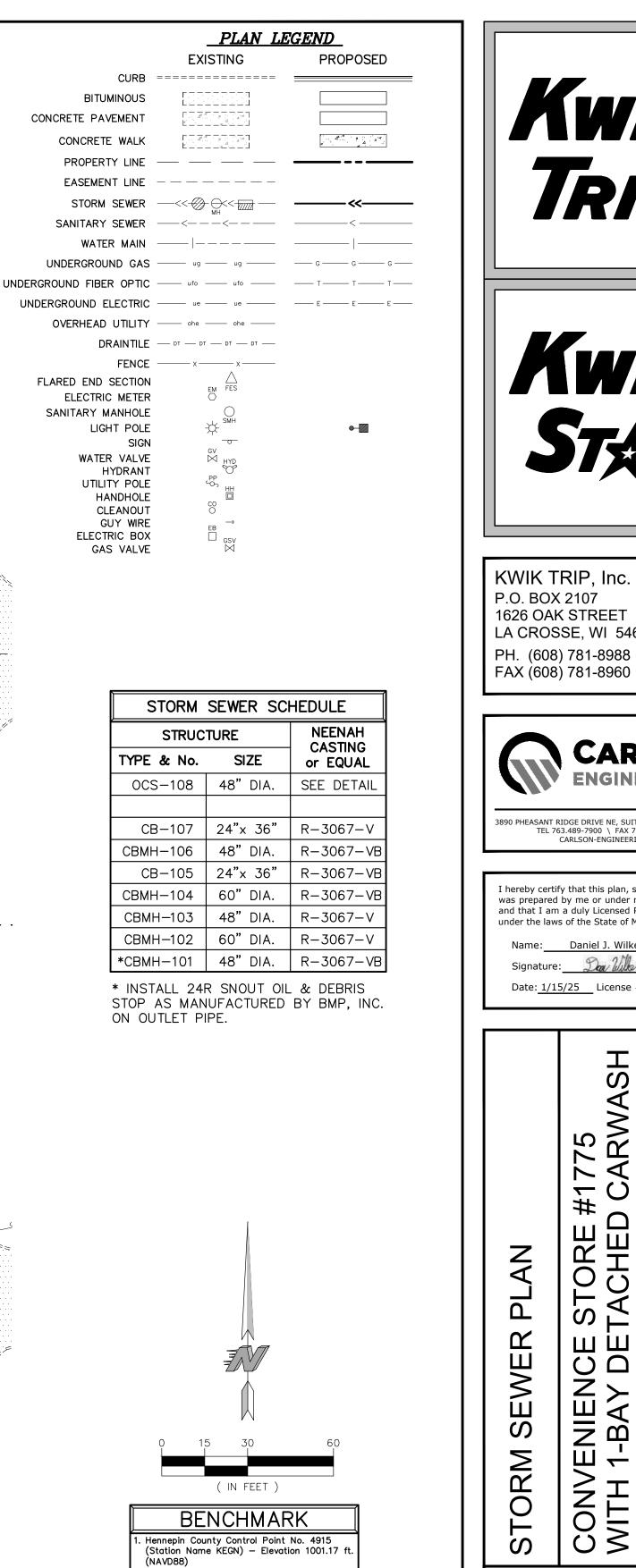












2. Minnesota Department of Transportation Geodetic GSID Station No. 11751 (MnDot Name SLAUG MNDT) — Elevation 990.926 ft

Know what's **below**.

Call before you dig.

(NAVD88)

CALL BEFORE YOU DIG

Kwik Trip Kwik Star KWIK TRIP, Inc. LA CROSSE, WI 54602-2107 PH. (608) 781-8988 CARLSON ENGINEERING 3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449 TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSON-ENGINEERING.COM I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Name: Daniel J. Wilke, P.E. Signature: Dav Uille Date: 1/15/25 License #:53182 775 :ARWASI ND ВГ WAY Ш Ш ⊢ < & GAT ESOT ROAD , MINNI ENIENCE -BAY DI PARK PLAIN, CONV ШЛ BAKE Ś <u># DATE DESCRIPTION</u> DRAWN BY DJW GRAPHIC SCALE PROJ. NO. 11109-00 DATE 2025-01-15 1775 C300 SHEET

5	TORM DRAINAGE:		tops of th board mat
•	Unless otherwise indicated, use reinforced, precast, concrete maintenance holes and catchbasins conforming to ASTM C478, furnished with water stop rubber gaskets and precast bases. Joints for all precast maintenance hole sections shall have confined, rubber "O"-ring gaskets in accordance with ASTM C443. These joints are normally used in sewers to hold infiltration and exfiltration to a practical minimum and are adequate for hydrostatic heads up to 30'. The inside barrel diameter shall not be less than 48 inches.		Install all point in th When conr and grade work.
2.	Install catchbasin castings RIM EL	22.	Line ponds
	as shown.	23.	Clean sedi
5.	All joints and connections in the storm sewer system shall be aastight or watertight. Use flexible compression joints to		

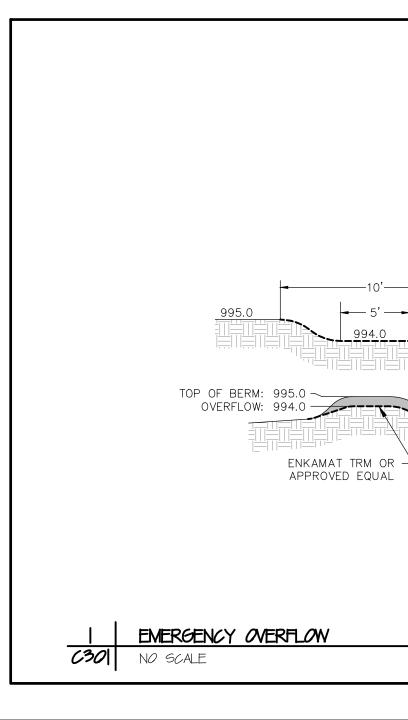
- make watertight connections to manholes in accordance with Minnesota Rules part 4714.0719.6. Where permitted by the administrative authority, approved resilient rubber seals or waterstop gaskets may be used in order to make watertight connections to manholes, catchbasins, and other structures. Use Fernco "Concrete Manhole Adaptors" or "Large Diameter Waterstops", Press-Seal "Waterstop Grouting Rings", or approved equal. Cement mortar joints alone are not allowed unless making repairs or connections to existing lines having such joints.
- 4. The building sewer starts 2 feet outside of the building. See Uniform Plumbing Code (UPC) part 715.1. Material installed within 2 feet of the building must be of materials approved for use inside of or within the building.
- 5. The exterior storm water piping must comply with the following requirements: (A) Double wyes may not be used for drainage fittings in the horizontal position (see Minnesota Rules, Chapter 4714, Section 310.5), because proper pipe slope cannot be maintained on both of the lateral branches. (B) Changes in direction in drainage piping must be made by appropriate use of wyes and bends (see Minnesota Rules, Chapter 4714, Section 706.0). When connecting any vertical drop to a horizontal run, use a wye and a 1/8 bend (45 deg), or a sanitary combo. A sanitary combo is a combination wye and a 1/8 bend combined in a single fitting. The reason is to form a long radius bend in order to insure that the waste is directed in the downstream direction as it enters the horizontal run. Tees are not allowed where the direction of flow changes from either vertical to horizontal or horizontal to horizontal.
- <u>PVC Pipe (Outside of the Building)</u>: Use solid-core, Schedule 40 Polyvinyl Chloride (PVC) Plastic Pipe for all designated PVC storm sewer services outside of the building. The PVC pipe shall meet or exceed the industry standards and requirements as set forth by the American Society for Testing and Materials (ASTM) D1785 and D2665. Fittings must comply with ASTM D1866, D2665, or F794. Joints must be approved mechanical or push-on utilizing an elastomeric seal. Use of solvent cement joints is allowed for building services. Solvent cement joints in PVC pipe must include use of ASTM F656 purple primer and cement in accordance with Uniform Plumbing Code (UPC), part 605.13.2. Pipe with solvent cent joints shall be joined with PVC cement conforming to ASTM D2564. The installation must comply with ASTM D2321, which requires open-trench installation on a continuous granular bed.
- <u>Cleanouts</u>: Install cleanouts on all roof drains. Cleanouts shall be installed at every wye, sweep, and bend. Install cleanouts on all storm sewer services in accordance with UPC part 719.0 and 1101.12. The distance between cleanouts in horizontal piping shall not exceed 100 feet for pipes 4-inch and over in size. Cleanouts shall be of the same nominal size as the pipes they serve. Include frost sleeves and concrete frame and pipe support. Install a meter box frame and solid lid (Neenah R–1914–A, or approved equal) over all cleanouts. Provide cleanouts at the base of the roof leader connections at the gas island pump stations.
- 8. <u>Fittings:</u> Provide directional fittings for the storm piping serving the gas island pump stations. All changes in direction of flow in drain piping shall be made by the appropriate use of 45 degree wyes, long or short sweep quarter bends, sixth, eighth, or sixteenth bends, or by a combination of these or other equivalent fittings.
- 9. Reinforced concrete pipe (RCP) and fittings shall conform to ASTM C76, Design C, with circular reinforcing for the class of pipe specified. Use Class IV RCP for pipes 21" and larger. Use Class V RCP for pipes 18" and smaller. Joints shall be made up of concrete surfaces with a groove on the spigot for an O-ring rubber gasket (also referred to as a confined O-ring type joint) in accordance with ASTM C361. These joints are normally used in gravity severs where exceptional tightness is required. This type of joint provides excellent inherent water tightness in both the straight and deflected position and meets all the joint requirements of ASTM C443.
- 10. <u>RC Aprons</u>: Install a reinforced concrete apron on the free end of all daylighted RCP storm sewer pipes. Tie the last three sections (including apron) of all daylighted RCP storm sewer with a minimum of two tie bolt fasteners per joint. This requirement applies to both upstream and downstream pipe inlets and outlets. For concrete culverts, tie all joints. Ties to be used only to hold the pipe sections together, not for pulling the sections tight. Nuts and washers are not required on inside of 675 mm (27 inch) or less diameter pipes.
- 11. <u>Grates on horizontal pipes</u>: Install safety-trash grates on all horizontal inlets/outlets greater than 6 inches in diameter. The grates shall be placed so that the rods or bars are not more than 3 inches downstream of the inlet/outlet. Rods or bars shall be spaced so that the openings do not permit the passage of a 6-inch sphere.
- <u>Testing</u>: Test all portions of storm sewer that are within 10 feet of buildings, within 10 feet of buried water, lines, within 50 feet of water wells, or that pass through soil or water identified as being contaminated in accordance with the Minnesota Rules part 4714.1109 and UPC part 1109.0. Test all flexible storm sewer lines for deflection after the sewer line has been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and retest.
- 13. Draintile: In accordance with Minnesota Rules part 4714.1102.5, use perforated polyvinyl chloride PVC (ASTM D2729) or corrugated polyethylene PE (ASTM F405) on all draintile 3-inches to 6-inches in diameter. **Install draintile with high** permittivity circular knit polymeric filament filter sock per ASTM D6707-01. MnDot 3733 Type I sewn seam non-woven fabric shall not be used. Draintile pipe directly connected to the storm sewer is classified as storm sewer. Draintile inlet elevations to the catch basins must be above the storm sewer outlet elevations.
- 14. Use Neenah R-3067-DR/DL casting with curb box, or approved equal, on CB #1, CB#2, CB#4 and CB #5. Casting shall include the "NO DUMPING. DRAINS TO RIVER." environmental notice. 15. Use Zurn Z886 trench drain model 8606N with black acid resistant epoxy coated ductile grate - Class C for proposed
- trench drain. 16. Use Neenah Foundry Co. R-1642 casting with self-sealing, solid, type B lid, or approved equal, on all storm sewer maintenance holes. Covers shall bear the "Storm Sewer" label.
- 17. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf). Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: ground=red, storm sewer=green, sanitary sewer=areen, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. o not connect the trace wire to existing conductive utilities. Use Copperhead Dryconn 3—Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm sewer=green, sanitary sewer=green, and water lines=blue.
- 18. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or approved equal.
- 19. Install anti-seepage diaphragms at the locations indicated on the plan in accordance with MNDOT Standard Specification 2501 and MNDOT Standard Plate No. 3146C.
- 20. The minimum depth of cover for building and canopy roof drain leaders without insulation is 5 feet. Insulate roof drain leaders at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 2 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the

he pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid aterial equivalent to DOW Styrofoam HI-40 plastic foam insulation. I pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. ecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such

- s with 2' thick impervious clay liner per detail.
- diment and debris from sewers, sumps and stormwater basins prior to final owner acceptance.
- 24. Televise all existing lines prior to connection.
- 25. Provide a final storm water management report that will serve to verify that the intent of the approved storm water management design has been met. The report shall include record drawings, measurements, and photographic evidence of the as-built storm water management system. The report shall substantiate that all aspects of the original design have been adequately provided for by the construction of the project.
- 26. Install finger drains at each and every proposed catchbasin (see detail). Finger drains around catch basin inlets shall not be installed below the crown of the storm drain piping.

#### <u>HDPE REQUIREMENTS:</u>

- 1. Install dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe at locations indicated on the plan. High-density polyethylene (HDPE) storm sewers must meet ASTM F714 (see Minnesota Rules, Chapter 4714 and Installation Standard 1). 2. Dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe shall conform to the requirements of AASHTO M252 for pipe sizes 4-inch to 10-inch diameter. Dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe shall conform to the requirements of ASTM F2306 (virgin PE material) for pipe sizes 12-inch to 60-inch diameter.
- 3. All fittings must comply with ASTM Standard D3212.
- 4. Water-tight joints must be used at all connections (including structures) in conformance with ASTM F2510.
- 5. HDPE pipe connections into all concrete structures must be made with water tight materials utilizing Nyoplast "Manhole Adaptors" along with Press-Seal or Kor-N-Seal "Watertight Connector", Cast-A-Seal "Precast Watertight Connector", or approved equals. Where the alignment precludes the use of the above approved watertight methods, Conseal 231 WaterStop sealant, or approved equal will only be allowed as approved by the Administrative Authority.
- be coupled in order to provide water-tight joints.
- 7. Perform deflection tests on all HDPE pipe after the sewer lines have been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and perform the test again until acceptable. Supply the mandrel for deflection testing. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The ball or mandrel shall be clearly stamped with the diameter. Perform the tests without mechanical pulling devices.

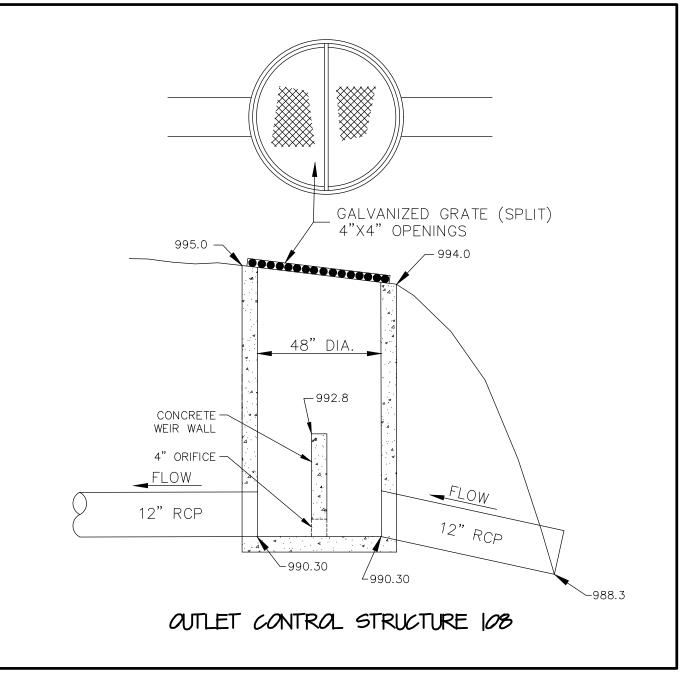


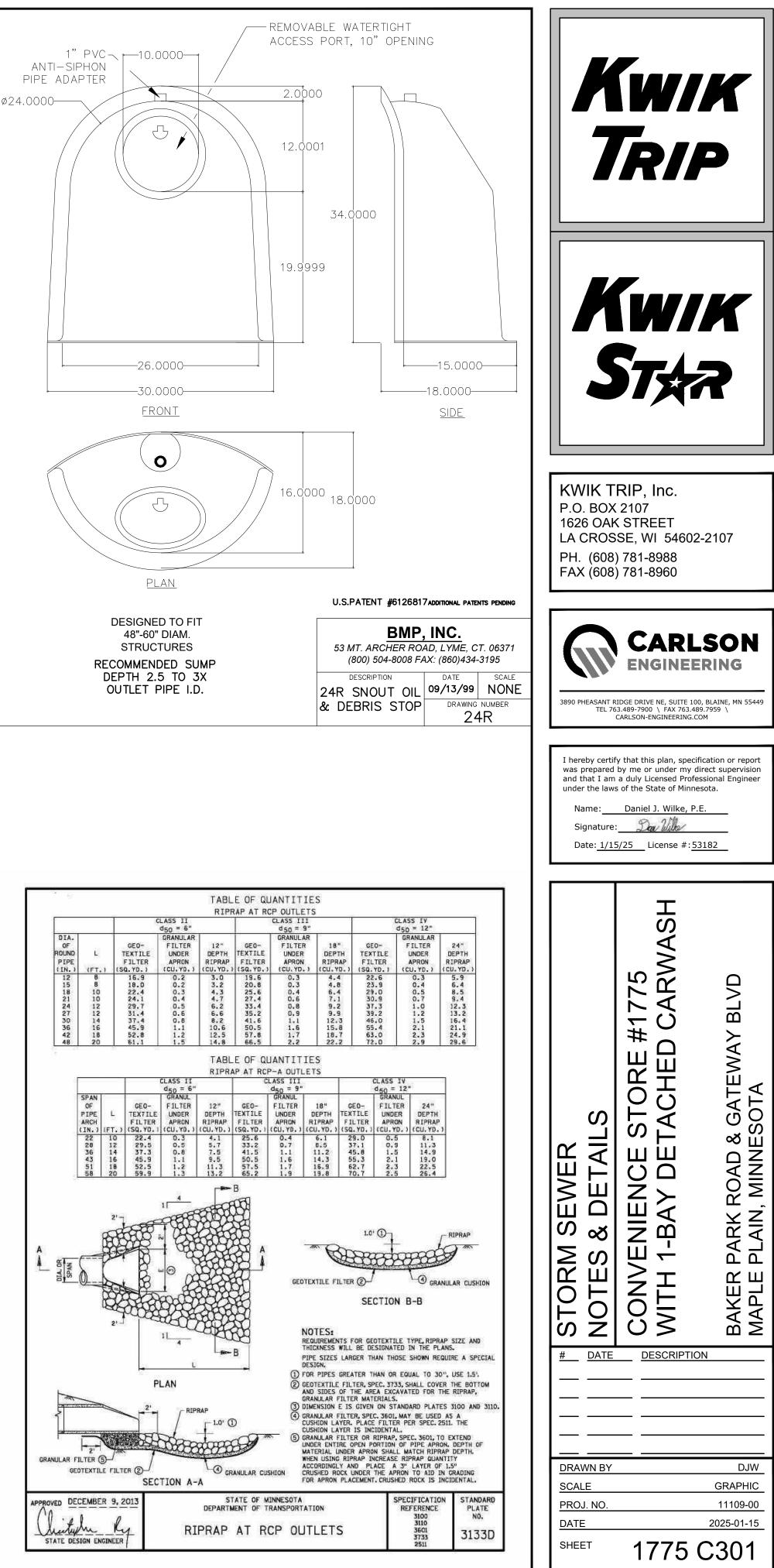
6. Lay all HDPE pipe on a continuous granular bed. Installation must comply with ASTM D2321. All sections of the corrugated HDPE pipe shall

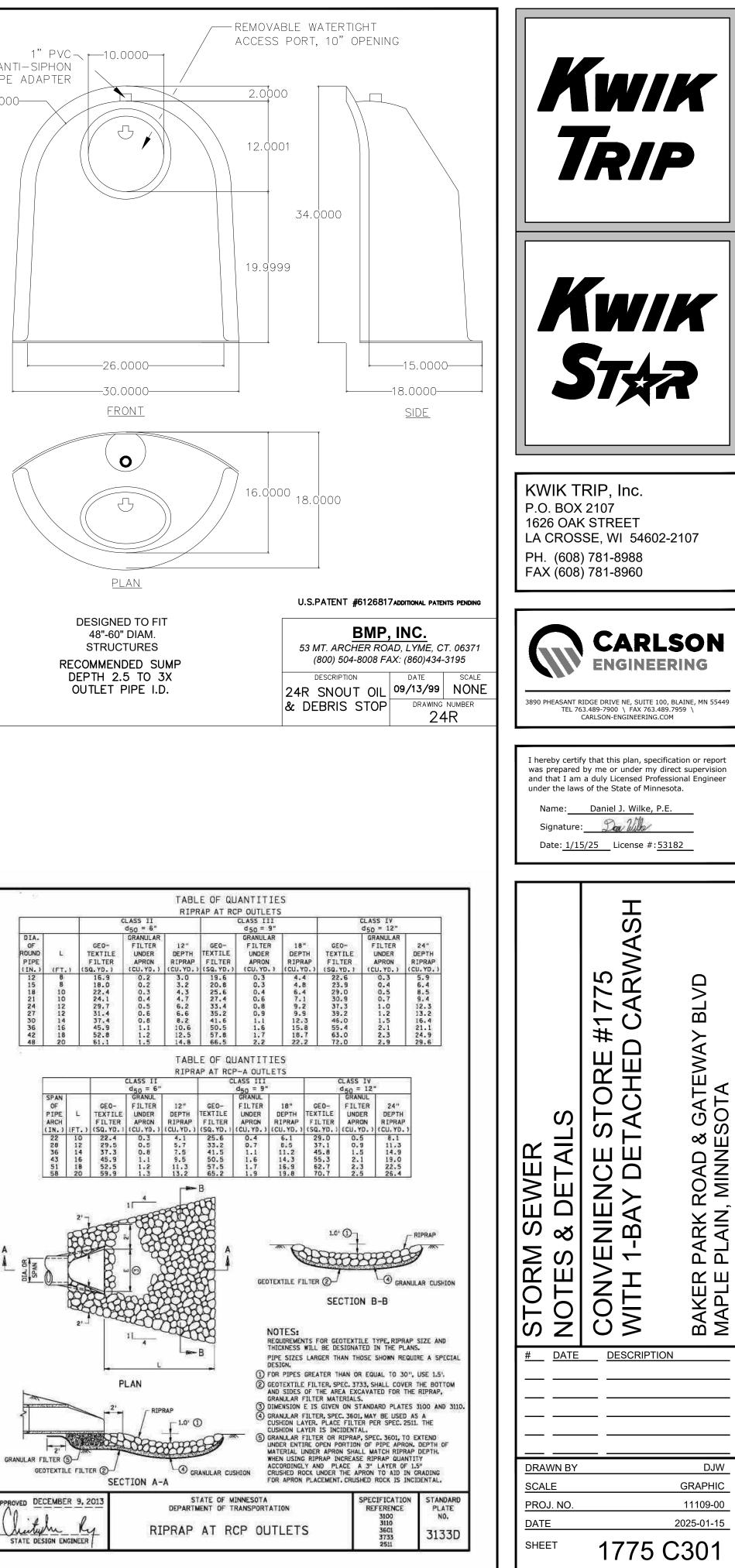
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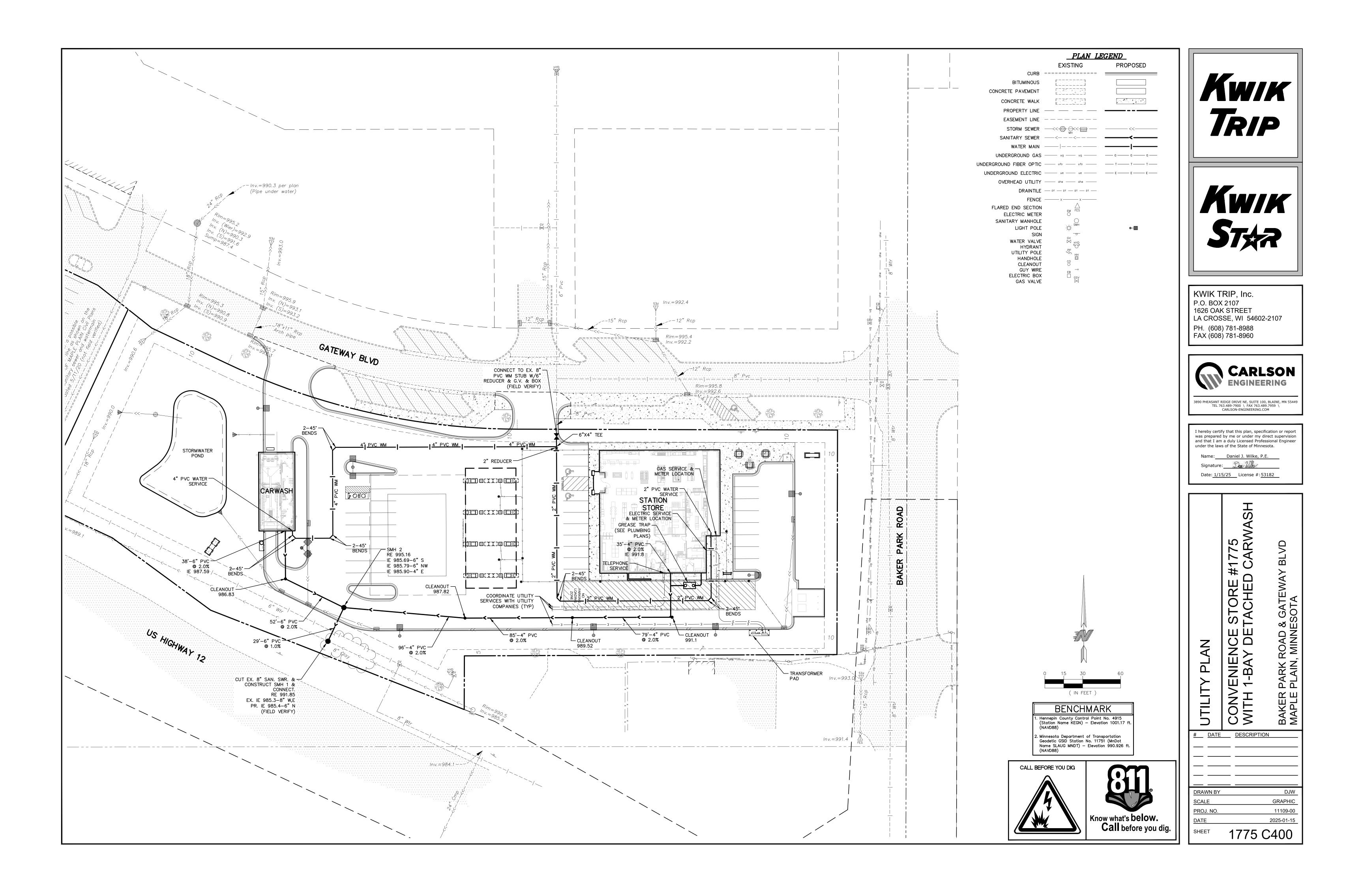
APPROVED EQUAL

BASIN 10









#### GENERAL:

- Existing boundary, location, topographic, and utility information shown on this plan is from a field survey by Carlson Mccain, Inc. dated 8/7/24. The Engineer is not responsible for inaccuracies related to the survey information.
- Perform all construction work in accordance with State and Local requirements.
- Perform all construction activity in accordance with the Minnesota Pollution Control Agency GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY issued August 1, 2023 and all subsequent amendments thereto.
- Comply with all applicable local, state, and federal safety regulations. Comply with the work safety practices specified by the Occupational Safety and Health Administration (OSHA). OSHA prohibits entry into "confined spaces," such as manholes and inlets (see 29 CFR Section 1910.146), without undertaking certain specific practices and procedures. Bench or slope sidewalls in order to provide safe working conditions and stability for the placement of engineered fill. Perform excavations in accordance with the requirements of O.S.H.A. 29 CFR, Part 1926, Subpart P, Excavations. The Contractor is responsible for naming the "Competent Individual" in accordance with CFR 1926.6. Sloping or benching for excavations greater than 20 feet deep must be approved by a registered professional engineer (www.osha.gov).
- Safety is solely the responsibility of the Contractor, who is also solely responsible for the construction means, methods, techniques, sequences or procedures, and for safety precautions and programs in connection with the Work. The Engineer shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or
- procedures, or for safety precautions and programs in connection with the Work. The Engineer's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures.
- Examine all local conditions at the site, and assume responsibility as to the grades, contours, and the character of the earth, existing conditions, and other items that may be encountered during excavation work above or below the existing grades. Review the drawings, specifications, and geotechnical report covering this work and become familiar with the anticipated site conditions.
- Refer to the architectural plans for building and stoop dimensions, site layout and dimensions, pavement sections and details, striping, and A licensed surveyor shall perform construction staking. The Contractor shall provide and be responsible for the staking. Verify all plan and
- detail dimensions prior to construction staking. Stake the limits of walkways and curbing prior to valvebox, maintenance hole, and catchbasin installation. Adjust valvebox and maintenance hole locations in order to avoid conflicts with curb and gutter. Adjust catchbasin locations in order to align properly with curb and gutter
- Provide temporary fences, barricades, coverings, and other protections in order to preserve existing items to remain, and to prevent injury or damage to person or property. Provide all traffic control required in order to construct the proposed improvements. Traffic control design and associated government approvals are the responsibility of the Contractor. Comply with local authorities and the latest version of the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), including the Field Manual for Temporary Traffic Control Zone Layouts. If the temporary traffic control zone
- affects the movement of pedestrians, provide adequate temporary pedestrian access and walkways. If the temporary traffic control zone affects an accessible and detectable pedestrian facility, maintain accessibility and detectability along the alternate pedestrian route in accordance with the provisions for pedestrian and worker safety contained in Part 6 of the MMUTCD Connect to existing sanitary sewer MH's by coredrilling. Connect to existing storm sewer MH's by either sawcutting or coredrilling. Use saws or drills that provide water to the blade. Meet all City standards and specifications for the the connection. Reconstruct inverts after
- before beginning construction to ensure that service connections do not cut into maintenance access structure joints or pipe barrel joints. Completely remove existing concrete and masonry structures that are located within the proposed building and future building expansion areas. All other existing sewer and watermain pipes that are to be abandoned shall either be removed, or completely filled with sand or controlled low strength material (CLSM) also known as flowable concrete fill. Bulkhead ends of the pipe segment to be decommissioned with concrete. All other existing sanitary sewer and storm sewer structures that are to be abandoned in place shall be abandoned as follows: (1) remove castings, rings, and top sections, (2) bulkhead any pipe openings, (3) break two 4-inch diameter holes in the barrel at the bottom of the

installation. Use water stop gaskets in order to provide watertight seals when penetrating a structure wall with a pipe. Take measurements

- structures for drainage and cover the holes with geotextile filter fabric, and (4) fill the structures with sand or CLSM. Testing and Inspections: All plumbing installations, including water and sewer services, must be tested and inspected in accordance with the requirements of the Minnesota Plumbing Code (Minnesota Rules Chapter 4714). Coordinate testing and inspection with the State Health Department and the City Public Works Department. No drainage or plumbing work may be covered prior to completing the required tests and
- Coordinate building utility connection locations at 2 ft. out from the proposed building with the interior Plumbing Contractor prior to construction. Verify water and sewer service locations, sizes, and elevations with the Mechanical Engineer prior to construction. Coordinate construction and connections with the Mechanical Contractor.
- The subsurface utility information shown on this plan is utility Quality Level D. This quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" by the FHA. The locations of existing utilities shown on this plan are from record information. The Engineer does not guarantee that all existing utilities
- are shown or, if shown, exist in the locations indicated on the plan. It is the Contractor's responsibility to ascertain the final vertical and horizontal location of all existing utilities (including water and sewer lines and appurtenances). Notify the Engineer of any discrepancies. The Contractor is solely responsible for all utility locates. Contact utility companies for locations of all public and private utilities within the
- work area prior to beainning construction. Contact GOPHER STATE ONE CALL at (651) 454-0002 in the Minneapolis/St. Paul metro area, or 1-800-252-1166 elsewhere in Minnesota for exact locations of existing utilities at least 48 working hours (not including weekends and holidays) before beginning any construction in accordance with Minnesota Statute 216D. Obtain ticket number and meet with representatives of the various utilities at the site. Provide the Owner with the ticket number information. Gopher State One Call is a free service that locates municipal and utility company lines, but does not locate private utility lines. Use an independent locator service or other means in order to obtain locations of private utility lines including, but not limited to, underground electric cables, telephone, TV, and lawn sprinkler
- Pothole to verify the positions of existing underground facilities at a sufficient number of locations in order to assure that no conflict with the proposed work exists and that sufficient clearance is available. Where existing gas, electric, cable, or telephone utilities conflict with the Work, coordinate the abandonment, relocation, offset, or support of
- the existing utilities with the appropriate local utility companies. Coordinate new gas meter and gas line installation, electric meter and electric service installation, cable service, and telephone service installation with the local utility companies. When working near existing telephone or electric poles, brace the poles for support. When working around existing underground utilities that become exposed, provide sufficient support in order to prevent excessive stress on the existing piping. The location and preservation of
- existing underground utilities is solely the responsibility of the Contractor. Temporary support systems are the responsibility of the Contractor, who is also solely responsible for the construction means, methods, techniques, sequences or procedures, and for safety precautions and programs in connection with the temporary support systems. Temporary eting, bracing, anchorages, excavation support walls, directional boring, auger

jacking, soil stabilization, and other methods of protecting existing improvements.

- Arrange for and secure suitable disposal areas off-site. Dispose of all excess soil, waste material, debris, and all materials not designated for salvage. Waste material and debris includes trees, stumps, pipe, concrete, asphaltic concrete, cans, or other waste material from the construction operations. Obtain the rights to any waste area for disposal of unsuitable or surplus material either shown or not shown on the plans. All work in disposing of such material shall be considered incidental to the work. All disposal must conform to applicable solid waste disposal permit regulations. Obtain all necessary permits at no cost to the Owner
- Store and protect existing site features that need to be removed and replaced in connection with the Work. Replace damaged or stolen site features at no additional cost to the Owner.
- Straight line saw—cut existing bituminous or concrete surfacing at the perimeter of pavement removal areas. Use saws that provide water to the blade. Do not allow the slurry produced by this process to be tracked outside of the immediate work area or discharged into the sewer system. Tack and match all connections to existing bituminous pavement.
- Relocate overhead power, telephone, and cable lines as required. Seal and report any existing unused on-site wells and septic systems in accordance with Minnesota Department of Health (MDH) requirements. Provide the MDH with a Well and Boring Sealing Record, or certify in writing that there are no unused wells on the property.
- All materials required for this work shall be new material conforming to the requirements for class, kind, grade, size, guality, and other details specified herein or as shown on the Plans. Do not use recycled or salvaged aggregate, asphaltic pavement, crushed concrete, or scrap shinales. Unless otherwise indicated, the Contractor shall furnish all required materials and labor in order to perform the construction in accordance with the construction documents, specifications, and regulatory agencies.
- Reconstruct driveways and patch street to match existing pavement section and grade. Sod right-of-way. Restore the public right-of-way at temporary construction entrance locations. Replace any concrete curb and gutter, bituminous pavement, sidewalk, or vegetative cover damaged by the construction activity. Restore damaged turf with sod within the public right—of—way. The work area shown is general and may need to be adjusted in the field.
- . Cut turf edges in order to allow for a uniform straight edge at locations where new sod meets existing turf. No jagged or uneven edges are allowed. Remove topsoil as required at joints between existing and new turf in order to allow the surface of the new sod to be flush with the existing.
- Document existing conditions (photographs, video, field survey, etc.) in order to enable restoration to match existing conditions and in order to ensure that restored areas have positive drainage similar to existing conditions. Provide positive drainage away from buildings at all times. Provide and maintain temporary drainage throughout construction until the
- permanent drainage system and structures are in place and operational. Install temporary ditches, piping, pumps, or other means as necessary in order to insure proper drainage at all times. Provide low points at building pads or roadways with positive outfalls. Do not block drainage from or direct excess drainage to adjacent property. Protect all structures and landscaping not labeled for demolition from damage during construction. Provide protective coverings and
- enclosures as necessary to prevent damage to existing work that is to remain. Existing work to remain may include items such as trees, shrubs, lawns, sidewalks, drives, curbs, utilities, buildings and/or other structures on or adjacent to the site. Provide temporary fences and barricades as required for the safe and proper execution of the work and the protection of persons and property. Provide building surveys and seismic monitoring in locations where demolition, excavation, underpinning, pile driving, compacting, or similar work is to be performed adjacent to or in the vicinity of existing structures. Return any on-site or off-site areas disturbed directly or indirectly due to construction to a condition equal to or better than the existing condition.
- . Protect sub grades from damage by surface water runoff. 4. Full design strength is not available in bituminous pavement areas until the final lift of asphalt is compacted into place. Protect pavement
- areas from overloading by delivery trucks, construction equipment, and other vehicles. When sawing or drilling concrete or masonry, use saws that provide water to the blade. Do not allow the slurry produced by this process to be tracked outside of the immediate work area or discharged into the sewer system.
- Adjust all public and private structures including curb stops, valve boxes, maintenance hole castings, catchbasin castings, cleanout covers, and similar items to finished grade. Comply with the requirements of each structure's owner. Structures being reset in paved areas must meet the owner's requirements for traffic loading.
- 2% maximum slope in all directions in handicapped accessible parking areas. 2% maximum cross slope and 5% maximum longitudinal slope on all sidewalks.
- . Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
- Obtain and pay for all permits, tests, inspections, etc. required by agencies that have jurisdiction over the project including the NPDES permit from the State. The Contractor is responsible for all bonds, letters of credit, or cash sureties related to the work. Execute and inspect work in accordance with all local and state codes, rules, ordinances, or regulations pertaining to the particular type of work involved. Measure pipe lengths from center-of-structure to center-of-structure, or to the end of aprons.
- Obtain permits from the City for work in the public right-of-way.
- . Refer to the geotechnical report by the Soils Engineer for dewatering requirements
- Test boring data shown on the plans were accumulated for designing and estimating purposes. Their appearance on the plan does not constitute a guarantee that conditions other than those indicated will not be encountered.
- The minimum depth of cover for building and canopy roof drain leaders without insulation is 5 feet. Insulate roof drain leaders at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 2 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam HI-40 plastic foam insulation.
- Insulate utility lines at locations indicated on the plans. Provide a minimum insulation thickness of 4 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam Highload 40 Polystyrene Insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" thk.

- 46. Construct sanitary sewer, watermain, and storm sewer utilities in accordance with the City Engineer's Association of Minnesota Standard Specifications sections 2600, 2611, and 2621 dated 2013, or the latest revised edition.
- hereon does not extend to any such safety systems that may nor or hereafter be incorporated into these plans. The construction contractor and/or local regulations.
- 48. Existing utilities shown on this plan are located as accurately as possible. However, the Engineer does not guarantee that all utilities are Il utilities which may be affected by the construction.
- 49. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the sewer=green, sanitary sewer=green, and water lines=blue.
- approved equal.
- 51. See architectural for building waterproofing and foundation drainage.
- pavement locations. 53. Place #4 x 2'-0'' tie bar at 3' on center in all concrete curb and gutter.
- and related structures. Location ties shall be to permanent landmarks or buildings.
- 55. Test reports required for project close-out include, but are not limited to: density test reports, bacteriological tests on the water system, pressure tests on the water system, leak tests on the sewer system, and deflection tests on all HDPE pipe
- road user shall be removed or obliterated to be unidentifiable as a marking as soon as practical. Pavement marking obliteration shall remove the non-applicable pavement marking material, and the obliteration method shall minimize pavement scarring. Painting over existing pavement markings with black paint or spraying with asphalt shall not be accepted as a substitute for removal or obliteration.
- mbination of air blasting, water blasting, and grinding. Provide a dust control system and remove accumulated sand or other materials. Collect, haul, and dispose of dust or residue from removals.
- WATER DISTRIBUTION SYSTEM:
- 2. CITY REQUIRES A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY WATER SHUTDOWN.
- water line within 10-feet of the crossing.
- as required. Include costs to lower water lines in the base bid.
- M-12, or using appropriate chlorine test kits.
- 7. All water supply piping connected to municipal water main must have a 150 psi minimum pressure rating. Rules part 4714,0604 and UPC part 604.0.)
- 10. Polyvinyl Chloride (PVC) Building Water Services must comply with ASTM D1785, ASTM D2241, or AWWA C900; pressure rated for water (See
- 11. Polyvinyl Chloride (PVC) Watermain: Use AWWA C900 for all PVC watermain furnished with integral elastomeric bell and spigot joints; and hydrants.
- device hardware shall be ANSI 304 stainless steel, or approved equivalent.
- 13. Watermain Valves: At all valve locations which require a 12" or smaller valve, install gate valves which are of the compression resilient
- urb stop locations. Stationary rod is required on all curb stops. Use Mueller Company Mark II Oriseal No. H—15154N curb stop, or approved equal, and stainless steel stem rod.
- ANSI 304 stainless steel, or approved equivalent 16. Do not connect new watermain to existing until the new water main is pressure tested and disinfected.
- follows: storm sewer=green, sanitary sewer=green, and water lines=blue.
- approved equal.

- and fittings with watertight plugs when work is not in progress. Keep the interior of all pipes clean and remove any dirt or debris from joint surfaces after the pipes have been lowered into the trench. Install all valves plumb and located according to the plans.
- least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam Highload 40 Polystyrene Insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" thk.

#### SANITARY SEWER:

47. These plans, prepared by Carlson McCain, LLC., do not extend to or include systems pertaining to the safety of the construction contractor or its employees, agents, or representatives in the performance of the work. The seal of Carlson McCain's registered professional engineer

shall prepare or obtain the appropriate safety systems which may be required by U.S. Occupational Safety and Health Administration (OSHA)

shown, or if shown are in the exact locations indicated on the plan. It is the Contractor's responsibility to ascertain the final vertical and horizontal location of all existing utilities (including municipal water and sewer lines and appurtenances) and to notify the owners of the utilities a minimum of 48 working hours before starting construction in a given area, requesting location in the field, as exact as possible, of

Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf) Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: red, storm sewer=green, sanitary sewer=green, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dryconn 3-Way or Locking Snake Bite connectors ated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed Trace wire must be properly arounded at all dead ends and services. Install arade-level/in-around trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm

50. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 nches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or

52. Place #3 rebar at 3' on center in all 6" thick concrete pavement locations. Place #4 rebar at 4' on center in all 8" thick concrete

54. Record as-built information as construction progresses or at appropriate construction intervals. Secure and deliver to the Owner as-built information showing locations, top, and invert elevations of maintenance holes, catchbasins, cleanouts, inlet and outlet pipes, valves, hydrants,

56. Removing Markings: Markings that are no longer applicable for roadway conditions or restrictions and that might cause confusion for the

57. Completely remove marking from locations shown on the plan in accordance with MnDOT Standard Specification Section 2102. Use one or a

1. Bring all site utilities to 2' outside of the building line with the exception of the water service. Extend water service into the building and up to the flange for the water meter. Do not install PVC water service pipe under or within any building, structure, or part thereof.

3. Separation of Water and Sewer: Construct sewer and water services in accordance with Minnesota Rules, part 4714.0721 and Uniform lumbing Code (UPC) parts 720.0 and 721.0. Provide a minimum horizontal separation of 10 feet between all water and sewer lines, including manholes, catch basins, storm sewer, sanitary sewer, draintile, or other potential sources for contamination. Measure the separation distance from the outer edge of the pipe to the outer edge of the contamination source (outer edge of structures, piping, etc.) At water and sewer crossings, the bottom of the water pipe located within ten feet of the point of crossing must be at least 12-inches above the top of the sewer. When this is not feasible, the sewer pipe material must be approved for use inside of or within a building in accordance with the requirements of Minnesota Rules part 4714.0701 and UPC part 701.0. No joints or connections are allowed on the

4. Watermain Depth: Maintain 8-feet of cover over the top of the water lines to the finished grade. Verify elevation of proposed and existing water lines at all utility crossings. Install the water lines at greater depths in order to clear storm sewers, sanitary sewers, or other utilities

5. Disinfection: Disinfect all completed watermains in accordance with AWWA Standard C651. If the tablet or continuous feed methods are used, disinfect using with water that contains at least 50 ppm of available chlorine in accordance with Minnesota Rules, part 4714.0609 and UPC part 609.9. Do not use the tablet method on solvent-welded plastic or on screwed-joint steel pipe because of the danger of fire or explosion from the reaction of the joint compounds with the calcium hypochlorite. Retain the treated water in the pipeline for at least 24 hours. Measure the chlorine residual at the end of the 24 hour period. The free chlorine residual must be at least 10 mg/l measured at any point in the line. Measurement of the chlorine concentration at regular intervals shall be in accordance with Standard Methods, AWWA

Testing: Pressure test and perform bacteriological tests on all water lines under the supervision of the City Public Works Department. tify the City at least 24 working hours prior to any testing. Pressure test the water system in accordance with the UPC part 609.4. Pressurize the waterline to a water pressure of 1034-kPa (150-psi) gauge pressure (measured at the point of lowest elevation) by means of a pump connected to the pipe in a satisfactory manner. Do not add water to the watermain in order to maintain the required pressure ing the water main pressure testing. Minnesota Department of Labor and Industry: The test section of pipe shall withstand the test without leaking for a period of not less than 15 minutes. <u>Minnesota Department of Health</u>: The watermain shall be pressure tested at 150-psi for at least two hours with not more than a 2-psi pressure drop during the last hour of the test.

8. Copper tube for water services must comply with ASTM B88 and shall have a weight not less than Type L (in accordance with Minnesota

9. Ductile iron pipe (DIP) water services must comply with AWWA C151/ANSI A21.51 or AWWA C155/ANSI A21.15 (See Minnesota Rules part 4714.0604 and UPC part 604.0.). Use Thickness Class 52 DIP with push-on joints. Use petroleum resistant gaskets, Nitrile (NBR), or approved equal. Use only ANSI 304 stainless steel bolts and nuts on all watermain fittings, valves, and hydrants. The exterior of ductile iron pipe shall be coated with a layer of arc-sprayed zinc per ISO 8179. The interior cement mortar lining shall be applied without asphalt seal coating. Polyethylene encasement is required on all ductile iron pipe. Use V-Bio Enhanced Polyethylene Encasement or approved equal.

Minnesota Rules part 4714.0604 and UPC part 604.0.). Do not install PVC water service pipe under or within any building, structure, or part

inimum pressure Class 150; dimension ratio not greater than 18; laying length 20 feet. Use EBAA Iron, Inc., "Series 2000 PV Megalug," or approved equal for restraint on C900 PVC watermain. Use only ANSI 304 stainless steel bolts and nuts on all watermain fittings, valves

12. Use mechanical joint restraint devices for joint restraint on all watermain bends having a vertical or horizontal deflection of 22-1/2 degrees or greater, all valves, stubs, extensions, tees, crosses, plugs, all hydrant valves, and all hydrants in accordance with City requirements. Use "Series 1100 Megalug" manufactured by EBAA Iron Inc., Eastland, Texas, or approved equal, installed in accordance with manufacturer's recommendations for restraint on Ductile Iron Pipe. Restraining devices are to have epoxy coating or approved equivalent. Restraining

seated (CRS) type. Use American Flow Control's Series 2500 Ductile Iron Resilient Wedge Gate Valve, or approved equal. Gate valves shall conform to AWWA C509. Install cast iron valve boxes conforming to ASTM A48 at each valve location. Valve boxes shall be the three-piece type with 5-1/4" shafts. Use Tyler 6860-G with No. 6 base, or equivalent. Valve boxes shall have at least 6" of adjustment above and below finished arade. Drop covers on valve boxes shall be round and bear the word "WATER" cast on the top. Use Tyler 6860-G "Stayput" covers with extended skirt, or equivalent. All valve hardware shall be ANSI 304 stainless steel, or approved equivalent. 14. Curb Valves and Boxes: Use Mueller H–10334 extension type curb box with Minneapolis pattern base, or approved equal, at all  $\frac{3}{4}$ " through 2"

15. Fire hydrants shall be in accordance with the requirements of the local municipality. Do not connect hydrant drains to sanitary sewers or storm sewers. Do not locate hydrants within 10 feet of sanitary sewers or storm sewers. When placing fire hydrants in locations where the groundwater table is less than 8 feet below the ground surface, plug the hydrant drain holes and equip the hydrants with a tag stating the reed for pumping after use. Maintain a 3-foot clear space around the circumference of all fire hydrants. All hydrant hardware shall be

17. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf) Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: around=red, storm sewer=areen, sanitary sewer=areen, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dryconn 3—Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as

18. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished arade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or

19. Threaded hose connections including hose bibbs and hydrants must include a back flow prevention device in accordance with Minnesota Rules, part 4714.0603 and UPC part 603.0. Wall hydrants must meet ASSE Standard 1019 (see Table 603.2). Where permitted by the administrative authority, wall hydrants may utilize non-removable ASSE 1052 backflow preventers or non-removable ASSE 1011 vacuum breakers and provision is made to protect from freezing (see Minnesota Rules, Chapter 4714, Sections 603.5.7, 312.6, and 301.1.2).

20. All newly installed or replacement pipes, pipe fittings, plumbing fittings and fixtures, including backflow preventers, that are installed on potable water systems or systems that are designed to distribute water for potable use, are required to meet the Reduction of Lead in Drinking Water Act, which establishes a maximum lead content of 0.25 percent by weighted average of the wetted surfaces. Solder and flux for potable water systems shall contain less than 0.2 percent lead. Joints must include non-corrosive non-toxic paste-type flux complying with ASTM B813 (see Minnesota Rules, Chapter 4714, Section 605.3.4). See Minnesota Rules, part 4714.0604 and UPC part 604.11. 21. Do not exceed the manufacturer's specifications for curvature of pipe and deflection at pipe joints. Securely close all open ends of pipe

22. Insulate the watermain at locations indicated on the plans. Provide a minimum insulation thickness of 4 inches. The insulation must be at

1. Unless otherwise indicated, use reinforced, precast, concrete maintenance holes conforming to ASTM C478, furnished with precast bases. Sanitary sewer maintenance holes shall be supplied with pre-formed inverts and flexible neoprene sleeve connections for all lateral lines 375 mm (15 inches) in diameter or less, unless otherwise indicated. Joints for all precast maintenance hole sections shall have confined, rubber "O"-ring gaskets in accordance with ASTM C443. These joints are normally used in sewers to hold infiltration and exfiltration to a practical minimum and are adequate for hydrostatic heads up to 30'. The inside barrel diameter shall not be less than 48 inches.

2. All joints and connections in the sewer system shall be gastight or watertight. Use flexible compression joints to make watertight connections to manholes in accordance with Minnesota Rules part 4714.0719.6. Where permitted by the administrative authority, approved resilient rubber joints or waterstop gaskets must be used in order to make watertight connections to manholes and other structures. Use Fernco "Concrete Manhole Adaptors" or "Large Diameter Waterstops", Press-Seal "Waterstop Grouting Rings", or approved equal. Cement mortar joints are permitted <u>only</u> for repairs or connections to existing lines having such joints.

3. The building sewer starts 2 feet outside of the building. See Uniform Plumbing Code (UPC) part 715.1. Material installed within 2 feet of the building must be of materials approved for use inside of or within the building. 4. The exterior sanitary sewer piping must comply with the following requirements: (A) Double wyes may not be used for

drainage fittings in the horizontal position (see Minnesota Rules, Chapter 4714, Section 310.5). Proper pipe slope cannot be maintained on both of the offset branches. (B) Changes in direction in drainage piping must be made by appropriate use of wyes and bends (see Minnesota Rules, Chapter 4714, Section 706.0). Tees are not allowed where the direction of flow changes from either vertical to horizontal or horizontal to horizontal.

5. Pipe: Use solid-core, Schedule 40 Polyvinyl Chloride (PVC) Plastic Pipe for all designated PVC sanitary sewer services outside of the building. The PVC pipe shall meet or exceed the industry standards and requirements as set forth by the American Society for Testing and Materials (ASTM) D1785 and D2665. Fittings must comply with ASTM D1866. D2665. or F794. Joints must be approved mechanical or push-on utilizing an elastomeric seal. Use of solvent cement joints is allowed for building services. Solvent cement joints in PVC pipe must include use of ASTM F656 purple primer and cement in accordance with Uniform Plumbing Code (UPC), part 605.13.2. Pipe with solvent cement joints shall be joined with PVC cement conforming to ASTM D2564. The installation must comply with ASTM D2321, which requires open-trench installation on a continuous aranular bed.

6. Cleanouts: Install cleanouts on all sanitary sewer services in accordance with UPC part 719.0 and 1101.12. The distance tween cleanouts in horizontal piping shall not exceed 100 feet for pipes 4-inch and over in size. Cleanouts shall be of the same nominal size as the pipes they serve. Include frost sleeves and concrete frame and pipe support. Install a meter box frame and solid lid (Neenah R-1914-A, or approved equal) over all cleanouts.

7. Testing: Pressure test all sanitary sewer lines in accordance with the Minnesota Rules parts 4714.0712 and 4714.0723 and parts 712.0 and 723.0. Test all flexible sanitary sewer lines for deflection after the sewer line has been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary

8. Install flexible watertight frame/chimney seals on all sanitary sewer maintenance holes in order to seal the outside of the nney from the cast iron frame down to the cone. The seal shall be a continuous seamless band made of high quality EPDM (Ethylene Propylene Diene Monomer) rubber with a minimum thickness of 65 mils. Use Internal/External Adapter Seal as manufactured by Adaptor, Inc. (www.adaptorinc.com/wp-content/uploads/2019/04/ADAP\_IEManholeSeal.pdf), Infi-Shield Uni-band one piece molded sealing system as manufactured bySealing Systems, Inc. (www.ssisealingsystems.com), or approved

9. Use Neenah Foundry Co. R-1642 casting with self-sealing, solid, type B lid, or approved equal, on all sanitary sewer maintenance holes. Covers shall bear the "Sanitary Sewer" label.

10. <u>Trace Wire</u>: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf). Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: ground=red, storm sewer=green, sanitary sewer=green, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dryconn 3-Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive—in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm sewer=green, sanitary sewer=green, and water lines=blue.

11. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virain polyethylene film. ne aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or approved equal.

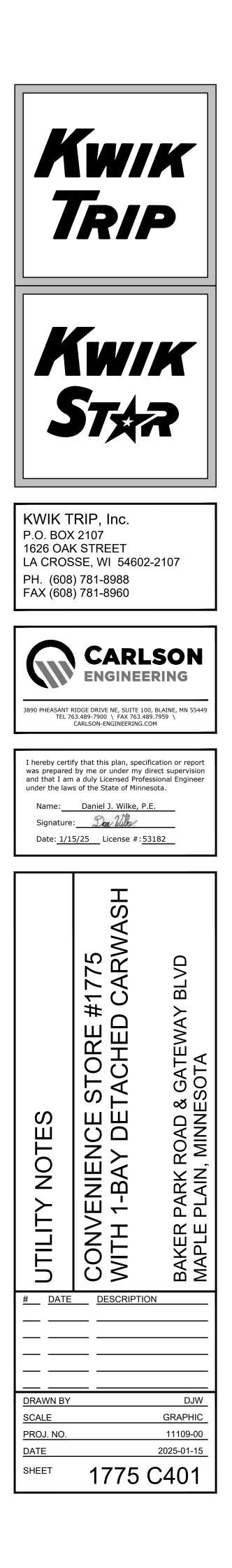
12. The minimum depth of cover for sanitary sewer without insulation is 5 feet. Insulate sanitary sewer services at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 4 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam Highload 40 Polystyrene Insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" th

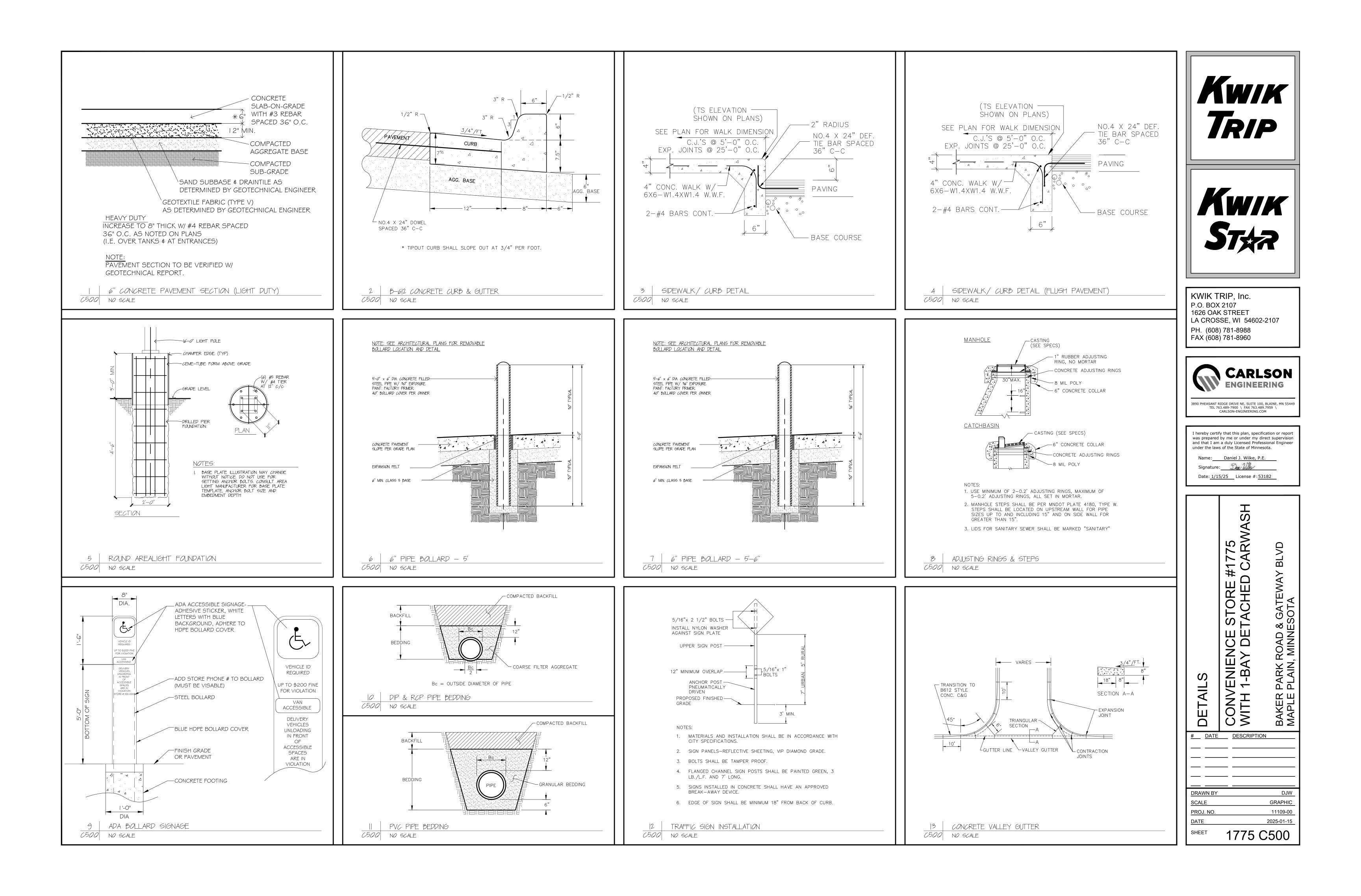
13. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.

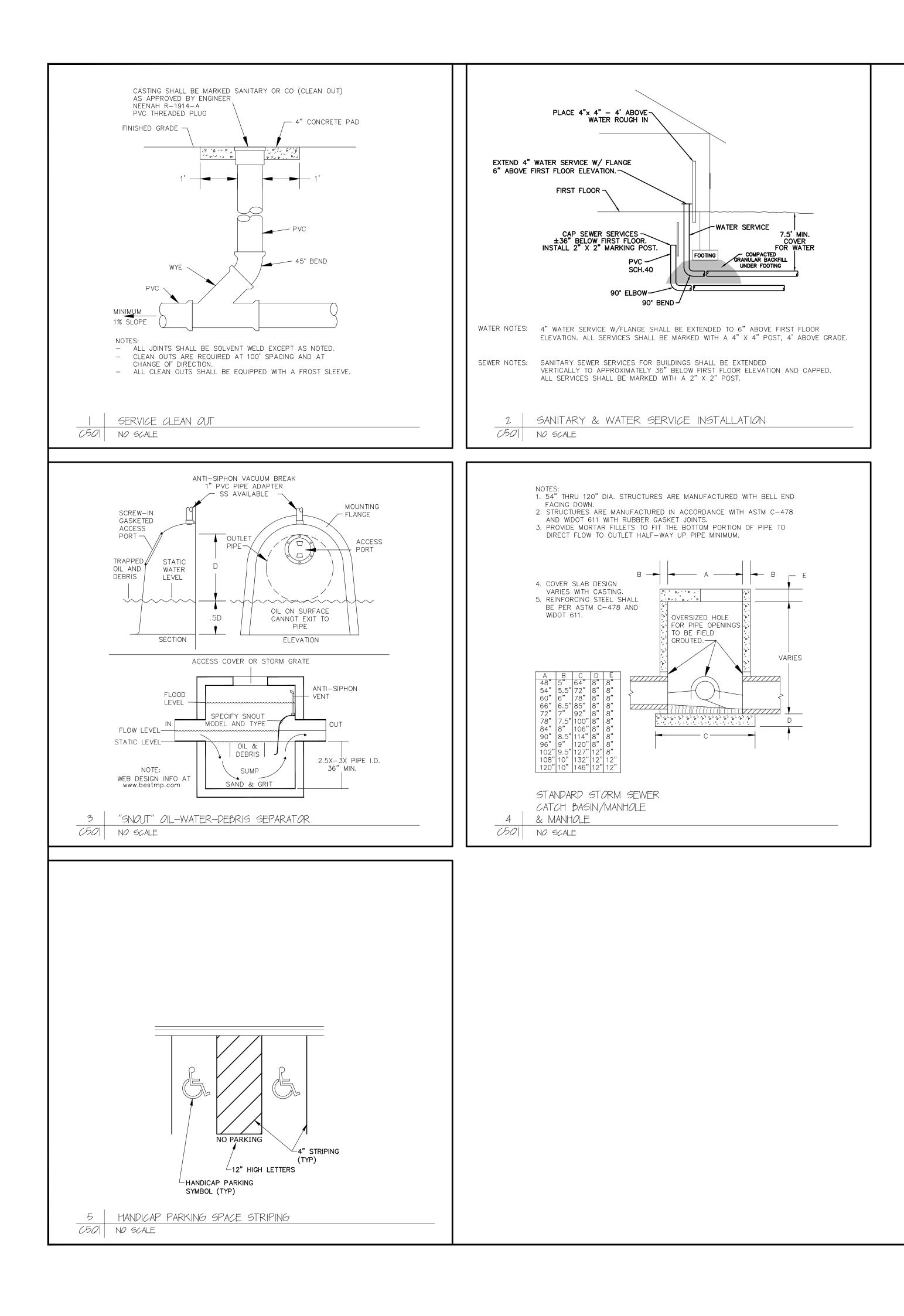
14. All saddle tee or wye fittings must provide an integrally molded pipe stop in the branch for positive protection against service pipe insertion beyond the inside of the sewer main pipe wall.

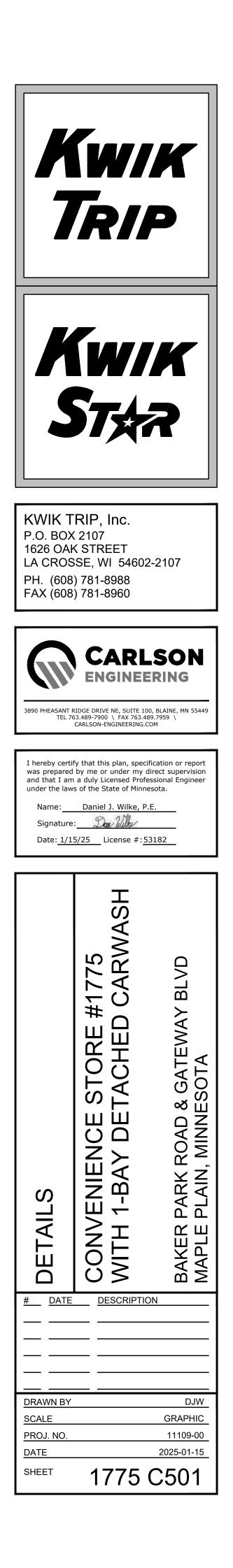
15. Terminate all new sewer stubs with a water-tight gasketed cap properly braced in order to withstand the infiltration-exfiltration test. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at the end of all stubs.

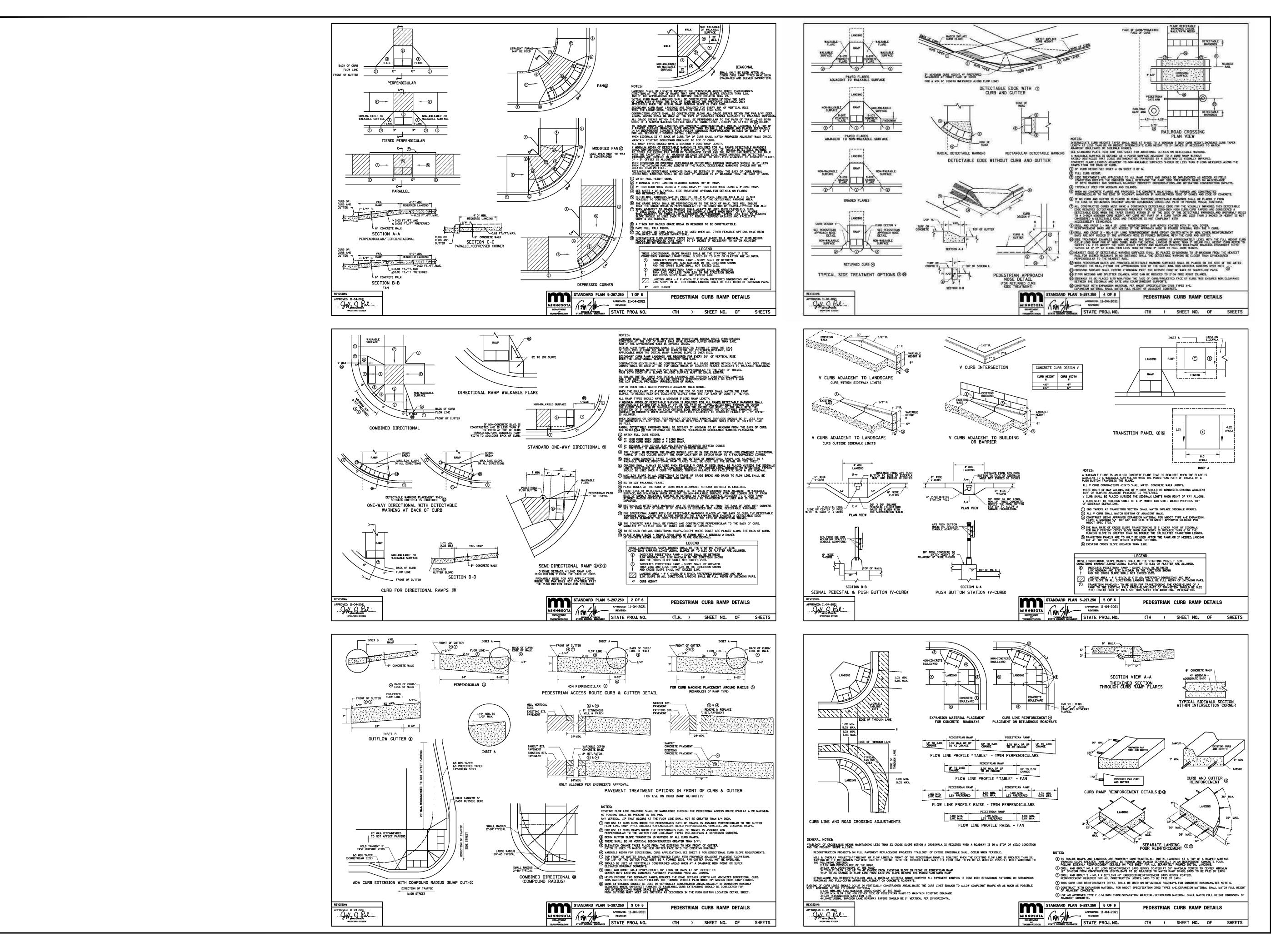
16. Televise all existing lines prior to connection.

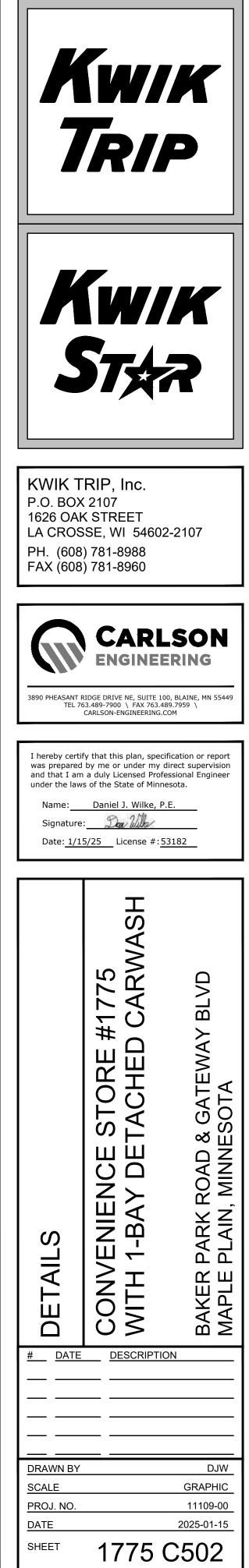


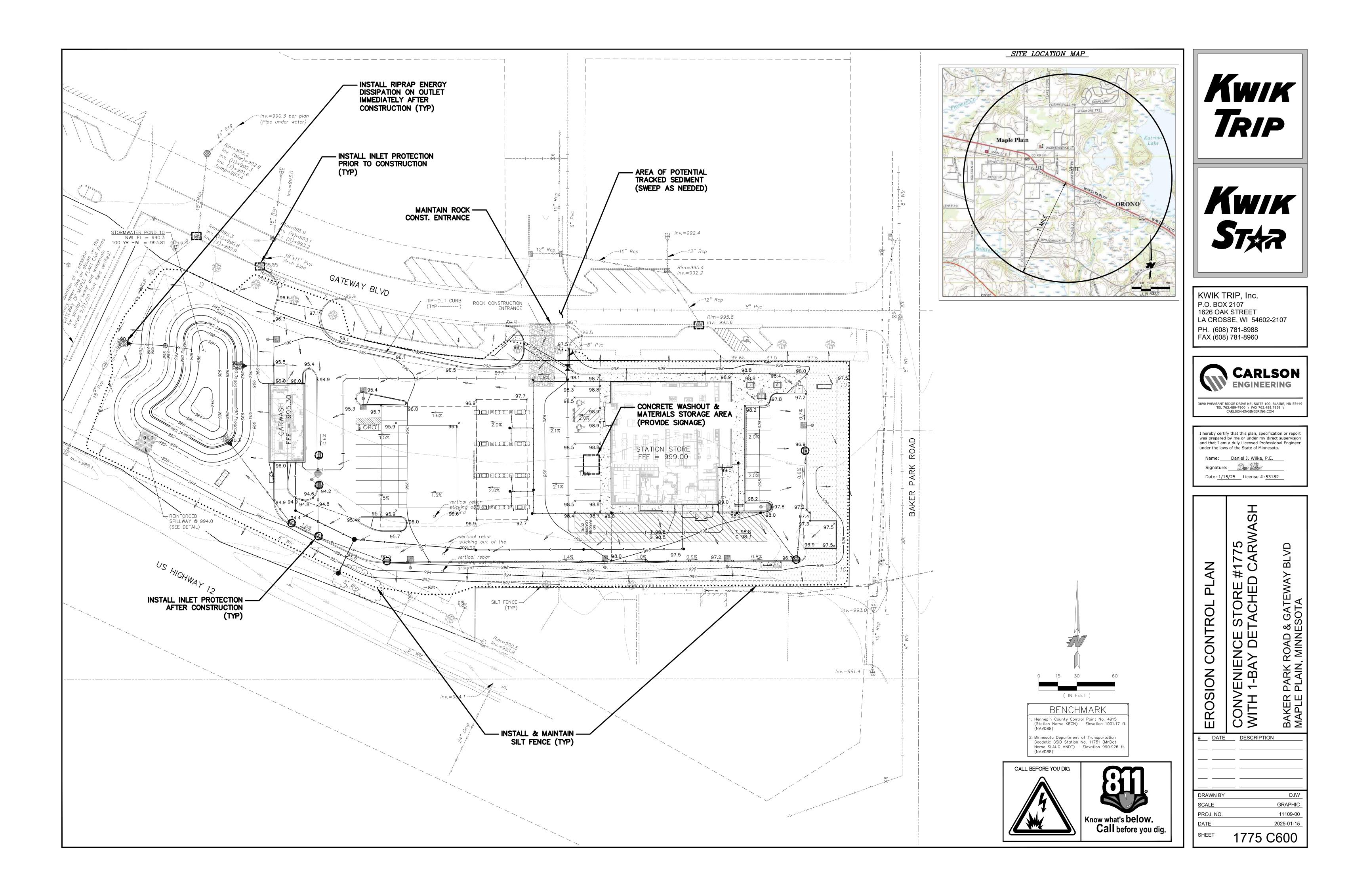












#### GENERAL INFORMATION MINNESOTA'S CONSTRUCTION STORMWATER PERMIT IS AN EXTENSION OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM STORMWATER PROGRAM, WHICH IS PART OF THE FEDERAL CLEAN WATER ACT. REGULATED PARTIES MUST DEVELOP A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP PROVIDES INFORMATION ON THE EXISTING AND PROPOSED SITE CONDITIONS, CONTROL MEASURES FOR STORMWATER POLLUTION PREVENTION BEFORE, DURING AND AFTER CONSTRUCTION, INSPECTION, MAINTENANCE AND INFORMATION RELATED TO THE PERMANENT STORMWATER MANAGEMENT SYSTEM. THE SWPPP SHALL BE KEPT ON SITE AT ALL TIMES DURING ACTIVE CONSTRUCTION.

#### PROJECT INFORMATION

PROJECT NAME: CONVENIENCE STORE 1775 WITH DETACHED CARWASH PROJECT LOCATION: MAPLE PLAIN, HENNEPIN COUNTY, MINNESOTA PROJECT OWNER: KWIK TRIP, INC.

RESPONSIBLE PARTIES THE OWNER MUST IDENTIFY A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION

PREVENTION AND SEDIMENT CONTROL BMP'S WHO WILL OVERSEE THE IMPLEMENTATION OF THE SWPPP, AND THE INSTALLATION, INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S.

#### SITE MANAGER: EMILY HELWIG - KWIK TRIP INC.

TRAINING DOCUMENTATION: CONSTRUCTION SITE MANAGEMENT (5/31/25 EXPIRATION) - UNIVERSITY OF MN

#### EXISTING SITE CONDITIONS

THE SITE IS LOCATED IN THE SOUTHWEST QUADRANT OF THE INTERSECTION OF BAKER PARK ROAD AND GATEWAY BOULEVARD IN MAPLE PLAIN, HENNEPIN COUNTY, MINNESOTA. THE SITE IS BOUNDED ON THE NORTH BY GATEWAY BOULEVARD, ON THE WEST BY UNDEVELOPED COMMERCIAL PROPERTY, ON THE SOUTH BY COMMERCIAL PROPERTY AND US HIGHWAY 12, AND ON THE EAST BY BAKER PARK ROAD. THE SITE IS CURRENTLY UNDEVELOPED GRASSLAND.

THE PROPOSED SITE BOUNDARY CONSISTS OF 2.637 ACRES. A DRAINAGE BOUNDARY OF 2.729 ACRES WILL BE CONSIDERED FOR THIS ANALYSIS, WHICH INCLUDES RUN-ON AREAS OUTSIDE THE SITE BOUNDARY. THE EXISTING SITE CURRENTLY CONTAINS 0.0 ACRES OF IMPERVIOUS SURFACES. THERE ARE 0.009 ACRES OF IMPERVIOUS SURFACE WITHIN THE DRAINAGE BOUNDARY, BUT OUTSIDE OF THE SITE BOUNDARY.

THE SITE HAS A MILDLY ROLLING TOPOGRAPHY GENERALLY SLOPING TO THE SOUTH, WITH SLOPES GENERALLY RANGING FROM 0.5% TO 33% OVER THE DEVELOPED AREA. ELEVATIONS AT THE SITE RANGE FROM 998 ALONG CENTER OF THE NORTH PROPERTY LINE, DOWN TO ABOUT 990 IN THE DRAINAGE DITCHES LOCATED IN THE SOUTHERN AND WESTERN SIDES OF THE SITE. STORMWATER FROM THE SITE GENERALLY DRAINS OVERLAND TO THE CULVERTS LOCATED ON THE SOUTHERN AND WESTERN EDGES OF THE SITE. STORMWATER NORTH OF THE NORTH PROPERTY LINE FLOWS TO THE TRUNK SEWER SYSTEM ON GATEWAY BOULEVARD. STORMWATER FLOWING

## WEST AND SOUTH FLOWS TO A LARGE WETLAND COMPLEX SOUTH OF US HIGHWAY 12. THE REMAINING STORMWATER FLOWS TO REGIONAL PONDING FOR GATEWAY BOULEVARD.

#### PROPOSED SITE CONDITIONS

KWIK TRIP, INC. PLANS ON DEVELOPING THE SITE INTO A CONVENIENCE STORE WITH A FUELING CANOPY, A DETACHED SINGLE BAY CARWASH, AND ASSOCIATED PARKING AND DRIVE LANES. DURING CONSTRUCTION, APPROXIMATELY 2.5 ACRES WILL BE DISTURBED. AFTER THE SITE IS CONSTRUCTED, THE DRAINAGE BOUNDARY WILL CONTAIN APPROXIMATELY 1.519 ACRES OF IMPERVIOUS SURFACE. THERE WILL BE APPROXIMATELY 1.510 ACRES OF NEWLY CREATED OR RECONSTRUCTED IMPERVIOUS SURFACE, WHICH INCLUDES DRIVEWAY ENTRANCES.

STORMWATER FROM THE MAJORITY OF THE IMPERVIOUS AREAS ONSITE SITE, INCLUDING ALL FUELING AREAS, WILL BE COLLECTED IN STORM SEWER AND ROUTED TO THE PROPOSED STORMWATER POND. ALL OTHER DRAINAGE AREAS WILL MOSTLY MAINTAIN EXISTING DRAINAGE ROUTES.

#### SOIL INFORMATION

IN SEPTEMBER OF 2024, BRAUN INTERTEC DRILLED NINE SOIL BORINGS TO APPROXIMATE NEAR SURFACE SOILS. THE BORINGS INDICATE THAT NEAR SURFACE SOILS CONSIST PRIMARILY OF SANDY LEAN CLAY AND CLAYEY SAND. THESE SOILS GENERALLY FALL WITHIN THE HYDROLOGIC SOIL GROUP (HSG) "D".

GROUNDWATER WAS FOUND TO BE PRESENT IN BORING ST-6 AT ELEVATION 987.5'. GROUNDWATER WAS NOT FOUND IN ANY OTHER BORINGS.

#### WETLAND CONSIDERATIONS

THERE ARE NO KNOWN WETLANDS ONSITE. STORMWATER RECEIVING WATERS

STORMWATER FROM THE MAJORITY OF THE DEVELOPED PORTION OF THE SITE, INCLUDING ALL FUELING AREAS, WILL BE COLLECTED IN STORM SEWER AND ROUTED TO THE EXISTING STORMWATER POND FOREBAY. ALL REMAINING AREAS NOT COLLECTED BY STORM SEWER WILL FLOW TO THE EXISTING POND VIA OVERLAND FLOW. THE POND OUTLETS TO A REGIONAL POND LOCATED EAST OF THE SITE ACROSS AKRON AVENUE.

#### SPECIAL/IMPAIRED WATER CONSIDERATIONS

PAINTER CREEK IS LOCATED APPROXIMATELY 0.7 MILES SOUTH OF THE SITE AND IS AN IMPAIRED WATER. LAKE INDEPENDENCE IS LOCATED APPROXIMATELY 1 MILE NORTH OF THE SITE AND IS ALSO AN IMPAIRED WATER. BMPS INCLUDE: IMMEDIATE STABILIZATION OF EXPOSED SOIL AREAS, AND COMPLETE STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES, AND TEMPORARY SEDIMENTATION BASINS FOR COMMON DRAINAGE AREAS OF FIVE (5) ACRES OR MORE.

#### STORMWATER MANAGEMENT PLAN

PER MCWMC, 1 INCH OF RUNOFF FROM THE NEW IMPERVIOUS SURFACE AREA OF THE SITE SHALL BE ABSTRACTED ONSITE. THE PROPOSED NEW IMPERVIOUS SURFACE AREA IS 1.510 ACRES. AS SUCH, THE REQUIRED ABSTRACTION VOLUME IS 0.126 ACRE FEET.

DUE TO CLAYEY SOIL CONDITIONS ONSITE AND THE PRESENCE OF FUELING AREAS, INFILTRATION IS NOT FEASIBLE FOR THIS SITE. ALSO DUE TO THE FLAT NATURE OF THE SITE, THERE IS NOT ENOUGH DROP IN ELEVATION TO OUTLET A FILTRATION SYSTEM. THEREFORE, THE ONLY WAY TO MEET THE VOLUME ABSTRACTION ON THIS SITE IS THROUGH SOIL AMENDMENTS. ALL ONSITE PERVIOUS AREAS INDICATED ON THE GRADE PLAN WILL RECEIVE THE FOLLOWING SOIL AMENDMENTS:

1. THE TOP 8-INCHES OF SOIL WILL CONSIST OF COMPOST MIXED SOIL THAT WILL INCLUDE NATIVE SOILS MIXED WITH 2-INCHES OF APPROVED COMPOST. 2. THE UNDERLYING 4-INCHES OF SOIL WILL BE RIPPED PRIOR TO THE PLACEMENT OF THE 8-INCHES OF COMPOST/SOIL MIX.

APPROXIMATELY 0.276 ACRES OF PERVIOUS AREA WILL RECEIVE SOIL AMENDMENTS. WHICH, AT 0.5-INCHES OF CREDIT OVER 0.276 ACRES, COUNTS AS 0.138 ACRES OF ABSTRACTION WHICH MEETS THE REQUIREMENTS.

PRETREATMENT FOR THE STORMWATER POND WILL BE PROVIDED BY A SUMP MANHOLES EQUIPPED WITH A SNOUT OIL/WATER/DEBRIS SEPARATOR.

THE MPCA CONSTRUCTION STORMWATER PERMIT REQUIRES SITES TO PROVIDE A WATER QUALITY VOLUME OF 1-INCH OF RUNOFF FROM NEWLY CREATED IMPERVIOUS SURFACES. THE PROPOSED SITE WILL REDUCE IMPERVIOUS SURFACE BY APPROXIMATELY 1.510 ACRES. AS SUCH, THE REQUIRED WATER QUALITY VOLUME IS 0.126 ACRE FEET.

THE WET DETENTION BASIN HAS BEEN DESIGNED TO MPCA WET SEDIMENTATION BASIN STANDARDS. A 10-FOOT BENCH AT THE NORMAL WATER LEVEL WAS NOT PROPOSED, DUE TO THE BENCH REDUCING THE PERMANENT POOL VOLUME BELOW NURP REQUIREMENTS.

#### PRIOR TO START OF CONSTRUCTION THE FOLLOWING STORMWATER POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED PRIOR TO

CONSTRUCTION. REFER TO GRADING AND EROSION CONTROL PLANS FOR LOCATIONS. 1. SILT FENCE

SILT FENCE SHALL BE INSTALLED AT THE LIMIT OF GRADING ON ANY FILL SLOPE. ADDITIONAL SILT FENCE MAY BE REQUIRED IN CUT SLOPE AREAS. SILT FENCE SHALL ALSO BE INSTALLED AROUND ANY INFILTRATION / FILTRATION PRACTICE.

- 2. ROCK CONSTRUCTION ENTRANCE ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE FIELD ENTRANCES TO THE SITE.
- 3. CATCH BASINS ALL CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION DEVICES APPROVED BY THE LOCAL GOVERNING UNIT. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO, WIMCO PROTECTION DEVICES, INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.

DURING CONSTRUCTION THE FOLLOWING STORMWATER POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED DURING CONSTRUCTION. REFER TO GRADING AND EROSION CONTROL PLANS FOR LOCATIONS.

- 1. PHASED GRADING TO THE EXTENT POSSIBLE, GRADING SHALL BE PHASED TO MINIMIZE THE AMOUNT OF DISTURBED AREAS DURING SITE CONSTRUCTION.
- 2. TRACKED SEDIMENT ANY SEDIMENT TRACKED FROM THE SITE ONTO THE STREET SHALL BE REMOVED IMMEDIATELY UPON DETECTION. THE ROCK CONSTRUCTION ENTRANCE SHALL BE INSPECTED AND REPAIRED IF INUNDATED WITH SEDIMENT.

- 3. STOCKPILES DITCHES.
- 4. TOPSOIL DISTURBED AREAS, EXCLUDING PROPOSED STREETS AND PARKING AREAS.
- 5. RESTORATION CONTROL BLANKET AND/OR SOD WITHIN 7 DAYS.
- 6. SLOPES
- 7. DRAINAGE DITCHES BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.
- 8. PIPE OUTLETS OF CONNECTION TO A SURFACE WATER.
- 9. CATCH BASINS INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.
- 10. DUST APPLICATION.
- 11. DEWATERING CONTROL AND ENERGY DISSIPATION.
- 12. CONSTRUCTION MATERIALS AND DEBRIS IN DUMPSTERS AND REMOVED FROM THE SITE AS NECESSARY.
- 13. CHEMICALS MATERIAL SAFETY DATA SHEETS AVAILABLE.
- 14. SPILLS AND CONTAMINATION DUTY OFFICER AT 800-422-0798.
- 15. CONCRETE WASHOUT AREA INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY.

## POST CONSTRUCTION

- PERENNIAL VEGETATIVE COVER. AREAS NOT REQUIRING SOD OR EROSION CONTROL BLANKET SHALL BE SEEDED AND MULCHED.
- BE SUFFICIENTLY CLEANED OUT TO RETURN THE BASIN TO DESIGN CAPACITY. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN OR CONVEYANCES DISCHARGING OFF-SITE OR TO SURFACE WATERS.
- INCLUDES, BUT IS NOT LIMITED TO, SILT FENCE, TREE FENCE AND CATCH BASIN INLET PROTECTION DEVICES.

#### SWPPP DRAWING UPDATES STAGING AREA(S), FUELING AREA(S), ETC. WHEN THEIR RESPECTIVE LOCATIONS ARE KNOWN.

INSPECTIONS & RECORD KEEPING STORMWATER POLLUTION PREVENTION INSPECTIONS SHALL OCCUR ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. INSPECTIONS MAY BE CEASED DURING FROZEN GROUND CONDITIONS. WHERE WORK HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE REQUIRED INSPECTIONS AND MAINTENANCE MUST TAKE PLACE WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR PRIOR TO RESUMING CONSTRUCTION, WHICHEVER COMES FIRST. DURING THE COURSE OF CONSTRUCTION, IT MAY BE DETERMINED THAT ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES MAY BE NEEDED, OR CERTAIN MEASURES ARE NOT PRACTICAL TO INSTALL. IN THESE CASES, AN AMENDMENT TO THE SWPPP SHALL BE MADE, AND SUPPORTING REASONS SHALL BE DOCUMENTED IN THE SWPPP.

- 1. THE EXCAVATOR IS RESPONSIBLE FOR ALL EROSION CONTROL INSPECTIONS.
- 2. RECORD NAME OF INSPECTOR AND DATE AND TIME OF INSPECTION.
- 3. RECORD RAINFALL AMOUNT SINCE MOST RECENT INPSECTION.
- TRACKING.
- 5. INSPECT SITE FOR EXCESSIVE EROSION AND SEDIMENT ACCUMULATION.
- A. INSPECT SILT FENCE AND OTHER TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES FOR EROSION,
- SEDIMENTATION AND MALFUNCTIONING. B. INSPECT FLARED END SECTIONS FOR EROSION AND SEDIMENTATION.
- C. INSPECT PONDS, INFILTRATION BASINS, TEMPORARY SEDIMENTATION BASINS AND ALL OTHER BMP'S FOR EROSION AND SEDIMENTATION.
- SEDIMENT BEING DEPOSITED BY EROSION.
- 7. INSPECT STABILIZED AREAS FOR EROSION.
- AND SEDIMENTATION CONTROL MEASURES ARE SUFFICIENT. 9. RECORD RECOMMENDED AMENDMENTS TO THE SWPPP.
- INSPECTION.
- MONTH.

#### MAINTENANCE

THE OWNER/CONTRACTOR IS RESPONSIBLE FOR THE OPERATION, INSPECTION AND MAINTENANCE OF ALL STORMWATER POLLUTION PREVENTION MEASURES FOR THE DURATION OF THE PROJECT. THE FOLLOWING GUIDELINES SHALL BE USED TO DETERMINE NECESSARY REPAIRS, MAINTENANCE AND/OR REPLACEMENT OF THE

STOCKPILES SHALL BE PLACED IN AN AREA THAT WILL MINIMIZE THE NEED FOR RELOCATION. IF A STOCKPILE WILL REMAIN IN PLACE FOR AN EXTENDED PERIOD OF TIME, STABILIZATION MEASURES SHALL BE IMPLEMENTED, INCLUDING BUT NOT LIMITED TO, SEEDING AND SILT FENCING. TEMPORARY STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, CONDUITS OR

UPON GRADING COMPLETION, A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED OVER ALL

ALL DISTURBED AREAS NOT ACTIVELY WORKED SHALL BE RESTORED WITH SEED AND MULCH. EROSION

IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES, THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER.

THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT DRAINS WATER FROM THE SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER. STABILIZATION MUST

PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS

ALL CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION DEVICES APPROVED BY THE LOCAL GOVERNING UNIT. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO, WIMCO PROTECTION DEVICES,

CONSTRUCTION DUST SHALL BE CONTAINED TO THE EXTENT POSSIBLE. IF THE SITE BECOMES EXCESSIVELY DUSTY, APPROPRIATE MEASURES SHALL BE TAKEN TO REDUCE DUST BEING TRANSPORTED FROM THE SITE. DUST CONTROL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, WATERING AND CALCIUM CHLORIDE

DEWATERING ACTIVITIES SHALL BE CONDUCTED WITH AND APPROVED BY THE LOCAL GOVERNING UNIT. IF THERE WILL BE ANY DEWATERING OR BASIN DRAINING THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE, THE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. APPROPRIATE BMPS SHALL BE USED FOR EROSION AND SEDIMENT

CONSTRUCTION MATERIALS SHALL BE STORED IN AN ORDERLY MANNER AND IN AN AREA THAT WILL MINIMIZE CONFLICTS WITH OTHER CONSTRUCTION ACTIVITIES. CONSTRUCTION DEBRIS SHALL BE CONTAINED

CHEMICALS SHALL BE STORED IN A SAFE AREA IN SEALED CONTAINERS WITH THE ORIGINAL LABELING AND

IF FUEL, OIL OR A HAZARDOUS CHEMICAL IS SPILLED OR DETECTED DURING CONSTRUCTION ACTIVITIES, ALL APPROPRIATE AGENCIES SHALL BE IMMEDIATELY NOTIFIED, INCLUDING, BUT NOT LIMITED TO, THE MINNESOTA

PERMITTEES MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (E.G., CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. PERMITTEES MUST PREVENT LIQUID AND SOLID WASHOUT WASTES FROM CONTACTING THE GROUND AND MUST DESIGN THE CONTAINMENT SO IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. PERMITTEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITTEES MUST

WHEN THE SITE HAS BEEN COMPLETELY CONSTRUCTED, THE SITE MUST UNDERGO FINAL STABILIZATION. FINAL STABILIZATION OCCURS WHEN ALL OF THE GRADING. INFRASTRUCTURE AND BUILDING ACTIVITIES HAVE BEEN COMPLETED. TO ACHIEVE FINAL STABILIZATION, THE FOLLOWING MEASURES SHALL BE COMPLETED 1. ALL DISTURBED AREAS WITHOUT PERMANENT IMPERVIOUS SURFACES SHALL BE STABILIZED BY A UNIFORM

2. SEDIMENT FROM CONVEYANCES AND TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS SHALL BE CLEANED OUT. SEDIMENTATION BASINS SHALL

3. WHEN STABILIZED VEGETATION HAS BEEN ESTABLISHED OVER 70 PERCENT OF THE PERVIOUS SURFACE AREA, ALL SYNTHETIC TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED. THIS

UPDATE SWPPP DRAWING FOR LOCATIONS OF CONSTRUCTION DUMPSTER, PORTABLE TOILET, EQUIPMENT

4. INSPECT ROCK CONSTRUCTION ENTRANCES FOR SEDIMENTATION. INSPECT ADJACENT STREETS FOR SEDIMENT

D. INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS FOR EVIDENCE OF

6. INSPECT SITE AND ADJACENT PROPERTIES FOR CONSTRUCTION DEBRIS, TRASH AND SPILLS.

8. RECORD RECOMMENDED REPAIRS, MAINTENANCE AND/OR REPLACEMENTS REQUIRED TO ENSURE EROSION

10. RECORD REPAIRS, MAINTENANCE AND/OR REPLACEMENTS THAT WERE COMPLETED SINCE THE LAST

NOTE: FOR AREAS THAT HAVE UNDERGONE FINAL STABILIZATION, INSPECTIONS CAN BE REDUCED TO ONCE PER

EROSION AND SEDIMENTATION CONTROL MEASURES.

1. ROCK CONSTRUCTION ENTRANCES SHALL BE REPAIRED OR REPLACED IF THE ROCK BECOMES INUNDATED WITH SEDIMENT AND/OR EXCESSIVE SEDIMENT IS BEING TRACKED FROM THE SITE. SEDIMENT TRACKED ONTO ADJACENT STREETS SHALL BE REMOVED. MEASURES SHALL BE TAKEN IMMEDIATELY UPON DISCOVERY.

2. SILT FENCE SHALL BE REPAIRED OR REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT FENCE, THE SILT FENCE IS DAMAGED AND/OR THE SILT FENCE BECOMES NONFUNCTIONAL. MEASURES SHALL BE TAKEN WITHIN 24 HOURS OF DISCOVERY.

3. CATCH BASIN INLET PROTECTION DEVICES SHALL BE CLEANED WHEN SEDIMENT REACHES 1 THE HEIGHT OF THE SEDIMENT TRAP AND/OR REPAIRED OR REPLACED IF THE DEVICE BECOMES NONFUNCTIONAL. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

4. FLARED END SECTIONS SHALL BE CLEANED IF DEBRIS IS RESTRICTING FLOW OR IF SEDIMENT HAS ACCUMULATED AT THE OUTLET. IF A FLARED END SECTION BECOMES NONFUNCTIONAL OR DAMAGED, IT SHALL BE REPAIRED OR REPLACED. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

5. IF SEDIMENT IS OBSERVED OFF-SITE OR NEAR SURFACE WATERS, THE SOURCE OF SEDIMENT SHALL BE DETECTED AND ADDITIONAL MEASURES SHALL BE IMPLEMENTED. THE PERMITEE(S) SHALL COORDINATE SEDIMENT RETRIEVAL FROM SURFACE WATERS WITH ALL APPROPRIATE AGENCIES. MEASURES SHALL BE TAKEN WITHIN 7 DAYS OF DISCOVERY.

6. PONDS, INFILTRATION BASINS, TEMPORARY SEDIMENTATION BASINS AND ALL OTHER BMP'S SHALL BE CLEANED IF DEBRIS IS PRESENT AND/OR EXCESSIVE SEDIMENTATION HAS OCCURRED. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN SEDIMENT HAS FILLED THE BASIN TO 1/2 THE STORAGE VOLUME. NO SEDIMENT SHALL BE ALLOWED TO ACCUMULATE IN INFILTRATION BASINS. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

#### NOTICE OF TERMINATION

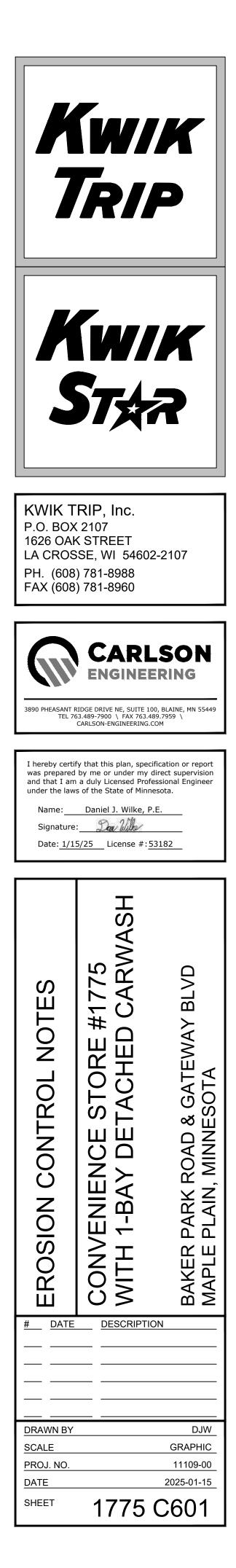
THE PERMITEE(S) MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA WITHIN 30 DAYS AFTER FINAL STABILIZATION IS COMPLETE, OR ANOTHER OWNER/OPERATOR (PERMITEE) HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION.

QUANTITIES

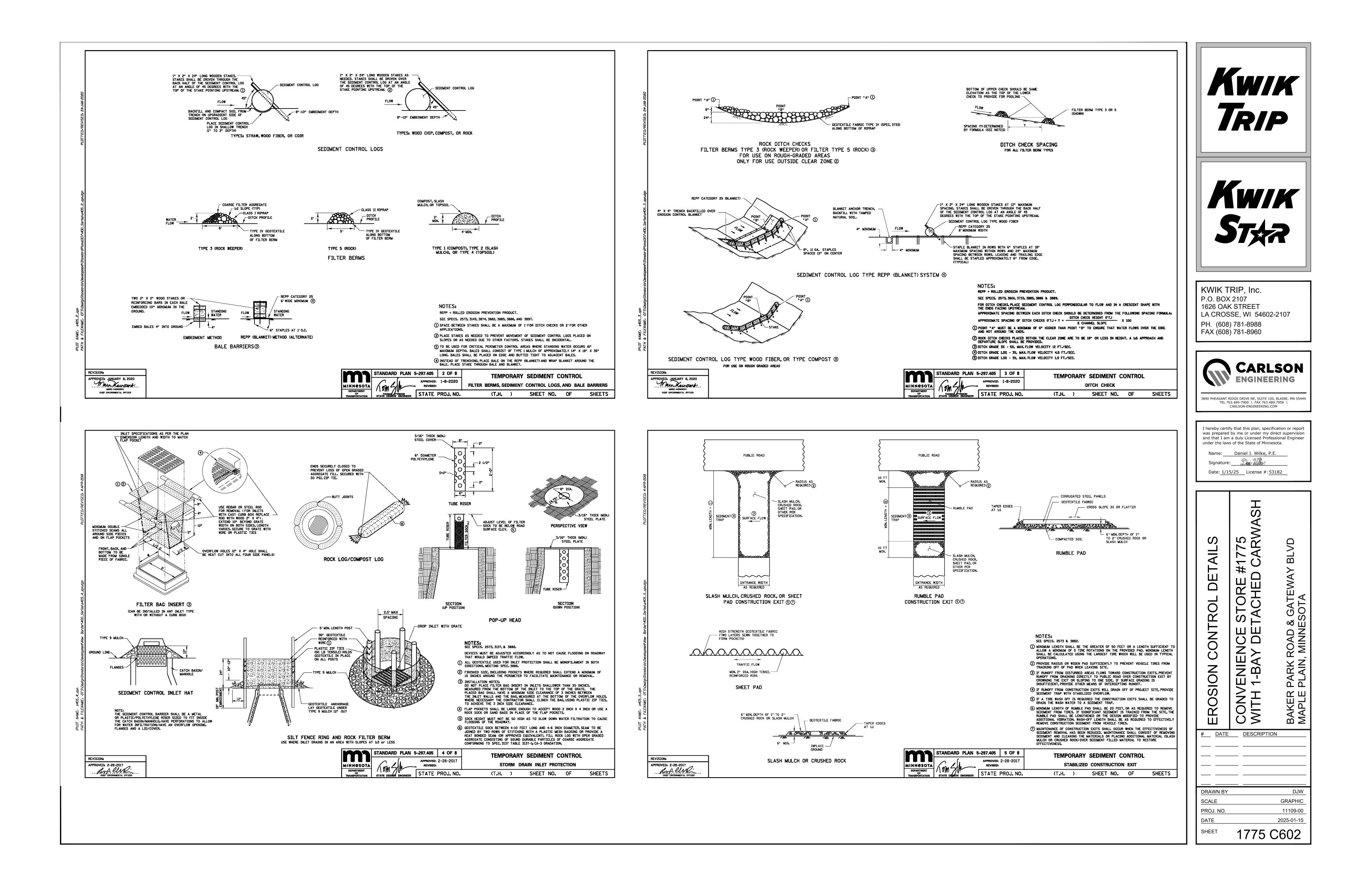
THE FOLLOWING TABLE PROVIDES ESTIMATED QUANTITIES FOR STORMWATER POLLUTION PREVENTION THROUGHOUT THE PROJECT.

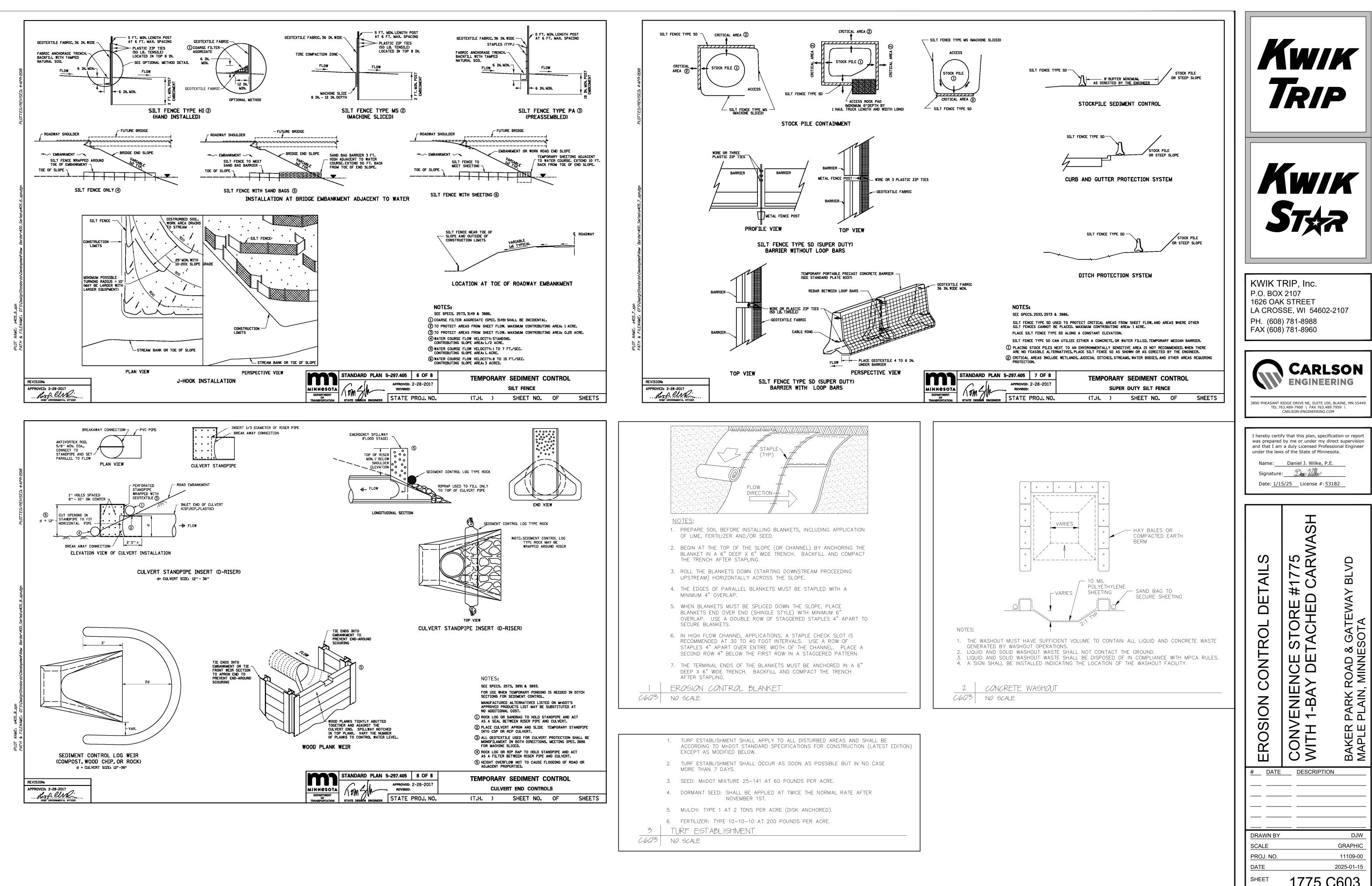
ITEM	UNIT	ESTIMATED QUANTITY
ROCK ENTRANCE	EA.	1
SILT FENCE	L.F.	825
INLET PROTECTION	EA.	11
TURF ESTABLISHMENT	AC.	1.0

SWPPP DESIGN CERTIFICATION	SWPPP
I, <u>Dan Wilke</u> , hereby certify that I have completed designer SWPP- Erosion and Stormwater Management Certification Program	l hereby c Stormwat Certificati
My certification expires May 2026	<u>signed</u> expiration

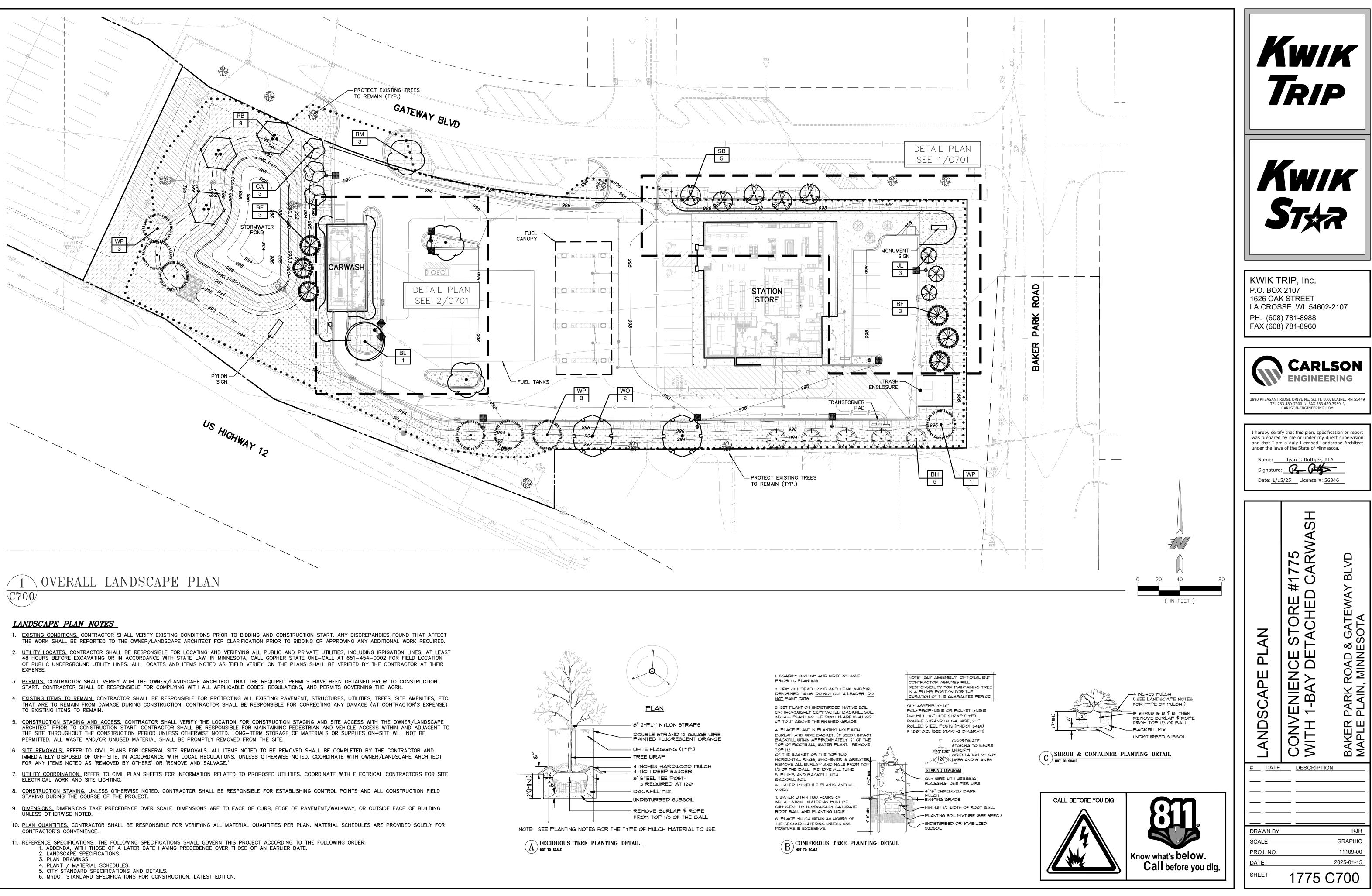


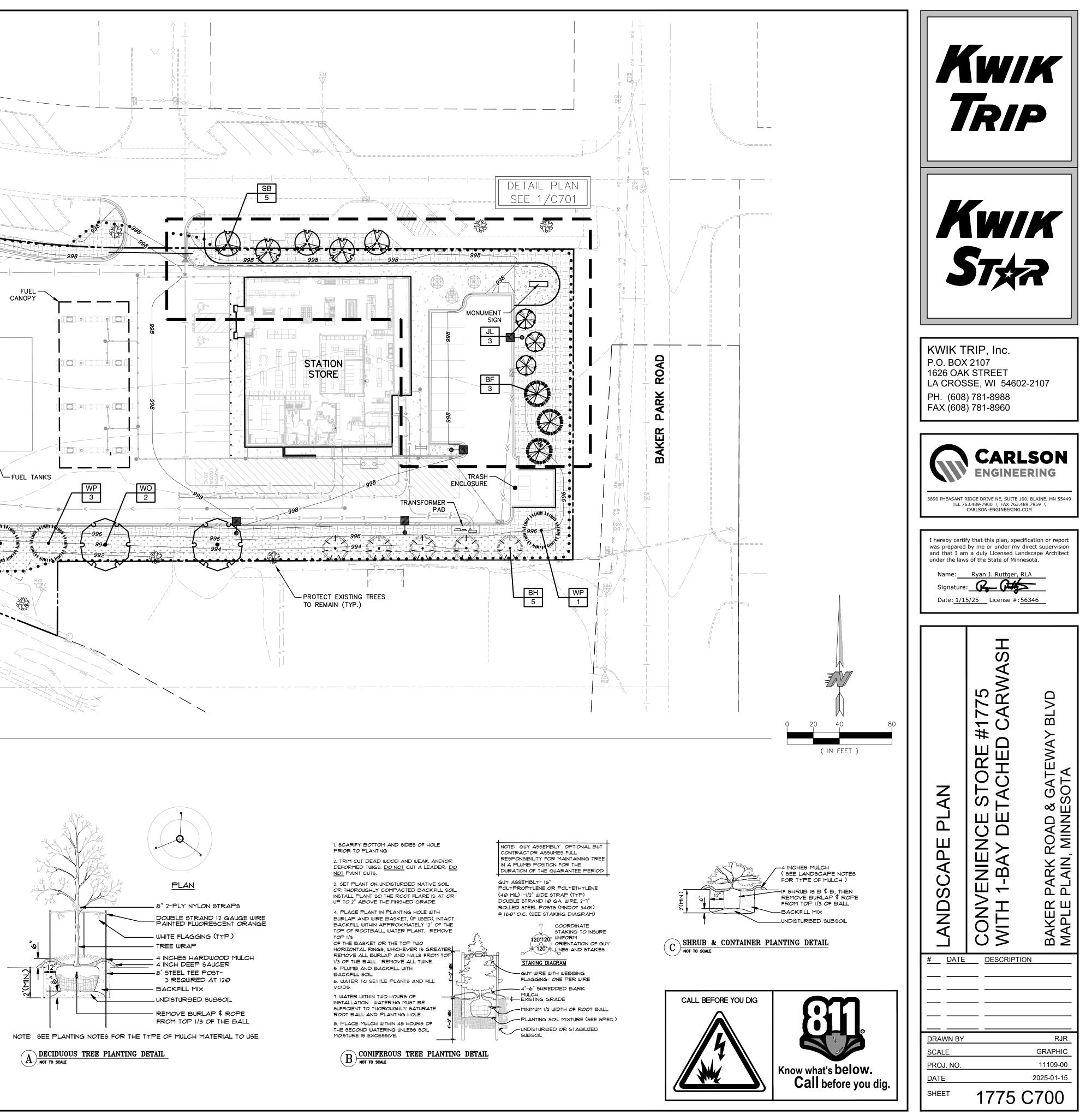
INSTALLER CERTIFICATION	SWPPP INSPECTOR CERTIFICATION
certify that I have completed Installer SWPP- Erosion and cer Management ion Program	l hereby certify that I have completed Inspector SWPP- Erosion ar Stormwater Management Certification Program
1	signed expiration

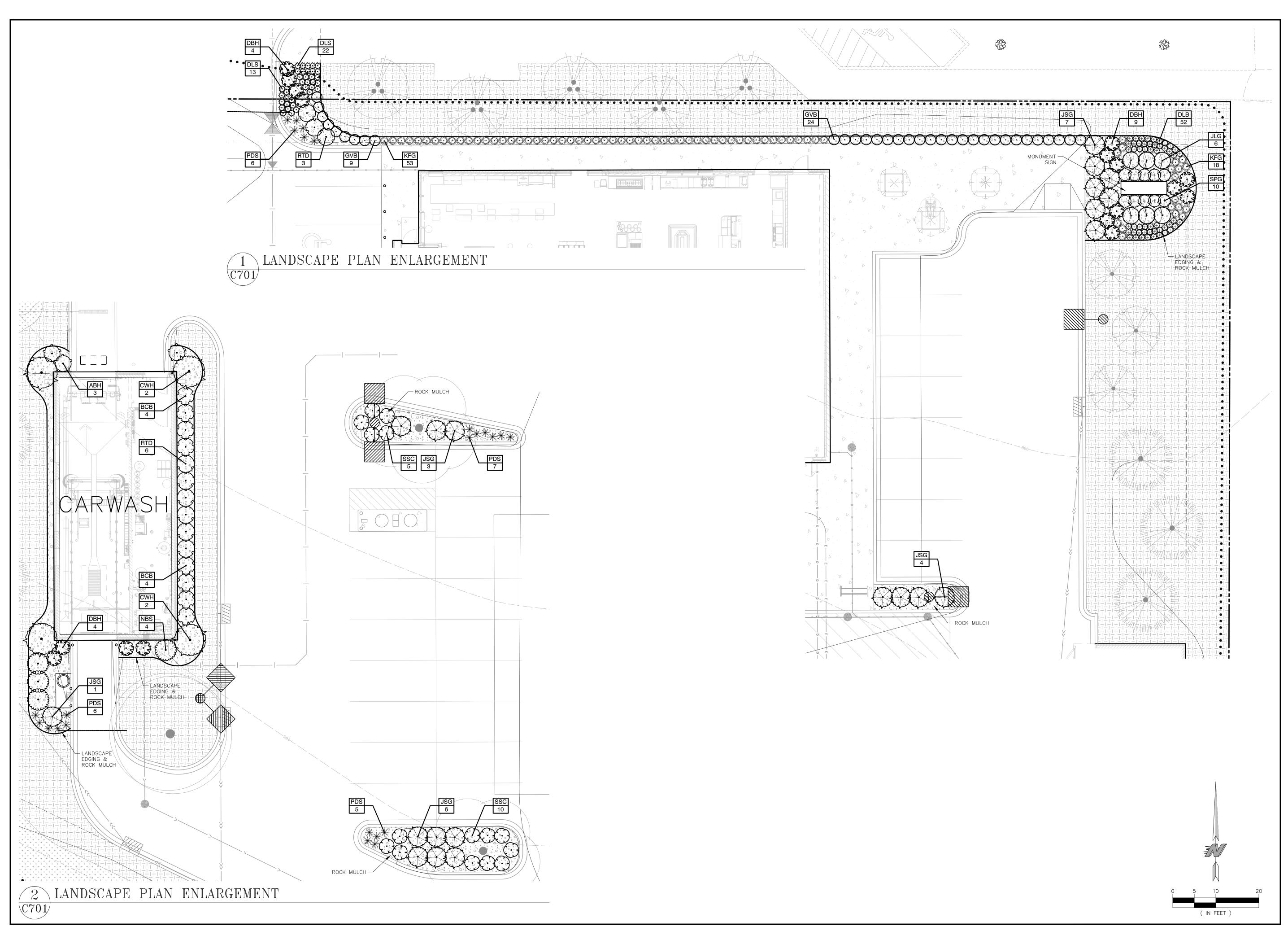


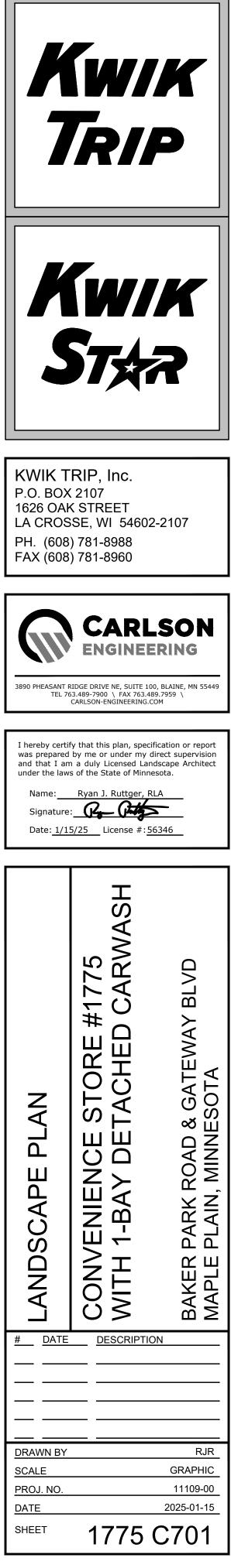


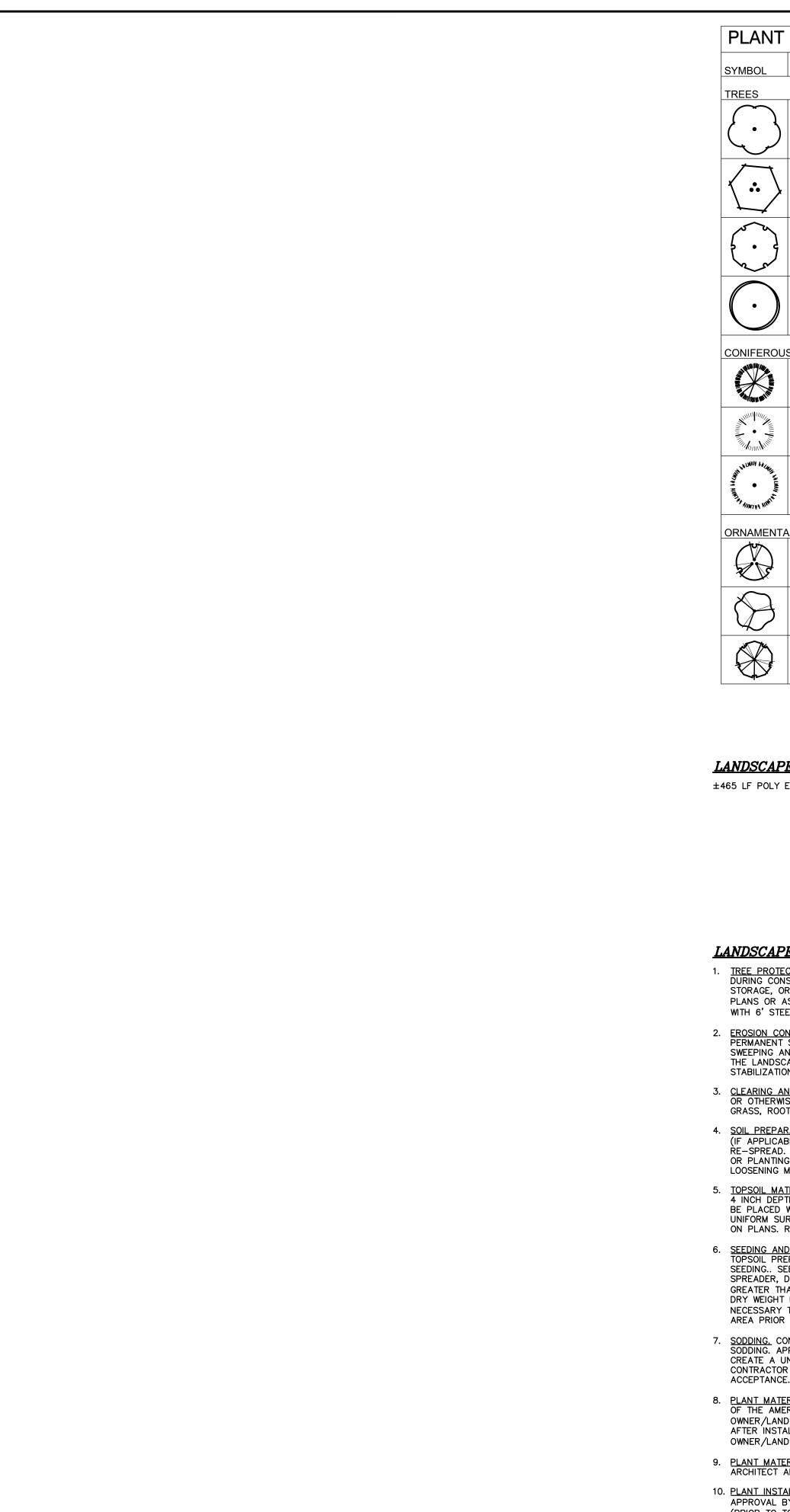
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ES							SHRUBS				T		
•	RM	3	Acer rubrum `Northwood`	Northwood Red Maple	2" Cal.	B&B	$\bigcirc$	BCB	8	Aronia melanocarpa `Autumn Magic`	Autumn Magic Black Chokeberry	#5 Cont.	
								SSC	15	Clethra alnifolia `Hummingbird`	Summersweet	#5 Cont.	
•	RB	3	Betula nigra Clump Form, 2" Cal Equivalent	River Birch Multi-Trunk	8` Ht.	B&B	$\bigcirc$	RTD	9	Cornus sericea `Alleman`s Compact`	Dwarf Red Twig Dogwood	#5 Cont.	
	wo	2	Quercus bicolor	Swamp White Oak	2" Cal.	B&B	Le se	DBH	17	Diervilla lonicera	Dwarf Bush Honeysuckle	#5 Cont.	
	vvO	2			2 Cai.	DQD	$\bigcirc$	СМН	4	Hamamelis virginiana	Common Witch Hazel	#5 Cont.	
$\widehat{\cdot}$	BL	1	Tilia americana `Boulevard`	Boulevard Linden	2" Cal.	B&B	$\bigcirc$	ABH	3	Hydrangea arborescens `Annabelle`	Annabelle Hydrangea	#5 Cont.	
							$-\bigcirc$	NBS	4	Physocarpus opulifolius `Seward` TM	Summer Wine Seward Ninebark	#5 Cont.	
	BF	6	Abies balsamea	Balsam Fir	6` Ht.	B&B		SPG	10	Spiraea x bumalda `Goldflame`	Goldflame Spirea	#5 Cont.	
								N SHRUB	S		1	1	1
	BH	5	Picea glauca densata	Black Hills Spruce	6` Ht.	B&B	$\odot$	GVB	33	Buxus x 'Green Velvet'	Green Velvet Boxwood	#5 Cont.	
WIV AN INIT					$\square$	JSG	21	Juniperus chinensis `Sea Green`	Sea Green Juniper	#5 Cont.			
· INNY	WP	1	Pinus strobus     White Pine     6` Ht.	6 Ht.	B&B	$\Box$	JLG	6	Juniperus horizontalis `Limeglow`	Limeglow Juniper	#5 Cont.		
							GRASSES						
the second	SB	5	Amelanchier x grandiflora `Autumn Brilliance` Clump Form, 1.5" Cal Equivalent	Autumn Brilliance Serviceberry	7` Ht.	B&B	300000 - CC	KFG	71	Calamagrostis x acutiflora `Karl Foerster`	Feather Reed Grass	#3 Cont.	
$\overline{}$	CA	3	Malus x `Prairifire`	Prairifire Crabapple	1.5" Cal.	B&B	*	PDS	24	Sporobolus heterolepis	Prairie Dropseed	#3 Cont.	
$\mathcal{N}$							PERENNIAL	S				1	1
	JL	3	Syringa reticulata `Ivory Silk` White Flowers	Ivory Silk Japanese Tree Lilac	1.5" Cal.	B&B		DLB	52	Hemerocallis x `Baja` Red Flowers	Baja Daylily	#1 Cont.	
								DLS	35	Hemerocallis x `Stella De Oro` Yellow / Gold Flowers	Stella De Oro Daylily	#1 Cont.	
							GROUND CO	OVERS					
							ROCK	2,467 sf	Rock Mulch Non-Woven Geotextile Incidental	1.5" Trap Rock Mulch	4" Depth		
DSCAPE QUANTITIES						SOD	13,977 sf	Turf Sod Bluegrass	Kentucky Bluegrass	sod			
						$\begin{array}{cccccccccccccccccccccccccccccccccccc$	* + + +	10,457 sf	Type I - Turf Seed Mix Refer to notes for acceptable seeding methods Seeding Rate 180 lb/ac	MnDOT Seed Mix 25-151	seed		
							ти	7,856 sf	Type II - Stormwater Seed Mix Refer to notes for acceptable seeding methods Seeding Rate 52.0 lb/ac	MnDOT Seed Mix 33-261	seed		
								тш	9,808 sf	Type III - Native Seed Mix Refer to notes for acceptable seeding methods. Seeding Rate 50.0 lb/ac	MnDOT Seed Mix 35-241	seed	

# methods. Seeding Rate 50.0 lb/ac

# LANDSCAPE SPECIFICATIONS

TREE PROTECTION. ALL TREES NOT SPECIFICALLY NOTED OR MARKED ON SITE FOR REMOVAL SHALL REMAIN PROTECTED AND UNDISTURBED DURING CONSTRUCTION. TREE PROTECTION SHALL EXTEND TO THE DRIP LINE, WITHIN WHICH NO CONSTRUCTION ACTIVITY, MATERIAL STORAGE, OR VEHICLE PARKING SHALL BE PERMITTED. TREE PROTECTION FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION START PER PLANS OR AS DIRECTED BY OWNER/LANDSCAPE ARCHITECT AND SHALL CONSIST OF 4' TALL HEAVY DUTY ORANGE CONSTRUCTION FENCING WITH 6' STEEL FENCE POSTS SPACED 6' O.C. MAX.

2. EROSION CONTROL. REFER TO CIVIL PLAN SHEETS FOR STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AND TEMPORARY AND PERMANENT STORMWATER BMPS, INCLUDING SILT FENCE, BIO-ROLLS, INLET PROTECTION, EROSION CONTROL BLANKETING, DUST CONTROL, SWEEPING AND ROCK CONSTRUCTION ENTRANCE. ALL DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION IN ACCORDANCE WITH THE LANDSCAPE PLAN WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY IN THE DISTURBED AREA HAS CEASED. IN THE EVENT PERMANENT STABILIZATION CANNOT BE IMPLEMENTED WITHIN 7 DAYS, TEMPORARY STABILIZATION BMPS MUST BE IMPLEMENTED WITHIN 7 DAYS USING.

3. CLEARING AND GRUBBING. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING ALL AREAS INDICATED AS BEING DISTURBED OR OTHERWISE SHOWN ON PLANS. CLEARING AND GRUBBING SHALL INCLUDE REMOVAL AND DISPOSAL OF ALL TREES, STUMPS, BRUSH, GRASS, ROOTS AND OTHER ORGANIC MATERIAL AT AN APPROVED OFF-SITE DISPOSAL LOCATION.

4. SOIL PREPARATION. REFER TO GEOTECHNICAL REPORT FOR ANY REQUIRED SOIL CORRECTIONS, AMENDMENTS OR ADDITIONAL INFORMATION (IF APPLICABLE). EXISTING TOPSOIL SHALL BE STRIPPED FROM ALL DISTURBED AREAS AND STOCKPILED IN AN APPROVED LOCATION FOR E-SPREAD. ALL AREAS WHERE SOIL HAS BEEN COMPACTED BY CONSTRUCTION ACTIVITY AND THAT ARE INDICATED TO BE SODDED, SEEDED OR PLANTING BED SHALL BE DE-COMPACTED TO A MINIMUM DEPTH OF 12 INCHES BY SOIL RIPPING, TILLING OR OTHER APPROVED SOIL LOOSENING METHOD.

5. <u>TOPSOIL MATERIAL.</u> ALL EXISTING, AMENDED OR IMPORTED TOPSOIL SHALL MEET THE REQUIREMENTS OF MNDOT TOPSOIL TYPE A. A MINIMUM 4 INCH DEPTH OF TOPSOIL SHALL BE PLACED ON ALL AREAS TO BE SODDED OR SEEDED. A MINIMUM 12 INCH DEPTH OF TOPSOIL SHALL BE PLACED WITHIN ALL PLANTING BED AREAS. ALL TOPSOIL SHALL BE FINE GRADED, RAKED AND DRAGGED TO PROVIDE A SMOOTH, UNIFORM SURFACE. TOPSOIL GRADES SHALL BE WITHIN .1 FEET OF INDICATED FINISHED GRADE AND SHALL BE TRUE TO GRADIENTS SHOWN ON PLANS. REFER TO CIVIL PLAN SHEETS FOR FILTRATION BASIN SOIL REQUIREMENTS.

6. <u>SEEDING AND TURF ESTABLISHMENT.</u> CONTRACTOR SHALL OBTAIN OWNER/LANDSCAPE ARCHITECT'S APPROVAL OF FINAL GRADES AND TOPSOIL PREP PRIOR TO SEEDING. APPLY 12-12-12 GRANULAR STARTER FERTILIZER AT A RATE OF 250 LBS PER ACRE PRIOR TO SEEDING .. SEEDS SHALL BE SOWED IN 2 PERPENDICULAR PASSES, EACH PASS AT ONE-HALF THE INDICATED RATE, VIA BROADCAST SPREADER, DROP SEEDER OR DRILL SEEDER. FOLLOWING SEED APPLICATION, INSTALL TYPE 3N EROSION CONTROL BLANKET ON ALL SLOPES GREATER THAN 4:1. IN ALL OTHER AREAS, APPLY HYDROMULCH COVER (MUST BE A SEPARATE OPERATION FROM SEEDING) AT A TARGETED DRY WEIGHT RATE OF 3500 LBS PER ACRE. SOIL SHALL BE KEPT MOIST DURING ESTABLISHMENT WITH ADDITIONAL RE-SEEDING AS NECESSARY TO ACHIEVE A HEALTHY, UNIFORM STAND OF GRASS, FREE OF WEEDS AND WITH COVERAGE EXCEEDING 75% IN ANY 10'x10' AREA PRIOR TO FINAL ACCEPTANCE.

SODDING. CONTRACTOR SHALL OBTAIN OWNER/LANDSCAPE ARCHITECT'S APPROVAL OF FINAL GRADES AND TOPSOIL PREP PRIOR TO SODDING. APPLY 12-12-12 GRANULAR STARTER FERTILIZER AT A RATE OF 250 LBS PER ACRE PRIOR TO SODDING AND ROLL TOPSOIL TO CREATE A UNIFORM SURFACE FOR LAYING SOD. SOD SHALL NOT BE CUT MORE THAN 24-HOURS IN ADVANCE OF INSTALLATION. CONTRACTOR SHALL KEEP SOD MOIST FOR A MINIMUM OF 30 DAYS AND SHALL BE RESPONSIBLE FOR MAINTAINING THE SOD UNTIL FINAL

8. PLANT MATERIAL. ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS. OWNER/LANDSCAPE ARCHITECT RESERVE THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION. NO SUBSTITUTION OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE OWNER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

9. <u>PLANT MATERIAL SUBSTITUTIONS.</u> ALL REQUESTS FOR PLANT SUBSTITUTIONS SHALL BE MADE IN WRITING TO THE OWNER/LANDSCAPE ARCHITECT AND MUST BE APPROVED BY THE CITY.

10. PLANT INSTALLATION AND ESTABLISHMENT. REFER TO STANDARD PLANTING DETAILS. CONTRACTOR SHALL STAKE TREE LOCATIONS FOR APPROVAL BY OWNER/LANDSCAPE ARCHITECT PRIOR TO PLANTING. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE.

- BE INSTALLED WITHIN 48-HOURS OF PLANT INSTALLATION.
- EXTRUDED IN STANDARD LENGTHS, WITH 9-INCH STEEL ANGLE STAKES.

- BEFORE FINAL ACCEPTANCE.
- MATERIAL.

11. MULCH MATERIAL. DOUBLE SHREDDED HARDWOOD MULCH OR ROCK MULCH AS INDICATED ON PLANS. ALL MULCH SHALL BE CLEAN AND FREE OF NOXIOUS WEEDS, SOIL, OR OTHER DELETERIOUS MATERIAL, AND SHALL BE INSTALLED OVER A NON-WOVEN GEOTEXTILE FABRIC (INCIDENTAL) OR OTHER APPROVED WEED BARRIER TO A MINIMUM SETTLED DEPTH OF 4". MULCH SHALL BE HELD BACK FROM PLANT STEMS/TRUNKS A MINIMUM OF 3". WOOD MULCH SHALL BE PLACED AROUND INDIVIDUAL TREES TO A 4' MINIMUM DIAMETER. MULCH SHALL

12. LANDSCAPE EDGING. INSTALL LANDSCAPE EDGING BETWEEN ALL MULCH AREAS AND TURF. EDGING SHALL BE COMMERCIAL GRADE BLACK POLYETHYLENE OR VINYL EDGING, 0.1 INCH THICK BY 5 INCHES DEEP, V-LIPPED BOTTOM, HORIZONTALLY GROOVED, 1-INCH ROUND TOP,

13. IRRIGATION. DESIGN, FURNISH AND INSTALL A COMPLETE UNDERGROUND IRRIGATION SYSTEM FROM APPROVED POINT(S)-OF-CONNECTION WITHIN THE SITE COVERING ALL TURF AND PLANTING AREAS AS SHOWN ON THE LANDSCAPE PLAN. INCLUDES FLOW/PRESSURE TESTING, PLANS WITH DESIGN CALCULATIONS, AS-BUILT DRAWINGS, LABOR, MATERIALS, EQUIPMENT, AND SERVICES FOR THE TESTING, ADJUSTING, RETESTING AND READJUSTING AS REQUIRED TO PLACE THE SYSTEM IN AN APPROVED OPERATING CONDITION. THE IRRIGATION SYSTEM SHALL INCLUDE THE DESIGN AND INSTALLATION OF THE FOLLOWING: PIPING, METER AND BACKFLOW ASSEMBLIES, SPRINKLER HEADS, CABINETS, VALVES AND VALVE BOXES, CONTROLLERS, CONTROL WIRING, FITTINGS, ELECTRICAL CONNECTIONS, QUICK-COUPLERS, ALL OTHER NECESSARY ACCESSORIES, SYSTEM MANUALS, 1-YEAR MAINTENANCE PERIOD INCLUDING 1 FALL WINTERIZATION AND 1 SPRING START-UP. IRRIGATION PLANS TO BE PREPARED BY A QUALIFIED IRRIGATION DESIGNER AND SUBMITTED TO OWNER/LANDSCAPE ARCHITECT FOR APPROVAL.

14. MAINTENANCE. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE, INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE MOWING, TRIMMING, WATERING, FERTILIZING, WEED AND PESTICIDE CONTROL, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES, HOWEVER, THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR ALL PLANT MATERIAL THROUGH THE COMPLETION OF THE WARRANTY PERIOD.

15. WATERING. UPON ESTABLISHMENT OF SEED AND INSTALLATION OF PLANTS, CONTRACTOR SHALL MAINTAIN A WATERING SCHEDULE WHICH WILL THOROUGHLY WATER ALL PLANTS AND TURF AREAS A MINIMUM OF ONCE A WEEK. MORE FREQUENT WATERING MAY BE REQUIRED DURING PERIODS OF HOT, DRY WEATHER. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR WATER. IN THE ABSENCE OF PERMANENT IRRIGATION, TEMPORARY IRRIGATION, TREE WATERING BAGS, OR HAND-WATERING ARE ACCEPTABLE.

16. NATIVE PLANT ESTABLISHMENT. THIS PROJECT INCLUDES ONE OR MORE NATIVE PLANT SEED MIXES CONSISTING OF A VARIETY OF GRASSES, SEDGES AND FLOWERING FORBS. BECAUSE THESE PLANTS TYPICALLY HAVE A LONGER GERMINATION PERIOD, A COVER CROP SPECIES IS REQUIRED TO PROVIDE TEMPORARY COVER AND STABILIZATION. MAINTENANCE OF THESE SEEDED AREAS IS CRITICAL DURING THE FIRST SEVERAL YEARS TO ESTABLISH A SUCCESSFUL NATIVE PLANT COMMUNITY. SEEDED AREAS SHALL BE MOWED / WEED-WHIPPED TO A HEIGHT OF 6-10 INCHES IN MID-JULY AND EARLY SEPTEMBER DURING THE FIRST 2-3 YEARS OF ESTABLISHMENT. IN ADDITION, ALL NON-NATIVE SPECIES / WEEDS SHALL BE SPOT SPRAYED NO LESS THAN 3 TIMES A YEAR WITH HERBICIDE BY A LICENSED APPLICATOR. RE-SEEDING AS NECESSARY SHALL OCCUR IN MAY. A NATIVE PLANT COMMUNITY SHALL BE CONSIDERED SUCCESSFULLY ESTABLISHED NO SOONER THAT 3 YEARS AFTER INITIAL SEEDING - ONCE THE COVER CROP HAS BEEN SUFFICIENTLY REPLACED BY NATIVE PLANTS AND THE AREA IS FREE OF ALL NON-NATIVE AND INVASIVE SPECIES. AT THIS TIME, MAINTENANCE CAN BE REDUCED TO MOWING / WEED-WHIPPING TO A HEIGHT OF 6-10 INCHES ONCE A YEAR IN EARLY SEPTEMBER AND SPOT SPRAYING OF HERBACIDE ONLY AS NEEDED. REFER TO MNDOT SEEDING MANUAL FOR ADDITIONAL INFORMATION ON PLANTING, ESTABLISHING AND MAINTAINING NATIVE SEED MIXES.

17. FINAL ACCEPTANCE. UPON SUBSTANTIAL COMPLETION OF THE WORK, CONTRACTOR SHALL REQUEST FINAL ACCEPTANCE OF THE WORK IN WRITING BY THE OWNER/LANDSCAPE ARCHITECT. IF ANY WORK IS FOUND TO BE INCOMPLETE OR UNSATISFACTORY IN THE OPINION OF THE OWNER/LANDSCAPE ARCHITECT, A WRITTEN PUNCH LIST WILL BE PREPARED LISTING ALL ITEMS THAT REQUIRE COMPLETING OR CORRECTING

18. WARRANTY. ALL PLANTS, MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE, UNLESS OTHERWISE SPECIFIED. THE GUARANTEE SHALL COVER THE FULL COST OF REPLACEMENT INCLUDING LABOR AND





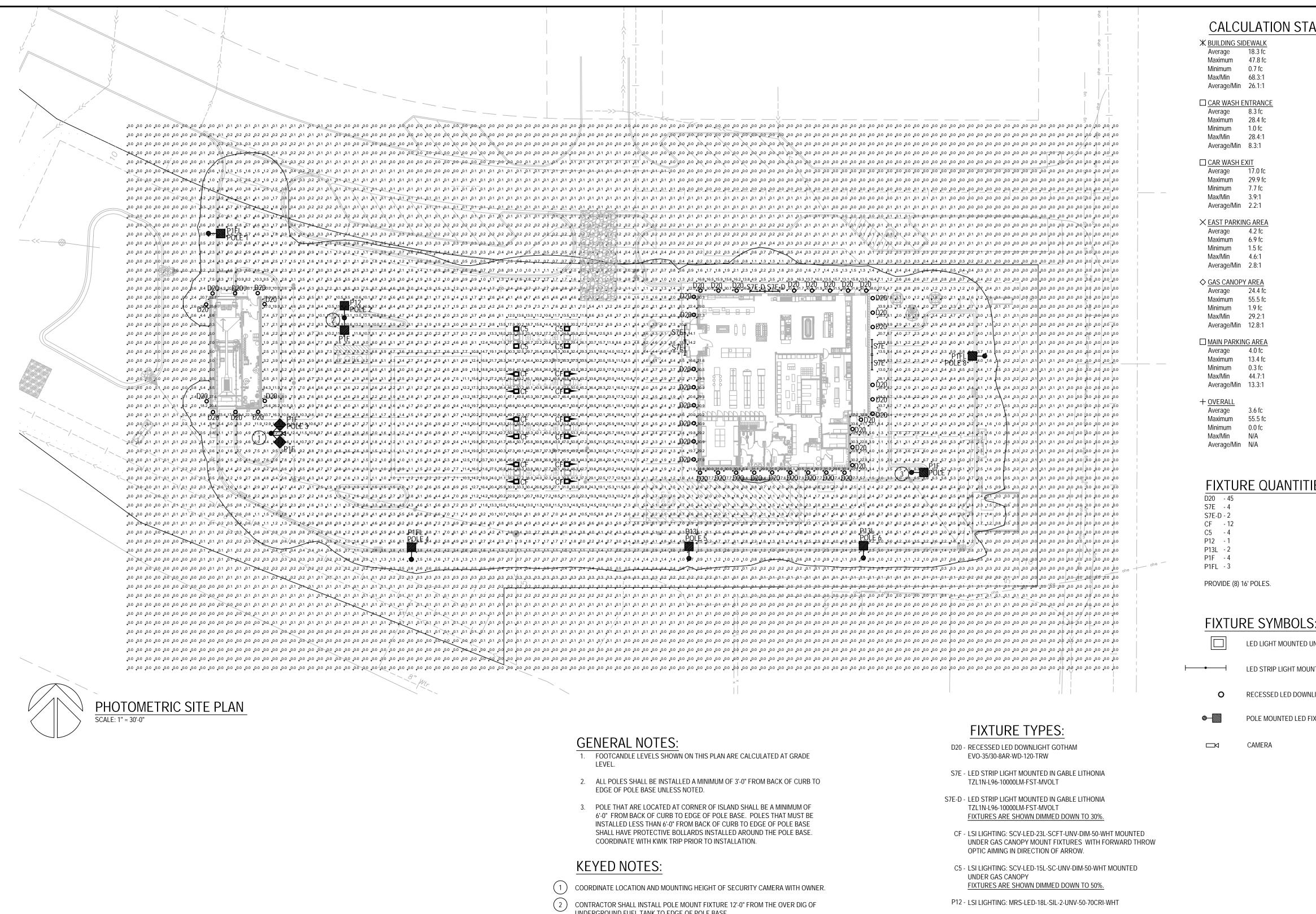
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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota

Name: Ryan J. Ruttger, RLA Signature: Reference Date: 1/15/25 License #: 56346

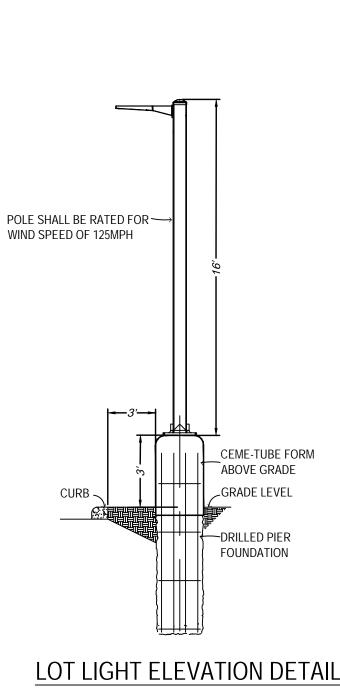




- UNDERGROUND FUEL TANK TO EDGE OF POLE BASE
- 3) CONTRACTOR SHALL POLE MOUNT FIXTURE 6'-0" FROM BACK OF CURB TO EDGE OF POLE

- P13L LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL
- P1F LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT
- P1FL LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

# CALCULATION STATISTICS



NOT TO SCALE

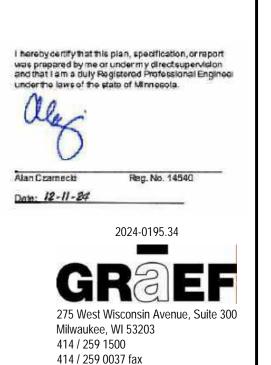
# FIXTURE QUANTITIES

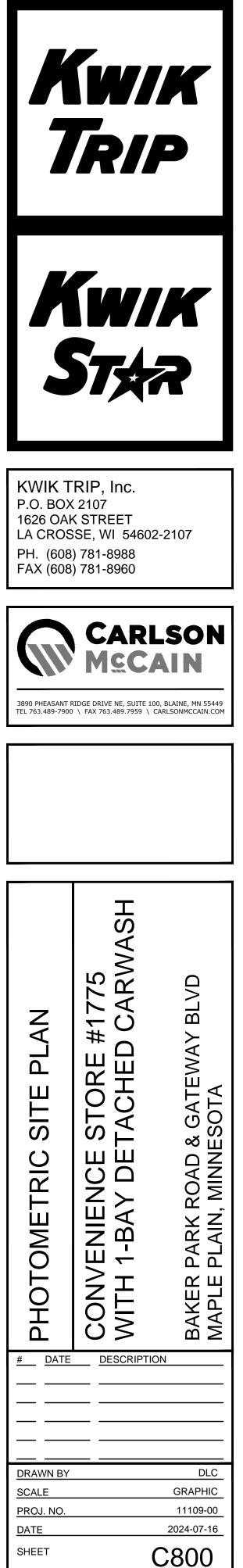
LED LIGHT MOUNTED UNDER FUEL CANOPIES

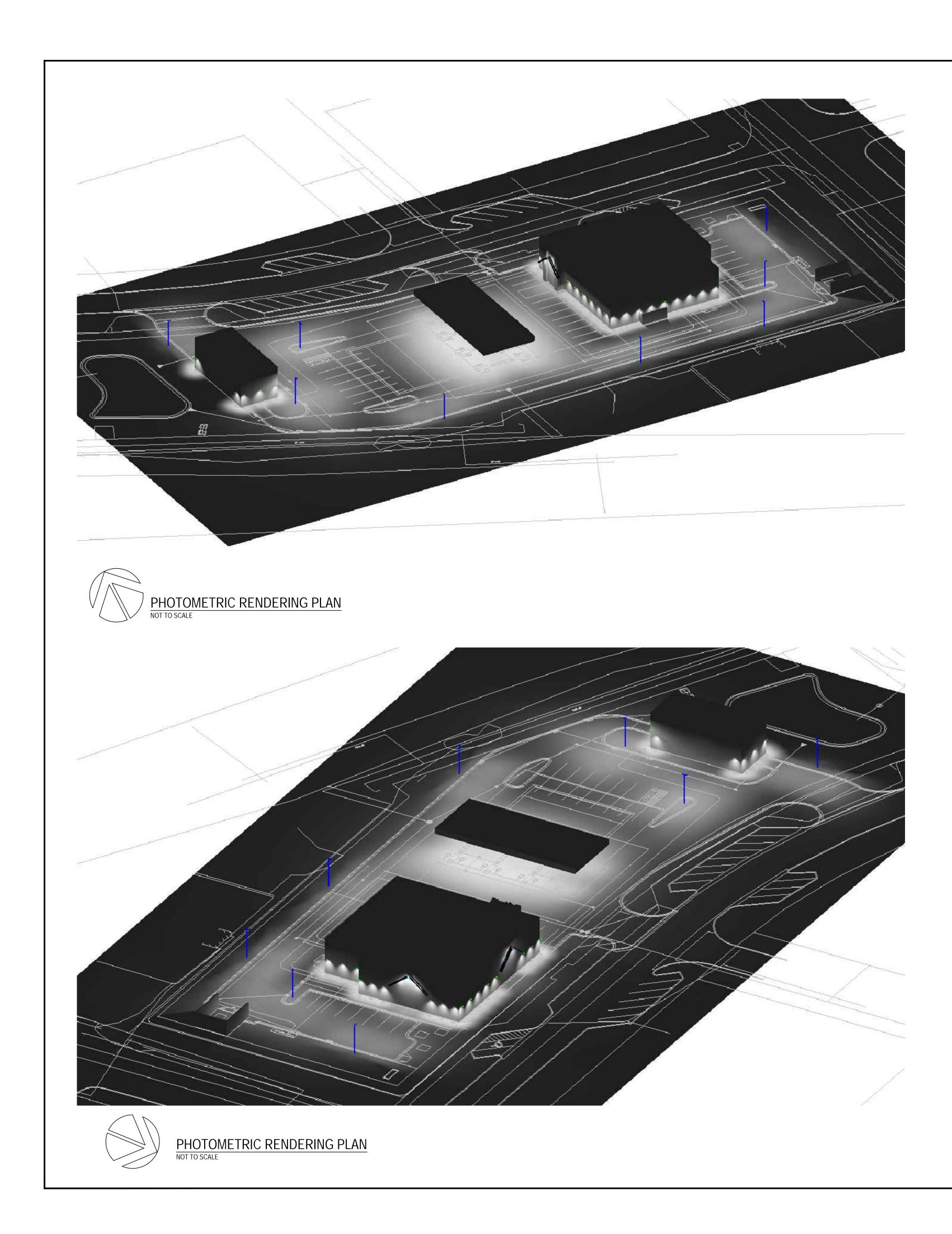
LED STRIP LIGHT MOUNTED IN GABLE

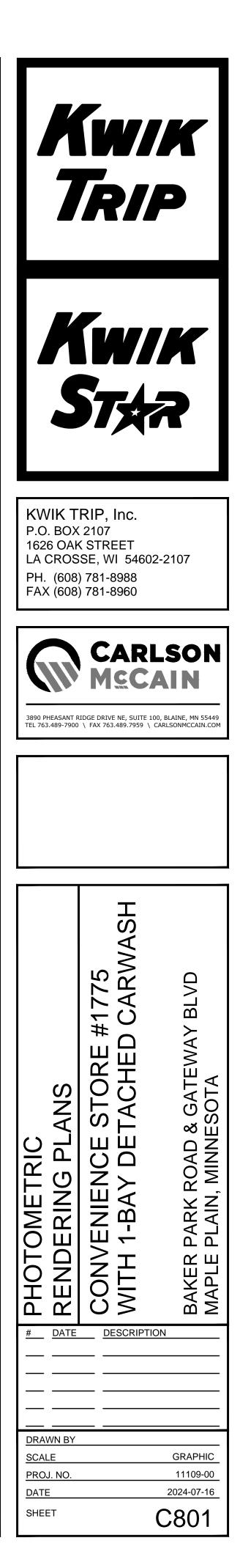
RECESSED LED DOWNLIGHT

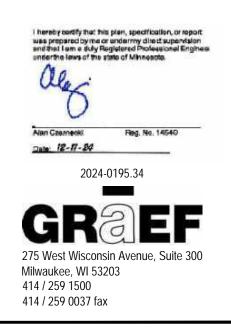
POLE MOUNTED LED FIXTURE

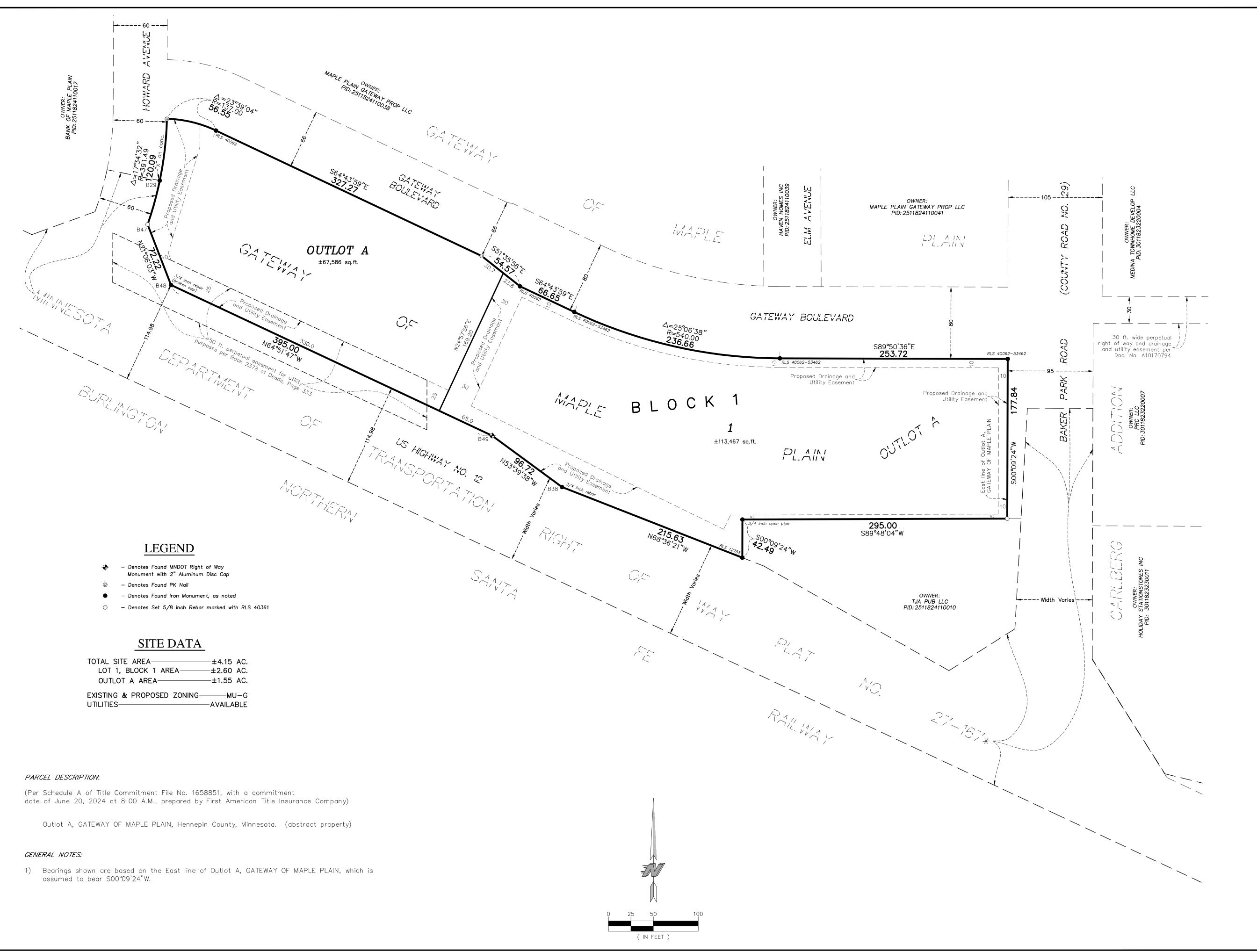


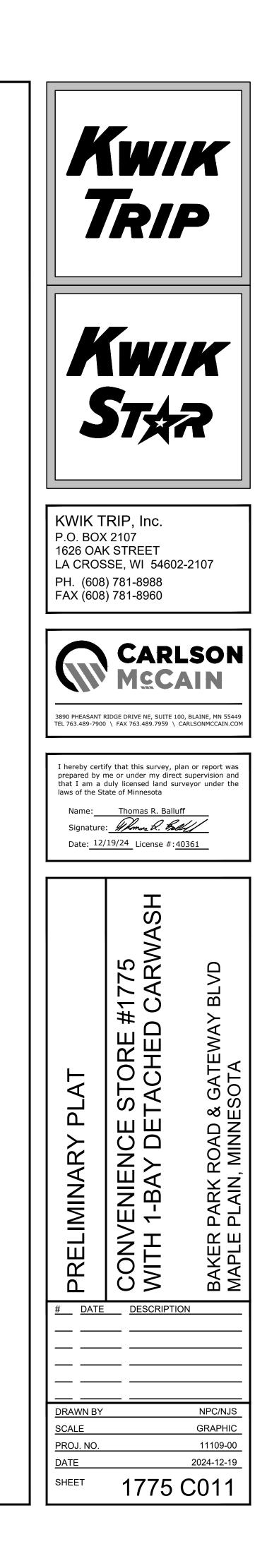




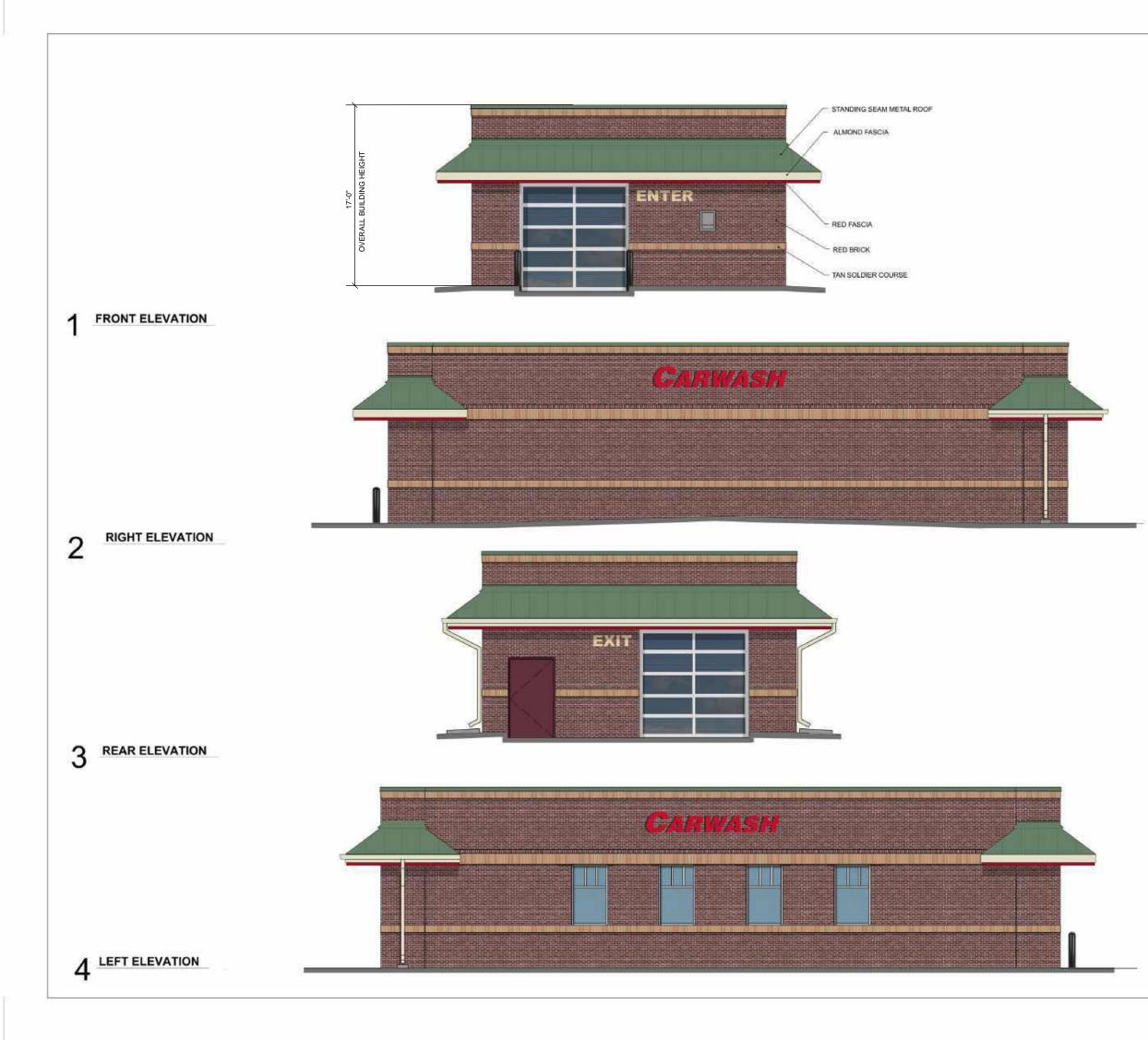




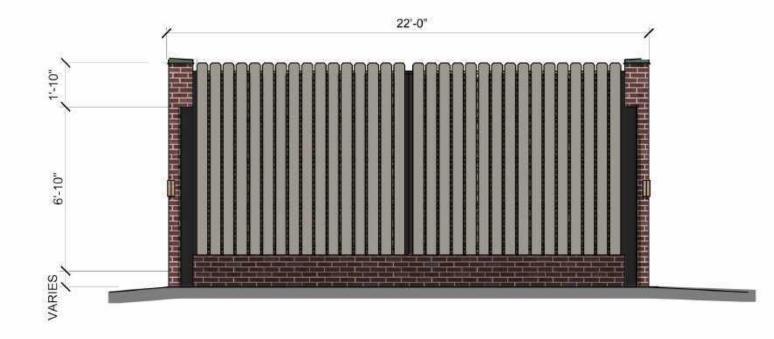




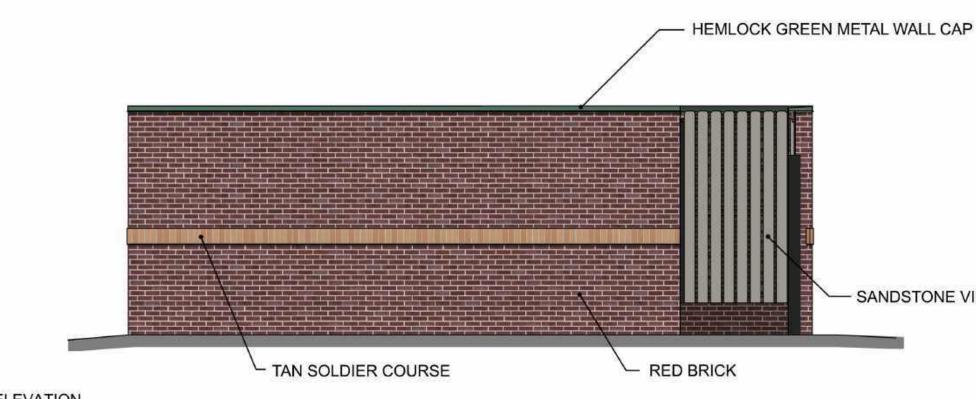








TRASH ENCLOSURE - FRONT ELEVATION



TRASH ENCLOSURE - SIDE ELEVATION



SANDSTONE VINYL BOARD



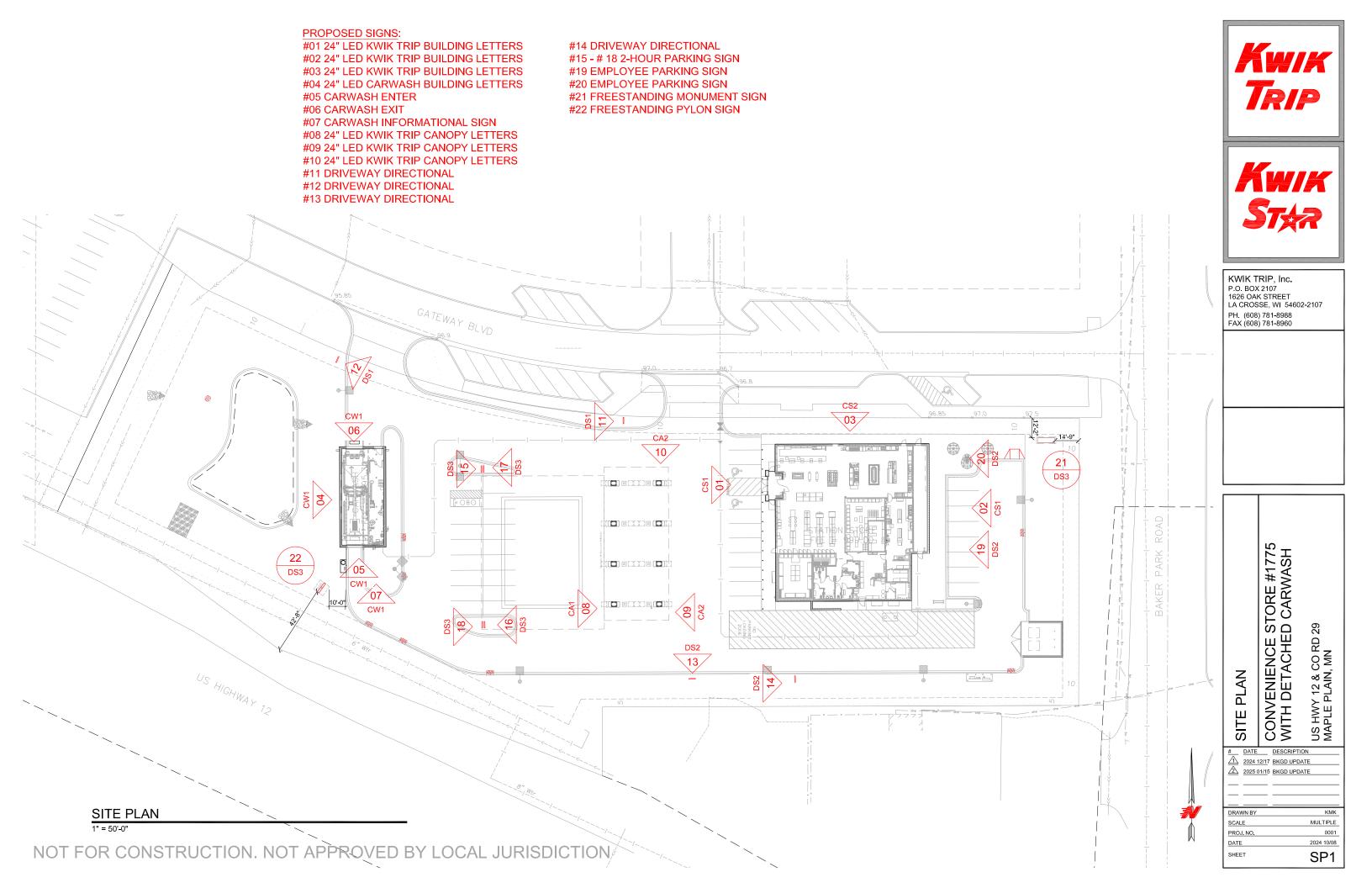
# 1 FRONT ELEVATION

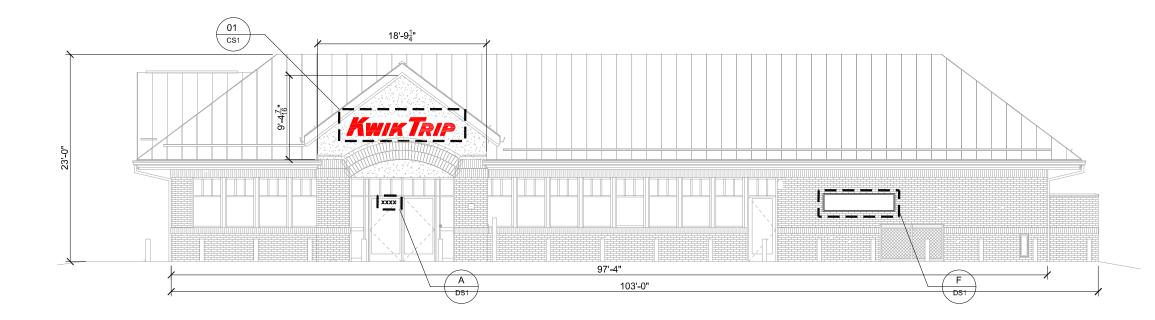




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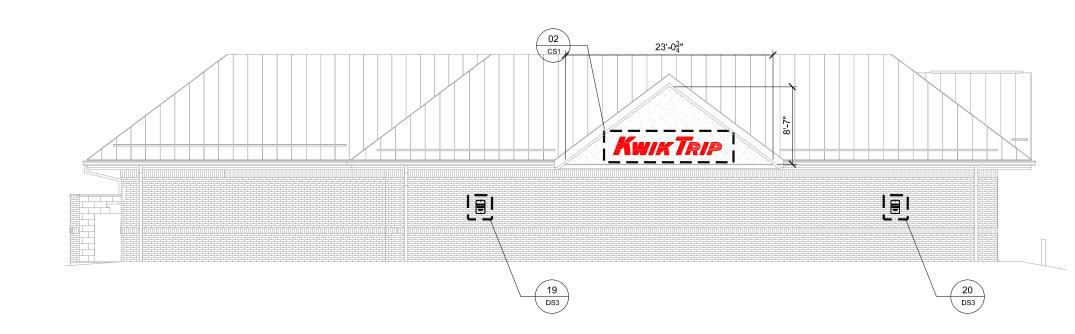
8 MPD





# STORE ELEVATION

SCALE: 3/32" = 1'-0"



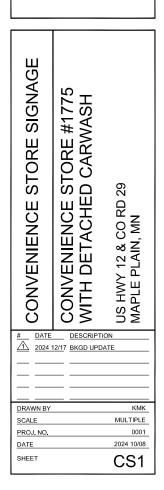
STORE ELEVATION

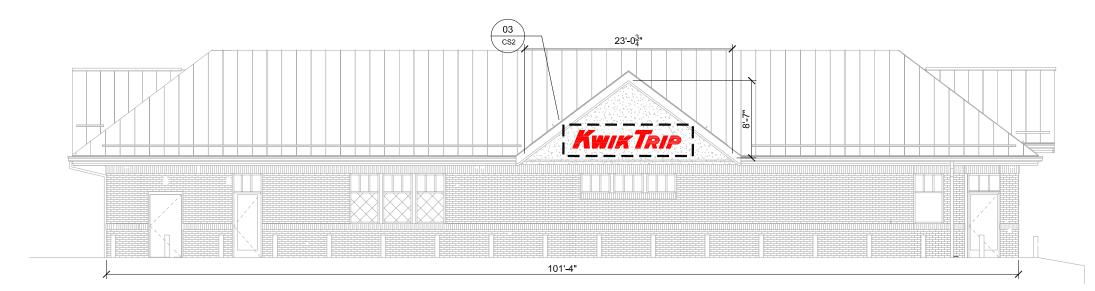
SCALE: 3/32" = 1'-0"





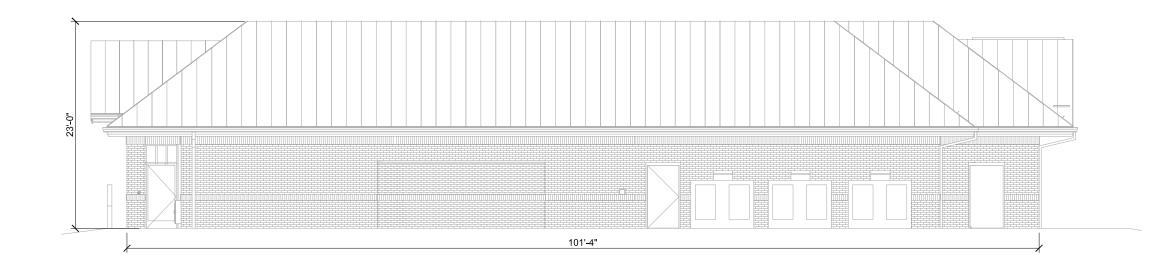






# STORE ELEVATION

SCALE: 3/32" = 1'-0"



# STORE ELEVATION

SCALE: 3/32" = 1'-0"

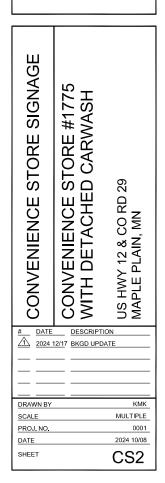


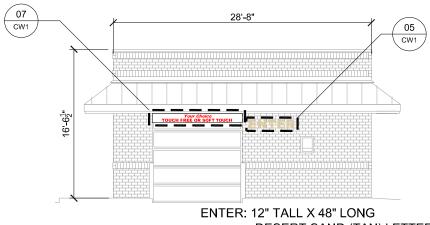
# LOGO DETAIL - SIGN #03

SCALE: 1/2" = 1'-0"

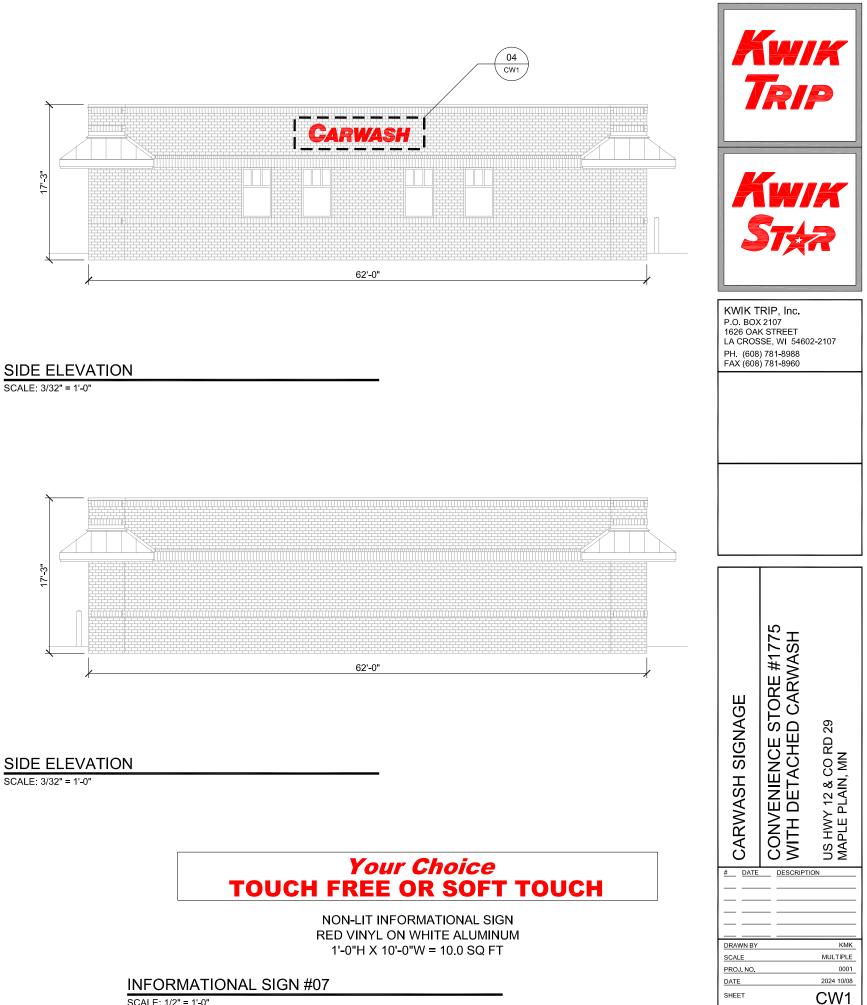






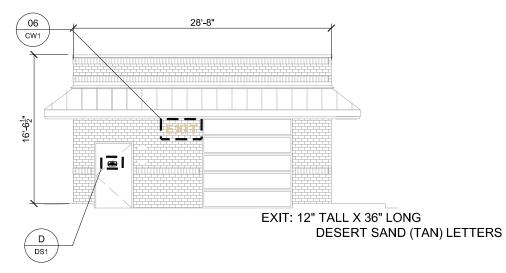


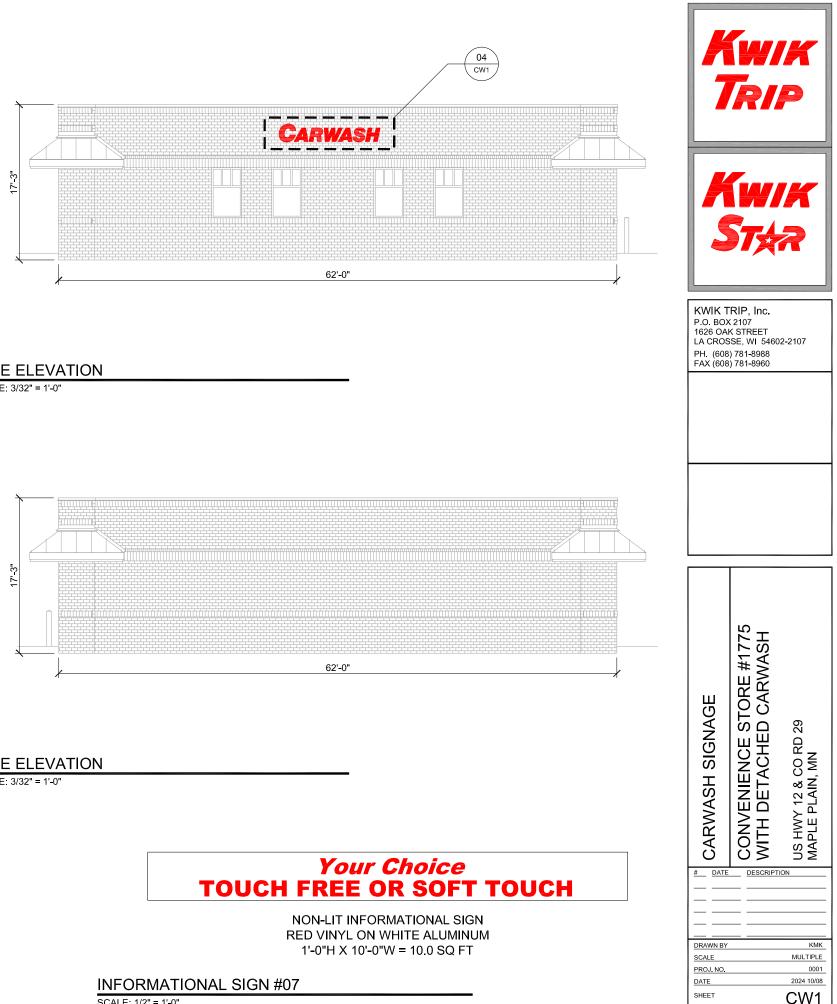
DESERT SAND (TAN) LETTERS



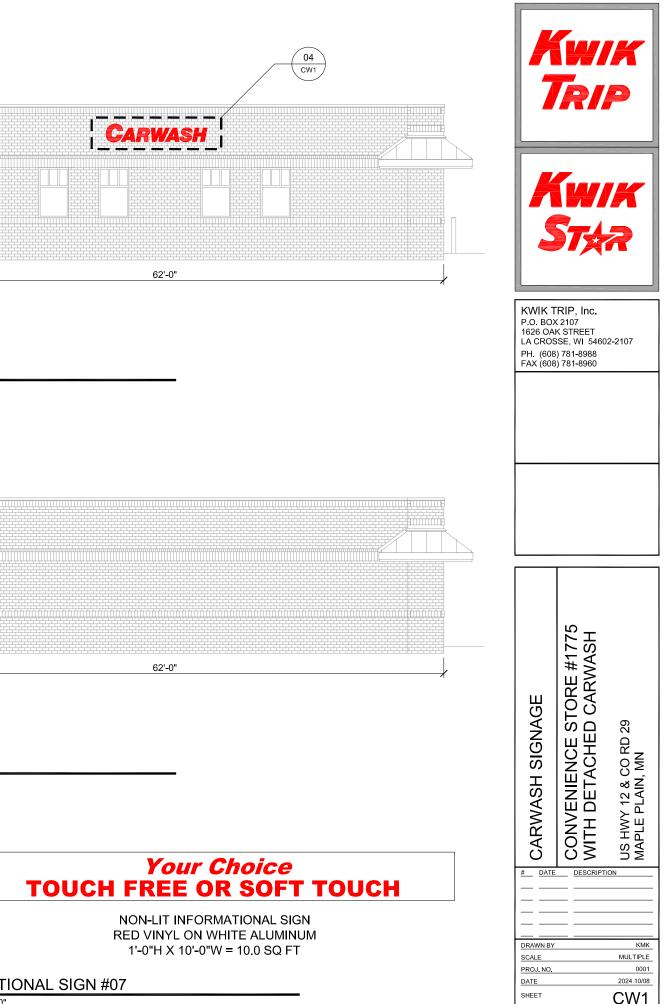
ENTER ELEVATION

SCALE: 3/32" = 1'-0"





SIDE ELEVATION SCALE: 3/32" = 1'-0"



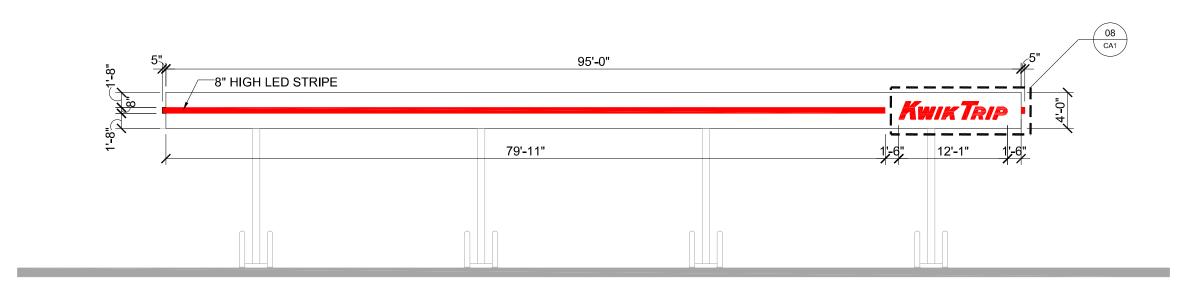
SCALE: 1/2" = 1'-0"

EXIT ELEVATION SCALE: 3/32" = 1'-0" 11'-3"



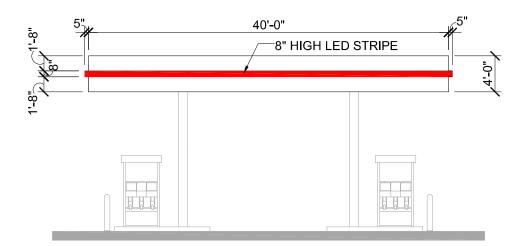
LOGO DETAIL - SIGN #04

SCALE: 1/2" = 1'-0"



# CANOPY ELEVATION

SCALE: 3/32" = 1'-0"



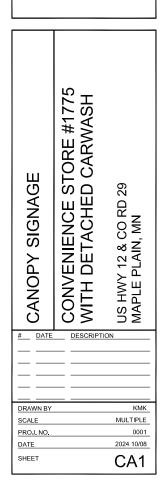
# CANOPY ELEVATION

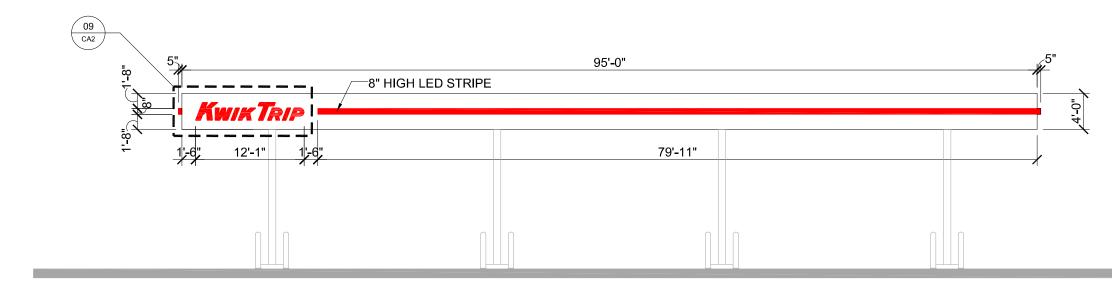
SCALE: 3/32" = 1'-0"





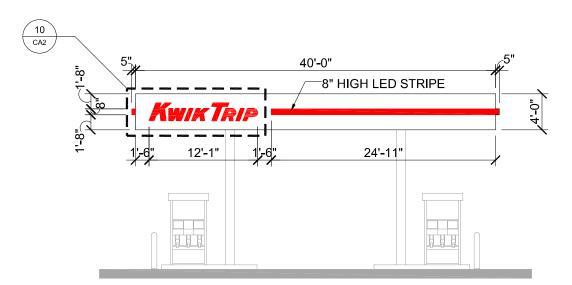






# CANOPY ELEVATION

SCALE: 3/32" = 1'-0"



# CANOPY ELEVATION

SCALE: 3/32" = 1'-0"





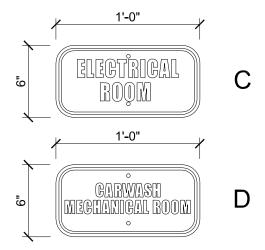




# GENERAL SPECIFICATIONS

ROOM SIGNS Qty: 3 total (different copy on each) Size: per art Material: white sign blank Finish: cut vinyl

to install.





**5" WHITE VINYL ADDRESS LETTERS** ON GLASS DOOR AS SHOWN ABOVE (VERIFY ACTUAL NUMBERS WITH PROJECT MANAGER)

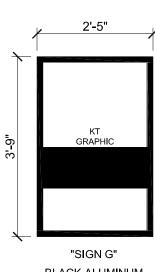
> **INFORMATIONAL SIGNS C & D** SCALE: 1 1/2" = 1'-0"

ADDRESS SIGN A

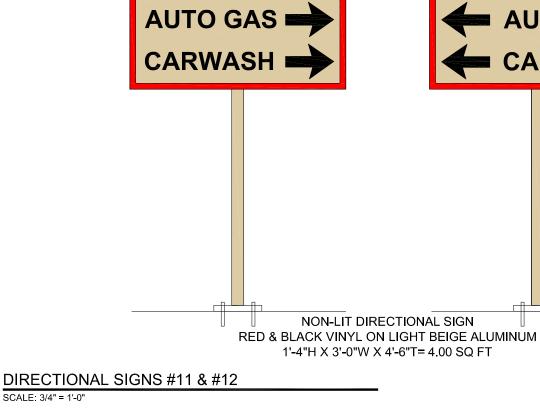
SCALE: 3/4" = 1'-0"

DOUBLE SIDED DIRECTIONAL SIGN WEST SIDE

8'-0" KT GRAPHIC 2'-0" INSERT "SIGN F" BLACK ALUMINUM FRAME



BLACK ALUMINUM FRAME



# **INFORMATIONAL SIGNS F & G**

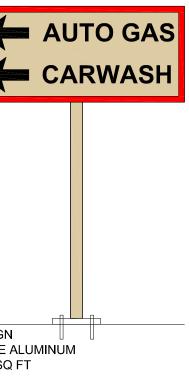
SCALE: 1/2" = 1'-0"

Install along with various signs for same site, crew to give to KT trim guys

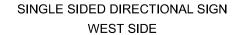


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EAST SIDE

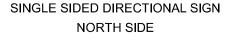


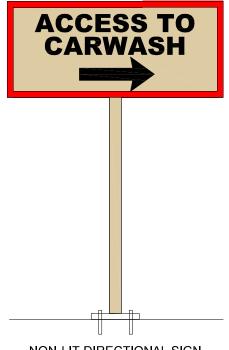






RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM 1'-4"H X 3'-0"W X 4'-6"T= 4.00 SQ FT

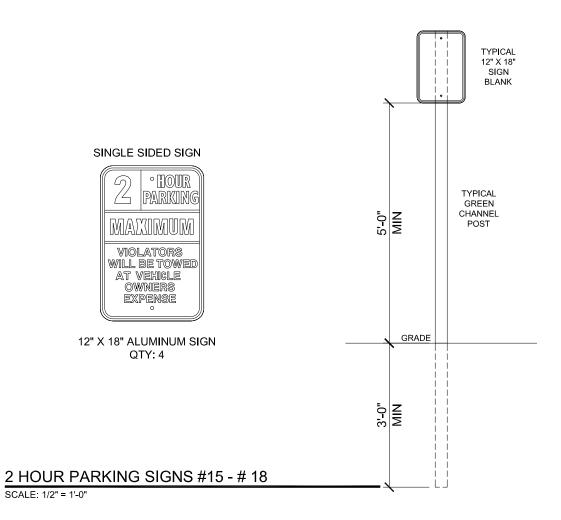




NON-LIT DIRECTIONAL SIGN RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM 1'-4"H X 3'-0"W X 4'-6"T= 4.00 SQ FT

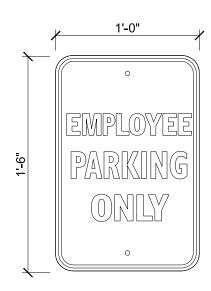
# **DIRECTIONAL SIGN #13**

SCALE: 3/4" = 1'-0"



# **DIRECTIONAL SIGN #14**

SCALE: 3/4" = 1'-0"



Qty: 2 Size: 18"x12" Pole Size: Pole Material: Pole Finish: Install: HAGL: OAH:

# GENERAL SPECIFICATIONS

18"x12" ALUMINUM SIGN

Material: Standard white blank Finish: cut vinyl graphics



DIRECTIONAL SIGNAGE	CONVENIENCE STORE #1775 WITH DETACHED CARWASH	US HWY 12 & CO RD 29 MAPLE PLAIN, MN
<u># DATE</u>	DESCRIPTI	ON
DRAWN BY		КМК
SCALE		MULTIPLE
PROJ. NO.		0001
DATE		2024 10/08
SHEET		DS2

# **#21 KWIK TRIP FREESTANDING MONUMENT SIGN**

# **#22 KWIK TRIP FREESTANDING PYLON SIGN**

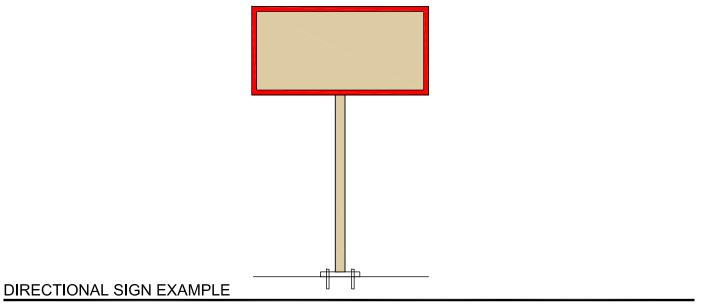
SEE ATTACHED ARTWORK

SEE ATTACHED ARTWORK



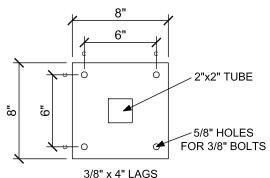
DIRECTIONAL SIGNAGE	CONVENIENCE STORE #1775 WITH DETACHED CARWASH	US HWY 12 & CO RD 29 MAPLE PLAIN, MN
<u># DATE</u>		ON
DRAWN BY SCALE		KMK MULTIPLE
PROJ. NO.		0001
DATE		2024 10/08

## SINGLE SIDED NON-LIT DIRECTIONAL SIGN



SCALE: NTS

# 8"x8" BASE PLATE



# NOTES:

\_

- Sign vendor to anchor sign/s to concrete pad
- Sign vendor to anchor signs with (4) 3/8" x 4" lags & shield anchors. Use stainless steel hardware \_
- Stainless steel flat washers may be used under base plate as needed to shim sign to be plumb \_
  - Concrete Pad installed by others (Kwik Trip/Kwik Star Concrete Vendor)

- Concrete Pad to be 5"x 36"x 36" - Center of footing to be installed 48" from face of curb



SCB #1

# **DIRECTIONAL SIGN BASE PLATE**

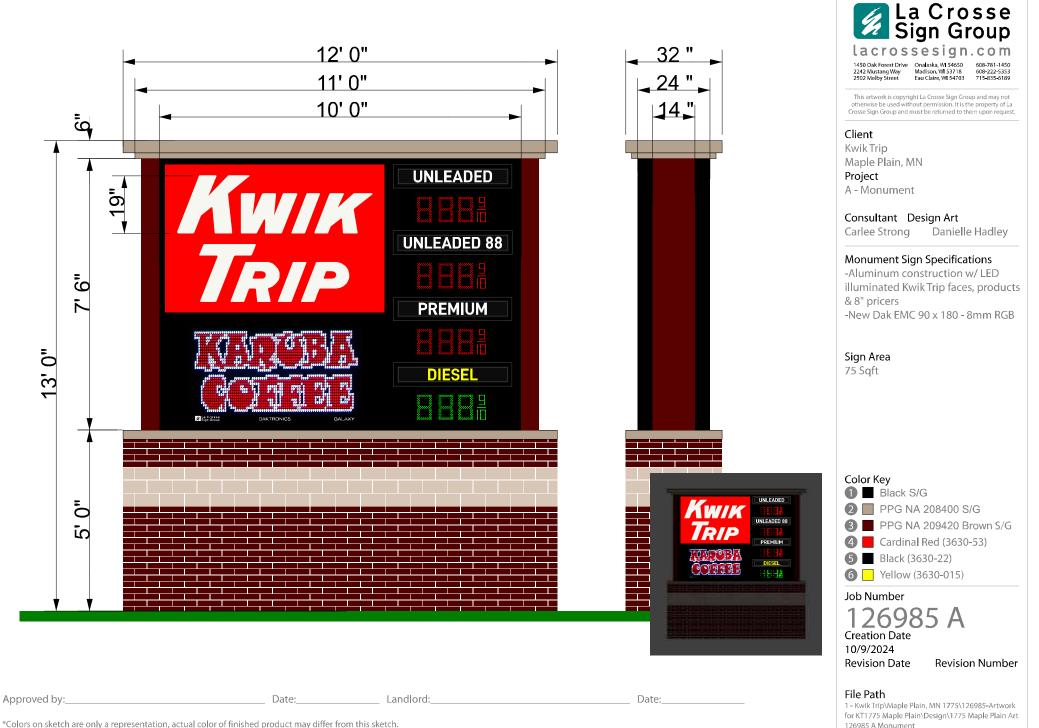
SCALE: 1 1/2" = 1'-0"



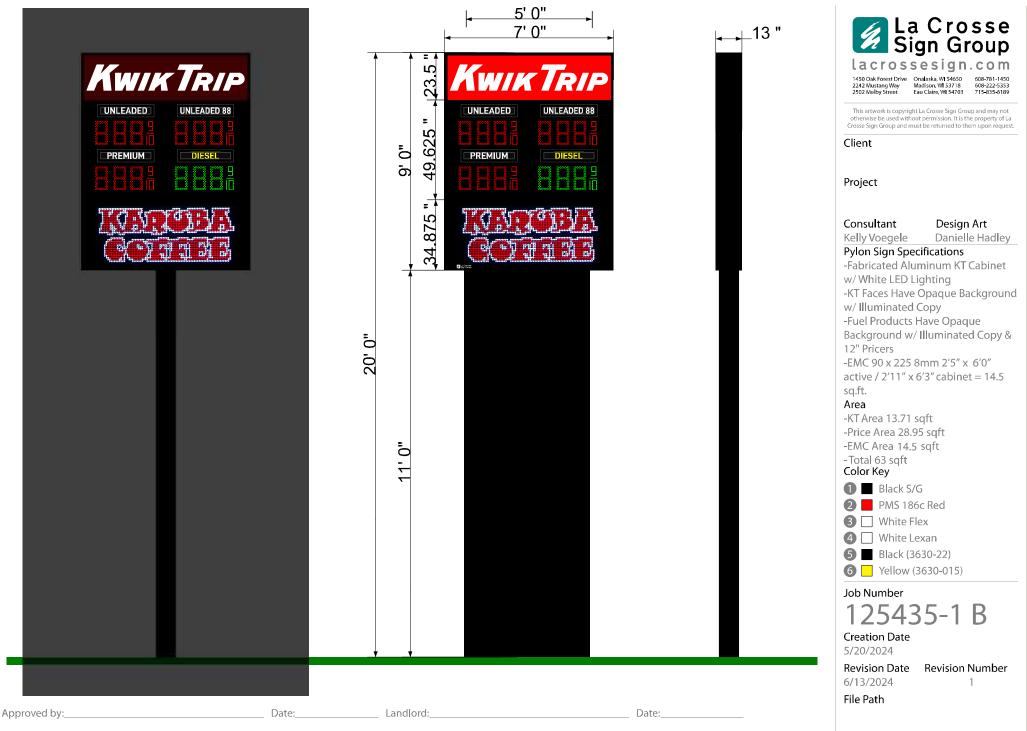
PROJECT: KWIK TRIP, Inc. P.O. BOX 2107 1626 OAK STREET LA CROSSE, WI 54602-2107 PH. (608) 781-8988 FAX (608) 781-8960

Store- All Stores Date - 08/31/2023

DESCRIPTION: All Directional signs will have a single post per the detail above



\*To make the best use of standard sized materials and control costs the size of the finished product may vary slightly.



\*Colors on sketch are only a representation, actual color of finished product may differ from this sketch. \*To make the best use of standard sized materials and control costs the size of the finished product may vary slightly.



5050 INDEPENDENCE STREET | P.O. BOX 97 | MAPLE PLAIN, MN 55359 Ph: (763) 479-0515 | Fax: (763) 479-0519 | www.mapleplain.com

February 10, 2025

Emily Helwig, Project Manager Kwik Trip 1626 Oak St., P.O. Box 2107 La Crosse, WI 54602

# **RE: Kwik Trip Preliminary/Final Plat and Site Plan Review**

Dear Emily:

The city has completed a review of your application for Site Plan Review and Preliminary/Final Plat for the property generally located at 4855 Gateway Blvd. The city has prepared a detailed review of your submittal. Please review and if requested, make any revisions and or provide additional information. It is anticipated that your application will initially be considered by the City's Planning Commission on Thursday, March 6<sup>th</sup>, 2025, at 6:00 pm.

The City offers the following comments:

# Site Plan/Preliminary Plat

- 1. The City has submitted the plans to Hennepin County and MNDOT for review.
- 2. The city finds that the proposed site plan layout meets applicable requirements. The city noted that the eight (8) parking spaces located to the east of the building create a "dead end" without a means for vehicle turnaround. The city is concerned that vehicles will attempt to go around the building to park or exit the site. If all spaces are occupied, there is not a way to exit without backing out of the area. It is recommended that a designated space be striped and or provided for vehicle turn around. In addition, it is recommended that a sign indicating no exit be provided near the southwest corner of the building.
- 3. Parking is required in accordance with the city's zoning ordinance. Please note that the east bank of spaces is labeled as having nine (9) spaces but there are only eight (8) on the plan. The city does not provide a specific parking requirement for convenience stores or modern motor fuel stations. The city's ordinance notes retail requirements as 1 space per 250 SF of the building

GFA. While this is an acceptable requirement, I would consider using 5 spaces per 1,000 SF of the building GFA (total of 51 spaces required). This would generate similar numbers to the total parking spaces proposed. Using both standards, the proposed plans appear to meat applicable parking requirements.

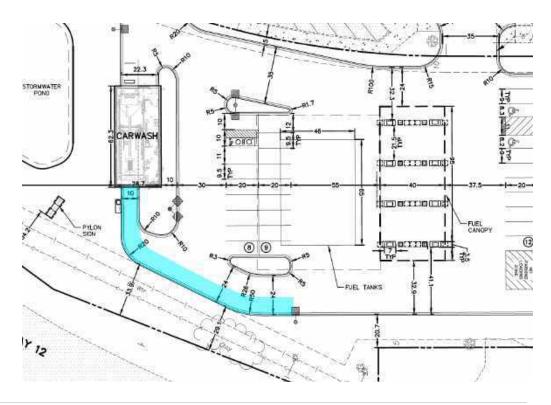
# **REQUIRED**

Motor Fuel Station: 4 spacesConvenience Store: 1 space per 250 GFA (9,070 SF/250 = 37)Car Wash:1 spaceTOTAL:42 spaces

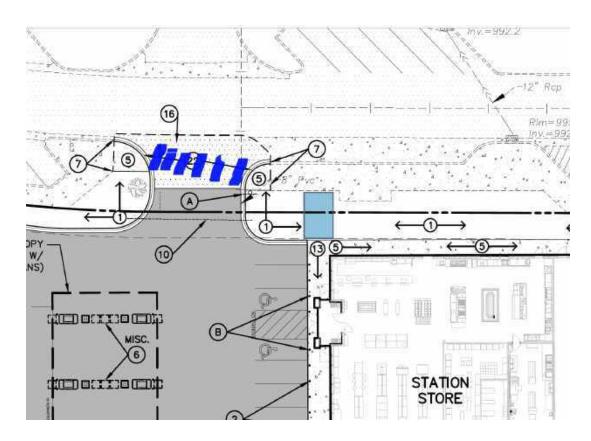
# PROVIDED

Standard Stalls	35 spaces
Accessible	2 spaces
Fuel Canopy	20 spaces
TOTAL:	57 spaces

4. The plans include a car wash that will have an entrance on the south side of the building. It is anticipated that this car wash will have a high demand and usage due to it being the only one in the area. Staff is trying to determine if there is a way to provide designated stacking (striped line and signage) along the south side of the parking lot to avoid cars waiting behind designated parking spaces (see below). Please review and let's discuss possible solutions.



- 5. It is recommended that the proposed sidewalk around the building perimeter and the sidewalk in the boulevard be connected (see below).
- 6. It is recommended that a pedestrian crosswalk be stripped (consistent with drive aisles along Gateway Blvd. see below).



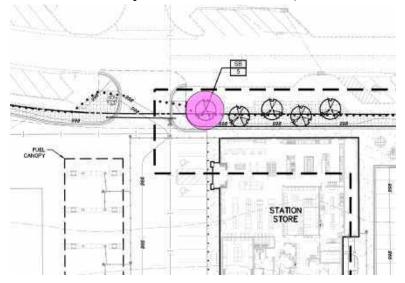
- 7. There are several areas along the north property line/Gateway Blvd. where footcandles exceed 1.0 which is the maximum permitted. Please review the lighting plan and revise proposed plans to conform.
- 8. Please provide cut sheets for all proposed light fixtures. Based on review of the cut sheets, additional comments may be provided.

# Architectural Plans/Building Materials

9. The City has adopted the Maple Plain Design Guidelines. The guidelines provide general direction and information pertaining to permitted architecture, building materials and other similar design standards. The guidelines provide specific requirements for commercial building architecture and general guidelines for residential development. The City has reviewed the proposed building materials and architecture and believes that it meets the intent of the City's Design Guidelines.

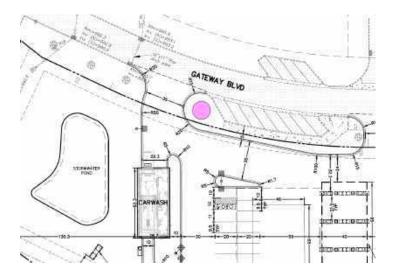
# Landscape Plan/Tree Preservation

10. The proposed landscape plan indicates five (5) serviceberries along the north side of the building. As a result of the boulevard tree being removed to accommodate the new drive aisle entrance, it is recommended that one of the serviceberries be replaced with a shade tree (see location below).



# Police/Fire/Engineering

- 11. The Maple Plain Fire Department has reviewed the plans and has the following comments:
  - i. Please indicate the location of the FDC on the site/utility plans.
  - ii. Please indicate the location of the mechanical room on the site/utility plans.
  - iii. The Fire Chief has noted that an additional fire hydrant would be needed to adequately protect this property given the proposed layout and use. MPFD would like to have a hydrant installed in the island shown below (pink circle).



12. Please see the attached review letter and SWPPP Checklist provided by the City's Engineer and dated February 7, 2025.

# <u>Sign Plans</u>

13. Sign plans are being reviewed, and comments will be provided in separate review letter.

Please let me know if you have any questions regarding any recommendations/comments or would like additional information.

Sincerely,

MAR

Mark Kaltsas, Planner City of Maple Plan

CC: Jacob Kolander, City Administrator Matt Bauman, City Engineer Gary Kroells, West Hennepin Public Safety Director Rick Denneson, Maple Plain Fire Chief

ATTACHMENTS: Engineering Memo



Real People. Real Solutions.

2638 Shadow Lane Suite 200 Chaska, MN 55318-1172

> Ph: (952) 448-8838 Fax: (952) 448-8805 Bolton-Menk.com

February 7, 2025

City of Maple Plain Attn: Jacob Kolander, City Administrator 5050 Independence Street Maple Plain, MN 55359

RE: Site Plan Review Kwik Trip Engineering Review #1

Dear Mr. Kolander:

As requested, Bolton & Menk, Inc. has completed an engineering review of the documents submitted for the above-referenced project. We offer the following comments for your consideration:

- 1. Modify the east entrance to include pedestrian ramps on each side of the driveway, increase the walk thickness for ramp areas to 6-inches, and recommend connecting the existing walkway to the walk around the building perimeter for pedestrians.
- 2. One wet retention basin is proposed to provide stormwater runoff management. The following must be considered regarding stormwater management:
  - a. Per City requirements, the proposed stormwater management system must limit proposed peak runoff rates to that of existing for the 2, 10, and 100 year – 24h hour events. Also, per the City's NPDES MS4 requirements, the system must treat the water quality volume, calculated as 1" times the sum of new and fully reconstructed impervious surface.
  - b. Due to site runoff coming from areas where vehicle maintenance and fueling occur, infiltration of the water quality volume is not required. The wet retention basin proposed has been sized adequately to limit peak runoff rates to existing and provide water quality treatment.
- 3. Final Plans must include a SWPPP meeting current NPDES requirements. See attached checklist for complete requirements.
- 4. The following permits will need to be provided conditional to City approval:
  - a. NPDES Construction Stormwater Permit
  - b. MCWD Permit
  - c. MnDOT Access/Work in ROW Permit
- 5. The condition of the adjacent street should be reviewed by the City and Contractor prior to any work and verified with video or pictures. Any damage to the street after work commences should be deemed to be caused by the Contractor and the Owner's responsibility to repair.
- 6. The condition of the existing storm sewer in adjacent areas should be documented prior to

<sup>/</sup>Private/var/folders/2w/g9qr\_wzd5sj803\_0kz6gj2pw0000gn/T/com.microsoft.Word/AcrFolder/49DE5934-957A-4291-9DC8-5621B5688014-42855-00080E0D385C5B03/0AD21ACB1E93A533177D6B68B0975F17B.docx Bolton & Menk is an equal opportunity employer.

any work. Any sediment deposited in the sewer after construction begins should be deemed to be the responsibility of the Contractor and be removed at the Contractor's expense prior to final site approval.

- 7. Work in the public right of way and connection to utilities must be coordinated with the City. A minimum 24-hour prior notice must be provided. Bituminous pavement shall be saw-cut, and concrete removed to the joint to provide clean match lines. Removal limits shall be marked by the City prior to any work.
- 8. Perimeter erosion control must be installed by the Contractor and inspected by the City prior to any other work. The Contractor must provide a minimum of 24 hours' notice prior to inspection.
- 9. The plans will need to be reviewed by the Fire Chief to verify hydrant, valve, and fire connections are adequately provided.
- 10. The applicant will be required to submit a Maintenance Agreement for all stormwater management structures and facilities. The agreement must define maintenance responsibilities following completion of project, specify types and frequencies of inspection and maintenance activities, designate who will conduct inspection and maintenance activities, and outline reporting requirements. The Agreement must be written in favor of the City and be recorded with the Final Plat.
- 11. Drainage and Utility Easements must be provided as follows:
  - a. Overall stormwater management facilities, including access routes, used to meet regulatory requirements.
  - b. All swales and piping providing drainage for multiple properties.
  - c. 5' along all side lot lines, unless adjacent to Development boundary.
  - d. 10' along all front lot lines, rear lot lines, and adjacent to Development boundary.
- 12. Record drawings must be provided upon completion of the project.

If you have any questions or comments, please contact me to discuss.

Sincerely,

Bolton & Menk, Inc.

att Bauman

Matthew S. Bauman, P.E. Project Manager