

## City of Maple Plain

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

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<i>To:</i>	City Council
<i>From:</i>	Mark Kaltsas, City Planner
<i>Meeting Date:</i>	March 24, 2025
<i>Applicant:</i>	Emily Helwig
<i>Owner:</i>	Kwik Trip, Inc.
<i>Location:</i>	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: ±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 meet applicable parking requirements.

### REQUIRED

Motor Fuel Station: 4 spaces

Convenience Store: 1 space per 250 GFA (9,070 SF/250 = 37)

Car Wash: 1 space

TOTAL: 42 spaces

### PROVIDED

Standard Stalls 35 spaces

Accessible 2 spaces

Fuel Canopy 20 spaces

TOTAL: 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.

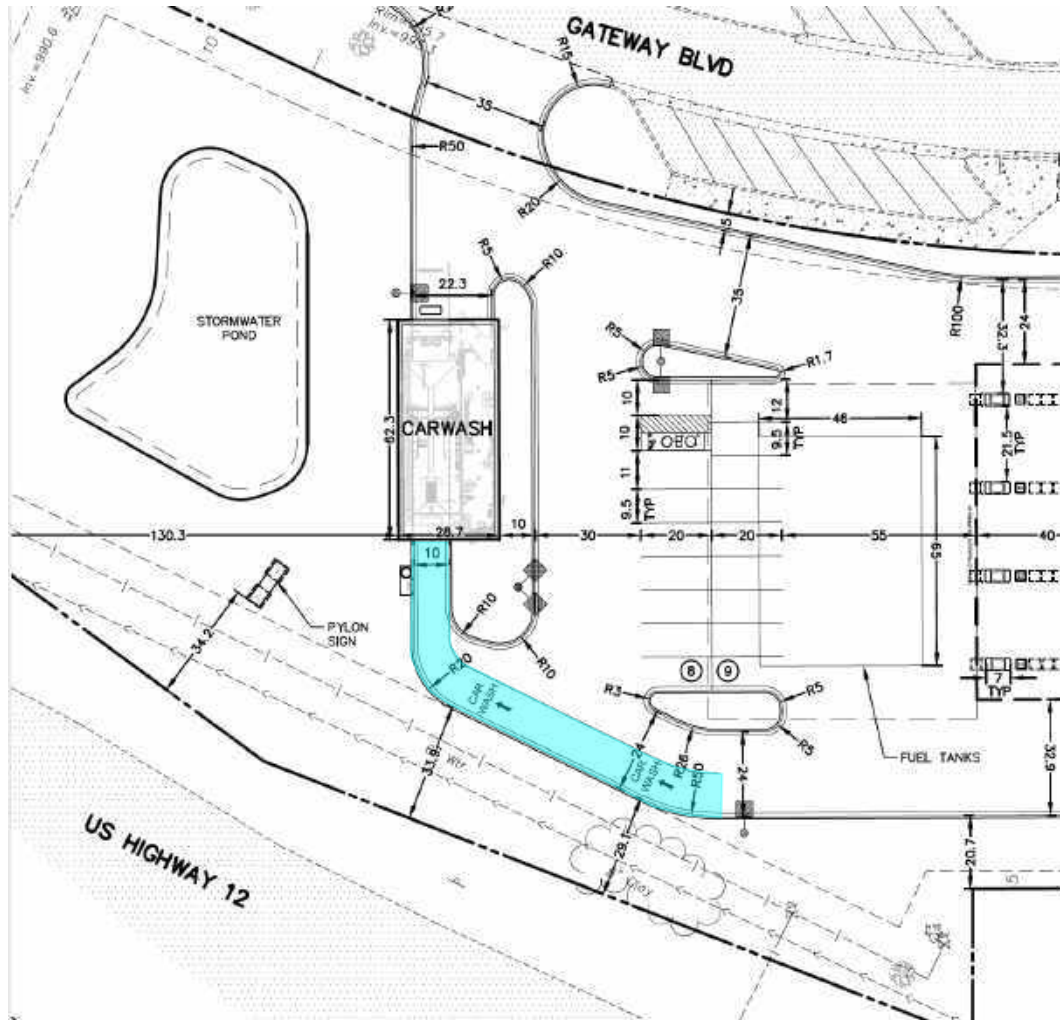
#### Parking Space Design:

**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 recommended 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). The applicant has revised the plans to provide the designated stacking area.





#### Landscape Plan:

The applicant has prepared a comprehensive landscape plan. Staffs initial review identified several areas where minor revisions were recommended. The proposed landscape plan has been revised to address all staff comments. T

#### Police/Fire/Engineering

All comments provided by Fire and Police have been addressed by the applicant in the revised plans.

#### 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:

The lighting plans have been revised based on comments provided in the city's initial review.

#### 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 base 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:

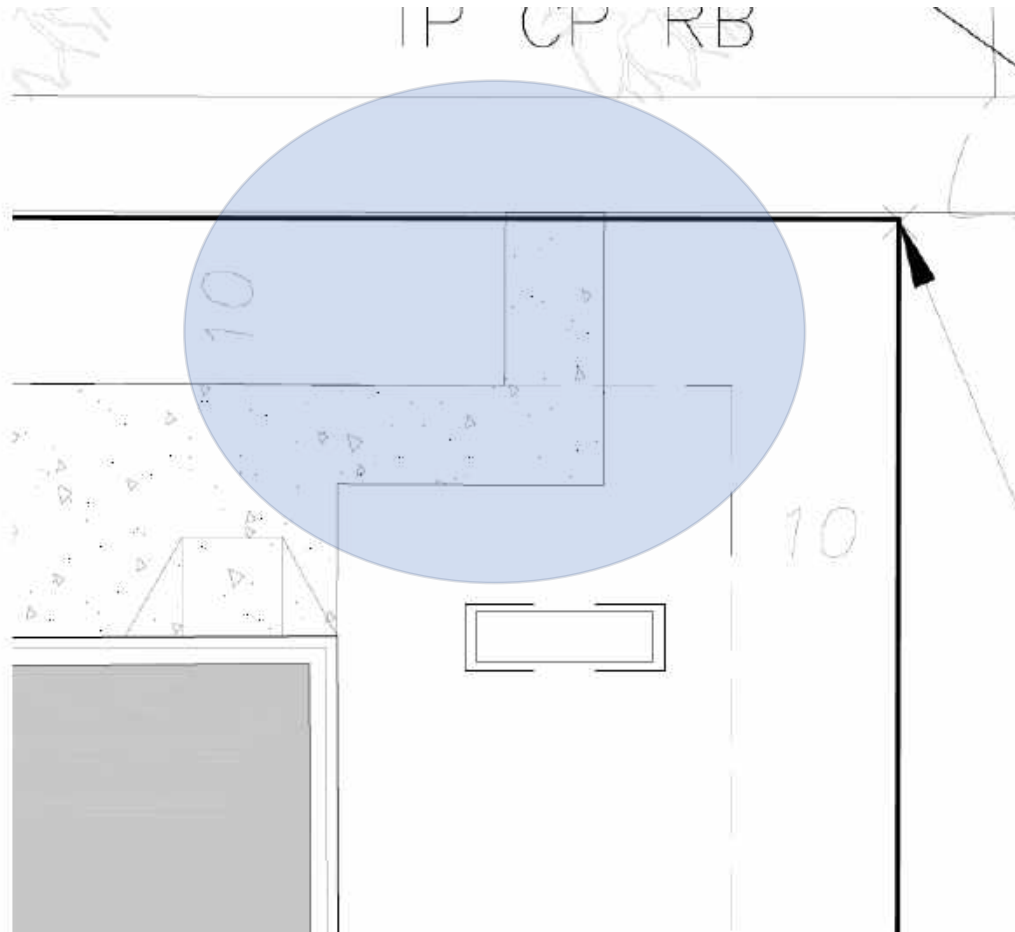
Staff will be seeking direction and feedback relating to the proposed application for a new convenience store, fuel station and car wash. The city has worked with the applicant for several years to find a suitable location for this use along Highway 12. The proposed location does work for the applicant 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. Hennepin County has provided a formal review. Hennepin County recommended that the applicant consider a



sidewalk connection along the east side of this property (west side of CSAH 29). The city has reviewed this request and noted that there is not a connection point along the west side of CSAH 29 that a sidewalk would tie into at this time. The other factor is that the pedestrian underpass of the railroad tracks is on the east side of CSAH 29. As a result, a sidewalk connection does not appear to be warranted. Staff will seek Council direction relating to a sidewalk connection.

- 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. A condition has been included to allow outdoor storage between fuel pumps provided it is maintained in a clean and orderly fashion at all times. Products displayed shall not encroach into the drive lane and shall not be stacked higher than 42 inches.
- The subdivision will be subject to park dedication fees. The requisite fee will be cash in lieu of land and is equal to 10% of the land area. It is estimated that the
- The city noted that the sidewalk surrounding the building should connect with the city's sidewalk on Gateway Blvd. The applicant has revised the plans to include a sidewalk connection (see below).



***Neighbor Comments:***

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

***Recommendation:***

The Planning Commission recommended approval of 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, 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.
3. City Council approval is subject to the following:
  - a. The applicant shall receive all applicable approvals from all outside agencies with authority over this site including:
    - MCWD
    - MNDOT
    - Hennepin County
  - b. The applicant shall pay applicable park dedication fees in accordance with the city's fee schedule.
4. 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.
5. The Applicant shall pay for all costs associated with the City's review of the site plan review, conditional use permit, preliminary and final plat.

***Attachments:***

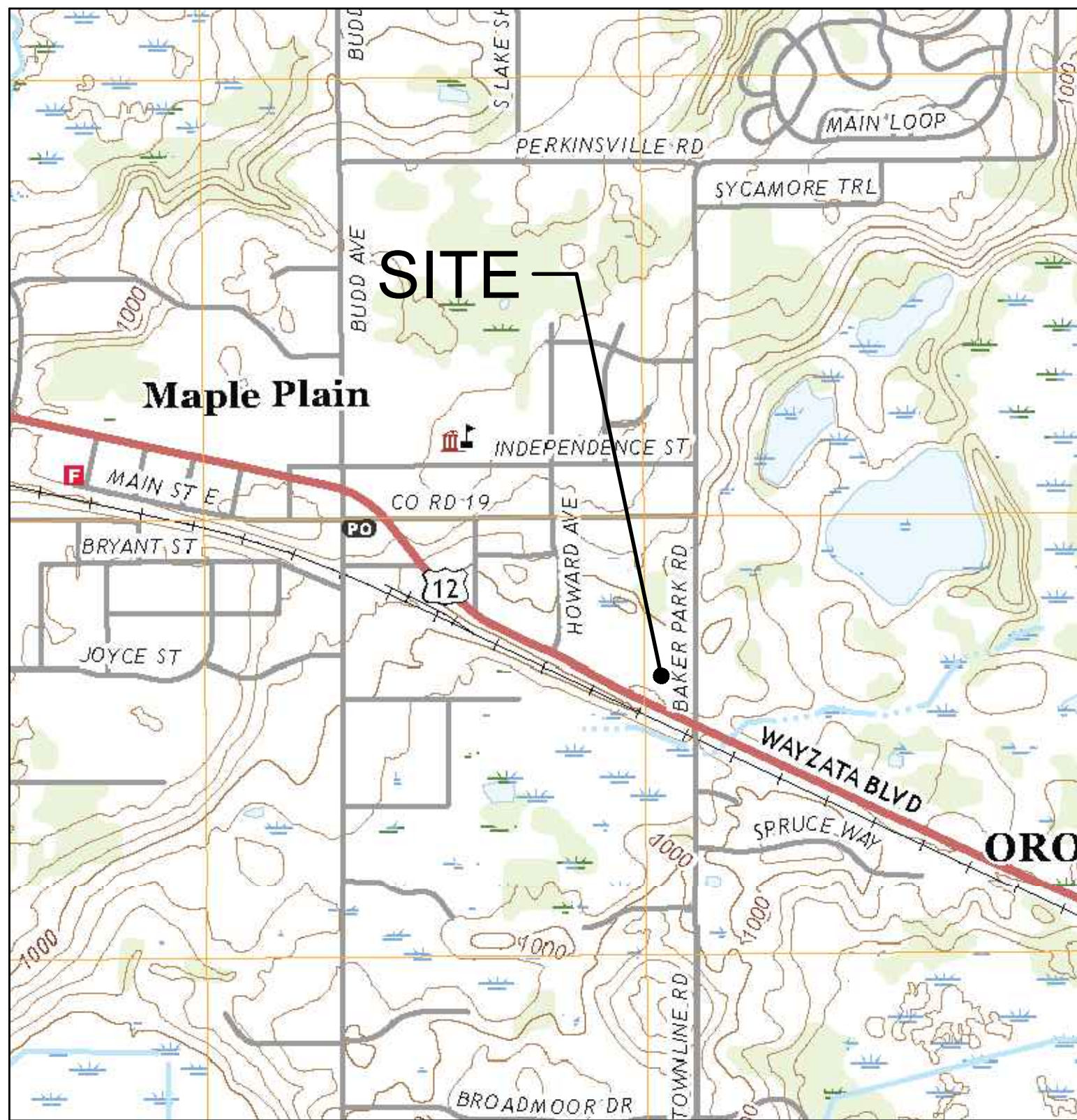
- 1. RESOLUTION**
2. Application
3. Survey
4. Site Plan Package
5. Preliminary Plat
6. Building Elevations
7. Sign Package
8. City Review Letter



# KWIK TRIP STORE #1775

## PERMIT SET

CITY OF MAPLE PLAIN  
HENNEPIN COUNTY, MINNESOTA



SITE LOCATION MAP



AERIAL LOCATION MAP

DRAWING INDEX	
C001	TITLE SHEET
C010	EXISTING CONDITIONS SURVEY
C020	DEMO PLAN
C100	SITE KEYNOTE PLAN
C180	SITE CIRCULATION PLAN
C181	SITE DIMENSION PLAN
C200	GRADE PLAN
C300	STORM SEWER PLAN
C301	STORM SEWER NOTES & DETAILS
C400	UTILITY PLAN
C401	UTILITY NOTES
C500	SITE PLAN DETAILS
C501	SITE PLAN DETAILS
C502	SITE PLAN DETAILS
C600	EROSION CONTROL PLAN
C601	EROSION CONTROL NOTES
C602	EROSION CONTROL DETAILS
C603	EROSION CONTROL DETAILS
C700	LANDSCAPE PLAN
C701	LANDSCAPE PLAN
C702	LANDSCAPE PLAN
C800	PHOTOMETRIC LIGHTING PLAN
C801	PHOTOMETRIC RENDERING PLANS

**OWNER**  
KWIK TRIP, INC  
EVAN ROTHWELL  
1626 OAK STREET  
LA CROSSE, WI 54602  
PHONE: 608-793-4967  
EMAIL: [erothwell@kwiktrip.com](mailto:erothwell@kwiktrip.com)

**CIVIL ENGINEER**  
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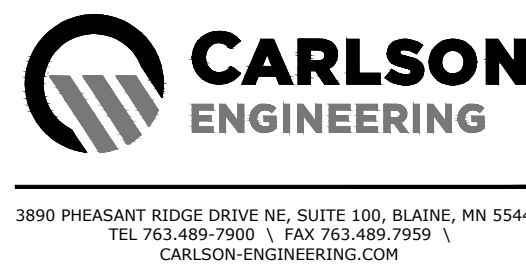
**SITE DESIGNER**  
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DANIEL WILKE  
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PLYMOUTH, MN 55446  
PHONE: 952-346-3864  
EMAIL: [dwilke@carlsonmccain.com](mailto:dwilke@carlsonmccain.com)

**SURVEYOR**  
CARLSON ENGINEERING, INC.  
THOMAS BALLUFF  
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BLAINE, MN 55449  
PHONE: 763-489-7916  
EMAIL: [tballuff@carlson-engineering.com](mailto:tballuff@carlson-engineering.com)


**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



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:   
Date: 1/15/25 License #: 53182

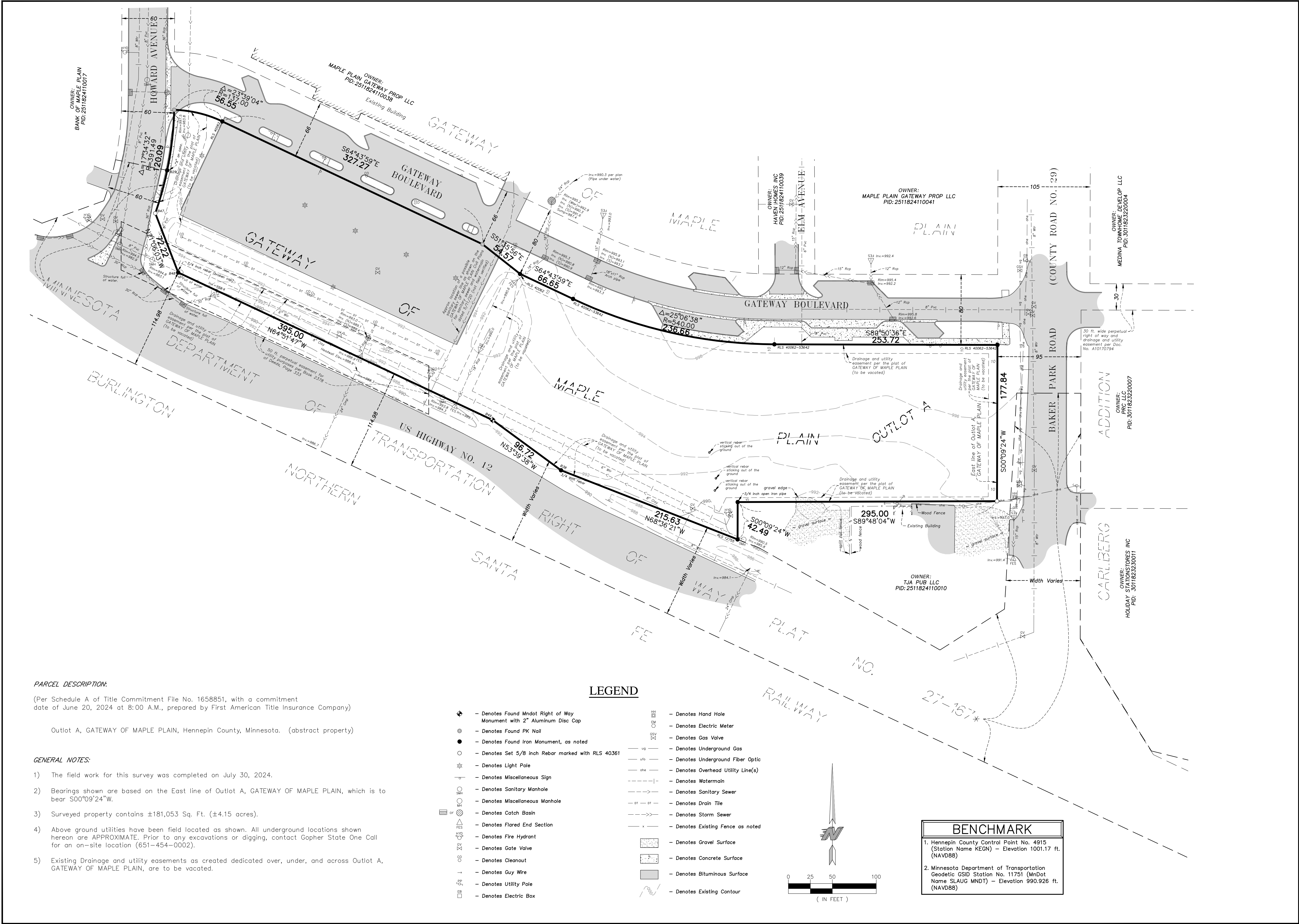
COVER SHEET

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

#	DATE	DESCRIPTION
1	02/28/25	Per City Comments
DRAWN BY		DJW
SCALE		GRAPHIC
PROJ. NO.		11109-00
DATE		2025-01-15
SHEET		1775 C001





**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 MCCAIN**

3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449  
TEL 763.489.7900 \ FAX 763.489.7999 \ CARLSONMCCAIN.COM

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly licensed land surveyor under the laws of the State of Minnesota

Name: Thomas R. Balluff  
Signature: *Thomas R. Balluff*  
Date: 12/19/24 License #: 40361

EXISTING CONDITIONS SURVEY

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

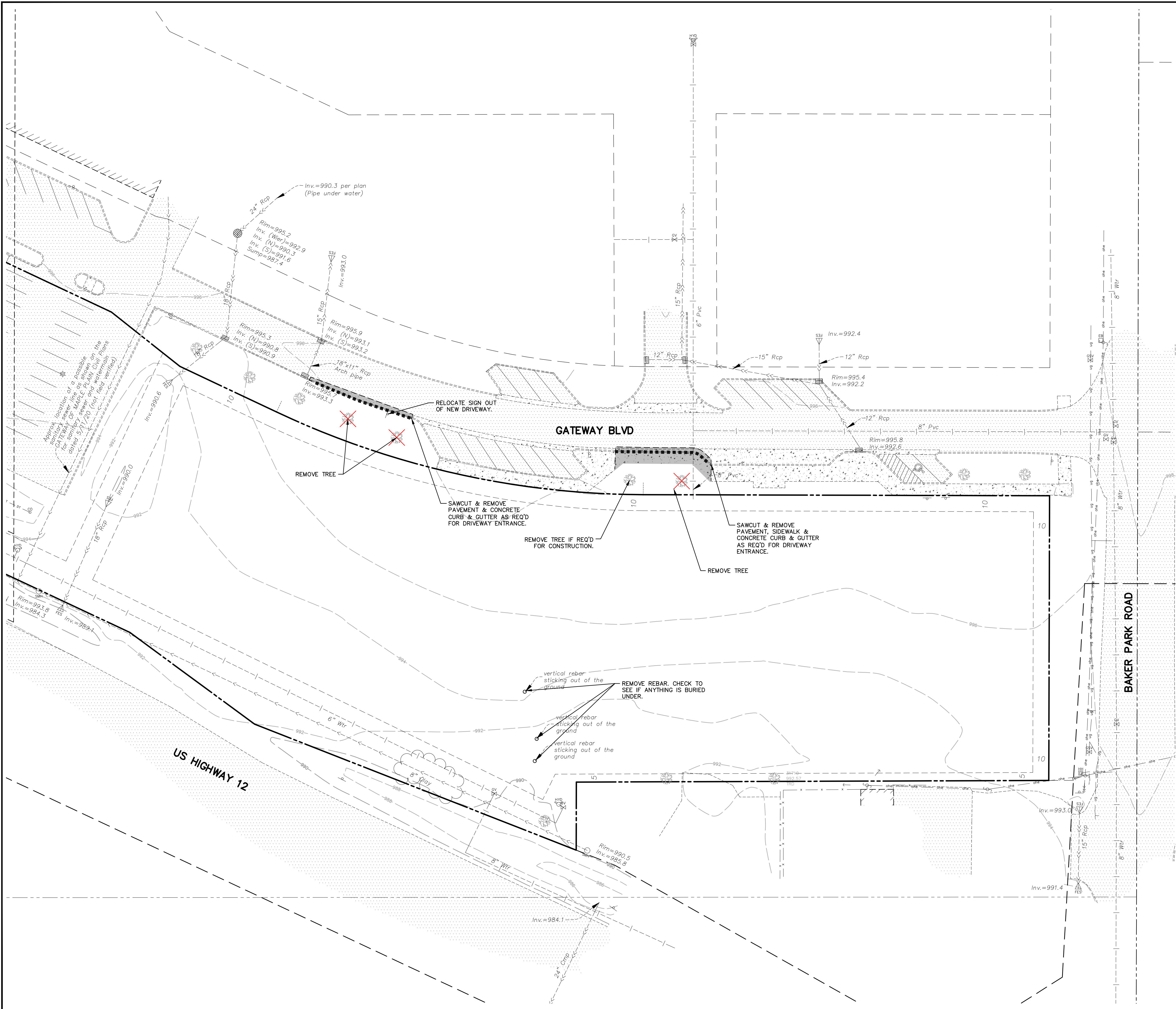
BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	NPC/NJS
SCALE	GRAPHIC
PROJ. NO.	11109-00
DATE	2024-12-19

SHEET 1775 C010





PLAN LEGEND	
EXISTING	REMOVAL
CURB	-----
BITUMINOUS	-----
CONCRETE PAVEMENT	-----
CONCRETE WALK	-----
PROPERTY LINE	-----
EASEMENT LINE	-----
STORM SEWER	-----
SANITARY SEWER	-----
WATER MAIN	-----
UNDERGROUND GAS	-----
UNDERGROUND FIBER OPTIC	-----
UNDERGROUND ELECTRIC	-----
OVERHEAD UTILITY	-----
DRAINTILE	-----
FENCE	-----
FLARED END SECTION	-----
ELECTRIC METER	-----
SANITARY MANHOLE	-----
LIGHT POLE	-----
SIGN	-----
WATER VALVE	-----
HYDRANT	-----
UTILITY POLE	-----
HANDHOLE	-----
CLEANOUT	-----
GUY WIRE	-----
ELECTRIC BOX	-----
GAS VALVE	-----

- REMOVAL PLAN NOTES**
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, DEPTH AND TYPES OF EXISTING UTILITIES AND TO NOTIFY THE OWNER AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
  - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, APPURTENANCES AND STRUCTURES NOT INDICATED FOR REMOVAL. DAMAGE CAUSED BY DEMOLITION OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
  - CONTRACTOR TO REMOVE/RELOCATE EXISTING PRIVATE UTILITIES AS NECESSARY. THE CONTRACTOR SHALL COORDINATE THESE ACTIVITIES WITH THE UTILITY COMPANIES.
  - THE CONTRACTOR IS RESPONSIBLE FOR ALL THE REMOVALS SHOWN ON THE PLANS AND SHALL CONFORM/ADHERE TO ALL GOVERNING STATE AND LOCAL REGULATIONS. ALL PERMITS, APPLICATIONS AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
  - 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.
  - THE CONDITION OF THE EXISTING STORM SEWER IN ADJACENT AREAS SHOULD BE DOCUMENTED PRIOR TO 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.

0 15 30 60  
( IN FEET )

**BENCHMARK**

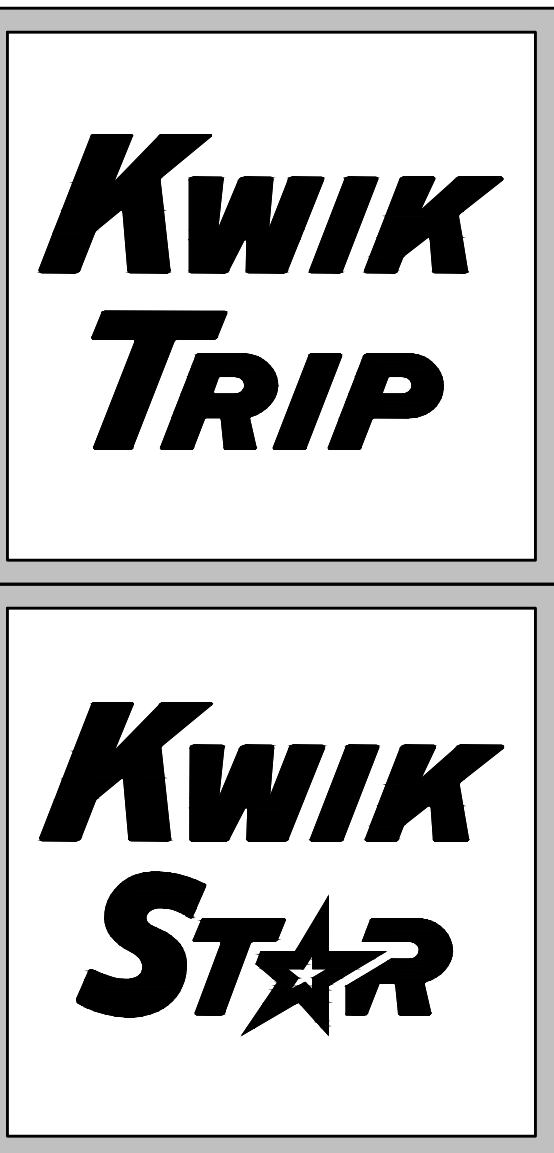
1. Hennepin County Control Point No. 4915  
(Station Name KEGN) - Elevation 1001.17 ft.  
(NAVD88)

2. Minnesota Department of Transportation  
Geodetic GSD Station No. 11751 (Midpoint)  
Name SLAUG MN017 - Elevation 990.926 ft.  
(NAVD88)

CALL BEFORE YOU DIG

**811**

Know what's below.  
Call before you dig.



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**

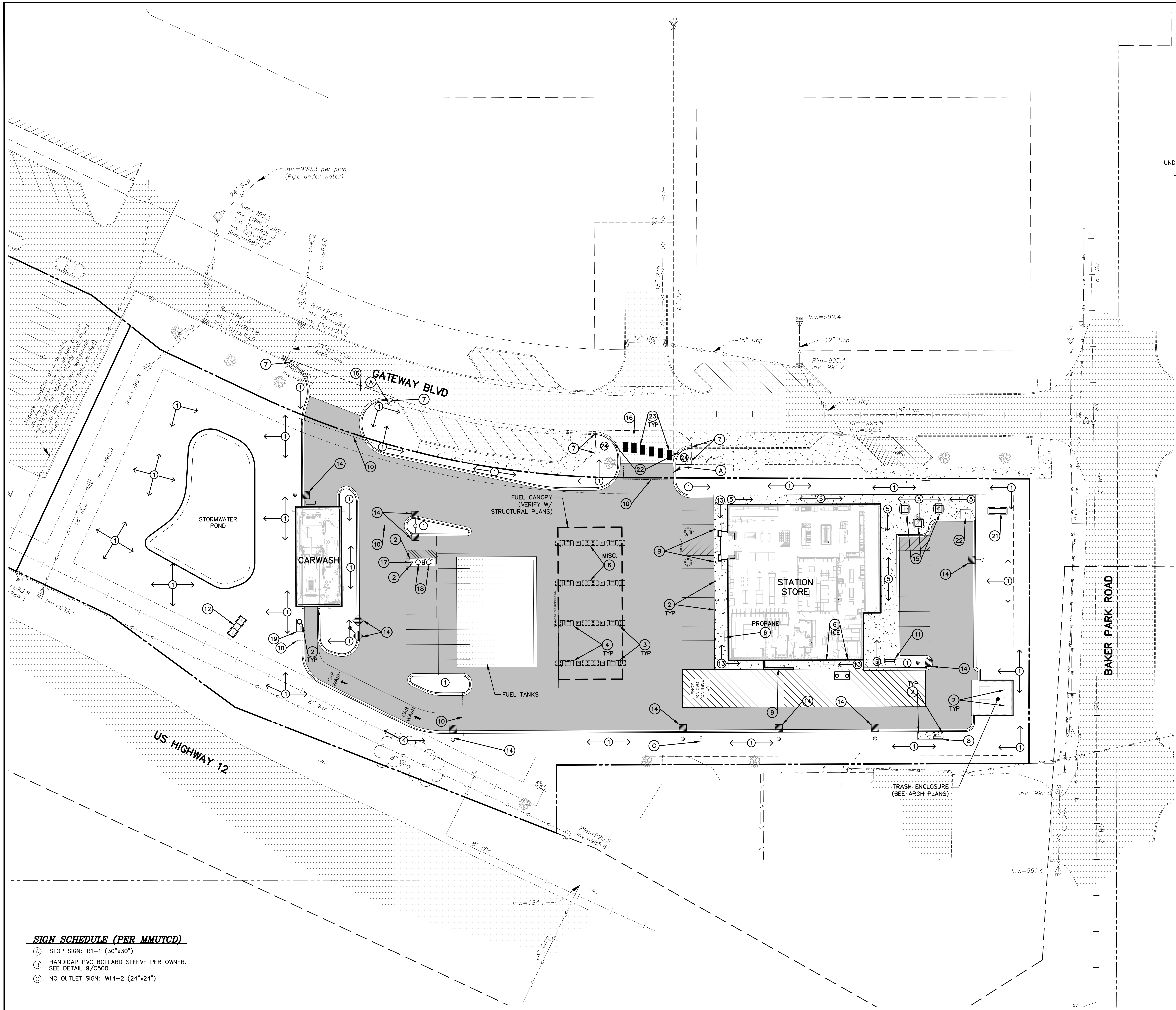
3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449  
TEL 763.489.7900 \ FAX 763.489.7999 \  
CARLSON-ENGINEERING.COM

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: [Signature]  
Date: 1/15/25 License #: 53182

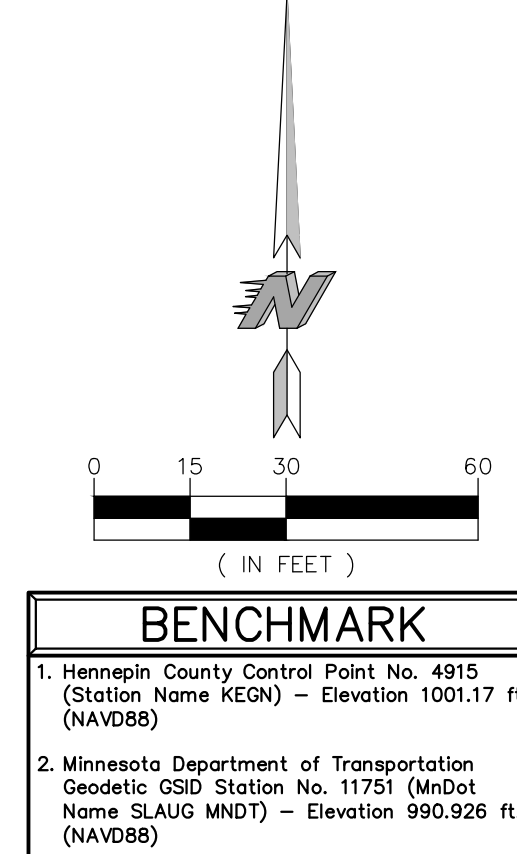
DEMO PLAN	CONVENIENCE STORE #1775 WITH 1-BAY DETACHED CARWASH		BAKER PARK ROAD & GATEWAY BLVD MAPLE PLAIN, MINNESOTA
	#	DATE	
	02/28/25	Per City Comments	
DRAWN BY	DJW		
SCALE	GRAPHIC		
PROJ. NO.	11109-00		
DATE	2025-01-15		
SHEET	1775 C020		





PLAN LEGEND	
EXISTING	PROPOSED
CURB	
BITUMINOUS	
CONCRETE PAVEMENT	
CONCRETE WALK	
PROPERTY LINE	
EASEMENT LINE	
STORM SEWER	
SANITARY SEWER	
WATER MAIN	
UNDERGROUND GAS	
UNDERGROUND FIBER OPTIC	
UNDERGROUND ELECTRIC	
OVERHEAD UTILITY	
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FENCE	
FLARED END SECTION	
ELECTRIC METER	
SANITARY MANHOLE	
LIGHT POLE	
SIGN	
WATER VALVE	
HYDRANT	
UTILITY POLE	
HANDHOLE	
CLEANOUT	
GUY WIRE	
ELECTRIC BOX	
GAS VALVE	

- PLAN KEYNOTES**
- LANDSCAPE AREA. SEE SHEET L1.
  - 30" HEIGHT, 6" DIAMETER CONCRETE FILLED PIPE BOLLARD. SEE DETAIL 6/C500.
  - 36" HEIGHT, 6" DIAMETER CONCRETE FILLED PIPE BOLLARD. SEE DETAIL 7/C500.
  - CONCRETE ISLAND WITH 6" EXPOSURE WITH FUEL DISPENSER. DISPENSER PER OWNER.
  - 4" CONCRETE WALK.
  - OUTDOOR MERCHANDISING.
  - MATCH EXISTING CURB & GUTTER/SIDEWALK/PAVEMENT.
  - TRANSFORMER LOCATION.
  - TOTE SCREENING WALL. SEE ARCHITECTURAL PLANS.
  - PVC IRRIGATION SLEEVE UNDER PAVEMENT. VERIFY WITH IRRIGATION PLAN FOR EXACT SIZE AND LOCATION BEFORE INSTALLATION.
  - BIKE RACK PER OWNER.
  - PYLON SIGN.
  - 6" INTEGRAL CONCRETE WALK/CURB.
  - SITE AREA LIGHT WITH CONCRETE BASE PER DETAIL 5/C500.
  - PICNIC TABLE PER OWNER.
  - CONCRETE VALLEY GUTTER PER DETAIL 13/C500.
  - "FREE AIR" COMPRESSOR PER OWNER. PROVIDE SIGNAGE PER OWNER.
  - AUTO VACUUM PER OWNER ON CONCRETE ISLAND WITH 6" EXPOSURE. PROVIDE TRASH CONTAINER PER OWNER.
  - CARWASH KEYPAD PER OWNER. PROVIDE TRASH CONTAINER PER OWNER.
  - FUEL TANKS VENT STAND PER OWNER (LOCATED WITHIN FUELING CANOPY).
  - MONUMENTS SIGN.
  - PEDESTRIAN RAMP.
  - 3' X 6' WHITE CROSSWALK MARKING.
  - 6" CONCRETE WALK.



- SIGN SCHEDULE (PER MMUTCD)**
- (A) STOP SIGN: R1-1 (30"x30")
  - (B) HANDICAP PVC BOLLARD SLEEVE PER OWNER. SEE DETAIL 9/C500.
  - (C) NO OUTLET SIGN: W14-2 (24"x24")

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LA CROSSE, WI 54602-2107  
PH. (608) 781-8988  
FAX (608) 781-8960

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: [Signature]  
Date: 1/15/25 License #: 53182

SITE KEYNOTE PLAN

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

#	DATE	DESCRIPTION
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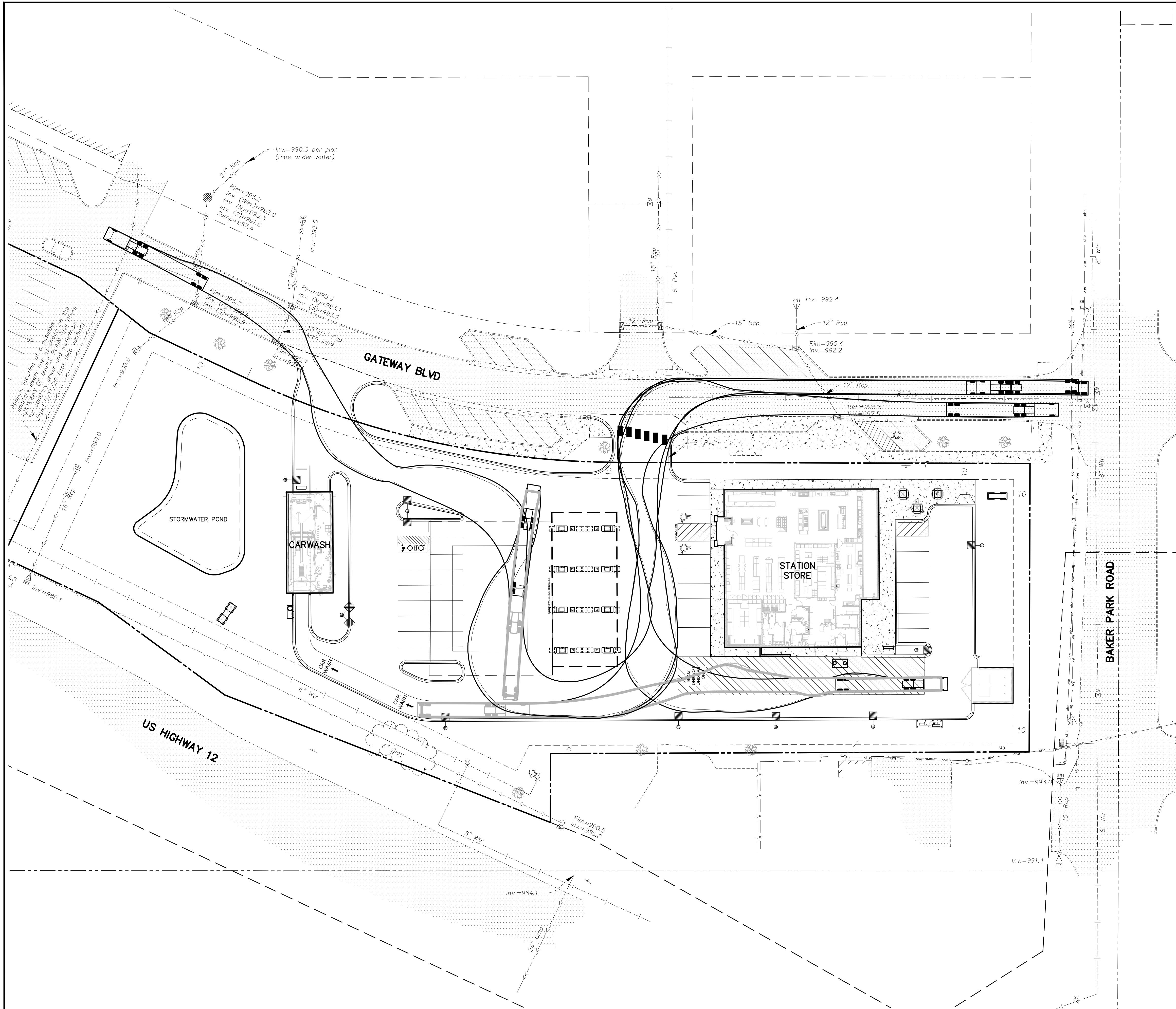
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PROJ. NO: 11109-00

DATE: 2025-01-15

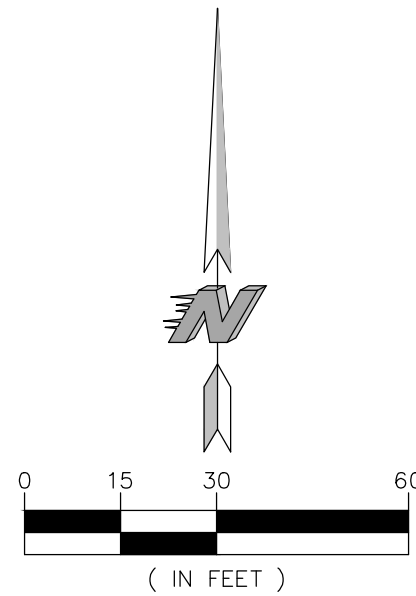
SHEET: 1775 C100





**PLAN LEGEND**

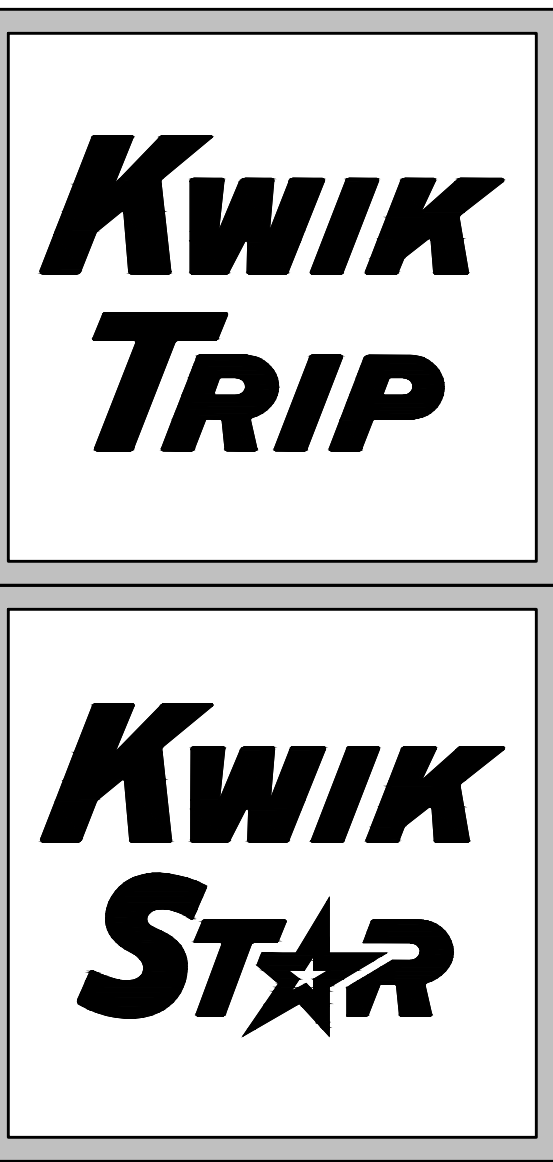
	EXISTING	PROPOSED
CURB	---	---
BITUMINOUS	---	---
CONCRETE PAVEMENT	---	---
CONCRETE WALK	---	---
PROPERTY LINE	---	---
EASEMENT LINE	---	---
STORM SEWER	---	---
SANITARY SEWER	---	---
WATER MAIN	---	---
UNDERGROUND GAS	---	---
UNDERGROUND FIBER OPTIC	---	---
UNDERGROUND ELECTRIC	---	---
OVERHEAD UTILITY	---	---
DRAINTILE	---	---
FENCE	---	---
FLARED END SECTION	---	---
ELECTRIC METER	---	---
SANITARY MANHOLE	---	---
LIGHT POLE	---	---
SIGN	---	---
WATER VALVE	---	---
HYDRANT	---	---
UTILITY POLE	---	---
HANDHOLE	---	---
CLEANOUT	---	---
GUY WIRE	---	---
ELECTRIC BOX	---	---
GAS VALVE	---	---



**BENCHMARK**

1. Hennepin County Control Point No. 4915  
(Station Name KEGN) - Elevation 1001.17 ft.  
(NAVD88)

2. Minnesota Department of Transportation  
Geodetic GSD Station No. 11791 (MnDOT  
Name SLAUG MNDT) - Elevation 990.926 ft.  
(NAVD88)



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**SITE CIRCULATION PLAN**

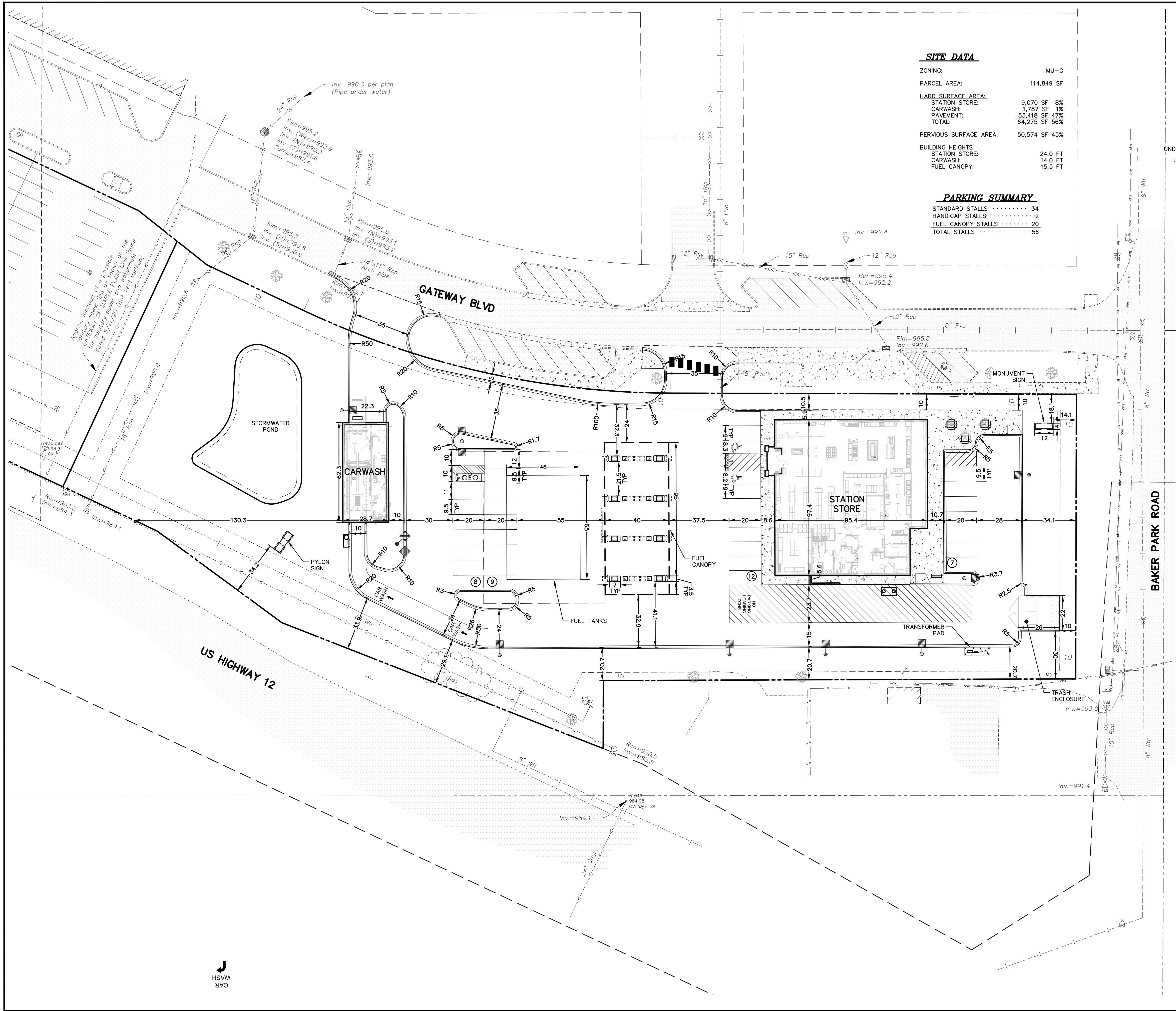
**CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH**

**BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA**

#	DATE	DESCRIPTION
1	02/28/25	Per City Comments
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DRAWN BY: DJW  
SCALE: GRAPHIC  
PROJ. NO.: 11109-00  
DATE: 2025-01-15  
SHEET: 1775 C180





**SITE DATA**

ZONING:	MU-G
PARCEL AREA:	114,849 SF
HARD SURFACE AREA:	
STATION STORE:	9,070 SF 8%
CARWASH:	1,787 SF 1%
PAVEMENT:	53,418 SF 47%
TOTAL:	64,275 SF 56%
PERVIOUS SURFACE AREA:	50,574 SF 45%
BUILDING HEIGHTS:	
STATION STORE:	24.0 FT
CARWASH:	14.0 FT
FUEL CANOPY:	15.5 FT

**PARKING SUMMARY**

STANDARD STALLS	34
HANDICAP STALLS	2
FUEL CANOPY STALLS	20
TOTAL STALLS	56

**PLAN LEGEND**

EXISTING	PROPOSED
CURB	
BITUMINOUS	
CONCRETE PAVEMENT	
CONCRETE WALK	
PROPERTY LINE	
EASEMENT LINE	
STORM SEWER	
SANITARY SEWER	
WATER MAIN	
UNDERGROUND GAS	
UNDERGROUND FIBER OPTIC	
UNDERGROUND ELECTRIC	
OVERHEAD UTILITY	
DRAIN TILE	
FENCE	
FLARED END SECTION	
ELECTRIC METER	
SANITARY MANHOLE	
LIGHT POLE	
SIGN	
WATER VALVE	
HYDRANT	
UTILITY POLE	
HANDHOLE	
CLEANOUT	
GUY WIRE	
ELECTRIC BOX	
GAS VALVE	

**SITE PLAN NOTES**

- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- CONCRETE CURB AND GUTTER SHALL BE B612 UNLESS OTHERWISE NOTED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF SITE WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES OR VARIATIONS FROM THE PLAN.
- UNLESS OTHERWISE SHOWN ON THIS DRAWING, CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINT AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS AND DRIVES PER THE FOLLOWING REQUIREMENTS:

CONTROL JOINT MAX. SPACING: WALKS-8' O.C.  
ALL OTHERS-10' O.C.

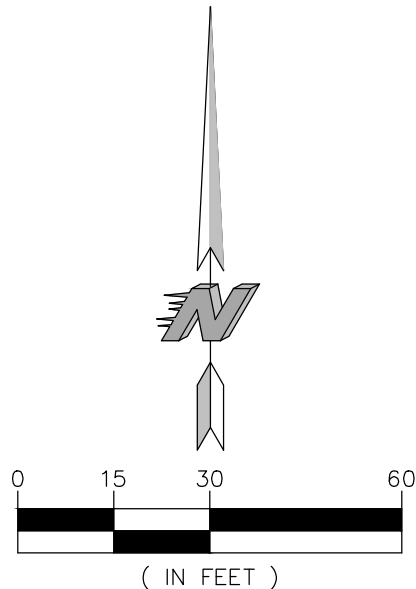
SAW CUT CONTROL JOINTS MINIMUM 1/4 CONCRETE THICKNESS.

EXPANSION JOINT MAX. SPACING: WALKS-24' O.C.  
\*ALL OTHERS-40' O.C.

\*ALL POINTS WHERE A CHANGE IN PAVEMENT THICKNESS OCCURS SHALL HAVE AN EXPANSION JOINT.

DOWELL ALL EXPANSION JOINTS: 24" O.C. MAX.

CONCRETE SEALER SHALL BE TK-26UV.



**BENCHMARK**

- Hennepin County Control Point No. 4915 (Station Name KEGN) - Elevation 1001.17 ft. (NAVD88)
- Minnesota Department of Transportation Geodetic GSD Station No. 11751 (MnDOT Name SLAUG MND1) - Elevation 990.926 ft. (NAVD88)

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Signature: *[Signature]*  
Date: 1/15/25 License #: 53182

SITE DIMENSION PLAN

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

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SHEET	1775 C181



GRADING NOTES

1. SILT FENCE AND EXISTING CATCH BASIN INLET PROTECTION SHALL BE INSTALLED PRIOR TO GRADING CONSTRUCTION, AND SHALL BE MAINTAINED UNTIL SITE HAS BEEN STABILIZED.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND PAVEMENTS PRIOR TO THE START OF GRADING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES OR VARIATIONS FROM THE PLAN.
3. CONTRACTOR SHALL STRIP, STOCKPILE AND RESPREAD SUFFICIENT TOPSOIL TO PROVIDE A MINIMUM OF 4" OF TOPSOIL OVER ALL DISTURBED AREAS THAT WILL BE SODDED, SEEDED OR LANDSCAPED.
4. PERMETER 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.

PLAN LEGEND

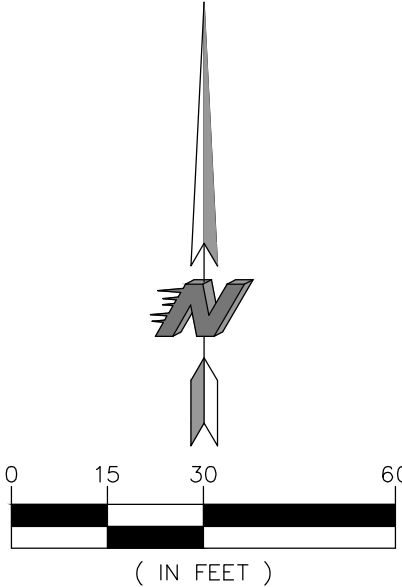
EXISTING	PROPOSED
CURB	
BITUMINOUS	
CONCRETE PAVEMENT	
CONCRETE WALK	
PROPERTY LINE	
EASEMENT LINE	
STORM SEWER	
SANITARY SEWER	
WATER MAIN	
UNDERGROUND GAS	
UNDERGROUND FIBER OPTIC	
UNDERGROUND ELECTRIC	
OVERHEAD UTILITY	
DRAIN TILE	
FENCE	
FLARED END SECTION	
ELECTRIC METER	
SANITARY MANHOLE	
LIGHT POLE	
SIGN	
WATER VALVE	
HYDRANT	
UTILITY POLE	
HANDHOLE	
CLEANOUT	
GUY WIRE	
ELECTRIC BOX	
GAS VALVE	
10' CONTOUR	
2' CONTOUR	
SPOT ELEVATION (CURB ELEVATIONS ARE TO GUTTER LINE)	
EROSION CONTROL BLANKET	
SILT FENCE	
SOIL RIPPING AREAS	

SOIL MANAGEMENT STRATEGIES

1. SOIL REMEDIATION (LOOSENING & AMENDMENT) MUST BE IMPLEMENTED PRIOR TO ANY INSTALLATION OF IRRIGATION SYSTEM COMPONENTS, TREES, SHRUBS, SOD AND/OR SEED. NO WHEELED EQUIPMENT SHALL BE USED ON LOOSENEED/AMENDED SOIL - WIDE-TRACKED EQUIPMENT ONLY.
2. LOOSENEED/AMENDED SOILS SHALL HAVE A MAXIMUM OF 200 PSI IN TOP 12-INCHES (INSERTING A 12-INCH WIRE FLAG, BY HAND TO FULL DEPTH) AND A MINIMUM OF 5% ORGANIC CONTENT IN TOP 6-INCHES OF SOIL (VISUALLY BLACK SOIL). SALVAGED TOPSOIL BY ITSELF DOES NOT COUNT TOWARD 5% SOIL ORGANIC TARGET.
3. ALL DISTURBED AREAS INDICATED ON THE PLAN SHALL HAVE A TOP 8-INCH DEPTH OF 2-INCHES OF MNDOT 3890 GRADE 2 COMPOST MIXED WITH 6-INCHES OF TOPSOIL, ONLY IF IMPORTED MNDOT 3890 GRADE 2 COMPOST HAS A MINIMUM OF 40% ORGANIC MATTER CONTENT. THE UNDERLYING 4-INCHES OF SOILS SHALL BE RIPPED PRIOR TO PLACEMENT OF THE COMPOST MIX.

GOVERNING SPECIFICATIONS

1. THE LATEST EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
2. THE LATEST EDITION OF THE CITY OF MAPLE PLAIN STANDARD DETAILS AND SPECIFICATIONS.
3. THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
4. THE LATEST EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS.



BENCHMARK

1. Hennepin County Control Point No. 4915 (Station Name KEGN) - Elevation 1001.17 ft. (NAVD88)
2. Minnesota Department of Transportation Geodetic SSD Station No. 11791 (Mndot Name SLAUG MNDT) - Elevation 990.926 ft. (NAVD88)

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
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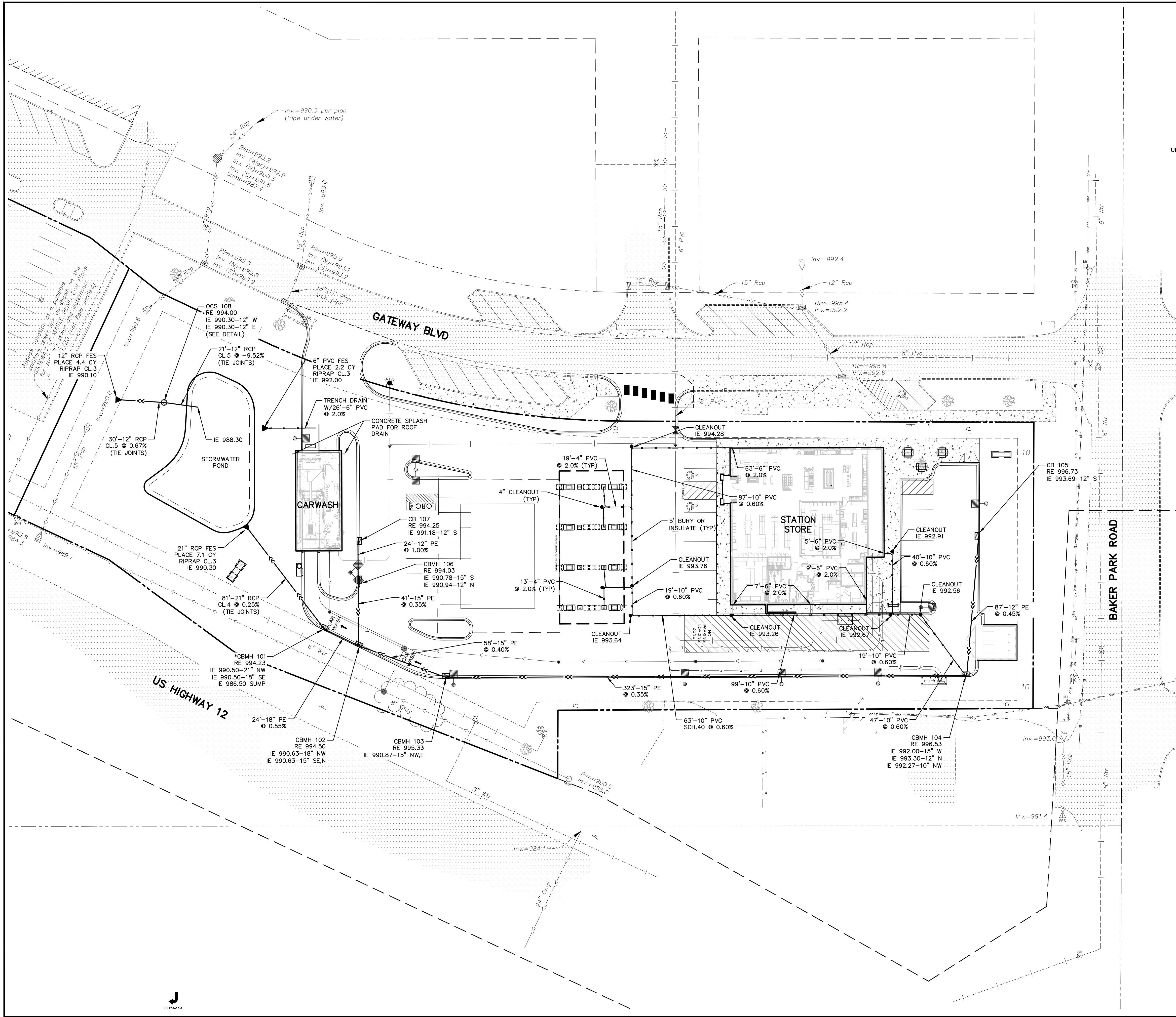
GRADE PLAN

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

#	DATE	DESCRIPTION
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PROJ. NO.	11109-00	
DATE	2025-01-15	
SHEET	1775 C200	

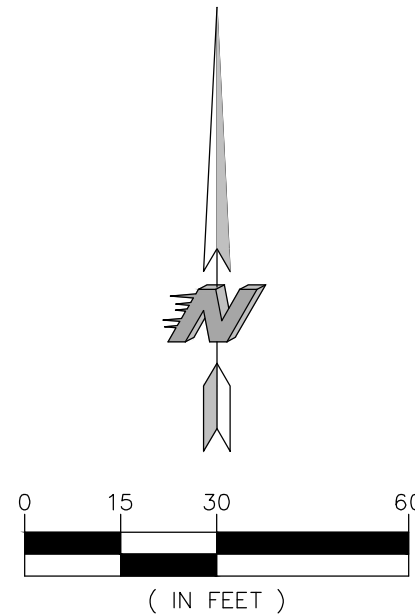




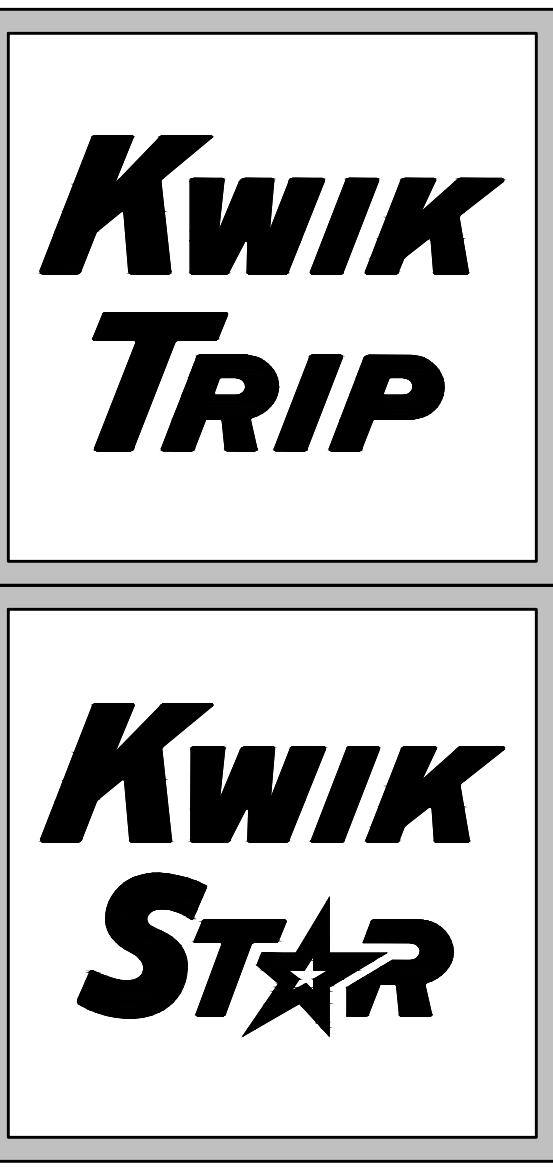
PLAN LEGEND		
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BITUMINOUS		
CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS		
UNDERGROUND FIBER OPTIC		
UNDERGROUND ELECTRIC		
OVERHEAD UTILITY		
DRAIN TILE		
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FLARED END SECTION		
ELECTRIC METER		
SANITARY MANHOLE		
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WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		
CLEANOUT		
GUY WIRE		
ELECTRIC BOX		
GAS VALVE		

STORM SEWER SCHEDULE		
STRUCTURE		NEENAH CASTING or EQUAL
TYPE & No.	SIZE	SEE DETAIL
OCS-108	48" DIA.	
CB-107	24" x 36"	R-3067-V
CBMH-106	48" DIA.	R-3067-VB
CB-105	24" x 36"	R-3067-VB
CBMH-104	60" DIA.	R-3067-VB
CBMH-103	48" DIA.	R-3067-V
CBMH-102	60" DIA.	R-3067-V
*CBMH-101	48" DIA.	R-3067-VB

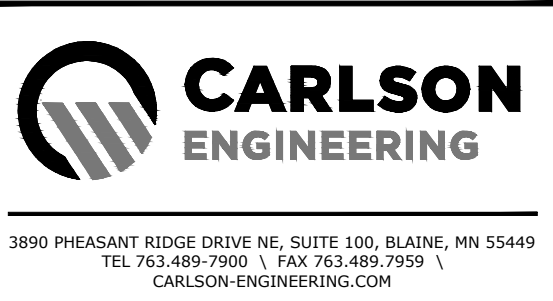
\* INSTALL 24R SNOUT OIL & DEBRIS STOP AS MANUFACTURED BY BMP, INC. ON OUTLET PIPE.



BENCHMARK	
1. Hennepin County Control Point No. 4913 (Station Name KEGN) - Elevation 1001.17 ft. (NAD83)	
2. Minnesota Department of Transportation Geodetic GSID Station No. 11751 (MnDOT Name SLAUG MNDT) - Elevation 990.926 ft. (NAD83)	



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STORM SEWER PLAN  
CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH  
BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

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STORM DRAINAGE:

1. 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 corrugated 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. Install catchbasin castings with specified rim elevation as shown.



3. All joints and connections in the storm sewer system shall be gastight or watertight. Use flexible compression joints to make watertight connections to manholes in accordance with Minnesota Rules, Chapter 4714.079B. Where permitted by the administrative authority, approved resilient rubber seals or watertight gaskets may be used in order to make watertight connections to manholes, catchbasins, and other structures. Use Fernco "Concrete Manhole Adaptors" or "Large Diameter Watertight", "Press-Seal", "Watertight 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.

6. PVC Pipe (Outside of the Building): 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 F856 pipe 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 D3231, which requires open-trench installation on a continuous granular bed.

7. Cleanouts: 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 at 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. Fittings: 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. RCP: Reinforced concrete pipe (RCP) and fittings shall conform to ASTM C76, Design C, with circular reinforcing for the size 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 sewers 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. RC Aprons: 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. Grates on Horizontal Pipes: 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.

12. Testing: 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. Drontite: In accordance with Minnesota Rules part 4714.1102.5, use perforated polyvinyl chloride PVC (ASTM D2729) or corrugated polyethylene PE (ASTM F405) on all drontite 3-inches to 6-inches in diameter. Install drontite with high permeability circular knit polymeric filament filter sock per ASTM D6707-01. Mdot 3733 Type 1 seam seam non-woven fabric shall not be used. Drontite pipe directly connected to the storm sewer is classified as storm sewer. Drontite 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 oxidant 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/TraceWireSpecGuideFinal08.pdf](http://www.mrwa.com/PDF/TraceWireSpecGuideFinal08.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 Dycrom 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](http://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

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.

21. 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 pipe in water or when the trench conditions are unsuitable for such work.

22. Line ponds with 2' thick improved clay liner per detail.

23. Clean sediment and debris from sewers, sumps and stormwater basins prior to final owner acceptance.

24. Telesive 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.

HDPE REQUIREMENTS:

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 F2366 (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-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.

6. Lay all HDPE pipe on a continuous granular bed. Installation must comply with ASTM D3231. All sections of the corrugated HDPE pipe shall 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 manual for deflection testing. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 90% 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.

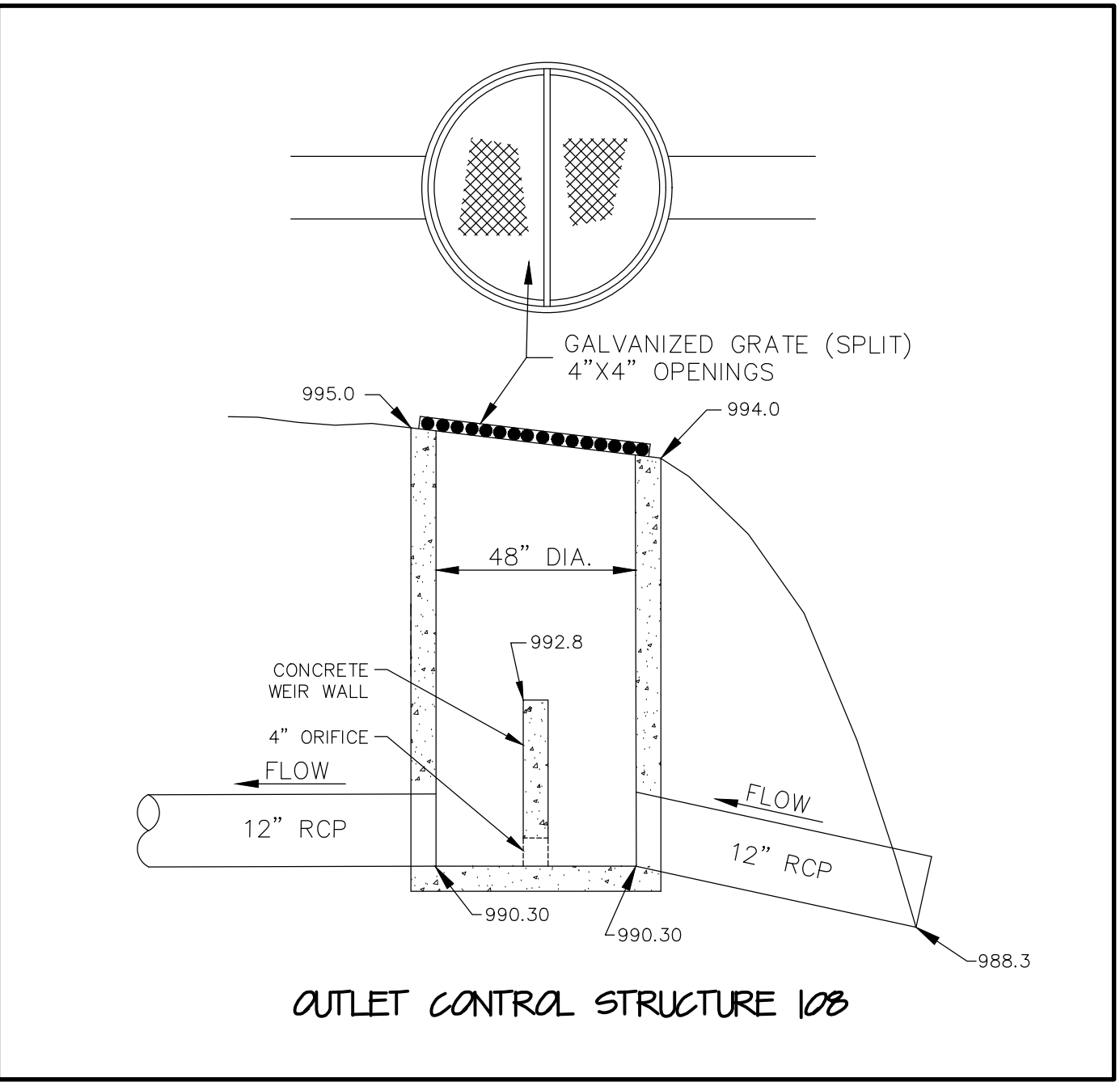
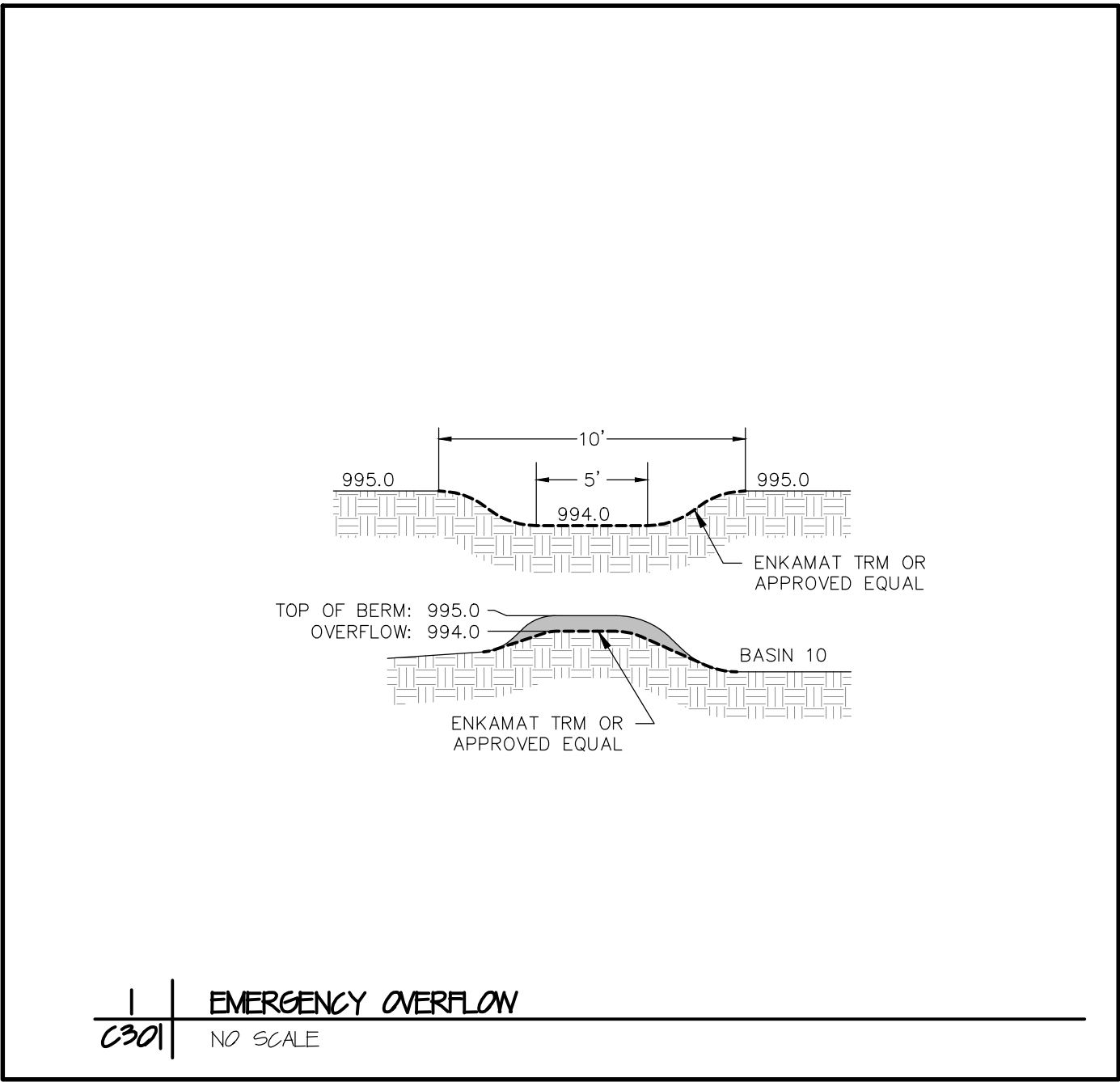
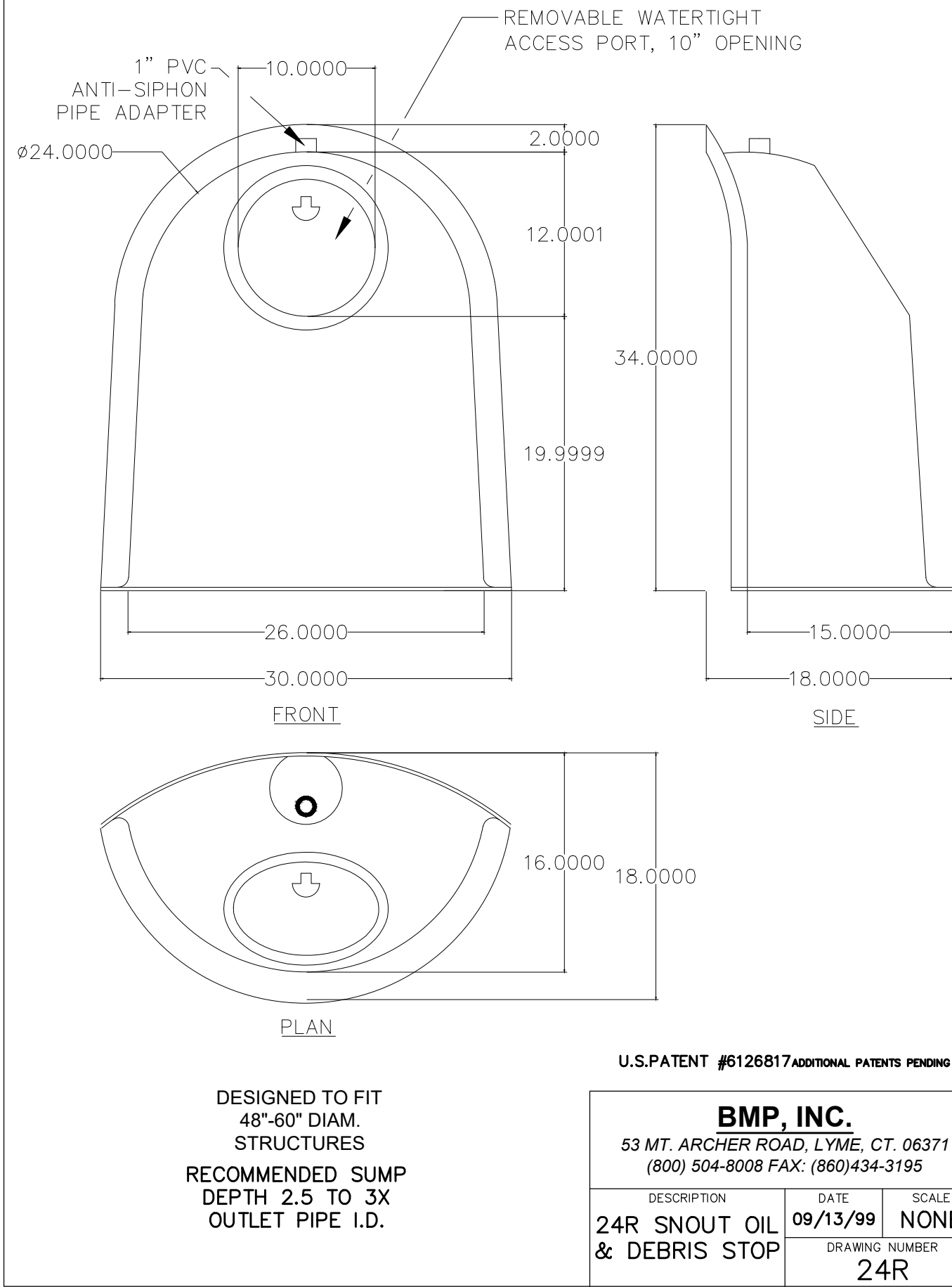


TABLE OF QUANTITIES RIPRAP AT RCP OUTLETS											
DIA. OF ROUNDP PIPE (IN.)	SPAN OF PIPE (FT.)	CLASS II d <sub>50</sub> = 6"			CLASS III d <sub>50</sub> = 9"			CLASS IV d <sub>50</sub> = 12"			24" DEPTH (CU. YD.)
		GEO-TEXTILE FILTER UNDER APRON	12" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	18" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	18" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	24" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	
12	8	16.8	0.2	3.0	18.6	0.3	4.4	22.6	0.3	5.9	
15	8	18.0	0.2	3.2	20.6	0.3	4.8	23.8	0.3	6.4	
18	10	22.4	0.3	4.3	25.6	0.4	6.4	29.0	0.5	8.5	
21	10	24.1	0.4	4.7	27.4	0.6	8.4	31.0	0.6	9.4	
24	12	29.7	0.5	6.2	33.4	0.8	9.2	37.3	1.0	12.3	
27	12	33.4	0.6	6.6	36.2	0.9	9.8	40.0	1.2	13.2	
30	14	31.4	0.8	8.2	41.6	1.1	12.3	46.0	1.5	16.4	
36	16	45.9	1.1	10.6	59.5	1.6	15.8	65.4	2.1	21.1	
42	18	55.8	1.2	12.5	67.8	1.7	18.7	75.0	2.3	24.9	
48	20	81.1	1.5	14.8	86.5	2.2	22.2	95.0	2.9	29.6	

TABLE OF QUANTITIES RIPRAP AT RCP-A OUTLETS											
SPAN OF PIPE (IN.)	L (FT.)	CLASS II d <sub>50</sub> = 6"			CLASS III d <sub>50</sub> = 9"			CLASS IV d <sub>50</sub> = 12"			24" DEPTH (CU. YD.)
		GEO-TEXTILE FILTER UNDER APRON	12" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	18" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	18" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	24" DEPTH RIPRAP	GEO-TEXTILE FILTER UNDER APRON	
28	10	28.4	0.3	4.1	25.6	0.4	6.1	29.0	0.5	8.1	
28	12	29.5	0.5	5.7	33.2	0.7	8.5	37.1	0.9	11.3	
36	14	37.5	0.6	7.5	41.5	1.1	11.2	45.9	1.5	14.9	
43	16	45.9	1.1	9.5	50.5	1.6	14.3	55.3	2.1	19.0	
51	18	52.5	1.2	11.3	57.5	1.7	16.3	62.3	2.3	22.5	
58	20	59.9	1.3	13.2	65.2	1.9	18.8	70.7	2.6	25.4	

**NOTES:**  
REQUIREMENTS FOR GEOTEXTILE TYPE, RIPRAP SIZE AND THICKNESS WILL BE DESIGNATED IN THE PLANS.  
PIPE SIZES LARGER THAN THOSE SHOWN REQUIRE A SPECIAL DESIGN.  
① FOR PIPES GREATER THAN OR EQUAL TO 30", USE 1.5'.  
② GEOTEXTILE FILTER, SPEC. 3733, SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIPRAP, GRANULAR FILTER MATERIALS.  
③ DIMENSION E IS GIVEN ON STANDARD PLATES 3100 AND 3101.  
④ GRANULAR FILTER, SPEC. 3601, MAY BE USED AS A CUSHION LAYER, PLACE FILTER PER SPEC. 2511. THE CUSHION LAYER IS INCIDENTAL.  
⑤ GRANULAR FILTER OR RIPRAP, SPEC. 3601, TO EXTEND UNDER ENTIRE BOTTOM OF PIPE APRON. DEPTH OF MATERIAL UNDER APRON SHALL MATCH RIPRAP DEPTH. WHEN USING RIPRAP INCREASE RIPRAP QUANTITY ACCORDINGLY AND PLACE A 3" LAYER OF 1.5' CRUSHED ROCK UNDER THE APRON TO AID IN GRADING FOR APRON PLACEMENT. CRUSHED ROCK IS INCIDENTAL.

APPROVED DECEMBER 9, 2013  
STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION  
RIPRAP AT RCP OUTLETS

SPECIFICATION REFERENCE: 3100 3601 3733 3911

STANDARD PLATE NO. 3133D

# 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:   
Date: 1/15/25 License #: 53182

## STORM SEWER NOTES & DETAILS

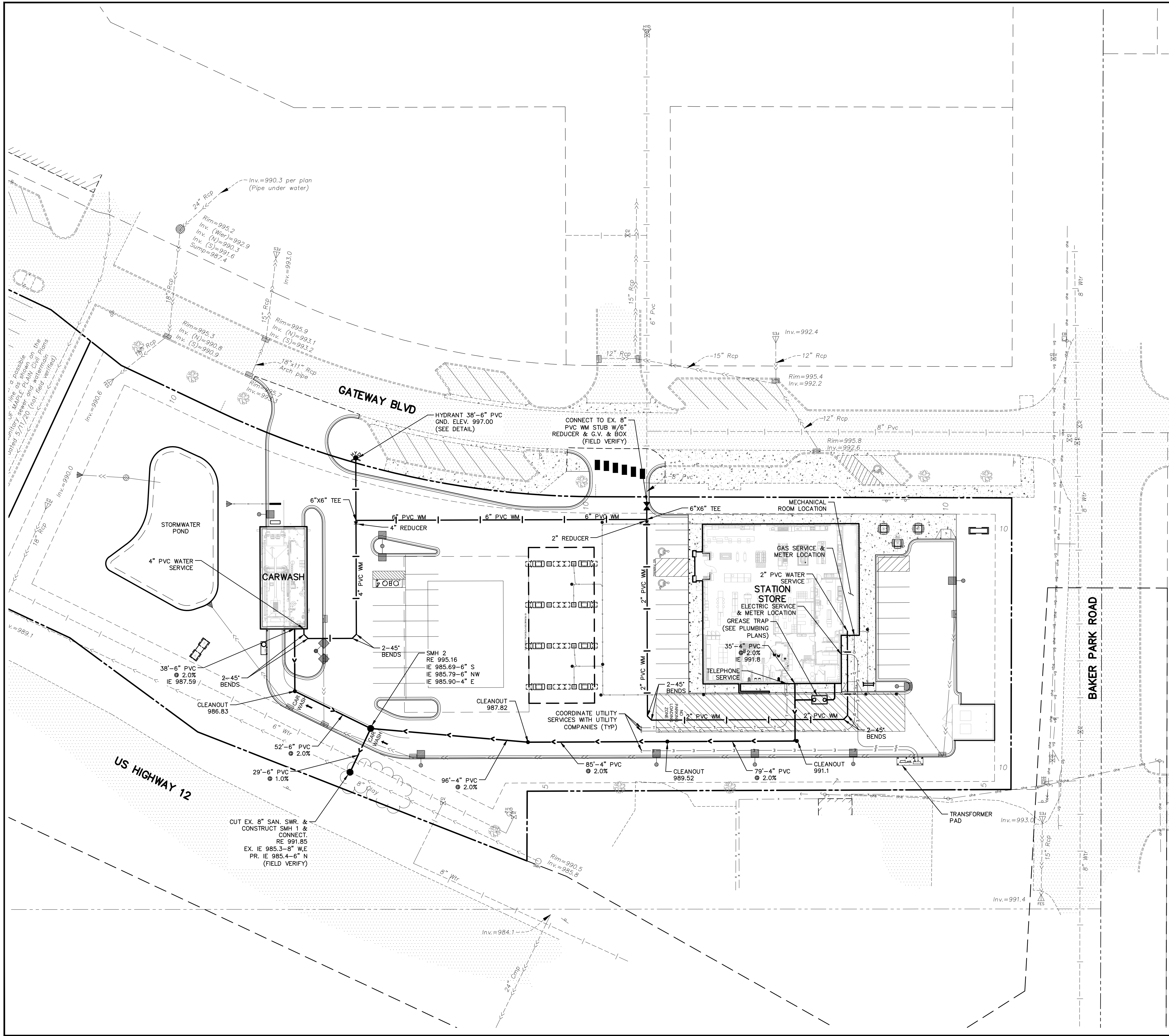
## CONVENIENCE STORE #1775 WITH 1-BAY DETACHED CARWASH

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

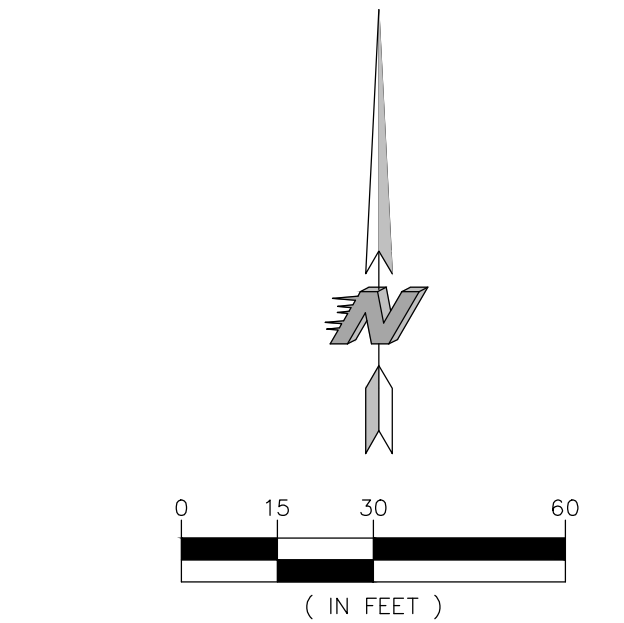
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1	02/28/25	Per City Comments

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SCALE: GRAPHIC  
PROJ. NO.: 11109-00  
DATE: 2025-01-15  
SHEET: 1775 C301

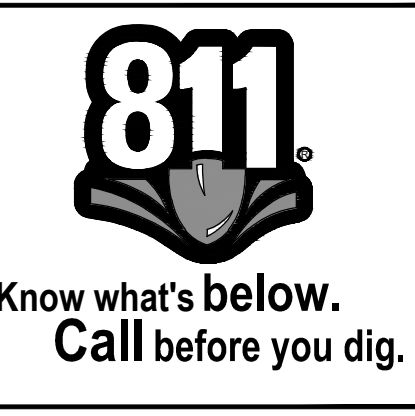




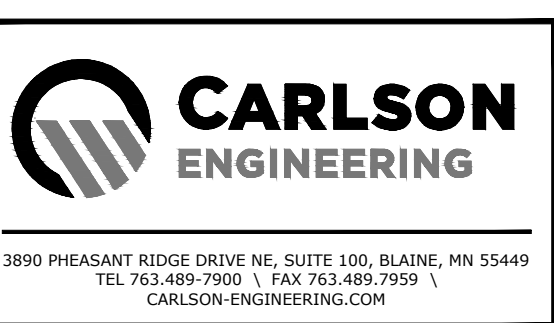
PLAN LEGEND		
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CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS		
UNDERGROUND FIBER OPTIC		
UNDERGROUND ELECTRIC		
OVERHEAD UTILITY		
DRAIN TILE		
FENCE		
FLARED END SECTION		
ELECTRIC METER		
SANITARY MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		
CLEANOUT		
GUY WIRE		
ELECTRIC BOX		
GAS VALVE		



BENCHMARK	
1. Hennepin County Control Point No. 4915 (Station Name REGA) - Elevation 1001.17 ft. (NAVD88)	
2. Minnesota Department of Transportation Geodetic GSD Station No. 11751 (MnDot Name SLAUG MNDT) - Elevation 990.926 ft. (NAVD88)	



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



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: [Signature]  
Date: 1/15/25 License #: 53182

UTILITY PLAN		
CONVENIENCE STORE #1775 WITH 1-BAY DETACHED CARWASH		
BAKER PARK ROAD & GATEWAY BLVD MAPLE PLAIN, MINNESOTA		
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GENERAL:

- Existing boundary, location, topographic, and utility information shown on this plan is from a field survey by **Carlson McCaig, 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.
- 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 determined by the City prior to any work.**
- 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 sidewalks 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's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures.
- 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 stop dimensions, site layout and dimensions, pavement sections and details, striping, and other site features.
- 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 cutting 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 route, make the route accessible to persons with disabilities. Make necessary adjustments to 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 MfTs by coexisting. Connect to existing storm sewer MfTs by either sawcutting or coexisting. Use saws or drills that provide water to the blade. Meet all City standards and specifications for the connection. Reconstruct inverts after installation. Use water stop gaskets until seals have been installed in a structure wall with a pipe. Take measurements before beginning construction to ensure that project 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 concrete fill to be decontaminated with concrete. For all 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 back six-inch diameter holes in the barrel at the bottom of the 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 inspections.
- 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 a Utility Quality Level D. This quality level was determined according to the guidelines of D/ASSE 38-02, entitled "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data" by the FNA.
- 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 locations. Contact utility companies for locations of all public and private utilities within the work area prior to beginning construction. Contact Gopher State One Call at (855) 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 latest 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 land spinner lines.
- Pathole 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 metering 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 support systems include, but are not limited to, shoring, shoring, bracing, anchoring, excavation support walls, dewatering basins, 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. Water 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 trucked outside of the immediate work area or discharged into the sewer system. Task and match all connections to existing bituminous pavement.
- Relocate overhead power, telephone, and cable lines as required. Seal and report any existing unsealed 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, quality, and other details specified herein or as shown on the Plans. Do not use recycled or salvaged aggregate, asphaltic pavement, crushed concrete, or other shingles. 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, sidewalks, or vegetable 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 of all areas. 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. Perform 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 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.
- 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 trucked 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 coverings, cleanout covers, and similar items to finished grade. Comply with the requirements of each structure's owner. Structures being reset in paved areas must constitute 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 up. 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 MPDES 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 Highload 40 Polystyrene insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" thick.
- Insulate utility lines at locations indicated on the plans. Provide a minimum insulation thickness of 4 inches. The insulation must be at

SANITARY SEWER:

- 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.
- 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 4714.0719.8. 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 Femco "Concrete Manhole Adaptors" or "Large Diameter Waterstops", Press-Seal "Waterstop Grouting Rings", or approved equal. Cement mortar joints are permitted gully for repairs or connections to existing lines having such joints.
- 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.
- 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 3103.5). Proper pipe slope cannot be maintained on both of the effect 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.
- 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 must 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-in 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 603.13.2. 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 granular bed.
- Cleanouts: Install cleanouts on all sanitary 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 (Neanen R-191A-A, or approved equal) over all cleanouts.
- Testing: Pressure test all sanitary sewer lines in accordance with the Minnesota Rules parts 4714.0712 and 4714.0723 and UPC 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 repairs and retest.
- Install flexible watertight frame/chimney seals on all sanitary sewer maintenance holes in order to seal the outside of the chimney from the storm sewer into the sanitary sewer. 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 Adaptor Seal as manufactured by Adaptor, Inc. ([www.adaptorinc.com/wp-content/uploads/2019/04/ADAP\\_SealManholeSeal.pdf](http://www.adaptorinc.com/wp-content/uploads/2019/04/ADAP_SealManholeSeal.pdf)), Infr-Seal Uni-Band one piece molded seating system as manufactured by Sealing Systems, Inc. ([www.sealingssystem.com](http://www.sealingssystem.com)), or approved equal.
- Use Neenah Foundry Co. R-1642 coating with self-sealing, solid, type B lid, or approved equal, on all sanitary sewer maintenance holes. Covers shall bear the "Sanitary Sewer" label.
- 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/TraceWireSpecGuideFinalweb9.pdf](http://www.mrwa.com/PDF/TraceWireSpecGuideFinalweb9.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 Copeshield Dyrcon 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.
- Separation of Water and Sewer: Construct sewer and water services in accordance with Minnesota Rules, part 4714.0721 and Uniform Plumbing 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, drainline, or other potential sources for contamination. Measure the separation distance from the outer edge of the contaminant source (the 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 pipe. 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 water line within 10-feet of the crossing.
- Watermain Details: 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 clearances in order to clear storm sewers, sanitary sewers, or other utilities as required. Include costs to lower water lines in the base bid.
- Disinfection: Disinfect all completed watermain lines 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 609.8. Do not use the tablet method on solvent-welded plastic or on screwed joint steel pipe because of the danger of 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. Use a 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 M-12, or using appropriate chlorine test kits.
- Testing: Pressure test and perform bacteriological tests on all water lines under the supervision of the City Public Works Department. Test the City at least 24 working hours prior to any testing. Pressure test the water system in accordance with the UPC 604.4. Pressurize the waterline to a water pressure of 103.4-kPa (150-psi) above pressure (measured at the point of lowest elevation) by means of a pump connected to the pipe in a solid-state water line to maintain the water in the pipe. The test section of pipe shall withstand 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. Minnesota Department of Health. 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.
- All water supply piping connected to municipal water main must have a 150 psi minimum pressure rating.
- Copper tube for water services must comply with ASTM B88 and shall have a weight not less than type L (in accordance with Minnesota Rules part 4714.0604 and UPC part 604.0).
- Ductile iron pipe (DIP) water services must comply with AWWA C151/ANSI A21.51 or AWWA C151/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 water main fittings, valves, and hydrants. The exterior of ductile iron pipe shall be coated with a layer of cold-sprayed zinc per ISO R179. The interior cement mortar lining shall be applied without asphalt seal coating. Polyethylene encasement is required on all ductile iron pipe. Use V-8 Enhanced Polyethylene Encasement or approved equal.
- Polyvinyl Chloride (PVC) Building Water Services must comply with ASTM D1785, ASTM D2241, or AWWA C900; pressure rated for water (See 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 thereof.
- Polyvinyl Chloride (PVC) Watermain: Use AWWA C900 for all PVC watermain furnished with integral elastomeric bell and spigot joints; minimum 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, and hydrants.
- 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 Megaplug" watermain hardware manufactured by EBA Iron, Inc. in cast steel, cast iron, or approved equal, installed in accordance with manufacturer's recommendations for restraint on Ductile Iron Pipe. Restrainting devices are to have epoxy coating or approved equivalent. Restrainting device hardware shall be ANSI 304 stainless steel, or approved equivalent.
- Watermain Valves: At all valve locations which require a 12" or smaller valve, install gate valves which are of the compression resilient seated (CRS) type. Use American Flow Control's Series 3500 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" x 5-1/4" flange with 5-1/4" x 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 grade. Drop covers on valve boxes shall be round and bear the word "WATER" cast on the top. Use Tyler 6860-G "Stopput" covers with extended skirt, or equivalent. All valve hardware shall be ANSI 304 stainless steel, or approved equivalent.
- Curb Valves and Boxes: Use Mueller H-10334 extension type curb box with Minneapolis pattern base, or approved equal, at all 2" through 24" curb stop locations. Stationary rod is required on all curb stops. Use Mueller Company Mark II Orisel No. H-15154N curb stop, or approved equal, and stainless steel stem rod.
- 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 5 feet below the ground surface, plug the hydrant drain holes and equip the hydrants with a top stating the need for pumping after use. Maintain a 3-foot clear space around the circumference of all fire hydrants. All hydrant hardware shall be ANSI 304 stainless steel, or approved equivalent.
- Do not connect new watermain to existing until the new water main is pressure tested and disinfected.
- 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/TraceWireSpecGuideFinalweb9.pdf](http://www.mrwa.com/PDF/TraceWireSpecGuideFinalweb9.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 Copeshield Dyrcon 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.
- 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](http://www.prolinesafety.com)) detectable marking tape or approved equal.
- 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 1022 backflow preventers or non-removable ASSE 1021 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).
- 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 subject to the public water supply act shall be made of materials that are approved by the Drinking Water Act, which establishes a maximum lead content of 0.25 percent by weight based on the weight 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 603.3.4). See Minnesota Rules, part 4714.0604 and UPC part 604.1.1.
- Do not exceed the manufacturer's specifications for curvature of pipe and deflection at pipe joints. Securely close all open ends of pipe 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.
- Insulate the watermain 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" thick.

**Kwik  
TRIP**


**Kwik  
Star**

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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:   
Date: **1/15/25** License #: **53182**

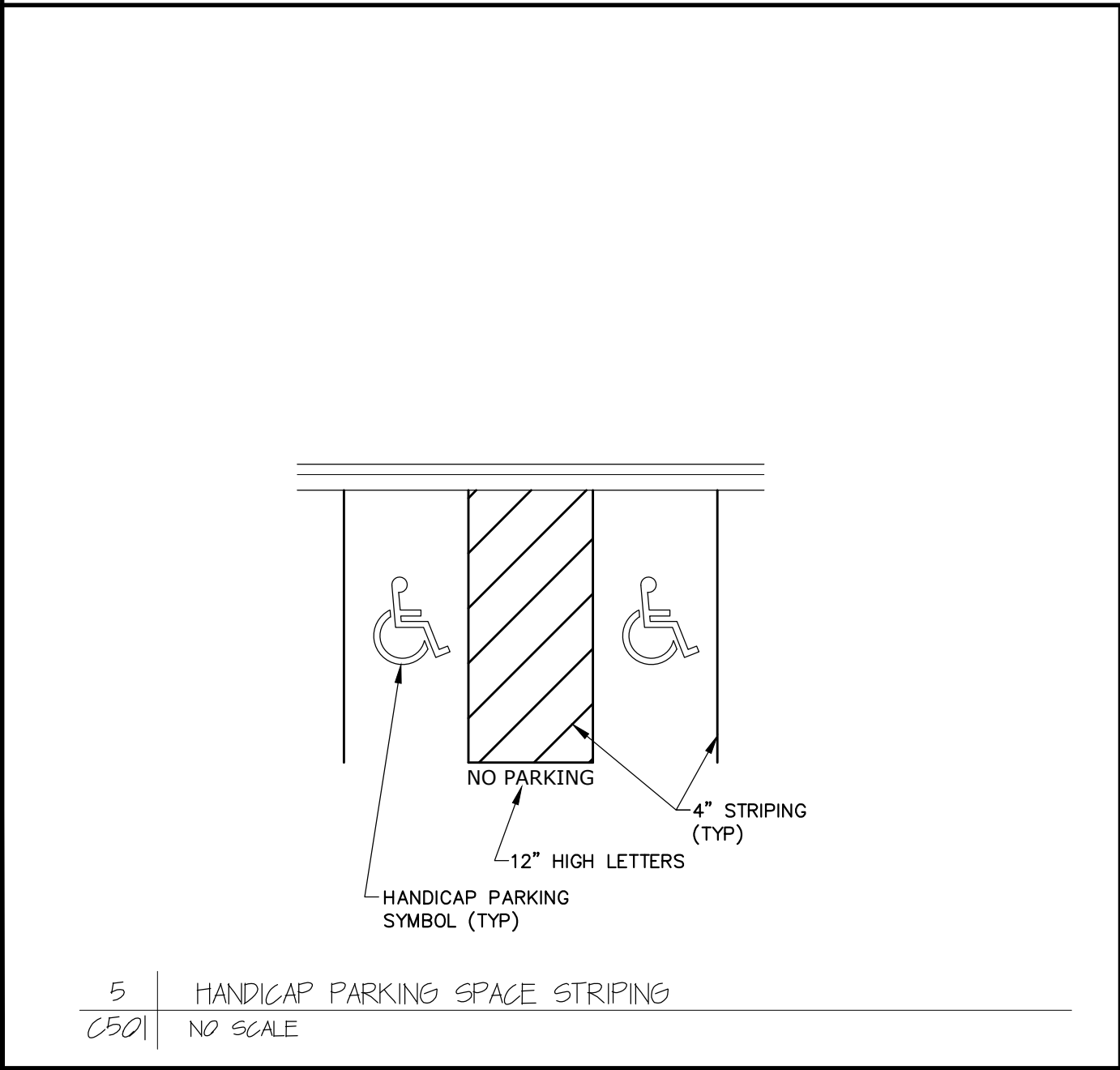
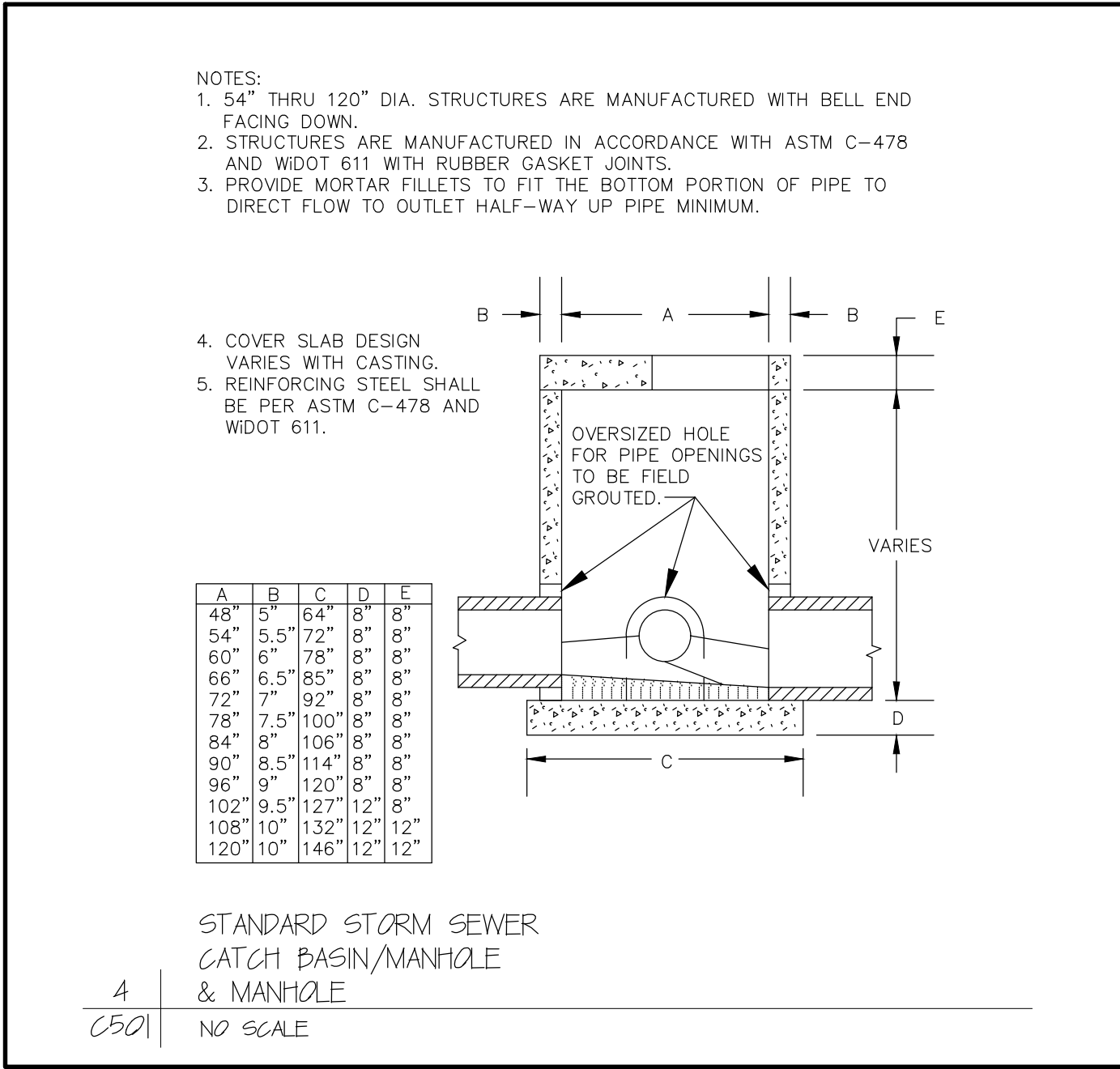
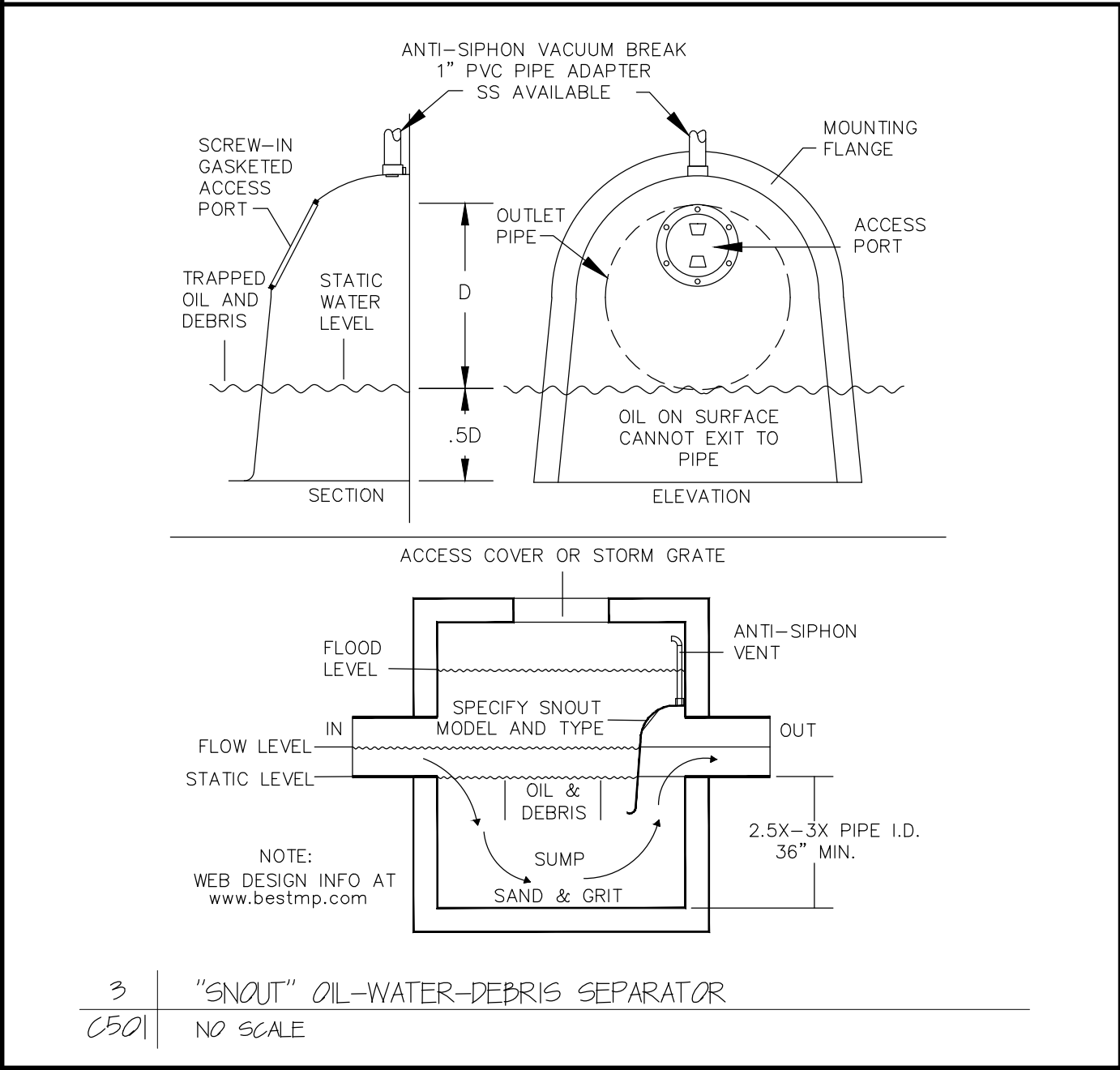
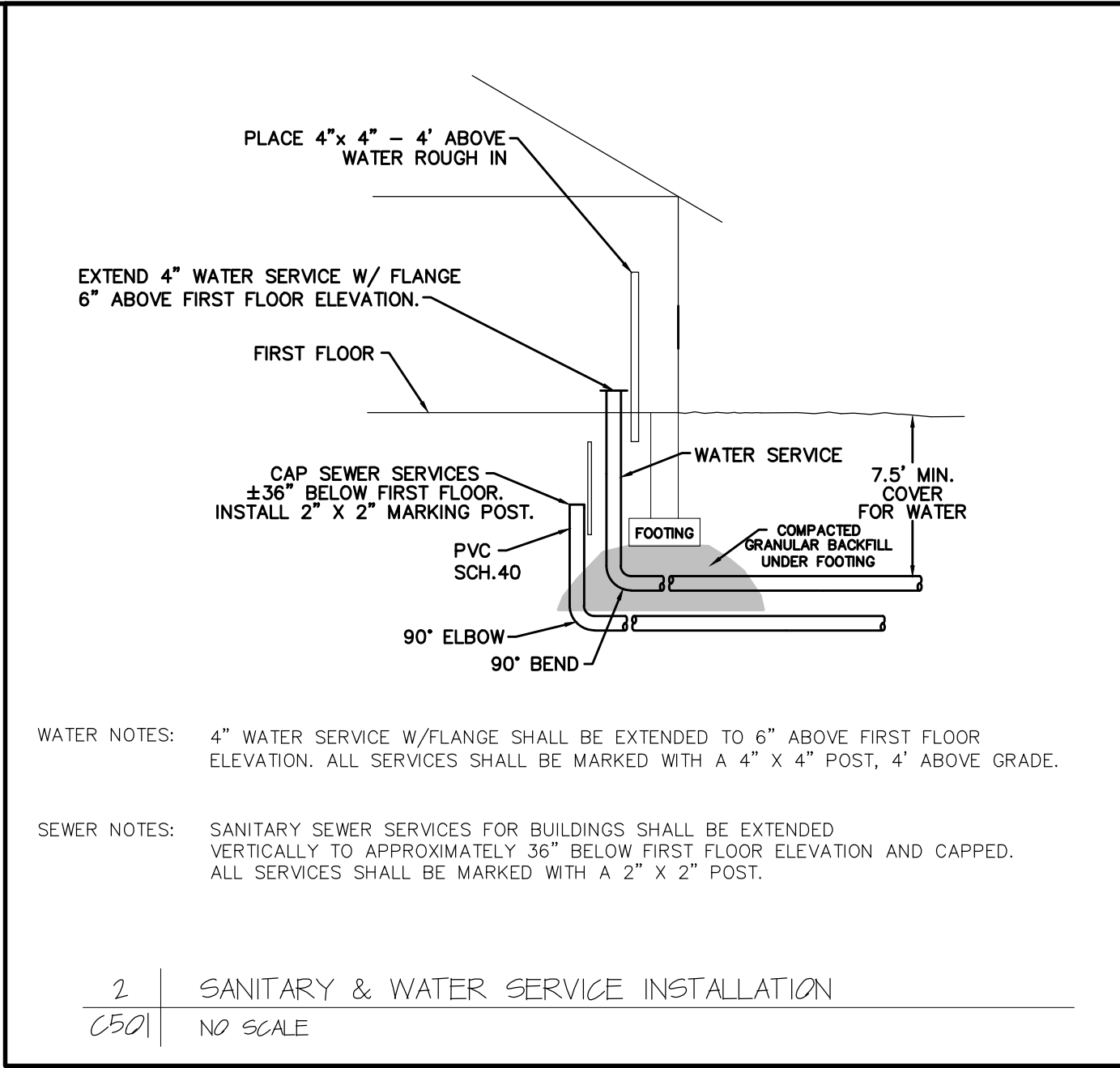
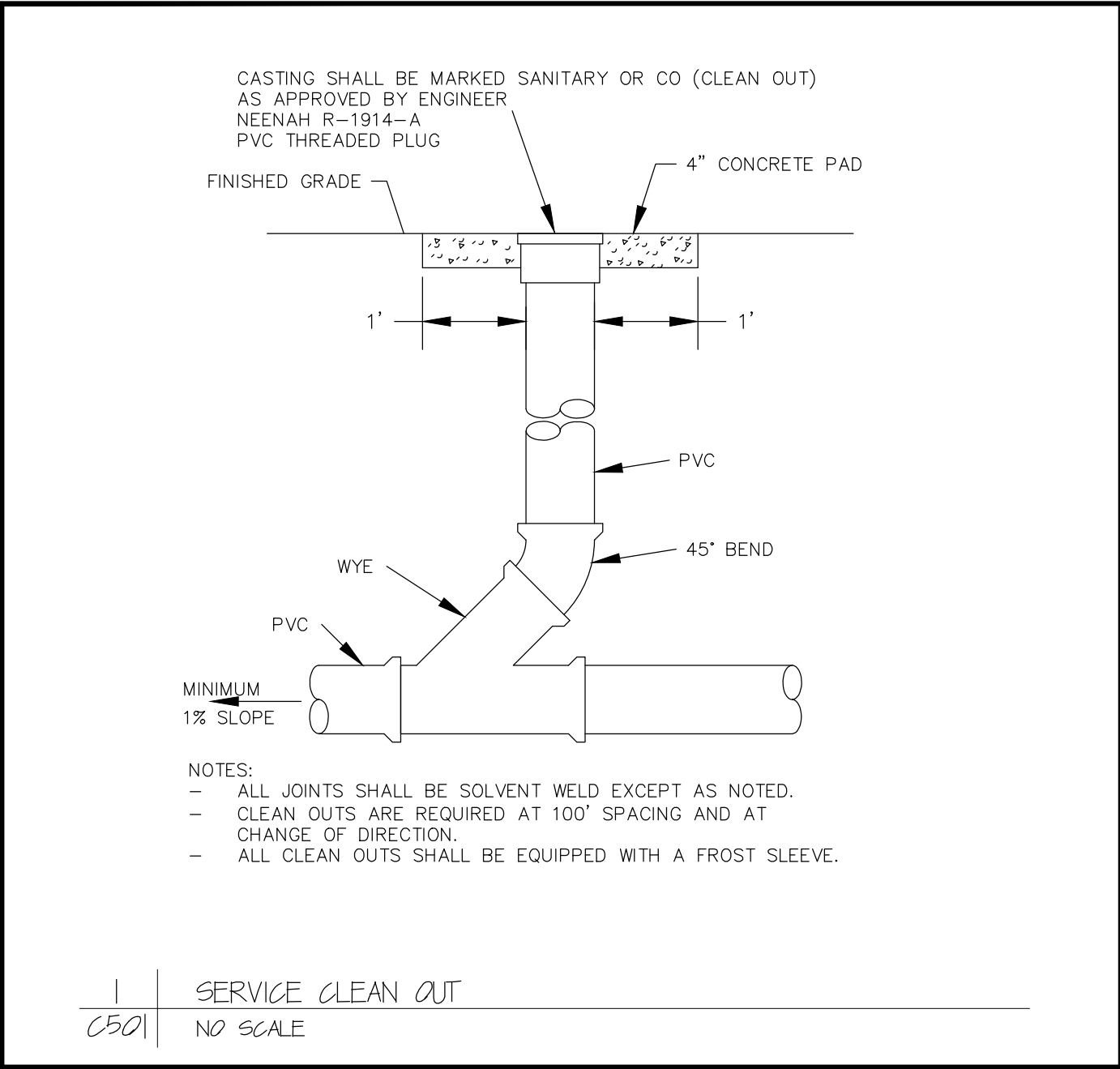
UTILITY NOTES  
**CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH**  
BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

#	DATE	DESCRIPTION
	02/28/25	Per City Comments

DRAWN BY **DJW**  
SCALE **GRAPHIC**  
PROJ. NO. **11109-00**  
DATE **2025-01-15**  
SHEET **1775 C401**







AMERICAN Flow Control®  
WATEROUS 5-1/4" PACER FIRE HYDRANT  
SUBMITTAL SHEET

City Specification: Quantity:

Style: ☒ Contemporary ☐ Classic

Type: ☒ Traffic (Model WB67-250) ☐ Non-Traffic (Model V67-250)

Direction to Open: ☒ Left (C.C.W.) ☐ Right (C.W.)

Operating Nuts	Operating Nut		Nozzle Cap Nuts	
	<input checked="" type="checkbox"/> Non-Weathershield	<input type="checkbox"/> Weathershield	<input type="checkbox"/> Rocker Lug for Spanner Wrench or <input checked="" type="checkbox"/> Same as Operating Nut	
Nominal Size: 1.5"	Shape: Pentagon	Nominal Size:	Shape:	
Waterous No. (If Known)	#5	Waterous No. (If Known)		

Nozzles	Nozzle Configuration (Check One)	Pumper Nozzle	Hose or IHG Valve Nozzle	
	<input checked="" type="checkbox"/> DDP (Two Hose, One Pumper) <input type="checkbox"/> DDD (Three Hose) <input type="checkbox"/> DD (Two Hose) <input type="checkbox"/> PP (Two Pumpers) <input type="checkbox"/> GGP (Two IHG Valves One Pumper) <input type="checkbox"/> GG (Two IHG Valves)	Storz: <input type="checkbox"/> 4 in. <input checked="" type="checkbox"/> 5 in. Nat'l Std. <input type="checkbox"/> Yes <input type="checkbox"/> No Size: 4.5" O.D. x T.P.I. Waterous Template (If Known):	Nat'l Std: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Size: 2.5" O.D. x T.P.I. Waterous Template (If Known): 7532	

Nozzle Cap Chains: ☒ Yes ☐ No Bury Depth: (Depth of Trench) 8'-0"

Upper Standpipe Length: ☐ 10" ☒ 16" ☐ 22" ☐ 28" ☐ 34"

Bottom (Base) Connection: (Check One)

☐ 6" Flanged ☒ 6" MJ ☐ 6" Tyton ☐ 6" Plain End with Integral MJ Gland

☐ 6" Flanged Vertical Entry ☐ 4" MJ

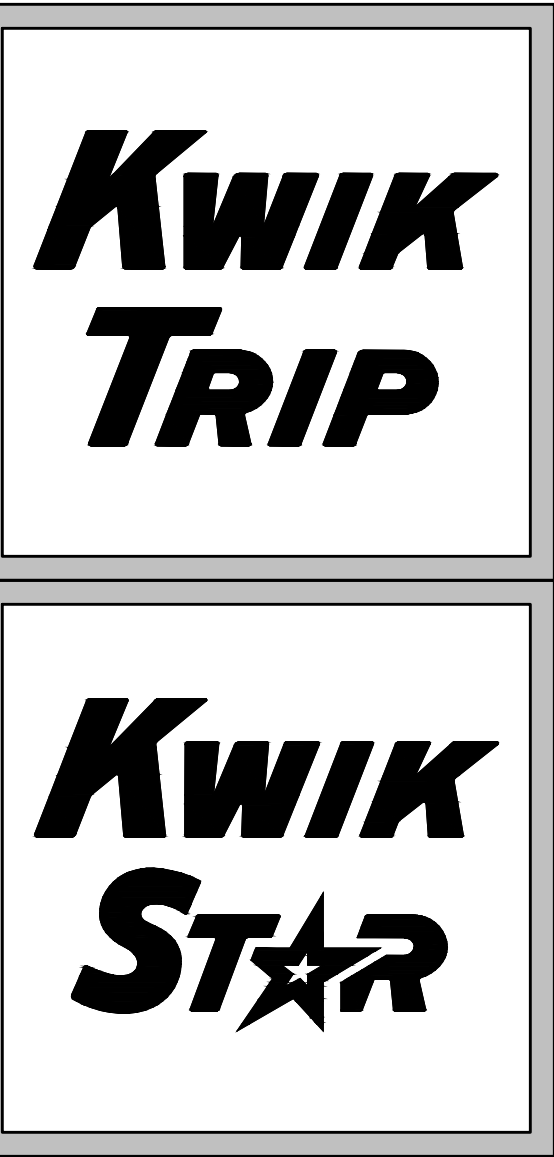
Paint Color: RED

UL Listed ☐ Yes ☒ No FM Approved ☐ Yes ☒ No

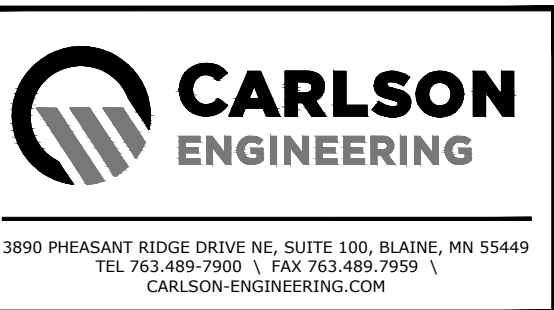
Other Requirements: (List) Plugged Drain

Notes:  
1. Meets or exceeds requirements of AWWA C502, latest revision.  
2. 250 psig rated working pressure.  
3. May be furnished in configurations that are Listed by Underwriters Laboratories Inc. and Approved by FM Approvals.

AMERICAN Flow Control Page 2B-8 Waterous 5-1/4" Pacer Fire Hydrant



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



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: [Signature]  
Date: 1/15/25 License #: 53182

#	DATE	DESCRIPTION
1	02/28/25	Per City Comments

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11109-00
DATE	2025-01-15
SHEET	1775 C501



# 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 \  
CARLSONENGINEERING.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: [Signature]  
Date: 1/15/25 License #: 53182

**DETAILS**

**CONVENIENCE STORE #1775**

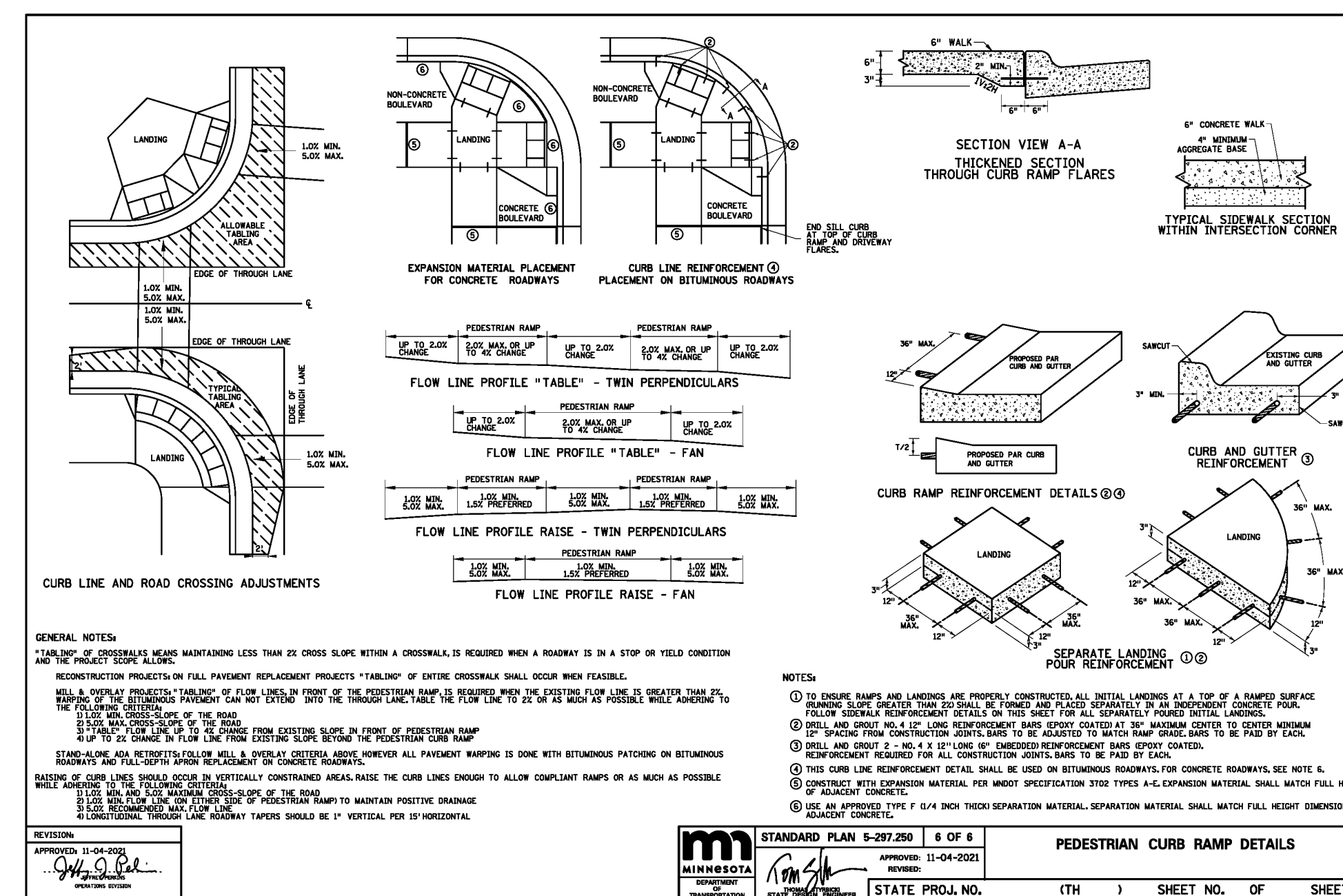
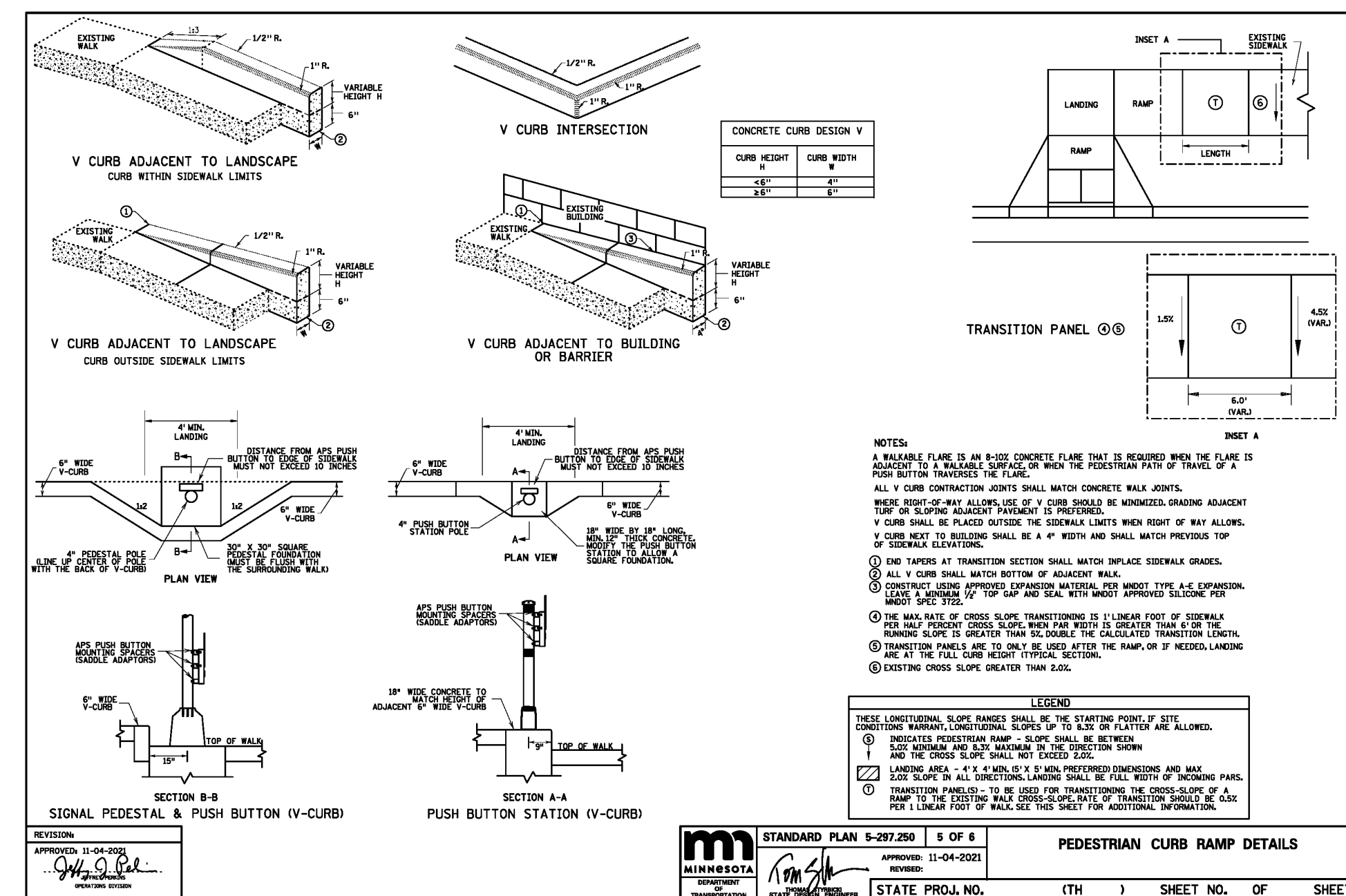
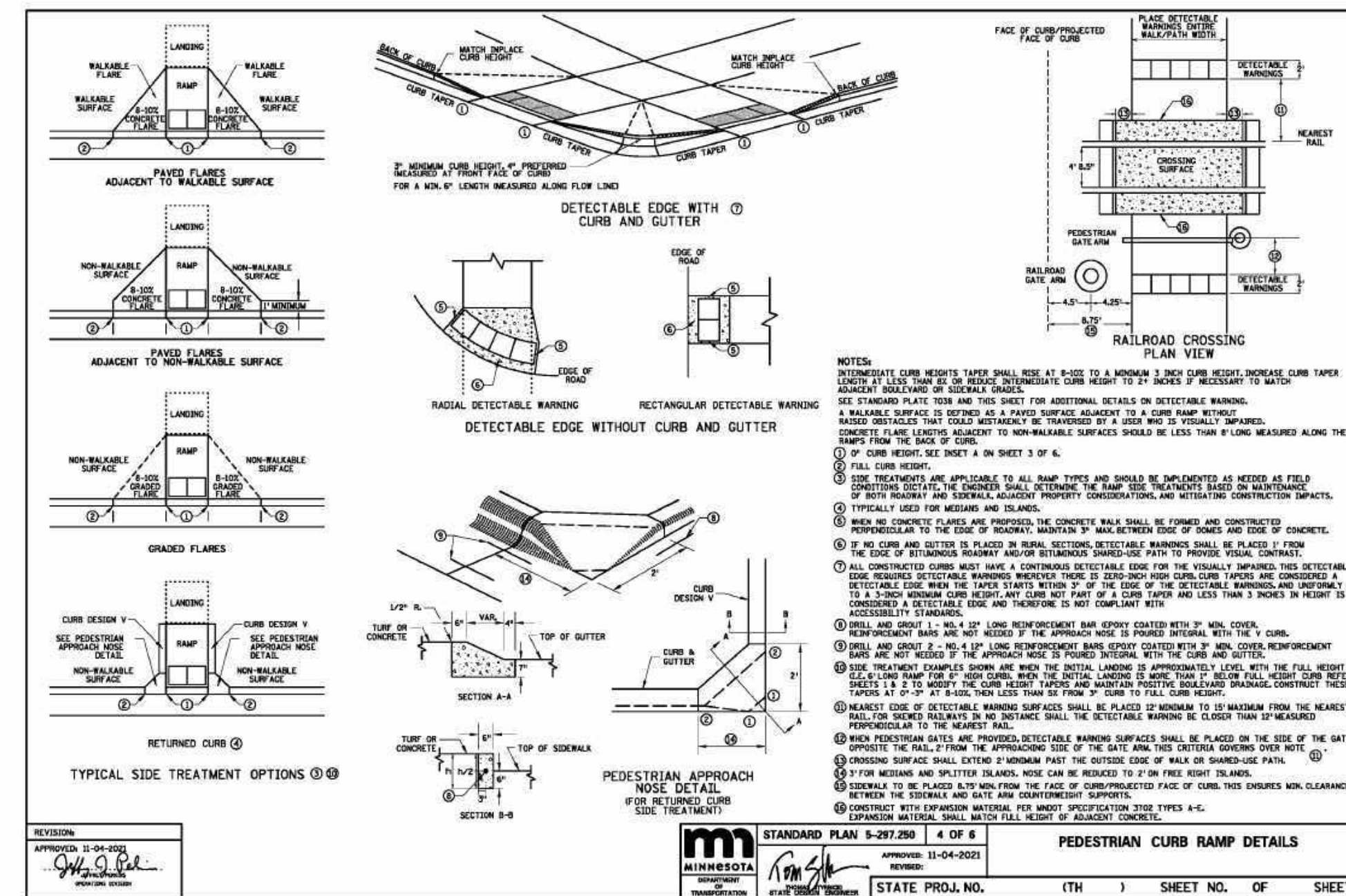
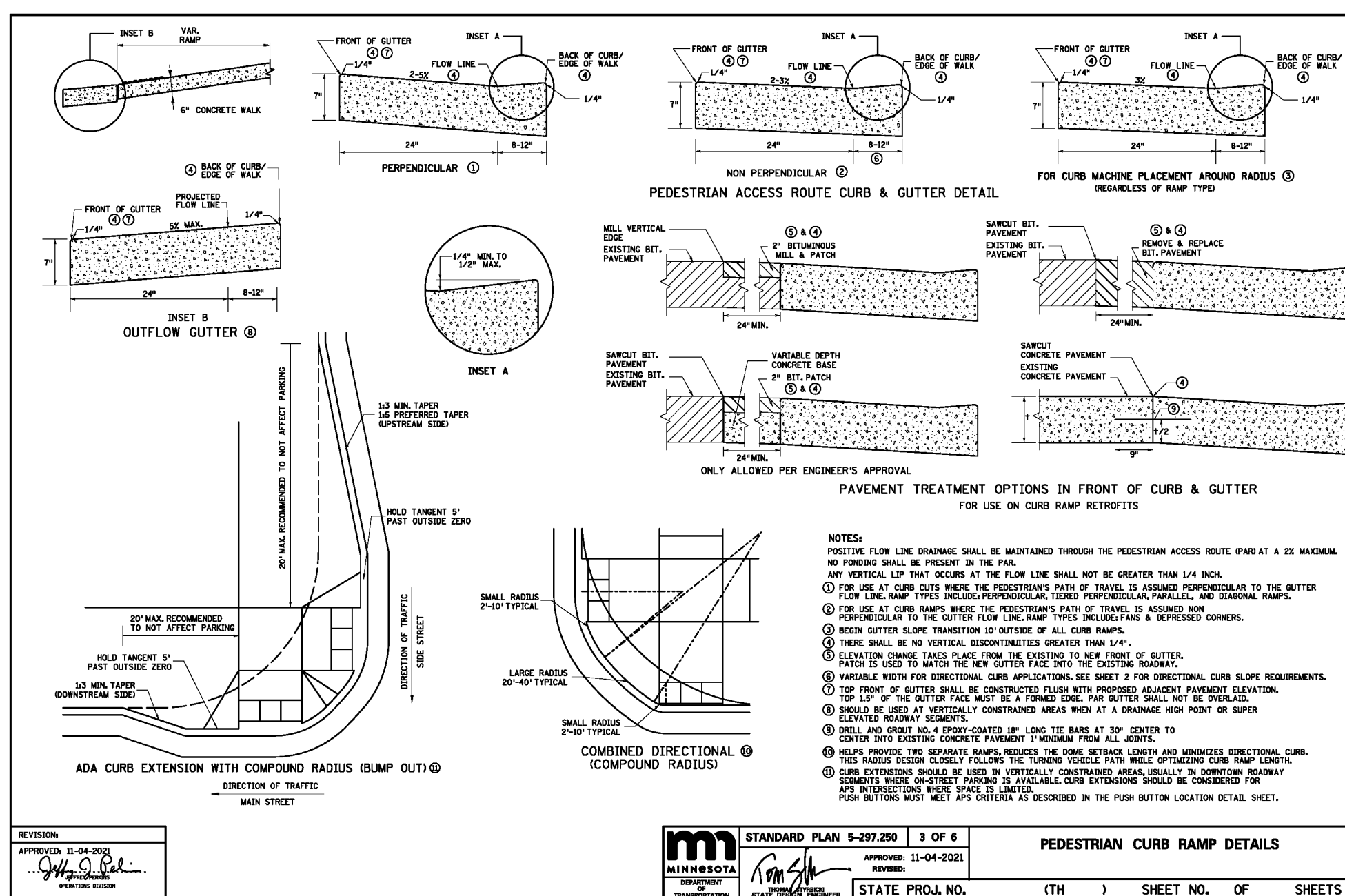
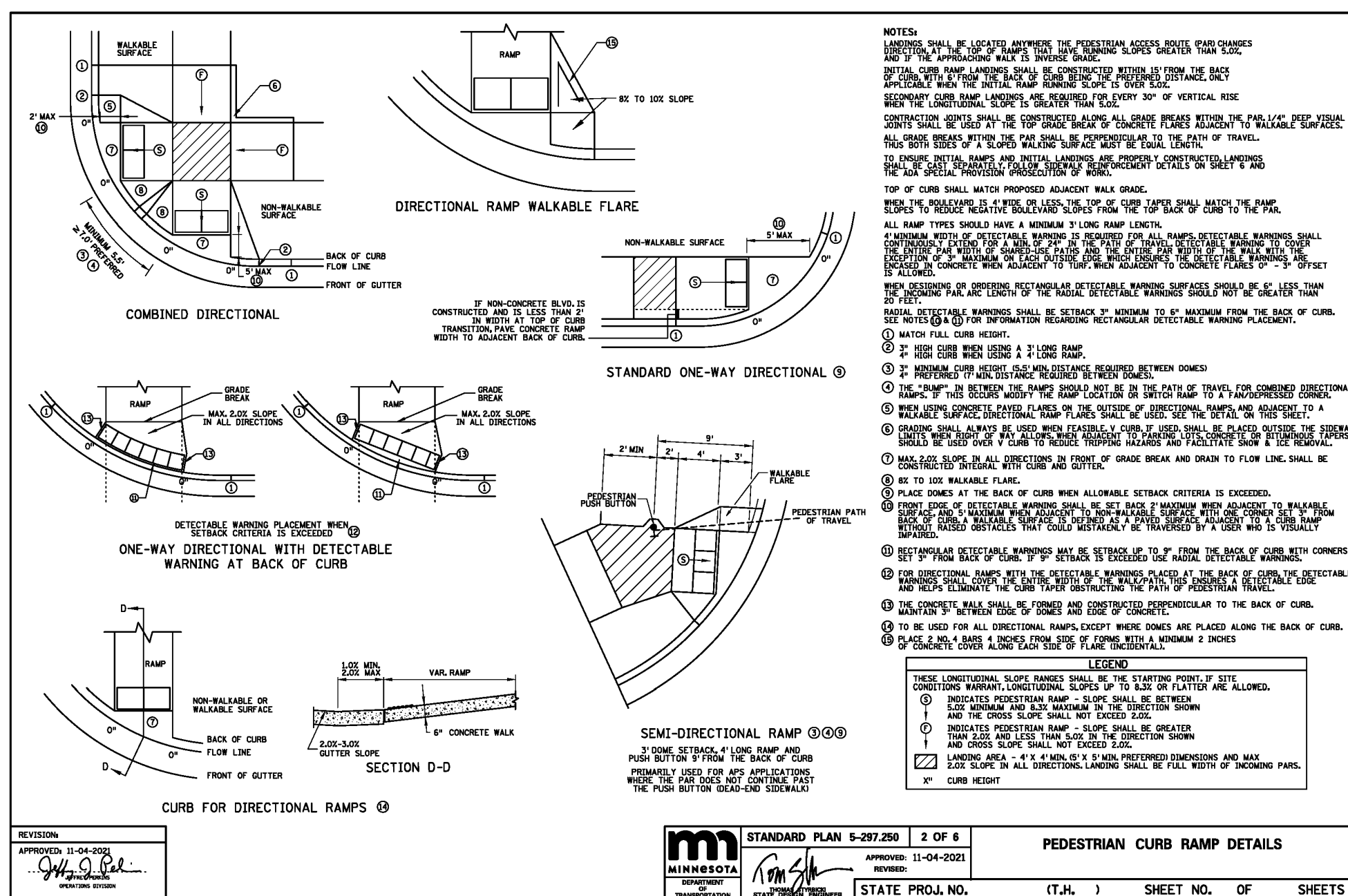
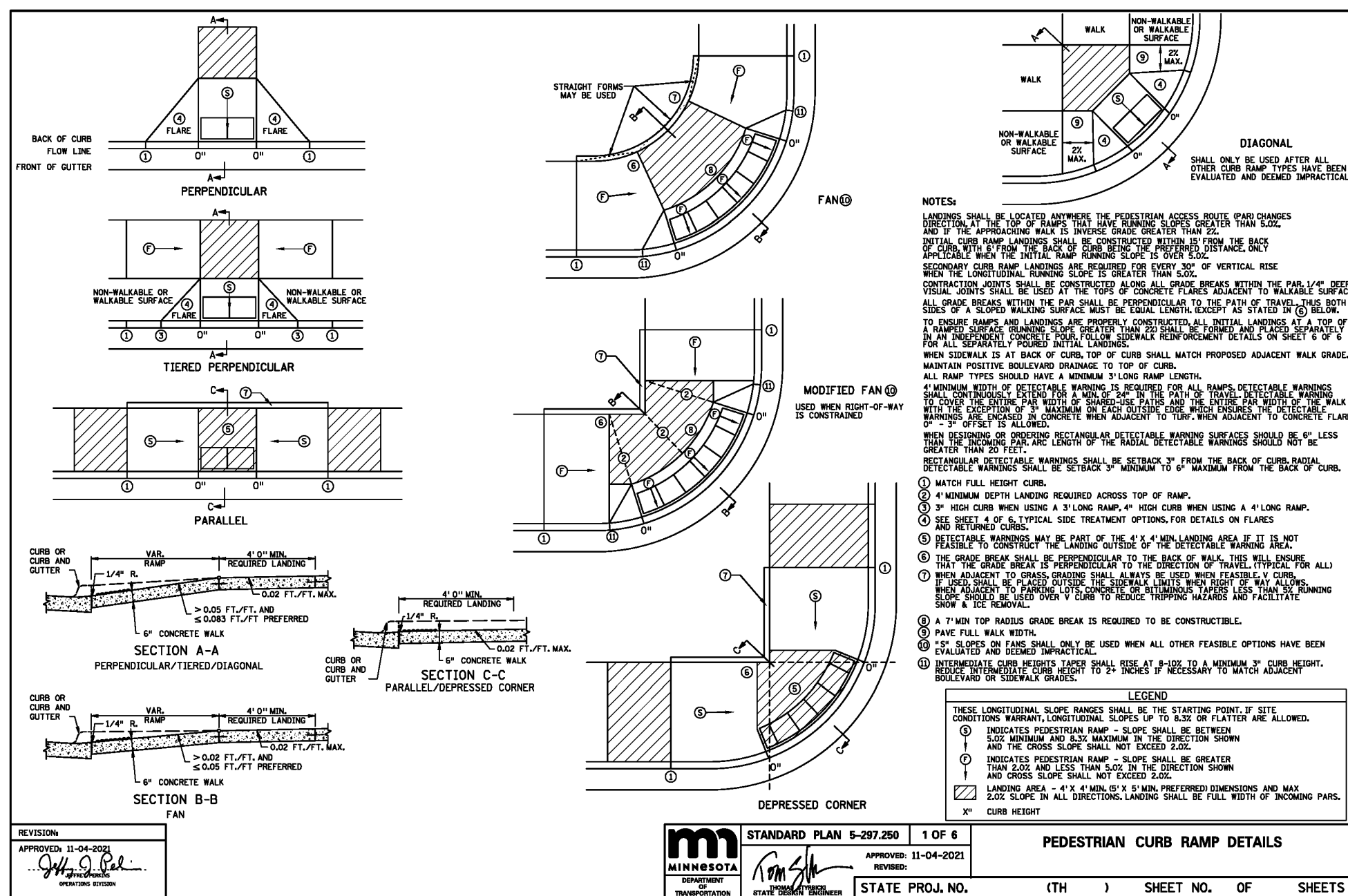
**WITH 1-BAY DETACHED CARWASH**

**BAKER PARK ROAD & GATEWAY BLVD**

**MAPLE PLAIN, MINNESOTA**

#	DATE	DESCRIPTION
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DRAWN BY: DJW  
SCALE: GRAPHIC  
PROJ. NO.: 11109-00  
DATE: 2025-01-15  
SHEET: 1775 C502









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 SURFACE. 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 MCHM, 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, MIMCO 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  
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 DITCHES.
4. TOPSOIL  
UPON GRADING COMPLETION, A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED OVER ALL DISTURBED AREAS, EXCLUDING PROPOSED STREETS AND PARKING AREAS.
5. RESTORATION  
ALL DISTURBED AREAS NOT ACTIVELY WORKED SHALL BE RESTORED WITH SEED AND MULCH, EROSION CONTROL BLANKET AND/OR SOD WITHIN 7 DAYS.
6. SLOPES  
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.
7. DRAINAGE DITCHES  
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 BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.

8. PIPE OUTLETS  
PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.

9. 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, MIMCO PROTECTION DEVICES, INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.

10. DUST  
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 APPLICATION.

11. DEWATERING  
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 CONTROL AND ENERGY DISSIPATION.

12. CONSTRUCTION MATERIALS AND DEBRIS  
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 IN DUMPSTERS AND REMOVED FROM THE SITE AS NECESSARY.

13. CHEMICALS  
CHEMICALS SHALL BE STORED IN A SAFE AREA IN SEALED CONTAINERS WITH THE ORIGINAL LABELING AND MATERIAL SAFETY DATA SHEETS AVAILABLE.

14. SPILLS AND CONTAMINATION  
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 DUTY OFFICER AT 800-422-0798.

15. CONCRETE WASHOUT AREA  
PERMITEES 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. PERMITEES 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. PERMITEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITEES MUST INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY.

POST CONSTRUCTION

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 PERENNIAL VEGETATIVE COVER. AREAS NOT REQUIRING SOD OR EROSION CONTROL BLANKET SHALL BE SEEDED AND MULCHED.
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 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.
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 INCLUDES, BUT IS NOT LIMITED TO, SILT FENCE, TREE FENCE AND CATCH BASIN INLET PROTECTION DEVICES.

SWPPP DRAWING UPDATES

UPDATE SWPPP DRAWING FOR LOCATIONS OF CONSTRUCTION DUMPSTER, PORTABLE TOILET, EQUIPMENT 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 AFTER RUNOFF OCCURS AT THE SITE AFTER RETURN 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 INSPECTION.
4. INSPECT ROCK CONSTRUCTION ENTRANCES FOR SEDIMENTATION. INSPECT ADJACENT STREETS FOR SEDIMENT 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.
  - D. INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION.
6. INSPECT SITE AND ADJACENT PROPERTIES FOR CONSTRUCTION DEBRIS, TRASH AND SPILLS.
7. INSPECT STABILIZED AREAS FOR EROSION.
8. RECORD RECOMMENDED REPAIRS, MAINTENANCE AND/OR REPLACEMENTS REQUIRED TO ENSURE EROSION AND SEDIMENTATION CONTROL MEASURES ARE SUFFICIENT.
9. RECORD RECOMMENDED AMENDMENTS TO THE SWPPP.
10. RECORD REPAIRS, MAINTENANCE AND/OR REPLACEMENTS THAT WERE COMPLETED SINCE THE LAST INSPECTION.

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

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 1/3 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	E.A.	1
SILT FENCE	L.F.	1,520
INLET PROTECTION	E.A.	10
TURF ESTABLISHMENT	AC.	0.9

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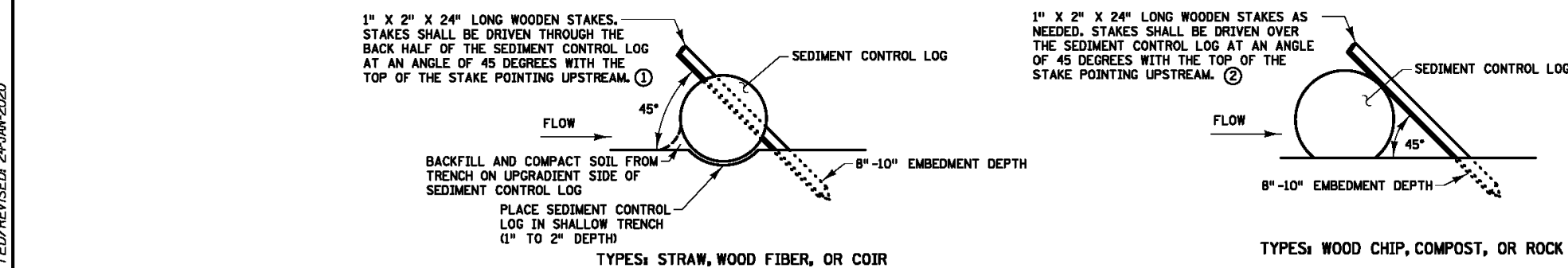
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Daniel J. Wilke, P.E.  
Signature: *Dan Wilke*  
Date: 1/15/25 License #: 53182

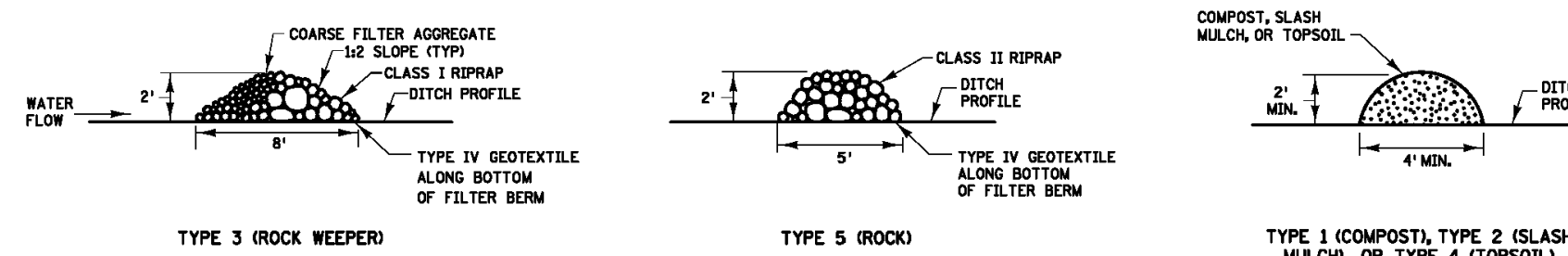
EROSION CONTROL NOTES	
CONVENIENCE STORE #1775 WITH 1-BAY DETACHED CARWASH	
BAKER PARK ROAD & GATEWAY BLVD MAPLE PLAIN, MINNESOTA	
#	DATE DESCRIPTION
1	02/28/25 Per City Comments
DRAWN BY DJW	
SCALE GRAPHIC	
PROJ. NO. 11109-00	
DATE 2025-01-15	
SHEET 1775 C601	

PLOTTED/REVISED: 24 JAN 2020

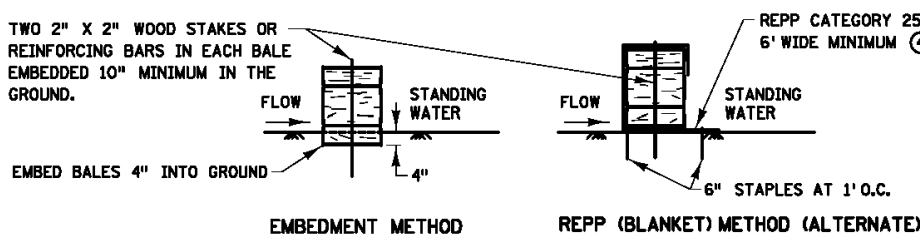
PROJECT NAME: 4405.3.000  
PART 1 & FILE NAME: C:\Users\jstevens\Documents\Development\Stations\Plan\4405.3.000\4405.3.000.dwg



SEDIMENT CONTROL LOGS



FILTER BERMS



BALE BARRIERS

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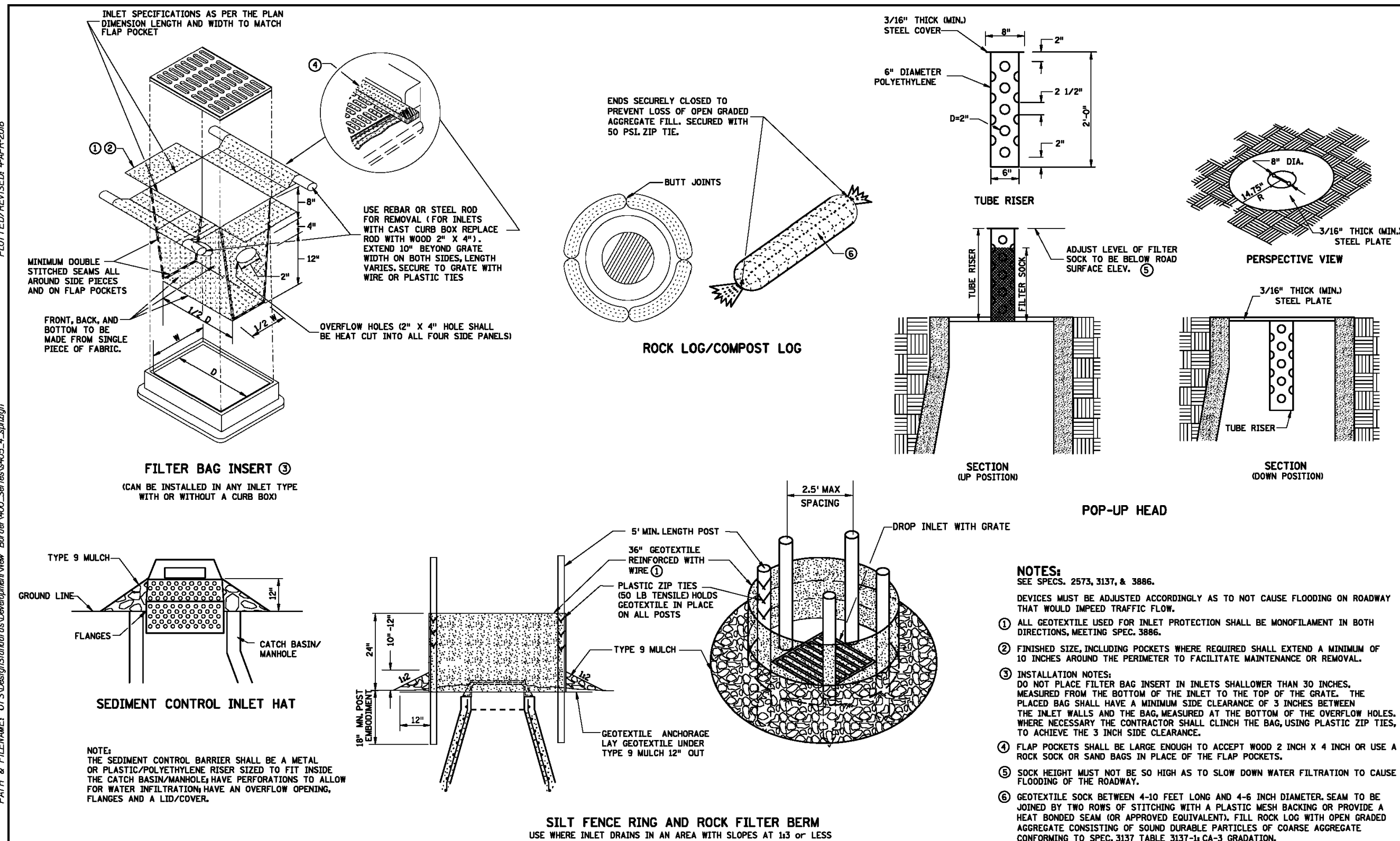
- REPP = ROLLED EROSION PREVENTION PRODUCT. SEE SPECS. 2573, 3149, 3874, 3882, 3885, 3886, AND 3897.
- SPACE BETWEEN STAKES SHALL BE A MAXIMUM OF 1' FOR DITCH CHECKS OR 2' FOR OTHER APPLICATIONS.
- PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS. STAKES SHALL BE INCIDENTAL.
- TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS WHERE STANDING WATER OCCURS 18\"/>



STANDARD PLAN 5-297.405	2 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 1-8-2020	REVISION:	FILTER BERMS, SEDIMENT CONTROL LOGS, AND BALE BARRIERS
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS

PLOTTED/REVISED: 4 APR 2020

PROJECT NAME: 4405.4.000  
PART 1 & FILE NAME: C:\Users\jstevens\Documents\Development\New\Barker\4405.4.000\4405.4.000.dwg



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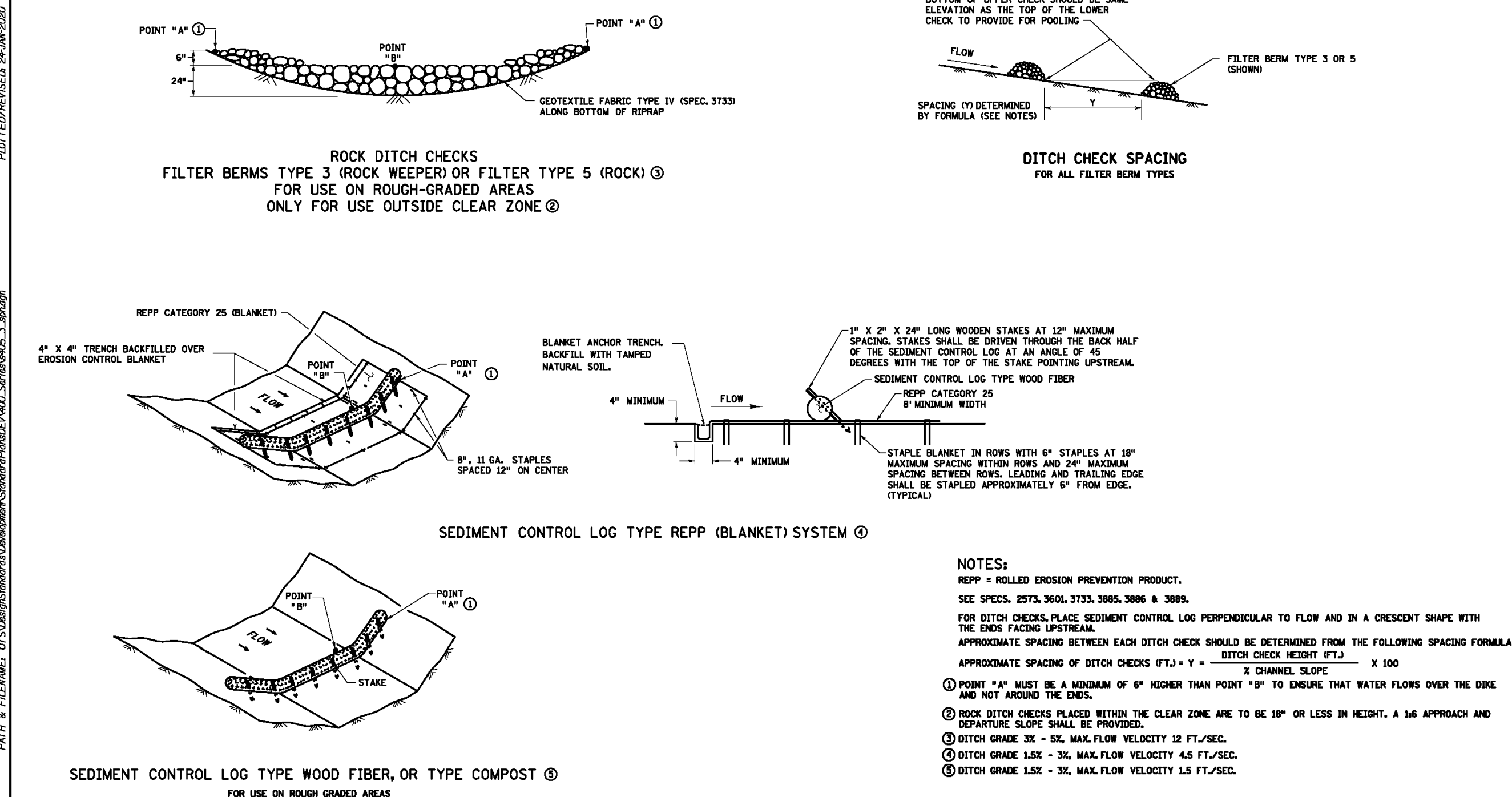
- DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPED TRAFFIC FLOW.
- ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
- FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- INSTALLATION NOTES: DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE FILTER BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY, THE CONTRACTOR SHALL CLINCH THE BAG USING PLASTIC ZIP TIES TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
- FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAG IN PLACE OF THE FLAP POCKETS.
- SOCK HEIGHT MUST NOT BE 90 INCH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
- GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER, SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK SOCK WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC 3337 TABLE 3337-1A-G-3 GRADATION.



STANDARD PLAN 5-297.405	4 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 2-28-2017	REVISION:	STORM DRAIN INLET PROTECTION
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS

PLOTTED/REVISED: 24 JAN 2020

PROJECT NAME: 4405.3.000  
PART 1 & FILE NAME: C:\Users\jstevens\Documents\Development\Stations\Plan\4405.3.000\4405.3.000.dwg



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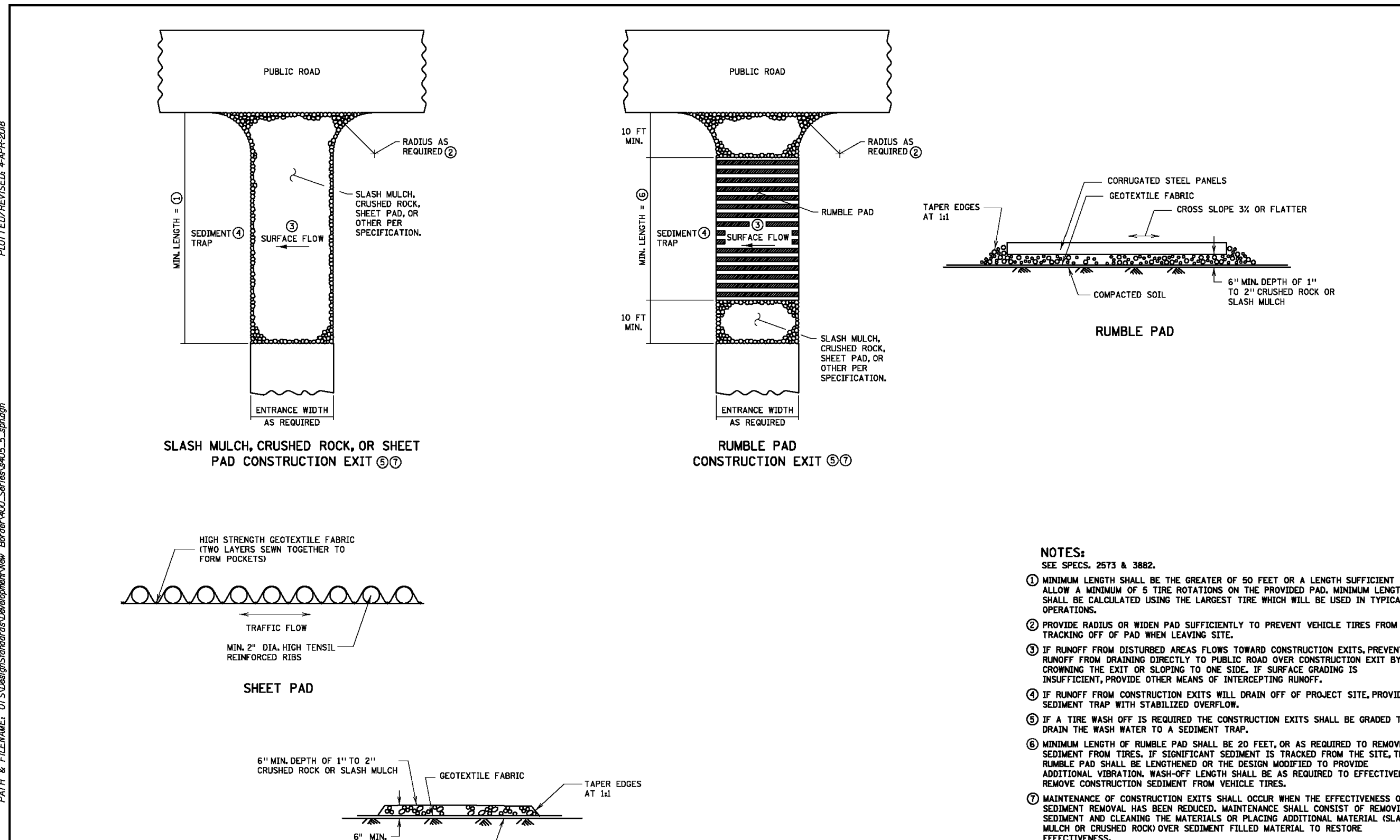
- REPP = ROLLED EROSION PREVENTION PRODUCT. SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.
- FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.
- APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:  $SPACING = \frac{DITCH CHECK HEIGHT \times 100}{DITCH GRADE \times 100}$
- POINT "A" MUST BE A MINIMUM OF 6" HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DITCH AND NOT AROUND THE ENDS.
- ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT, A 1/4 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.
- DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC.
- DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC.
- DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC.



STANDARD PLAN 5-297.405	3 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 1-8-2020	REVISION:	DITCH CHECK
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS

PLOTTED/REVISED: 4 APR 2020

PROJECT NAME: 4405.5.000  
PART 1 & FILE NAME: C:\Users\jstevens\Documents\Development\New\Barker\4405.5.000\4405.5.000.dwg



NOTES:

- SEE SPECS. 2573 & 3882.
- MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.
- PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.
- IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CHANNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.
- IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.
- IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.
- MINIMUM LENGTH OF RUMBLE PAD SHALL BE 20 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.
- MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.



STANDARD PLAN 5-297.405	5 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 2-28-2017	REVISION:	STABILIZED CONSTRUCTION EXIT
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS

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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 Professional Engineer under the laws of the State of Minnesota.

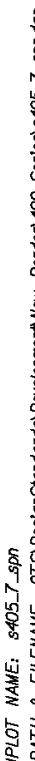
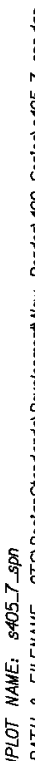
Name: Daniel J. Wilke, P.E.  
Signature: *D. Wilke*  
Date: 1/15/25 License #: 53182

EROSION CONTROL DETAILS  
CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH  
BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

#	DATE	DESCRIPTION
1	02/28/25	Per City Comments

DRAWN BY: DJW  
SCALE: GRAPHIC  
PROJ. NO.: 11109-00  
DATE: 2025-01-15  
SHEET: 1775 C602





- |      |                         |
|------|-------------------------|
| 1    | EROSION CONTROL BLANKET |
| 6603 | NO SCALE                |



- |      |                  |
|------|------------------|
| 2    | CONCRETE WASHOUT |
| C603 | NO SCALE         |


- |      |                    |
|------|--------------------|
| 3    | TURF ESTABLISHMENT |
| 6603 | NO SCALE           |

1775 C603





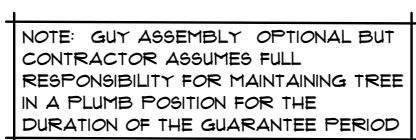
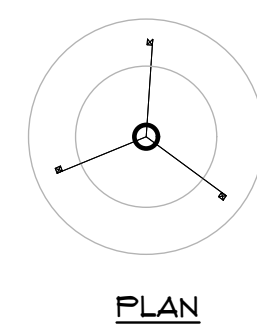
**CARLSON**  
ENGINEERING

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

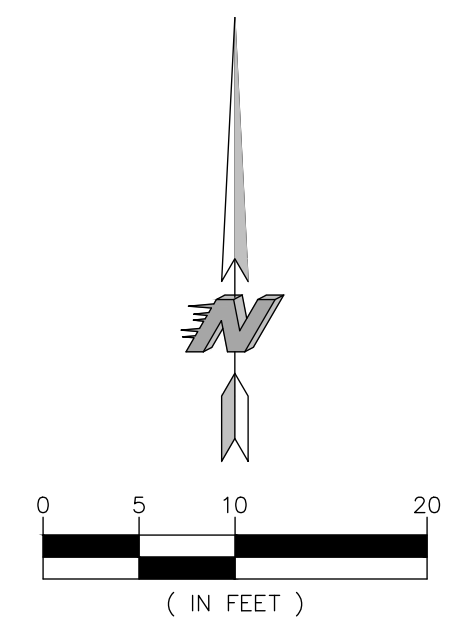
BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA


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1. **EXISTING CONDITIONS.** CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION START. ANY DISCREPANCIES FOUND THAT AFFECT THE WORK SHALL BE REPORTED TO THE OWNER/LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING OR APPROVING ANY ADDITIONAL WORK REQUIRED.
2. **UTILITY LOCATES.** CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL PUBLIC AND PRIVATE UTILITIES, INCLUDING IRRIGATION LINES, AT LEAST 48 HOURS BEFORE EXCAVATING OR IN ACCORDANCE WITH STATE LAW. IN MINNESOTA, CALL Gopher State One-Call AT 651-454-0002 FOR FIELD LOCATION OF PUBLIC UNDERGROUND UTILITY LINES. ALL LOCATES AND ITEMS NOTED AS 'FIELD VERIFY' ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR AT THEIR EXPENSE.
3. **PERMITS.** CONTRACTOR SHALL VERIFY WITH THE OWNER/LANDSCAPE ARCHITECT THAT THE REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION START. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
4. **EXISTING ITEMS TO REMAIN.** CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING PAVEMENT, STRUCTURES, UTILITIES, TREES, SITE AMENITIES, ETC. THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DAMAGE (AT CONTRACTOR'S EXPENSE) TO EXISTING ITEMS TO REMAIN.
5. **CONSTRUCTION STAGING AND ACCESS.** CONTRACTOR SHALL VERIFY THE LOCATION FOR CONSTRUCTION STAGING AND SITE ACCESS WITH THE OWNER/LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION START. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PEDESTRIAN AND VEHICLE ACCESS WITHIN AND ADJACENT TO THE SITE THROUGHOUT THE CONSTRUCTION PERIOD UNLESS OTHERWISE NOTED. LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE PERMITTED. ALL WASTE AND/OR UNUSED MATERIAL SHALL BE PROMPTLY REMOVED FROM THE SITE.
6. **SITE REMOVALS.** REFER TO CIVIL PLANS FOR GENERAL SITE REMOVALS. ALL ITEMS NOTED TO BE REMOVED SHALL BE COMPLETED BY THE CONTRACTOR AND IMMEDIATELY DISPOSED OF OFF-SITE, IN ACCORDANCE WITH LOCAL REGULATIONS, UNLESS OTHERWISE NOTED. COORDINATE WITH OWNER/LANDSCAPE ARCHITECT FOR ANY ITEMS NOTED AS 'REMOVED BY OTHERS' OR 'REMOVE AND SALVAGE.'
7. **UTILITY COORDINATION.** REFER TO CIVIL PLAN SHEETS FOR INFORMATION RELATED TO PROPOSED UTILITIES. COORDINATE WITH ELECTRICAL CONTRACTORS FOR SITE ELECTRICAL WORK AND SITE LIGHTING.
8. **CONSTRUCTION STAKING.** UNLESS OTHERWISE NOTED, CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING CONTROL POINTS AND ALL CONSTRUCTION FIELD STAKING DURING THE COURSE OF THE PROJECT.
9. **DIMENSIONS.** DIMENSIONS TAKE PRECEDENCE OVER SCALE. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT/WALKWAY, OR OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. **PLAN QUANTITIES.** CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MATERIAL QUANTITIES PER PLAN. MATERIAL SCHEDULES ARE PROVIDED SOLELY FOR CONTRACTOR'S CONVENIENCE.
11. **REFERENCE SPECIFICATIONS.** THE FOLLOWING SPECIFICATIONS SHALL GOVERN THIS PROJECT ACCORDING TO THE FOLLOWING ORDER:
  1. ADDENDA, WITH THOSE OF A LATER DATE HAVING PRECEDENCE OVER THOSE OF AN EARLIER DATE.
  2. LANDSCAPE SPECIFICATIONS.
  3. PLAN DRAWINGS.
  4. PLANT / MATERIAL SCHEDULES.
  5. CITY STANDARD SPECIFICATIONS AND DETAILS.
  6. MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION.






**Kwik  
Star**

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

LANDSCAPE PLAN

---

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

---

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

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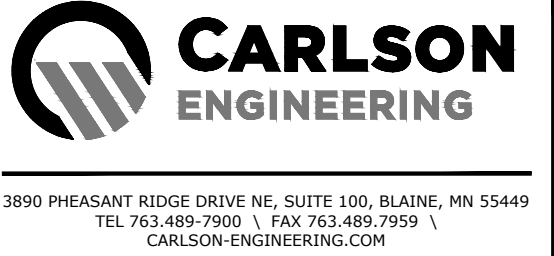
**LANDSCAPE QUANTITIES**  
±465 LF POLY EDGING - BLACK

1. **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, VEHICLE TRAFFIC SHALL BE PERMITTED. TREE PROTECTION FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION. START PERMITS 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, BOW-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 REUSE. ALL TOPSOIL WHICH 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. **TOPSOIL MATERIAL.** 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 WORKSHIPPED 1 FEET OF INDICED FINISHING GRADE AND SHALL BE TRUE TO GRADIENTS SHOWN ON PLANS. REFER TO CIVIL PLAN SHEETS FOR FILTRATION BASIN SOIL REQUIREMENTS.
6. **SEEDING AND TURF ESTABLISHMENT.** 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 SOWN IN 2 PERPENDICULAR PASSES, EACH PASS AT ONE-HALF THE INDICATED RATE, VIA BROADCAST SPREADER, DRILL 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 RATE OF 1000 LBS PER ACRE. SEEDING SHALL BE KEPT MOIST WITH WATER. SODS SHALL BE LAYED WITHIN 24 HOURS OF SEEDING AS NECESSARY TO ACHIEVE A HEALTHY, UNIFORM STAND OF GRASS, FEE OF WEEDS AND WITH COVERAGE EXCEEDING 75% IN ANY 10'x10' AREA PRIOR TO FINAL ACCEPTANCE.
7. **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 ACCEPTANCE.
8. **PLANT MATERIAL.** ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSESMEN, INC. IT 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. **PLANT MATERIAL SUBSTITUTIONS.** 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 PLANTING PLANTING DETAILS. CONTRACTOR SHALL STAKE TREE LOCATIONS FOR APPROVAL BY OWNER/LANDSCAPE ARCHITECT PRIOR TO PLANTING ANY PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLEATED (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.


1. **MULCH MATERIAL.** DOUBLE SHREDED HARDWOOD MULCH OR ROCK MULCH AS INDICATED ON PLANS. ALL MULCH SHALL BE CLEAN AND FREE OF NOXIOUS WEEDS, SOIL, OR OTHER DELTERIUM MATERIAL, AND SHALL BE INSTALLED OVER A NON-WOVEN GEOTEXTILE FABRIC OR PLASTAL 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 BE INSTALLED WITHIN 48-HOURS OF PLANT INSTALLATION.
2. **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-UPPED BOTTOM, HORIZONTALLY GROOVED, 1-INCH ROUND TOP, EXTRUDED IN STANDARD LENGTHS, WITH 9-INCH SECT ANGLE STAKES.
3. **IRRIGATION.** DESIGN, FURNISH AND INSTALL A COMPLETE UNDERGROUND IRRIGATION SYSTEM FROM APPROVED POINT(S)-OF-CONNECTION WITH THE SITE COVERING ALL TURF AND PLANTING AREAS AS SHOWN ON THE LANDSCAPE PLAN. INCLUDES FLOW/PRESSURE TESTING, FLUSH WITH DESIGN WATER, INITIAL OPERATING MANUAL, SCHEDULED MAINTENANCE ADJUSTING, RE-TESTING 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, ELECTRICAL CONTROLS, AND ACCESSORIES. PROVIDE QUOTE FOR QUICK-RESPONSE, ALL PLUMBING 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.
4. **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, PRUNING, AND REMOVAL OF DEAD BRANCHES AND MATERIALS. MAINTENANCE SHALL BE PROVIDED AT THE PLANT 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.
5. **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 HOT PERIODS. WATERING SHALL BE DONE USING SPRINKLERS OR HAND WATERING. IF THERE IS NO AVAILABLE WATER, IN THE ABSENCE OF PERMANENT IRRIGATION, TEMPORARY IRRIGATION, TREE WATERING BAGS, OR HAND-WATERING ARE ACCEPTABLE.
6. **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 ONCE A YEAR IN EARLY SEPTEMBER AND SPOT SPRAYING OF HERBICIDE ONLY IN 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 LATER THAN 3 YEARS AFTER SEEDING. AFTER THE 3-YEAR PERIOD, THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR MAINTAINING THE AREA. 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 HERBICIDE ONLY AS NEEDED. REFER TO MNDOT SEEDING MANUAL FOR ADDITIONAL INFORMATION ON PLANTING, ESTABLISHING AND MAINTAINING NATIVE SEED MIXES.
7. **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 PLAN LIST WILL BE PREPARED LISTING ALL ITEMS THAT REQUIRE COMPLETING OR CORRECTING BEFORE FINAL ACCEPTANCE.
8. **WARRANTY.** ALL PLANTS, MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE, UNLESS OTHERWISE SPECIFIED. THE GUARANTEE COVERS THE FULL COST OF REPLACEMENT INCLUDING LABOR AND MATERIAL.

The Kwik Star logo, featuring the word "Kwik" in a bold, italicized sans-serif font above the word "Star" in a similar font, with a five-pointed star replacing the letter "a".

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



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:   
Date: 1/15/25 License #: 56346

[illegible]





3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449  
TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

CONVENIENCE STORE #1775  
WITH 1-BAY DETACHED CARWASH

BAKER PARK ROAD & GATEWAY BLVD  
MAPLE PLAIN, MINNESOTA

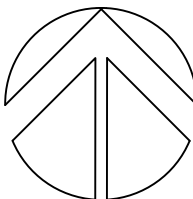
DRAWN BY	DLC
SCALE	GRAPHIC
PROJ. NO.	11109-00
DATE	2024-07-16
SHEET	C800

# C800

 CAMERA

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

- 1 COORDINATE LOCATION AND MOUNTING HEIGHT OF SECURITY CAMERA WITH OWNER.
- 2 CONTRACTOR SHALL INSTALL POLE MOUNT FIXTURE 12'-0" FROM THE OVER DIG OF UNDERGROUND FUEL TANK TO EDGE OF POLE BASE.
- 3 CONTRACTOR SHALL POLE MOUNT FIXTURE 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.
- 4 1 FC CONTOUR LINE, TYPICAL.
- 5 CONTRACTOR SHALL PROVIDE PROTECTIVE BOLLARDS AROUND POLE BASE.

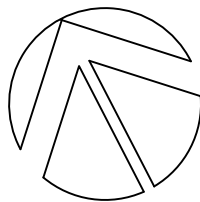
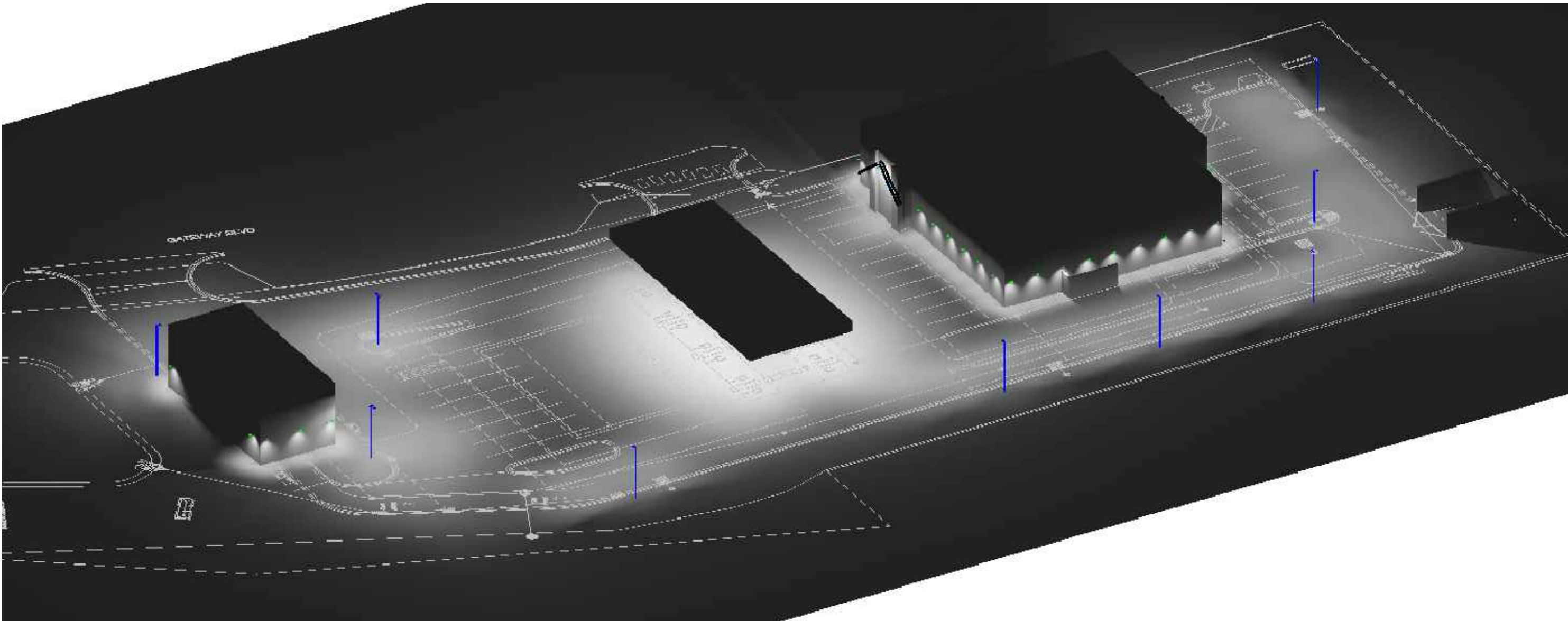


SCALE: 1" = 30'-0"

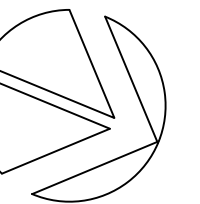
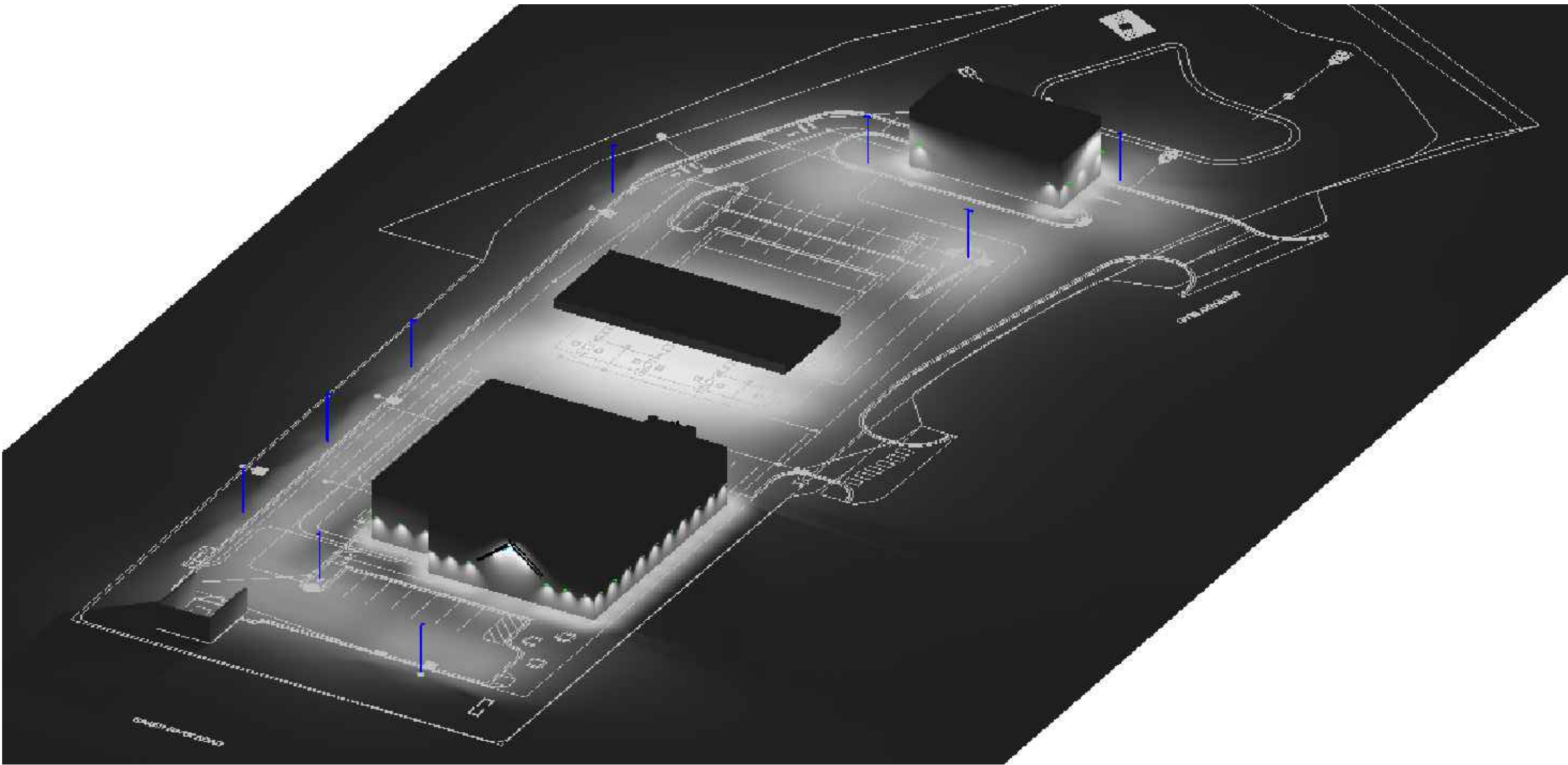
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PHOTOMETRIC RENDERING PLAN  
NOT TO SCALE



PHOTOMETRIC RENDERING PLAN  
NOT TO SCALE

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

*[Signature]*  
Date: 08-17-24  
2024-0195.34  
**GRÄEF**  
275 West Wisconsin Avenue, Suite 300  
Milwaukee, WI 53203  
414 / 259-1500  
414 / 259-0037 fax

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TRIP**

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**CARLSON  
McCain**

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TEL 763.489.7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM



PHOTOMETRIC RENDERING PLANS		
CONVENIENCE STORE #1775 WITH 1-BAY DETACHED CARWASH		
BAKER PARK ROAD & GATEWAY BLVD MAPLE PLAIN, MINNESOTA		
#	DATE	DESCRIPTION
DRAWN BY		GRAPHIC
SCALE		11109-00
PROJ. NO.		2024-07-16
DATE		
SHEET		C801



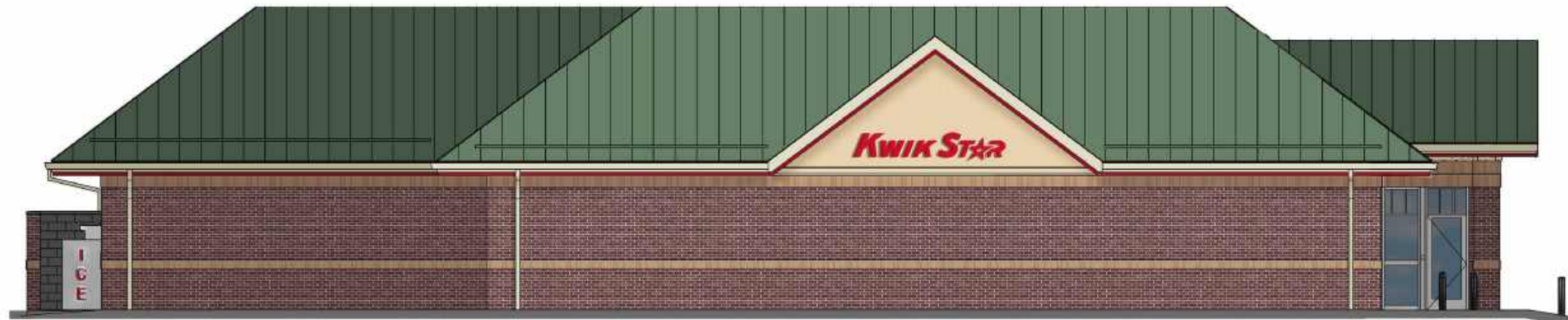
1 FRONT ELEVATION



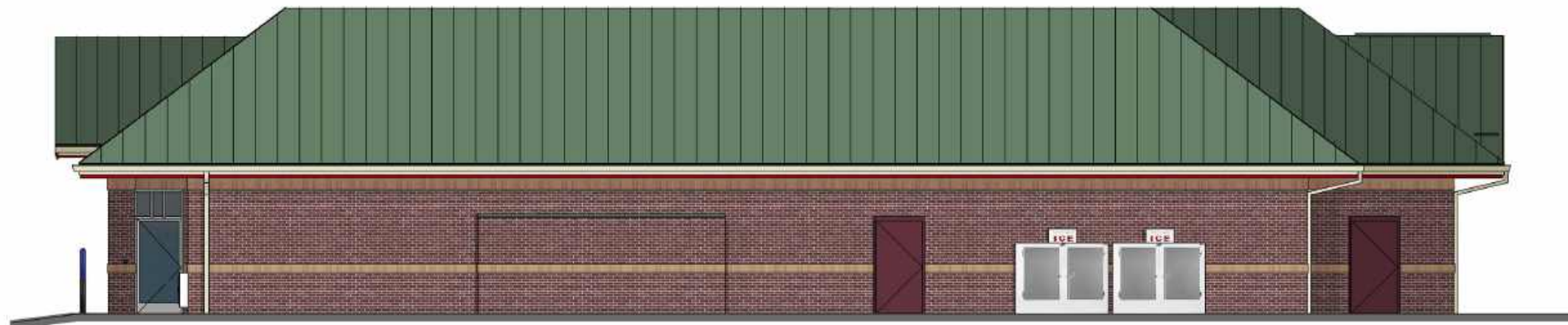
2 LEFT ELEVATION



3 REAR ELEVATION



4 RIGHT ELEVATION



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1 FRONT ELEVATION



2 RIGHT ELEVATION



3 REAR ELEVATION

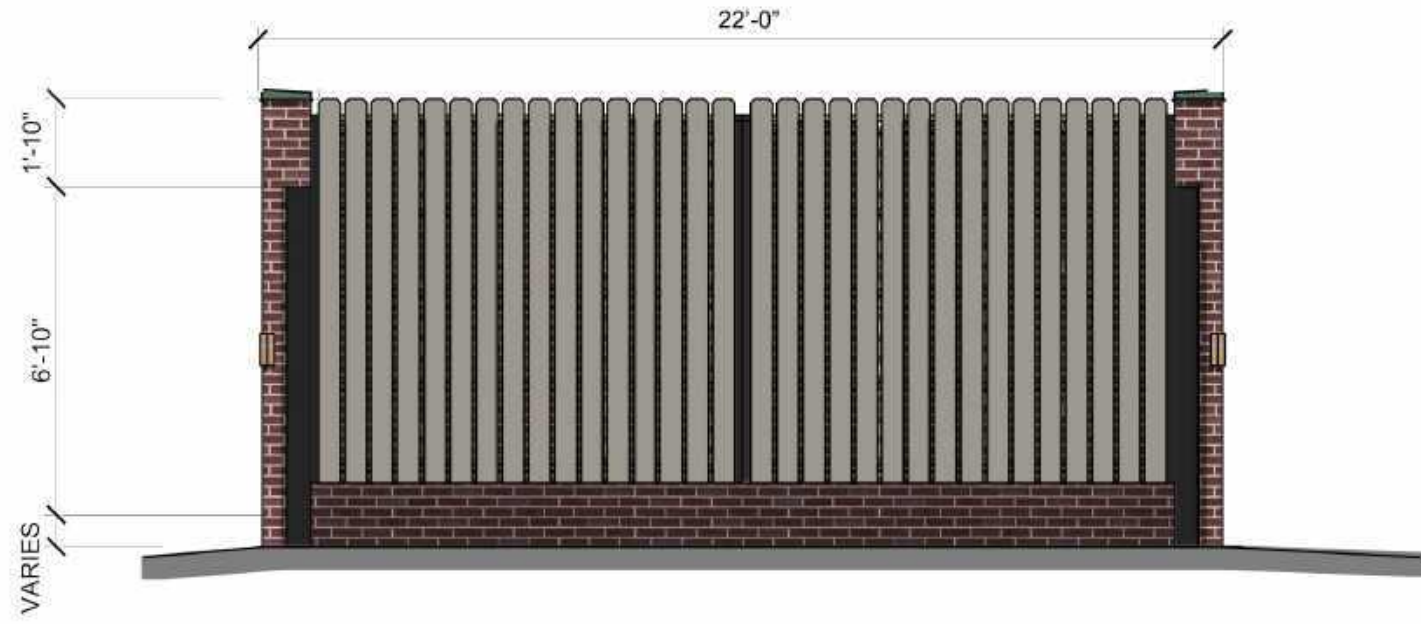


4 LEFT ELEVATION



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TRASH ENCLOSURE - FRONT ELEVATION

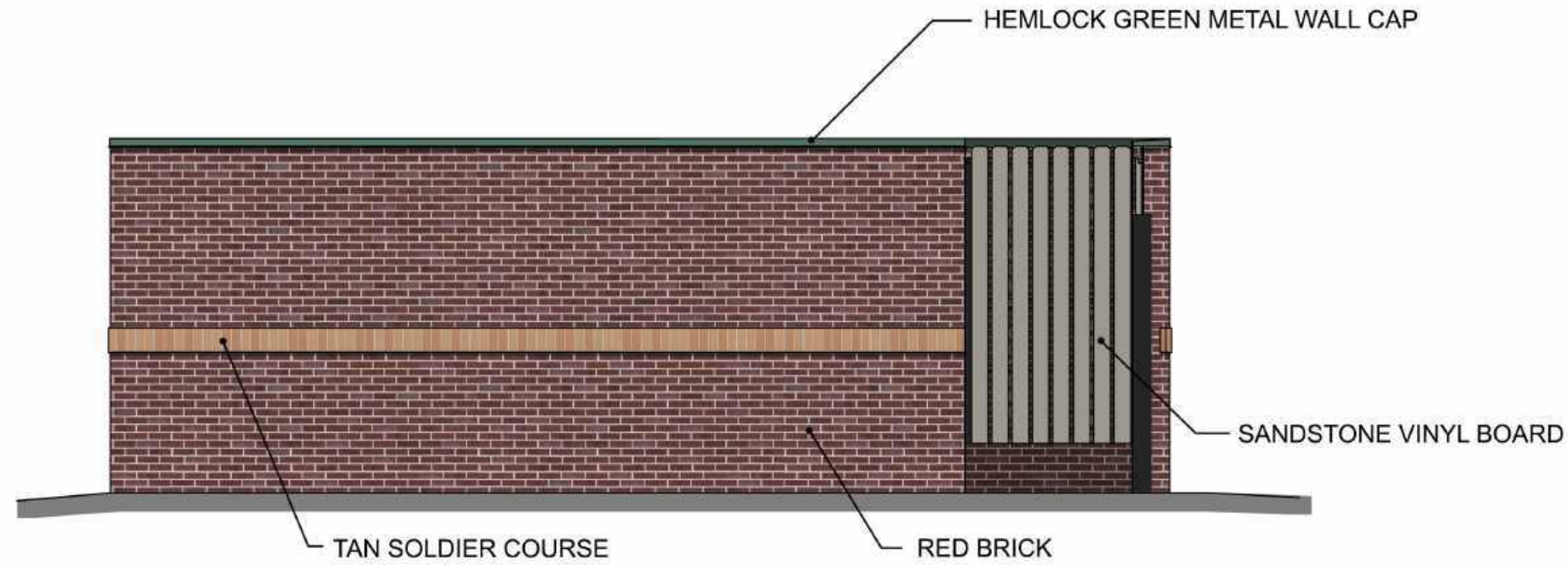
***Kwik  
TRIP***

---

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TRASH ENCLOSURE - SIDE ELEVATION





1 FRONT ELEVATION



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8 MPD



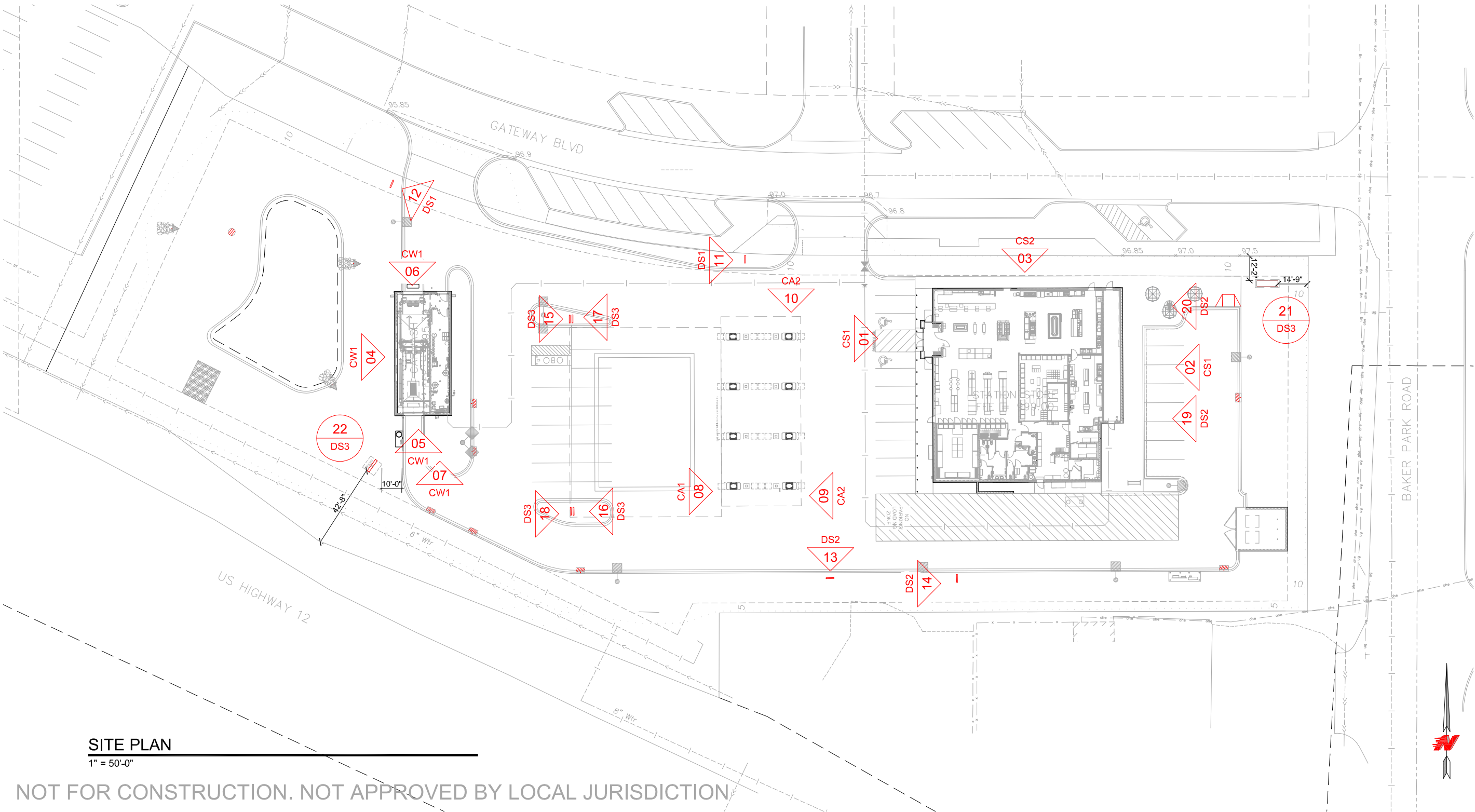
2 SIDE ELEVATION



- PROPOSED SIGNS:  
#01 24" LED KWIK TRIP BUILDING LETTERS  
#02 24" LED KWIK TRIP BUILDING LETTERS  
#03 24" LED KWIK TRIP BUILDING LETTERS  
#04 24" LED CARWASH BUILDING LETTERS  
#05 CARWASH ENTER  
#06 CARWASH EXIT  
#07 CARWASH INFORMATIONAL SIGN  
#08 24" LED KWIK TRIP CANOPY LETTERS  
#09 24" LED KWIK TRIP CANOPY LETTERS  
#10 24" LED KWIK TRIP CANOPY LETTERS  
#11 DRIVEWAY DIRECTIONAL  
#12 DRIVEWAY DIRECTIONAL  
#13 DRIVEWAY DIRECTIONAL  
#14 DRIVEWAY DIRECTIONAL  
#15 - # 18 2-HOUR PARKING SIGN  
#19 EMPLOYEE PARKING SIGN  
#20 EMPLOYEE PARKING SIGN  
#21 FREESTANDING MONUMENT SIGN  
#22 FREESTANDING PYLON SIGN



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SITE PLAN  
1" = 50'-0"

NOT FOR CONSTRUCTION. NOT APPROVED BY LOCAL JURISDICTION

SITE PLAN

CONVENIENCE STORE #1775  
WITH DETACHED CARWASH

US HWY 12 & CO RD 29  
MAPLE PLAIN, MN

#	DATE	DESCRIPTION
▲	2024 12/17	BKGD UPDATE
▲	2025 01/15	BKGD UPDATE

DRAWN BY

SCALE

PROJ. NO.

DATE

SHEET

KMK

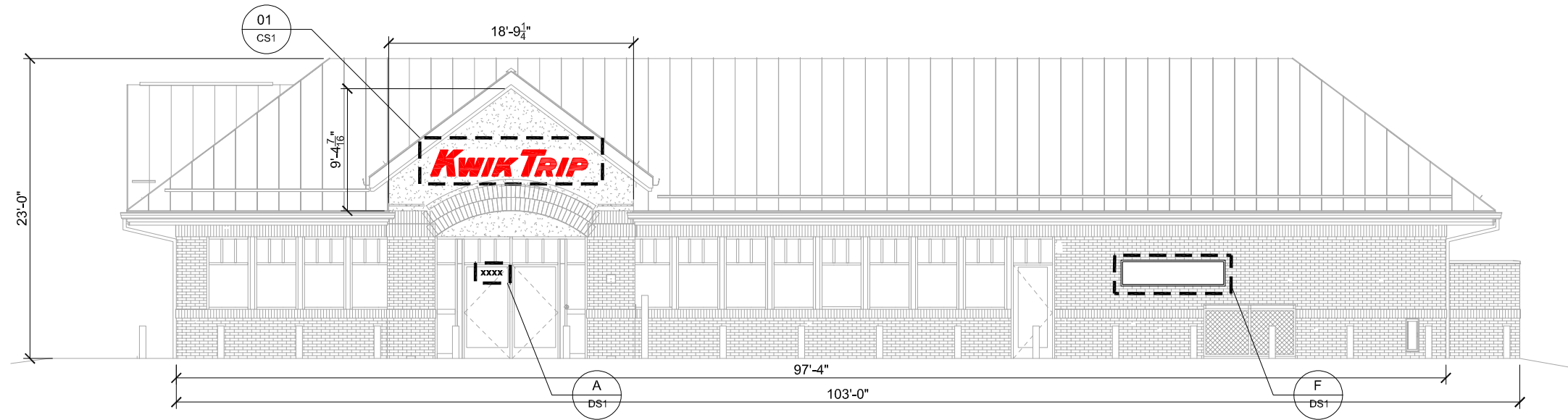
MULTIPLE

0001

2024 10/08

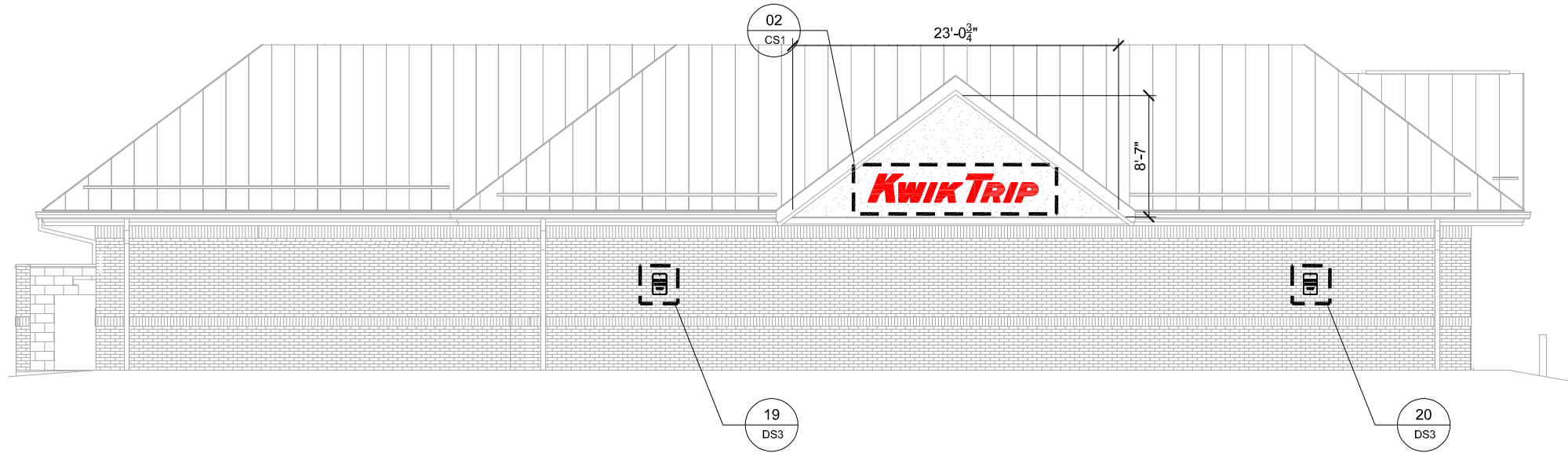
SP1





STORE ELEVATION

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



STORE ELEVATION

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



LOGO DETAIL - SIGNS #01 & #02

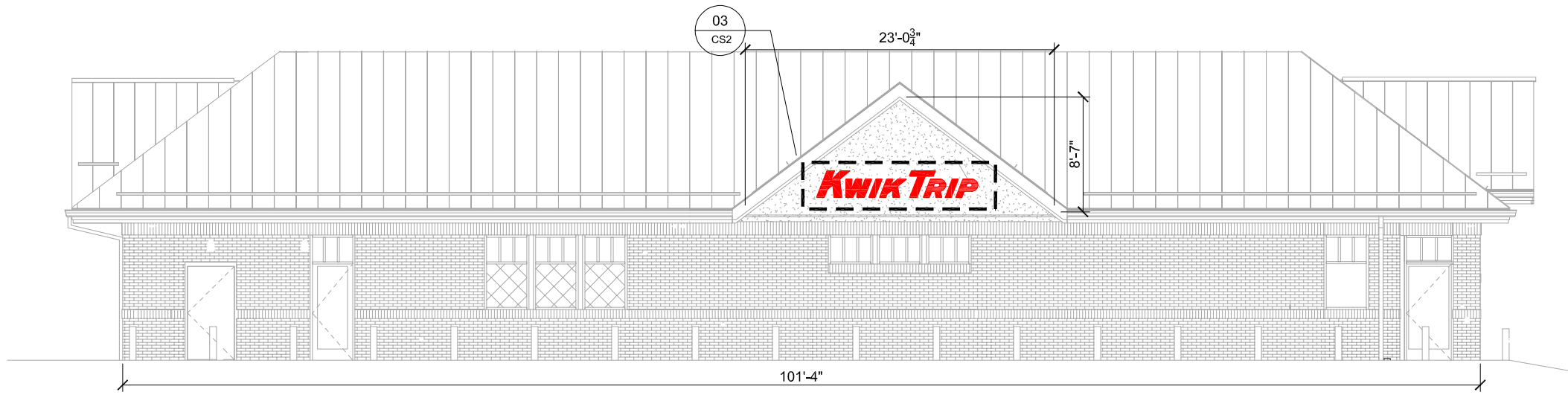
SCALE: 1/2" = 1'-0"



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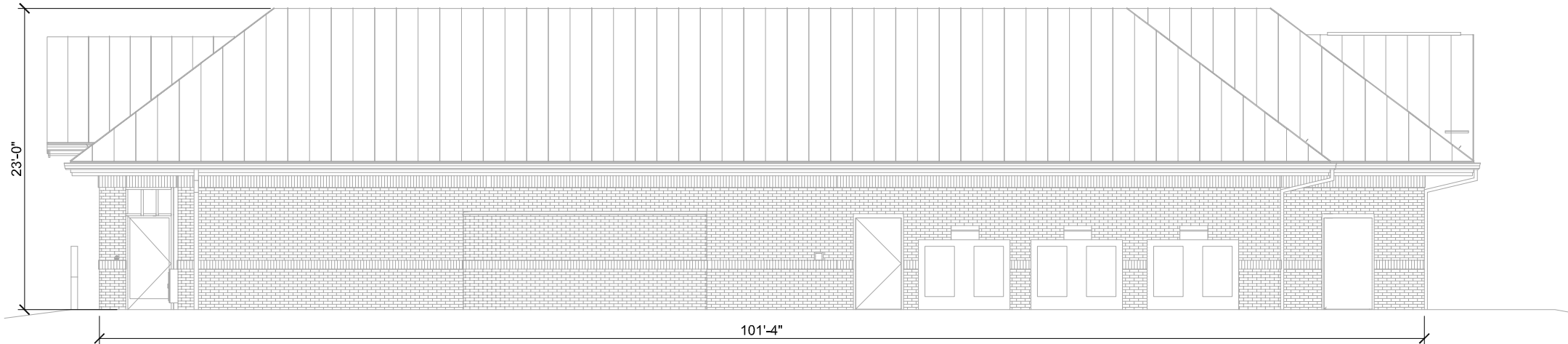
CONVENIENCE STORE SIGNAGE		
CONVENIENCE STORE #1775 WITH DETACHED CARWASH		
US HWY 12 & CO RD 29 MAPLE PLAIN, MN		
#	DATE	DESCRIPTION
△	2024 12/17	BKGD UPDATE
DRAWN BY		KMK
SCALE		MULTIPLE
PROJ. NO.		0001
DATE		2024 10/08
SHEET		CS1





STORE ELEVATION

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



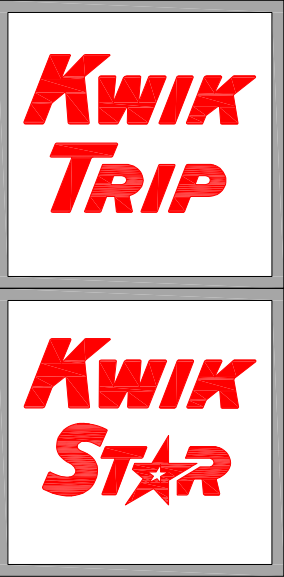
STORE ELEVATION

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



LOGO DETAIL - SIGN #03

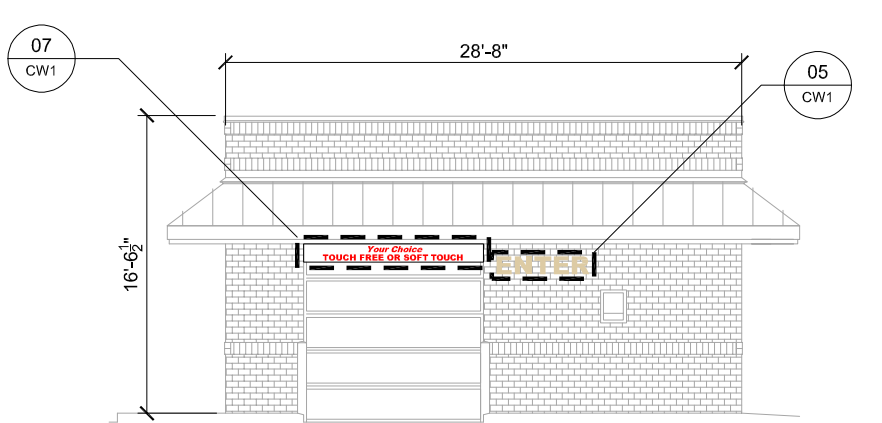
SCALE: 1/2" = 1'-0"



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CONVENIENCE STORE SIGNAGE		
CONVENIENCE STORE #1775 WITH DETACHED CARWASH		
US HWY 12 & CO RD 29 MAPLE PLAIN, MN		
#	DATE	DESCRIPTION
△	2024 12/17	BKGD UPDATE
DRAWN BY		KMK
SCALE		MULTIPLE
PROJ. NO.		0001
DATE		2024 10/08
SHEET		CS2

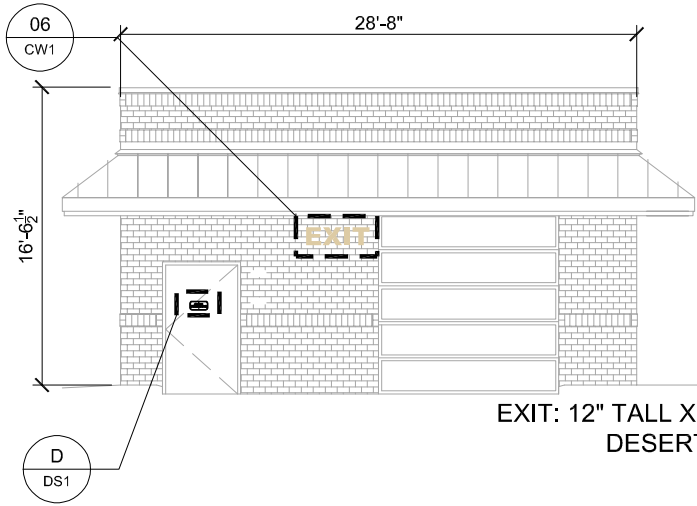




ENTER: 12" TALL X 48" LONG  
DESERT SAND (TAN) LETTERS

ENTER ELEVATION

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



EXIT: 12" TALL X 36" LONG  
DESERT SAND (TAN) LETTERS

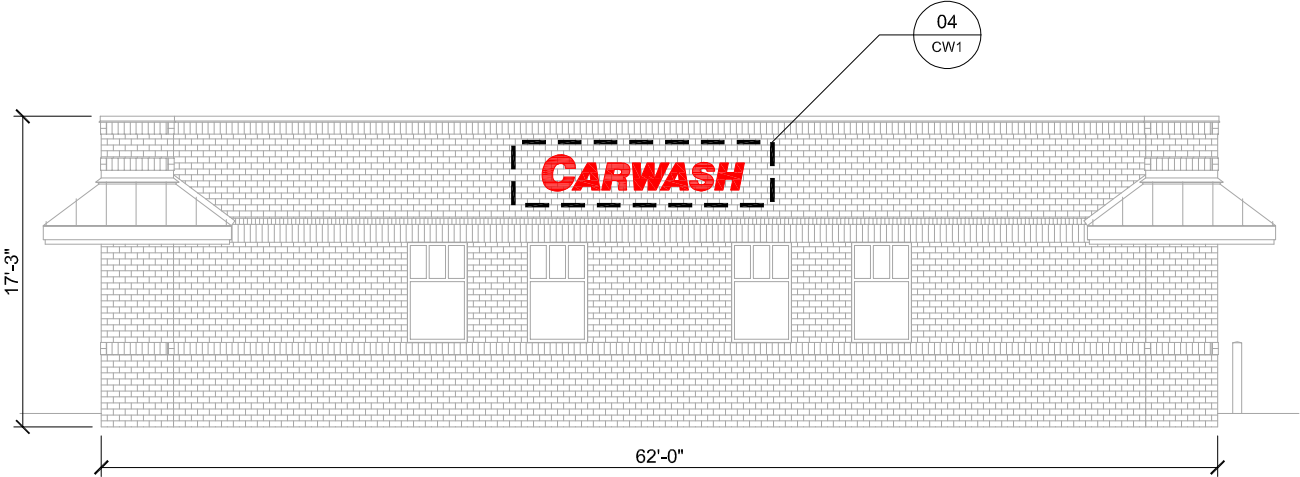
EXIT ELEVATION

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



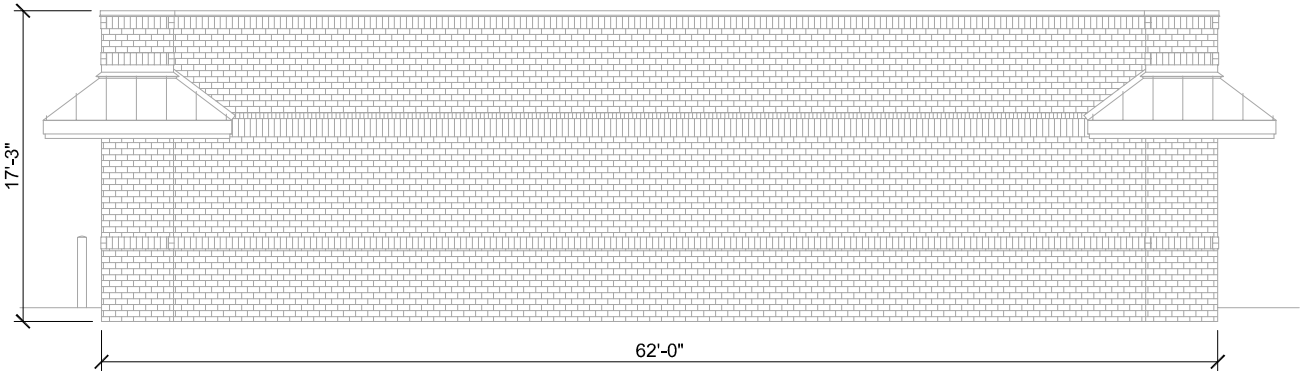
LOGO DETAIL - SIGN #04

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



SIDE ELEVATION

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



SIDE ELEVATION

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



NON-LIT INFORMATIONAL SIGN  
RED VINYL ON WHITE ALUMINUM  
1'-0"H X 10'-0"W = 10.0 SQ FT

INFORMATIONAL SIGN #07

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

**Kwik  
TRIP**

**Kwik  
STAR**

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CARWASH SIGNAGE

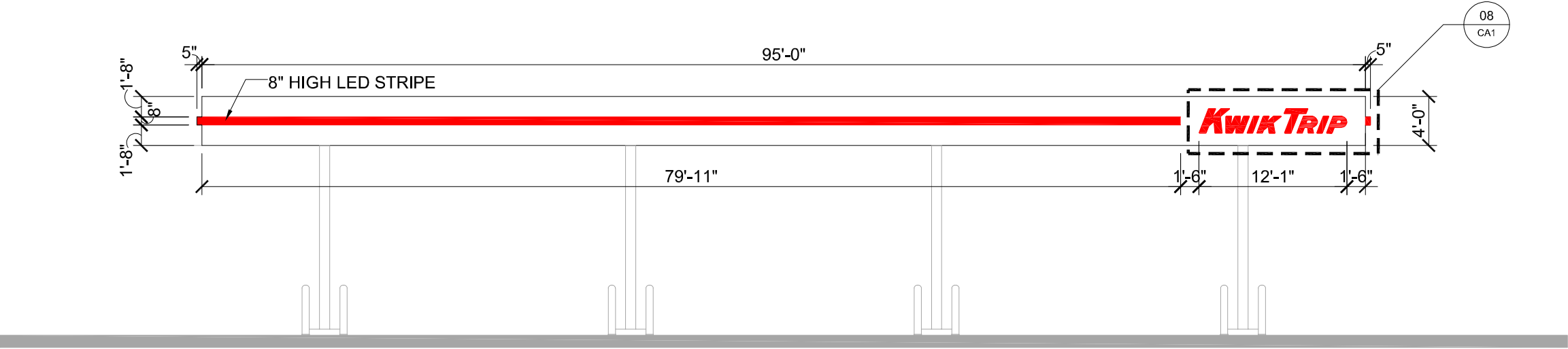
CONVENIENCE STORE #1775  
WITH DETACHED CARWASH

US HWY 12 & CO RD 29  
MAPLE PLAIN, MN

#	DATE	DESCRIPTION

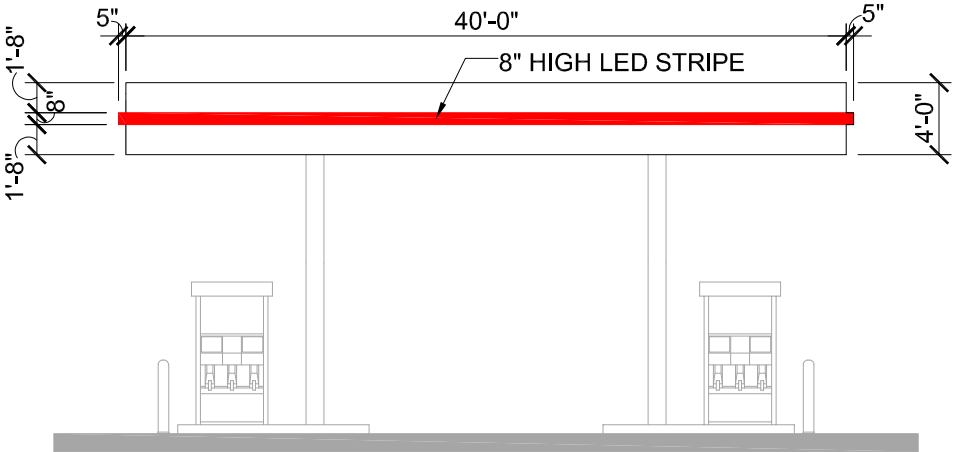
DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2024 10/08
SHEET	CW1





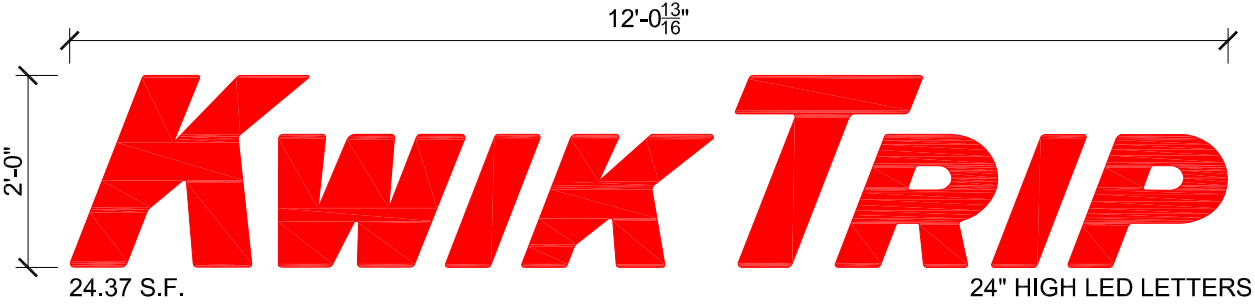
CANOPY ELEVATION

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



CANOPY ELEVATION

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



LOGO DETAIL - SIGN #08

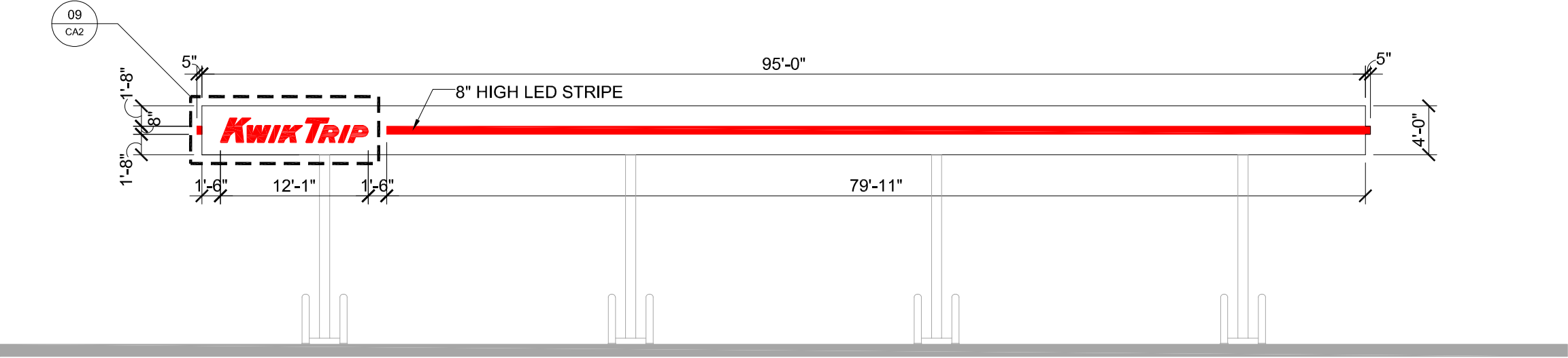
SCALE: 1/2" = 1'-0"



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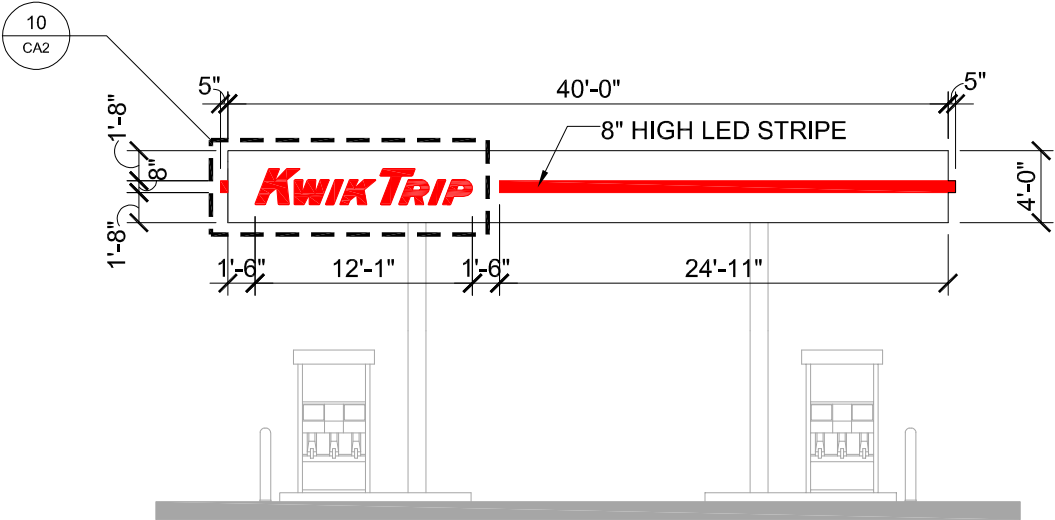
CANOPY SIGNAGE	CONVENIENCE STORE #1775 WITH DETACHED CARWASH	
	US HWY 12 & CO RD 29 MAPLE PLAIN, MN	
	#	DATE
	DESCRIPTION	
DRAWN BY		KMK
SCALE		MULTIPLE
PROJ. NO.		0001
DATE		2024 10/08
SHEET		CA1





CANOPY ELEVATION

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



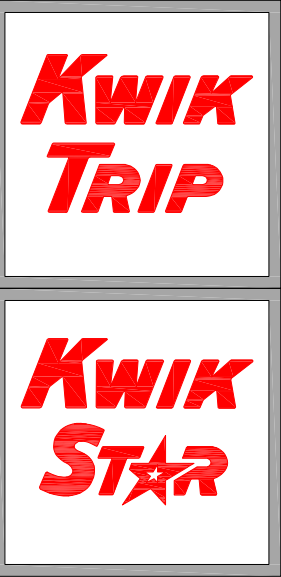
CANOPY ELEVATION

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



LOGO DETAIL - SIGNS #09 & #10

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



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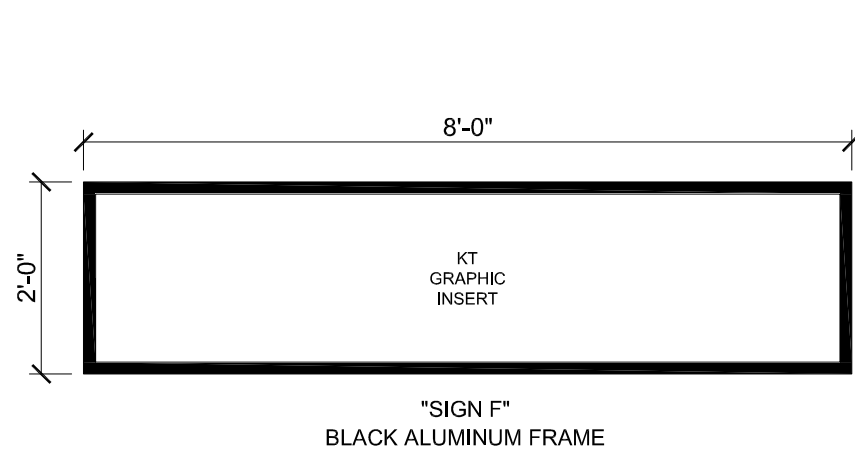
CANOPY SIGNAGE	CONVENIENCE STORE #1775 WITH DETACHED CARWASH	
	US HWY 12 & CO RD 29 MAPLE PLAIN, MN	
	#	DATE
	DESCRIPTION	
DRAWN BY		KMK
SCALE		MULTIPLE
PROJ. NO.		0001
DATE		2024 10/08
SHEET		CA2





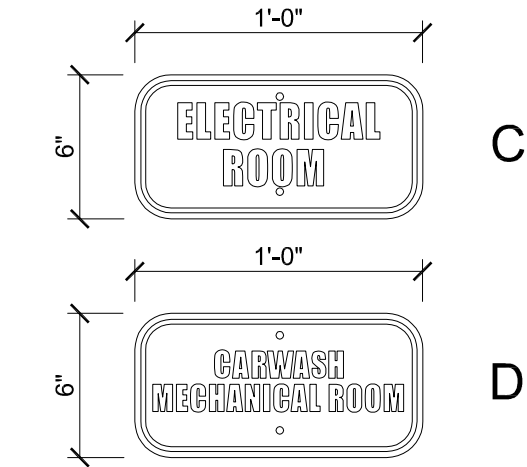
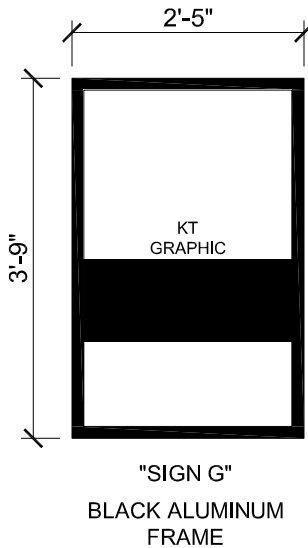
ADDRESS SIGN A

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



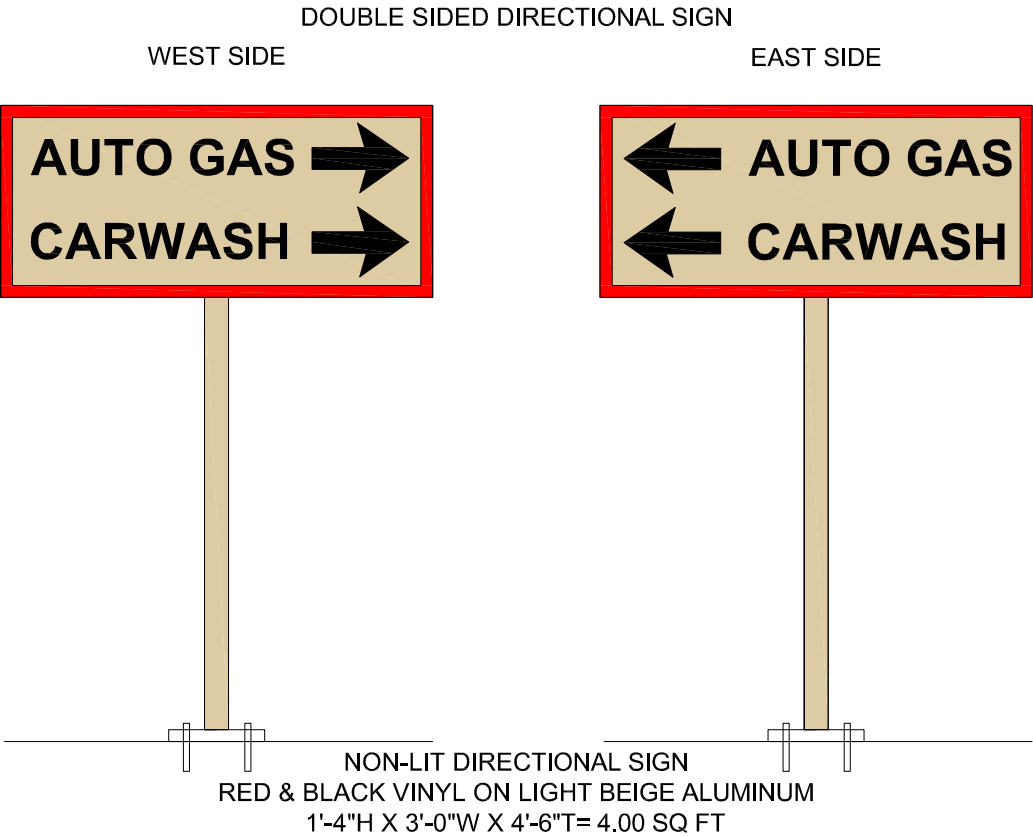
INFORMATIONAL SIGNS F & G

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



INFORMATIONAL SIGNS C & D

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





DIRECTIONAL SIGNS #11 & #12

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

GENERAL SPECIFICATIONS

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

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

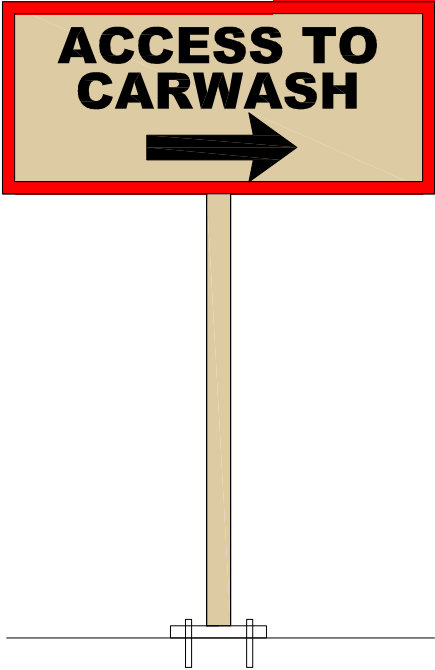


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1626 OAK STREET  
LA CROSSE, WI 54602-2107  
PH. (608) 781-8988  
FAX (608) 781-8960

DIRECTIONAL SIGNAGE	CONVENIENCE STORE #1775 WITH DETACHED CARWASH	US HWY 12 & CO RD 29 MAPLE PLAIN, MN			
			#	DATE	DESCRIPTION
DRAWN BY		KMK			
SCALE		MULTIPLE			
PROJ. NO.		0001			
DATE		2024 10/08			
SHEET		DS1			



SINGLE SIDED DIRECTIONAL SIGN  
NORTH SIDE

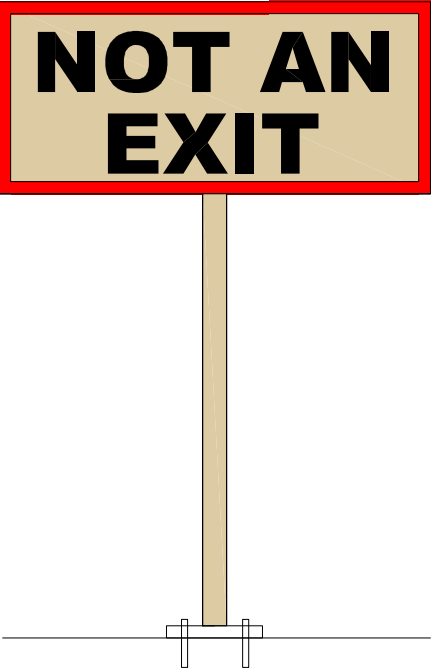


NON-LIT DIRECTIONAL SIGN  
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM  
1'-4"H X 3'-0"W X 4'-6"T= 4.00 SQ FT

DIRECTIONAL SIGN #13

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

SINGLE SIDED DIRECTIONAL SIGN  
WEST SIDE



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 #14

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

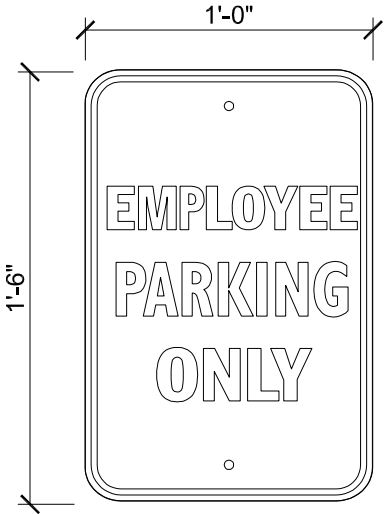
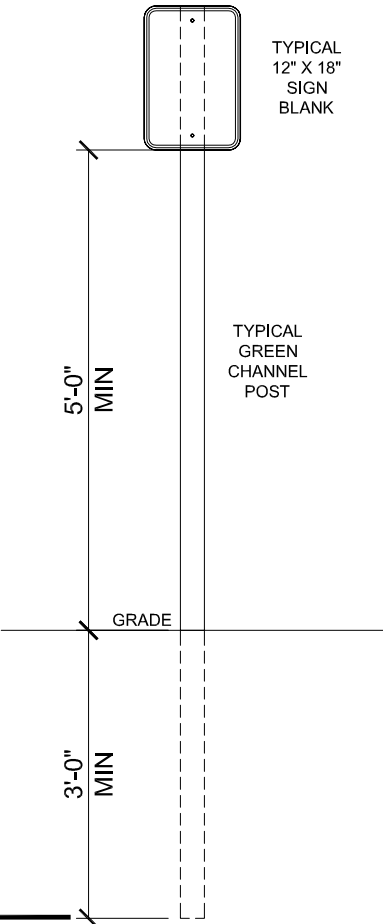
SINGLE SIDED SIGN



12" X 18" ALUMINUM SIGN  
QTY: 4

2 HOUR PARKING SIGNS #15 - # 18

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



EMPLOYEE PARKING SIGNS #19 & #20

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

GENERAL SPECIFICATIONS

18"x12" ALUMINUM SIGN  
Qty: 2  
Size: 18"x12"  
Material: Standard white blank  
Finish: cut vinyl graphics  
Pole Size:  
Pole Material:  
Pole Finish:  
Install:  
HAGL:  
OAH:

**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

DIRECTIONAL SIGNAGE

CONVENIENCE STORE #1775  
WITH DETACHED CARWASH

US HWY 12 & CO RD 29  
MAPLE PLAIN, MN

#	DATE	DESCRIPTION



DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2024 10/08
SHEET	DS2

#21 KWIK TRIP FREESTANDING MONUMENT SIGN

SEE ATTACHED ARTWORK

#22 KWIK TRIP FREESTANDING PYLON SIGN

SEE ATTACHED ARTWORK



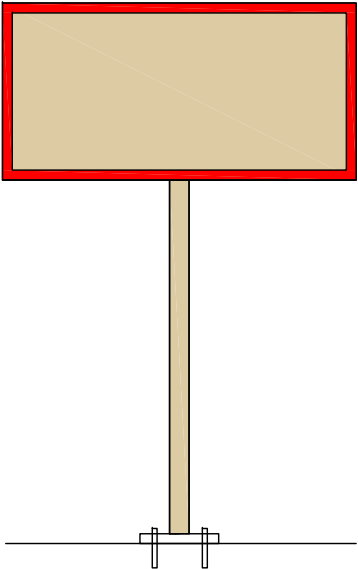
KWIK TRIP, Inc.  
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1626 OAK STREET  
LA CROSSE, WI 54602-2107  
PH. (608) 781-8988  
FAX (608) 781-8960

DIRECTIONAL SIGNAGE	CONVENIENCE STORE #1775 WITH DETACHED CARWASH	US HWY 12 & CO RD 29 MAPLE PLAIN, MN			
			#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2024 10/08
SHEET	DS3

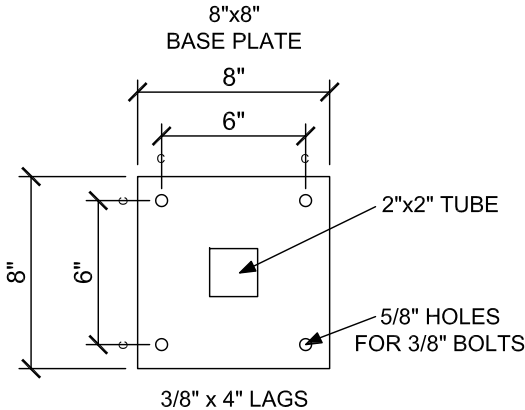


SINGLE SIDED NON-LIT DIRECTIONAL SIGN



DIRECTIONAL SIGN EXAMPLE

SCALE: NTS




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



DIRECTIONAL SIGN BASE PLATE

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

	<p>KWIK TRIP, Inc. P.O. BOX 2107 1626 OAK STREET LA CROSSE, WI 54602-2107 PH. (608) 781-8988 FAX (608) 781-8960</p>	<p>PROJECT: Store- All Stores Date - 08/31/2023</p> <p>DESCRIPTION: All Directional signs will have a single post per the detail above</p>	SCB #1



#### Client

Kwik Trip  
Maple Plain, MN  
Project  
A - Monument

Consultant Design Art  
Carlee Strong Danielle Hadley

**Monument Sign Specifications**  
-Aluminum construction w/ LED illuminated Kwik Trip faces, products & 8" pricers  
-New Dak EMC 90 x 180 - 8mm RGB

**Sign Area**  
75 Sqft

#### Color Key

- 1 Black S/G
- 2 PPG NA 208400 S/G
- 3 PPG NA 209420 Brown S/G
- 4 Cardinal Red (3630-53)
- 5 Black (3630-22)
- 6 Yellow (3630-015)

#### Job Number

126985 A

Creation Date

10/9/2024

Revision Date

Revision Number

#### File Path

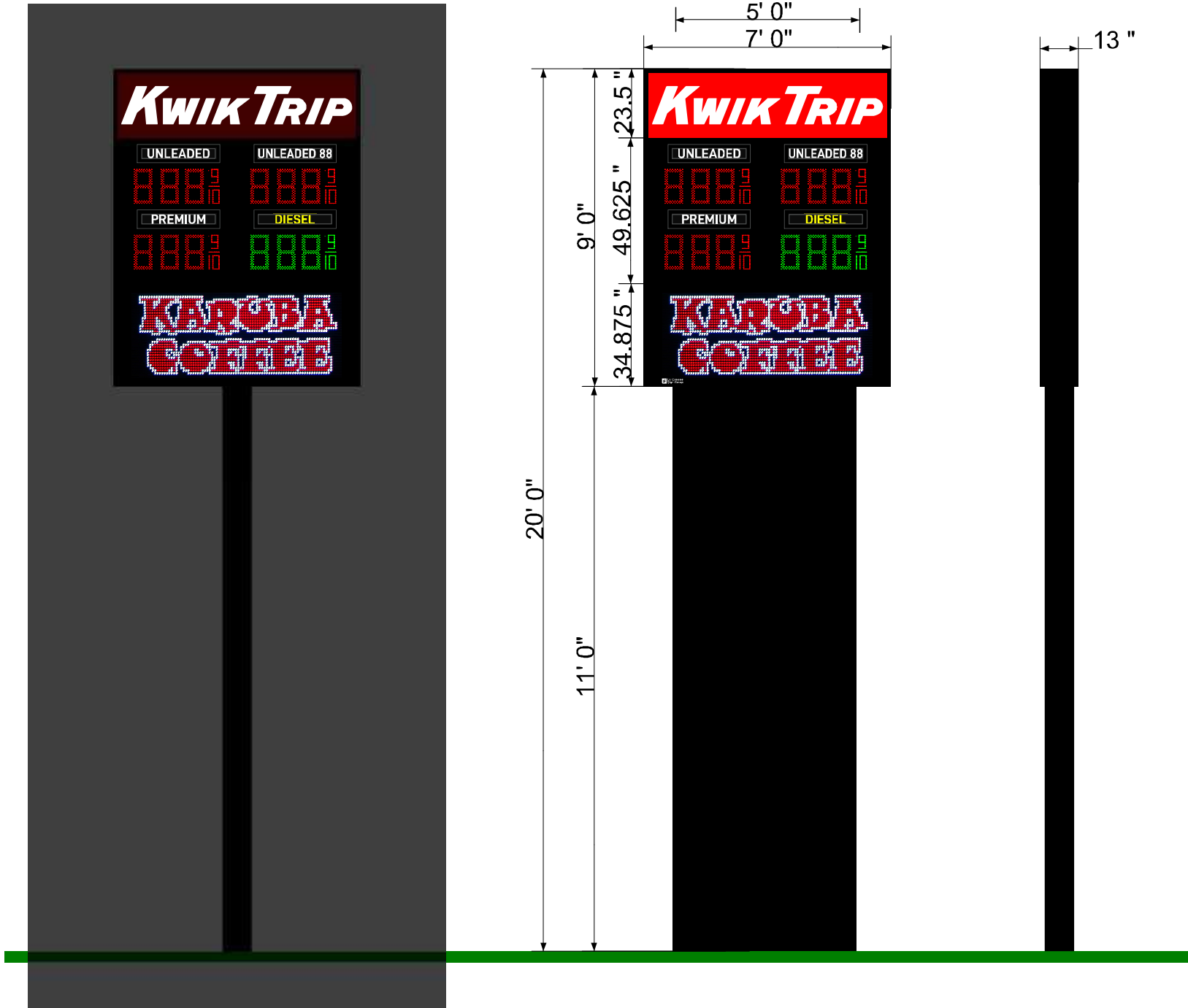
1 - Kwik Trip\Maple Plain, MN 1775\126985-Artwork for KT1775 Maple Plain\Design\1775 Maple Plain Art 126985 A Monument

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_ Landlord: \_\_\_\_\_ Date: \_\_\_\_\_

\*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.





lacrossesign.com

1450 Oak Forest Drive Onalaska, WI 54650 608-781-1450  
2242 Mustang Way Madison, WI 53718 608-222-5353  
2502 Melby Street Eau Claire, WI 54703 715-835-6189

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Client

Project

Consultant Kelly Voegele Design Art Danielle Hadley

Pylon Sign Specifications

- Fabricated Aluminum KT Cabinet w/ White LED Lighting
- KT Faces Have Opaque Background w/ Illuminated Copy
- Fuel Products Have Opaque Background w/ Illuminated Copy & 12" Pricers
- EMC 90 x 225 8mm 2'5" x 6'0" active / 2'11" x 6'3" cabinet = 14.5 sq.ft.

Area  
-KT Area 13.71 sqft  
-Price Area 28.95 sqft  
-EMC Area 14.5 sqft  
-Total 63 sqft  
Color Key

- 1 Black S/G
- 2 PMS 186c Red
- 3 White Flex
- 4 White Lexan
- 5 Black (3630-22)
- 6 Yellow (3630-015)

Job Number  
125435-1 B

Creation Date  
5/20/2024

Revision Date 6/13/2024 Revision Number 1

File Path

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_ Landlord: \_\_\_\_\_ Date: \_\_\_\_\_

\*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.