#2023-206 Lake Roots
475 Virginia Street – Comprehensive Land Use Plan Amendment, Rezoning and Preliminary/Final PUD for a Store and Restaurant
Project Review for Planning and Zoning Commission

Meeting Date: July 8, 2024

Requests:
1) Comprehensive Land Use Plan Amendment from Urban Residential to Commerce
2) Rezoning from R-3A Two Family Residential to B-2 General Commercial
3) Preliminary and Final Planned Unit Development and Variations for a Convenience Store / Restaurant with outdoor seating

Location: 475 W. Virginia Street

Acreage: Approximately 0.6 acres

Existing Zoning: B-2 General Commercial and R-3A Two Family Residential

Proposed Zoning: B-2 General Commercial

Surrounding Properties:
North: B-2 General Commercial
South: R-3A Two Family Residential
East: B-2 General Commercial
West: R-3A Two Family Residential

Staff Contact: Elizabeth Maxwell (815.356.3615)

Background:

- The site is the former Mr. A's restaurant. The site is comprised of three parcels which have been under single ownership. The main parcel at the corner of Virginia Street and Dole Avenue was the restaurant and parking lot. The lot to the south was a driveway and grass, previously there was also a home on the property that was utilized by the owners of Mr. A's. The lot to the west was an ancillary parking area.
- The existing building would be reused and include an addition. The west lot with the ancillary parking lot would be improved as a standard parking lot.
- The south and west lots would need to be rezoned to B-2 and obtain a Comprehensive Land Use Plan Amendment to Commerce.
- The use would be a café and convenience store with outdoor seating.

Development Analysis:

General

- Requests:
  - Comprehensive Land Use Plan Amendment from Urban Residential to Commerce for two of the parcels.



  - Rezoning: The site would be rezoned from R-3B Multi-Family Residential to B-2 General Commercial for two of the parcels.
  - A Preliminary and Final Planned Unit Development with Variations to construct the Convenience Store / Restaurant with outdoor seating.
- Zoning: The site would be rezoned to B-2 General Commercial for a portion of the property. The property is within the Virginia Street Corridor (VSC). The VSC encourages pedestrian oriented designs through reduced setbacks and parking standards.
- Land Use: The land use map would be changed to Commerce. This land use designation would be appropriate for this use.

- Site Plan:
  - The existing building and parking lot is on the northeast parcel. The drive will be extended to the south utilizing an entrance along Dole Avenue and creating a new exit onto Pierson Street.
  - The building addition will be behind the existing building and go west into the parking area. The outdoor patio will be farther behind along Dole Avenue.
  - The access along Route 14 will be a right-in / right-out. The access along Dole Avenue is a full in and out. The access along Pierson Street is an exit only.

- The outdoor seating is 8.5 feet from the property line adjacent to the residence and includes an 8-foot barrier fence to limit noise.
- The plans illustrate the stormwater management system. This includes two rain gardens and a gravel swale to comply with the Crystal Lake Watershed requirements. The proposal complies with the ordinance requirements.
- Parking is provided in four areas. The front lot is 90 degree parking and contains nine spaces, there are then two parallel spaces along the drive aisle and five angles spaces leading to Pierson. The last parking area is the west parking lot with 17 spaces. The site meets the parking requirements.
- Parking is based on the square footage of the use,
  - Convenience Store (Market) 1/350 gross excluding storage = 1998 5.7 spaces
  - Limited Service Restaurant (Café) 1/100 gross = 2102 21 spaces
  - Outdoor Seating 1 per 4 seats. 34 seats = 9 spaces
  - Virginia Street Corridor is allowed to reduce the parking to 70% of the requirement = 25 spaces required. 33 spaces are provided.

- Landscape Plan:
  - New landscape areas are being added around the perimeter of the site. This will improve the look of the site and add areas for water quality treatment.
  - Landscape buffers between parking areas and right-of-way shall be between 5 and 10 feet, averaging 10 feet in the Virginia Street Corridor. There is limited space in this existing site to provide the minimum landscape buffer. The buffer along Dole Avenue is reduced to zero (0) feet along the parallel spaces, and reduced to 1.5 feet along the angled spaces. Additional space up to 5 feet is provided along Route 14.

- Elevations:
  - The exterior façade will be upgraded with new colors and materials. It will be a modern look in a bright teal color.
  - The new building addition will have a stucco exterior also in a bright teal color.
  - A solid brick base continues around the entire building.
  - The building will have a unique look and refresh this corner.
  - The site meets the Virginia Street Corridor Design Standards except ensuring a clear base, middle and top. Amending the elevations per the suggestions will meet this standard.
  - The elevations **meet five (5)** of the design standards. The UDO requires a minimum of six (6) design standards be met. It is recommended that the following be incorporated to comply:
    - Increasing the size of the top cap around the parapet roof.

- Changing the exterior material from Stucco to brick as the primary building material.

- Signs:
  - The main identification signs are proposed on the east (Route 14) façade and the south (Dole Avenue) façade. These signs total 156 square feet.
  - A mural, which is considered signage, is proposed on the north façade to help provide interest on the long blank wall. The mural is 208 square feet.
  - The canopies are striped. Striping has been considered signage in the past, but an interpretation by Council several years ago resulted in striping on awnings or around canopies not being considered signage.

Findings of Fact:

Outdoor Seating

Section 2-400 B 19b Sidewalk or Outdoor Seating. Outdoor seating located on private property shall comply with the following standards:

1. Outdoor seating areas must be adjacent to and provide direct access to and from the tenant space within the principal structure which the outside seating area serves.
   ☐ *Meets* ☐ *Does not meet*

2. Outdoor seating areas must be located 20 feet from the rear property line if adjacent to residentially zoned properties.
   ☐ *Meets* ☐ *Does not meet*

   The site proposes an 8.5-foot setback from the neighboring residential property.

3. Outdoor seating areas shall not be located in the parking lot landscape islands.
   ☐ *Meets* ☐ *Does not meet*

4. The use of the additional area for outdoor seating will not decrease available parking below that required by the UDO for the food service use.
   ☐ *Meets* ☐ *Does not meet*

5. If outdoor seating areas are located within six feet from driveways, drive aisles and alleys, and within 10 feet from intersections, a sturdy and highly visible barrier shall be provided to protect the seating area.
   ☐ *Meets* ☐ *Does not meet*

6. A minimum of three feet of clear pedestrian passage, free of barriers and street trees, bike racks, lamp posts, sign posts, and any other fixtures or obstructions is required between the seating area and the edge of the sidewalk.
   ☐ *Meets* ☐ *Does not meet*

Preliminary and Final Planned Unit Development/Special Use Permit
The petitioner is requesting approval of a Preliminary and Final Planned Unit Development to allow the construction of a Convenience Store / Restaurant. A Planned Unit Development is a Special Use and Special Uses require separate review because of their potential to impact surrounding properties and the orderly development of the City.

Section 2-400 B General Standards for all special uses in the Unified Ordinance establishes standards for all special uses in Crystal Lake. Briefly, the criteria are as follows:

7. The use is necessary or desirable, at the proposed location, to provide a service or facility which will further the public convenience and general welfare.
   ☐ *Meets* ☐ *Does not meet*

8. The use will not be detrimental to area property values.
   ☐ *Meets* ☐ *Does not meet*

9. The use will comply with the zoning districts regulations.
   ☐ *Meets* ☐ *Does not meet*

10. The use will not negatively impact traffic circulation.
    ☐ *Meets* ☐ *Does not meet*

11. The use will not negatively impact public utilities or municipal service delivery systems. If required, the use will contribute financially to the upgrading of public utilities and municipal service delivery systems.
    ☐ *Meets* ☐ *Does not meet*

12. The use will not negatively impact the environment or be unsightly.
    ☐ *Meets* ☐ *Does not meet*

13. The use, where possible will preserve existing mature vegetation, and provide landscaping and architecture, which is aesthetically pleasing, compatible or complementary to surrounding properties and acceptable by community standards.
    ☐ *Meets* ☐ *Does not meet*

14. The use will meet requirements of all regulating governmental agencies.
    ☐ *Meets* ☐ *Does not meet*

15. The use will conform to any conditions approved as part of the issued Special Use Permit.
    ☐ *Meets* ☐ *Does not meet*

16. The use will conform to the regulations established for specific special uses, where applicable.
    ☐ *Meets* ☐ *Does not meet*

In addition PUDs must also meet the standards in Section 4-500 C. Development Standards and 4-500 D. 1 Additional standards for Planned Unit Developments Commercial PUDs.

1. Implements the vision and land use policies of the Comprehensive Plan.
   ☐ Meets ☐ Does not meet

2. Shall not result in substantial adverse effect on adjacent property, natural resources, infrastructure, public sites or other matter of public health, safety and welfare.
   ☐ Meets ☐ Does not meet

3. PUDs must provide transitional uses to blend with adjacent development.
   ☐ Meets ☐ Does not meet

4. PUD phases must be logically sequenced.
   ☐ Meets ☐ Does not meet

5. The density and intensity of a PUD shall be in accordance with the Comprehensive Plan.
   ☐ Meets ☐ Does not meet

6. All dimensional standards shall be listed within the PUD plan if they do not meet the Ordinance minimum standards.
   ☐ Meets ☐ Does not meet

7. The responsible parties for all on-site and other required public improvements shall be established and a utility plan indicating all proposed easements shall be provided.
   ☐ Meets ☐ Does not meet

8. Any private infrastructure shall comply with the city standards.
   ☐ Meets ☐ Does not meet

9. The PUD plan shall establish the responsibility of the applicant/developer.
   ☐ Meets ☐ Does not meet

10. A bond or letter of credit shall be posted to cover required fees or public improvements.
    ☐ Meets ☐ Does not meet

PLANNED UNIT DEVELOPMENT VARIATION

The purpose of Planned Unit Developments is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are, therefore, intended to allow substantial flexibility in planning and designing a proposal. The proposed amendment enhances the character of the center and allows for a new and unique design for these tenants.

This flexibility is often in the form of relief from compliance with conventional zoning ordinance site and design requirements which may otherwise require individual requests and applications for zoning variations.

Ideally, this flexibility results in a development that is better planned, contains more amenities, and is ultimately more desirable than one that would have been produced through compliance with typical zoning ordinance and subdivision controls.

Therefore more lenient site requirements may be granted where the Planned Unit Development contains features not normally required of traditional developments. Although a formal variation request is not required to be made in conjunction with a Planned Unit Development, Staff identifies those aspects of the Planned Unit Development which effectively result in variations from UDO requirements. If the evidence is not found to justify these variations from the UDO that fact shall be reported to the City Council with a recommendation that the variations from the UDO which are proposed as part of the Planned Development be lessened or denied.

VARIATIONS
The petitioner is requesting four (4) variations as part of the Planned Unit Development:

- Article 4-200 Parking: Parking lots are required to be setback 20 feet from the right-of-way.

  The parking area is approximately five (5) feet back from Route 14 and zero (0) feet from Dole Avenue. The property is an existing narrow site. Due to the size of the lot, the location of the existing building and the need for sufficient parking, the petitioner could not provide the full 20-foot setbacks.

- Article 4-400 Landscape and screening: Landscape is required along perimeters of parking lots, within parking lots, and along buildings through foundation base landscape.
  - Properties in the Virginia Street Corridor are required to have an average 10-foot landscape buffer between parking areas and parking lots.

    The narrow lot allows for a zero (0) to approximately five (5) foot buffer at the perimeters of the parking and the property line.

  - Parking lots are required to have an eight (8) by 19-foot landscape island at the end of each parking area.

    Islands are provided in certain location as space allows.

  - Buildings are required to have a five (5) foot foundation base landscape area.

    Some planters are provided along the building, which still allow for a wide sidewalk. Landscape is provided along the outdoor seating area.

  - The site is permitted a six-foot-high fence. The petitioner has requested an eight-foot-high fence within the 20-foot residential setback

    The eight-foot-high fence will screen and provide additional sound protection from the outdoor seating to the

- Article 4-900 Design Standards: New construction and renovations of over 50% need to meet 6 of the 10 standards.
    - The project meets five (5) of the standards; building form, building massing, rooflines and parapet, building fenestration, and canopy/awning.

      The elevations can be modified to meet two (2) more standards by increasing the size of the top cap around the parapet roof, changing the stucco material to a masonry product.
- Article 4-1000 Signs: Free-standing buildings are permitted 150 square feet of signage.
    - The building contains signage in three different categories. The total wall signage is 537 square feet.
        - Wall signage is 156 square feet.
        - The mural is 208 square feet.

          Other buildings have received variations for murals. This mural helps break up the blank northwest wall.

Comprehensive Land Use Plan 2030 Vision Summary Review:

The Comprehensive Plan designates the subject property as Commerce and Urban Residential. The Urban Residential portion would have a map amendment to Commerce. Commerce is appropriate for existing and future commercial uses. The following goals are applicable to this request:

Land Use - Commerce

Goal: Maintain a dynamic and sustainable base of commercial uses that provides a solid tax base, goods, services and jobs to the City, as well as the surrounding region through coordination in the Unified Development Ordinance, Comprehensive Land Use Plan and Economic Development Strategic Plan.

Supporting Actions – Promote retain and attract businesses that provide a diverse tax base.

Success Indicators – The number of new "mom & pop" / small independent business occupancies.

Economic Vitality – Revitalize and Enhance Key Commercial Areas

Goal: Establish funding sources and work with property owners to assist with and encourage the redevelopment of commercial areas.

Success Indicators – Number of permits for redevelopment of the properties.

Recommended Conditions:

If a motion to recommend approval of the petitioner's request is made, it should be with the following conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Lake Roots Holdings LLC, received 10/5/23)
   B. Plan Set (eSG Architecture & Design, dated 05/17/24, received 6/11/24)
   C. Stormwater Report (Haeger Engineering, dated 5/21/24, received 6/11/24)
   D. Landscape Plan (Daniel Weinbach & Partners, dated 05/17/24, received 06/11/24)

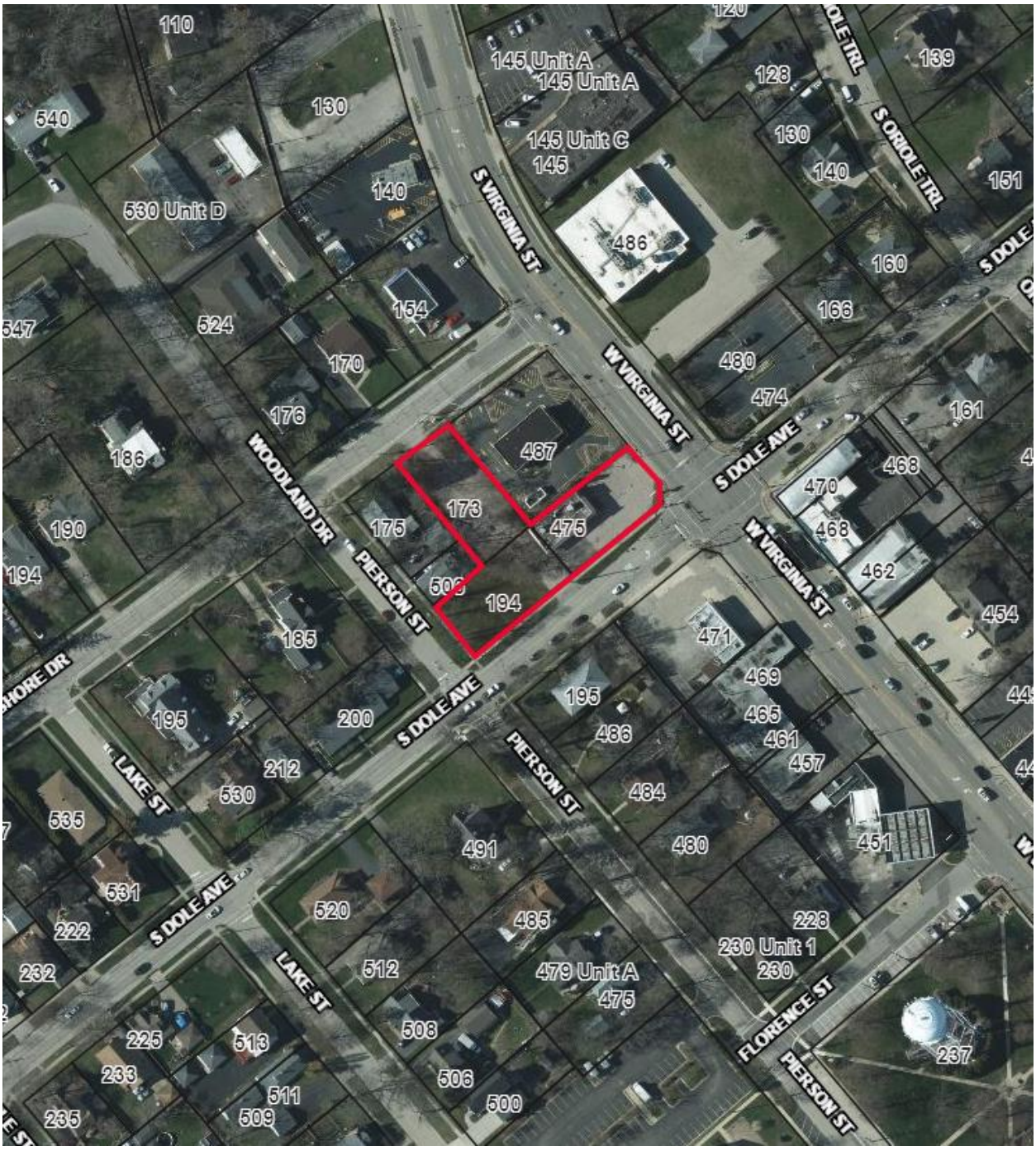
2. Architecture
   A. Building shall retain full wythe brick along base.
   B. Stucco is limited to 25% of the building preferably more than 10 feet above the ground. Work with staff on a material to bridge the gap between the stucco and the brick.
   C. Create a thicker top cap to finish the building.

3. Provide a location for bicycle parking.

4. The ground mounted sign shall not exceed 3.5 feet in height, or be moved back a minimum of 10 feet from all property lines.

5. The petitioner shall address all of the review comments and requirements of the City Departments of Public Works and Engineering, Fire Rescue, and Community Development, and the City's Stormwater Consultant.

PIQ
475 W. Virginia Street



City of Crystal Lake
Development Application
Ownership Sign-off Acknowledgement Form

The following information is related to a development application. As the owner of the property in question, I (we) acknowledge that the information provided in the submittal was reviewed and approved.

Owner Information

Name: Lake Roots Holdings LLC

Address: 820 Country Club Road
Crystal Lake, IL 60014

Phone: 312-860-5662

E-mail: rrussell8586@gmail.com

Project Name & Description: Lake Roots Holdings LLC - Dole Avenue Project
Petitioner would like to redevelop the former Mr. A's Italian Beef restaurant property and two adjacent lots to be a small restaurant with "grab and go" items available for purchase and an indoor/outdoor seating area

Project Address/Location: 475 W. Virginia Street -on the corner of Rt 14 and Dole

Signature

Rod J. Russell 10/5/2023

Owner: Print and Sign name Date

NOTE: If the property is held in a trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

PUBLIC NOTICE BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY OF CRYSTAL LAKE

IN THE MATTER OF THE APPLICATION OF

Lake Roots Holdings LLC

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance of the City of Crystal Lake, Illinois, that a public hearing will be held before the Planning and Zoning Commission of the City of Crystal Lake upon the application of Lake Roots Holdings LLC for approval of a Comprehensive Land Use Plan Map Amendment, Rezoning, and Final Planned Unit Development at the real estate commonly known as 475 W. Virginia Street, Crystal Lake, Illinois 60014 bearing PINs: 19-06-277-007; 19-06-277-002; 19-06-277-005 and consisting of approximately 26,000 square feet and improved with a building previously used as a restaurant.

This application is filed for the purposes of seeking a Comprehensive Land Use Plan Map Amendment from Urban Residential to Commerce, Rezoning a portion of the property from R-3A Two Family District to B-2 General Commercial, and a Final Planned Unit Development for a restaurant/store with indoor/ outdoor seating, variations of the provisions of UDO Section 4-1000 related to maximum wall signage and UDO Section 4-400 related to foundation landscaping and parking lot landscaping and any other variations as necessary to approve the plans as presented pursuant to Article 4 and Article 9.

Plans for this project can be viewed at the City of Crystal Lake Planning and Economic Development Department at City Hall. A public hearing before the Planning and Zoning Commission regarding this request will be held at 7:00 p.m. on July 8, 2024, at the City of Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person desiring to be heard may be present.

Jeff Greenman, Chairperson

Planning and Zoning Commission

City of Crystal Lake

(Published in the Northwest Herald on June 21, 2024) 2173381

STATE OF ILLINOIS)
) **SS**
COUNTY OF McHENRY)

IN THE MATTER OF THE APPLICATION OF
Lake Roots Holdings LLC

AFFIDAVIT

Lisa M. Waggoner, being first duly sworn on oath deposes and states as follows:

A. That a copy of the legal notice, concerning the hearing date for the above-mentioned Petitioner, was sent to each of the persons named on the attached sheet by regular mail notifying them of the hearing before the Planning and Zoning Commission on July 8, 2024, at 7:00 p.m., at the Crystal Lake City Hall, 100 West Woodstock Street in Crystal Lake, Illinois. Said notice was mailed to each of the persons on the attached List of Adjacent Owners by regular mail on June 20, 2024.

B. That the posting requirements of the Unified Development Ordinance have been complied with by placing the customary public notice sign on the subject property on June 20, 2024.

Lisa M. Waggoner

Subscribed and Sworn to me before
this 28th day of June, 2024.

Notary Public

OFFICIAL SEAL
DIANE L. RICHARD
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires March 30, 2027

ADJACENT OWNERS W/IN 200 FEET
FOR LAKE ROOTS PROJECT

	A	B	C	D	E	F	G	H
1	Parcel Number	Owner	Mail To Address 1	Mail To Address 2	Mail To City	Site Address Street	Site Address City	
2	19-06-277-001	ANKE J DOUGHERTY	175 LAKESHORE DR		CRYSTAL LAKE, IL 60014	175 LAKESHORE DR	CRYSTAL LAKE, IL	
3	19-06-277-002	LAKE ROOTS HLDGS LLC	820 COUNTRY CLUB RD		CRYSTAL LAKE, IL 60014	NA		
4	19-06-277-003	VIRGINIA CRYSTAL LLC	1250 LINDENWOOD DR		WINNETKA, IL 60093	487 W VIRGINIA ST	CRYSTAL LAKE, IL	
5	19-06-277-007	LAKE ROOTS HLDGS LLC	820 COUNTRY CLUB RD		CRYSTAL LAKE, IL 60014	475 VIRGINIA ST	CRYSTAL LAKE, IL	
6	19-06-277-005	LAKE ROOTS HLDGS LLC	820 COUNTRY CLUB RD		CRYSTAL LAKE, IL 60014	NA		
7	19-06-253-036	IAN D ERIN M PHILPOT	186 LAKESHORE DR		CRYSTAL LAKE, IL 60014	186 LAKESHORE DR	CRYSTAL LAKE, IL	
8	19-06-277-004	ALICE WISK	506 PIERSON ST		CRYSTAL LAKE, IL 60014	506 PIERSON ST	CRYSTAL LAKE, IL	
9	19-06-253-029	CHRISTINE HOLIAN	190 LAKESHORE DR		CRYSTAL LAKE, IL 60014	190 LAKESHORE DR	CRYSTAL LAKE, IL	
10	19-06-204-041	DENNIS DARLEEN TUHOLSKI	524 WOODLAND DR	APT 2	CRYSTAL LAKE, IL 60014	524 WOODLAND DR	CRYSTAL LAKE, IL	
11	19-06-204-019	MELINDA K ROMA	176 LAKE SHORE DR		CRYSTAL LAKE, IL 60014	176 LAKESHORE DR	CRYSTAL LAKE, IL	
12	19-06-204-020	JOSE LOPEZ	170 E LAKESHORE DR		CRYSTAL LAKE, IL 60014	168 E LAKESHORE DR	CRYSTAL LAKE, IL	
13	19-06-204-025	LOTUS REAL ESTATE LLC	726 OAK HOLLOW RD		CRYSTAL LAKE, IL 60014	154 VIRGINIA ST	CRYSTAL LAKE, IL	
14	19-06-204-032	DIANNA L OCONNOR	11754 RICHMOND LN		HUNTLEY, IL 60142	140 VIRGINIA ST	CRYSTAL LAKE, IL	
15	19-06-228-019	ANDREW IRREV TR PICULAS	865 VILLA DR		CRYSTAL LAKE, IL 60014	474 W VIRGINIA ST	CRYSTAL LAKE, IL	
16	19-06-228-007	ILL BELL TELEPHONE CO	PROP TAX DEPT	1010 PINE 9E L 01	SAINT LOUIS, MO 63101	NA		
17	19-06-228-008	ANDREW IRREV TR PICULAS	865 VILLA DR		CRYSTAL LAKE, IL 60014	480 W VIRGINIA ST	CRYSTAL LAKE, IL	
18	19-06-228-017	STEVEN T KRETSCHMAR	166 DOLE AVE		CRYSTAL LAKE, IL 600145841	166 DOLE AVE	CRYSTAL LAKE, IL	
19	19-06-284-002	ANDREW IRREV TR PICULAS	865 VILLA DR		CRYSTAL LAKE, IL 60014	468 W VIRGINIA ST	CRYSTAL LAKE, IL	
20	19-06-284-004	VIRGINIA DOLE LLC	796 S MCLEAN BLVD		ELGIN, IL 60123	460 W VIRGINIA ST	CRYSTAL LAKE, IL	
21	19-06-284-006	THREE WISE MEN LLC	454 W VIRGINIA ST		CRYSTAL LAKE, IL 60014	454 W VIRGINIA ST	CRYSTAL LAKE, IL	
22	19-06-284-001	ELLIENAT PROP LLC	1116 WINDRIDGE DR		CRYSTAL LAKE, IL 60014	470 W VIRGINIA ST	CRYSTAL LAKE, IL	
23	19-06-284-003	VIRGINIA DOLE LLC	796 S MCLEAN BLVD		ELGIN, IL 60123	458 VIRGINIA ST	CRYSTAL LAKE, IL	
24	19-06-284-025	ANDREW IRREV TR PICULAS	865 VILLA DR		CRYSTAL LAKE, IL 60014	S DOLE AVE	CRYSTAL LAKE, IL	
25	19-06-284-027	ELLIENAT PROP LLC	1116 WINDRIDGE DR		CRYSTAL LAKE, IL 60014	161 DOLE AVE	CRYSTAL LAKE, IL	
26	19-06-284-028	ANDREW IRREV TR PICULAS	865 VILLA DR		CRYSTAL LAKE, IL 60014	435 S ORIOLE TRL	CRYSTAL LAKE, IL	
27	19-06-284-041	VIRGINIA DOLE LLC	796 S MCLEAN BLVD		ELGIN, IL 60123	462 VIRGINIA ST	CRYSTAL LAKE, IL	
28	19-06-284-042	ANDREW IRREV TR PICULAS	865 VILLA DR		CRYSTAL LAKE, IL 60014	S DOLE AVE	CRYSTAL LAKE, IL	
29	19-06-284-029	JONATHAN HARTSAW	431 S ORIOLE TRL		CRYSTAL LAKE, IL 60014	431 S ORIOLE TRL	CRYSTAL LAKE, IL	
30	19-06-276-003	KYLE JENNIFER OLIVER	195 LAKE SHORE DR		CRYSTAL LAKE, IL 60014	185 LAKESHORE DR	CRYSTAL LAKE, IL	
31	19-06-276-005	NICHOLAS KACHIROUBAS	212 DOLE AVE		CRYSTAL LAKE, IL 60014	212 S DOLE AVE	CRYSTAL LAKE, IL	
32	19-06-276-006	GARRETT M FRYE	10316 HERITAGE BAY BLVD	UNIT 2724	NAPLES, FL 34120	200 DOLE AVE	CRYSTAL LAKE, IL	
33	19-06-276-007	KYLE JENNIFER OLIVER	195 LAKESHORE DR		CRYSTAL LAKE, IL 600145255	195 LAKESHORE DR	CRYSTAL LAKE, IL	
34	19-06-276-004	CHARLES R JR KALLMAN	530 LAKE ST		CRYSTAL LAKE, IL 60014	530 LAKE ST	CRYSTAL LAKE, IL	
35	19-06-280-008	VIRGINIA CENTER INC	770 SKOKIE BLVD	UNIT 814	NORTHBROOK, IL 60062	VIRGINIA ST	CRYSTAL LAKE, IL	
36	19-06-280-009	VIRGINIA CENTER INC	770 SKOKIE BLVD	UNIT 814	NORTHBROOK, IL 60062	VIRGINIA ST	CRYSTAL LAKE, IL	
37	19-06-280-001	RIVAL PROP LLC	28400 ALTESSA WAY	APT 103	BONITA SPRINGS, FL 34135	195 DOLE AVE	CRYSTAL LAKE, IL	
38	19-06-280-013	ABDULHAMID PATEL	471 W VIRGINIA ST		CRYSTAL LAKE, IL 600145958	471 VIRGINIA ST	CRYSTAL LAKE, IL	
39	19-06-280-003	JUANA VALENCIA JR BERNARDINO	484 PIERSON ST		CRYSTAL LAKE, IL 60014	484 PIERSON ST	CRYSTAL LAKE, IL	
40	19-06-280-002	RIVAL PROP LLC	28400 ALTESSA WAY	APT 103	BONITA SPRINGS, FL 34135	486 PIERSON ST	CRYSTAL LAKE, IL	
41	19-06-280-007	VIRGINIA CENTER INC	770 SKOKIE BLVD	UNIT 814	NORTHBROOK, IL 60062	457 W VIRGINIA ST	CRYSTAL LAKE, IL	
42	19-06-280-005	WA KM LIV TR ZINGRONE	480 PIERSON ST		CRYSTAL LAKE, IL 60014	480 PIERSON ST	CRYSTAL LAKE, IL	
43	19-06-279-008	SCOTT BROWNLEY	491 PIERSON ST		CRYSTAL LAKE, IL 60014	491 PIERSON ST	CRYSTAL LAKE, IL	
44	19-06-279-001	F W JR J L EIBISCH	520 LAKE ST		CRYSTAL LAKE, IL 60014	520 LAKE ST	CRYSTAL LAKE, IL	
45	19-06-279-002	SCOTT EIBISCH	512 LAKE ST		CRYSTAL LAKE, IL 60014	512 LAKE ST	CRYSTAL LAKE, IL	
46	19-06-279-009	1ST MIDWEST BK TR 13037	2801 W JEFFERSON ST		JOLIET, IL 604355274	485 PIERSON ST	CRYSTAL LAKE, IL	

LAKE ROOTS RESTAURANT

LAKE ROOTS
RESTAURANT
475 W. VIRGINIA ST
CRYSTAL LAKE, IL 60014



475 W. VIRGINIA STREET
CRYSTAL LAKE, IL 60014

PRICING ALTERNATES

ALTERNATE #1: Substitute thin brick in lieu of full wythe brick base at addition
Reduce foundation wall thickness from 12" wide to 8" wide to eliminate brick ledge
Reduce concrete reinforcing from two vertical rows of reinforcing to a single vertical reinforcing row in the center of the wall

ALTERNATE #2: Substitute EIFS claddng in lieu of 3-part stucco cladding on the addition
increase foundation wall thickness from 12" to 14" to position brick/brick ledge proud of EIFS outer surface

DRAWING INDEX

DRAWING NUMBER	DRAWING NAME	PZC SET - 04/03/2024	DD PRICING SET - 05/01/2024	REVISED PZC SET - 05/17/2024
GENERAL INFORMATION				
T1.1	TITLE SHEET	●	●	●
T1.2	ABBREVIATIONS AND SYMBOLS	●	●	●
CIVIL				
C1.0	TITLE SHEET	●		●
C2.0	GENERAL NOTES AND SPECIFICATIONS	●		●
C2.1	GENERAL NOTES AND SPECIFICATIONS	●		●
C3.0	EXISTING CONDITIONS & DEMOLITION PLAN	●		●
C4.0	GEOMETRY & PAVING PLAN	●		●
C5.0	GRADING & EROSION CONTROL PLAN	●		●
C6.0	UTILITY PLAN	●		●
C7.0	TYPICAL CONSTRUCTION DETAILS	●		●
C7.1	TYPICAL CONSTRUCTION DETAILS	●		●
LANDSCAPE				
L1.0	PRELIMINARY LANDSCAPE SKETCH PLAN	●		●
ARCHITECTURAL				
D1.1	DEMOLITION PLAN		●	
A1.1	LEVEL 1 AND BASEMENT FLOOR PLANS	●	●	●
A1.2	ROOF LEVEL OVERALL PLAN	●	●	●
A2.1	LEVEL 1 AND BASEMENT REFLECTED CEILING PLANS		●	
A3.0	3D VIEWS	●	●	●
A3.1	EXTERIOR ELEVATIONS	●	●	●
A3.2	RENDERED EXTERIOR VIEWS	●	●	●
A4.1	BUILDING SECTIONS		●	
A5.1	WALL SECTIONS		●	
A9.1	ENLARGED RESTROOM ELEVATIONS AND PLAN		●	
A9.2	INTERIOR ELEVATIONS		●	
A10.1	WALL TYPES - INTERIOR		●	
A10.2	INTERIOR DETAILS		●	
A10.3	INTERIOR DETAILS		●	
A10.4	INTERIOR DETAILS		●	
A10.5	INTERIOR DETAILS		●	
A10.6	INTERIOR DETAILS		●	
A11.1	OPENING SCHEDULES AND TYPES/DETAILS		●	
A11.2	WINDOW AND STOREFRONT TYPES AND DETAILS		●	
INTERIORS				
ID1.1	FINISH FLOOR PLANS		●	
STRUCTURAL				
S0.00	GENERAL NOTES		●	
S0.01	GENERAL NOTES		●	
S0.02	LOAD PLAN, SYMBOLS, AND ABBREVIATIONS		●	
S1.00	BASEMENT PLAN		●	
S1.01	FOUNDATION PLAN		●	
S1.02	ROOF FRAMING PLAN		●	
S2.00	CONCRETE DETAILS		●	
S2.01	CONCRETE DETAILS		●	
S3.00	MASONRY DETAILS		●	
S4.00	STEEL DETAILS		●	
S5.00	WOOD DETAILS		●	
S5.01	WOOD DETAILS		●	
PLUMBING				
P0.1	PLUMBING NOTES, DETAILS, AND SPECIFICATIONS		●	
P0.2	PLUMBING NOTES, DETAILS, AND SPECIFICATIONS		●	
P1.0	WASTE AND VENT FLOOR PLAN		●	
P1.1	DOMESTIC FLOOR PLAN		●	
P1.2	PLUMBING BASEMENT FLOOR PLAN AND RISERS		●	
MECHANICAL				
M0.1	MECHANICAL NOTES, DETAILS, AND SPECIFICATIONS		●	
M0.2	MECHANICAL DETAILS		●	
M0.3	MECHANICAL DETAILS		●	
M0.4	MECHANICAL DETAILS		●	
M0.5	MECHANICAL DETAILS		●	
M0.6	MECHANICAL DETAILS		●	
M0.7	MECHANICAL DETAILS		●	
M0.8	MECHANICAL DETAILS		●	
M0.9	MECHANICAL DETAILS		●	
M1.0	BASEMENT MECHANICAL PLAN		●	
M1.1	1ST FLOOR MECHANICAL PLAN		●	
M1.2	MECHANICAL ROOF PLAN		●	
ELECTRICAL				
E0.1	ELECTRICAL NOTES, DETAILS, AND SPECIFICATIONS		●	
E0.2	ELECTRICAL NOTES, DETAILS, AND SPECIFICATIONS		●	
E0.6	POWER FLOOR PLAN		●	
E1.1	LIGHTING FLOOR PLAN		●	
E1.2	ELECTRICAL BASEMENT FLOOR PLAN		●	
E1.3	ELECTRICAL SITE PLAN		●	
E2.0	ELECTRIC ROOF PLAN		●	

PROJECT LOCATION



Vicinity



Site Location

PROJECT TEAM

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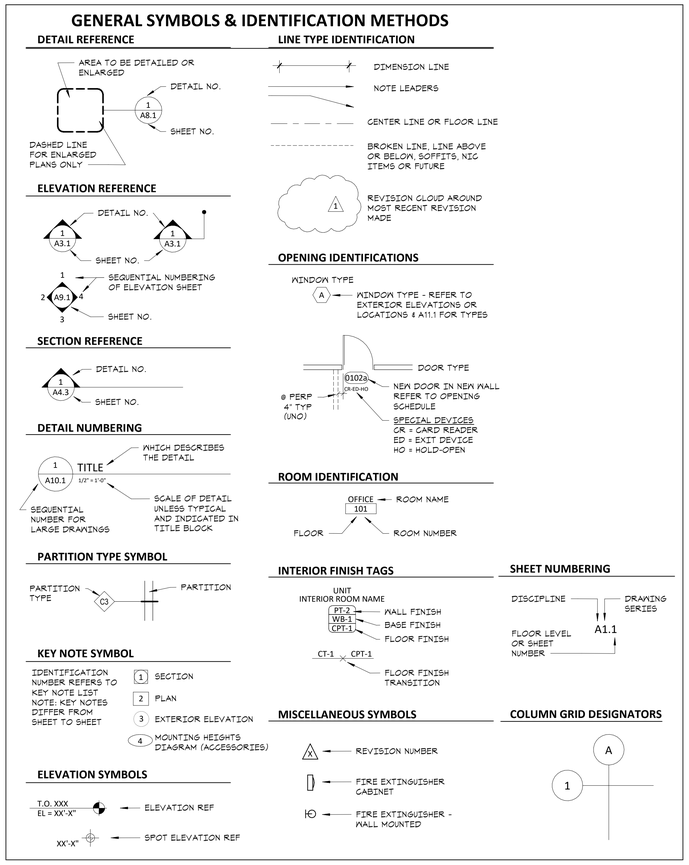
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GENERAL SYMBOLS & IDENTIFICATION METHODS



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KEY PLAN



LAKE ROOTS RESTAURANT

TITLE SHEET

T1.1

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#	POUND OR NUMBER
&	AND
@	AT

A

A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABV	ABOVE
AC	AIR CONDITIONING
ACOUS	ACOUSTIC (AL)
ACT	ACOUSTICAL TILE
ADDL	ADDITIONAL
ADDN	ADDITION
ADH	ADHESIVE
ADJ	ADJACENT
ADJST	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZE (D)
ANUN	ANNUNCIATOR
AP	ACCESS PANEL
APC	ARCHITECTURAL PRECAST CONCRETE
APT	APARTMENT
ARCH	ARCHITECT (URAL)
ASSN	ASSOCIATION
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AVE	AVENUE

B

B	BATHROOM
B&B	BALLED AND BURLAPPED
BALC	BALCONY
BCMU	BURNISHED CONCRETE MASONRY UNIT
BD	BOARD
BEV	BEVEL
BF	BOTH FACES
BIT	BITUMINOUS
BL	BRICK LEDGE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLST	BALLAST
BLW	BELOW
BM	BEAM
BM	BENCH MARK
BO ____	BOTTOM OF ____
BOT	BOTTOM
BR	BEDROOM
BRG	BEARING
BRK	BRICK
BRKT	BRACXET
BRZ	BRONZE
BS	BOTH SIDES
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BUR	BUILT-UP ROOF (ING)
BW	BOTH WAYS

C

C	COURSES
C/C	CENTER TO CENTER
CAB	CABINET
CAV	CAVITY
CB	CATCH BASIN
CBD	CASING BEAD
CCTV	CLOSED CIRCUIT TELEVISION
CEM	CEMENT
CEM PNL	CEMENT FIBER PANEL
CF	CUBIC FEET
CFLG	COUNTER FLASHING
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CGL	CERAMIC GLASS
CH BD	CHALKBOARD
CHAM	CHAMFER
CHAN	CHANNEL
CI	CAST IRON
CIP	CAST-IN-PLACE
CIRC	CIRCULAR
CJ	CONTROL JOINT
CK	CORK
CL	CENTER LINE
CL	CHAIN LINK
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
CLS	CLOSURE
CLWD	CLAD WOOD
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNR BD	CORNER BEAD
CNTR	COUNTER
CO	CLEANOUT
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITE
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECT (ION) (ER)
CONST	CONSTRUCTION
CONT	CONTINU (OUS) (ATION)
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
COV	COVER
CPT	CARPET
CPTB	CARPET BASE
CSG	CASING
CSK	COUNTER SUNK
CSWK	CASEWORK
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
CTR	CENTER
CTV	CABLE TELEVISION
CUH	CABINET UNIT HEATER
CW	COLD WATER
CW	CURTAIN WALL

D

DEF JT	DEFLECTION JOINT
DEG	DEGREE (S)
DEMO	DEMOLITION
DET or DTL	DETAIL
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFERENCE
DIM	DIMENSION
DISP	DISPENSER
DIST	DISTANCE
DIV	DIVISION, DIVIDER
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DP	DAMPPROOFING
DP	DEEP
DPU	DEEP PANTRY UNIT
DR	DINING ROOM
DR	DOOR
DRW	DRY WELL
DS	DOWNSPOUT
DT	DRAIN TILE
DW	DISHWASHER
DW	DRYWALL
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
DWTR	DUMBWAITER

E

E	EAST
EA	EACH
EB	EXPANSION BOLT
EF	EACH FACE
EHD	ELECTRIC HAND DRYER
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJT	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC (AL)
ELEV	ELEVATOR
ENGR	ENGINEER
ENTR	ENTRANCE
EP	ELECTRIC PANELBOARD
EPS	EXPANDED POLYSTYRENE
EPT	EPOXY PAINT
EPX	EPOXY WALL COATING
EQ	EQUAL
EQUIP	EQUIPMENT
ESCAL	ESCALATOR
ESMT	EASEMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATED
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXP STR	EXPOSED STRUCTURE
EXT	EXTERIOR

F

F/F	FACE TO FACE
FA	FRESH AIR
FBP	FINISHED BACK PANEL
FBRBD	FIBERBOARD
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDF	FALSE DRAWER FRONT
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FEP	FINISHED END PANEL
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FFE	FURNITURE FIXTURES AND EQUIPMENT
FGL	FIBERGLASS
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHWS	FLAT HEAD WOOD SCREW
FIN	FINISH
FIXT	FIXTURE
FL	FLOW LINE
FLDG	FOLDING
FLEX	FLEXIBLE
FLG	FLASHING
FLR	FLOOR (ING)
FLUOR	FLUORESCENT
FN	FENCE
FO____	FACE OF ____
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF SHEATHING
FPL	FIREPLACE
FPRF	FIREPROOF (ING)
FR	FRAME
FRIG	REFRIGERATOR
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FULL SIZE
FSP	FIRE STANDPIPE
FSTNR	FASTENER
FSTOP	FIRE STOPPING
FT	FOOT or FEET
FTG	FOOTING
FTR	FIN TUBE RADIATION
FUR	FURR (ING)
FURN	FURNACE
FUT	FUTURE
FV	FIELD VERIFY
FWC	FABRIC WALL COVERING

G

GA	GAGE
GALV	GALVANIZED
GAR	GARAGE
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GENL	GENERAL
GI	GALVANIZED IRON
GL	GLASS
GLU LAM	GLUED LAMINATED
GLZ	GLAZING
GLZ CMU	GLAZED CONCRETE MASONRY UNIT
GR	GRADE
GRTG	GRATING
GS	GREASE SHIELD
GT	GROUT
GV	GRAVITY VENT
GWT	GLAZED WALL TILE
GYP	GYPSUM

H

H	HIGH
HB	HOSE BIB
HC	HOLLOW CORE
HCHB	HOLLOW CORE HARDBOARD
HCW	HOLLOW CORE WOOD
HD	HEAD
HD BD	HARD BOARD
HDCP	HANDICAP
HDR	HEADER
HDWD	HARDWOOD
HDWE	HARDWARE
HEX	HEXAGON (AL)
HM	HOLLOW METAL
HNDRL	HANDRAIL
HORZ	HORIZONTAL
HR	HOUR
HS	HIGH STRENGTH
HT	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HW	HOT WATER
HYD	HYDRANT

I

ID	INSIDE DIAMETER
ID	INTERIOR DESIGN
IE	INVERT ELEVATION
IN	INCH (ES)
INCAND	INCANDESCENT
INCIN	INCINERATOR
INCL	INCLUDE (D) (ING)
INFO	INFORMATION
INSUL	INSULAT (ED) (ION)
INSUL PNL	INSULATED PANEL
INT	INTERIOR
INTER	INTERMEDIATE

J

JB	JUNCTION BOX
JC	JANITOR'S CLOSET
JST	JOIST
JT	JOINT
JT BKR	JOINT BACKER

K

KD	KNOCK DOWN HOLLOW METAL
KIT	KITCHEN
KO	KNOCKOUT
KOP	KNOCKOUT PANEL
KPL	KICK PLATE

L

L	LEFT
LAB	LABORATORY
LAU	LAUNDRY
LAV	LAVATORY
LB	POUND
LBL	LABEL
LCMU	LIGHTWEIGHT CONCRETE MASONRY UNIT
LDG	LANDING
LF	LINEAL FOOT (FEET)
LG	LENGTH or LONG
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LIB	LIBRARY
LINO	LINOLEUM
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNTL	LINTEL
LR	LIVING ROOM
LRG	LARGE
LSD	LIQUID SOAP DISPENSER
LT	LIGHT
LT WT	LIGHTWEIGHT
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
LVT	LUXURY VINYL TILE

M

MAINT	MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MBL	MARBLE
MBR	MASTER BEDROOM
MBR	MEMBER
MECH	MECHANICAL
MED CAB	MEDICINE CABINET
MEMB	MEMBRANE
MET or MTL	METAL
MEZZ	MEZZANINE
MFG	MANUFACTURING
MFR	MANUFACTURER
MH	MANHOLE
MICRO	MICROWAVE
MILWK	MILLWORK
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MK BD	MARKER BOARD
MLDG	MOLDING
MO	MASONRY OPENING
MOD	MODULE (AR)
MT	MEN'S TOILET
MTD	MOUNTED
MTG	MOUNTING
MTR	MORTAR
MULL	MULLION
MULT	MULTIPLE
MVBL	MOVABLE

N

N	NORTH
NA	NOT APPLICABLE
NC	NURSE CALL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE

O

OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OCT	OCTAGON (AL)
OD	OUTSIDE DIAMETER
OFF	OFFICE
OH	OVERHEAD
OHD	OVERHEAD DOOR
OP	OPERABLE PARTITION
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OXY	OXYGEN
OZ	OUNCE

P

PB	PUSH BUTTON
PBD	PARTICLEBOARD
PBG	PLUMBING
PC	PIECE
PC CONC	PRECAST CONCRETE
PCD	PAPER CUP DISPENSER
PCF	POUNDS PER CUBIC FOOT
PED	PEDESTAL
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PL	PLATE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
PP	POWER POLE
PPT	PRESSURE PRESERVATIVE TREATED
PR	PAIR
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PREP	PREPARE
PROJ	PROJECT
PRV	POWER ROOF VENTILATOR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PT	POST TENSIONED (SLAB/BEAM)
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT

Q

QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY

R

R	RISER
R & S	ROD AND SHELF
RA	RETURN AIR
RAD	RADIUS
RB	RESILIENT BASE
RBR	RUBBER
RC	RESILIENT CHANNEL
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESS (ED)
RECPT	RECEPTACLE
RECT	RECTANGL (E) (ULAR)
REF	REFER (ENCE)
REF	REFRIGERATOR
REINF	REINFORCE (D) (ING)
REQ	REQUIRED
RES	RESIN, RESIN PANEL
RESIL	RESILIENT
RET	RETURN
REV	REVERSE
RF	RESILIENT FLOOR (ING)
RFG	ROOFING
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RM	ROOM
RMC	RECESSED MEDICINE CABINET
RND	ROUND
RNG	RANGE
RO	ROUGH OPENING
RR	RAILROAD
RWL	RAINWATER LEADER

S

S	SOUTH
SA	SUPPLY AIR
SB	SLIDE BAR
SC	SOLID CORE
SCHB	SOLID CORE HARD BOARD
SCHED	SCHEDULE
SCONC	SEALED CONCRETE, STAINED CONCRETE
SCR	SHOWER CURTAIN ROD
SCRN	SCREEN
SCU	SQUARE CORNER UNIT
SCW	SOLID CORE WOOD
SD	SOAP DISH
SDA	SELF-DRAINING AGGREGATE
SDG	SIDING
SDISP	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FOOT (FEET)
SFP	SPRAY-ON FIREPROOFING
SH	SHELF (VES) (VING)
SH	SHOWER HEAD
SHT	SHEET
SHTHG	SHEATHING
SI	SQUARE INCH (ES)
SIM	SIMILAR
SK	SINK
SLNT	SEALANT
SLP	SLOPE
SLV	SLEEVE
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SP	STANDPIPE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SS	SANITARY SEWER
SSF	SOLID SURFACE (FINISH)
SSK	SERVICE SINK
SST	STAINLESS STEEL
SSV	SEAMLESS SHEET VINYL
ST	STAIN
ST	STREET
STC	SOUND TRANSMISSION CLASSIFICATION
STD	STANDARD
STL	STEEL
STN	STONE
STOR	STORAGE
STR	STAIR
STRUC	STRUCTURAL
SUPP	SUPPLIER
SUSP	SUSPENDED
SV	SHEET VINYL
SVB	SEAMLESS SHEET VINYL BASE
SWR	SEWER
SYD	SQUARE YARD (S)
SYM	SYMMETRICAL
SYS	SYSTEM

T

T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TB	TOWEL BAR
TC	TRAFFIC COATING
TD	TOWEL DISPENSER
TD	TRENCH DRAIN
TDISP	TISSUE DISPENSER
TDR	TOWEL DISPENSER/RECEPTACLE
TEL	TELEPHONE
TEMP	TEMPORARY
TERM	TERMINATION (ATE)
TERR	TERRAZZO
TH	THRESHOLD
THK	THICK (NESS)
THRU	THROUGH
TK BD	TACKBOARD
TKS	TACKSTRIP
TMPD	TEMPERED
TO ____	TOP OF ____
TOIL	TOILET
TP	TOILET PARTITION
TPD	TOILET PAPER DISPENSER
TR	TRAFFIC DOOR
TRANS	TRANSPARENT
TRTD	TREATED
TS	TUBE SECTION
TV	TELEVISION
TYP	TYPICAL

U

UH	UNIT HEATER
UNEX	UNEXCAVATED
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
USO ____	UNDERSIDE OF ____
UTIL	UTILITY

V

VAC	VACUUM
VB	VINYL BASE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITE TILE
VEND	VENDING
VENT	VENTILATE (ION) (OR)
VERT	VERTICAL
VEST	VESTIBULE
VIN	VINYL
VNR	VENEER
VR	VAPOR RETARDER
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING

W

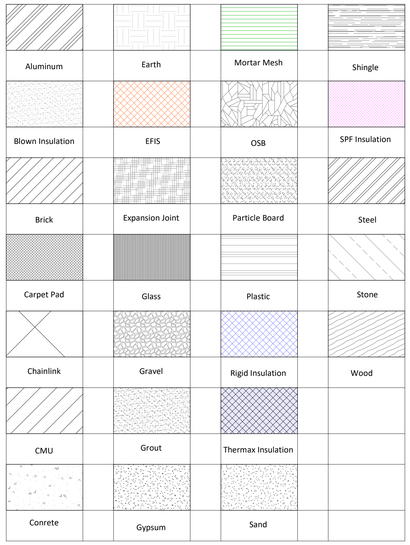
W	WASTE
W	WEST
W	WIDE, WIDTH
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
W/W	WALL TO WALL
WC	WATER CLOSET
WD	WOOD
WDB	WOOD BASE
WDSP	WASTE DISPOSER
WDW	WINDOW
WGL	WIRE GLASS
WH	WALL HUNG
WH	WALL HYDRANT
WH	WATER HEATER
WI	WROUGHT IRON
WP	WATERPROOF (ING)
WP	WORKING POINT
WR	WATER RESISTANT
WS	WEATHERSTRIP (ING)
WSCT	WAINSCOT
WT	WOMEN'S TOILET
WWF	WELDED WIRE FABRIC

X

X	BY (AS 6' X 8')

Y

YD	YARD



STANDARD MATERIAL PATTERNS

LAKE ROOTS RESTAURANT
475 W. VIRGINIA ST
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KEY PLAN

LAKE ROOTS RESTAURANT

ABBREVIATIONS AND SYMBOLS

T1.2

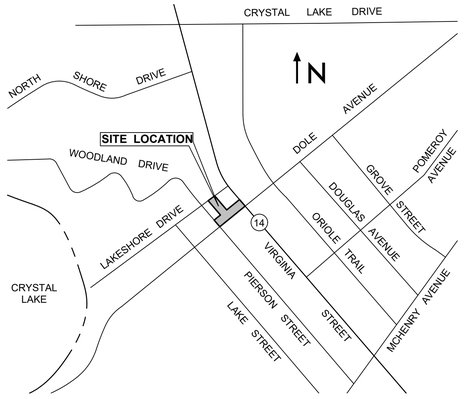
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SITE IMPROVEMENT PLAN
BUILDING RENOVATION
475 W. VIRGINIA STREET

SECTION 6 TOWNSHIP 43 NORTH RANGE 8 EAST
CRYSTAL LAKE, ILLINOIS
MCHENRY COUNTY

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LOCATION MAP
Not To Scale

Benchmark

Site Benchmark

CP # 205 (see survey)
Description: MAG Nail
Elevation: 902.52 NAVD 88 (Geoid 12A)

CP # 3524 (see survey)
Description: Cross Notch
Elevation: 900.74 NAVD 88 (Geoid 12A)

CP # 3711 (see survey)
Description: Tag Bolt on Hydrant
Elevation: 901.00 NAVD 88 (Geoid 12A)

LEGAL DESCRIPTION

LOT 3 (EXCEPT THAT PART DESCRIBED IN DOCUMENT 933753), AND ALL OF LOTS 4 AND 5 IN BLOCK 8 IN PIERSON'S ADDITION TO CRYSTAL LAKE, A SUBDIVISION OF PART OF SECTION 5 AND SECTION 6, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 18, 1868, IN BOOK 43 OF DEEDS, PAGE 303, IN MCHENRY COUNTY, ILLINOIS.

INDEX TO SHEETS

NO.	DESCRIPTION
C1.0	TITLE SHEET
C2.0-C2.1	GENERAL NOTES AND SPECIFICATIONS
C3.0	EXISTING CONDITIONS & DEMOLITION PLAN
C4.0	GEOMETRY & PAVING PLAN
C5.0	GRADING & EROSION CONTROL PLAN
C6.0	UTILITY PLAN
C7.0-C7.1	TYPICAL CONSTRUCTION DETAILS

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
B	B-Box	B
W	Well Head	W
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
H	Hand Hole	H
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
G	Gas Valve	G
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
E	Electrical Pedestal	E
E	Electric Manhole	E
	Guy Wire	
	Utility Pole	
T	Telephone Pedestal	T
T	Telephone Manhole	T
T	Telephone Line	T
CATV	Cable TV Line	CATV
C	Cable TV Pedestal	C
	Flagpole	
M	Mailbox	M
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	T/W XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	B/W XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	

MICHAEL L. ANDERSON
062-053214
LICENSED PROFESSIONAL ENGINEER
OF
STATE OF ILLINOIS
EXPIRES 11-30-25

No.	Date	Revision
1	05.17.2024	Revised P.I.C

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TITLE SHEET

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager: M L A
Engineer: K J L
Date: 04.02.2024
Project No. 23-006
Sheet C1.0 / C7

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Plot Date: May 17, 2024 - 12:09pm Plotted By: mike-a
File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg

GENERAL NOTES

1. Definition of Terms:
   a. "Owner" shall mean the person or entity with which Haeger Engineering, LLC has been contracted with to prepare the Plans and Specifications.
   b. "Engineer" shall mean Haeger Engineering, LLC.
   c. "Contractor" shall mean the persons or entities responsible for performing and constructing the work described in the Plans, Specifications and other Construction Documents including but not limited to furnishing all labor, materials, tools, equipments, and other incidentals necessary.
   d. "Plans and Specifications" shall mean the Engineering Drawings and any Specifications prepared by Haeger Engineering, LLC, the Engineer.
   e. "Jurisdictional Agency" shall mean any local, municipal, county, township, state or federal entity of government or other entity having jurisdiction of some aspect of the project from whom approval, permit and/or review and approval was required.
2. The Specifications governing this project are as follows:
   a. All applicable Village/City and other applicable Jurisdictional Agency Ordinances, Codes, Regulations, Requirements, Policies, Specifications, Standards, etc.
   b. Roadway and Earthwork construction shall conform to the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction", latest edition and any subsequent "Supplemental Specifications and Recurring Special Provisions" as well as any applicable IDOT Highway Standards. Hereafter these items shall be collectively be referred to as the IDOT Standard Specifications.
   c. Water Main, Storm Sewer, and Sanitary Sewer construction shall conform to the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition.
   d. Soil Erosion and Sedimentation Control shall conform to the Illinois Environmental Protection Agency (IEPA) "Illinois Urban Manual" (IUM), latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition.
   e. Traffic Control shall conform to the "Manual of Uniform Traffic Control Devices" (MUTCD), latest edition, as well as the latest edition of the "Illinois Supplement to the MUTCD", and IDOT "Quality Standard for Work Zone Traffic Control Devices", latest edition.
   f. All handicap accessibility items shall conform to the Illinois Accessibility Code (IAC), latest edition.
   g. General Notes and Specifications contained herein or elsewhere as a separate document.

   If a conflict, contradiction, or discrepancy occurs between any of the above Specifications the more stringent requirement shall apply, unless directed otherwise by the applicable Jurisdictional Agency.
3. Contract Documents:
   a. The Engineer's Plans and Specifications shall be included as part of the Contract Documents.
   b. All Contractors shall carefully examine the Plans and Specifications, and other Contract Documents prepared for the work. They shall visit the site of the work and acquaint themselves with all local conditions, codes, and requirements affecting the contract. If awarded the contract, they shall not be allowed extra compensation by reason of any unforeseen difficulties or obstacles which the Contractor could have discovered or reasonably anticipated or inferred prior to bidding or start of construction.
   c. Should it appear that the work covered by the Plans and Specifications or other Contract Documents is not sufficiently detailed or explained, a Request For Information (RFI) Form shall be submitted to the Engineer for further explanations and drawings as may be necessary to clarify the point in question prior to the contract award. It is the intention of the Contract Documents to provide a job complete in every respect. Incidental items or accessories necessary to complete the work may not be specifically noted or shown but that are necessary to complete the project shall be considered incidental to the Contract. The Contractor is responsible for this result and to turn over the project in complete operating condition, irrespective of whether the contract documents cover every individual item in minute detail.
   d. The Contractor shall review the subsurface exploration and geotechnical report (a.k.a. soil boring report) prepared by _____ dated _____, to become familiar with the subsurface soil conditions for the site. Copies of all such soil boring reports for the property can be obtained from the Owner. If any additional soils data is needed to confirm the Contractor's opinions of the subsurface conditions, this shall be done at the Contractor's expense. The Contractor shall obtain the Owner's written authorization to access the site to conduct a supplemental soils investigation. The Owner and Engineer make no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof. Furthermore, the Owner and Engineer assume no responsibility for the possibility that during construction, the soil and groundwater conditions may vary between borings or are different than previously indicated. Any bracing, sheeting, dewatering or special construction methods deemed necessary by the Contractor in order to install the proposed improvements shall be considered incidental to the Contract and no additional compensation will be allowed.
4. Should any apparent errors, omissions, discrepancies or conflicts be discovered on the Plans, Specifications, Quantities or other Contract Documents by the Contractor, whether prior to or after the award of the contract, the Engineer's attention shall be called to the same before work is begun thereon, so that proper clarification can be provided or revision made. If any work is done without contacting the Engineer, it shall be considered that the Contractor has proceeded at their own risk and expense.
5. Whenever the performance of work is indicated on the Plans, and no specific item is included in the Contract for payment, the work shall be considered incidental to the Contract and no additional compensation will be allowed. The Contractor shall provide all necessary labor, material, equipment, etc. necessary to perform all the work required for construction of the proposed improvements.
6. The base plan/drawing for the Engineering Plans (existing conditions, site topography, utilities, rights-of-way, etc.) was obtained from the topographic survey prepared by Haeger Engineering.
7. The Contractor, unless otherwise agreed upon in writing with the Owner prior to the start of Construction, shall at his own expense, obtain all other approvals including permits, licenses, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all required insurance and/or bonds as may be required by the Jurisdictional Agencies. In addition, the Contractor shall meet all of the requirements of any permits as might be issued for this work by other Agencies, and shall pay for at their sole expense any surety, insurance or bonds as may be required by the Jurisdictional Agencies.
8. No work shall proceed until the appropriate permit or permits have been obtained for the item or items to be constructed. If any work does proceed without the appropriate permits or approvals, it is being done without the permission or consent of the Engineer. The Contractor and Party authorizing the work to proceed shall be assumed to be proceeding at their own risk and the Engineer shall not be held liable or responsible for any work being performed without a permit.
9. The Contractor shall hereby indemnify and hold harmless the Owner, Engineer, Village/City, and other Jurisdictional Agencies as well as all of their respective officers, employees, agents, and Engineers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgment of every nature and description brought or recovered against them, by reason of any act, error or omission of said Contractor, their agents or employees in the execution of the work or in the guarding of it.
10. The construction shall be under the general inspection and observation of the designated individual authorized by the Village/City or other applicable Jurisdictional Agencies. The Village/City, Jurisdictional Agencies, Owner, and Engineer shall be notified at least two working days prior to the commencement of work.
11. The location of existing underground utilities such as water mains, sewers, gas lines, electric lines, cable TV lines, fiber optic lines, etc., as shown on the Plans, has been determined from the best available information and has been provided for the convenience of the Contractor. However, the Owner and Engineer do not assume responsibility in the event that during construction, utilities other than those shown may be encountered and that the actual location of those which are shown may be different from the location as shown on the Plans. The Contractor is to verify the location of all utilities prior to the start of work and is responsible for damage to the same. The Contractor shall contact J.U.L.I.E. or Digger by dialing 811 (Outside the City of Chicago - J.U.L.I.E.: 1-800-892-0123 or within the City of Chicago - Digger: 312-744-7000) and the Village/City Public Works Department for utility locates at least 48 hours, excluding weekends and holidays, before digging. For any utility companies which are not members of JULIE or DIGGER, the Contractor shall contact the Owners of each respective utility directly for utility locates at least 48 hours, excluding weekends and holidays, before digging.
12. In some instances, the existing utilities are shown on the Plans according to information obtained from the utility companies (atlas information) and/or surveys performed By Others. The Owner and Engineer do not guarantee the accuracy or completeness of this information. The Contractor shall be aware of potential conflicts with existing or other proposed utilities as indicated on the Plans or that become apparent as the result of field locates By Others. The Contractor shall make their own investigations as necessary to determine the existence, nature, and location of all utility lines and related appurtenances within the limits or adjacent to the proposed improvements. The Contractor shall locate all utilities far enough in advance to avoid all conflicts between existing utilities and proposed improvements and make the Engineer aware of any such conflicts. If the Contractor encounters a conflict between the proposed improvements and existing utility that was not located in advance by the Contractor, then the Contractor shall at no cost to Owner, relocate the proposed improvements and/or utility to avoid the conflict.
13. The Contractor will be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, construction, reconstruction or abandonment by these companies of any and all services or facilities owned or operated by them within the limits or general vicinity of the proposed improvements. Further, at the direction of the Owner and Utility Companies the Contractor shall coordinate the location and install PVC sleeves as necessary under the proposed pavement, curbs, walks, etc. for utility companies to run their proposed utility lines.
14. Before doing any work which will damage, disturb or leave unsupported, or unprotected any utility lines or related appurtenances encountered, the Contractor shall notify the respective Owner thereof, who will make all arrangements for relocating, adjusting, bracing, or otherwise maintaining or abandoning service on lines that fall within the limits of the proposed construction without cost to the Contractor, including the removal of all cables, manhole covers and other related appurtenances which the Owner desires to salvage. After such arrangements have been made, the Contractor will proceed with the work as directed by the Engineer. All utility lines and related appurtenances which are abandoned shall be removed if necessary and legally disposed of legally off-site by the Contractor.
15. No extra compensation will be allowed by the Contractor for any expense incurred for complying with all of these aforementioned utility coordination and cooperation requirements, or because of delays, inconvenience or interruptions in their work resulting from the failure of any utility company to remove, relocate, construct, reconstruct or abandon their services. The responsibility for prompt and timely removal, relocation, reconstruction or abandonment of their facilities by all utility companies involved, and the coordination of their own work with that of these companies to the end that work on this improvement is not delayed because of the necessary changes in the existing utilities, public or private, shall rest upon the Contractor.
16. Prior to commencing work, the Contractor is to field check and verify all critical locations, elevations, materials, sizes, dimensions, and conditions affecting the work, and notify the Engineer immediately if there are any suspected discrepancies. No work shall be performed until the suspected discrepancy has been resolved. The Contractor shall also call to the attention of the Engineer any errors or discrepancies which may be suspected in the lines and grades which are established by the Surveyor, and shall not proceed with the work until any lines and grades which are to believed to be in error have been verified or corrected by the Engineer.
17. The Contactor shall maintain positive drainage at all times during construction. Construction shall not block off-site drainage and the flow from any drainage ways, field tiles, storm sewers or similar draining off-site properties. All on-site existing field tiles, storm sewers, drainage ways or similar encountered or damaged during construction shall be maintained, restored to their original pre-construction condition or better, properly re-routed, and/or connected to the proposed stormwater drainage system. If this can't be accomplished then the field tile should be repaired or re-routed with new pipe of similar diameter to the original line and put back in service. The Contractor shall notify the Engineer if any such field tiles are encountered. Whenever during any construction activities any loose material is deposited in the flow line of gutters, ditches, drainage structures, etc. such that the natural flow of water is obstructed, this material shall be removed by the responsible party.
18. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
19. No construction activities, disturbance or fill shall occur within the limits of natural resources such as wetlands, floodplains, creeks, streams, ponds, lakes, basins, reservoirs, etc. or their respective buffers unless specifically specified on the Plans and further that the work has been permitted. The Contactor shall take sufficient precautions to protect these natural resources that are to remain, whether on-site or on adjacent property, to protect them from sediment, fuels, oils, bitumens, calcium chloride, or other harmful materials that may be a detriment. The Contractor shall conduct and schedule their Construction so as to avoid siltation, or other disturbance or impact to these natural resource areas. The Contractor shall not disturb or otherwise impact these designated natural resource areas or areas that have been designated to be protected or as essential habitat for State or Federal listed endangered or threatened species, or Prairie or Savannah areas where the Owner has made commitments for protection of these areas. Also, if previously unidentified natural resource areas, prairies, savannahs, or areas or locations suspected of containing protected species are identified during construction, the Contractor shall not disturb them unless written permission to do so is granted by the Owner or applicable Jurisdictional Agency. If the Owner, Engineer, or applicable Jurisdictional Agency determines that additional measures are necessary to prevent or mitigate project effects on natural resource areas, prairies, savannahs, protected species, or essential habitat the Contractor shall cooperate in accomplishing these measures.
20. The Contractor shall confine their activities to within the project boundaries, work areas, or easements specified. No work shall be performed on adjacent private property or outside the project work areas without the written permission of each respective Owner. The Contractor shall be liable for damage caused to existing or newly installed improvements as well as any damage on adjacent property or areas outside designated work areas, provided damage us a result of Contractor action, or lack thereof.
21. The Contractor is responsible for returning all areas affected by equipment, materials and/or laborers to pre-construction condition or better. All existing utilities or improvements, including but not limited to pavements, curbs, drives, trees, and parkways damaged or removed during construction shall be promptly restored to their respective original pre-construction condition or better. The Contractor is also responsible for protecting all newly constructed work from damage until the project has been completed and has been approved and accepted by the Owner.
22. Clean-up and final restoration shall be performed immediately upon completion of each phase of the work or when directed to do so by the Owner, so that these areas will be restored as nearly as possible to their original pre-construction condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, landscaping, fences, mailboxes, storm sewers, drain tiles, sanitary sewers, water mains, etc. It shall also be the responsibility of the Contractor to remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner.
23. All proposed grades shown on the Plans shall be considered to be finished grade surface elevations unless noted otherwise.
24. Construction staking/layout shall be provided by the Contractor and shall be included in the Contract Price unless otherwise agreed upon in writing with the Owner prior to the start of Construction.
25. All Construction means and methods, techniques, procedures, scheduling, sequencing, and job site safety is the sole responsibility of the Contractor.
26. The Contractor shall observe and comply with all the Occupational Safety and Health Administration (OSHA) standards, rules and regulations, as well as any other applicable local, state and federal safety requirements.
27. All trenching, shoring, bracing and construction work performed shall be in accordance with the Occupational Safety and Health Administration (OSHA) standards.
28. The Contractor shall take whatever steps necessary to protect the public from open trenches, excavations, and other site obstructions or hazards. No trenches, excavations or holes in the pavement or parkway are to be left open over a holiday, weekend, or after 3 p.m. on the day preceding a holiday or weekend.
29. During construction the Contractor and their Sub-Contractors shall keep the premises clean by removing all rubbish, debris, waste material and other accumulations as necessary. The Contractor shall clean the premises to the satisfaction of the Village/City and Owner.
30. The Contractor shall have appropriate equipment and material including street sweepers and end loaders available on-site at all times when equipment or vehicles are using existing public or private roads and/or pavement. The Contractor shall immediately remove any sediment or debris including but not limited to dirt, mud, clay, sediment, concrete, gravel, sand, stones, plant material, refuse, garbage, oil, grease, etc. deposited on any roadway, street, walk, alley or other pavement by any equipment, vehicles or personnel associated with this project. This work shall be considered incidental to the Contract.
31. The Contractor shall at all times maintain proper dust control at the site and shall have a watering truck readily available during all working hours. The Contractor shall water the entire site whenever the site conditions become unhealthy due to blowing soil or dust. The site shall be watered as many times per day as necessary to maintain a healthy work site as determined by the Owner or Engineer. Water for non-emergency use shall not be obtained from any fire hydrant, unless the fire hydrant is metered with a proper backflow preventer in accordance with Village/City or Jurisdictional Agency requirements. The cost to furnish dust control shall be incidental to the cost of Construction.
32. Trees not marked for removal shall be protected as necessary by the Contractor. In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree or trees in accordance with Village/City requirements. If the Village/City does not have specific tree replacement requirements, the damaged existing or newly planted tree shall be replaced in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications. The Contractor shall ensure that they are familiar with the applicable tree preservation requirements and shall be held responsible for the replacement of all damaged trees not designed for removal, and any penalties associated with the unapproved removal of trees.
33. Where overhanging branches, limbs, or roots interfere with the required construction activities, said branches, limbs, or roots shall be trimmed or pruned as necessary in accordance with Section 201 of the IDOT Standard Specifications. This work shall be performed under the supervision of an approved arborist or landscape architect.
34. The Contractor is responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices, in accordance with the Plans, applicable IDOT Standard Specifications and the MUTCD Standards to inform and protect the public during all phases of construction. The Contractor shall provide all signage, barricades, devices, equipment, personnel, etc. necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency which at their discretion may require the Contractor to furnish traffic control under these or other circumstances where in their opinion it is necessary for the protection of life and property. Emergency vehicle access along with access to fire hydrants shall be maintained at all times. Further, unless authorized by the Owner, all existing access points shall be maintained at all times by the Contractor.
35. Where noted in the Plans, the Contractor shall have Shop Drawings and any other required supporting documentation or calculations prepared and submitted for review and approval prior to any fabrication, placement, or construction. If structural elements such as retaining walls are required, the drawings and any required supporting design calculations must be prepared, and signed and sealed by an Illinois licensed Structural Engineer.
36. The Contractor is responsible for having a set of approved Plans and Specifications with the latest revision date on the job site at all times during the construction period.
37. The Contractor shall maintain a clean, legible, undamaged set of Field Marked Construction Plans. These Field Marked Construction Plans shall show the location of the actual installed location of all underground utilities including related appurtenances (sanitary, storm, water, service stubs, gas, telephone, electric, cable TV, etc.) giving particular attention to concealed elements that would be difficult to measure and record at a later date. Any approved modifications, deviations, or alterations from the approved Plans should also be noted and shown on these Field Marked Construction Plans. These Field Marked Construction Plans shall be provided to the Owner/Engineer at the completion of construction.
38. All work that is performed that is not in conformity with the Plans, Specifications or other Contract Documents or that is defective shall be removed and replaced, or otherwise corrected or remedied by and at the sole expense of the Contractor. Any unauthorized work or work performed beyond the limits or in excess of that shown on the Plans will not be measured or paid for.
39. All work performed under the Plans, Specifications or other Contract Documents shall be guaranteed against all defects in materials and workmanship of whatever nature by the Contractor and his surety for a minimum period of 12 months from the date of final acceptance of the work by the Village/City, other applicable Jurisdictional Agencies, and the Owner, unless otherwise agreed upon in writing with the Owner prior to the start of construction,.
40. Before acceptance by the Owner and prior to final payment all work shall be inspected and approved by the Owner or designated representative. Final payment will be made after the Contractor's work has been approved and accepted or as required by the Contract Documents.
41. If required, the Owner shall have As-built or Record Drawings prepared and submitted to the Village/City and all other applicable Jurisdictional Agencies for approval after the completion of construction. These drawings shall be prepared in accordance with the Village/City and other applicable Jurisdictional Agency requirements. The As-built or Record Drawings must be prepared, and signed and sealed by a registered professional Engineer in Illinois.

DEMOLITION AND CLEARING

1. The Contractor shall perform all demolition, clearing, grubbing, and tree removal and protection work in accordance with all applicable Federal, State, County and Local requirements or as noted in the Plans.
2. Prior to the commencement of any demolition or clearing activities, the Owner or Contractor shall obtain all applicable permits to disconnect the existing utility services to each building proposed for demolition.
3. The Contractor shall coordinate all demolition work with the Village/City, utility companies, and other Jurisdictional Agencies, so as to ensure the protection of all existing sewer, water main, and other utilities, and further to ensure that proper stormwater conveyance is attained until the proposed improvements can be installed and placed into operation.
4. Clearing shall consist of the removal and legal disposal of all obstructions such as trees, hedges, fences, walls, accumulations of rubbish of whatever nature, and all logs, shrubs, brush, grass, weeds, and other vegetation and stumps. These items shall be removed whenever they are found within the street right-of-ways or within the limits of construction. Trees to be saved or protected shall be identified by the Engineer on the Plans or in the field. All trees except those designated to be saved or protected, as well as all stumps and hedges within the limits of construction, shall be removed completely and legally disposed of off-site or as otherwise designated on the Plans or authorized by the Owner. Trees designated to be saved or protected as indicated on the Plans or as directed by the Engineer, shall be protected from damage in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications.
5. All items shown to be removed on the Plans including items not specifically noted but necessary to be removed to construct the proposed improvements shall be demolished or removed as necessary and disposed of legally off-site or as approved by the Owner.
6. Existing utilities to be disconnected shall be done so at the main or as directed by the applicable Jurisdictional Agency or as noted on the Plans.
7. Utilities marked to be abandoned shall be abandoned as required by the applicable Jurisdictional Agency or as noted on the Plans.
8. All existing pavement or concrete to be removed shall be saw-cut along the limits of the proposed removal to provide a clean vertical edge. The cost of saw-cutting shall be considered incidental to the removal of each item.
9. All voids left by any item removed under any proposed building, pavement walk or other structural areas or within zones of influence thereof shall be properly backfilled with suitable backfill material and/or compacted as necessary by the Contractor.
10. The Contractor shall implement a daily program for dust control as it relates to the demolition and clearing activities. This program is to be approved by the Village/City prior to the start of any demolition or clearing work.
11. All existing building services serving buildings that are to be removed shall be disconnected and removed as required by the applicable Jurisdictional Agency.
12. All existing wells shown on the Plans to be abandoned or that are discovered during the course of construction shall be exposed and cut-off three (3) feet below the proposed finished grade and sealed by the Contractor in accordance with Section 920 of the "Illinois Water Well Construction Code", latest edition, or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
13. All existing septic tanks, grease traps or similar shown on the Plans to be abandoned or that are discovered during the course of construction shall have all liquids and solids removed and disposed of legally off-site by a licensed commercial waste hauler in accordance with the requirements of the Health Department or as required by any Local, County, State or Federal rules and regulations. The structures shall then be removed and disposed legally off-site or broken in-place, so as not to hold liquid, and back-filled with suitable materials by the Contractor or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
14. Any material containing asbestos or other hazardous materials found within existing structures or other items shown to be removed in order to construct the proposed improvements shall be removed from the site and legally disposed of off-site by the Contractor in accordance with applicable County, State or Federal rules or regulations.
15. All fire access lanes or routes located within the existing project area shall remain in service, clean of debris, and accessible for use by emergency vehicles at all times while demolition and clearing work is being performed.
16. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their demolition or clearing operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

EARTHWORK AND GRADING

1. All earthwork and grading activities shall be performed in accordance with the IDOT Standard Specifications or as noted in the Plans. Included in this work, but not necessarily limited to the following are: stripping and stockpiling of topsoil, mass grading and fine grading of the site and roadways, excavation of unsuitable materials and adequate disposal of unsuitable materials and their replacement with suitable materials where required, construction of detention ponds, berm construction, and miscellaneous topsoil respread and seeding.
2. Any earthwork quantities, calculations, summaries that have been furnished by the Engineer are for information purposes only and are provided without any guarantee by the Owner or Engineer whatsoever as to their sufficiency or accuracy. They are intended to be used solely as a guide for the Contractor in determining the scope of the completed project. It is the responsibility of the Contractor to determine all material quantities and apprise themselves of all site conditions. The Contractor warrants that he has performed his own investigations as necessary and his own calculations to determine site soil conditions and earthwork quantities. The Engineer makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction tolerances and construction methods that are beyond the control of the Engineer. In the event that the Earthwork is indicated to be Lump Sum then the Contract Price submitted by the Contractor shall be considered as Lump Sum and shall include all items necessary for the complete project and no claims for extra work will be recognized unless authorized in writing by the Owner.
3. The soil boring reports for the subject property can be obtained from the Owner. The information presented in these reports is solely for the guidance of the Contractor. The Owner and the Engineer make no representation or warranty regarding the information contained in the boring logs or soils report. The Contractor shall make their own investigations and shall plan their work accordingly. Arrangements to enter the property during the bidding phase may be made upon request of the Owner. There will be no additional payment for expenses incurred by the Contractor resulting from adverse soil or ground water conditions.
4. The initial establishment of soil erosion and sediment control measures such as the placement of erosion control silt fence, stabilized construction entrance, inlet protection, etc. shall be installed by the Contractor prior to the start of demolition, clearing and mass grading.
5. All earthwork and grading operations are to be supervised and inspected by a qualified Geotechnical/Soils Engineer or their designated representative. All testing, inspection, observation, and supervision of soil quality, unsuitable soil removal and its replacement, compaction testing, ensuring ponds and retention areas hold/retain water and other soils related operations shall be entirely the responsibility of the Geotechnical/Soils Engineer. Furthermore, no undercut or other recommended remediation work shall be performed without authorization by the Owner and documentation of extent by the Geotechnical/Soils Engineer.
6. A qualified Geotechnical/Soils Engineer or their designated representative shall observe the construction of the retention and detention areas including berming to ensure the areas will be capable of holding the designated normal and high water levels. Gravel or sand seams, or other conditions which may be encountered and which might tend to dewater the area shall be remedied as directed by the Geotechnical/Soils Engineer.
7. Topsoil stripping or excavation shall initially consist of the removal of the uppermost layers of organic soil and stockpiling at a location shown on the Plans, in another area deemed appropriate by the Contractor and approved by the Owner, or at a location specified by the Owner or Engineer. No stockpile location shall be finalized without the explicit approval from the Owner. Further, stockpiles shall not be located within flood prone areas or within designated buffer areas.
8. Stripping of vegetation or ground cover, grading, or other soil disturbance activities shall be done in a manner which will minimize soil erosion. Further, the disturbance shall be kept to a minimum and all disturbed areas shall be stabilized with temporary or permanent measures within fourteen (14) days of active hydrologic disturbance or re-disturbance.
9. The Contractor shall take precautionary measures to minimize earthwork and other activities in the areas where trees are to be saved or protected as to not cause injury to roots or trunks.
10. Embankment placement including preparation of existing ground surface prior to embankment placement and compaction shall be in accordance with Section 205 of the IDOT Standard Specifications. All embankments located within structural fill areas or zones of influence thereof shall be constructed to a minimum 95% of the modified proctor density in accordance with ASTM D1557. Embankments located in non-structural fill areas shall be constructed to a minimum of 90% of the modified proctor density in accordance with ASTM D1557.
11. Topsoil respread shall consist of placing a minimum of a four (4) inch layer of topsoil or depth indicated on the Plans over the disturbed unpaved areas within the construction limits. These areas shall then be seeded, sodded, landscaped, stabilized, etc. as indicated on the Plans.
12. Sod shall be placed on all disturbed areas within the right-of-way and at other locations indicated on the Plans.
13. Refer to the Landscape Plans prepared By Others for additional information on the landscaping and ground cover requirements.
14. Completed subgrade grading and final finished grading for all proposed improvements shall be within a tolerance of plus or minus one-tenth (0.1) foot of the design elevation.
15. Contractor shall provide uniform slopes between proposed grades and smooth vertical curves/transitions through all high and low points. Smooth transitions shall be provided where any proposed improvements match into or abut existing improvements.
16. The subgrade for the proposed streets and other pavement areas shall be proof-rolled by the Contractor in the presence of the Village/City Engineer or applicable Jurisdictional Agency and the Geotechnical/Soils Engineer. Any unstable areas or failures encountered shall be removed and replaced or remediated as directed by the Village/City Engineer or applicable Jurisdictional Agency and Geotechnical/Soils Engineer. Any unstable areas or failures encountered and remediation method including approximate size, quantity, etc. shall be documented by the Geotechnical/Soils Engineer.
17. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

Note: In the event of any conflicts between the specifications or requirements of the plans and the City standard notes and specifications, the City standard notes and specifications shall be followed.

No.	Date	Revision
1	05.17.2024	Revised PZC

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GENERAL NOTES AND SPECIFICATIONS

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager:	M L A
Engineer:	K J L
Date:	04.02.2024
Project No.	23-006
Sheet	C2.0 / C7

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Plot Date: May 17, 2024 - 12:09pm Plotted By: mike-o
File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg

PAVEMENT, CURB & GUTTER, AND WALKS

1. All work under this Section shall be performed in accordance the IDOT Standard Specifications or as specified in the Plans.
2. Concrete curb or curb and gutter shall be constructed in accordance with the Plans and Section 606 of the IDOT Standard Specifications. A ¾" pre-molded fiber joint filler along with two (2) 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps, centered on joint, shall be provided at expansion joints. Expansion joints shall be provided at a maximum of sixty (60) foot intervals and at all points of curvature and tangency, curb returns, five (5) feet either side of edge of structures, and at the end of each pour. Construction joints shall be provided at maximum twenty (20) foot intervals.
3. Where proposed curb or curb and gutter connects to an existing curb or curb and gutter, the existing curb or curb and gutter shall be saw-cut and then two 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps shall be drilled and installed nine (9) inches into the existing and proposed curb. Bars shall be installed in a location similar to that of the expansion joint in the curb or curb and gutter as applicable.
4. All curb and curb and gutter constructed over a utility trench shall be reinforced with two (2) #4 epoxy coated reinforcing bars for a length of ten (10) feet centered over the trench or as shown on the plans.
5. Reversed pitched curb and gutter shall be installed in areas where pavement slopes away from the curb.
6. Sidewalks and walks shall be constructed in accordance with the Plans and Section 424 of the IDOT Standard Specifications. Concrete sidewalks and walks shall be thickened to a minimum of 6" at all driveways. All sidewalks and walks shall be IDOT Portland Cement Concrete, Class SI, on compacted aggregate base course as shown on the Plans. Scored contraction joints shall be provided at five (5) foot intervals or as specified in the Plans. Expansion joints consisting of a ½" pre-molded fiber joint filler shall be provided at maximum fifty (50) foot intervals, and adjacent to concrete curbs, drives, foundations, ramps, etc. as well as when meeting existing concrete walks.
7. Sidewalks and walks constructed over a utility trench shall be reinforced with three (3) #4 round epoxy coated reinforcing bars for a length of ten (10) feet centered over the utility trench or as shown on the plans.
8. Curb ramps accessible to the disabled with raised truncated dome detectable warning surface of standard brick red color or other contrasting color shall be provided at all locations where sidewalk meets curb and at other locations shown on the Plans in accordance with the Illinois Accessibility Code (IAC), latest edition and IDOT Standard 424001, latest revision.
9. Curing and protection of all exposed concrete surfaces shall be in accordance with the IDOT Standard Specifications. No "honey-combing" or other similar failures of the concrete surfaces will be accepted.
10. Aggregate base course shall be in accordance with the Plans and Section 351 of the IDOT Standard Specifications. Aggregate base course material shall be CA-6, Type B, 100% crushed gravel conforming to Section 1004 of the IDOT Standard Specifications.
11. Bituminous binder and surface courses shall be Hot Mix Asphalt (HMA) of type and compacted thickness as specified in the Plans and shall be constructed in accordance with Section 406 of the IDOT Standard Specifications. The surface course shall be made with virgin materials; no recycled materials shall be allowed unless specified otherwise on the Plans. The Contractor shall provide and pay for the services of a competent paving laboratory to design and supervise the control of the paving mixture. All paving materials and mixes shall be IDOT certified.
12. Portland cement concrete (PCC) pavement shall be Class PV with reinforcement as specified on Plans and be constructed in accordance with Section 420 of the IDOT Standard Specifications.
13. All concrete work shall be finished with a broom finish unless specified otherwise in the Plans.
14. The Contractor shall saw-cut the exposed edges of all existing pavement adjacent to any proposed pavement, apron, sidewalk, curb and gutter or similar to provide a smooth, clean edge that is free of loose material. A proper transition butt joint and/or taper shall also be provided as necessary. Refer to butt joint detail for additional information.
15. The testing of the subgrade, aggregate base course, bituminous aggregate material, binder course, surface course, and concrete work shall be required and be performed in accordance with the IDOT Standard Specifications and requirements of the applicable Jurisdictional Agency. A qualified testing firm shall be employed to perform the required tests, ensure quality and conformance, and provide the results to the Engineer, Owner, and Jurisdictional Agency. The Contractor shall provide the Owner with a construction schedule and shall coordinate all required testing with the testing firm.
16. Prior to the commencement of any paving activities, a proof-roll must be performed by the Contractor and approved by the Village/City or applicable Jurisdictional Agency, and the Owner. All areas not passing the proof-roll shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner. Any remediate areas shall be re-tested.
17. Prior to installation of the aggregate base course:
    a. The subgrade shall be prepared in accordance with Section 301 of the IDOT Standard Specifications.
    b. The Contractor shall be responsible for all subgrade compaction and preparation to within 0.1-ft of the proposed subgrade elevation. Subgrade shall be compacted to a minimum 95% of the modified proctor density in accordance with ASTM D1557.
    c. Sub-grade shall pass a proof-roll and any unsuitable areas in the subgrade shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner.
18. Prior to the installation of the binder course:
    a. The aggregate base course shall be prepared in accordance with Section 351 of the IDOT Standard Specifications.
    b. The aggregate base course shall be clean and dry.
    c. The bituminous priming material shall be prepared and applied according to Section 403 of the IDOT Standard Specifications.
    d. The Contractor shall prime the aggregate base course at a rate of 0.25 gallons per square yard prior to the placement of the binder course.
    e. The binder course shall be placed only when the temperature in the shade is at least 40º F and the forecast is for rising temperatures.
19. Prior to the installation of the surface course:
    a. The Contractor shall patch and repair all damaged and failed areas in the binder course to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
    b. The Contractor shall repair all damaged curb and gutter or other concrete pavement to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
    c. Structures within pavement shall be adjusted to final surface grade.
    d. The Contractor shall clean and prime the binder course at a rate of 0.05 gallons per square yard prior to the placement of the surface course.
    e. The surface course shall be placed only when the air temperature in the shade is at least 45º F and the forecast is for rising temperatures.
20. Pavement marking/striping:
    a. All Pavement markings shall be in accordance with Section 780 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size and color specified on the Plans.
    b. Pavement marking on freeways shall be placed with truck-mounted equipment. Markings on roads other than freeways may be placed with either truck-mounted or hand-operated equipment.
    c. Before applying the pavement marking material, the pavement shall be clean, dry, and free of debris or any other material that would reduce the adhesion of the markings on the pavement.
    d. Pavement markings shall be applied in accordance with the manufacturer's recommended instructions.
    e. Pavement markings shall be uniform and have clean, straight edges.
    f. Pavement marking words and symbols shall conform closely to the dimensions and spacing specified in the MUTCD, IDOT Standard Details, and the Plans.
    g. Deviations from the required dimensions and spacing or other departures from reasonable standards of professionalism will be cause for rejection by the Engineer.
21. Handicapped stalls shall be striped and signed in accordance with the Illinois Accessibility Code (IAC), latest edition and any other applicable ADA guidelines. Handicapped stalls shall be a minimum of sixteen (16) feet wide and signage shall be affixed to a post permanently mounted in the ground or wall and located in the center of the space no further than five (5) feet from the front of the accessible space. The minimum height to the bottom of the fine sign shall be four (4) feet. Handicapped stall striping shall be yellow in color.
22. All signs shall be in accordance with Section 720 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size, and color specified on the Plans.
23. Raised reflective pavement markers shall be in accordance with Section 781 of the IDOT Standard Specifications and be recessed into the pavement as required by the applicable Jurisdictional Agency.
24. Pavement marking and marker removal shall be in accordance with Section 783 of the IDOT Standard Specifications.
25. All pavements, curb, curb and gutters, walks, etc. shall be cleaned to the satisfaction of the Village/City or applicable Jurisdictional Agency, Owner, and Engineer as necessary during construction and at the end of the project prior to the final acceptance.

SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

1. All soil erosion and sedimentation control (SESC) measures shall be installed and properly maintained in accordance with the Illinois Environmental Protection Agency's (IEPA) "Illinois Urban Manual", latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition, and shall be followed as directed by the Village/City and Engineer. In addition, on sites that will ultimately result in the disturbance of one (1) acre or more the provisions outlined in the General National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10, latest edition, shall also be followed.
2. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
3. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
4. Soil Erosion Control measures shall include the provision of an erosion control fence as required along the area of disturbance, a stabilized construction entrance, and sediment traps or other inlet protection method at each inlet or catch basin.
5. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter silt fence prior to the start of any clearing or grading activities.
6. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
7. After the start of mass grading and before all storm water conveyance improvements are in place and functional, all on-site storm water shall be temporarily diverted into the detention basin or a properly constructed temporary sedimentation basin or collection device, as per local requirements, so as to prevent surface waters from flowing onto adjacent property.
8. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
9. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
10. No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
11. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
12. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
13. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
14. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
15. All storm sewers, drainage structures, catch basin sumps and/or retention/detention/sedimentation basins provided within this project are to be cleaned at the end of construction and prior to final acceptance. Cleaning may also be required during the course of construction if it is determined that the structures are not properly functioning and their performance is impaired.
16. Storm water conveyance swales, channels, streams or similar, if disturbed, are to be stabilized within 48 hours after the end of active disturbance.
17. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
18. The Contractor shall water the site, as required during dry weather to control dust.
19. Erosion Control Maintenance and Replacement Notes:
    a. Silt fences are to be cleaned as required during the course of the construction of the project or if the Engineer determines that they are not properly functioning and their performance is impaired.
    b. Sediment traps and basins shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
    c. Should the fabric decomposed or become ineffective prior to the end of the expected life and the barrier still be necessary, the fabric shall be replaced promptly.
    d. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
    e. Mud or dust which is deposited on adjacent roadways shall be removed at the end of each day.
20. The sediment and erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Jurisdictional Agency.
21. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
22. The work shall generally follow the following typical Construction Sequencing:
    a. Installation of them soil erosion and sediment control (SE/SC) measures:
        1. Selective vegetation removal for silt fence installation
        2. Silt fence installation
        3. Construction fencing around areas not to be disturbed
        4. Stabilized construction entrance
    b. Install tree protection fencing and tree removal where necessary (clear & grub)
    c. Construct sediment trapping devices (sediment traps, basins, etc.)
    d. Construct detention facilities and outlet control structure with restrictor.
    e. Strip and stockpile topsoil and mass grade the site
    f. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
    g. Install sanitary sewer, storm sewer, watermain and associated inlet & outlet protection
    h. Permanently stabilize detention basins with seed and erosion control blanket
    i. Temporarily stabilize all areas including lots that have reached temporary grade
    j. Install roadways, parking areas, etc.
    k. Final grade and permanently stabilize all outlot areas with topsoil and seed
    l. Install structures and grade individual lots
    m. Permanently stabilize site with topsoil and seed
    n. Remove all temporary SE/SC measures after the site is stabilized with vegetation

Note: In the event of any conflicts between the specifications or requirements of the plans and the City standard notes and specifications, the City standard notes and specifications shall be followed.

GE-02a

GENERAL SITE WORK:

1. Pre-Construction meeting shall be conducted with City Staff and all Contractors prior to commencing any grading or underground utility construction activities (schedule meeting with the Community Development Department at 815-356-3605).
2. 24-hour Emergency contact numbers shall be provided to City Staff at the Pre-Construction meeting.
3. Working hours shall be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays only (except in cases of emergency). Non-emergency work on weekends or holidays is not permitted per City Code except under written permission from the City Engineer. The owner is responsible for the City Inspector cost of overtime inspection beyond the normal eight (8) hour day, including weekends and holidays.
4. Public/private streets shall be kept free of dirt and debris with regular cleaning, sweeping, and scraping conducted by the Contractor. Junk and debris shall not be allowed to accumulate, blow, or scatter onto streets or adjacent properties.
5. J.U.L.I.E. shall be contacted for utility locations on-site and in the adjacent rights-of-way.
6. Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safeguarding measures during the course of all work to protect the public from the construction operations.
7. Maintain access to adjacent streets during construction. No closing of streets unless approval is first obtained from the agency with jurisdiction (City of Crystal Lake, McHenry County Department of Transportation, Illinois Department of Transportation, etc).
8. Any damage to public right-of-way, public utilities, streets, curb, etc. shall be repaired/replaced as soon as possible and as directed by the City Engineer.
9. The contractor shall give the City of Crystal Lake, Illinois Department of Transportation, and any other governmental agency having jurisdiction, at least two (2) working days notice excluding Saturday and Sunday prior to the initiation of any phase of construction. Contractor shall immediately notify if construction has ceased and renew the two (2) working day notification thereafter.
10. The Contractor shall be responsible for obtaining all required permits for construction prior to commencement along or across existing streets or highways. The Contractor shall make arrangements for the proper bracing, shoring and other protection of all roadways before construction begins.

GRADING:

1. The grading and construction of the site improvements shall not cause ponding of storm sewer water. All areas adjacent to these improvements shall be graded to allow positive drainage.
2. The proposed grading elevations shown on the plans are finished grade. A minimum of six (6) inches of topsoil is to be placed before finished grade elevations are achieved.
3. Embankment material within parkway and open space areas shall be compacted to a minimum of ninety percent (90%) of maximum density in accordance with ASTM Specification D-1557 (modified proctor method), or to such other density as may be determined appropriate by the soils engineer.
4. All subgrade material shall have a minimum CBR (California Bearing Ratio) of 3.0 as determined by the soils engineer, or base replacement and pavement design revisions shall be provided which are adequate to obtain equivalent pavement strength.
5. Proposed pavement areas, building pads, driveways and sidewalks and yard/open space areas shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the Contractor.
6. Any borrow pit locations shall be identified by the Contractor on a copy of the approved site plans and forwarded to the Engineering Division at least 24-hours prior to excavation. Provide backfill compaction reports from a geotechnical engineer and as-built plans to the Engineering Division for any borrow pit area.
7. Backfill shall be monitored by a geotechnical engineer on-site with compaction reports forwarded to the Engineering Division for review.
8. Water truck shall be on-site at all times during mass-grading operations and be available as needed for the purposes of dust control or at the request of City Staff.
9. Use of City fire hydrants is not allowed unless approved (separate from this permit) by the Public Works Department and a hydrant meter and RPZ is obtained from the City of Crystal Lake Water Division (815-356-3614). Only the City of Crystal Lake Water Division may operate valves and hydrants.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	STANDARD NOTES AND SPECIFICATIONS	GE-02a Date: 01/30/15 Drawn Checked DD AW	City of Crystal Lake Illinois

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GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 595 of the City Code.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
2. All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
3. All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
4. Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material RR 2 (6") - RR4 (16") shall be in accordance with Article 281
9. Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 02/25/2020 3. 4.	STANDARD NOTES AND SPECIFICATIONS	GE-02b Date: 01/30/15 Drawn Checked DD AW	City of Crystal Lake Illinois

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GE-02c

SANITARY SEWER:

1. Non-shear stainless steel couplings shall be used when connecting sewer pipes of dissimilar materials and pipes with no hub joints. When connecting to an existing sanitary sewer by means other than an existing wye or manhole, contractor shall use a Sewer-Tap and hub-wye or hub-tee saddle.
2. Unless an alternate method is approved, water stop gaskets shall be provided at all sanitary sewer manhole connections. Type and manufacturer to be approved by the City.
3. PVC plastic sewer pipe and fittings of sizes 4-inch through 15-inch shall conform to the latest revised specification requirements of ASTM D3034 for type PSM polyvinyl chloride (PVC) sewer pipe and fittings of minimum wall thickness SDR 26.
4. Joints shall be either the solvent weld type conforming to the latest revised specification requirements of ASTM D2564 and ASTM D2855, or elastomeric gasket type conforming to the latest revised specification requirements of ASTM D1869 and ASTM D3212.
5. A thicker walled pipe such as SDR 18 may be specified by the engineer depending on design and/or field conditions.
6. PVC plastic sewer pipe and fittings of sizes 18-inch through 36-inch shall conform to the latest revised specification requirements of ASTM F679 or polyvinyl chloride (PVC) large diameter ribbed gravity sewer pipe and fittings, with integral bell gasketed joints and elastomeric gaskets to form a watertight seal conforming to the latest revised specification requirements of ASTM F477 or ASTM D3212.
7. Pipe and fittings shall be the products of one approved manufacturer only, and there shall not be any mixing of pipe and fittings of different manufacturers between manholes.
8. The handling and installation of pipe, assembly or joints, and manhole connections shall be in accordance with the manufacturer's recommendations.
9. Gasket-type waterstop collars consist of a neoprene collar and a stainless steel band or other approved manhole waterstop shall be installed wherever the pipe passes through the manhole walls to provide a watertight joint to prohibit infiltration into the sewer system.
10. PVC pipe shall be installed in accordance with the latest revised specification requirements of ASTM D2321 using either compacted class I or class II granular embedment materials for bedding, haunching and initial backfill of 12 inches over the top of pipe to provide the necessary support for the pipe so that the maximum deflection does not exceed five percent of the pipe's original internal diameter.
11. The Contractor shall provide the necessary tools and equipment and perform the work necessary to test the deflection in the initial 1,200 feet of installed sewer and not less than ten percent (10%) of the remainder of the sewer project at random locations selected by the engineers no sooner than 30 days after backfilling has been completed. In the event that deflection exceeds the maximum limit of five percent (5%), the Contractor shall test all other new flexible pipe for deflection. Deflection shall be tested by use of either a mandrel or rigid ball having a diameter equal to ninety-five percent (95%) of the inside diameter of the pipe, and the test shall be performed without using mechanical pulling devices. Wherever the deflection limitation is exceeded, the contractor shall uncover the pipe, carefully replace compacted embedment and backfill material, and retest for deflection.
12. The Contractor shall subject all sanitary sewers, including service lines, to an air test. Air testing shall be performed in accordance with the latest Standard Specifications for Water and Sewer.
13. The Contractor shall subject all newly constructed sanitary manholes to the Negative Pressure (Vacuum) Test in accordance with ASTM C 1244.The Contractor shall also televise all public sanitary sewers. Televising of sanitary sewer, cost for televising, and testing shall be the responsibility of the Contractor.
14. Cast Iron Soil Pipe: service weight cast iron soil pipe and fittings conforming C.I.S.P.I. Specification HS-67 with compression type rubber gasket joints conforming to ASTM specification C564, or other suitable materials approved by the City Engineer.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 01/25/2021 KL Vacuum Test Note 13 3. 4.	STANDARD NOTES AND SPECIFICATIONS	GE-02c Date: 01/30/15 Drawn Checked DD AW	City of Crystal Lake Illinois

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GE-02d

WATER MAIN:

1. Water main shall be Ductile Iron.
    a) Ductile iron water main shall be Class 52 conforming to ANSI/AWWA C151/A21.51-09.
    b) Ductile iron fittings shall conform to ANSI/AWA C153/A21.53 with mechanical joint gaskets.
2. All bolted connections shall be torqued to the manufacturer's specification. The Contractor shall verify the manufacturer's specification with an approved torque wrench.
3. Thrust blocking or Mega-Lugs with Mega-Bond coating or pre-approved equal shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
4. Thrust blocks not permitted with 45 degree vertical bends in water main (these shall be restrained with Mega-Lug or pre-approved equal.
5. Ductile iron pipe shall be encased in polyethylene and shall conform with ANSI/AWWA C105/A21.10 - 10 and ASTM A674-10.
6. Minimum cover from finished grade to top of water main shall be six (6) feet; Maximum cover shall be eight (8) feet.
7. Water Main Taps: An Illinois licensed plumber is required for any water main tap.
8. All water mains shall be subjected to a 2 hour pressure and leakage test by the Contractor in accordance with City Detail UW-09A and UW-09B. Water mains shall be chlorinated in accordance with City Detail UW-09A.
9. The Underground Contractor shall consider incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawing.
10. For repairs to existing PVC watermains, see details UW-12 and UW-13

PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavements shall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevation.
3. The Paving Contractor shall ensure that the subgrade has been properly prepared and that the finished top of subgrade elevation has been graded within the tolerances allowed in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to fine grading for base course construction, it is understood that the Contractor has approved and accepts responsibility for the subgrade.
4. For the purpose of providing handicap accessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at locations where public walks or pedestrian paths intersect curb lines at street intersections and other locations as directed.
5. ¾ inch thick premolded fiber expansion joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes.
6. ½ inch thick fiber expansion joints shall be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter shall incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines, the cost of which shall be considered incidental to the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be of the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.1 bag mix (or IDOT class SI concrete) and shall develop a minimum of 3,500 psi compressive strength at fourteen (14) days. Contraction joints shall be set at five (5) foot centers, and one-half inch (½ inch) premolded fiber expansion joints at fifty (50) foot centers and where the sidewalk meets the curb or another sidewalk, or at the end of each pour. All sidewalks constructed over utility trenches and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot minimum length).

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. KL 01/25/2021 Torque Specification 3. 02/06/2023 JRG - Update Water Main Note 8 4. 07/14/2023 JRG - Update Water Main Notes 1, 5, 10	STANDARD NOTES AND SPECIFICATIONS	GE-02d Date: 01/30/15 Drawn Checked DD AW	City of Crystal Lake Illinois

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No.	Revised/Revision	Date
1	Revised PZC	05.17.2024

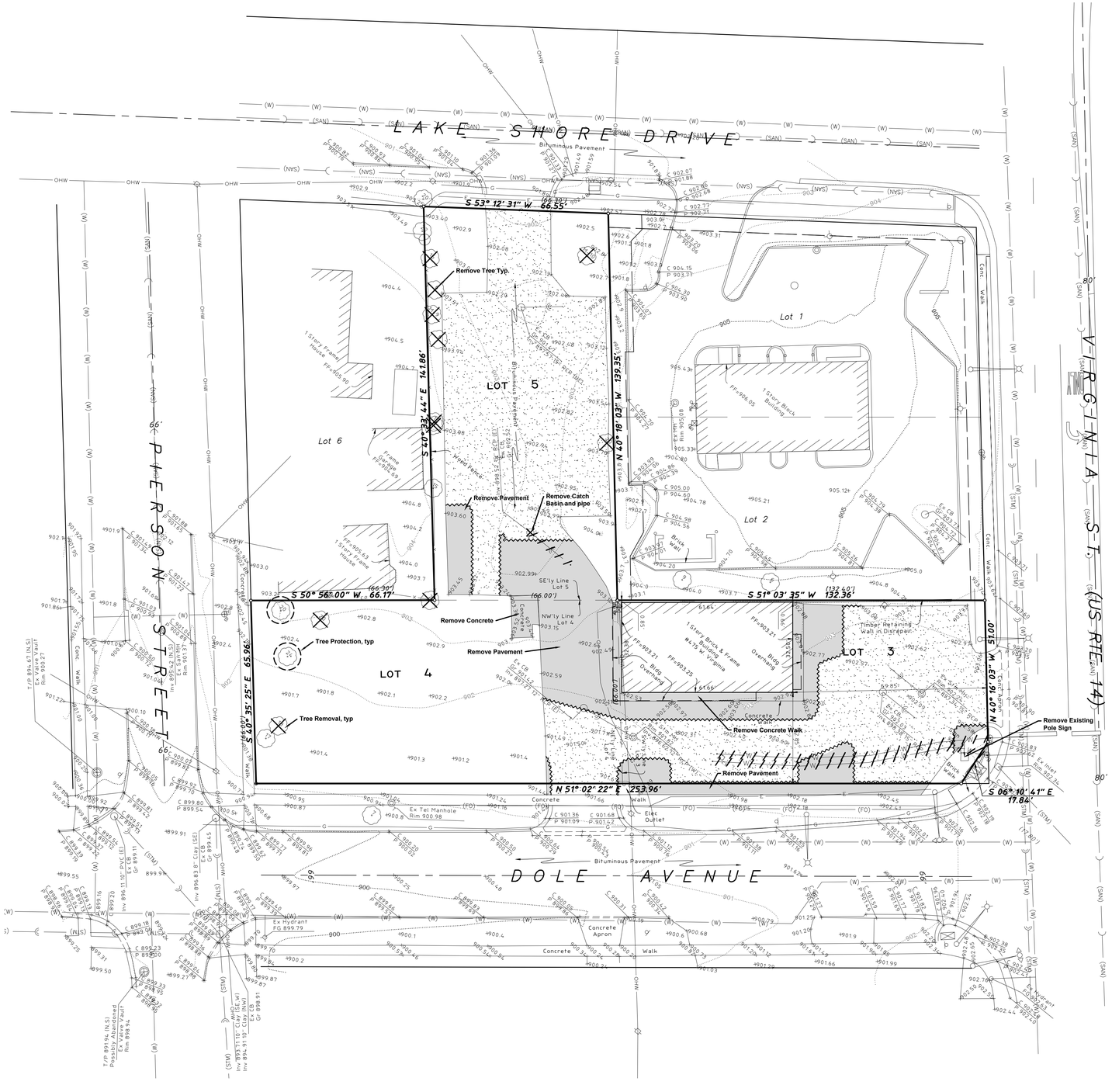
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Illinois Professional Design Firm License No.: 184.003152
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GENERAL NOTES AND SPECIFICATIONS
BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager:	M L A
Engineer:	K J L
Date:	04.02.2024
Project No.	23-006
Sheet	C2.1 / C7

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Plot Date: May 17, 2024 - 12:09pm Plotted By: mike-o
File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg



DEMOLITION LEGEND

- PAVEMENT REMOVAL
- REMOVE EXISTING ASPHALT COURSE FOR RESURFACING
- UTILITY REMOVAL
- MISCELLANEOUS REMOVAL
- SAW CUT
- TREE REMOVAL

NORTH

10 0 20

Scale: 1" = 20

AREA SUMMARY

LOT 3	8,649 S.F.	0.19856 AC.
LOT 4	8,713 S.F.	0.20002 AC.
LOT 5	9,294 S.F.	0.21336 AC.
TOTAL	26,656 S.F.	0.61194 AC.

LEGAL DESCRIPTION

LOT 3 (EXCEPT THAT PART DESCRIBED IN DOCUMENT 933753), AND ALL OF LOTS 4 AND 5 IN BLOCK 8 IN PIERSON'S ADDITION TO CRYSTAL LAKE, A SUBDIVISION OF PART OF SECTION 5 AND SECTION 6, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 18, 1868, IN BOOK 43 OF DEEDS, PAGE 303, IN MCHENRY COUNTY, ILLINOIS.

Revised PZC — Revision — 05.17.2024 — Date

1 — No.

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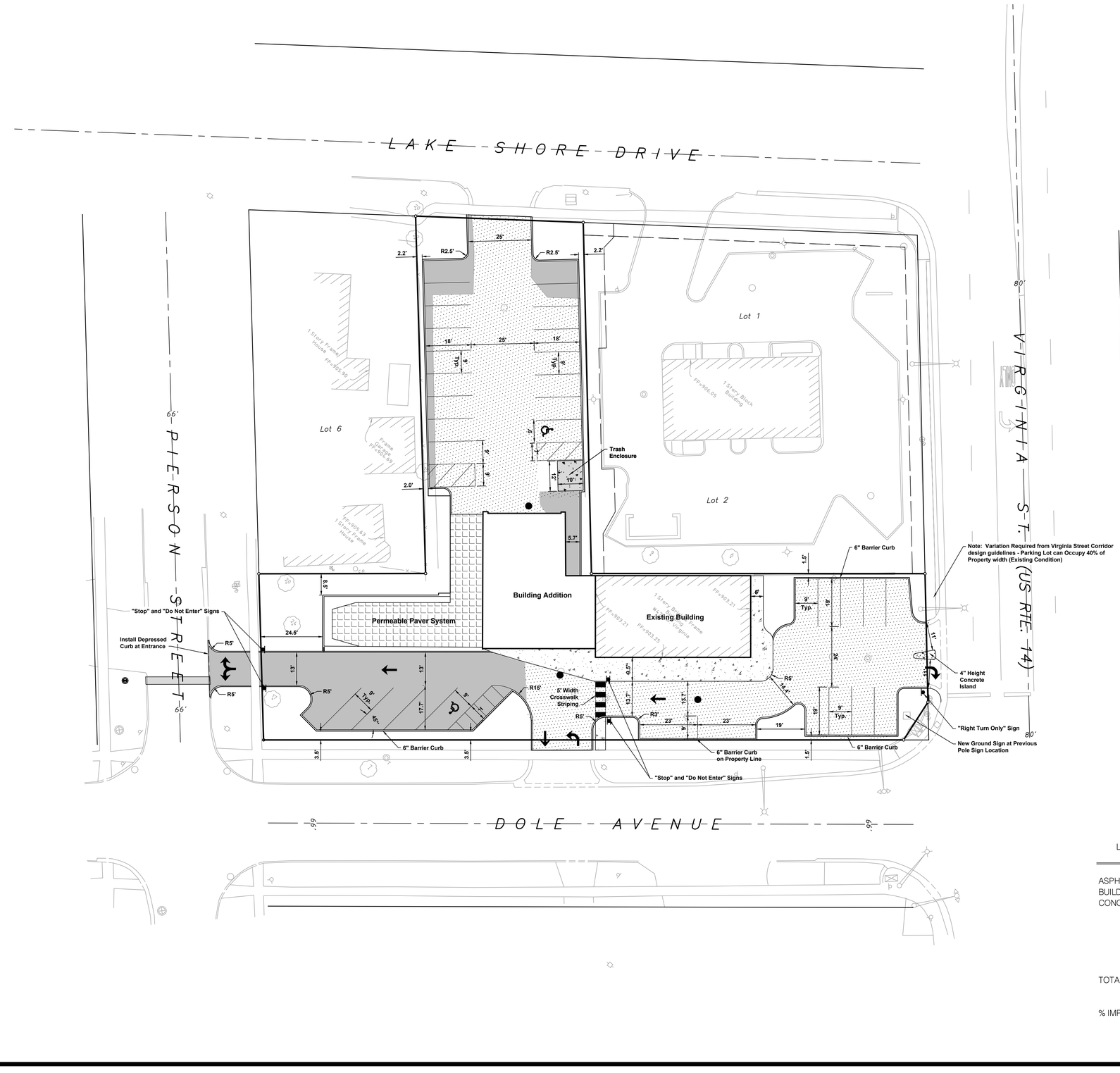
EXISTING CONDITIONS & DEMOLITION PLAN

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager: M L A
Engineer: K J L
Date: 04.02.2024
Project No. 23-006
Sheet C3.0 / C7

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Plot Date: May 17, 2024 - 12:09pm Plotted By: mike-o
File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg



PAVING LEGEND

New Pavement Area
-1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50
-2 1/4" Hot Mix Asphalt Binder Course, IL-19, N50
-10" CA-6 Crushed Aggregate Base Course, Type B

New Asphalt Course on Existing Pavement
-Prime Coat
-1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50
-2 1/4" Hot Mix Asphalt Binder Course, IL-19, N50

Pea Gravel Surface
-3" Depth Clean Pea Gravel
-Stainless Steel Retaining Edge adjacent to Landscaping
-Non-woven Geotextile Fabric

Concrete Sidewalk
-5" Portland Cement Concrete
-4" CA-6 Crushed Aggregate Base Course

Heavy Duty Concrete
-8" Portland Cement Concrete
-6" CA-6 Crushed Aggregate Base Course

NORTH

10 0 20

Scale: 1" = 20

IMPERVIOUS COVERAGE CALCULATIONS

All Areas Provided in Square Feet

LOT AREA = 26,656

EXISTING		PROPOSED	
ASPHALT/PAVEMENT	15,611	ASPHALT/PAVEMENT	14,837
BUILDING	2,000	BUILDING + ADDITIONS	5,942
CONCRETE	8	CONCRETE	538
TOTAL IMPERVIOUS	17,619	TOTAL IMPERVIOUS	21,317
		NET INCREASE	3,698
% IMPERVIOUS	66.1%	% IMPERVIOUS	80.0%

No.	Date	Revision
1	05.17.2024	Revised PZC

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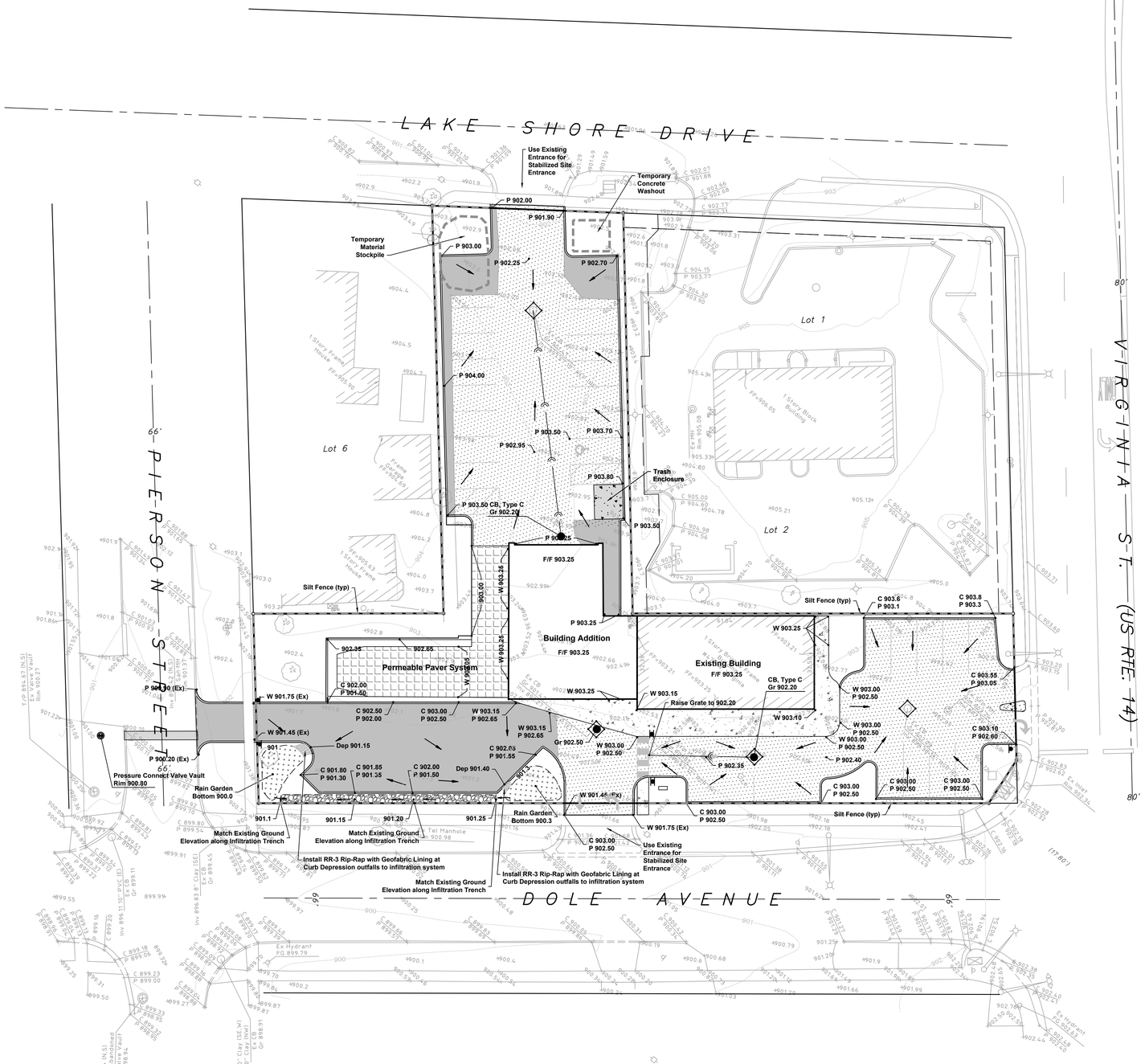
GEOMETRY & PAVING PLAN

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager: M L A
Engineer: K J L
Date: 04.02.2024
Project No. 23-006
Sheet C4.0/C7

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File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg



PAVING LEGEND

New Pavement Area
-1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50
-2 1/4" Hot Mix Asphalt Binder Course, IL-19, N50
-10" CA-6 Crushed Aggregate Base Course, Type B

Existing Pavement to be Milled and Resurfaced
-Prime Coat
-1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50

Concrete Sidewalk
-5" Portland Cement Concrete
-4" CA-6 Crushed Aggregate Base Course

Heavy Duty Concrete
-8" Portland Cement Concrete
-6" CA-6 Crushed Aggregate Base Course

EROSION CONTROL LEGEND

Silt Fence

Inlet Protection

NORTH

10 0 20

Scale: 1" = 20

No.	Date	Revision
1	05.17.2024	Revised PZC

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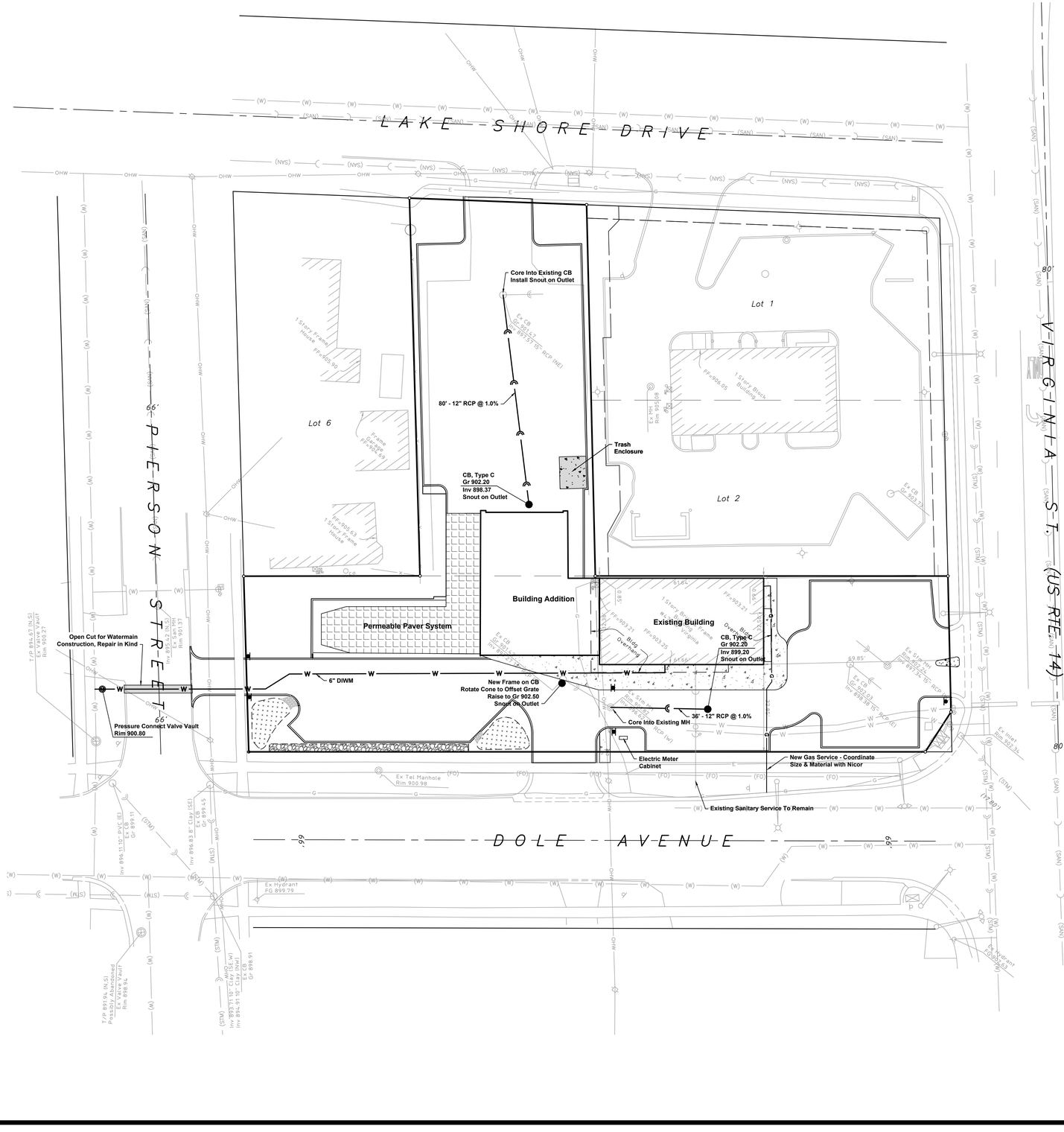
GRADING & EROSION CONTROL PLAN

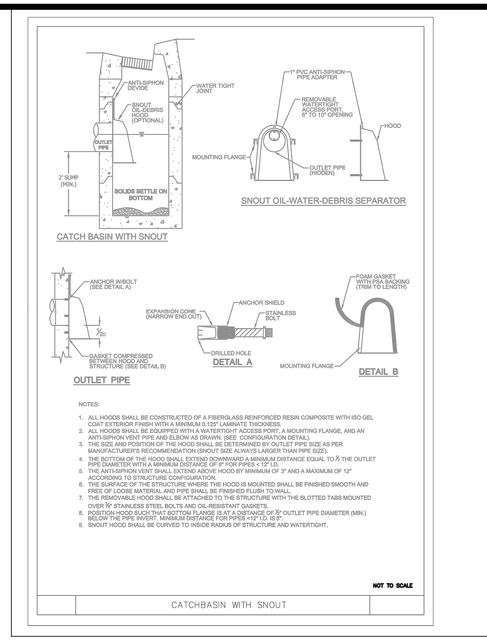
BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager:	M L A
Engineer:	K J L
Date:	04.02.2024
Project No.	23-006
Sheet	C5.0 / C7

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NOTES:

1. ALL HOODS SHALL BE CONSTRUCTED OF A FIBERGLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
2. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL).
3. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (INOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
4. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO ⅄ THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 4" FOR PIPES ≤ 12" I.D.
5. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
6. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
7. THE REMOVABLE HOOD SHALL BE ATTACHED TO THE STRUCTURE WITH THE SLOTTED TABS MOUNTED OVER ⅜" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKETS.
8. POSITION HOOD SUCH THAT BOTTOM FLANGE IS AT A DISTANCE OF ⅄ OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES ≤12" I.D. IS 6".
9. SNOUT HOOD SHALL BE CURVED TO INSIDE RADIUS OF STRUCTURE AND WATERTIGHT.

NOT TO SCALE

CATCHBASIN WITH SNOUT

NORTH

10 0 20

Scale: 1" = 20

No.	Date	Revision
1	05.17.2024	Revised PZC

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UTILITY PLAN

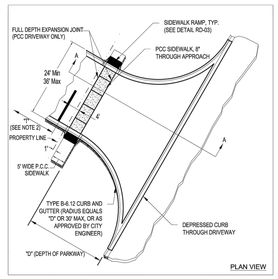
BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

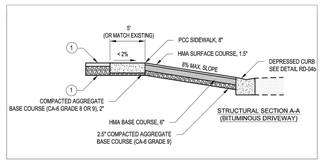
Project Manager:	M L A
Engineer:	K J L
Date:	04.02.2024
Project No.	23-006
Sheet	C6.0 / C7

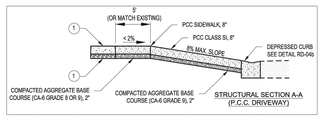
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RD-01a







NOTES:

1. MAX. CONSTRUCTED APPROACH GRADE = 8%. APPROACH SHALL BE DESIGNED AT 6% UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
2. FOR THICKNESS OF PAVEMENT "T", VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE A MINIMUM OF 9 INCHES. FOR HMA BASE COURSE PAVEMENT SECTIONS THE GUTTER FLAG SHALL BE SAME THICKNESS AS PAVEMENT STRUCTURE.
3. TRANSITION FROM FULL CURB TO DEPRESSED CURB IN 2 LINEAL FEET, WHEN APPLICABLE.

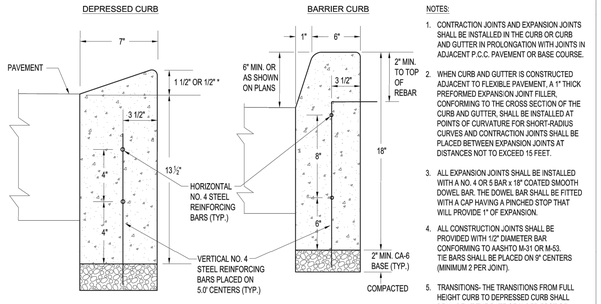
LEGEND:

(1) FOR PARKING LOT SEE UNIFIED DEVELOPMENT ORDINANCE, APPENDIX SECTION A-700.

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 02/25/2020 3. 08/18/2023 JRG - Update curb radius and transitions details 4.	DRIVEWAY: COMMERCIAL APPROACH	RD-01a Date: 01/30/15 Drawn DD Checked AW	

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RD-05b



BARS TO BE SET AND TIED PRIOR TO CONCRETE POUR. BAR PLACEMENT DURING POUR WILL NOT BE PERMITTED.

* ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED

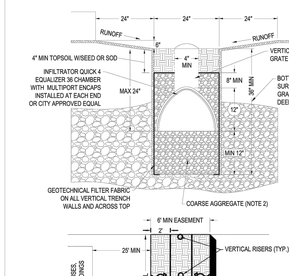
NOTES:

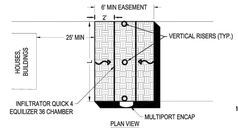
1. CONTRACTION JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB OR CURB AND GUTTER IN PROLONGATION WITH JOINTS IN ADJACENT P.C.C. PAVEMENT OR BASE COURSE.
2. WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, A ½" THICK PREFORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTION OF THE CURB AND GUTTER, SHALL BE INSTALLED AT POINTS OF CURVATURE FOR SHORT-RADIUS CURVES AND CONTRACTION JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT TO EXCEED 15 FEET.
3. ALL EXPANSION JOINTS SHALL BE INSTALLED WITH A NO. 4 OR 5 BAR x 18" COATED SMOOTH DOWEL BAR. THE DOWEL BAR SHALL BE FITTED WITH A CAP HAVING A PINCHED STOP THAT WILL PROVIDE 1" OF EXPANSION.
4. ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH 1/2" DIAMETER BAR CONFORMING TO AASHTO M-31 OR M-53. TIE BARS SHALL BE PLACED ON 9" CENTERS (MINIMUM 2 PER JOINT).
5. TRANSITIONS- THE TRANSITIONS FROM FULL HEIGHT CURB TO DEPRESSED CURB SHALL BE MADE AT THE RATE OF 3" PER FOOT OF LENGTH OR FLATTER.
6. EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT TO EXCEED 100 FEET.

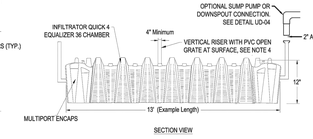
Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 08/21/2018 3. 4.	CURB: CONCRETE CURB TYPE B	RD-05b Date: 01/15/2015 Drawn DD Checked AW	

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UD-05







NOT TO SCALE

NOTES:

1. CITY ENGINEER MAY PERMIT ALTERNATE CHAMBER CONFIGURATIONS DEPENDING ON SITE CONDITIONS.
2. COARSE AGGREGATES SHALL CONSIST OF 1" TO 2" WASHED STONE OR IDOT GRADATION CA-1.
3. SEE PLANS FOR LENGTH (L) DIMENSION.
4. THE VERTICAL RISERS SHALL BE SPACED AT THE FOLLOWING INCREMENTS AT A MAXIMUM OF 8 FEET APART WITH ONE LOCATED AT EACH END OF THE TRENCH DRAIN. (SEE CHART)

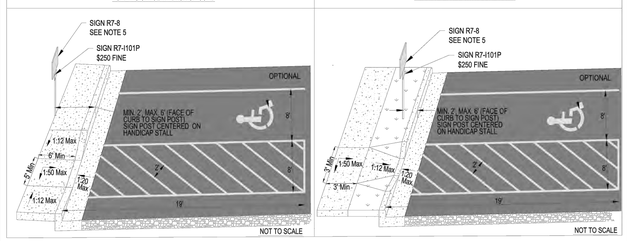
LENGTH OF TRENCH	NUMBER OF RISERS
<=12'	2
13' - 24'	3
25' - 36'	4
37' - 50'	5

5. SUMP PUMPS OR DOWNSPOUTS SHALL BE CONNECTED TO INFILTRATION TRENCHES WHENEVER POSSIBLE.
6. INFILTRATION TRENCH SHALL BE PLACED IN A MINIMUM 6 FOOT WIDE RECORDED STORMWATER MANAGEMENT EASEMENT

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. KL 4/16/2020 Quick 4 Chamber 2KL 1/25/2021 Sump Pump/Downspout Connection 3. 4.	INFILTRATION TRENCH	UD-05 Date: 08/01/2019 Drawn DD Checked MM	

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TR-06



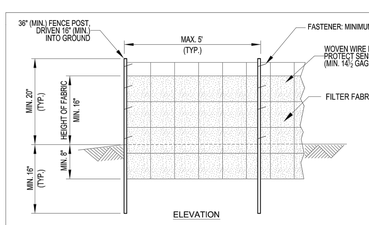
NOTES:

1. CONCRETE PARKING BUMPERS REQUIRED IF BARRIER CURB NOT PRESENT
2. REFER TO CURRENT EDITION OF THE ILLINOIS ACCESSIBILITY CODE, SECTION 502 PARKING SPACES
3. IF DEPRESSED CURB OPENING IS GREATER THAN 3.0 FEET, THE LANDING SHALL BE AS WIDE THE DEPRESSED OPENING.
4. MOUNT SIGNS SO BOTTOM OF R7-8 SIGN IS BETWEEN 5 FEET - 9 FEET ABOVE FINISH GRADE. MOUNT R7-101P DIRECTLY BELOW.
5. TWO PARKING SPACES ARE PERMITTED TO SHARE A COMMON ACCESS AISLE IN PERPENDICULAR PARKING ONLY
6. PAVEMENT MARKINGS SHALL BE HIGH QUALITY YELLOW PAINT OR THERMOPLASTIC PER ILLINOIS ACCESSIBILITY CODE AND MUTCD.

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 3/22/2022 KL - Center sign, height, landing options specified. 3. 4.	TYPICAL HANDICAP ACCESSIBLE PARKING STALL	TR-06 Date: 06/01/2007 Drawn EM Checked AW	

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EC-01



ELEVATION

MATERIAL SPECIFICATIONS:

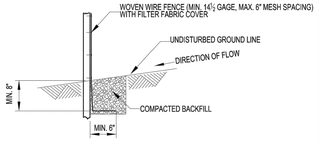
POSTS: STEEL (EITHER "T" OR "U" TYPE) OR HARDWOOD WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.

FENCE: WOVEN WIRE (14 ½ GAGE) WITH 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T 140N.

NOTES:

1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED, AS NEEDED, THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION
4. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED
5. MATERIAL SHALL BE REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE
6. DOUBLE ROWS OF SILT FENCE SPACED FIVE (5) FEET APART SHALL BE PLACED AROUND EXISTING STORMWATER MANAGEMENT FACILITIES OR WETLANDS AS ADDITIONAL PROTECTION WHEN REQUIRED BY CITY ENGINEER

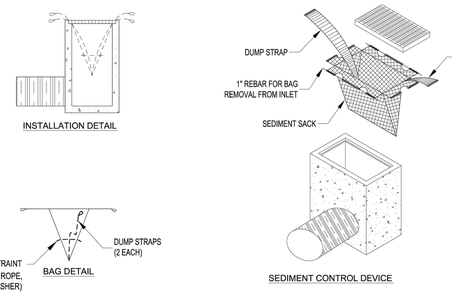


FABRIC ANCHOR DETAIL

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 3. 4.	SILT FENCE	EC-01 Date: 12/4/2012 Drawn DD Checked AW	

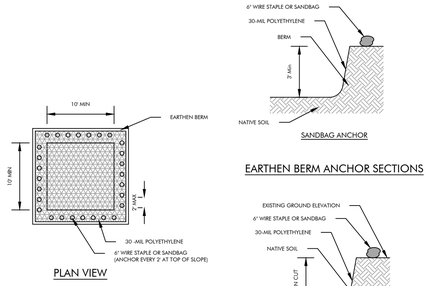
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EC-04



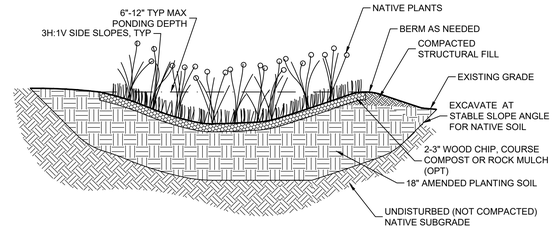
Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 3. 4.	INLET SEDIMENT CONTROL DEVICE	EC-04 Date: 11/2/2007 Drawn EM Checked AW	

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CONCRETE WASHOUT - EARTHEN

Note: The Facility Is Intended For Concrete, Masonry, And Slurry



RAIN GARDEN DETAIL

INFILTRATION RAIN GARDEN WITH PLANTING SOIL NOTES

DESIGN NOTES:

1. PLANT WITH PLANTS PER LANDSCAPE ARCHITECT DWGS. NATIVE PLANTS ARE PREFERRED, BECAUSE NON-NATIVE AND INVASIVE SPECIES CAN REPRODUCE DOWNSTREAM AND DAMAGE HABITAT. IF NON-NATIVES ARE CHOSEN, BE SURE THAT THEY WILL NOT DAMAGE DOWNSTREAM HABITAT.

CONSTRUCTION NOTES:

2. BUILD AND VEGETATE RAIN GARDEN AS EARLY AS POSSIBLE TO ESTABLISH PLANTINGS BEFORE DIRECTING STORMWATER RUNOFF TO IT OR DIVERT STORMWATER AROUND FACILITY. PREFERABLY, THIS PERIOD WOULD LAST A MINIMUM OF 3 MONTHS OR PER LANDSCAPE ARCHITECT/DESIGNER GUIDELINES.
3. INFILTRATION AREAS (THE AREA OF THE RAIN GARDEN AS DEFINED BY THE TOP ELEVATION OF THE FACILITY) SHALL BE FENCED OFF FROM THE FIRST DAY OF EARTH MOVING UNTIL PROJECT COMPLETION TO PREVENT COMPACTION OF THE SUBGRADE. DIRT TRACKING ONTO ANY LAYER OF THE FACILITY AND STOCKPILING OF CONSTRUCTION MATERIALS THAT MAY CLOG THE SURFACE.
4. DURING EXCAVATION OF NATIVE SOILS TO THE BOTTOM OF THE FACILITY, RAINFALL MAY CAUSE FINES TO CLOG THE SURFACE OF THE FACILITY. IF THE NATIVE SOIL HAS BEEN EXPOSED TO RAINFALL, HAND RAKE THE SURFACE TO A DEPTH OF 3" TO RESTORE INFILTRATION CAPACITY.
5. CALL THE [CIVIL ENGINEER OR LANDSCAPE ARCHITECT], [ENTER NAME HERE] AT [ENTER PHONE NUMBER HERE] 24 HOURS IN ADVANCE OF CONSTRUCTING THIS FACILITY SO CONSTRUCTION OBSERVATION MAY BE PERFORMED TO IDENTIFY VARIATIONS IN THE FIELD THAT MAY AFFECT DESIGN AND VERIFY PROPER CONSTRUCTION.

STORMWATER MANAGEMENT

595 Attachment 3

City of Crystal Lake

Appendix 3
Standard Drain Tile Notes

1. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
2. All abandoned drain tiles within disturbed areas shall be removed in their entirety.
3. Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

STORMWATER MANAGEMENT

595 Attachment 2

City of Crystal Lake

Appendix 2
Standard Soil Erosion and Sediment Control Notes

1. Control measures shall meet the minimum standards and specifications of the Illinois Urban Manual unless stated otherwise. **[Amended 11-17-2020 by Ord. No. 7671]**
2. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
3. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
4. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
5. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
6. Off-site property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
7. Sediment control measures shall be installed prior to the disturbance of tributary areas.
8. Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth-disturbing activities have permanently ceased on any portion of the development site, or temporarily ceased on any portion of the development site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas shall be initiated within one working day of permanent or temporary cessation of earth-disturbing activities and shall be completed as soon as possible, but not later than 14 calendar days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below:
   a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable; and
   b. In areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method may be used.
9. Disturbance of steep slopes shall be minimized. Areas or embankments having slopes steeper than 3:1 shall be stabilized with staked-in-place sod, erosion control blankets in combination with seeding, or an equivalent control measure.
10. Perimeter control measures shall be provided downslope and perpendicular to the flow of runoff from disturbed areas, where the tributary area is greater than 5,000 square feet, and where runoff will flow in a sheet flow manner. Perimeter erosion control shall also be provided at the base of soil stockpiles.
11. The stormwater management system shall be protected from erosion and sedimentation downslope from disturbed areas. Inlet protection that reduces sediment loading, while allowing runoff to enter the inlet, shall be required for all storm sewers. Check dams, or an equivalent control measure, shall be required for all channels. Filter fabric inlet protection and straw bale ditch checks are not acceptable control measures.
12. If dewatering services are used, discharges shall be routed through an effective sediment control measure (e.g., sediment trap or an equivalent control measure). The enforcement officer shall be notified prior to the commencement of dewatering activities.
13. All temporary soil erosion and sediment control measures shall be removed within 30 days after final stabilization of the development site is achieved or after the temporary measures are no longer necessary. Trapped sediment shall be removed and disturbed areas shall be permanently stabilized.
14. Stockpiled soil and materials shall be removed from flood hazard areas at the end of each work day. Soil and materials stockpiled in IWMC or buffer areas shall be placed on timber mats, or an equivalent control measure.
15. Effective control measures shall be utilized to minimize the discharge of pollutants from the development site. At a minimum, control measures shall be implemented in order to:
   a. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash water; and
   b. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, vehicle fluids, sanitary waste, and other materials present on the development site to precipitation and to stormwater.
16. Adequate receptacles shall be provided for the depositing of all construction material debris generated during the development process. The applicant shall not cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of construction material debris upon or into any development site, channel, or IWMC. The development site shall be maintained free of construction material debris.
17. The enforcement officer may require additional or alternate soil erosion and sediment control measures, based on development-site-specific considerations and the effectiveness of the installed control measures.

No.	Date	Revision
1	05.17.2024	Revised P2C

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www.haegerengineering.com

TYPICAL CONSTRUCTION DETAILS

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager:	M L A
Engineer:	K J L
Date:	04.02.2024
Project No.	23-006
Sheet	C7.0 / C7

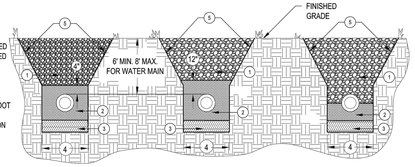
© 2024 Haeger Engineering, LLC

Plot Date: May 17, 2024 - 12:09pm Plotted By: mike-o
File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg

UG-03

LEGEND:

1. TRENCH BACKFILL TO SUBGRADE AND WITHIN 2 FEET OF PROPOSED PAVEMENT, DRIVEWAY, CURB AND GUTTER OR SIDEWALK. TRENCH BACKFILL MATERIALS SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9 COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY. IN NON-STRUCTURAL AREAS BACKFILL WITH APPROVED EXCAVATED MATERIALS.
2. PIPE BEDDING SHALL BE WASHED MATERIAL IDOT GRADATION CA-7 OR CA-11 FROM 4 INCHES BELOW BOTTOM OF PIPE TO HEIGHT SHOWN ON EACH SECTION
3. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL
4. TRENCH WIDTH:
   PIPE O.D. + 12 INCHES MINIMUM
   PIPE I.D. + 18 INCHES MAXIMUM
5. CONTRACTORS SHALL COMPLY WITH ALL CURRENT OSHA STANDARDS.



SECTION A:
WATER MAIN DIP

FORCE MAIN DIP

SANITARY SEWER MAIN & SERVICES DIP

SECTION B:
SANITARY SEWER MAIN & SERVICES (PVC)

STORM SEWER (PVC)

WATER MAIN, C909 FORCE MAIN ** (PVC) (HDPE)

SECTION C:
STORM SEWER (RCP)

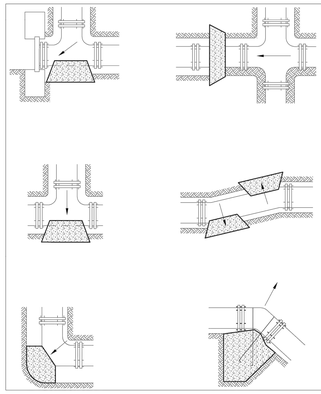
* NOTE: ALL DUCTILE IRON SHALL BE WRAPPED WITH APPROVED POLYETHYLENE PIPE WRAP

** NOTE: PVC WATERMAIN ONLY ALLOWED FOR REPAIRS TO EXISTING PVC WATERMAIN

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 02/04/2021 KL CA-7 WASHED STONE 3. 07/14/2023 JRG PVC ALLOWED ONLY AS STATED 4.	TYPICAL TRENCH CROSS SECTION	UG-03 Date: 05/29/2015 Drawn JH Checked AW	

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UW-03



BEARING AREA (SQ. FT.)

PIPE SIZE	TEE/PLUG	90°	45°	21 1/2°	11 1/4°
6	4	2	1	1	1
8	6	4	3	1	1
10	7	5	3	1	1
12	8	6	4	2	2
14	12	9	6	3	3
16	15	12	7	3	3
18	18	15	9	4	4
24	40	30	15	5	5

NOTES:

ALL BLOCKING SHALL BE POURED CLASS SI CONCRETE AGAINST UNDISTURBED EARTH.

ALL BENDS OR ELBOWS GREATER THAN OR EQUAL TO 11 1/4° SHALL HAVE THRUST BLOCKING. FORM AS TO NOT COVER BOLTS.

IN LIEU OF THRUST BLOCKING, "MEGA LUG" (EBAA) JOINT RESTRAINTS OR APPROVED EQUAL CAN BE USED AS APPROVED BY THE ENGINEER.

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 3. 4.	THRUST BLOCK INSTALLATION	UW-03 Date: 05/29/2015 Drawn JH Checked VR	

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UW-02

NOTES:

1. ALL UNDERGROUND MUST BE STAINLESS STEEL NUTS, BOLTS AND WASHERS.
2. MUELLER T-2360-16 OR AMERICAN FLOW CONTROL SERIES 2500-1 TAPPING VALVE
3. STAINLESS STEEL SMITH BLAIR "665", CASCADE "CST-EX", "ROMAC INDUSTRIES "SST", OR FORD "FTSS" TAPPING SLEEVE
4. SEE UW-01 FOR STANDARD VAULT VALVE

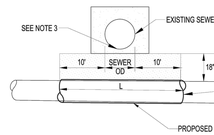
* DUCTILE IRON FLANGE AND M.J. OUTLET NOT APPROVED FOR USE W/ROMAC SST

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. KL 1-25-2021 1" CORPORATION STOPS 3. 4.	WATER MAIN PRESSURE CONNECTION	UW-02 Date: 05/29/2015 Drawn JH Checked VR	

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UW-04b

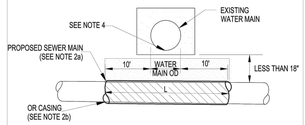
PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION



NOTES

1. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER THE TOP OF PROPOSED WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
2. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
4. USE A CASING PIPE LENGTH "L" FOR PROPOSED WATER MAIN AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18" SEPARATION



NOTES

1. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF PROPOSED SEWER LINE AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".

2a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR

2b. CONSTRUCT "L" FEET OF CASING FOR PROPOSED SEWER AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS OR

3. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
4. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

ADDITIONAL NOTES

*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (SEE PAGES 160-173)

CLASS IV MATERIALS SHALL BE COMPACTED TO 95% OF STANDARDS PROCTOR DENSITY.

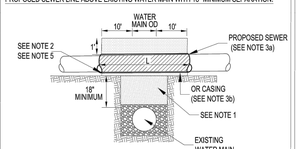
OD = OUTSIDE DIAMETER

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 8/30/2021 KL - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04b Date: 04/15/2007 Drawn EM Checked AW	

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UG-04a

PROPOSED SEWER LINE ABOVE EXISTING WATER MAIN WITH 18" MINIMUM SEPARATION.



NOTES

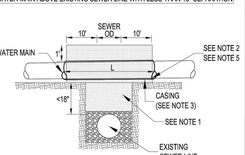
1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF THE WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".

3a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR

3b. USE CASING LENGTH "L" FOR PROPOSED SEWER AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.

4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
5. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH LESS THAN 18" SEPARATION.



NOTES

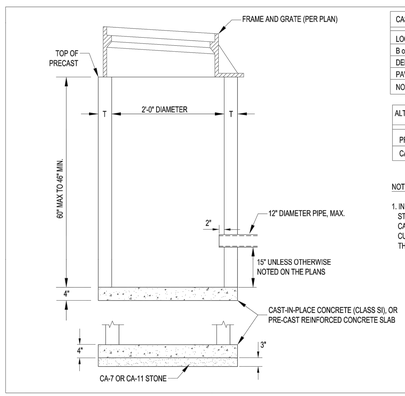
1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER THE TOP OF THE WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
3. USE A CASING PIPE FOR PROPOSED WATER MAIN AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.
4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
5. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT OF WATER MAIN TRENCH.

ADDITIONAL NOTES:
THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, CURRENT EDITION
CLASS IV MATERIAL TO BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY
OUTER DIAMETER = OD

Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 8/18/2023 JRG - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04a Date: 04/15/2007 Drawn EM Checked AW	

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UD-01c



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R-3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	T
PRE CAST REINFORCED CONCRETE SECTIONS	3"
CAST-IN-PLACE CONCRETE	6"

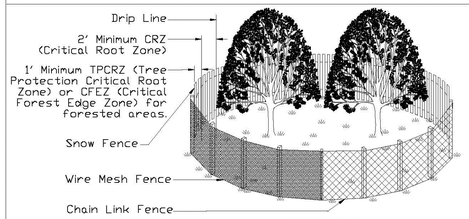
NOTES:

1. IN ADDITION TO THE REQUIREMENTS OF ART. 602.16 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED. FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.

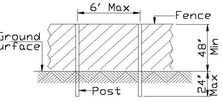
Revised:	Drawing Name	Drawing Number	City of Crystal Lake Illinois
1. 06/12/2015 2. 3. 4.	CATCH BASIN TYPE C	UD-01c Date: 05/19/2015 Drawn JH Checked AW	

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TREE PROTECTION - FENCING
(Moderately Urbanized to Open Space Areas)



SIDE VIEW



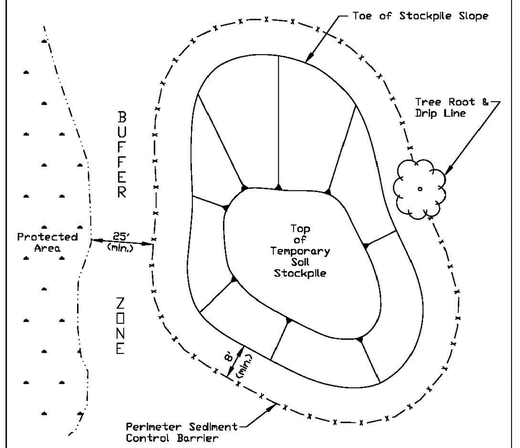
POST AND FENCE DETAIL

NOTES:

1. Call J.U.L.I.E. (800-892-0123) for the location of existing utilities 48 hours prior to commencement of work.
2. The CRZ is located 2' from the farthest outreaching branch (drip edge) or the distance as determined by the ISA trunk diameter method or whichever is greater.
3. The fence shall be located 1' from the Critical Root Zone (CRZ) of the protected tree, thus creating the Tree Protection Critical Root Zone (TPCRZ) and the Critical Forest Edge Zone (CFEZ) for forested areas.
4. Fence Posts shall be either 6' steel posts @ 1.33Lbs./Ft. or 2" x 2" nominal wood posts.
5. For projects without highly significant or historical trees and that will last for less than 6 months duration, a non-treated wood lath snow fence or wire mesh fencing shall be used with appropriate posts that are securely anchored into the ground. For projects over 6 months in duration or trees considered significant or historical, a chain link fence with Construction Specification Chain Link Fence IUM 91 or better (as approved by the forester per local ordinances singularly or in tandem with the project Engineer) shall be used. Fencing shall be a minimum height of 4'. For chain link fencing, metal posts shall be placed 6' on center (OC) and the fencing securely anchored to the post.
6. Outside the TPCRZ or CFEZ, erosion and sediment control measures shall be installed to prevent sediment reaching the TPCRZ or the CFEZ. These measures shall extend out from the fence 10' and shall be continuous around the perimeter of the fence. These measures include, but are not limited to vegetative filter strip, rolled excelsior blankets and mulch with a 3" to 5" depth. Other measures may be used if approved by the Professional Forester, Certified Arborist or Horticulturalist. Installation shall cause no disturbance to soils.

REFERENCE		STANDARD DWG. NO.
Project Designed _____ Date _____ Checked _____ Date _____ Approved _____ Date _____		IUM-690-A SHEET 1 OF 1 DATE 09-14-2017

TEMPORARY SOIL STOCKPILE DETAIL



NOTES:

1. Stockpile slopes should be based on angle of repose of the soil material to avoid potential sloughing of the slope.
2. Soil stockpile to be stabilized in accordance with practical standards.
3. Do not locate stockpile within overland drainage flow path, designated floodways, drip line or over the root crown of adjacent trees.
4. Provisions for sediment control practices may be required along haul roads and entrance/exit locations for access the soil stockpile that can create flow path for stormwater runoff.
5. Installation of benches, terraces, or slope interrupters should be considered.
6. Avoid building soil stockpiles on impervious surfaces.
7. Linlear sediment trap surrounding the stockpile base may be used to control sediment.

REFERENCE		STANDARD DWG. NO.
Project Designed _____ Date _____ Checked _____ Date _____ Approved _____ Date _____		IUM-627 SHEET 1 OF 1 DATE JANUARY 2017

No. 1 — Revised PZC — 05.17.2024 — Date

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www.haegerengineering.com

TYPICAL CONSTRUCTION DETAILS

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager: M L A
Engineer: K J L
Date: 04.02.2024
Project No. 23-006
Sheet C7.1 / C7

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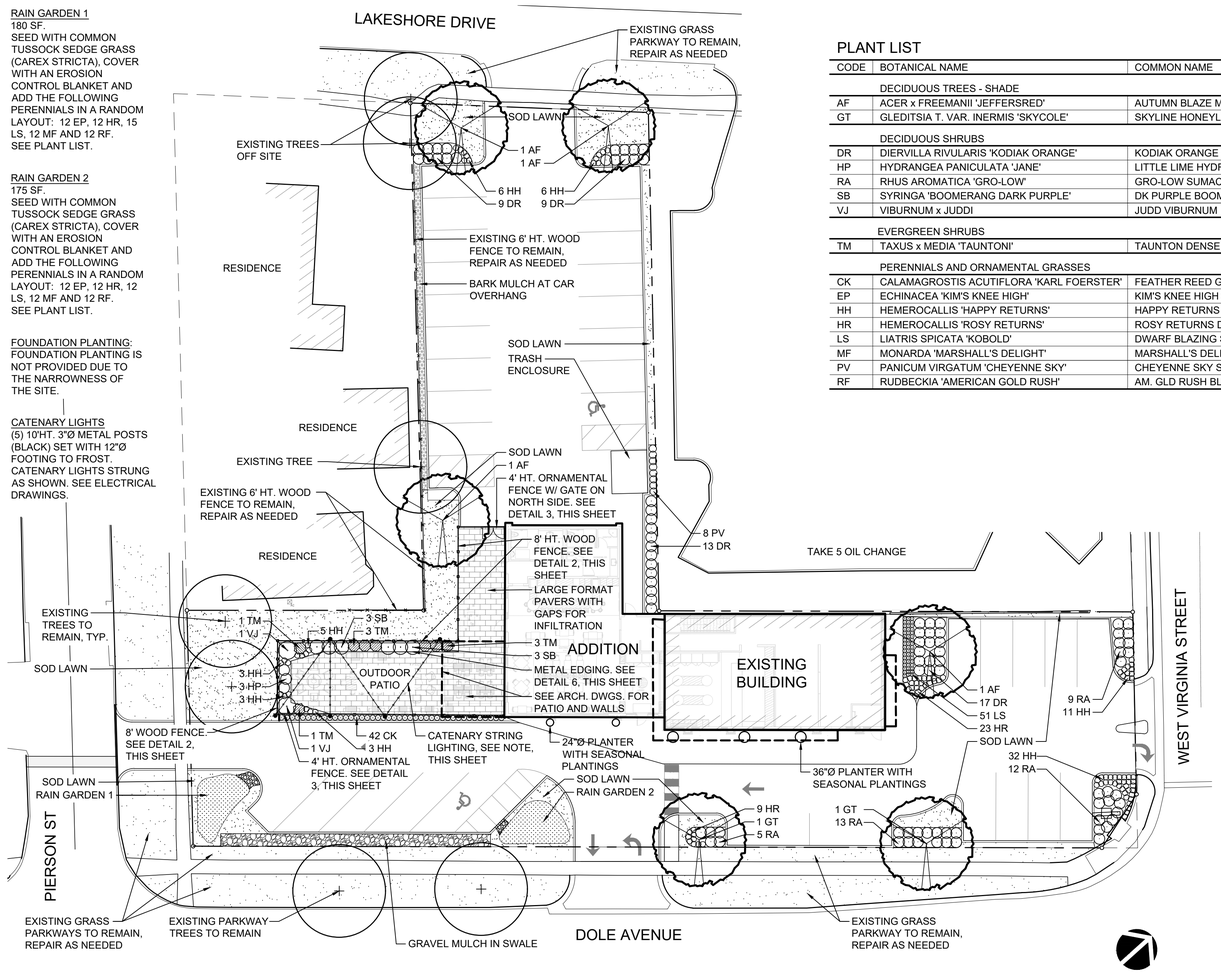
Plot Date: May 17, 2024 - 12:09pm Plotted By: mike-o
File Name: P:\2023\23006\Drawings\Final Engineering\23006-Final Eng.dwg

RAIN GARDEN 1
180 SF.
SEED WITH COMMON TUSSOCK SEDGE GRASS (CAREX STRICTA), COVER WITH AN EROSION CONTROL BLANKET AND ADD THE FOLLOWING PERENNIALS IN A RANDOM LAYOUT: 12 EP, 12 HR, 15 LS, 12 MF AND 12 RF.
SEE PLANT LIST.

RAIN GARDEN 2
175 SF.
SEED WITH COMMON TUSSOCK SEDGE GRASS (CAREX STRICTA), COVER WITH AN EROSION CONTROL BLANKET AND ADD THE FOLLOWING PERENNIALS IN A RANDOM LAYOUT: 12 EP, 12 HR, 12 LS, 12 MF AND 12 RF.
SEE PLANT LIST.

FOUNDATION PLANTING:
FOUNDATION PLANTING IS NOT PROVIDED DUE TO THE NARROWNESS OF THE SITE.

CATENARY LIGHTS
(5) 10'HT. 3"Ø METAL POSTS (BLACK) SET WITH 12"Ø FOOTING TO FROST. CATENARY LIGHTS STRUNG AS SHOWN. SEE ELECTRICAL DRAWINGS.



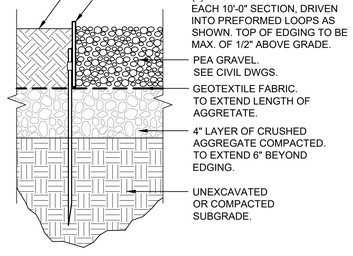
1 PRELIMINARY LANDSCAPE PLAN
SCALE: 1" = 20'-0"

0 2 4 10 20 40

PLANT LIST

CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY	ADDITIONAL NOTES
	DECIDUOUS TREES - SHADE				
AF	ACER x FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	3" CALIPER	4	BRANCHED UP 6'
GT	GLEDITSIA T. VAR. INERMIS 'SKYCOLE'	SKYLINE HONEYLOCUST	3" CALIPER	2	BRANCHED UP 6'
	DECIDUOUS SHRUBS				
DR	DIERVILLA RIVULARIS 'KODIAK ORANGE'	KODIAK ORANGE HONEYSUCKLE	18" HT x 18" W	48	
HP	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	24" HT x 24" W	3	
RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW SUMAC	12" HT x 18" W	39	
SB	SYRINGA 'BOOMERANG DARK PURPLE'	DK PURPLE BOOMERANG LILAC	24" HT x 24" W	6	
VJ	VIBURNUM x JUDDI	JUDD VIBURNUM	30" HT x 30" W	2	
	EVERGREEN SHRUBS				
TM	TAXUS x MEDIA 'TAUNTONI'	TAUNTON DENSE YEW	18" HT x 24" W	8	
	PERENNIALS AND ORNAMENTAL GRASSES				
CK	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GALLON	42	SPACED 18" O.C.
EP	ECHINACEA 'KIM'S KNEE HIGH'	KIM'S KNEE HIGH CONEFLOWER	1 GALLON	24	
HH	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	1 GALLON	69	SPACED 16" O.C.
HR	HEMEROCALLIS 'ROSY RETURNS'	ROSY RETURNS DAYLILY	1 GALLON	56	SPACED 16" O.C.
LS	LIATRIS SPICATA 'KOBOLD'	DWARF BLAZING STAR	1 GALLON	78	
MF	MONARDA 'MARSHALL'S DELIGHT'	MARSHALL'S DELIGHT BEEBALM	1 GALLON	24	SPACED 18" O.C.
PV	PANICUM VIRGATUM 'CHEYENNE SKY'	CHEYENNE SKY SWITCH GRASS	1 GALLON	8	SPACED 22" O.C.
RF	RUDBECKIA 'AMERICAN GOLD RUSH'	AM. GLD RUSH BLK-EYED SUSAN	1 GALLON	24	

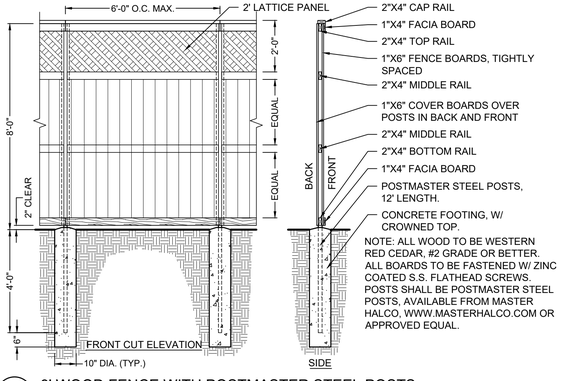
NOTE: EDGING TO BE BY COL-MET (800) 829-8225, (WWW.COLMET.COM) INSTALLED PER MANUFACTURER INSTALLATION GUIDELINES. EDGING SUPPLIED IN 10'-0" SECTIONS. ALLOW FOR 8" OF OVERLAP PER SECTION. COLOR TO BE BLACK POWDER COAT AS APPLIED BY MANUFACTURER.



6 STEEL EDGE DETAIL
NOT TO SCALE

GENERAL NOTES

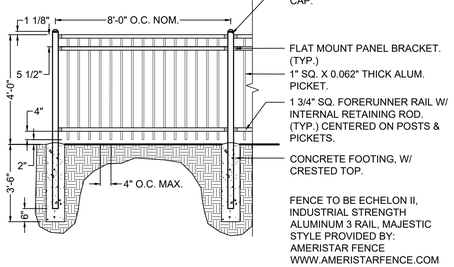
1. ALL DIMENSIONS AND SITE CONDITIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO STARTING WORK. SITE PLAN, ARCHITECTURE PLAN AND SITE SURVEY WERE PROVIDED BY OTHERS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
3. SPECIES AND SIZES OF PLANTS LISTED IN THE PLANT LIST ARE SUBJECT TO AVAILABILITY AT TIME OF INSTALLATION. IF SUBSTITUTIONS ARE REQUIRED, THE CONTRACTOR SHALL SUBMIT REQUESTS TO THE LANDSCAPE ARCHITECT FOR APPROVAL.
4. ALL OVERHEAD AND UNDERGROUND UTILITIES ARE TO BE LOCATED PRIOR TO DIGGING OR EXCAVATION. IF UTILITIES OR OTHER OBSTRUCTIONS ARE DISCOVERED TO CONFLICT WITH GRADING, PLANT OR MATERIALS PLACEMENT, NOTIFY THE LANDSCAPE ARCHITECT SO THAT ADJUSTMENTS MAY BE MADE PRIOR TO PROCEEDING.
5. CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT EXISTING PLANTS, LAWN AREA, FENCES, SITE FEATURES AND PAVING TO REMAIN. ANY DAMAGE TO THESE EXISTING AREAS OR FEATURES SHALL BE REPLACED BY THE CONTRACTOR AT THEIR EXPENSE. DAMAGED LAWN AREAS SHALL BE TILLED, RE-GRADED, TOPSOIL ADDED AS NEEDED AND BE RESTORED WITH SOD.
6. IMPORTED TOPSOIL FOR THIS PROJECT SHALL BE FRIABLE LOAM OR SANDY LOAM, COMPRISED OF BETWEEN 20% AND 50% SILT, 10% AND 25% CLAY, AND 30% AND 60% SAND. THE pH LEVEL SHALL BE BETWEEN 6.0 AND 7.2 AND THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 3% AND 6%. TOPSOIL SHALL BE FREE OF SEEDS, STONES, LARGE CLUMPS, ROOTS, LEAVES AND DEBRIS, AND SHALL NOT BE DELIVERED WHILE IN A FROZEN OR MUDDY CONDITION. CONTRACTOR SHALL PROVIDE A RECENT SOIL TEST ANALYSIS FOR ALL SOIL TO BE USED. THE ANALYSIS MUST INCLUDE THE INFORMATION REQUIRED ABOVE.
7. SOD SHALL BE A TALL FESCUE BLEND SOD, SUCH AS BLACK BEAUTY OR APPROVED EQUAL. BLUEGRASS BLEND SOD IS NOT ACCEPTABLE, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
8. ALL TREES ARE TO HAVE FRESHLY DUG, BALLED AND BURLAPPED ROOT BALLS WITH SIZES THAT MEET THE STANDARDS OF THE AMERICAN NURSERYMEN'S ASSOCIATION. DECIDUOUS AND EVERGREEN SHRUBS MAY EITHER HAVE FRESHLY DUG, BALLED AND BURLAPPED ROOT BALLS OR MAY BE CONTAINER GROWN. ALL PERENNIALS, ORNAMENTAL GRASSES AND GROUNDCOVERS MUST BE CONTAINER GROWN, CONTAINER GROWN MATERIALS SHALL HAVE BEEN GROWN IN THEIR CURRENT CONTAINER FOR A PERIOD OF NO LESS THAN SIX MONTHS.
9. ALL TREES SHALL BE INSPECTED BY THE LANDSCAPE ARCHITECT, AT THE NURSERY, PRIOR TO DIGGING. TREES THAT ARE ACCEPTABLE WILL BE SEALED. ALL SEALS APPLIED BY THE LANDSCAPE ARCHITECT MUST REMAIN ON THE TREES AND ARE NOT TO BE REMOVED BY THE CONTRACTOR. ALL TREES MUST HAVE SEALS IN PLACE AT TIME OF ACCEPTANCE OR WILL BE AUTOMATICALLY REJECTED. HEELED-IN TREES WILL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT.
10. ALL SHRUBS MUST MEET THE MINIMUM SIZES GIVEN IN THE PLANT LIST AND BE SPECIMEN QUALITY. SHRUBS THAT DO NOT MEET THESE GUIDELINES WILL BE REJECTED.
11. PLANT MATERIAL SHALL ONLY BE INSTALLED WITHIN THE FOLLOWING DATES: MAY 1 THROUGH NOVEMBER 1
12. TEST TREE PITS AND PLANT BEDS FOR ADEQUATE DRAINAGE. FILL PLANT PIT WITH 12" OF WATER. IF WATER LEVEL DOES NOT DROP A MINIMUM OF ONE INCH PER HOUR, NOTIFY THE LANDSCAPE ARCHITECT OF DRAINAGE ISSUES.
13. PLANTING MIX FOR ALL PLANTINGS SHALL BE A BLEND OF 90% APPROVED TOPSOIL AND 10% SOIL AMENDMENT. ACCEPTABLE AMENDMENTS INCLUDE ONE STEP SOIL CONDITIONER OR PM35 PLANTER MIX FROM MIDWEST TRADING, OR APPROVED EQUAL. BLENDING OF PLANTING MIX COMPONENTS SHALL BE COMPLETED OUTSIDE OF THE PLANTING PITS, PRIOR TO PLANTING.
14. AREAS DESIGNATED WITH GRAVEL IS TO HAVE A 4" DEPTH OF AN ANGULAR DECORATIVE GRAVEL OVER A FILTER FABRIC. GRAVEL TO BE DARK COLOR, 3/4" TO 1" DIA. SUBMIT SAMPLES FOR OWNER APPROVAL.
15. EXCAVATE PARKING LOT ISLANDS AND CURBED PLANTERS TO A DEPTH OF 24". BACKFILL WITH A 12" DEPTH OF TOPSOIL, AND A 12" DEPTH OF PLANTING MIX. BERM PLANTERS AND ISLANDS TO A HEIGHT OF 3" ABOVE TOP OF CURB TO PREVENT PONDING.
16. ALL PLANT BEDS ARE TO BE WELL SHAPED 'SPADE CUT' EDGES, 3" DEPTH, IN LINES OR IN CURVES AS SHOWN ON THE DRAWINGS.
17. ALL PLANT MATERIAL, INCLUDING SOD, SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL 'ACCEPTANCE' IS GRANTED. MAINTENANCE SHALL INCLUDE, WATERING, WEEDING, PRUNING, STRAIGHTENING, SPRAYING, MULCH REPLACEMENT AND MOWING.
18. THE CONTRACTOR SHALL REQUEST AN INSPECTION OF LANDSCAPE PLANTING UPON SUBSTANTIAL COMPLETION FOR "ACCEPTANCE". REQUEST MUST BE SUBMITTED TO LANDSCAPE ARCHITECT AT LEAST TEN DAYS PRIOR TO ANTICIPATED INSPECTION. UPON INSPECTION THE LANDSCAPE ARCHITECT SHALL PREPARE A PUNCH LIST OF UNACCEPTABLE OR OUTSTANDING ITEMS. AFTER THE ITEMS HAVE BEEN SATISFACTORILY COMPLETED AND REVIEWED, THE LANDSCAPE ARCHITECT WILL RECOMMEND "ACCEPTANCE". SOD AND SEED SHALL BE REVIEWED FOR ACCEPTANCE, ONLY AFTER THEY HAVE FULLY ROOTED AND HAVE BEEN MOWED AT LEAST TWICE.
19. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF "ACCEPTANCE". AT OR NEAR THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL REQUEST AN INSPECTION OF LANDSCAPE PLANTING FOR "FINAL ACCEPTANCE". REQUEST MUST BE SUBMITTED TO LANDSCAPE ARCHITECT AT LEAST TEN DAYS PRIOR TO ANTICIPATED INSPECTION. UPON INSPECTION THE LANDSCAPE ARCHITECT SHALL PREPARE A PUNCH LIST OF UNACCEPTABLE ITEMS. AFTER THE ITEMS HAVE BEEN SATISFACTORILY REPLACED OR REPAIRED, REVIEWED AND APPROVED, THE LANDSCAPE ARCHITECT WILL RECOMMEND "FINAL ACCEPTANCE".



NOTE: ALL WOOD TO BE WESTERN RED CEDAR, #2 GRADE OR BETTER. ALL BOARDS TO BE FASTENED W/ ZINC COATED S.S. FLATHEAD SCREWS. POSTS SHALL BE POSTMASTER STEEL POSTS, AVAILABLE FROM MASTER HALCO, WWW.MASTERHALCO.COM OR APPROVED EQUAL.

2 8' WOOD FENCE WITH POSTMASTER STEEL POSTS
NOT TO SCALE

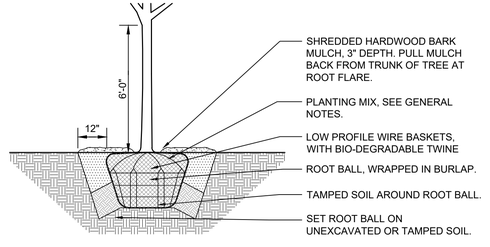
NOTE: ALL FENCING COMPONENTS TO BE BLACK IN COLOR AS SUPPLIED BY THE MANUFACTURER.



FENCE TO BE ECHELON II, INDUSTRIAL STRENGTH ALUMINUM 3 RAIL, MAJESTIC STYLE PROVIDED BY: AMERISTAR FENCE WWW.AMERISTARFENCE.COM OR APPROVED EQUAL

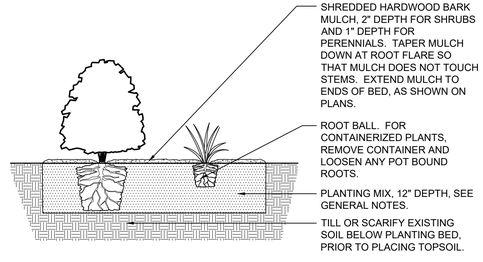
3 4' HT. ORNAMENTAL ALUMINUM FENCE
NOT TO SCALE

LOCATE ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. TREE PIT WIDTH TO BE EXTENDED 12" AROUND THE ENTIRE ROOT BALL AS SHOWN IN THE DETAIL BELOW. TEST TREE PIT FOR DRAINAGE PRIOR TO INSTALLING TREE. PRUNE OFF ALL DEAD, BROKEN OR SCARRED BRANCHES, AND SHAPE PRUNE AS DIRECTED BY THE LANDSCAPE ARCHITECT. FOR TREES UP TO 4" CALIPER OR 12' HEIGHT, REMOVE APPROXIMATELY 5% OF THE OVERALL BRANCHING. LOCATE ROOT FLARE IN ROOT BALL AND SET TREE HEIGHT SO THAT ROOT FLARE IS FLUSH WITH FINISH GRADE. WATER IN THE PLANTING MIX THOROUGHLY, WHILE KEEPING THE TREE PLUMB. STRAIGHTEN TREE IF SETTLING OCCURS. UN-TIE AND REMOVE TWINE FROM AROUND ROOT FLARE.



4 DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

LOCATE ALL UNDERGROUND UTILITIES PRIOR TO PLANTING. PLANT BEDS ARE TO BE EXCAVATED AS A SINGLE PIT. EXTEND PIT WIDTH TO EDGES OF PLANT BED AS SHOWN ON THE LANDSCAPE PLAN. SET PLANT HEIGHT SO THAT ROOT FLARE IS FLUSH WITH FINISH GRADE. BACKFILL AND WATER IN THE PLANTING MIX THOROUGHLY, WHILE KEEPING THE PLANT PLUMB. STRAIGHTEN PLANTS IF SETTLING OCCURS. PRUNE OFF ALL DEAD, BROKEN OR SCARRED BRANCHES, AND SHAPE PRUNE AS DIRECTED BY THE LANDSCAPE ARCHITECT. MULCH LIMITS SHALL EXTEND TO ALL OUTER EDGES OF PLANTING BEDS, SEE LANDSCAPE PLAN FOR BED LAYOUTS.



5 SHRUB AND PERENNIAL PLANTING DETAIL
NOT TO SCALE

DANIEL WEINBACH & PARTNERS, LTD.
Landscape Architects
1142 W. Madison Street
Suite 206
Chicago, IL 60607
312 427-2888

Revisions

8.	
7.	
6.	
5.	
4.	
3. REVISED PZC	05/17/24
2. PZC SUBMITTAL	04/03/24
1. ISSUED FOR PERMIT	01/19/24

Project

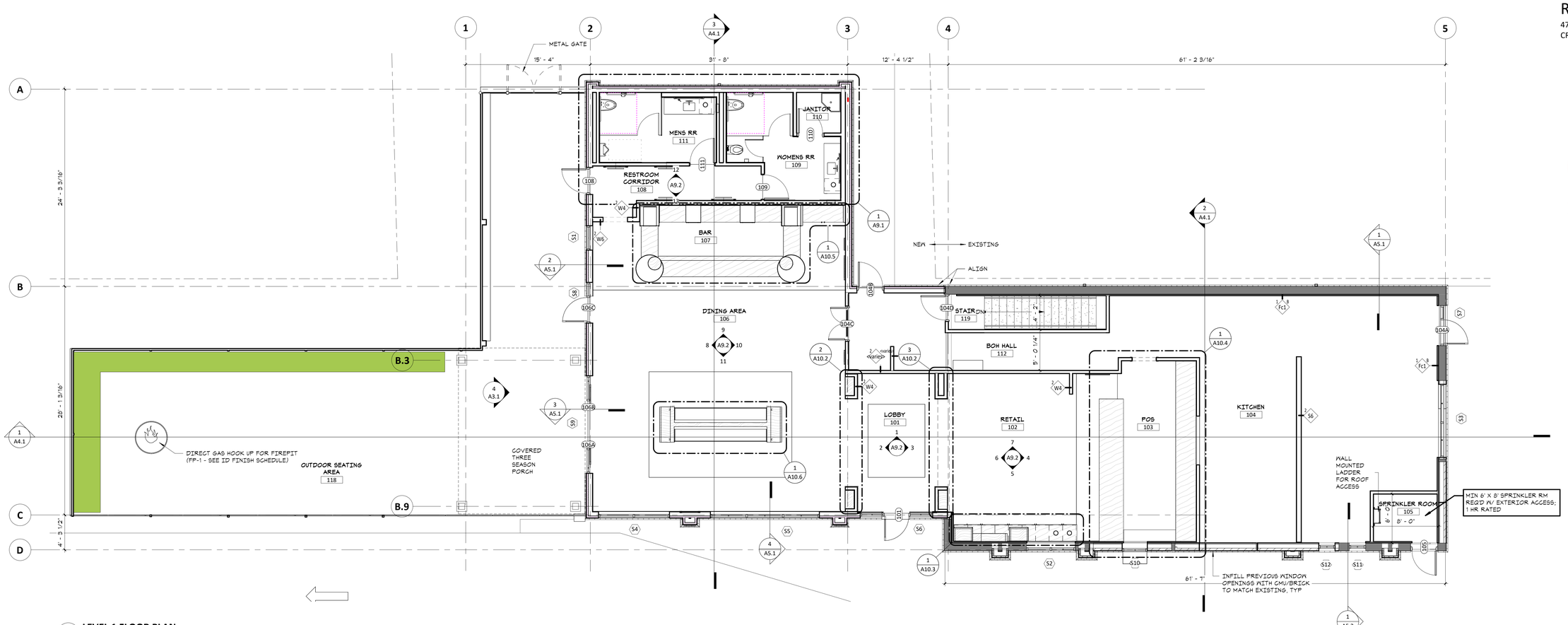
LAKE ROOTS

475 W. VIRGINIA STREET
CRYSTAL LAKE, IL 60014

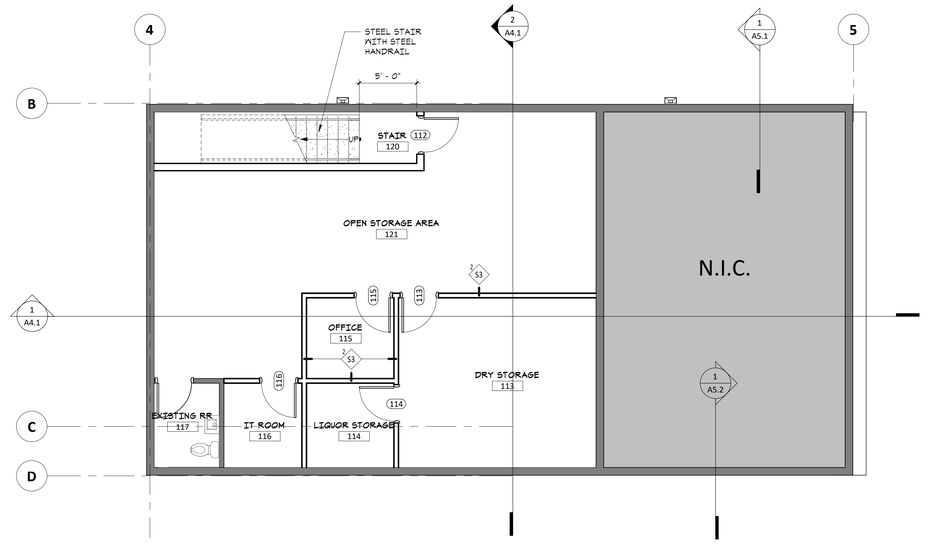
Sheet Title

PRELIMINARY LANDSCAPE SKETCH PLAN

Date 01/15/24	Project No. DWP 23-170
Scale 1" = 20'-0"	Sheet No. L-1.0
Drawn By FERGUSON	
Approved SCHULENBERG	



1 A1.1 **LEVEL 1 FLOOR PLAN**
3/16" = 1'-0"



2 A1.1 **BASEMENT FLOOR PLAN**
3/16" = 1'-0"

DIMENSIONING STANDARDS

1. EXTERIOR MASONRY/CONCRETE WITH OR WITHOUT MASONRY VENEER WALLS, DIMENSIONS ARE TO FACE OF MASONRY.
2. MASONRY OR NON-MASONRY VENEER EXTERIOR WALLS WITH STUD BACKUP, (IE. METAL PANEL) DIMENSIONS ARE TO EXTERIOR FACE OF SHEATHING.
3. INTERIOR WALLS, DIMENSIONS ARE TO THE FACE OF GYPSUM BOARD.
4. MECHANICAL AND STAIR SHAFT WALLS, DIMENSIONS ARE TO SHAFT SIDE FACE OF GYPSUM BOARD.
5. EXISTING WALLS ARE DIMENSIONED FROM FACE OF WALL FINISH.
6. DO NOT SCALE DIMENSIONS FROM PLANS. NOTIFY ARCHITECT OF MISSING DIMENSIONS.
7. REFER TO ENLARGED PLANS AND DETAIL CALLOUTS FOR ADDITIONAL DIMENSIONING INFORMATION.

PLAN KEYNOTES

LAKE ROOTS RESTAURANT
475 W. VIRGINIA ST
CRYSTAL LAKE, IL 60014

esg
ARCHITECTURE & DESIGN
500 Washington Avenue South, Suite 1080
Minneapolis, MN 55415
p 612.339.5508 | f 612.339.5382
www.esgarch.com

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05/17/24

ORIGINAL ISSUE:
04/03/2024

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EM
DRAWN BY

TG
CHECKED BY

KEY PLAN

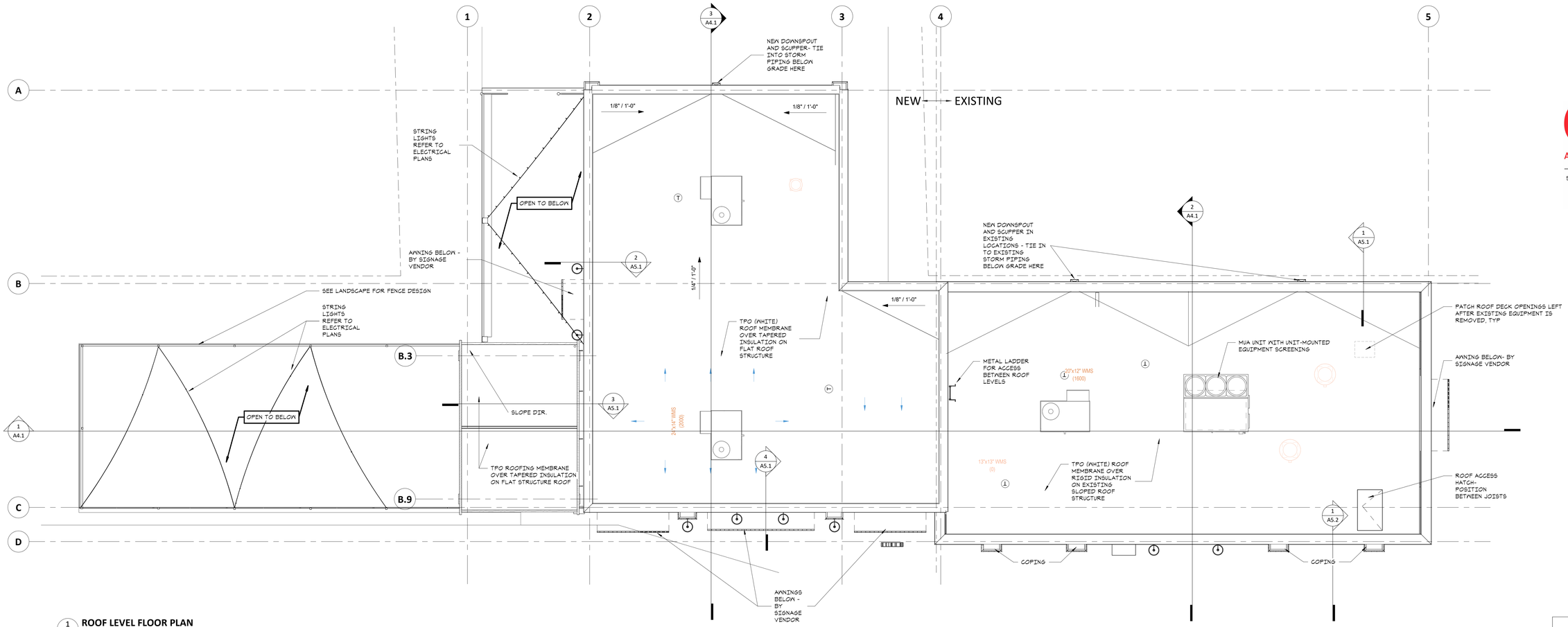
PLAN NORTH
TRUE NORTH

LAKE ROOTS RESTAURANT

LEVEL 1 AND BASEMENT FLOOR PLANS

A1.1

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1 A1.2 **ROOF LEVEL FLOOR PLAN**
3/16" = 1'-0"

DIMENSIONING STANDARDS
1. EXTERIOR MASONRY/CONCRETE WITH OR WITHOUT MASONRY VENEER WALLS, DIMENSIONS ARE TO FACE OF MASONRY. 2. MASONRY OR NON-MASONRY VENEER EXTERIOR WALLS WITH STUD BACKUP, (IE. METAL PANEL) DIMENSIONS ARE TO EXTERIOR FACE OF SHEATHING. 3. INTERIOR WALLS, DIMENSIONS ARE TO THE FACE OF GYPSUM BOARD. 4. MECHANICAL AND STAIR SHAFT WALLS, DIMENSIONS ARE TO SHAFT SIDE FACE OF GYPSUM BOARD. 5. EXISTING WALLS ARE DIMENSIONED FROM FACE OF WALL FINISH. 6. DO NOT SCALE DIMENSIONS FROM PLANS. NOTIFY ARCHITECT OF MISSING DIMENSIONS. 7. REFER TO ENLARGED PLANS AND DETAIL CALLOUTS FOR ADDITIONAL DIMENSIONING INFORMATION.

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EM DRAWN BY
TG CHECKED BY

KEY PLAN

PLAN NORTH
TRUE NORTH

LAKE ROOTS RESTAURANT

ROOF LEVEL OVERALL PLAN

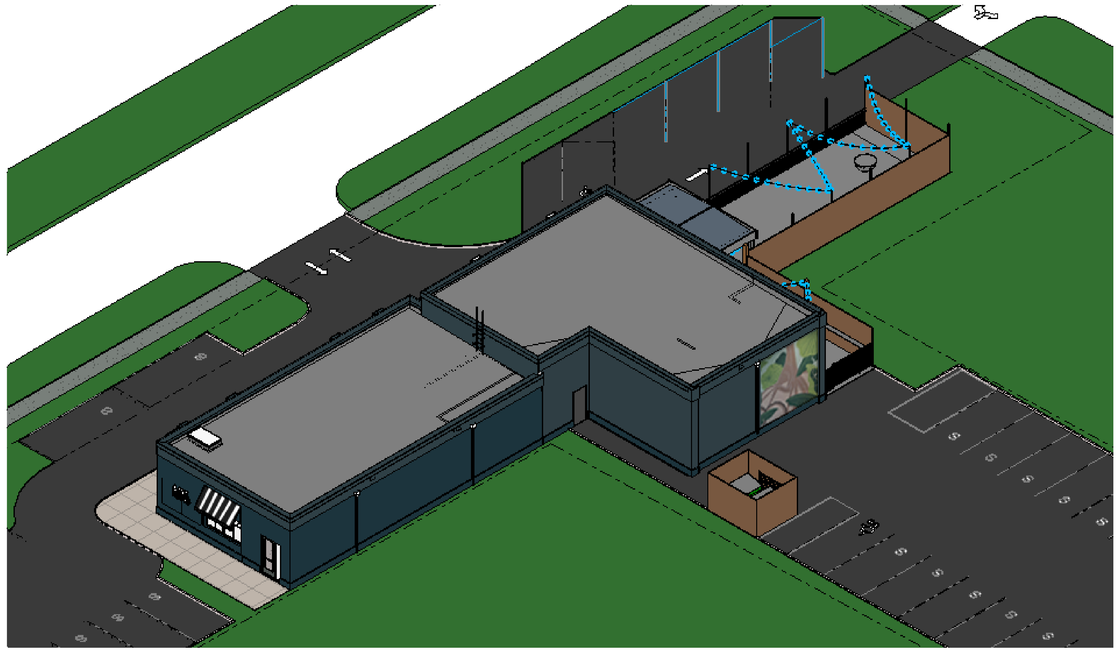
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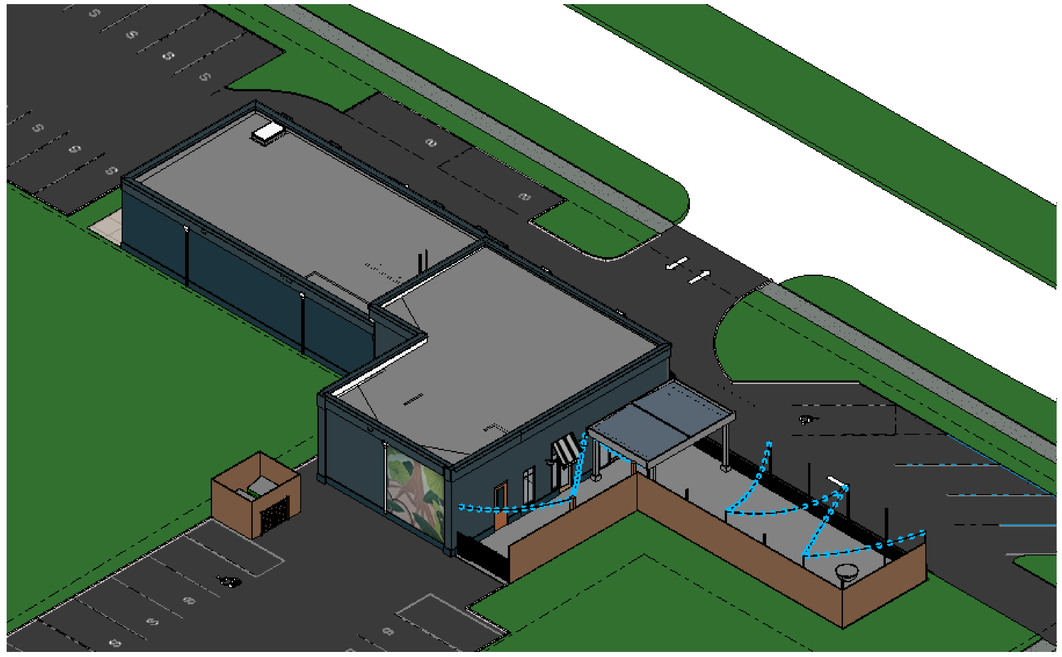
LAKE ROOTS
RESTAURANT
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4 A3.0 **NORTHEAST**



3 A3.0 **NORTHWEST**



1 A3.0 **SOUTHWEST**



2 A3.0 **SOUTHEAST**

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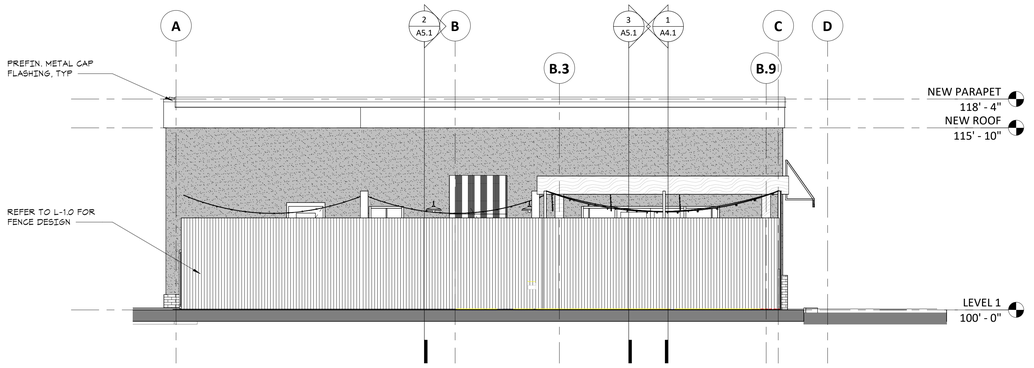
KEY PLAN

LAKE ROOTS RESTAURANT

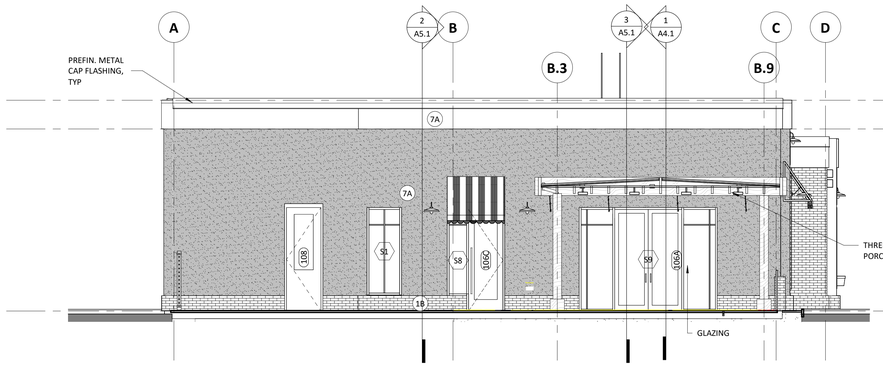
3D VIEWS

A3.0

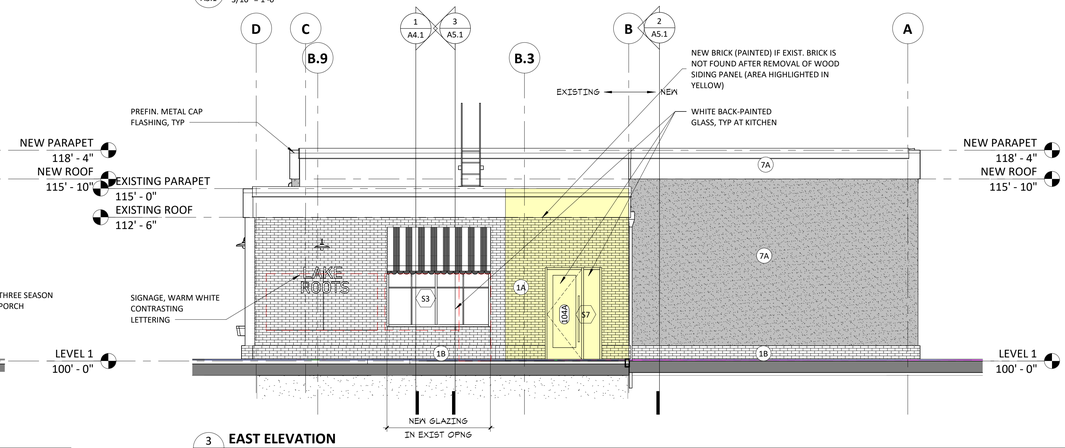
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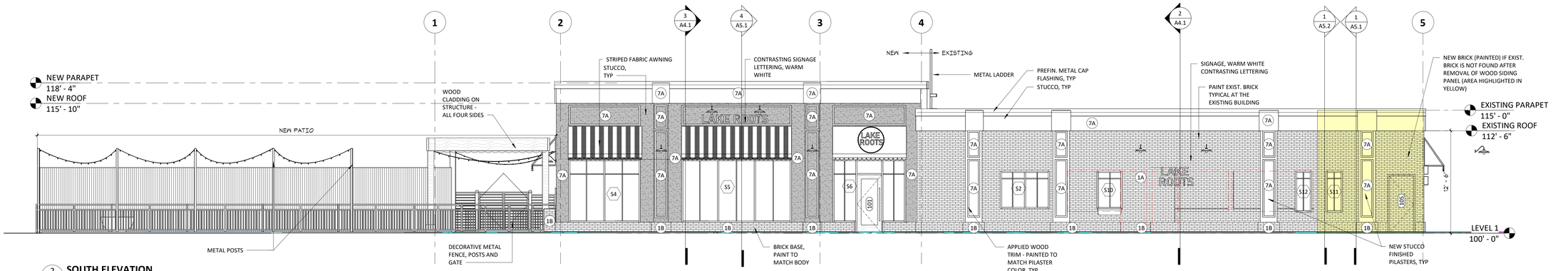
5 A3.1 **WEST ELEVATION - OUTDOOR PATIO**
3/16" = 1'-0"



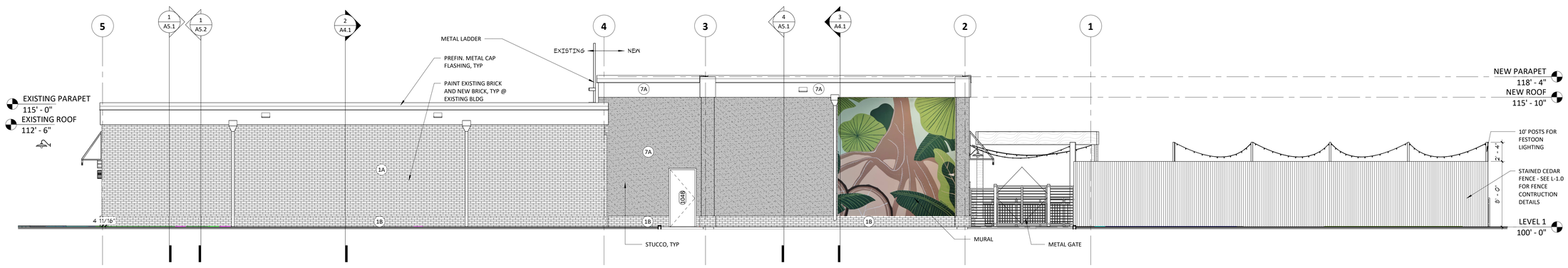
4 A3.1 **WEST ELEVATION**
3/16" = 1'-0"



3 A3.1 **EAST ELEVATION**
3/16" = 1'-0"



2 A3.1 **SOUTH ELEVATION**
3/16" = 1'-0"



1 A3.1 **NORTH ELEVATION**
3/16" = 1'-0"

5/17/2024 10:02:01 AM

EXTERIOR MATERIAL KEYNOTES	
1A	PAINTED EXISTING BRICK - DARK TEAL
1B	PAINTED NEW BRICK - DARK TEAL
7A	STUCCO - DARK TEAL

PRICING ALTERNATES

ALTERNATE #1:
Substitute thin brick in lieu of full wythe brick base at addition
Reduce foundation wall thickness from 12" wide to 8" wide to eliminate brick ledge
Reduce concrete reinforcing from two vertical rows of reinforcing to a single vertical reinforcing row in the center of the wall

ALTERNATE #2:
Substitute EIFS claddng in lieu of 3-part stucco cladding on the addition
Increase foundation wall thickness from 12" to 14" to position brick/brick ledge proud of EIFS outer surface

NOTE
GLAZING PERCENTAGE TOTAL:
SOUTH ELEVATION: 24% GLAZING
EAST ELEVATION 11% GLAZING

SIGNAGE TOTALS:
NORTH: 208 SF (MURAL)
SOUTH: 106 SF
EAST: 50 SF
WEST: N/A

STRIPING CANOPIES TOTALS:
NORTH: N/A
SOUTH: 120 SF
EAST: 34 SF
WEST: 19

NOT FOR CONSTRUCTION

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2024-1132
PROJECT NUMBER

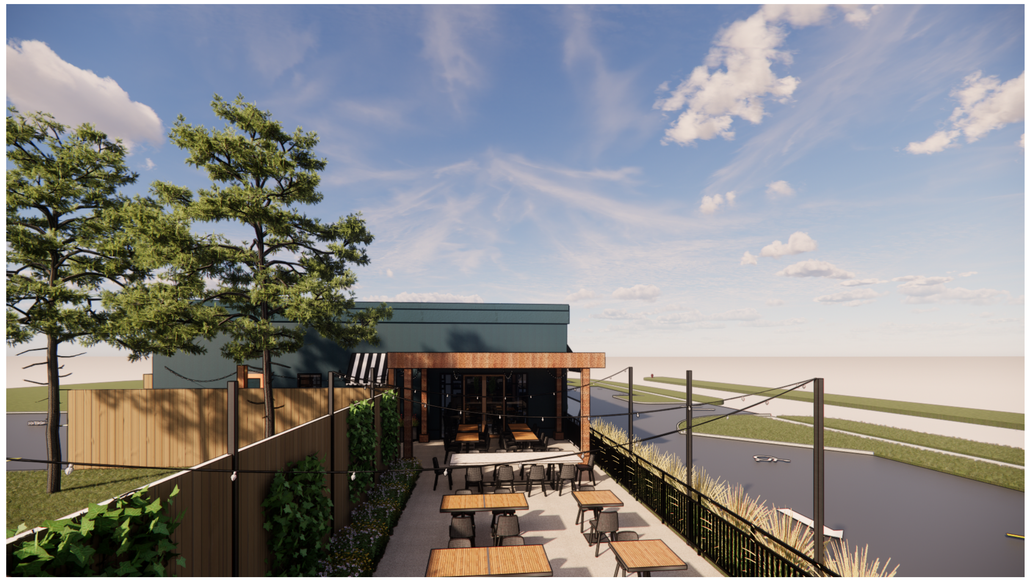
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KEY PLAN

LAKE ROOTS RESTAURANT

EXTERIOR ELEVATIONS

A3.1



WEST ELEVATION



EAST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

MATERIAL LEGEND

PAINTED BRICK - 1905 GREEN (JOANNA GAINES, COLOR MATCH)

STUCCO - 1905 GREEN (JOANNA GAINES, COLOR MATCH)

REFERENCE VIEWS ONLY

REFERENCE IMAGE



LAKE ROOTS
RESTAURANT
475 W. VIRGINIA ST
CRYSTAL LAKE, IL 60014

esg
ARCHITECTURE & DESIGN
500 Washington Avenue South, Suite 1080
Minneapolis, MN 55415
p 612.339.5508 | f 612.339.5382
www.esgarch.com

NOT FOR CONSTRUCTION

REVISED PZC
05/17/24

ORIGINAL ISSUE:
04/03/2024

REVISIONS:

No.	Description	Date

2024-1132
PROJECT NUMBER

ESG
DRAWN BY

ESG
CHECKED BY

KEY PLAN

LAKE ROOTS RESTAURANT

RENDERED EXTERIOR VIEWS

A3.2

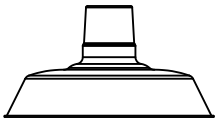
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SPS-0448 REV C

THE ORIGINAL™ INTEGRATED LED SERIES

LIGHT FIXTURE TO BE BLACK

JOB NAME: _____ FIXTURE TYPE: _____



BLE - ____ - ____ - ____ - ____ - ____ - ____ - ____ - ____

A B C D E F G H I J K L

Order Example: BLE - G - WHS16 - 600 - G22 - 980 - NA - ACR - 600 - NA - LED38 - 2700K - DL

A - MOUNTING STYLE

C	Cord Hung
CN	Chain Hung
F	Flush Mount[1]
G	Gooseneck
S	Stem Mount

B - SHADE SIZE

THE ORIGINAL™:

WHS12	12″ Shade
WHS14	14″ Shade
WHS16	16″ Shade
WHS18	18″ Shade
WHS20[2]	20″ Shade

C - SHADE FINISH

PORCELAIN FINISHES[3]:

150	Black
250	White
350	Vintage Green
355	Jadite
455	Cherry Red
550	Yellow
650	Bronze
750	Cobalt Blue
765	Delphite Blue
850	Graphite
950	Metallic Chrome

POWDER COAT FINISHES[4]:

100	Black
105	Textured Black
106	Matte Black
200	White
206	Matte White
300	Dark Green
307	Emerald Green
311	Jadite
370	Mint
380	Chartreuse
390	Teal
400	Barn Red
420	Orange
470	Watermelon
480	Blush Pink
490	Magenta
495	Sherbet Orange
500	Buttery Yellow
570	Sunflower
600	Bronze
601	Chocolate
605	Rust
615	Oil-Rubbed Bronze

C - SHADE FINISH (CONTINUED)

POWDER COAT FINISHES[4]:

700	Royal Blue
705	Navy
710	Cobalt Blue
715	Delphite Blue
790	Lavender
800	Industrial Grey
805	Charcoal Granite
810	Graphite
975	Galvanized

NATURAL METALS[5]:

995	Raw Copper
996	Weathered Copper
997	Raw Brass
998	Weathered Brass
999	Oil-Rubbed Copper

D - MOUNTING

*Please Note: If Flush Mount [F] is selected in **Section A**, please select **NA***

NA	Not Applicable

CSA LISTED CORDS:

SBK	Standard Black
SWH	Standard White
CSB	Black Cloth
CSW	White Cloth
CMG	Grey Cloth
CSR	Red Cloth
CRZ	Red Chevron Cloth
CSBB	Black & Brown Cloth
CSRW	Red & White Cloth
CSGW	Gold & White Cloth
CSBG	Black & Gold Cloth
CSBW	Black & White Cloth
CSBP	Black & Pink Cloth
CSUW	Blue & White Cloth

CHAIN MOUNT OPTIONS[2]:

CN36	3′ of Chain
CN48	4′ of Chain
CN60	5′ of Chain
CN72	6′ of Chain

D - MOUNTING (CONTINUED)

GOOSENECK OPTIONS:

G1[2]	**G11[2]**	**G26[2]**
G2[2]	**G12[2]**	**G32**
G3[2,6]	**G13**	**G34[2]**
G4[6]	**G14**	**G35[2]**
G5[2]	**G15**	**G36[2]**
G6	**G16[2]**	**G64[2]**
G7	**G17**	**G65[2]**
G8	**G22**	
G9	**G24**	
G10	**G25**	

STEM MOUNT OPTIONS:

ST506	.5″ Stem Mount, 6″[2]
ST512	.5″ Stem Mount, 12″[2]
ST518	.5″ Stem Mount, 18″[2]
ST524	.5″ Stem Mount, 24″[2]
ST536	.5″ Stem Mount, 36″[2]
ST548	.5″ Stem Mount, 48″[2]
ST706	.75″ Stem Mount, 6″
ST712	.75″ Stem Mount, 12″
ST718	.75″ Stem Mount, 18″
ST724	.75″ Stem Mount, 24″
ST736	.75″ Stem Mount, 36″
ST748	.75″ Stem Mount, 48″

E - MOUNTING FINISH

*Please Note: See **Section C** for Finish Options. 980-Brushed Aluminum is also available for Gooseneck (Except G36, G64 & G65) and Stem mounting styles. If a Porcelain shade finish is selected, mounting will be powder coat painted-to-match. Porcelain shade finishes are not available with a Natural Metal mounting finish*
(I) If Cord Hung [C], selection identifies canopy finish
(II) If Chain Hung [CN] Mounting Style, selection identifies chain and canopy finish. Natural Metals are not applicable
(III) If Stem Mount [S] Mounting Style, selection identifies stem and canopy finish
(IV) If Flush Mount [F] Mounting Style, selection identifies hex coupler and canopy finish. Natural Metals are not applicable

980	Brushed Aluminum

F - CORDS[7]

*Please Note: See **Section D** for all applicable CSA Listed Cord Options*

NA	Not Applicable

G - SHADE ACCESSORIES[2]

NA	None
WC	Wire Cage
ACR	Acrylic Diffuser[8,9]

H - SHADE ACCESSORY FINISH

*Please Note: See **Section C** for Finish Options. Natural Metals not applicable. If Porcelain Finish is selected, accessory will be powder coat painted-to-match*

NA	Not Applicable

I - MOUNTING ACCESSORY

Please Note: Mounting Accessories below are only applicable with select Mounting Styles. Please refer to product listings on our website for further detail.

NA	None/Not Applicable
HSC	Hang Straight Canopy[2,10]
LDBPC	LED Decorative Backing Plate Cover[11,12]
LDCHX	LED Decorative Backing Plate Cover & Hex Cover[11,12]

J - LIGHT SOURCE

LED11	850 Lumen, 11W LED
LED16	1250 Lumen, 16W LED
LED27	2000 Lumen, 27W LED
LED38	3000 Lumen, 38W LED
LED43	4000 Lumen, 43W LED[1]

K - COLOR TEMPERATURE

2700K	2700K, Warm White
3000K	3000K, Neutral White
3500K	3500K, Bright White
4000K	4000K, Cool White

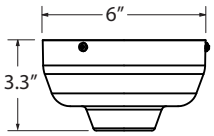
L - LED LENS

DL	Domed Lens
FL	Flat Lens

IMPORTANT: *(1) Not available with Acrylic Diffuser shade accessory (2) Not available in Natural Metals (3) All Porcelain Enamel finished shades feature a white interior and a black outer rim (4) All Powder Coat finished shades, Galvanized excluded, feature a white interior (5) Natural Metals have a longer estimated manufacturing time, please check the website for exact lead time. There are no returns accepted on Natural Metals (6) Not compatible with 16″ shade size and larger (7) Only applicable if Chain Hung Mounting Style selected in Section A, select NA if another Mounting Style is selected (8) Acrylic Diffuser limits the maximum lumen selection as well as reduces lumens delivered and LPW. Selection Limits: 2000 Max for 12″ and 14" shades; 3000 Max for 16″ through 20" shades (9) Fixture is CSA Listed for Damp Location with Acrylic Diffuser (10) Only applicable if Stem Mounting Style is selected in Section A (11) Not available with G3, G4, G11, G15, G26, & G36 Gooseneck option (12) Only applicable if Gooseneck Mounting Style is selected in Section A*

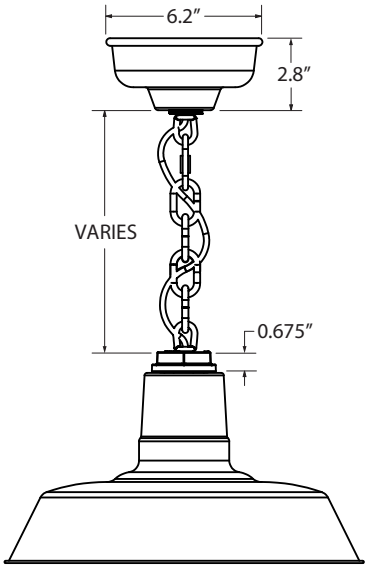
MOUNTING STYLE

HIGH LUMEN CANOPY FOR PENDANT & FLUSH MOUNT



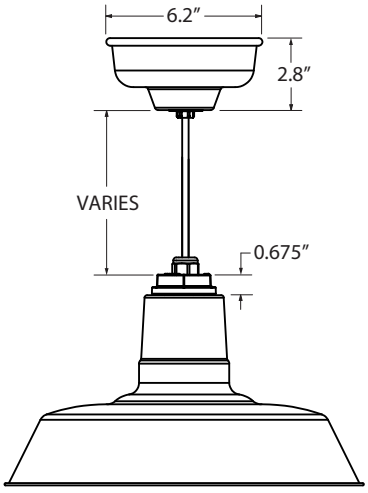
Required if LED 27, 38, 43 Light Source selected in Section J

CHAIN HUNG PENDANT (CN)



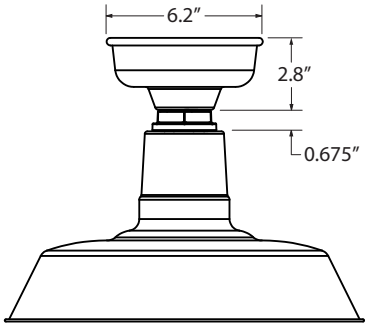
Canopy shown required if LED 11 & 16 Light Source selected in Section J

CORD HUNG PENDANT (C)



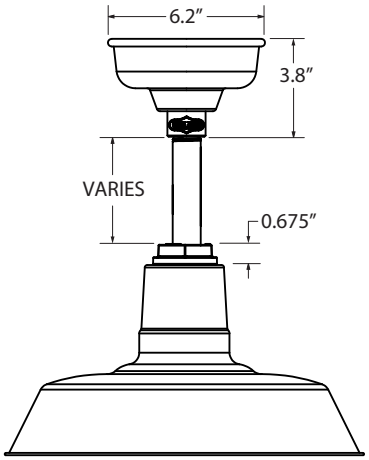
Canopy shown required if LED 11 & 16 Light Source selected in Section J

FLUSH MOUNT (F)



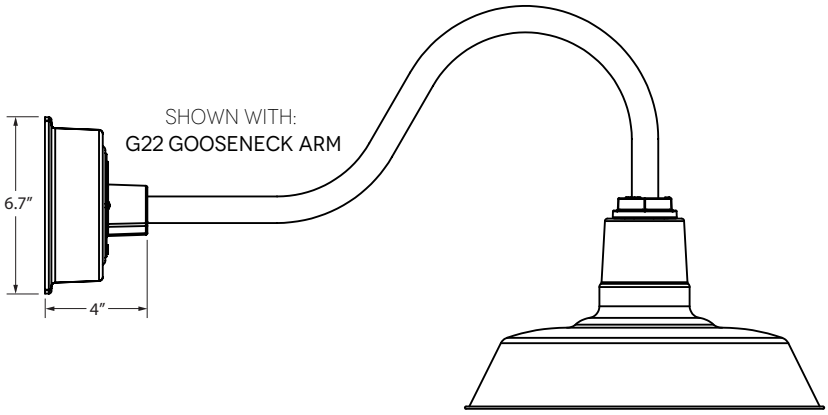
Canopy shown required if LED 11 & 16 Light Source selected in Section J

STEM MOUNT PENDANT (S)

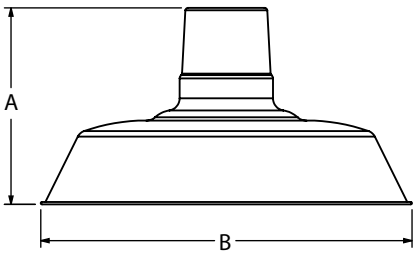


Canopy shown required if LED 11 & 16 Light Source selected in Section J

GOOSENECK (G)



LUMINAIRE DIMENSIONS



SHADE CODE	HEIGHT (A)	DIAMETER (B)
WHS12	7″	12″
WHS14	7.5″	14″
WHS16	7.75″	16″
WHS18	8.5″	18″
WHS20	9.25″	20″

LIGHT SOURCE

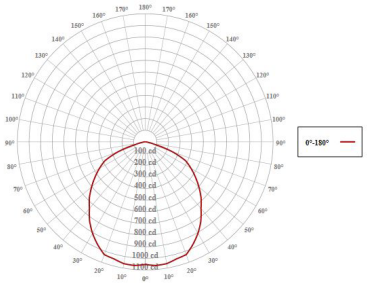
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. To obtain an IES file specific to your project, please contact the factory.

	LUMENS	850		1250		2000		3000		4000	
	Wattage	11		16		27		38		43	
	Optics	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
WHS12	FLAT	846	74	1244	78	1997	74	2996	79	3995	93
	DOMED	824	72	1212	76	1936	72	2904	76	3872	90
WHS14	FLAT	845	74	1243	77	1982	73	2973	78	3964	92
	DOMED	823	72	1210	75	1904	71	2856	75	3808	88
WHS16	FLAT	845	74	1243	77	1982	73	2973	78	3964	92
	DOMED	822	72	1209	75	1902	70	2854	75	3805	88
WHS18	FLAT	843	74	1240	77	1978	73	2967	78	3956	92
	DOMED	819	72	1204	75	1895	70	2843	75	3791	88
WHS20	FLAT	841	74	1237	77	1973	73	2959	78	3945	91
	DOMED	815	72	1199	75	1887	70	2830	74	3773	87

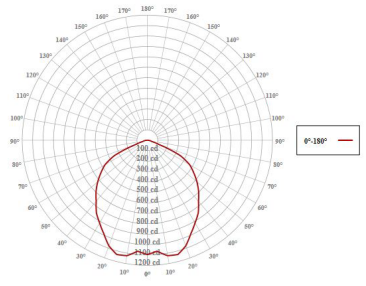
*Acrylic Diffuser option reduces lumens delivered and LPW

LIGHT DISTRIBUTION

DOMED LENS (DL)

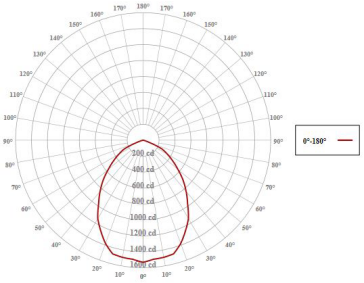


Shown above with 16" Shade (WHS16), White Interior (200-White) and 3000 Lumen (LED38)

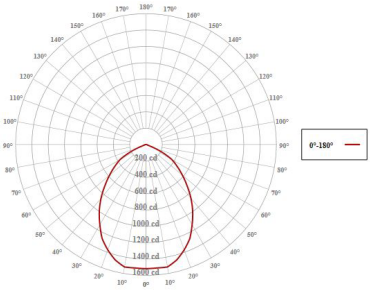


Shown above with 20" Shade (WHS20), White Interior (200-White) and 3000 Lumen (LED38)

FLAT LENS (FL)



Shown above with 16" Shade (WHS16), White Interior (200-White) and 3000 Lumen (LED38)



Shown above with 20" Shade (WHS20), White Interior (200-White) and 3000 Lumen (LED38)

SPECIFICATIONS

CERTIFICATIONS, LISTINGS & WARRANTY

MADE IN THE USA
Manufactured and Hand-Crafted in Our 60,000 Square Foot Facility Located in Titusville, FL

CSA LISTED FOR WET LOCATIONS
Includes All Gooseneck, Stem and Flush Mounting Styles
Acrylic Diffuser is CSA Listed for Damp Locations for Gooseneck and Stem Mounting Styles

CSA LISTED FOR DAMP LOCATIONS
Includes All Chain and Select Cord Hung Mounting Styles
Acrylic Diffuser is CSA Listed for Damp Locations for Chain and Cord Hung Mounting Styles

LIMITED WARRANTY
For Additional Information on Our Limited Warranty, Please See Our Terms & Conditions

OPERATING TEMPERATURE
-30˚C to 40˚C

CONSTRUCTION & FINISH

POWDER COAT SHADE
Hand-Spun from High Purity 3003-O Temper Aluminum

GALVANIZE SHADE
Hand Spun from High Quality Galvanized Steel

PORCELAIN SHADE
Hand-Spun from 20 Gauge Porcelain Steel

POWDER COAT FINISHES
Polyester Powder Coat Finishes Are Electro-Statically Applied and Thermocured

PORCELAIN FINISHES
Applied by Hand and Fired in a High Temperature Oven

COPPER
Hand-Spun from High Purity C11000-O60 ETP Copper

BRASS
Hand-Spun from High Purity C2600-O60 Brass

STEM
1/2" Nominal (0.84" Actual) or 3/4" Nominal (1.05" Actual) Sch 40, 6063 Aluminum Mounting Stem. Custom Lengths Available upon Request.

GOOSENECK
1/2" Nominal (0.84" Actual) or 3/4" Nominal (1.05" Actual) Sch 40, 6063 Aluminum Gooseneck

CORD
Cord-Hung Pendants Include 7' of Standard Cord or 5' of Cloth Cord, +/- For Socket Orientation

CHAIN
4-Gauge Chain Complete with Quick Link for On-Site Adjustments to Chain's Length

LED LIGHT SOURCE

LED TYPE: CREE LMH2 MODULE

INITIAL LUMENS DELIVERED: UP TO 4000 LUMENS

L90(6K) > 36,300 HOURS

AVAILABLE CCT: 2700K, 3000K, 3500K, 4000K
Custom Temperatures Available upon Request

90+ CRI

2 STEP MACADAMS ELLIPSE

EFFICACY: UP TO 93 LPW
High Efficacy Available upon Request, Consult Factory for Additional Information

ELECTRICAL/LED DRIVER

DRIVER TYPE: ERP ESS/T & ESP/T

POWER FACTOR > 0.9

EFFICIENCY: UP TO 87% TYPICAL

INPUT VOLTAGE: 120–277 VAC (SEE DIMMING SECTION)

CLASS 2 POWER SUPPLY

LED DRIVER LIFETIME: > 100,000 HOURS (@ 25 DEG C AMBIENT)

IP64 MINIMUM RATING CASE WITH SILICONE–BASED POTTING

PROTECTIONS
Output Open Load, Over-Current and Short-Circuit (hiccup), and Over-Temperature with Auto Recovery

CONDUCTED AND RADIATED EMI
Compliant with FCC CFR Title 47 Part 15 Class B (120 Vac), Class A (277 Vac) and EN55015 (CISPR 15) at 220, 230 and 240 Vac

COMPLIANT WITH
Complies with Energy Star® DLR (DesignLight Consortium®) and CA Title 24 Technical Requirements

DIMMING

TRI–MODE DIMMING™
Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V Dimmers

DIMMING RANGE 1–100%
The Dimming Range Is Dependent on Each Specific Dimmer. May Not Be Able to Achieve 1% Dimming with Some Dimmers.

TRIAC AND ELV DIMMING ONLY AT 120 VAC

ELV DIMMING AT 230 VAC
Available by Request

COMPATIBLE DIMMERS
Consult Factory for Additional Information on Dimming



Example Elevation

STORMWATER REPORT

Contents:

1 Project Narrative
2 Site Impervious Area Summary
3 Site BMP Infiltration Sizing Calculation
4 Storm Sewer / Overflow / Tributary Area Exhibit
5 Storm Sewer C-Factor Calculation
6 Storm Sewer Sizing Calculation
7 Storm Inlet Capacity Calculation
8 Overflow Route Calculations

Project:
Lake Roots

Location:
475 W. Virginia Street
Crystal Lake

Prepared For:
Lake Roots Holdings LLC

Date:
May 21, 2024



EXPIRES 11-30-25

Prepared By:
Mike Anderson, PE

Haeger Project No.: 23-006



ENGINEERING | SURVEYING | CONSTRUCTION

HAEGER ENGINEERING
consulting engineers · land surveyors
100 East State Parkway, Schaumburg, IL 60173 · tel 847.394.6600 fax 847.394.6608
haegerengineering.com

EXECUTIVE SUMMARY

The property at 475 W. Virginia Street in Crystal Lake is being redeveloped into a proposed restaurant with associated parking. The property was previously a restaurant; the existing building is being expanded and additional property is being included in the site which will be used for expanded parking lot area and outdoor seating area.

The site proposes an increase in overall site impervious area of 2,223-sf on the overall 26,656-sf parcel. Note that this impervious area increase does not include a proposed permeable paver outdoor seating area, which is classified as pervious area.

Stormwater Management (Infiltration)

We believe the site is categorized as a minor development according to the City stormwater ordinance. As such stormwater detention is not required; however because it is within the Crystal Lake Watershed it is required to conform to this City ordinance, specifically related to stormwater infiltration.

The existing site parking lot area directs runoff into two catchbasins located within the parking lot area; these catchbasins then discharge into three existing dry wells on the property. These structures will remain in their current configuration, with cleaning of the structures required as necessary based on condition.

The City Stormwater Ordinance requires that runoff from new impervious areas be infiltrated to 95% of annual volume. Additionally, runoff must be pre-treated prior to infiltration. To accomplish this, new pavement on the southwest portion of the site will runoff into a system of rain gardens and infiltration trenches along the southwest property line.

The new proposed impervious surface area on the site totals 2,223 sf. According to the NRCS Soils Map in the Crystal Lake Watershed Design Manual (Figure 1.6) the predominant hydrologic soil group for the project site area are B-type soils. Based on infiltration tests performed on the property immediately adjacent to this site, previous designed by Haeger Engineering, we have used a soil infiltration rate of 0.5 in/hr. This assumed rate will be confirmed during final permit design.

Pollutant Source Control Plan

Mechanical means (plowing and shoveling) will be used throughout the property for snow removal. Calcium magnesium acetate will be used moderately at the site pedestrian entrances for ice control.

Runoff Control Submittal per McHenry County

We note that the project is considered a Minor Development per the McHenry County ordinance as it disturbs less than 20,000 sf. Per section 15.60.050.E, a runoff control submittal is required including the following items:

> E.2.a. Development Plan (see Site Improvement Plans). Note because of the small size of the project, and it being a redevelopment site in a long-developed area, the applicant requests that a drain tile survey be waived for the project.

IMPERVIOUS COVERAGE CALCULATIONS

All Areas Provided in Square Feet

LOT AREA = 26,656

EXISTING		PROPOSED	
ASPHALT/PAVEMENT	*15,611*	ASPHALT/PAVEMENT	*14,837*
BUILDING	*2,000*	BUILDING + ADDITIONS	*4,467*
CONCRETE	*8*	CONCRETE	*538*
		PERMEABLE PAVEMENT	*1,475*
TOTAL IMPERVIOUS	*17,619*	TOTAL IMPERVIOUS	*21,317*
		NET INCREASE (LESS PERVIOUS)	*2,223*
% IMPERVIOUS	*66.1%*	% IMPERVIOUS	*80.0%*

A. NEW SITE IMPERVIOUS AREA 2223 sf

B. INFILTRATION RATE

Soil Infiltration Rate:	0.5	in/hr (assumed)
Total Infiltration Media Area, Rain Garden:	347.6	sf
Total Infiltration Media Area, Trench:	176	sf
Total Infiltration Media Area, Combined:	523.6	sf
Total System Infiltration Rate:	261.8	sf-in/hr
Total System Infiltration Rate:	0.0061	cfs

C. INFILTRATION CAPACITY & STORAGE REQUIRED

TOTAL AREA REQUIRING INFILTRATION:	0.05	acres
Actual Release Rate:	0.0061	cfs
10-yr, 24 hr Rainfall:	4.47	in

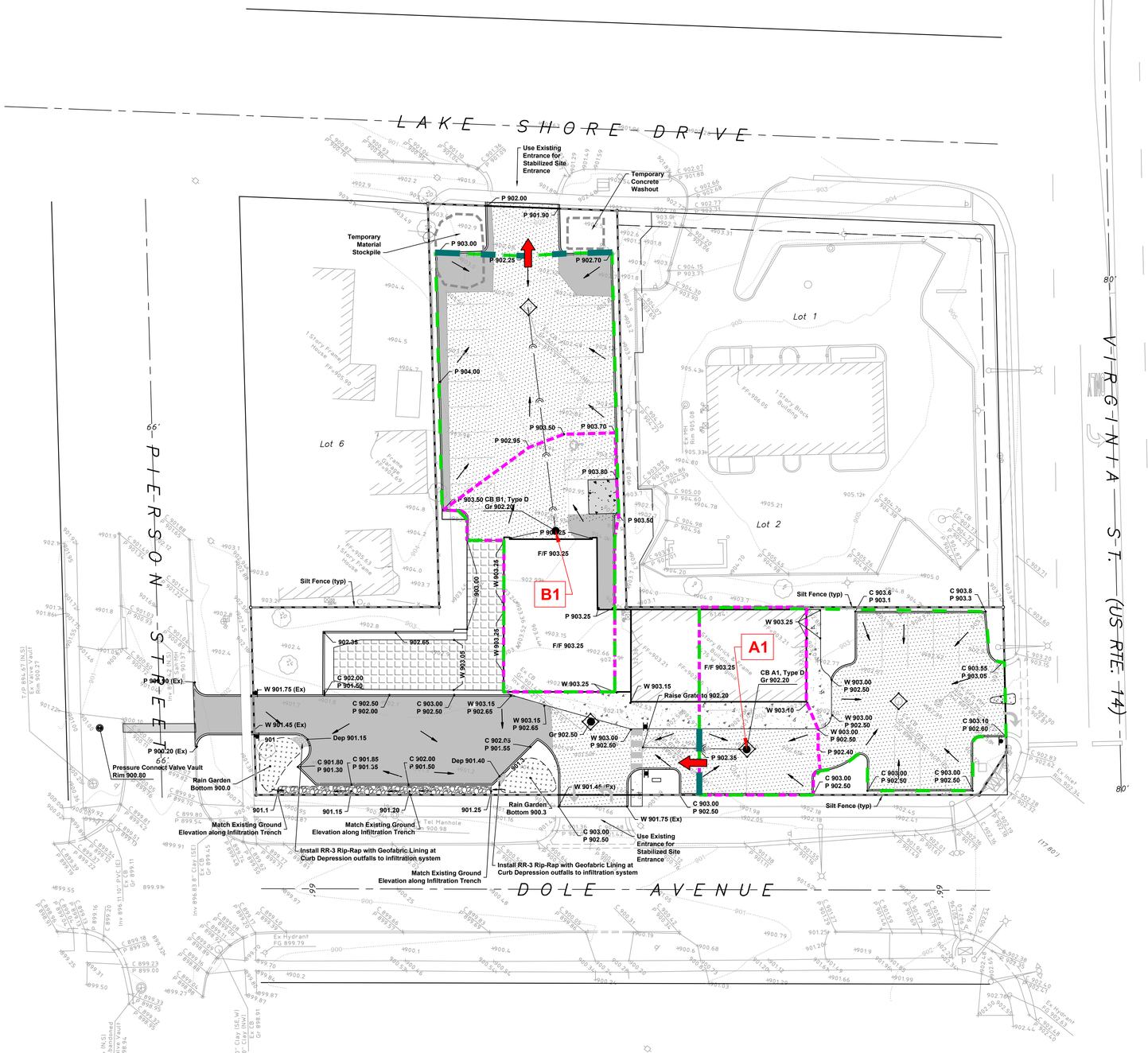
Coeff. c	Runoff Duration t (hours)	Ratio x-hr/24-hr	Rainfall Intensity i(10) (in\hr)	Drainage Area A (acres)	Inflow Rate Q(i)=ci(100)A (cfs.)	Release Rate Q(o) (cfs.)	Storage Rate Q(i)-Q(o) (cfs.)	Storage Required Q(i)-Q(o)*t / 12 (acre-ft.)
0.95	0.08	0.12	6.44	0.051	0.31	0.0061	0.306	0.002
0.95	0.17	0.21	5.63	0.051	0.27	0.0061	0.267	0.004
0.95	0.18	0.22	5.36	0.051	0.26	0.0061	0.254	0.004
0.95	0.20	0.23	5.20	0.051	0.25	0.0061	0.246	0.004
0.95	0.22	0.25	5.05	0.051	0.25	0.0061	0.239	0.004
0.95	0.23	0.26	4.93	0.051	0.24	0.0061	0.233	0.005
0.95	0.25	0.27	4.83	0.051	0.23	0.0061	0.228	0.005
0.95	0.50	0.37	3.31	0.051	0.16	0.0061	0.154	0.006
0.95	1	0.47	2.10	0.051	0.10	0.0061	0.096	0.008
0.95	2	0.58	1.30	0.051	0.06	0.0061	0.057	0.009
0.95	3	0.64	0.95	0.051	0.05	0.0061	0.040	0.010
0.95	6	0.75	0.56	0.051	0.03	0.0061	0.021	0.011
0.95	12	0.87	0.32	0.051	0.02	0.0061	0.010	0.010
0.95	18	0.94	0.23	0.051	0.01	0.0061	0.005	0.008
0.95	24	1.00	0.19	0.051	0.01	0.0061	0.003	0.006
0.95	48	1.08	0.10	0.051	0.00	0.0061	0.000	0.000
0.95	72	1.16	0.07	0.051	0.00	0.0061	0.000	0.000

STORAGE REQUIRED = 0.011 Ac-ft.

= 458 cubic feet

D. SYSTEM STORAGE PROVIDED

Required Storage Volume:	**458**	**cubic feet**
Rain Garden Storage Depth:	1.0	ft
Rain Garden Volume Provided:	347.6	cubic feet
Infiltration Trench Stone Depth:	4	ft
Infiltration Trench Total Volume (stone):	704	cubic feet
Stone Storage Rate:	0.36	
Total Trench Storage Volume:	253	cubic feet
Total System Storage Provided:	**601**	**cubic feet**



Scale: 1" = 20

PAVING LEGEND

New Pavement Area
-1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50
-2 1/4" Hot Mix Asphalt Binder Course, IL-19, N50
-10" CA-6 Crushed Aggregate Base Course, Type B

Existing Pavement to be Milled and Resurfaced
-Prime Coat
-1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50

Concrete Sidewalk
-5" Portland Cement Concrete
-4" CA-6 Crushed Aggregate Base Course

Heavy Duty Concrete
-8" Portland Cement Concrete
-6" CA-6 Crushed Aggregate Base Course

DRAINAGE LEGEND

Proposed Catch Basin Tributary

Overland Flow Route Tributary

Overland Flow Route Cross Section

Overland Flow Arrow

Overland Flow Calculations				
	C	i (in/hr)	A (acres)	Q (cfs)
North Overflow	0.9	10.8	0.189	1.84
South Overflow	0.88	10.8	0.147	1.4

A. NEW SITE IMPERVIOUS AREA 2738 sf

B. INFILTRATION RATE

Soil Infiltration Rate:	0.5 in/hr (assumed)
Total Infiltration Media Area, Rain Garden:	347.6 sf
Total Infiltration Media Area, Trench:	176 sf
Total Infiltration Media Area, Combined:	523.6 sf
Total System Infiltration Rate:	261.8 sf-in/hr
Total System Infiltration Rate:	0.0061 cfs

C. INFILTRATION CAPACITY & STORAGE REQUIRED

TOTAL AREA REQUIRING INFILTRATION:	0.06 acres
Actual Release Rate:	0.0061 cfs
10-yr, 24 hr Rainfall:	4.47 in

Coeff. c	Runoff Duration t (hours)	Ratio x-hr/24-hr	Rainfall Intensity i(10) (in/hr)	Drainage Area A (acres)	Inflow Rate Q(i)=ci(100)A (cfs.)	Release Rate Q(o) (cfs.)	Storage Rate Q(i)-Q(o) (cfs.)	Storage Required Q(i)-Q(o)*t 12 (acre-ft.)
0.95	0.08	0.12	6.44	0.063	0.38	0.0061	0.378	0.003
0.95	0.17	0.21	5.63	0.063	0.34	0.0061	0.330	0.005
0.95	0.18	0.22	5.36	0.063	0.32	0.0061	0.314	0.005
0.95	0.20	0.23	5.20	0.063	0.31	0.0061	0.304	0.005
0.95	0.22	0.25	5.05	0.063	0.30	0.0061	0.296	0.005
0.95	0.23	0.26	4.93	0.063	0.29	0.0061	0.288	0.006
0.95	0.25	0.27	4.83	0.063	0.29	0.0061	0.282	0.006
0.95	0.50	0.37	3.31	0.063	0.20	0.0061	0.191	0.008
0.95	1	0.47	2.10	0.063	0.13	0.0061	0.119	0.010
0.95	2	0.58	1.30	0.063	0.08	0.0061	0.071	0.012
0.95	3	0.64	0.95	0.063	0.06	0.0061	0.051	0.013
0.95	6	0.75	0.56	0.063	0.03	0.0061	0.027	0.014
0.95	12	0.87	0.32	0.063	0.02	0.0061	0.013	0.013
0.95	18	0.94	0.23	0.063	0.01	0.0061	0.008	0.012
0.95	24	1.00	0.19	0.063	0.01	0.0061	0.005	0.010
0.95	48	1.08	0.10	0.063	0.01	0.0061	0.000	0.000
0.95	72	1.16	0.07	0.063	0.00	0.0061	0.000	0.000

STORAGE REQUIRED = 0.014 Ac-ft.
= 595 cubic feet

D. SYSTEM STORAGE PROVIDED

Required Storage Volume:	**595 cubic feet**
Rain Garden Storage Depth:	1.0 ft
Rain Garden Volume Provided:	347.6 cubic feet
Infiltration Trench Stone Depth:	4 ft
Infiltration Trench Total Volume (stone):	704 cubic feet
Stone Storage Rate:	0.36
Total Trench Storage Volume:	253 cubic feet
Total System Storage Provided:	**601 cubic feet**

NORTH

Revision | Date | No.

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STORM SEWER AND OVERLAND FLOW TRIBUTARY EXHIBIT

BUILDING RENOVATION
475 W. VIRGINIA STREET
CRYSTAL LAKE

Project Manager: M L A
Engineer: K J L
Date: 05.20.2024
Project No. 23-006
Sheet 1/1

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Plot Date: May 20, 2024 - 2:22pm Plotted By: kevin-l
File Name: P:\2023\23006\Drawings\Exhibits\23006-StormSewerTributary.dwg

Calculation of C Factors

Assumptions

Impervious C-Factor	=	0.90
Pervious C-Factor	=	0.45

Structure #	Drainage Area				Combined C Factor
	$A_{total\ acre}$	$A_{total\ SF}$	$A_{pervious\ SF}$	$A_{impervious\ SF}$	
Ex Stm MH	0.00	0	0	0	0.00
A1	0.06	2,588	0	2,588	0.90
TOTALS	**0.06**	**2,588**	**0**	**2,588**	**0.90**

Ex CB	0.00	0	0	0	0.00
B1	0.09	3,761	0	3,761	0.90
TOTALS	**0.09**	**3,761**	**0**	**3,761**	**0.90**

10YR - STORM SEWER SIZING CALCULATION

PROJECT: Building Renovation
SUBJECT: Storm Sewer Calculations
JOB No.: 23-006
Assumptions: n = 0.013
Initial Tc = 10 Minutes (minimum)
100yr Intensity 10.80 in/hr (Bulletin 75)
10ry Intensity 6.49 in/hr (Bulletin 75)

STORM SPREADSHEET LEGEND

= 100-Year Storm Intensity
= Tributary (to Main) Line
= Mainline
= Secondary Tributary Line

MH/CB No.	c	A (Ac)	cA	Sum cA	Tc (min)	i (in/hr)	q (cfs)	Diam. (in)	Slope (%)	V	L	T	Rim	Invert in	Invert out	Actual Depth of Out Inv.	Min. Depth of Out Req'd	Pipe full Q	Pipe full V	q/Q Capacity	v/V
MAIN LINE A1																					
A1	0.90	0.06	0.053	0.053	10.00	6.49	0.35						902.20		899.20	3.00	2.58				
A1 to Ex Stm MH								12	2.00	3.14	36	0.19						5.04	6.42	0.07	0.49
Ex Stm MH	0.00	0.00	0.000	0.053	10.19	6.49	0.35						901.82	898.48	**<--Invert @ "Ex Stm MH"**						
MAIN LINE B1																					
B1	0.90	0.09	0.078	0.078	10.00	6.49	0.50						902.20		899.17	3.03	2.58				
B1 to Ex CB								12	2.00	3.59	80	0.37						5.04	6.42	0.10	0.56
Ex CB	0.00	0.00	0.000	0.078	10.00	6.49	0.50						901.47	897.57	**<--Invert @ "Ex CB"**						

Grate & Curb Opening Capacities Calculations

Project: Building Renovation
Haeger Project No.: 23-006

Equations

Weir Equation (Grates): Q = CP(h)^1.5 (from Neenah Foundry Co. Engineering Tools)	Orifice Equation: Q = 0.6(A)(2gh)^0.5 (from Neenah Foundry Co. Engineering Tools)	Weir Equation (Curb Openings): Q = CL(h)^1.5 (from Neenah Foundry Co. Engineering Tools)
C = Weir coefficient = 3.3	Q = flow rate (cfs)	C = Weir coefficient = 3.3
Q = Flow rate (cfs)	A = Open area of grate (sf)	Q = Flow rate (cfs)
P = Wetted perimeter of grate (ft)	g = Gravitation constant = 32.174 ft/s^2	L = Unobstructed length of curb opening (ft)
h = Head (ft)	h = Head (ft)	h = Head (ft) (max 6")
Note: this weir equation applies to on-grade grates when head is less than or equal to 0.3'	Note: orifice equation applies to on-grade grates when head is greater than 0.3'	Note: This weir equation applies to structures with curb openings

Project-Related Grate Characteristic Table

Grate Catalogue No.	Grate Type	Open Area, A (sf)	Weir Perimeter, P (ft)	Length of Curb Opening (ft)	% of Curb Opening Unobstructed	Unobstructed Length of Curb Opening, L (ft)	
Neenah R-2502-D	D	0.9	6.0	0.0	N/A	0	(Pavement Structures NOT in Curb Line)
Neenah R-4340-B	B	1.1	6.0	0.0	N/A	0	(Structures in Grass)
Neenah R-3278-A	C	1.2	4.6	1.8	50%	0.9	(Structures in Curb Line at Sag)

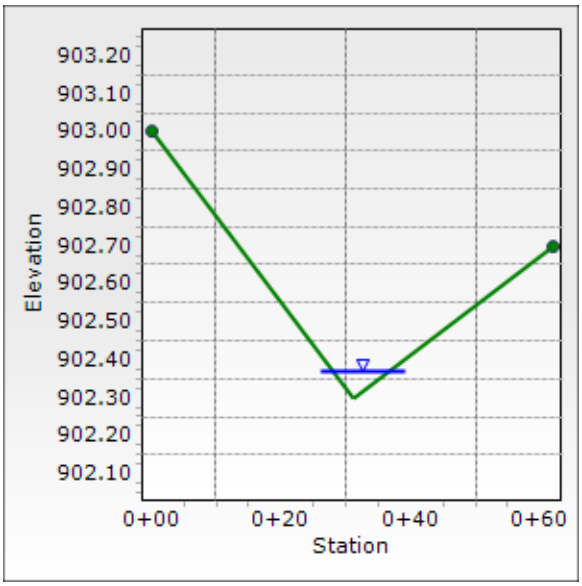
Grate Capacity Calculations

Storm Sewer Stucture ID	C-Factor	Drainage Area (Acres)	Tc (min)	i (in/hr)	Rim Elevation (Feet)	Overflow Elevation (Feet)	Max. Depth of Water over Grates (Feet)	Grate Type	Free Open Area (sf)	Wetted Perimeter (LF)	Grate Capacity (cfs)	Curb Opening Capacity (cfs)	Grate + Curb Opening Capacity (cfs)	Bypassed Flow (cfs)	10-Year Runoff (cfs)	Total Flow to Structure (cfs)	# Grates Required (Each)	# Grates Provided (Each)
A1	0.90	0.059	10.00	6.49	902.20	902.35	0.15	Neenah R-2502-D	0.90	6.0	1.2	0.0	1.2	0.00	0.35	0.35	0.3	1.0
B1	0.90	0.086	10.00	6.49	902.20	902.95	0.75	Neenah R-2502-D	0.90	6.0	3.8	0.0	3.8	0.00	0.50	0.50	0.1	1.0

Cross Section for North Overland Flow

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

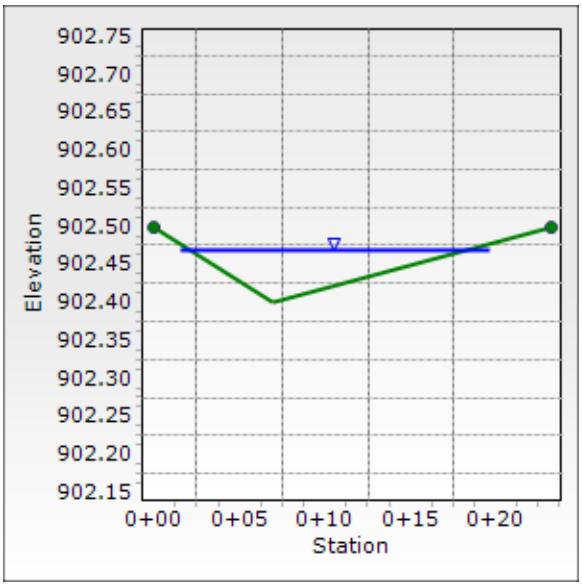
Input Data	
Channel Slope	0.020 ft/ft
Normal Depth	1.4 in
Discharge	1.84 cfs



Cross Section for South Overland Flow

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.006 ft/ft
Normal Depth	1.4 in
Discharge	1.40 cfs



Worksheet for North Overland Flow

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.020 ft/ft
Discharge	1.84 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00	903.00
0+31	902.25
0+62	902.70

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00, 903.00)	(0+62, 902.70)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	1.4 in
Roughness Coefficient	0.013
Elevation	902.37 ft
Elevation Range	902.3 to 903.0 ft
Flow Area	0.8 ft²
Wetted Perimeter	12.9 ft
Hydraulic Radius	0.7 in
Top Width	12.94 ft
Normal Depth	1.4 in
Critical Depth	1.8 in
Critical Slope	0.006 ft/ft
Velocity	2.42 ft/s
Velocity Head	0.09 ft
Specific Energy	0.21 ft
Froude Number	1.760
Flow Type	Supercritical

GVF Input Data

Worksheet for North Overland Flow

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	1.4 in
Critical Depth	1.8 in
Channel Slope	0.020 ft/ft
Critical Slope	0.006 ft/ft

Worksheet for South Overland Flow

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.006 ft/ft
Discharge	1.40 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00	902.50
0+07	902.35
0+23	902.50

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00, 902.50)	(0+23, 902.50)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	1.4 in
Roughness Coefficient	0.013
Elevation	902.47 ft
Elevation Range	902.4 to 902.5 ft
Flow Area	1.1 ft²
Wetted Perimeter	18.1 ft
Hydraulic Radius	0.7 in
Top Width	18.09 ft
Normal Depth	1.4 in
Critical Depth	1.4 in
Critical Slope	0.006 ft/ft
Velocity	1.33 ft/s
Velocity Head	0.03 ft
Specific Energy	0.14 ft
Froude Number	0.967
Flow Type	Subcritical

GVF Input Data

Worksheet for South Overland Flow

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	1.4 in
Critical Depth	1.4 in
Channel Slope	0.006 ft/ft
Critical Slope	0.006 ft/ft