# #2022-140
# U Haul Final PUD Amendment
# Project Review for Planning and Zoning Commission

| | |
|---|---|
| **Meeting Date:** | December 2, 2022 continued to January 18, 2023 |
| **Request:** | Final PUD Amendment to allow a new storage building with variations from the maximum 70% impervious surface coverage to allow 75.6% and from the maximum 150 square feet of signage to allow 521.76 square feet. |
| **Location:** | 4504 Northwest Highway |
| **Acreage:** | Approximately 8.2 acres |
| **Zoning:** | M PUD Manufacturing |
| **Surrounding Properties:** | North: M Manufacturing<br>South: B-2 PUD General Commercial<br>East: M PUD Manufacturing<br>West: B-2 PUD General Commercial |
| **Staff Contact:** | Elizabeth Maxwell (815.356.3615) |

**Background:**

- Previous Approvals:
  - The property was annexed in 2016 and zoned M PUD. They received a Special Use Permit for Bulk Inside Storage and Outside Storage.
  - June 7, 2022, they received a sign variation to paint the water tower with 260 square feet of signage.
- Existing Use: U Haul operates the facility for inside and outside storage.

**Development Analysis:**

Request:

- To allow a new bulk storage building for the storing of the U Boxes, which are the pack your own portable storage and moving containers, with variations for impervious surface coverage and wall signage.
- There are requested variations for signage and impervious surface coverage.

Land Use:

- Zoning: The site is zoned M PUD Manufacturing. The zoning district is appropriate for the storage use.
- Land Use: The land use map shows the area as Commerce. This land use designation is appropriate for service and storage.

Elevations

- U-Haul provided an elevation with various materials and design elements that creates a distinct and appealing façade.
- Window bays provide relief to the wall panels.
- The building is mainly comprised of a paneling system colored Sirerra Tan, Sand Stone, and Bone White.
- The main front corner of the building includes a wood style paneling and brick veneer base.
- The "Lyrical Articulated Design Element" panels project from the façade and create interest, shade and shadow, and pick up colors from other parts of the façade.
- There is a teal top cap over the front corner which really stands out against the dark wood paneling. This teal is also repeated above the windows.

Signage:

- Wall signage is proposed on two sides of the building.
- The following table lists the signs and the sizes:

| Sign | Square Footage | Quantity | Total Square Footage |
|---|---|---|---|
| U-Box Cabinet Sign | 168.83 SF | 2 | 337.66 SF |
| Moving Containers Channel Letters | 92.05 SF | 2 | 184.1 SF |

**Total 521.76 square feet**

- In addition to the new building, the existing signage on the showroom building is being reduced from 570 square feet to 410.25 square feet.
- The petitioner reduced the signage to the staff suggested amount, as well as reducing the signage on the existing building.

**Findings of Fact:**

**Final Planned Unit Development Amendment**

The petitioner is requesting approval of an amendment to a Final Planned Unit Development to allow a new bulk inside storage building with variations to allow 75.6% impervious and 521.76 square feet of signage. 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:

1. 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*

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

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

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

5. 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*

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

7. 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*

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

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

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

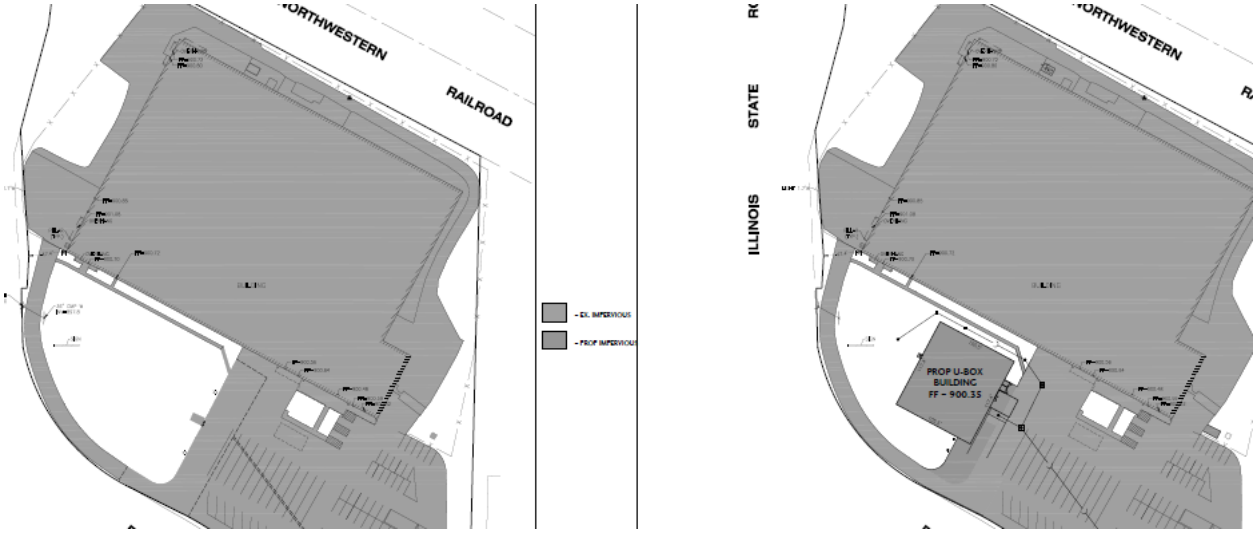
**Planned Unit Development Variation**
The purpose of Planned Unit Developments is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are, in the form of relief from compliance with conventional zoning ordinance site and design therefore, intended to allow substantial flexibility in planning and designing a proposal. This flexibility is often requirements.

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. If the evidence is not found to justify such conditions, that fact shall be reported to the City Council with a recommendation that the variation request be lessened or denied.

Variations are being requested from:

- Article 3 from the maximum impervious surface coverage of 70%. The existing impervious surface coverage is 71.36%. The new building and paving to the building will increase the total impervious coverage to 75.6%, which is a variation of 5.6%.




**Existing** **Proposed**

- U Haul is requesting a variation from Article 4-1000 Commercial Signs to allow signage on the new building at 521.76 square feet to allow for the U-Box Moving Containers identification signage.

Signs can be evaluated based on certain for the hardship:

A. The proposed variation will not serve merely as a convenience, but alleviate some demonstrable and unusual hardship.

B. The proposed variation will not be materially detrimental to the public welfare or injurious to other property or improvements in the neighborhood. The proposed variation will not by itself, or with other signs, contribute to the creation of a visual distraction which may lead to personal injury or a substantial reduction in the value of the property.

C. The proposed variation is in harmony with the intent, purpose and objectives of the Ordinance.

**Comprehensive Land Use Plan 2030 Vision Summary Review:**

The Comprehensive Plan designates the subject property as Commerce, which allows for existing and future commercial and business 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.**

This can be accomplished with the following supporting actions:

**Supporting Action:** Promote, retain and attract businesses that provide a diverse tax base.

**Recommended Conditions:**

If a motion is made to recommend approval of the petitioner's request, the following conditions are recommended:

1. Approved plans, to reflect staff and advisory board comments, as approved by the City Council:
   A. Application (Heimsoth, received 06/20/22).
   B. Elevations (a&m, dated 01/06/23, received 01/09/23)
   C. Sign Plans (a&m, dated 11/23/22, received 01/09/23)
   D. Landscape Plan (HKM, dated 11/28/22, received 11/28/22)
   E. Engineering Plans (Condon, dated 10/14/22, received 10/24/22)
   F. Impervious Surface Exhibit (Condon, dated 10/14/22, received 10/24/22)
   G. Engineering Report, dated 10/14/22, received 10/24/22)

2. The colored "Lyrical Articulated Design Elements" attached to the ATAS Sandstone portion of the façade cannot be illuminated.

3. The petitioner shall comply with all of the requirements of the Community Development Department.

PIQ Map
4504 Northwest Highway



# *City of Crystal Lake*
# *Development Application*

*Office Use Only*
*File #* _____

**Project Title:** U-Haul Crystal Lake U-Box Building

***Action Requested***

| | | | |
|---|---|---|---|
| __ | **Annexation** | __ | **Preliminary PUD** |
| __ | **Comprehensive Plan Amendment** | __ | **Preliminary Plat of Subdivision** |
| __ | **Conceptual PUD Review** | __ | **Rezoning** |
| __ | **Final PUD** | __ | **Special Use Permit** |
| | **Final PUD Amendment** | x | **Variation** |
| __ | **Final Plat of Subdivision** | __ | **Other** |

***Petitioner Information***

**Name:** Brian Heimsoth
**Address:** 2482 Technology Dr. Elgin IL. 60124
**Phone:** 847-930-5859
**Fax:** 224-699-9650
**E-mail:** brian@bcentinc.com

***Owner Information (if different)***

**Name:** UH STORAGE DE LTD PRTNRSHP
**Address:** U HAUL MOVING PRTNRS INC
PO BOX 29046
PHOENIX, AZ, 85038-9046
**Phone:** 602-263-6555 / 815-477-7389
**Fax:** N/A
**E-mail:** heather_skelton@uhaul.com

***Property Information***

**Project Description:** Construction of a 13,775 U-Box storage building with loading dock.

**Project Address/Location:** 4504 Northwest Hwy. Crystal Lake, IL 60014

**PIN Number(s):** 19-03-451-001, 002

**Development Team**

Please include address, phone, fax and e-mail

**Developer:** BoC Enterprises, Inc. 2482 Technology Drive; Elgin, IL 60124 Brian Heimsoth
815-482-5722 brian@bcentinc.com; heather@bcentinc.com

**Architect:** RB Custom Designs, Inc. Rick Bierman 2108 Johnsburg Rd; Johnsburg, IL 60051
815-759-9459 rbcusdesgn@comcast.net

**Attorney:** UHAUL Legal Department, 2727 N. Central Ave., Phoenix, AZ 800-528-0463
85004-1120

**Engineer:** J. Condon & Associates, Inc. Meghan Michel, P.E. 5415 Business Parkway, Ringwood IL 60072
815-404-1358 mmichel@jcondoninc.com

**Landscape Architect:** HKM Architects + Planners; Mark Kwensky - mkwensky@hkm-arch.com
847-392-9200 - 43 S. Vail Ave; Arlington Heights, IL 60005

**Planner:**

**Surveyor:** Vanderstappen Land Surveying, Inc. Arthur Gritmacker artg@vandersinc.com (815) 337-8310
1316 N. Madison Street Woodstock IL 60098

**Other:**

**Signatures**

Brian Heimsoth 6/20/22

**PETITIONER: Print and Sign name (*if different from owner*)** **Date**

**As owner of the property in question, I hereby authorize the seeking of the above requested action.**

Heather Skelton 6/10/22

**OWNER: Print and Sign name** **Date**

NOTE: If the property is held in 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, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE PETITION OF
UH Storage DE LTD Partnership

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 upon the application by Heather Skelton, representing UH Storage DE LTD Partnership for a Final Planned Unit Development Amendment, relating to the property at 4504 Northwest Highway in Crystal Lake, Illinois 60014. PIN: 19-03-451-001.

This application is filed for the purpose of seeking an amendment to an approved Final Planned Unit Development to allow a new storage building with variations from the maximum 70% impervious surface coverage to allow 76.06% and from the maximum 150 square feet of signage to allow 726.5 square feet and any other changes as presented at the hearing, pursuant to Article 3, Article 4 and Article 9. Plans for this project can be viewed at the Crystal Lake Community Development Department at City Hall.

A public hearing before the Planning and Zoning Commission for this request will be held at 7:00 p.m. on Wednesday November 2, 2022, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Jeff Greenman, Chairperson
Planning and Zoning Commission
City of Crystal Lake

(Published in the Northwest Herald on October 15, 2022) 2025143



U-HAUL

# PRELIMINARY ELEVATIONS

## *CRYSTAL LAKE, IL*



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**Jan 06, 2023**

# MOVING & STORAGE OF CRYSTAL LAKE (739050)

4504 Northwest Hwy., Crystal Lake, IL 60014








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Jan 06, 2023

# MOVING & STORAGE OF CRYSTAL LAKE (739050)

4504 Northwest Hwy., Crystal Lake, IL 60014



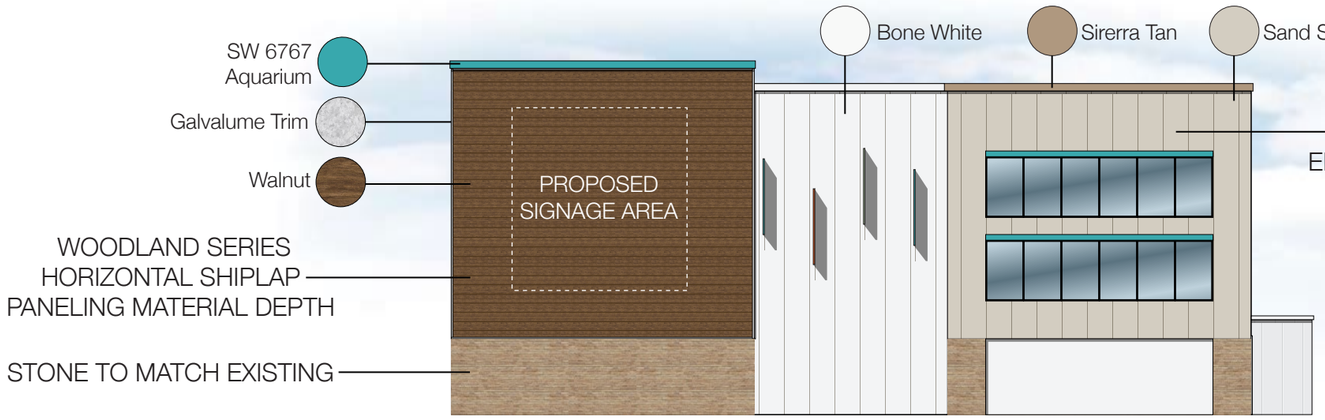



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**Jan 06, 2023**

# MOVING & STORAGE OF CRYSTAL LAKE (739050)

4504 Northwest Hwy., Crystal Lake, IL 60014






## SOUTH ELEVATION

Scale: 1" = 20'



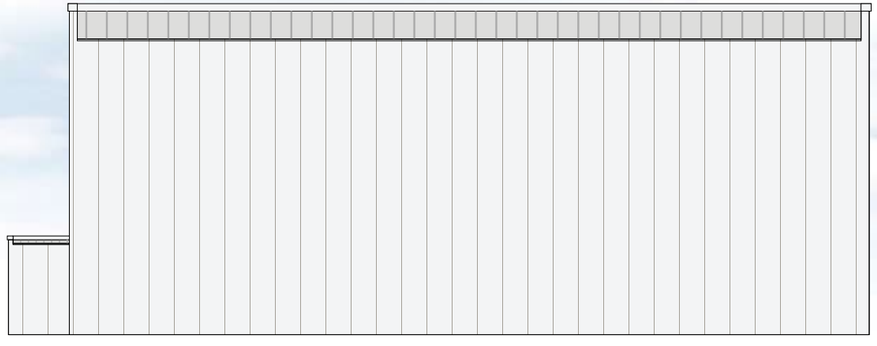
## EAST ELEVATION

Scale: 1" = 20'




## WEST ELEVATION

Scale: 1" = 20'



## NORTH ELEVATION

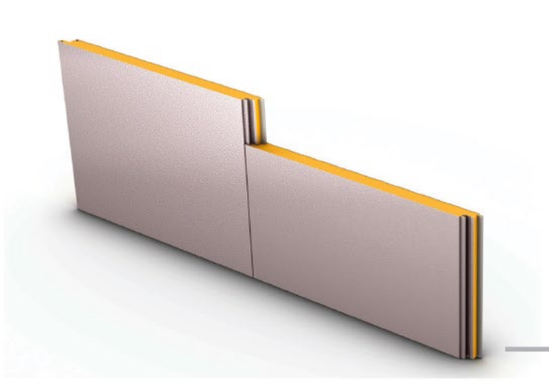
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Jan 06, 2023

# Isoleren IM (or Equivalent IMP)



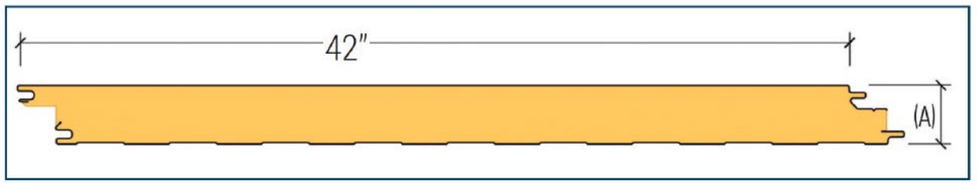
**SKU:**
IIM

**Thickness (A):**
2", 2 1/2", 3", and 4"

**Exterior Texture:**
Stucco Embossed

**Standard Lengths:**
8'-0" to 40'-0"






## 9"D Lyrical Articulated Design Element

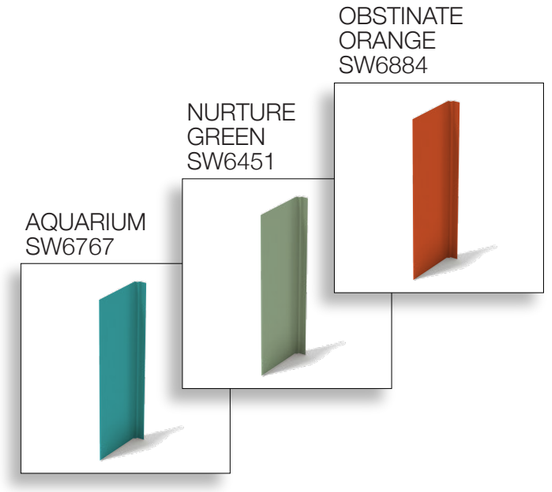




WOODLAND SERIES
HORIZONTAL LAP SIDING
EMBOSSED WALNUT
EXAMPLE



Isoleren
STUCCO EMBOSSED
EXAMPLE



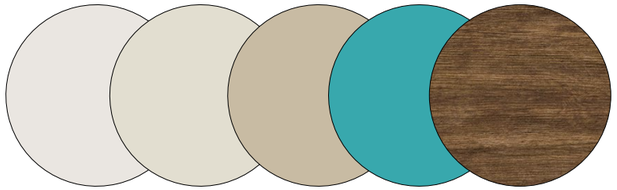


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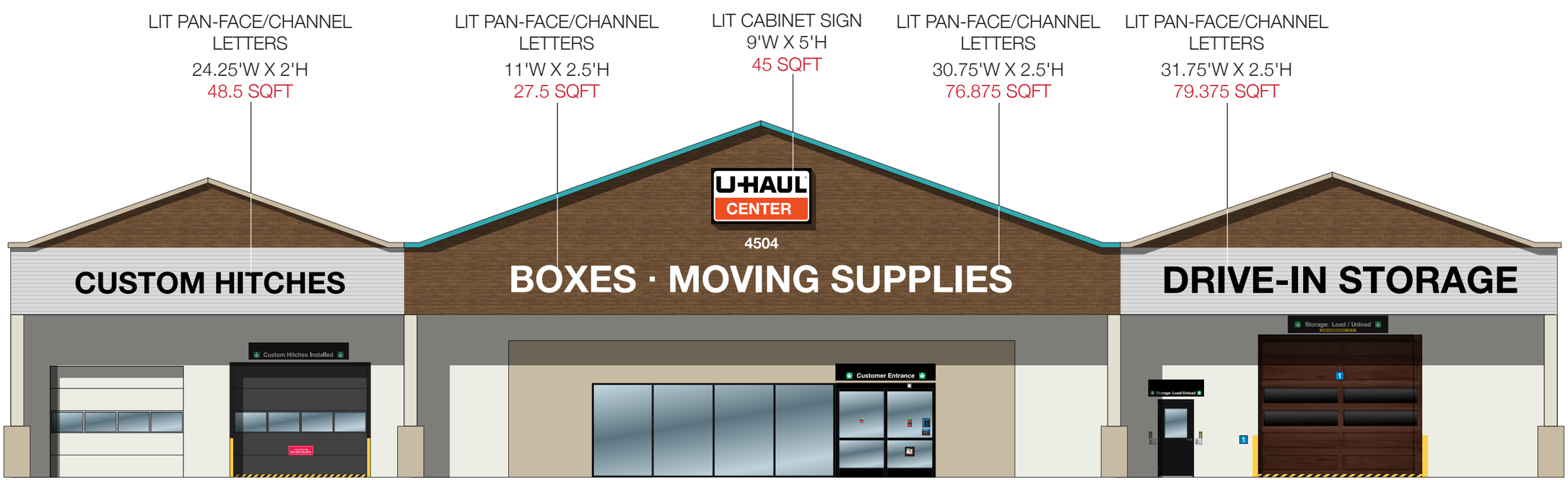


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## SOUTH ELEVATION



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Jan 06,2023




# SIGNAGE PROPOSAL

## *CRYSTAL LAKE, IL*



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Nov. 23rd, 2022

U-HAUL

# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014









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Nov. 23rd, 2022

# MOVING & STORAGE OF CRYSTAL LAKE

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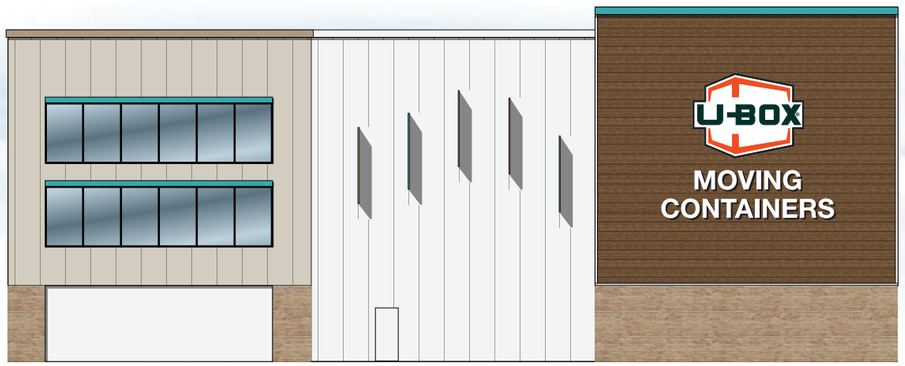

## SOUTH ELEVATION

Scale: 1" = 20'



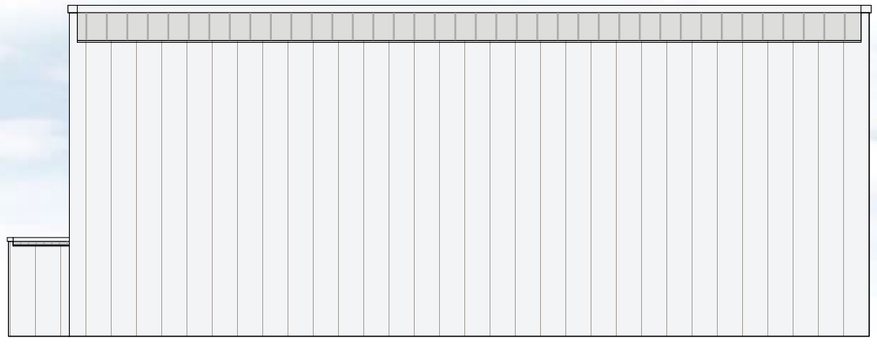
## EAST ELEVATION

Scale: 1" = 20'




## WEST ELEVATION

Scale: 1" = 20'



## NORTH ELEVATION

Scale: 1" = 20'

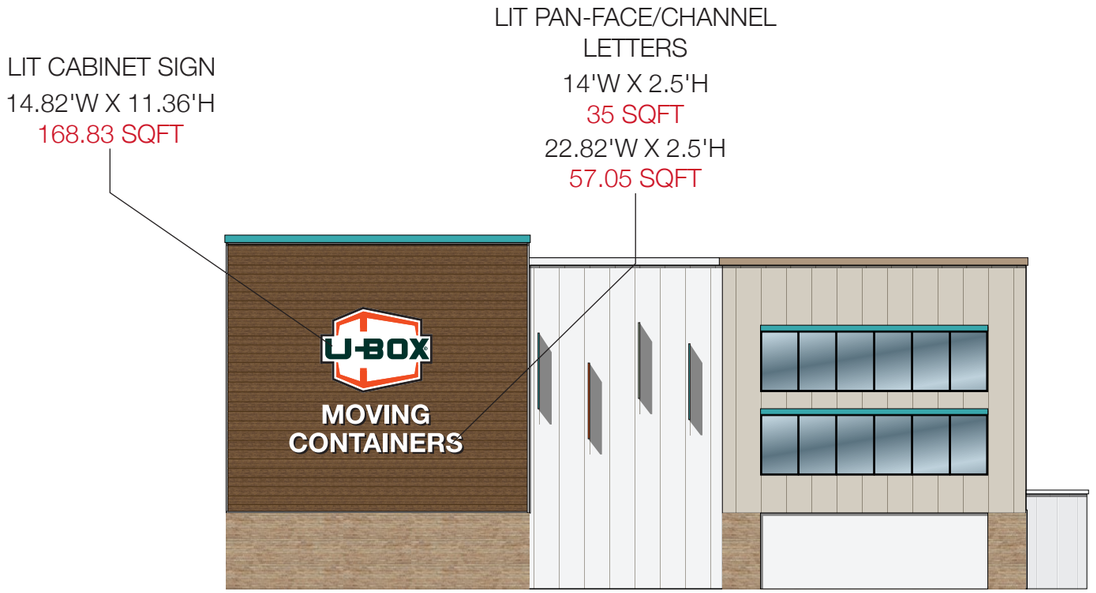


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Nov. 23rd, 2022

# MOVING & STORAGE OF CRYSTAL LAKE

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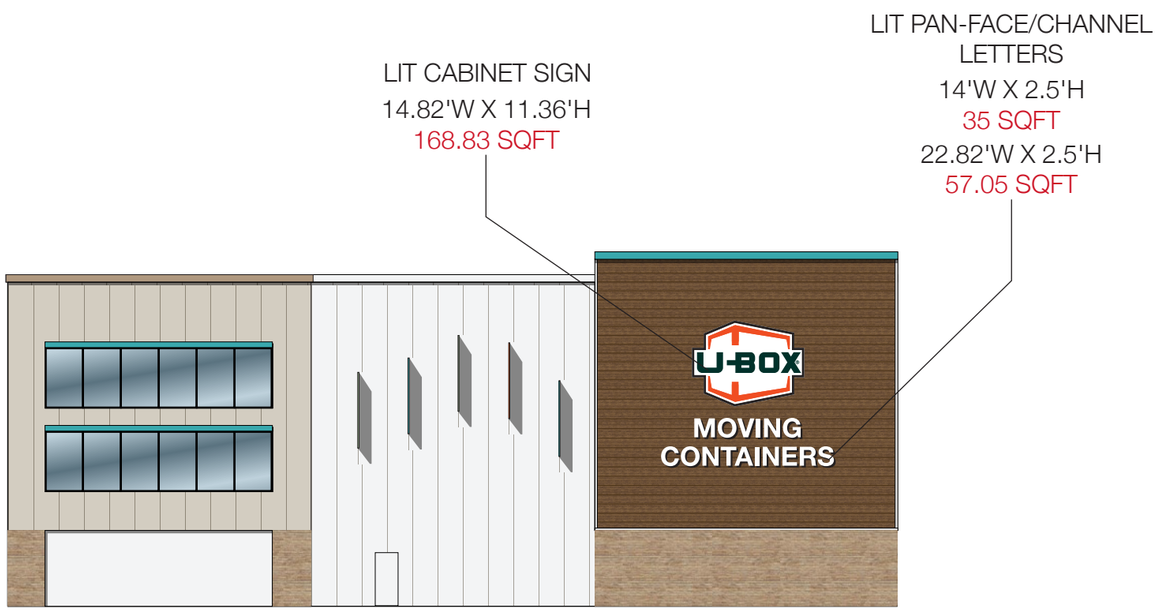

## SOUTH ELEVATION

Scale: 1" = 20'



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Nov. 23rd, 2022




## WEST ELEVATION

Scale: 1" = 20'


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Nov. 23rd, 2022

existing entry
lawn
flowering shrub
flowering perennials
evergreen tree
lawn
shade tree
sign
Stone Edging
staghorn sumac
ornamental tree
@ brick base
Stone Edging
flowering shrub
@ metal panel
bluegrass lawn
naturalized fescue
existing building
existing parking lot
- no change



naturalized fescue

North 0 20' 40' 80'

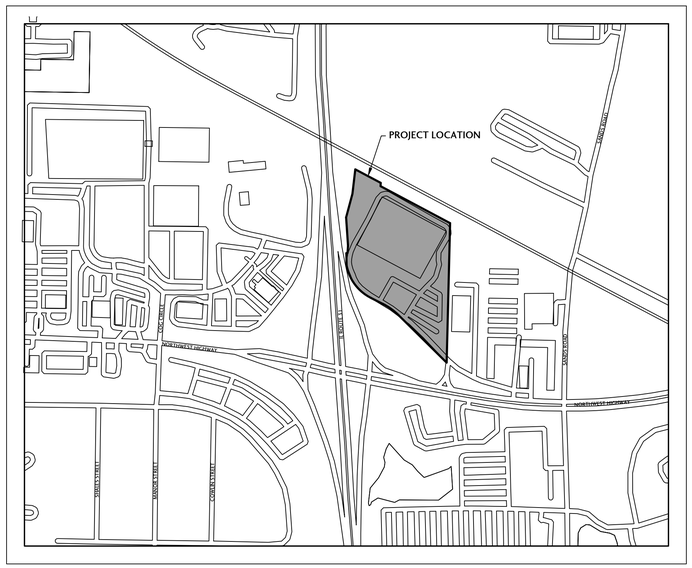
PRELIMINARY
NOT FOR CONSTRUCTION

# ENGINEERING PLANS
# FOR
# U-HAUL CRYSTAL LAKE
# U-BOX BUILDING

## 4504 NORTHWEST HWY
## CRYSTAL LAKE, IL 60014

## PLANS PREPARED FOR:

MR. BRIAN HEIMSOTH
B&C ENTREPRISES
2482 TECHNOLOGY DRIVE
ELGIN, IL 60124




LOCATION MAP
N.T.S.

## BENCHMARK

SITE BENCHMARK:

CROSS IN HEADWALL
ELEV=901.85 NAVD88

811
Know what's **below.**
**Call** before you dig.

OPERATES 24 Hours 365 Days

CALL JULIE 1-800-892-0123
WITH THE FOLLOWING:
COUNTY MCHENRY
CITY-TOWNSHIP CITY OF CRYSTAL LAKE
SEC. & ¼SEC. NO.# SE 1/4 SEC 3, T43N, R8E
48 Hours Before You Dig.
EXCLUDING SAT., SUN., & HOLIDAYS

SHEET INDEX:


C0.0 COVER SHEET
C0.1 SPECIFICATIONS AND TYPICAL SECTIONS
C1.0 EXISTING CONDITIONS AND DEMOLITION PLAN
C2.0 OVERALL SITE PLAN
C3.0 GRADING & EROSION CONTROL PLAN
C4.0 STANDARD DETAILS
C4.1 STANDARD DETAILS


## LEGEND

| EXISTING | DESCRIPTION | PROPOSED |
|---|---|---|
| | DOWN GUY | |
| | DRAIN | |
| | ELECTRIC TELEPHONE TV RISERS | |
| | UTILITY HANDHOLE MANHOLE | |
| | ELECTRIC GAS WATER METER | |
| | UTILITY MARKER | |
| | LIFT STATION | |
| SPGT | SPIGOT | |
| | TRAFFIC CONTROL BOX | |
| | TRAFFIC CONTROL SIGNAL | |
| | TRANSFORMER | |
| | WELL | |
| | SOIL BORING | |
| | A/C UNIT | |
| | FLAG POLE | |
| | CURB INLET | |
| | SANITARY MANHOLE | |
| | STORM MANHOLE | |
| | STORM CATCH BASIN | |
| | STORM INLET | |
| | FLARED END SECTION | |
| | VALVE VAULT | |
| | WATER VALVE | |
| | FIRE HYDRANT | |
| | SIGN POST | |
| | LIGHT POLE | |
| DS | DOWNSPOUT | DS |
| | BOLLARD | BOL |
| | UTILITY POLE | |
| | CLEANOUT | CO |
| | MAILBOX | |
| W | WATERMAIN | W |
| | SANITARY SEWER | |
| | STORM SEWER | |
| X | FENCE | X |
| OE | OVERHEAD ELECTRIC | OE |
| E | ELECTRIC SERVICE | E |
| T | TELEPHONE SERVICE | T |
| GAS | GAS SERVICE | GAS |
| | COMBINED SEWER | |
| XXX | MAJOR CONTOUR | XXX |
| XXX | MINOR CONTOUR | XXX |

PRELIMINARY
NOT FOR CONSTRUCTION

MEGHAN A. MICHEL
062-057170
LICENSED PROFESSIONAL ENGINEER OF
ILLINOIS

I HEREBY CERTIFY THAT THE PLANS WITH THE FIRM'S NAME LISTED BELOW WERE PREPARED UNDER MY DIRECT SUPERVISION. FURTHERMORE, THE PROPOSED PROJECT WILL NOT RESULT IN DRAINAGE, EROSION OR RUNOFF WHICH ADVERSELY IMPACTS ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY. THE PLANS PREPARED MEET THE MINIMUM REQUIREMENTS OF THE MCHENRY COUNTY STORMWATER MANAGEMENT ORDINANCE. DATED AT RINGWOOD, ILLINOIS THIS 14th DAY OF OCTOBER, 2022

Meghan A Michel

MEGHAN A. MICHEL, P. E. , J. CONDON & ASSOCIATES, INC.
ILLINOIS REG. PROF. ENGINEER No. 062-057170 EXPIRATION DATE 11-30-2023
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION FIRM NUMBER: 184-006759


J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759


B&C ENTERPRISES

ELGIN,
ILLINOIS

N W E S

SCALE: N/A
ISSUE DATE: 06/03/2022
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

U-HAUL CRYSTAL LAKE U-BOX BUILDING

CRYSTAL LAKE,
ILLINOIS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |


LIMITATION OF WARRANTY OF ENGINEER'S INSTRUMENTS OF SERVICE

THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES FOR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.


PROJECT NUMBER: BCEI-21046-3

SHEET TITLE: COVER SHEET

SHEET NUMBER: C0.0


X:\2021\21046\cad\21046-3.dwg, 10/24/2022 11:36:48 AM, DWG To PDF.pc3, 1:1

## Design Special Provisions

The Standard Specifications for Road and Bridge Construction prepared by the Department of Transportation of the State of Illinois (latest edition), Supplemental Specifications, the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition) and the Illinois Urban Manual (blue book) as published by the IEPA shall govern the construction of this project.

In addition, the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

1. Scope of Work

The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated "U-HAUL CRYSTAL LAKE U-BOX BUILDING."

2. Construction Of Underground Utilities

A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.

The slopes shall not extend below the top of the pipe, and the trench excavations below this point shall be made with vertical sides with width not exceeding those specified herein for the various sizes of pipe.

Open-cut trenches shall be sheeted and braced as required by the governing state, federal laws and municipal ordinances, and as may be necessary to protect life, property or the work.

Where firm foundation is not encountered at the grade established, due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

B. Width of Trenches: The maximum width of the trench at the top of the pipe shall be as follows:

| Nominal Pipe Sizes (inches) | Trench Widths (inches) |
|---|---|
| 12 or smaller | 30 |
| 14-18 | 36 |
| 20-24 | 42 |
| 27-30 | 48 |
| 33 and larger | 1-1/3 times pipe O.D. |

C. Removal of Water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the City Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities.

D. Bedding of Pipe: All pipe shall be installed on a bedding of approved, compacted granular material unless otherwise approved by the City Engineer. The bedding material shall be installed as per the typical trench backfill detail.

E. Trench Backfill: Whenever the excavation is in or within 2 feet of existing or proposed streets, parking areas, driveways, sidewalks or other paved areas, the trench shall be backfilled with approved selected granular material compacted in place. The granular material shall consist of CA-6 and extend away from the back of curb or any edge of pavement at a 1 to 1 slope. The top 12 inches of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area when the trench is in existing pavements.

F. Restoration of Drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practical after backfilling is complete.

G. Utilities: The contractor shall notify all utilities prior to the installation of any pipelines. Where conflicts exists between underground utilities and the proposed underground pipeline requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.

3. Inspection

All improvements shall be subject to inspection by a duly authorized and qualified Owner's Representative both during the course of construction and after construction is complete. The Owner's Representative shall have authority over materials of construction, methods of construction and workmanship to ensure compliance with working drawings and specifications. The contractor shall provide for reasonable tests and proof of quality of materials as requested by the inspector. Upon due cause, which shall include weather conditions, workmanship or non-adherence to the approved plans and specifications, the inspector shall have the authority to stop construction.

4. Sanitary Service Lines

The services shall be of adequate depth at the property line to gravity drain the lowest point in the building. Where necessary, riser pipes shall be installed to prevent the service line from being installed deeper than necessary. All sanitary services shall be 10 feet parallel to water services where practical. All services shall be marked with a red-topped wood 4"x 4" x 8' stake, securely buried with 30 inches exposed. Required trench backfill shall be considered in the cost of the service being installed.

5. Water Main

Water mains shall be cement lined Class 52 Ductile Cast Iron pipe meeting the requirements of ANSI A21.51 or Class 150 (SDR 18) PVC pipe meeting the requirements of AWWA Standard C900. Pipe joints may be push-on bell and spigot type with rubber ringed gasket, except for valves, hydrants and bends used for vertical height adjustments to cross over or under storm and sanitary structures and pipe, which shall be mechanical joints. All required fittings for water main construction shall be included in the cost of the water main being installed.

6. Fire Hydrants

Hydrants shall be per City of Crystal Detail "UW-06" with break away flange and a depth of "bury" compatible to the finished grade and elevation of the water main. All hydrants shall have an auxiliary valve and box.

7. Valves And Vaults

Valve vaults shall be provided for all valves except fire hydrant auxiliary valves and will be of the type specified in the valve vault detail. The word "Water" shall be permanently imprinted on the face of the valve box and valve vault covers. All valves shall be Mueller 2360-23-9020 or American Flow Control 2500-1 Resilient Seat Gate Valve or approved equal.

8. Protection Of Water Main And Water Service Lines

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

A. Water Main

1. Horizontal Separation

a. Water mains shall be located at least 10 feet (3.1 m)horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

b. Water mains may be located closer than 10 feet (3.1 m)to a sewer line when:

i. local conditions prevent a lateral separation of 10 feet (3.1 m); and

ii. the water main invert is at least 18 inches (460 mm)above the crown of the sewer; and

iii. the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

c. When it is impossible to meet (a.) or (b.) above, both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure to the maximum expected surcharge head before backfilling.

2. Vertical Separation

a. A water main shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within 10 feet (3.1 m) horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

b. Both the water main and sewer shall be constructed of slip-on, mechanical joint cast or ductile iron pipe, prestressed conrete pipe, or PVC pipe equivalent to water main standards of construction when:

i. it is impossible to obtain the proper vertical separation as described in (a)above;

or

ii. the water main passes under a sewer or drain.

c. A vertical separation of 18 inches (460 mm) between the invert of the sewer drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support for the sewer or drain lines shall be provided to prevent settling and breaking the water main, as shown on the plans or as approved by the ENGINEER.

d. Construction shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least 10 feet (3.1 m).

9. Water Service Line

a. The horizontal and vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as the water main separation described in (A) above.

b. The water pipe described in (2) above shall be used for sewer service lines when minimum horizontal and vertical separation cannot be maintained.

1. Special Conditions. Conditions in (1.), (2.) and (3.) shall be met unless special considerations are covered in the Plans and Special Provisions.

2. Sewer Manholes. No water pipe shall pass through or come in contact with any part of a sewer or sewer manhole.

10. Pressure And Leakage Testing

After the pipe has been laid and partly backfilled as Specified herein, all newly laid pipe or any valved sections of it shall, unless otherwise expressly specified, be subjected to a hydrostatic pressure equal to fifty (50) percent more than the operating pressure at the lowest elevation of the pipe section, but not to exceed the pressure rating of the type of pipe specified. The duration of each pressure test shall be for a period of not less than one hour and not more than six hours. The basic provisions of AWWA C-600 and C-603 shall be applicable.

Each section of pipe to be tested, as determined by the ENGINEER, shall be slowly filled with water and the Specified test pressure shall be applied by means of a pump connected to the pipe in a satisfactory manner. The pump, pipe connection and all necessary apparatus including gauge and meters shall be furnished by the CONTRACTOR. Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made, if necessary, at points of highest elevation and afterwards tightly plugged. Any cracked of defective pipes, fittings, valves, or hydrants discovered in consequence of this pressure test shall be removed and replaced by the CONTRACTOR with the sound material and the test shall be repeated until satisfactory to the ENGINEER. Provisions of AWWA C-600 and C-603, where applicable, shall apply.

After completion of the pressure test, a leakage test shall be conducted to determine the quantity of water lost by leakage under the specified test pressure. Test pressure is defined as the maximum operating pressure of the section under test and is based on the elevation of the lowest point in the line or section under test corrected to the elevation of the test gauge. Applicable provisions of AWWA C-600 and C-603 shall apply. Duration of each leakage test shall be a minimum of one (1) hour in addition to the pressure test period.

11. Disinfection & Chlorination

All installed water mains shall be disinfected and chlorinated per Article 41, Section 2.14 of the Standard Specifications.

12. Storm Sewers

Storm sewers shall be of reinforced concrete pipe meeting the requirements of ASTM C-76. Pipe shall be Class III for depths less than or equal to 14 feet and Class IV for depths exceeding 14 feet or less than 3 feet under paved surfaces. All joints shall be completed with mastic joint materials.

OR

Corrugated Polyethylene (HDPE) Pipe with Smooth Interior. Pipes and fittings shall meet the requirements of AASHTO M-294 (12" and larger), Type S (corrugated outside smooth inside, 4" -48"). The joints shall be bell and spigot having a factory installed Elastomeric rubber "O-ring" gasket which meets ASTM F-477.

OR

Corrugated Polypropylene (CPP) Pipe with Smooth Interior. Pipes and fittings shall meet the requirements of AASHTO M-330 (12" and larger). The joints shall be bell and spigot having meeting the requirements of ASTM F2881 or AASHTO M330 with a factory installed Elastomeric rubber "O-ring" gasket which meets ASTM F-477.

OR

PVC storm sewer shall be SDR 26 ASTM D3034 with ASTM D3212 joints.

13. Storm Sewer Frames And Grates

All frames and grates shall be per City of Crystal Lake details "UD-01a-d".

14. Earth Excavation

This item shall include stripping and stockpiling of all topsoil in areas designated by the Owner's Representative. All material deposited in embankment areas shall be compacted under the direction of the municipal inspector. Topsoil shall be stripped in all fill areas before placement of material. All excess material shall be disposed of off-site at an approved facility by the contractor unless otherwise directed by the Owner.

15. Topsoil Placement

The contractor shall place topsoil to a minimum depth of 6 inches over all unpaved disturbed areas ready for landscaping. The surface of the topsoil shall be free from clods, stones, sticks and debris. Placement shall include spreading, cultivating, lightly compacting, dragging and grading. Topsoil, when placed, shall be dry enough so as not to puddle or bond. Topsoil shall not be placed when the subgrade is frozen, excessively wet, or in any other condition detrimental to proper grading. Remove all foreign matter and soil clods larger than 1" in diameter. If undesirable vegetation is present prior to seeding, the topsoil shall be disked until all vegetation has been removed

16. Seeding

All disturbed unpaved areas shall be seeded or sodded with Kentucky Bluegrass mixture or with another mixture approved by the owner's representative. All seeded areas shall be covered with the specified erosion control matting. All seeded areas shall have an adequate growth of grass before work is accepted. All seeded areas shall be stabilized within 24 hours after seeding operations have been completed. The owner's representative shall approve the seed bed prior to sowing any seeds. Prior to starting seed work, contractor shall submit the name of seed supplier for the project and labels from the bags. The seed shall be sown with a machine that mechanically places the seed in direct contact with the soil, packs, and covers the seed in one continuous operation. Broadcasting will be allowed as approved by owner's representative in inaccessible areas where the use of the equipment specified is physically impossible. Adequate growth will be defined as root depth into topsoil a minimum of 2" and dense, green, consistent turf void of any bare or patchy areas of more than 9 square inches. The contractor shall maintain the turf grass until final acceptance. Maintenance to include grade repair, reseeding, mowing, insect & weed control, trimming & edging. Each mowing shall occur when the grass has reached a height of 4 inches. Mow to a height of 3 inches, turf shall be mowed so as not to remove more than 1/3 of the total height. The cost of such maintenance shall be included in the turf grass installation cost. All seeded areas shall have an adequate growth of grass before work is accepted.

17. Bituminous Materials (Prime Coat)

Prime shall be MC-30 applied at a rate of 0.35 GAL/SY of pavement for all aggregate areas. Prime shall be SS-1 applied at a rate of 0.1 GAL/SY of pavement on all bituminous surfaces.

18. Traffic Control

The contractor shall obtain, erect, maintain and remove all signs, barricades, flagman, and other traffic control devices as may be necessary for the purpose of regulating, warning or guiding traffic. Placement and maintenance of all traffic control devices shall be as directed by the municipal inspector and in accordance with the applicable parts of Article 701 of the Standard Specifications for Road and Bridge Construction. All traffic protection will be considered incidental to the contract.

19. Engineer's Responsibility

The engineer shall be responsible for the following:

A. To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the engineer;

B. The engineer shall not, during such visits or as a result of such observations of the contractor's work in progress, supervise, direct, have control over the contractor's work, nor shall the engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the contractor for safety precautions and programs incidental to the work of the contractor, or for any failure of the contractor to comply with the laws, rules, regulations, ordinances, codes or orders applicable to the contractor furnishing and performing his work. Accordingly, the engineer can neither guarantee the performance of the construction contracts by the contractor nor assume responsibility for the contractor's failure to furnish and perform his work in accordance with the contract documents.

20. Construction Drawings/Contractor's Responsibility

No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. In addition, the contractor must verify the engineer's line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the engineer before doing any work, otherwise, the contractor assumes full responsibility. In the event of disagreement between the construction plans, Standard Specifications and/or special details, the contractor shall secure written instructions from the engineer prior to proceeding with any part of the work effected by omissions or discrepancies. Failing to secure such instructions, the contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question arising with respect to specifications, the decision of the engineer shall be final and conclusive.

21. Indemnification

The contractor shall indemnify and hold harmless the Owner and J. Condon & Associates, Inc. from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the contractor's work. In any and all claims against the owner or J. Condon & Associates, Inc., by any employee of the contractor, or anyone directly or indirectly employed by the contractor, or anyone for whose acts the contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of damages, compensation or benefits payable by or for the contractor under Worker's Compensation acts, disability benefit acts or other employee benefit acts.

22. Preconstruction Conference

A preconstruction conference for representatives of the developer, municipality and contractor will be held before the contractor proceeds with construction, at a time and place convenient for all parties, for review of the contractor's construction schedules, to establish procedures for handling shop drawing and other submittals and to establish a working understanding among the parties to the contract work.

23. Project Quantities

The quantities given by the engineer are intended as a guide for the contractor in determining the scope of the completed project. It is the contractor's responsibility to determine all material quantities and appraise himself of all site conditions. The contract price submitted by the contractor shall be considered as lump sum for the completed project. No claims for extra work will be recognized unless ordered in writing by the Owner.

24. Insurance Requirements

The contractor shall purchase and maintain Comprehensive General Liability and other insurance set forth below which will provide protection from claims which may arise out of or resulting from the performance of work by anyone directly or indirectly employed by the contractor or by anyone for whose acts the contractor may be liable.

A. Worker's Compensation and Employer's Liability insurance in any amount not less than statutory limits required by law.

B. Comprehensive General Liability insurance including coverage in the amount of $500,000 per accident for property damage and $1,000,000 per person and $2,000,000 aggregate per accident for bodily injury, sickness or disease, or death of any person.

C. Comprehensive Automobile Liability insurance covering all automobiles, trucks, trailers and any other motorized equipment owned or leased by the contractor.

25. Certificate of Insurance

The contractor shall not commence work until he has filed with the Owner's Representative a certificate of insurance showing complete coverage of all insurance required, signed by the insurance companies or their authorized agents. Each certificate shall provide that coverage shall not be terminated or reduced without 30 days advance written notice to the Owner's Representative. The contractor shall name the Owner & J. Condon & Associates, Inc. as additional insureds on the Comprehensive General Liability and Automobile Liability policies.

26. Erosion Control

It shall be the contractor's responsibility to properly control erosion on the job site through the use of siltation ponds, filter fabrics, etc. Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the contractor until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the contractor.

The contractor's responsibility for erosion control shall extend throughout the construction process. The contractor shall be responsible for clean-up of paved surfaces within and outside of the project.

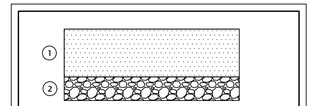
All erosion control practices shall comply with the latest revision of the Illinois Urban Manual (Blue Book) as published by the IEPA.

## STANDARD SOIL EROSION AND SEDIMENT CONTROL

1. Control measures shall meet the minimum standards and specifications of the *Illinois Urban Manual* (www.aiswcd.org/IUM) unless stated otherwise.
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. Offsite 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 1 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 blanket 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.

Standard Drain Tile Notes

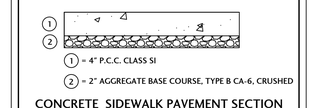
1. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
2. All abandoned drain tiles within disturbed areas shall be removed in their entirety.
3. Drain tiles within the 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.




1 = 8" P.C.C. CLASS SI

2 = 4" AGGREGATE BASE COURSE, TYPE B CA-6, CRUSHED

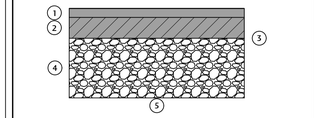
HEAVY DUTY CONCRETE PAVEMENT SECTION
N.T.S.




1 = 4" P.C.C. CLASS SI

2 = 2" AGGREGATE BASE COURSE, TYPE B CA-6, CRUSHED

CONCRETE SIDEWALK PAVEMENT SECTION
N.T.S.




1 = 1.50" HMA SURFACE COURSE, MIX "D", IL-9.5, N50

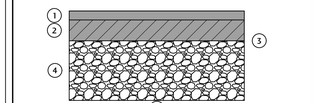
2 = 2.50" HMA BINDER COURSE, IL-19.0, N50

3 = BITUMINOUS MATERIALS PRIME COAT, MC-30, 0.35 GAL/SY

4 = 8" AGGREGATE BASE COURSE, TYPE B CA-6, CRUSHED

5 = SUBGRADE, COMPACTED & PROOF ROLLED

PARKING LOT ASPHALT PAVEMENT SECTION
N.T.S.




1 = 1.50" HMA SURFACE COURSE, MIX "D", IL-9.5, N50

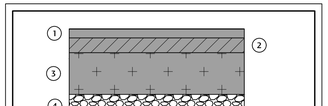
2 = 3.50" HMA BINDER COURSE, IL-19.0, N50

3 = BITUMINOUS MATERIALS PRIME COAT, MC-30, 0.35 GAL/SY

4 = 10" AGGREGATE BASE COURSE, TYPE B CA-6, CRUSHED

5 = SUBGRADE, COMPACTED & PROOF ROLLED

HEAVY DUTY ASPHALT PAVEMENT SECTION
N.T.S.




1 = 1.50" HMA SURFACE COURSE, MIX "C", IL-9.5, N50

2 = 2.50" HMA BINDER COURSE, IL-19.0, N50

3 = 7" HMA BASE COURSE

4 = 4" AGGREGATE BASE COURSE, TYPE B CA-6, CRUSHED

5 = TRENCH BACKFILL

UTILITY TRENCH ASPHALT PAVEMENT SECTION
N.T.S.


J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
545 E BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759


B&C ENTERPRISES

ELGIN,
ILLINOIS

N W E S

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

SCALE: N/A

ISSUE DATE: 06/03/2022

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

# U-HAUL CRYSTAL LAKE U-BOX BUILDING

CRYSTAL LAKE,
ILLINOIS

PROJECT NUMBER
BCEI-21046-3

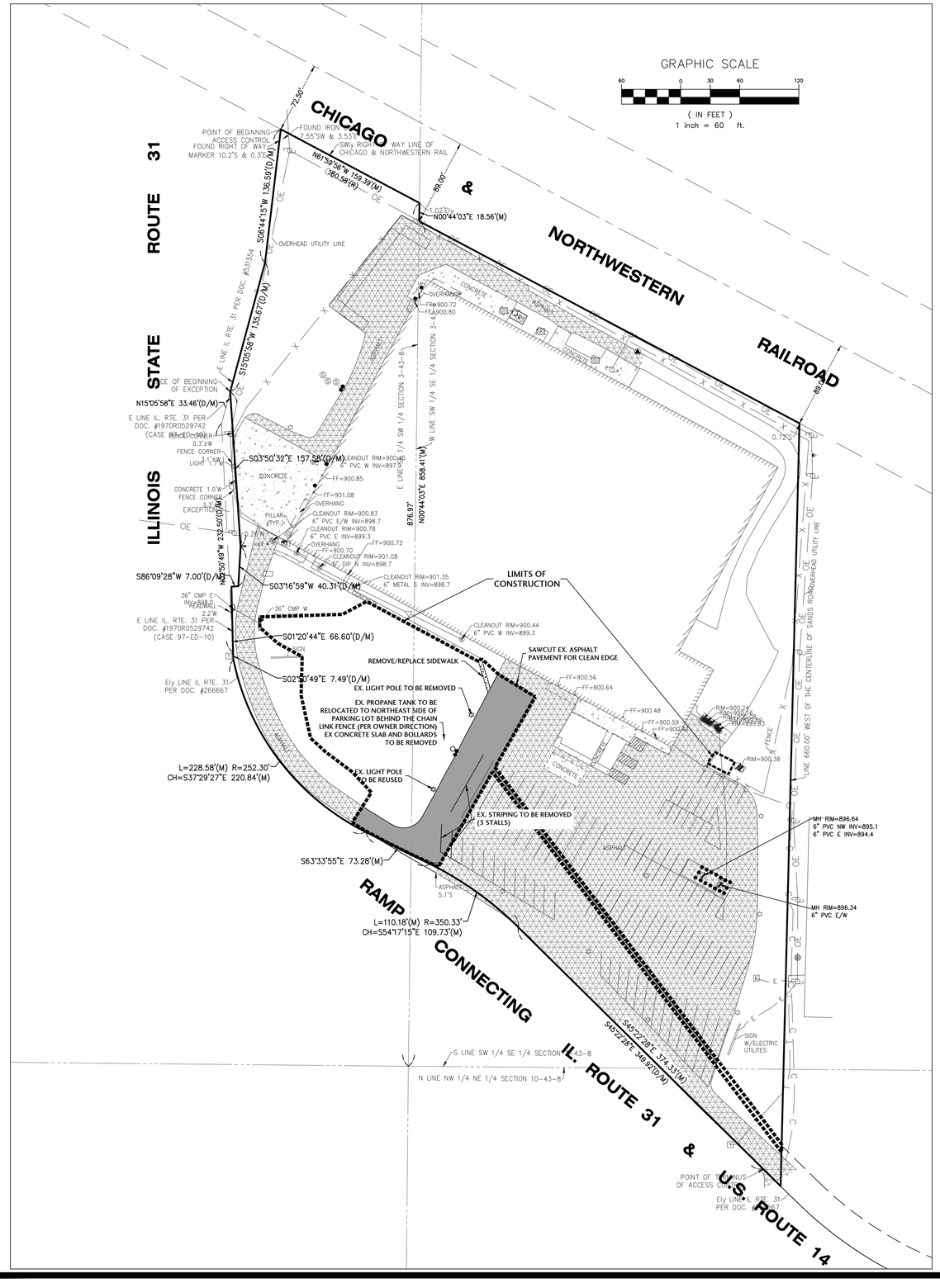
SHEET TITLE

SPECIFICATIONS AND TYPICAL SECTIONS

SHEET NUMBER

C0.1


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## DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO DEMOLITION. SOME UTILITIES MAY NOT BE SHOWN.
2. COORDINATE WITH LOCAL AUTHORITIES AND UTILITY PURVEYORS FOR THE REMOVAL/RELOCATION OF EXISTING UTILITIES.
3. SAWCUTTING OF EXISTING PAVEMENT SHALL BE FULL DEPTH TO PROVIDE A CLEAN VERTICAL FACE TO MATCH PROPOSED PAVEMENT.
4. KEEP ALL PUBLIC AND PRIVATE STREETS CLEAR OF CONSTRUCTION DEBRIS, TRASH, AND MATERIALS. ALL ADJOINING PUBLIC AND PRIVATE PROPERTIES SHALL BE PROTECTED FROM DAMAGED CAUSED BY CONSTRUCTION.
5. ALL WASTE MATERIALS SHALL BE DISPOSED OF OFFSITE IN AN APPROVED FACILITY.
6. ALL WASTE MATERIALS SHALL BE REMOVED IN A MANNER THAT PREVENTS INJURY OR DAMAGE TO PERSONS, ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY.
7. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION OPERATIONS.
8. THE SITE SHALL BE GRADED TO MINIMIZE ACCUMULATION OF WATER OR DAMAGE TO ANY FOUNDATIONS ON THE PREMISES OF ADJOINING PROPERTY.

## LEGEND

- = EXISTING BITUMINOUS PAVEMENT
- = EXISTING CONCRETE SIDEWALK
- = EXISTING GRAVEL
- = EXISTING BUILDING
- = PAVEMENT TO BE REMOVED
- = CONCRETE PAVEMENT TO BE REMOVED
- ------ = FULL DEPTH SAWCUT
- ▪▪▪▪▪ = LIMITS OF WORK AREA

## SITE DATA TABLE

| | |
|---|---|
| **EXISTING** | |
| IMPERVIOUS AREA: | 6.23 ACRES |
| PERVIOUS AREA: | 2.50 ACRES |
| PROPERTY AREA: | 8.73 ACRES |
| **PROPOSED** | |
| IMPERVIOUS AREA: | 6.60 ACRES (16,139 SF NEW) |
| DISTURBANCE AREA: | 0.95 ACRES |


J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759


B&C ENTERPRISES

ELGIN, ILLINOIS

N W E S

SCALE: 1" = 60'
ISSUE DATE: 06/03/2022
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

U-HAUL CRYSTAL LAKE U-BOX BUILDING

CRYSTAL LAKE, ILLINOIS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

PROJECT NUMBER: BCEI-21046-3

SHEET TITLE: EXISTING CONDITIONS AND DEMOLITION PLAN

SHEET NUMBER: C1.0

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## OVERALL NOTES

1. ALL SIGNING AND PAVEMENT MARKINGS SHALL MEET MUTCD STANDARDS.
2. PAVEMENT MARKINGS TO BE 4" WIDE PAINT UNLESS OTHERWISE NOTED.
3. ALL ACCESSIBLE PARKING SIGNS (R7-8) SHALL BE PLACED AT THE CENTER OR THE PARKING SPACE AND WITHIN 5' OF THE SPACE.
4. ALL DIMENSIONS ARE TO BACK OF CURB, EDGE OF PAVEMENT, AND OUTSIDE OF BUILDING FOUNDATION UNLESS OTHERWISE NOTED.
5. STRIPING DIMENSIONS ARE FROM CENTER TO CENTER OF PAVEMENT MARKING.

## LEGEND

- = EXISTING BITUMINOUS PAVEMENT
- = EXISTING CONCRETE PAVEMENT
- = EXISTING CONCRETE SIDEWALK
- = EXISTING BUILDING
- = PROPOSED BUILDING
- = PROPOSED PARKING LOT PAVEMENT
- = PROPOSED HEAVY DUTY PAVEMENT
- = PROPOSED CONCRETE PAVEMENT
- = PROPOSED CONCRETE SIDEWALK

## STORM SEWER TAGS

P1. PROP 12" FES W/GRATE
INV = 897.00

P2. PROP 58 LF 12" ST SEWER @ 0.86%

P3. PROP CB TC 3' DIA, T8GR
RIM = 899.50
INV = 896.50 (SW, SE)

P4. PROP 41 LF 12" ST SEWER @ 0.98%

P5. PROP CB TC 3' DIA, T8GR
RIM = 899.25
INV = 896.10 (E, W)

P6. PROP 85 LF 12" ST SEWER @ 0.53%

P7. PROP CB TC 3' DIA, T8GR
RIM = 899.30
INV = 895.65 (E, W)

P8. PROP 38 LF 12" ST SEWER @ 0.53%

P9. PROP CB TC 3' DIA, T8GR
RIM = 899.35
INV = 895.45 (NW, SE)

P10. PROP 60 LF 12" ST SEWER @ 0.50%

P11. PROP CB TA, 4' DIA, TIF OL
W/ SNOUT DEBRIS HOOD
RIM = 899.00
INV = 895.15 (N)
INV = 893.90 (W, SE)

P12. PROP CB TA, 3' DIA, TIF OL
RIM = 896.25
INV = 894.15

P13. PROP 33 LF 12" ST SEWER @ 0.76%

P14. PROP 477 LF 15" ST SEWER @ 0.30%

P15. PROP 15" FES W/GRATE
INV = 892.45

GRAPHIC SCALE

30 0 15 30 60

( IN FEET )
1 inch = 30 ft.


J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759


**B&C ENTERPRISES**

ELGIN, ILLINOIS

N W E S

SCALE: 1"=30'
ISSUE DATE: 06/03/2022
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

**U-HAUL CRYSTAL LAKE U-BOX BUILDING**

CRYSTAL LAKE, ILLINOIS

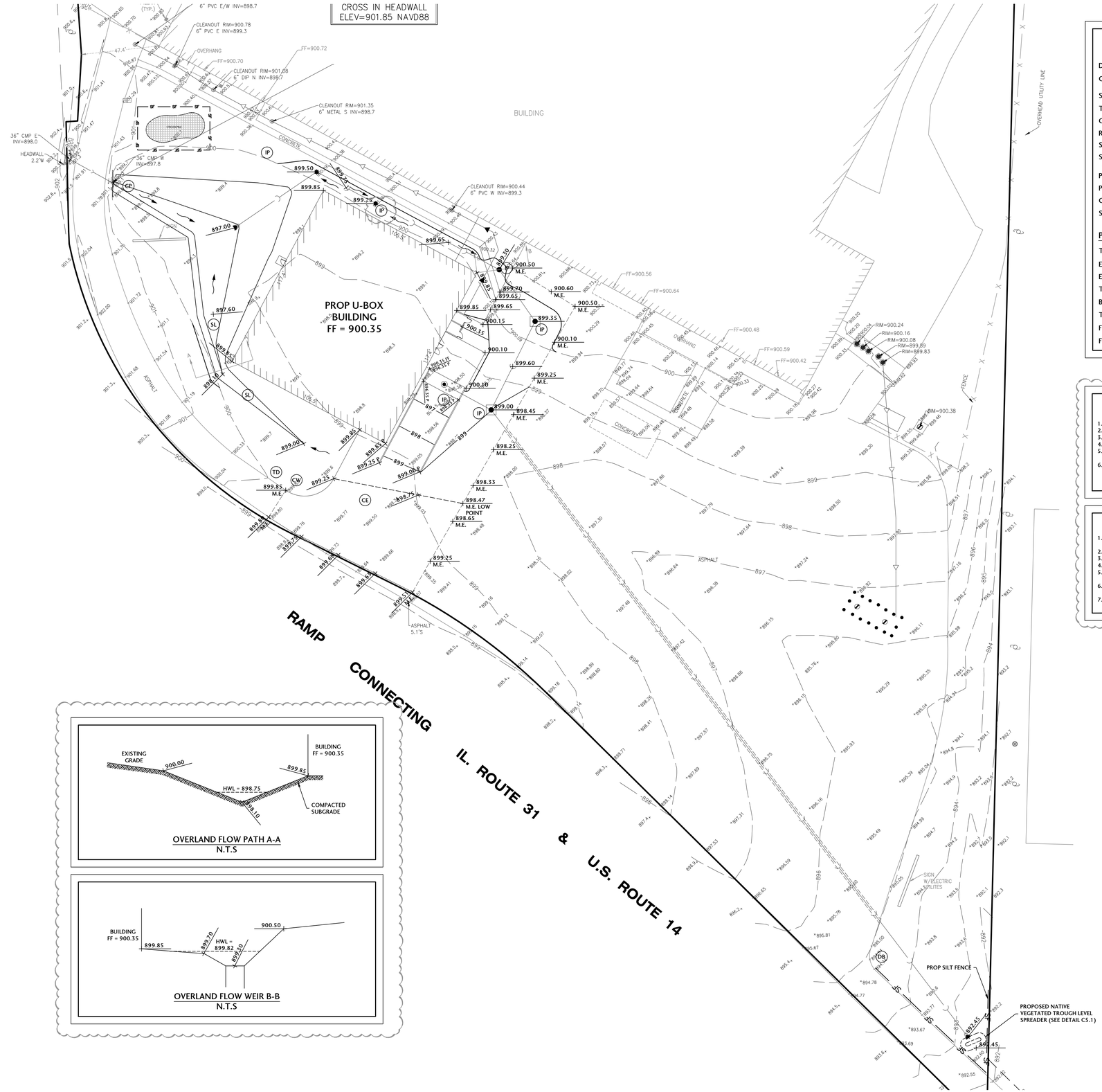
| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

PROJECT NUMBER: BCEI-21046-3

SHEET TITLE: OVERALL SITE PLAN

SHEET NUMBER: C2.0

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## GRADING & EROSION CONTROL LEGEND

| | |
|---|---|
| DRAINAGE ARROW | X.XX% |
| OVERLAND OVERFLOW ROUTE | 100 YR OVERFLOW |
| SILT FENCE | SF |
| TEMPORARY TYPE II/ TYPE III TRAFFIC BARRICADES | TB |
| OPEN-LID INLET PROTECTION | IP |
| RIP RAP PROTECTION | RR |
| SEDIMENT LOG (CURLEX SEDIMENT LOG 6") | SL |
| STABILIZED CONSTRUCTION ENTRANCE (USE EX. PAVEMENT) | CE |
| PERMIT DISPLAY BOARD | DB |
| PORTABLE CONCRETE WASHOUT AREA | CW |
| ONSITE TRASH DUMPSTER | TD |
| SEDIMENT LOG CULVERT PROTECTION | CP |

## PROPOSED ELEVATIONS:

| | |
|---|---|
| TOP OF CONCRETE CURB | C XXX.XX |
| EDGE OF CONCRETE/BITUMINOUS PAVEMENT | P XXX.XX |
| EDGE OF CONCRETE SIDEWALK | W XXX.XX |
| TOP OF WALL | T/W XXX.XX |
| BOTTOM OF WALL | B/W XXX.XX |
| TOP OF FOUNDATION | T/F XXX.XX |
| FIRST FLOOR ELEVATION | FF XXX.XX |
| FINISHED GRADE | XXX.XX |

E-28

### EROSION CONTROL
### SEQUENCE OF CONSTRUCTION/EROSION CONTROL MEASURES

1. Installation of sedimentation and erosion control measures.
2. Site clearing and topsoil stripping.
3. Excavation and grading.
4. Placement of topsoil on disturbed areas.
5. Seeding, landscaping and final stabilization Seeding to be completed within 7 days of final grading.
6. All temporary erosion control measures shall be removed and disposed of within 30 days of final stabilization. All trapped sediment is required to be stabilized or disposed of offsite.

### EROSION CONTROL NOTES

1. Construction on this site shall comply with all Crystal Lake ordinances pertaining to erosion control.
2. All disturbed areas shall be stabilized within 7 days of active disturbance.
3. All roadways shall be cleaned at the end of each day.
4. Silt Sack/approved equal measure shall be placed between all open frame and grates.
5. All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
6. All temporary erosion control measures shall be removed and disposed of within 30 days of final stabilization. All trapped sediment is required to be stabilized or disposed.
7. All erosion and sediment control work shall conform to the Illinois Urban Manual for erosion control.

## GRADING & EROSION CONTROL NOTES:

1. ALL DISTURBED AREAS SHALL BE STABILIZED WITH NA GREEN DS75 EROSION BLANKET OR APPROVED EQUAL OR HYDROSEEDED UNLESS OTHERWISE NOTED WITHIN THE PLAN SET.
2. CONTRACTOR RESPONSIBLE FOR MAINTENANCE/REPAIR OF EROSION CONTROL MEASURES UNTIL ADEQUATE VEGETATION GROWTH HAS OCCURRED. MAINTENANCE/REPAIR WORK SHALL BE INCIDENTAL TO THE INSTALLATION COSTS.
3. CONTRACTOR RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS RECOMMENDED BY THE ENFORCEMENT OFFICER OR THE DESIGNATED EROSION INSPECTOR AS SITE CONDITIONS WARRANT.
4. ALL TRAPPED SEDIMENT IS TO BE PROPERLY STABILIZED OR DISPOSED OF.
5. IF CONTRACTOR NEEDS TO DEWATER WHEN EXCAVATING, THEY MUST PUMP TO A "DIRT BAG" OR APPROVED EQUAL.
6. WHERE THE USE OF TREE PROTECTION FENCING DOES NOT PROVIDE AMPLE ROOM FOR CONSTRUCTION, TREE TRUNK PROTECTION SHALL BE USED.
7. TEMPORARY SEEDING SHALL BE REQUIRED TO TEMPORARILY STABILIZE DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH CONSTRUCTION WILL BE STOPPED FOR A PERIOD OF MORE THAN 14 DAYS. THE COVER CROP SEED MIX SHALL BE UTILIZED FOR TEMPORARY SEEDING.
8. CONTRACTOR IS RESPONSIBLE TO EMPLOY DUST CONTROL METHODS TO REDUCE & PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. IN ADDITION TO MINIMIZATION OF SOIL DISTURBANCE, CONTRACTOR SHALL UTILIZE MULCHING METHODS (IDOT 251.03 OR 251.04), IRRIGATION AND BARRIERS.

### STORM SEWER TAGS

P1. PROP 12" FES W/GRATE
INV = 897.00

P2. PROP 58 LF 12" ST SEWER @ 0.86%

P3. PROP CB TC 3' DIA, T&GR
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INV = 892.45

GRAPHIC SCALE
30 0 15 30 60
( IN FEET )
1 inch = 30 ft.

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815.728.0068
IL DESIGN FIRM # 184-006759

B&C ENTERPRISES

ELGIN,
ILLINOIS

N W E S

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

SCALE
1"=30'

ISSUE DATE
06/03/2022

PROJECT MANAGER
MAM

DESIGNER
MAM

QUALITY CONTROL
JEC

# U-HAUL CRYSTAL LAKE U-BOX BUILDING

CRYSTAL LAKE,
ILLINOIS

PROJECT NUMBER
BCEI-21046-3

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C3.0

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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 | STANDARD NOTES AND SPECIFICATIONS | GE-02a | |
| 2. | | Date: 01/30/15 | |
| 3. | | Drawn DD | Checked AW |
| 4. | | | 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.

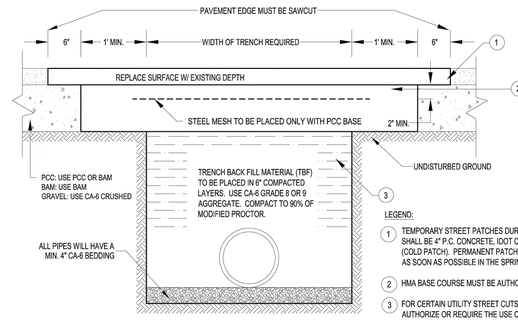
EROSION CONTROL:

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 and grouted in place according to Article 601 of the IDOT Standard Specifications.
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 | STANDARD NOTES AND SPECIFICATIONS | GE-02b | |
| 2. | | Date: 01/30/15 | |
| 3. | | Drawn DD | Checked AW |
| 4. | | | City of Crystal Lake Illinois |

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RD-06



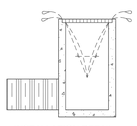

LEGEND:

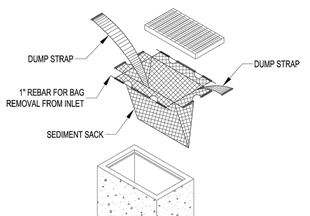
1. TEMPORARY STREET PATCHES DURING WINTER CONSTRUCTION SHALL BE 4" P.C. CONCRETE, IDOT CLASS SI OR A MIN. 3" OF UPM (COLD PATCH). PERMANENT PATCHES SHALL BE COMPLETED AS SOON AS POSSIBLE IN THE SPRING.
2. HMA BASE COURSE MUST BE AUTHORIZED BY THE CITY ENGINEER.
3. FOR CERTAIN UTILITY STREET CUTS, THE CITY ENGINEER MAY AUTHORIZE OR REQUIRE THE USE OF A CONTROLLED LOW-STRENGTH MATERIAL (CLSM) AS PER THE IDOT SPECIAL PROVISIONS.

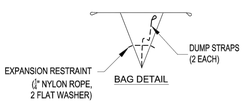
| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | PAVEMENT CUT AND REPLACEMENT | RD-06 | |
| 2. | | Date: 05/19/2015 | |
| 3. | | Drawn JH | Checked AW |
| 4. | | | City of Crystal Lake Illinois |

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EC-04



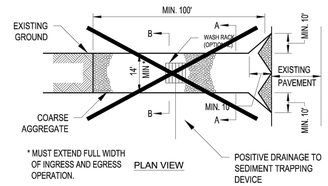




| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | INLET SEDIMENT CONTROL DEVICE | EC-04 | |
| 2. | | Date: 11/2/2007 | |
| 3. | | Drawn EM | Checked AW |
| 4. | | | City of Crystal Lake Illinois |

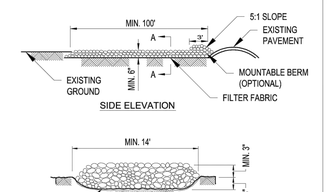
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EC-02



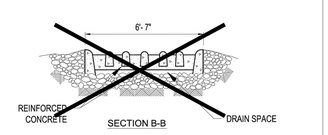

NOTES:

1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 282 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO THE PLACEMENT OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATIONS, CA-1, CA-2, CA-3 OR CA-4.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
4. IF WASH RACKS ARE USED, THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.





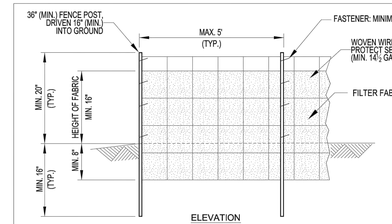





| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | CONSTRUCTION ENTRANCE | EC-02 | |
| 2. | | Date: 07/31/2012 | |
| 3. | | Drawn DD | Checked AW |
| 4. | | | City of Crystal Lake Illinois |

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EC-01




MATERIAL SPECIFICATIONS:

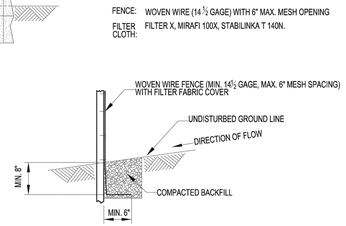
POSTS: STEEL (EITHER "T" OR "U" TYPE) OR HARDWOOD WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.

FENCE: WOVEN WIRE (14½ GAGE) WITH 6" MAX. MESH OPENING

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

NOTES:

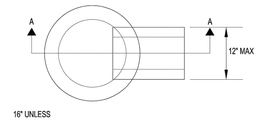
1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED, AS NEEDED, THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE 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




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

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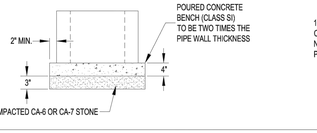
UD-01a

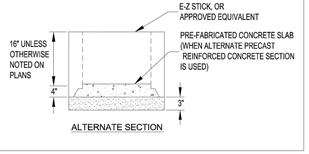



| CASTING SCHEDULE | | |
|---|---|---|
| LOCATION | EJIW | NEENAH |
| B or M 6.12 C&G | 7235 M2 | R3502-A |
| DEPRESSED CURB | 7210 M3 | R-3281A* |
| PAVED | 1920 | R-1713 |
| NON-PAVED | 1020 | R-2535 |

* WITHOUT CURB BOX

| ALTERNATE MATERIALS FOR WALLS | T |
|---|---|
| PRE-CAST REINFORCED CONCRETE SECTIONS | 3" |

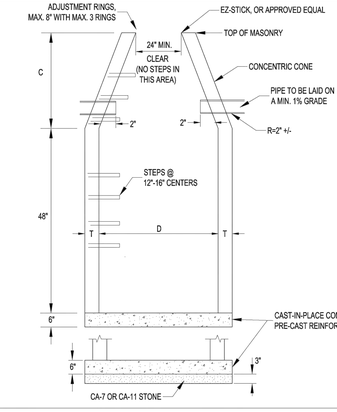



| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | DRAINAGE STRUCTURES: INLET, TYPE A | UD-01a | |
| 2. | | Date: 05/28/2015 | |
| 3. | | Drawn JH | Checked AW |
| 4. | | | City of Crystal Lake Illinois |

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

UD-01b

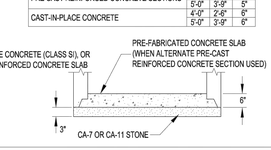



NOTES:

1. ALL CATCH BASINS SHALL BE 4'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
2. 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.
3. DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTIONS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 6 INCHES.

| CASTING SCHEDULE | | |
|---|---|---|
| LOCATION | EJIW | NEENAH |
| B or M 6.12 C&G | 7235 M2 | R3502-A |
| DEPRESSED CURB | 7210 M3 | R-2511 |
| PAVED | 1920 | R-1713 |
| NON-PAVED | 1020 | R-2535 |

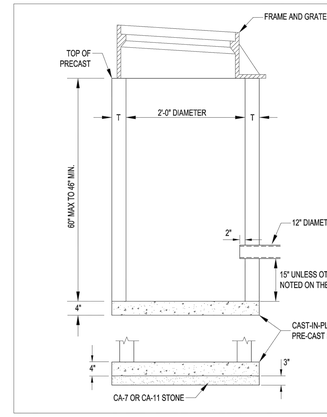
| ALTERNATE MATERIALS FOR WALLS | D | C | T |
|---|---|---|---|
| PRE CAST REINFORCED CONCRETE SECTIONS | 4'-0" | 2'-6" | 4" |
| | 5'-0" | 3'-9" | 5" |
| CAST-IN-PLACE CONCRETE | 4'-0" | 2'-6" | 6" |
| | 5'-0" | 3'-9" | 6" |




| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | CATCH BASIN TYPE A | UD-01b | |
| 2. | | Date: 09/18/2012 | |
| 3. | | Drawn DD | Checked AW |
| 4. | | | City of Crystal Lake Illinois |

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

UD-01c

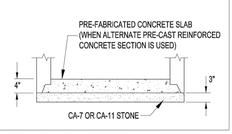



| CASTING SCHEDULE | | |
|---|---|---|
| LOCATION | EJIW | NEENAH |
| B or M 6.12 C&G | 7235 M2 | R3502-A |
| DEPRESSED CURB | 7210 M3 | R-2511 |
| PAVED | 1920 | R-1713 |
| NON-PAVED | 1020 | R-2535 |

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

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J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759


B&C ENTERPRISES

ELGIN, ILLINOIS

N W E S

SCALE: N/A

ISSUE DATE: 06/03/2022

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

U-HAUL CRYSTAL LAKE U-BOX BUILDING

CRYSTAL LAKE, ILLINOIS

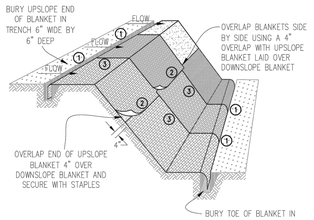
| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

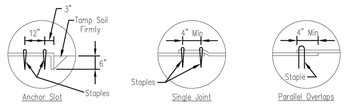
PROJECT NUMBER: BCEI-21046-3

SHEET TITLE: STANDARD DETAILS

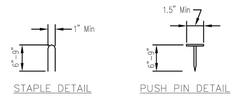
SHEET NUMBER: C4.0

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DETAIL 1 DETAIL 2 DETAIL 3



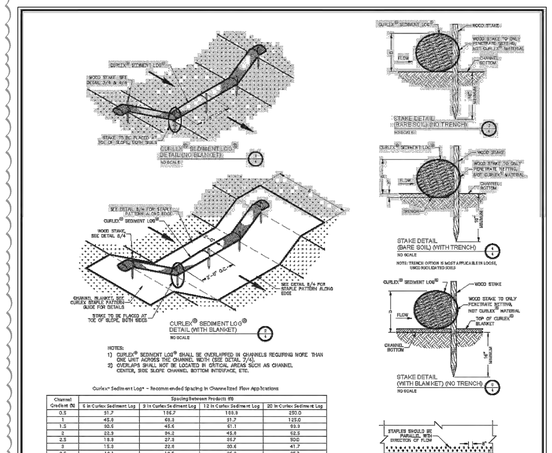

NOTES:

1. Staples shall be placed in a diamond pattern at 2 per s.y. for stiched blankets. Non-stiched shall use 4 staples per s.y. of material. This equates to 200 staples with stiched blanket and 400 staples with non-stiched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

| No. | Description | Date |
|---|---|---|
| 1 | 10% REVISED NO. 1 | 11/08 |

EROSION CONTROL
BLANKET INSTALLATION DETAILS

Designed _____ Date _____
Drawn E. JOHNSON 11/08
Checked _____ _____
Approved _____ _____




Curlex® Sediment Logs – Recommended Spacing In Channelized Flow Applications

| Channel Gradient (%) | Spacing Between Products (ft) | | | |
|---|---|---|---|---|
| | 6 in Curlex Sediment Log | 9 in Curlex Sediment Log | 12 in Curlex Sediment Log | 20 in Curlex Sediment Log |
| 0.5 | 51.7 | 116.7 | 155.9 | 292.0 |
| 1 | 45.6 | 68.3 | 91.7 | 125.6 |
| 1.5 | 30.5 | 45.6 | 61.1 | 94.3 |
| 2 | 22.3 | 34.2 | 45.6 | 62.5 |
| 2.5 | 19.8 | 27.3 | 32.7 | 50.0 |
| 3 | 15.3 | 22.8 | 30.6 | 41.7 |
| 3.5 | 13.1 | 19.5 | 26.2 | 35.7 |
| 4 | 11.5 | 17.1 | 22.5 | 31.3 |
| 4.5 | 10.2 | 15.2 | 20.4 | 27.8 |
| 5 | 9.2 | 13.7 | 18.3 | 25.0 |
| 5.5 | 8.3 | 12.4 | 16.7 | 22.7 |
| 6 | 7.6 | 11.4 | 15.3 | 20.8 |
| 6.5 | 7.1 | 10.5 | 14.1 | 19.2 |
| 7 | 6.5 | 9.8 | 13.1 | 17.9 |
| 7.5 | 6.1 | 9.1 | 12.2 | 16.7 |
| 8 | 5.7 | 8.6 | 11.5 | 15.6 |
| 8.5 | 5.4 | 8.0 | 10.8 | 14.7 |
| 9 | 5.1 | 7.6 | 10.2 | 13.9 |
| 9.5 | 4.8 | 7.2 | 9.6 | 13.2 |
| 10 | 4.6 | 6.8 | 9.2 | 12.5 |
| 11 | 4.2 | 6.2 | 8.3 | 11.4 |
| 12 | 3.8 | 5.7 | 7.6 | 10.4 |
| 13 | 3.5 | 5.3 | 7.1 | 9.6 |
| 14 | 3.3 | 4.9 | 6.5 | 8.9 |
| 15 | 3.1 | 4.6 | 6.1 | 8.3 |
| 16 | 2.9 | 4.3 | 5.7 | 7.8 |
| 17 | 2.7 | 4.0 | 5.4 | 7.4 |
| 18 | 2.5 | 3.8 | 5.1 | 6.9 |
| 19 | 2.4 | 3.6 | 4.8 | 6.6 |
| 20 | 2.3 | 3.4 | 4.6 | 6.3 |
| 25 | 1.8 | 2.7 | 3.7 | 5.0 |
| 30 | 1.5 | 2.3 | 3.1 | 4.2 |
| 35 | 1.3 | 2.0 | 2.6 | 3.6 |
| 40 | 1.1 | 1.7 | 2.3 | 3.1 |
| 45 | 1.0 | 1.5 | 2.0 | 2.8 |
| 50 | 0.9 | 1.4 | 1.8 | 2.5 |

Notes:
1. Spacing of Curlex Sediment Logs is calculated by:
[Distance between channel bottom (ft) top of installed Curlex Sediment Log (ft)/Channel gradient (%)]*100 = Curlex Sediment Log Spacing (ft)
2. Sediment logs are to be placed perpendicular to the flow direction. Minimum installed log lengths of 6 in., 9 in., 12 in., and 20 in Curlex Sediment logs are 5.5', 8', 10.5', and 17.5', respectively.

American Excelsior Company
Earth Science Division

| AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS | SHEET DESCRIPTION: CURLEX® SEDIMENT LOG® DITCH/CHANNEL APPLICATION DETAIL | DATE: 03/01/18 | DRAWN BY: |
|---|---|---|---|
| | | SCALE: NONE | PROJECT NO.: |
| | | | SHEET NO.: 6 |

## COVER CROP MIX (TEMP. SEEDING)

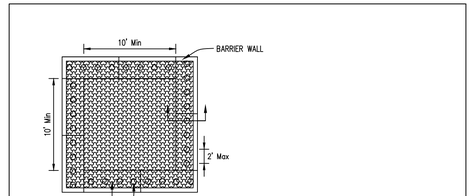
| Scientific Name | Common Name | Amount/Ac |
|---|---|---|
| Avena sativa | Oats | 65 lbs |
| Lolium multiforum | Annual Ryegrass | 25 lbs |

Notes:
1. The cover crop rate listed above is for spring and summer, in the event the seed is sown for the fall the Oats shall be sown at 130 lbs/ac.
2. Seedbed shall be prepared of loose soil to a depth of 3-4 inches prior to temporary seeding occurring.
3. Temporary seed shall be evenly applied with a cyclone seeder, drill, cultipacker seeder or hydroseeder. Small grains shall be planted no more than 1 inch deep, grasses no deeper than 1/2 inch. Cover broadcast seed by cultipacking, dragging a harrow or raking.
4. Temporary seeding shall be mulched in accordance with IDOT specifications (Article 251.03 or 251.04).

## TURF GRASS SEED MIX (IDOT Class 1) (ONSITE AREAS)

| Common Name | Amount/Ac |
|---|---|
| Kentucky Bluegrass | 100 lbs |
| Perennial Ryegrass | 60 lbs |
| Creeping Red Fescue | 40 lbs |

* FINAL SEEDING ON ALL DISTURBED AREAS UPON CONSTRUCTION COMPLETION




NOTES:

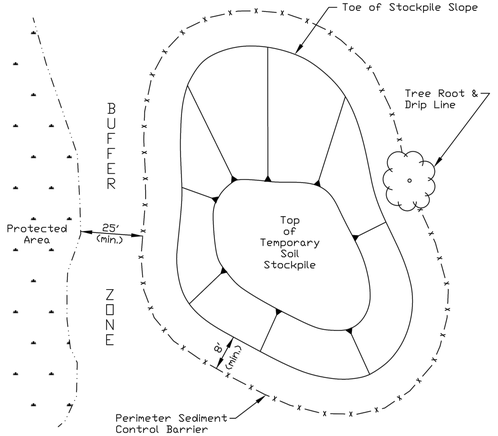
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardend concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

| No. | Description | Date |
|---|---|---|
| 1 | 10% REVISED NO. 1 | 11/08 |

TEMPORARY CONCRETE WASHOUT FACILITY – BARRIER WALL

Designed _____ Date _____
Drawn E. JOHNSON 11/08
Checked _____ _____
Approved _____ _____

## TEMPORARY SOIL STOCKPILE DETAIL

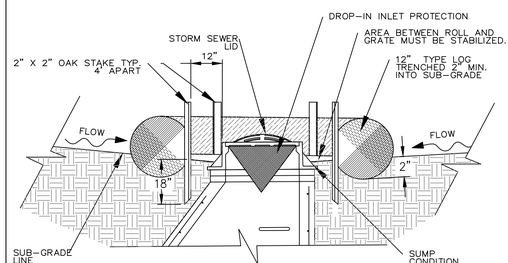



NOTES:

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. Liniear sediment trap surrounding the stockpile base may be used to control sediment.

## INLET PROTECTION LOG TYPE

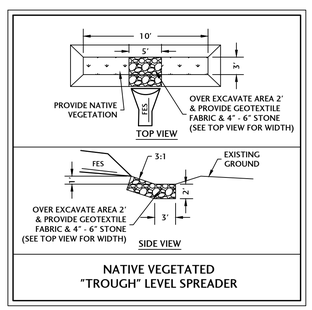
NOT TO SCALE




SECTION

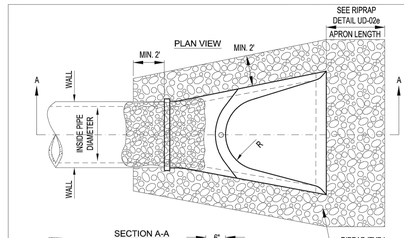
NOTES:

1. 2" x 2" nominal hardwood stakes, 4 foot minimum length, driven into ground approximately 18 inches, stakes driven a minimum width of 12 inches away from the drop inlet.
2. Area inside the log, from edge of fabric to structure, must be stabilized with erosion control blanket. Turf Reinforcement Mat, Geotextile 592 Table 2 Class 2 or CA-7 stone.
3. The maximum distance between the stakes should be 4 feet.
4. A maintenance schedule must maintain a sediment accumulation of less than 50% of the height of the log.




NATIVE VEGETATED "TROUGH" LEVEL SPREADER

| REFERENCE | | STANDARD DWG. NO. | REFERENCE | | STANDARD DWG. NO. |
|---|---|---|---|---|---|
| Project | | IUM-627 | Project | | IUM-562 |
| Designed | Date | SHEET 1 OF 1 | Designed | Date | SHEET 1 OF 1 |
| Checked | Date | DATE JANUARY 2017 | Checked | Date | DATE 11-30-2015 |
| Approved | Date | | Approved | Date | |

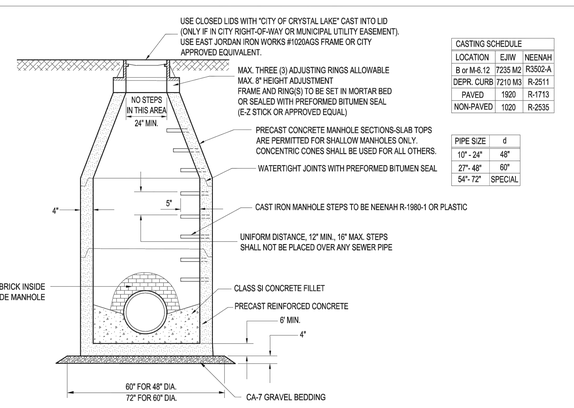



NOTES:
1. CONCRETE FLARED END SECTIONS SHOULD BE CONSIDERED FOR USE WITH CONCRETE PIPE CULVERTS HAVING SKEWS NO GREATER THAN 15 DEGREES.
2. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-170 CLASS III, WALL B REINFORCED CONCRETE PIPE.
3. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
4. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ART. 502.10 OF THE STANDARD SPECIFICATIONS. THIS COST SHALL BE INCIDENTAL TO EACH END SECTION.
5. RIPRAP SHALL CONFORM TO SECT. 281 OF THE STANDARD SPECIFICATIONS.
6. INSTALL FILTER FABRIC UNDER ALL RIPRAP AND BEDDING. FILTER FABRIC SHALL CONFORM TO SECT. 282 OF THE STANDARD SPECIFICATIONS.
6. STANDARD IDOT GALVANIZED GRATE REQUIRED FOR 15" DIAMETER AND LARGER.

UD-02d

| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | FLARED END SECTION (PRECAST CONCRETE PIPE) | UD-02d | City of Crystal Lake Illinois |
| 2. 8/27/2015 | | Date: 04/15/2007 | |
| 3. | | Drawn DD Checked AW | |
| 4. | | | |

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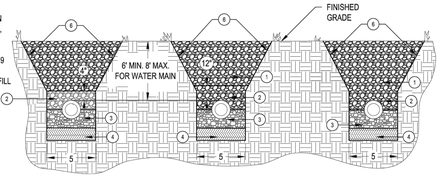

| CASTING SCHEDULE | | |
|---|---|---|
| LOCATION | EJIW | NEENAH |
| B or M-6.12 | 7235 M2 | R-3502-A |
| DEPR. CURB | 7210 M2 | R-2511 |
| PAVED | 1920 | R-1713 |
| NON-PAVED | 1020 | R-2535 |

| PIPE SIZE | d |
|---|---|
| 10" - 24" | 48" |
| 27"- 48" | 60" |
| 54"- 72" | SPECIAL |

UD-01d

| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | STORM MANHOLE TYPE A | UD-01d | City of Crystal Lake Illinois |
| 2. | | Date: 05/19/2015 | |
| 3. | | Drawn JH Checked AW | |
| 4. | | | |

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* NOTE: ALL DUCTILE IRON SHALL BE SUBJECT TO POLY WRAP PER CITY ENGINEER

UG-03

| Revised: | Drawing Name | Drawing Number | |
|---|---|---|---|
| 1. 06/12/2015 | TYPICAL TRENCH CROSS SECTION | UG-03 | City of Crystal Lake Illinois |
| 2. | | Date: 05/29/2015 | |
| 3. | | Drawn JH Checked AW | |
| 4. | | | |

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J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759


B&C ENTERPRISES
ELGIN, ILLINOIS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

PROJECT NUMBER: BCEI-21046-3

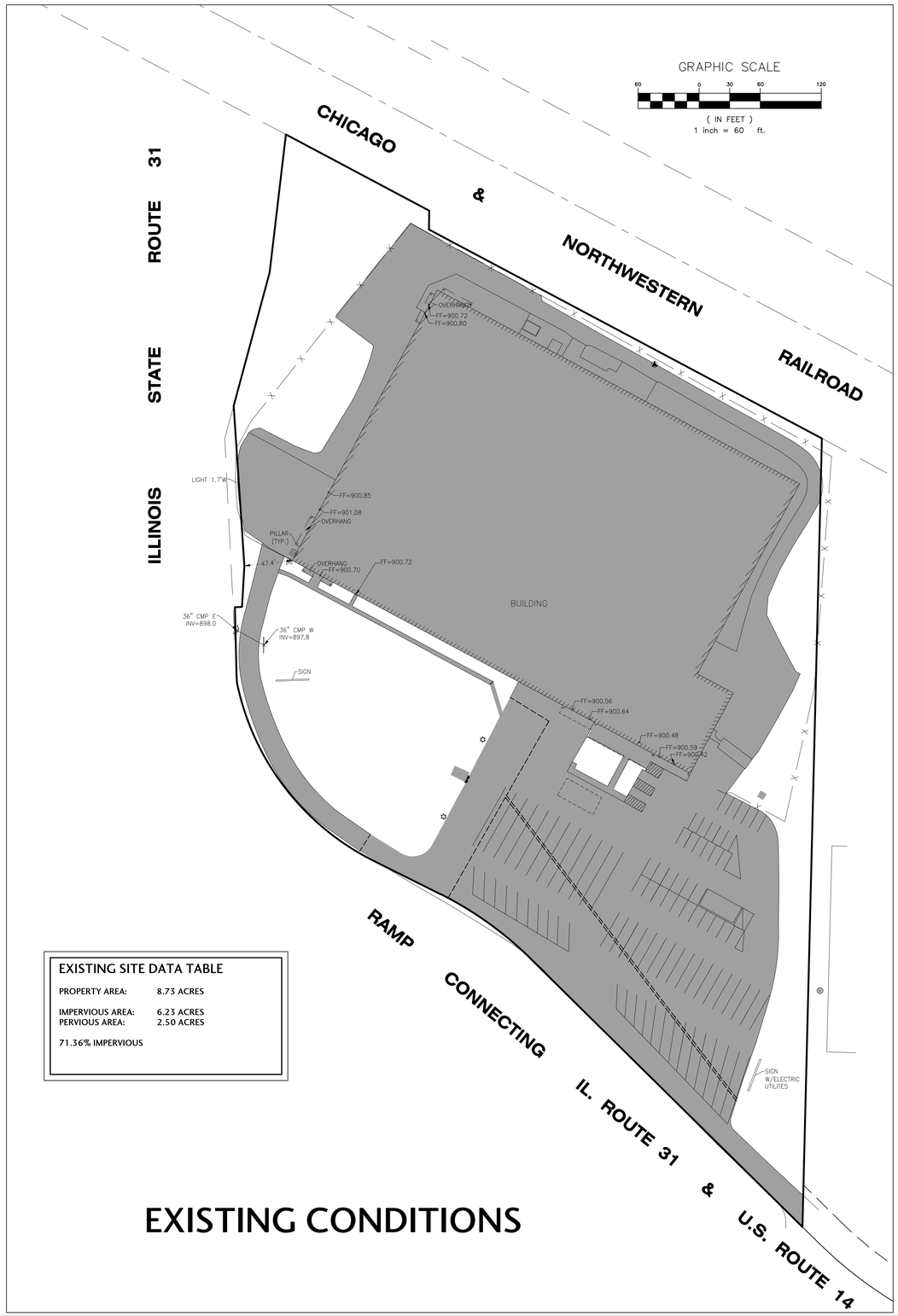
SHEET TITLE: STANDARD DETAILS

SHEET NUMBER: C4.1

U-HAUL CRYSTAL LAKE U-BOX BUILDING
CRYSTAL LAKE, ILLINOIS

SCALE: N/A
ISSUE DATE: 06/03/2022
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

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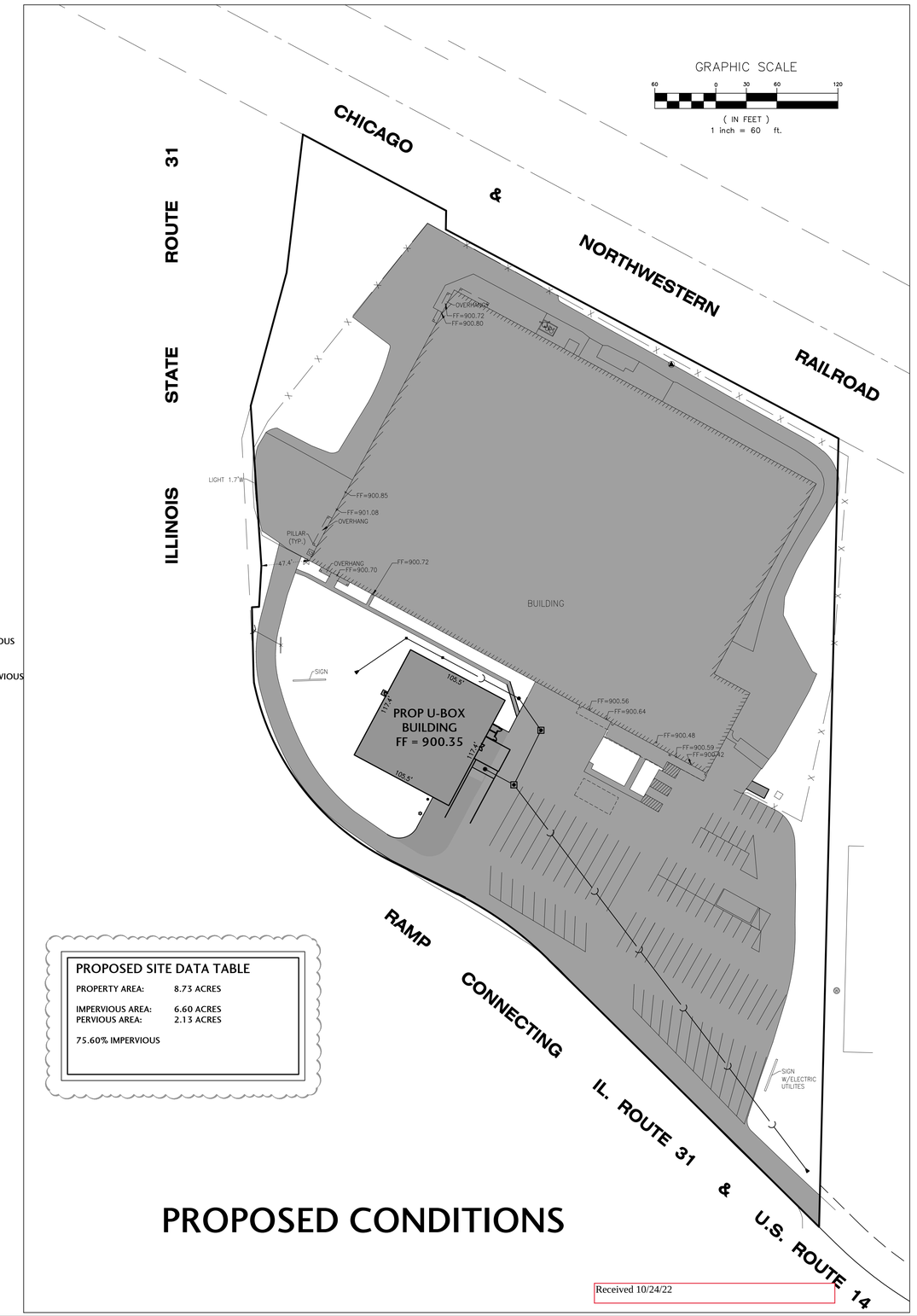



## EXISTING SITE DATA TABLE

| | |
|---|---|
| PROPERTY AREA: | 8.73 ACRES |
| IMPERVIOUS AREA: | 6.23 ACRES |
| PERVIOUS AREA: | 2.50 ACRES |

71.36% IMPERVIOUS

# EXISTING CONDITIONS




## PROPOSED SITE DATA TABLE

| | |
|---|---|
| PROPERTY AREA: | 8.73 ACRES |
| IMPERVIOUS AREA: | 6.60 ACRES |
| PERVIOUS AREA: | 2.13 ACRES |

75.60% IMPERVIOUS

# PROPOSED CONDITIONS

Received 10/24/22

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

**B&C ENTERPRISES**

ELGIN, ILLINOIS

SCALE: 1" = 60'

ISSUE DATE: 06/03/2022

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

**U-HAUL CRYSTAL LAKE U-BOX BUILDING**

CRYSTAL LAKE, ILLINOIS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/14/22 | PER CITY REVIEW AND NEW BUILDING SIZE |

PROJECT NUMBER: BCEI-21046-3

SHEET TITLE: IMPERVIOUS SURFACE VARIANCE REQUEST

SHEET NUMBER: VX1.0

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# U-Haul Crystal Lake

# U-Box Building

## ENGINEERING REPORT

**BCEI-21046-3**

*For:*
Mr. Brian Heimsoth
B&C Enterprises
2482 Technology Drive
Elgin, IL 60124

June 3, 2022
***Revised 10/14/22***




EXPIRES 11/30/2023




5415 Business Parkway
Ringwood, Illinois 60072
(815) 728-0068
Email: mmichel@jcondoninc.com
IL Design Firm # 184-006759

Received 10/24/22

## General Information

The proposed development is located at the northeast corner of Route 14 and the frontage road to IL Route 31 in the City of Crystal Lake. The parcel is located in the Southeast Quarter of Section 3 Township 43 North Range 8 East. The overall site is approximately 8.73 acres containing the existing 125,000+/- sf U-Haul facility and the associated parking lot and outside storage areas. The proposed improvements are comprised of the following items:

1. Construction of a 12,385 sf U-Box storage building with loading dock.
2. Storm sewer and drainage improvements onsite.
3. Water and sewer services.

## ***Site Data:***

*Existing Conditions (Pre-2004)*

| | |
|---|---|
| *Impervious Area:* | *6.23 Acres* |
| *Pervious Area:* | *2.50 Acres* |
| *Property Area:* | *8.73 Acres* |

*Proposed Conditions*

| | |
|---|---|
| *Impervious Area:* | *6.60 Acres* |
| *Pervious Area:* | *2.13 Acres* |
| *Property Area:* | *8.73 Acres* |

*Disturbed Area:* *0.95 Acres*

## Site Access and Parking

The site will continue to use the existing driveway and parking facilities for the new storage building.

## Sewer and Water Services

A 4" combined water service and a 6" sanitary sewer service will be connected to the existing septic system and well.

## Stormwater Management

The proposed development will create 16,139 sf of new impervious area, thus no detention will be required.

On-site storm sewer has been designed to convey runoff to the existing discharge point at the southeast corner of the site. The storm sewer outlet will release to a native vegetated level spreader. A snout oil and debris hood will be installed on the most downstream catch basin to reduce contaminants and pollutants from leaving the site.

There is an existing 36" culvert that crosses the U-Haul driveway on the west side of the property. Exhibit CX1.1 demonstrates that the reconfiguration of the Route 31/14 intersection in the late 1990's reduced the tributary area to that culvert. The tributary area is shown in Exhibit CX1.0.

The onsite storm sewer is designed to accommodate the 10-year storm event. Supporting calculations have been included in the Appendix of the report.

**Overflow Design:**

The overland flow path capacity has been verified to confirm building freeboard requirements are met at two critical locations. The results indicate that the ordinance freeboard requirement has been met. (See supporting calculations)

**Floodplain Design**

Per FEMA Firm panel number 17111C0335J, effective November 16, 2006, there is no floodplain located within the project area.

**Wetland Design**

Per the U.S. Fish and Wildlife Service National Wetlands Inventory, there are no wetlands within the vicinity of the project. A copy of the referenced map is located in the appendix portion of this report.

**Miscellaneous Information**

Since the site was previously fully developed, a drain tile survey has not been included in the site design work as neither exist on the site due to the previous developments.