#2018-02
165 First Street – Preliminary/Final PUD
Project Review for Planning and Zoning Commission

Meeting Date:	August 1, 2018
Request:	1. Preliminary and Final Planned Unit Development to allow a completely residential project within the B-4 Downtown Business zoning district. 2. Comprehensive Plan Amendment to change the land use designation from Commerce to Central Urban Residential.
Location:	165 First Street
Acreage:	8,712 square feet
Zoning:	B-4 Mixed-Use Business
Surrounding Properties:	North: R-3B (Multi-Family Residential) South: B-4 (Mixed-Use Business) Crystal Lake Brewery East: R-3B (Multi-Family Residential) West: R-3B (Multi-Family Residential)
Staff Contact:	Kathryn Cowlin (815.356.3615)

Background:

- The subject property is a vacant lot located on First Street between a residential property and the parking lot for Crystal Lake Brewing.
- Residential land uses are permitted in the B-4 zoning district with the approval of a Planned Unit Development.
- First Street is primarily a residential street. The proposed two-family home fits in with the character of the street.

Development Analysis:

Land Use/Zoning

- The site is currently zoned B-4 Mixed-Use Business. The petitioner is requesting Planned Unit Development approval to allow the subject property be developed as a residential use.
- The land use map shows the area as Commerce. Due to the residential character of First Street and the proposed residential duplex, a Comprehensive Plan Amendment to change the land use designation to Central Urban Residential is being requested.

- Central Urban Residential is an appropriate land use designation for the proposed use and for the existing character of the area.

Site Layout

- The proposed duplex would have two detached garages, one for each unit.
- The proposed detached garages are located 3 feet and 2.98 feet from the side property lines. The required setback is zero feet in the B-4 zoning district.
- The petitioner is requesting a variation of 4-feet from the minimum lot width required for two driveways. The lot is only 66 feet wide and the minimum width to allow two driveways is 70 feet.
- The following chart illustrates how the current lot and structure meet the B-4 district standards.

Bulk Standard	**B-4 requirement**	**Lot**
Lot Width	50 feet	66 feet
Lot Area	5,000 square feet	8,712 square feet
Front Yard Setback	0 feet	21 feet
Side Yard Setbacks	0 feet	16.56 feet and 16.63 feet
Rear Yard Setback	20 feet	66 feet
Impervious Surface	95%	53%
Building Coverage	70 %	22%

Parking

- The UDO parking requirement is 2 per dwelling unit, 1 space to be an enclosed garage and 1 can be a driveway at least 21 feet long. The proposed development meets this requirement.

Architecture

- The proposed duplex meets the infill two-family residential UDO design standards.
- The proposed duplex has a front porch and detached garages which match the character of the existing neighborhood.

Findings of fact:

PRELIMINARY and FINAL PLANNED UNIT DEVELOPMENT

The petitioner is requesting approval of a Preliminary/Final Planned Unit Development to allow a residential use in the B-4 zoning district. A Special Use requires separate review because of its 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*

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

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

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

3. PUD's must provide transitional uses to blend with adjacent development.
   ☐ *Meets* ☐ *Does not meet*

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

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

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

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

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

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

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

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

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

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

The Planned Unit Development proposed by the Petitioner includes the following variation from

the UDO:

1. Appendix A-400(C) to allow two driveways on a lot less than 70 feet in width, a variation of 4 feet.

The proposed development has been designed to complement the existing land uses on First Street. The homes on the block have detached garages and the subject property is immediately adjacent to the edge of the downtown commercial district. Due to the unique area that the proposed development is located, the variations are appropriate.

COMPREHENSIVE PLAN AMENDMENT
This petition requests a Comprehensive Land Use Plan Amendment from Commerce to Central Urban Residential for a duplex.

Comprehensive Land Use Plan 2030 Vision Summary Review:
The Comprehensive Plan designates the subject property as Commerce, which allows for existing and future business uses. The following goal is applicable to the request to change the land use designation to Central Urban Residential.

Land Use – Central Urban Residential
Goal: Provide for a reasonable rate of residential growth especially infill growth and mixed-use development which take advantage of existing city services.

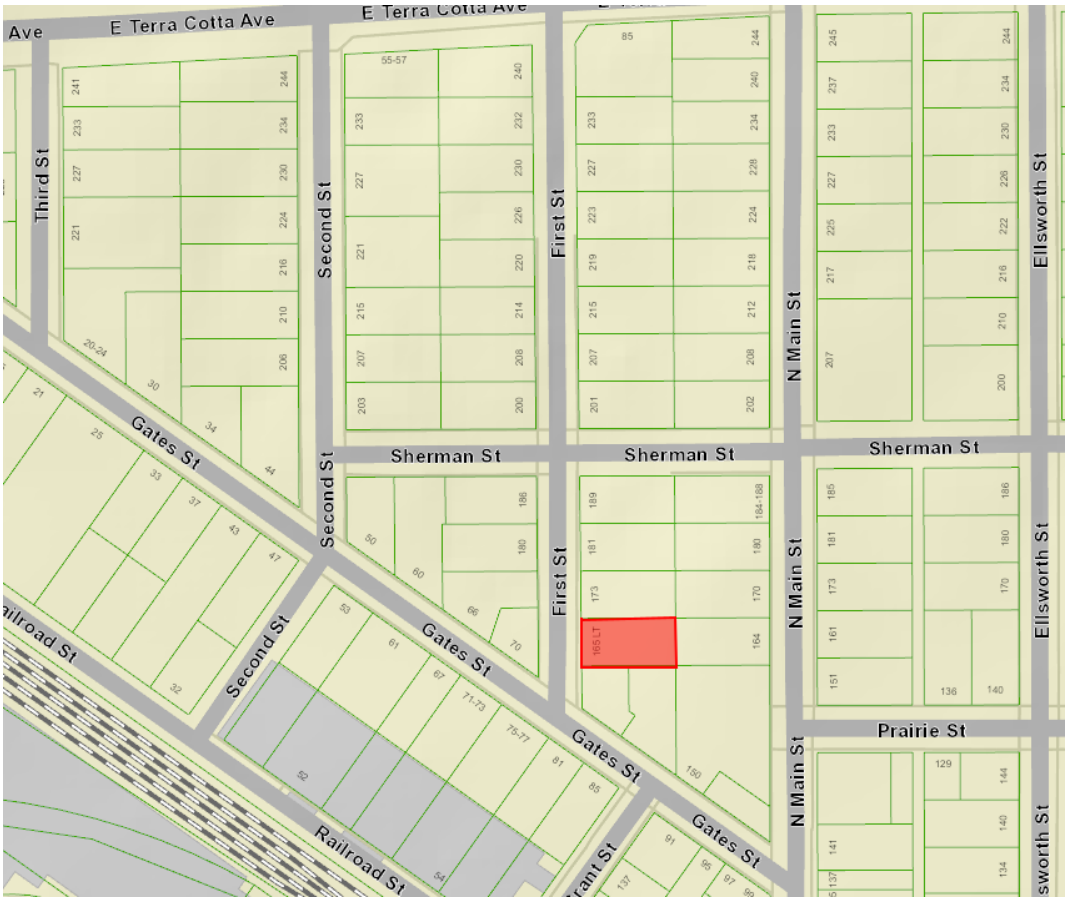
This can be accomplished with the following supporting action:
Supporting Action: Approval of minor subdivisions to increase infill lot potential and the number of building permits issued for new construction on infill lots.

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

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Kourtis, received 01/03/18)
   B. Engineering Plans (CE Ltd, dated 05/21/2018, received 05/22/18)
   C. Elevations (James R. Byrnes, dated 12/20/17, received 01/03/18)
   D. Plat of Survey (Vanderstappen, received 01/03/2018)

2. If the northern detached garage must be moved to address the stormwater consultant comments, it must maintain the proposed side yard setback of 3 feet.
3. The petitioner shall address all of the review comments and requirements of the Community Development and Fire Rescue Departments, as well as the City's stormwater consultant, Christopher B. Burke Engineering.

2018-02 Kourtis – 165LT First St





SIGNED COPIE

City of Crystal Lake
Development Application

Office Use Only
File # _____

Project Title: LOT 7 FIRST STREET, CRYSTAL LAKE, IL 60014 2018 02

RECEIVED
JAN 03 2018
BY:

Action Requested

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

Petitioner Information

Name: PETE KOURTIS
Address: 1661 W. CASTAWAY LANE
HOFFMAN ESTATES, IL 60195
Phone: 847-804-4113
Fax: 847-991-3077
E-mail: PKK1965@YAHOO.COM

Owner Information (if different)

Name: _____
Address: _____
_____
Phone: _____
Fax: _____
E-mail: _____

Property Information

Project Description: DEVELOP A DUPLEX MULTI-FAMILY UNIT BUILDING ON PROPERTY

Project Address/Location: 1st St Lot 7, Crystal Lake, IL 60014 165LT FIRST ST.

PIN Number(s): 14-32-431-015

Development Team

Please include address, phone, fax and e-mail

Developer: PETE KOURTIS 1661 W. CASTAWAY LN,HOFFMAN EST. IL 60165 PH:847-804-4113,FX:847-991-3077

Architect: JAMES R BYRNES 6803 W. HILLSIDE RD, CRYSTAL LAKE, IL PH:815-477-7717,FX:815-893-4578

Attorney: JOHN SKOUBIS 1300 W Higgins Rd. Suite 209, Park Ridge, IL 60068 PH: 847-696-0900

Engineer: CALDWELL ENGINEERING LTD. 1316 N MADISON ST. WOODSTOCK, IL 60098 PH:815-502-5504.FX:815-482-5232

Landscape Architect: _____

Planner: _____

Surveyor: VLSI INC. 1316 N. MADISON ST. WOODSTOCK. IL 60098 PH: 815-337-8310 FX: 815-502-5516

Other: _____

Signatures

_____

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.

PETE KOURTIS _____ 12.20.2017

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 Pete Kourlis

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance (UDO) of the City of Crystal Lake, Illinois, that a public hearing will be held before the Planning and Zoning Commission upon the application of Pete Kourlis, seeking a Preliminary/Final Planned Unit Development, Comprehensive Plan Amendment and Variation located at

165 First St.,
Crystal Lake, Illinois.
PIN 14-32-431-015.

This application is filed for the purpose of seeking a Preliminary/Final Planned Unit Development pursuant to Article 4-500 and 9-200 to allow a residential duplex. A Comprehensive Plan Amendment from Commerce to Central Urban Residential pursuant to Article 9-200 and a variation from A-400(C) to allow two driveways on a lot less than 70 feet in width, as well as any other variations as necessary to complete the project as proposed. 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 7:30 p.m. on Wednesday July 18, 2018, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Tom Hayden, Chairperson
Planning and Zoning Commission
City of Crystal Lake

(Published in the Northwest Herald on July 6, 2018) 1554429





SHEET SCHEDULE

NO.	SHEET CONTENTS
1	FRONT ELEVATION LEFT SIDE ELEVATION
2	REAR ELEVATION RIGHT SIDE ELEVATIONS
3	FIRST FLOOR PLAN
4	SECOND FLOOR PLAN
5	FOUNDATION PLAN TYPICAL WALL SECTION
6	ELECTRICAL PLANS

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6803 West Hillside Road Crystal Lake, Illinois 60012
Phone: 815/477-7717 Email: jim@byrnesarchitect.com

Peter Kourtis
pkk1965@yahoo.com
Phone: (847) 804-4113

Exterior Views

Duplex Residence
Lot-7 First Street
Crystal Lake, Illinois

No.	Date:	Revision
1		
2		
3		

Date: 1-17-18
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Plan No:

Sheet Number: **1**

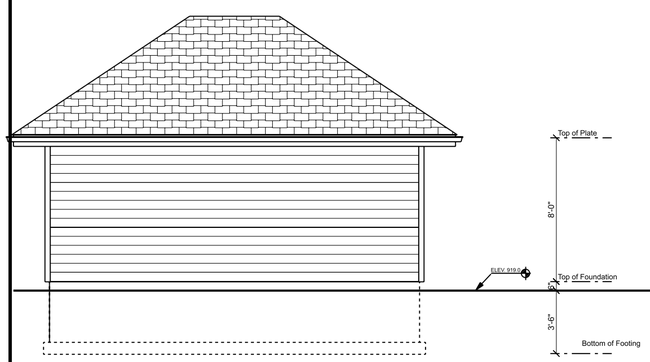
First Street Duplex

Front Elevation

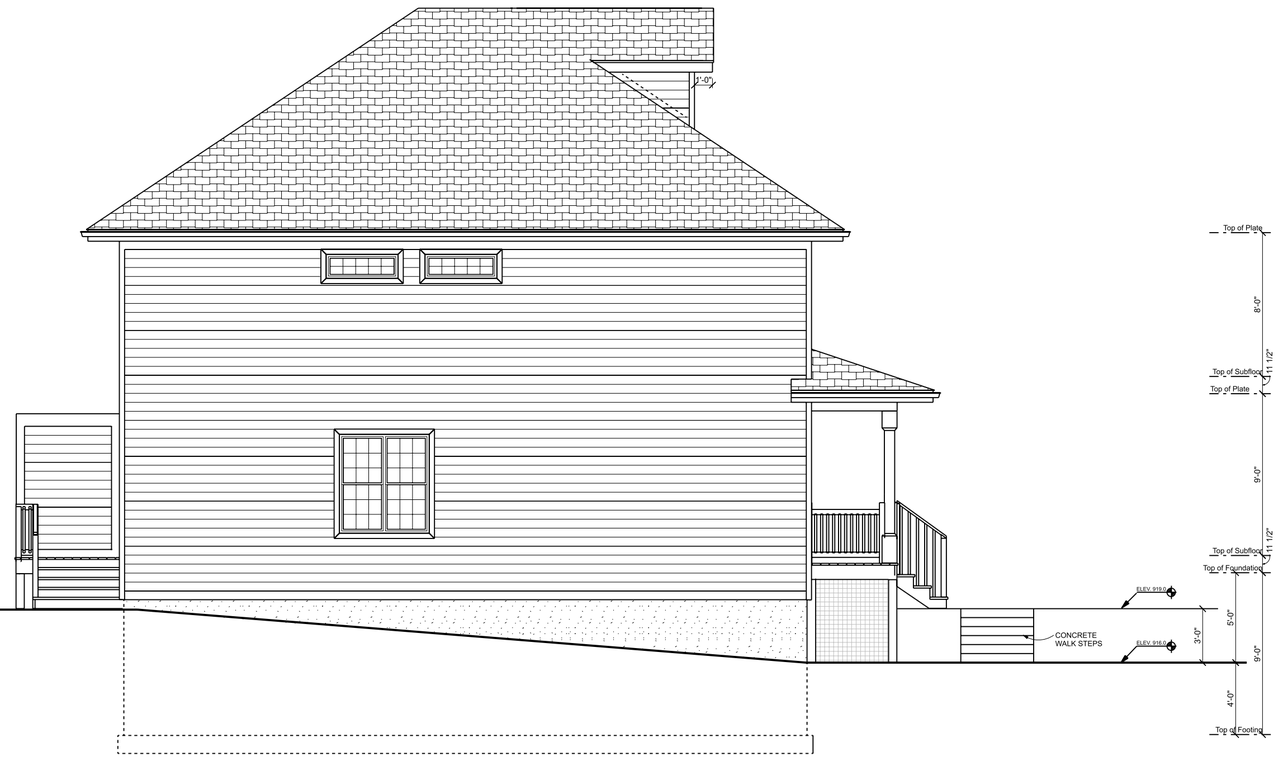


Rear Elevation





Left Side Elevation



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Peter Kourtis
pkk1965@yahoo.com
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Elevations

Duplex Residence
Lot-7 First Street
Crystal Lake, Illinois

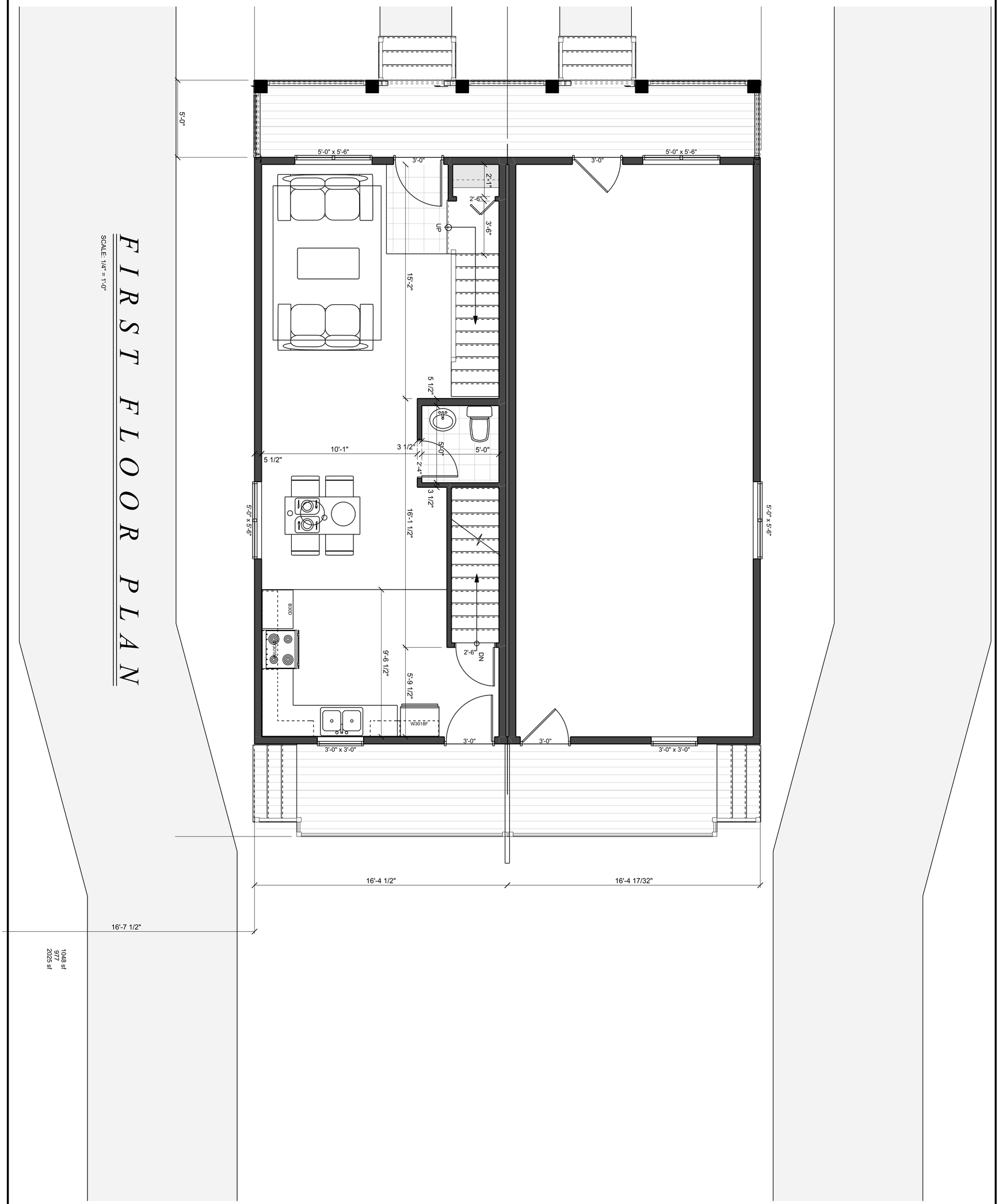
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FIRST FLOOR PLAN

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



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Sheet Number: 3

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First Floor Plan

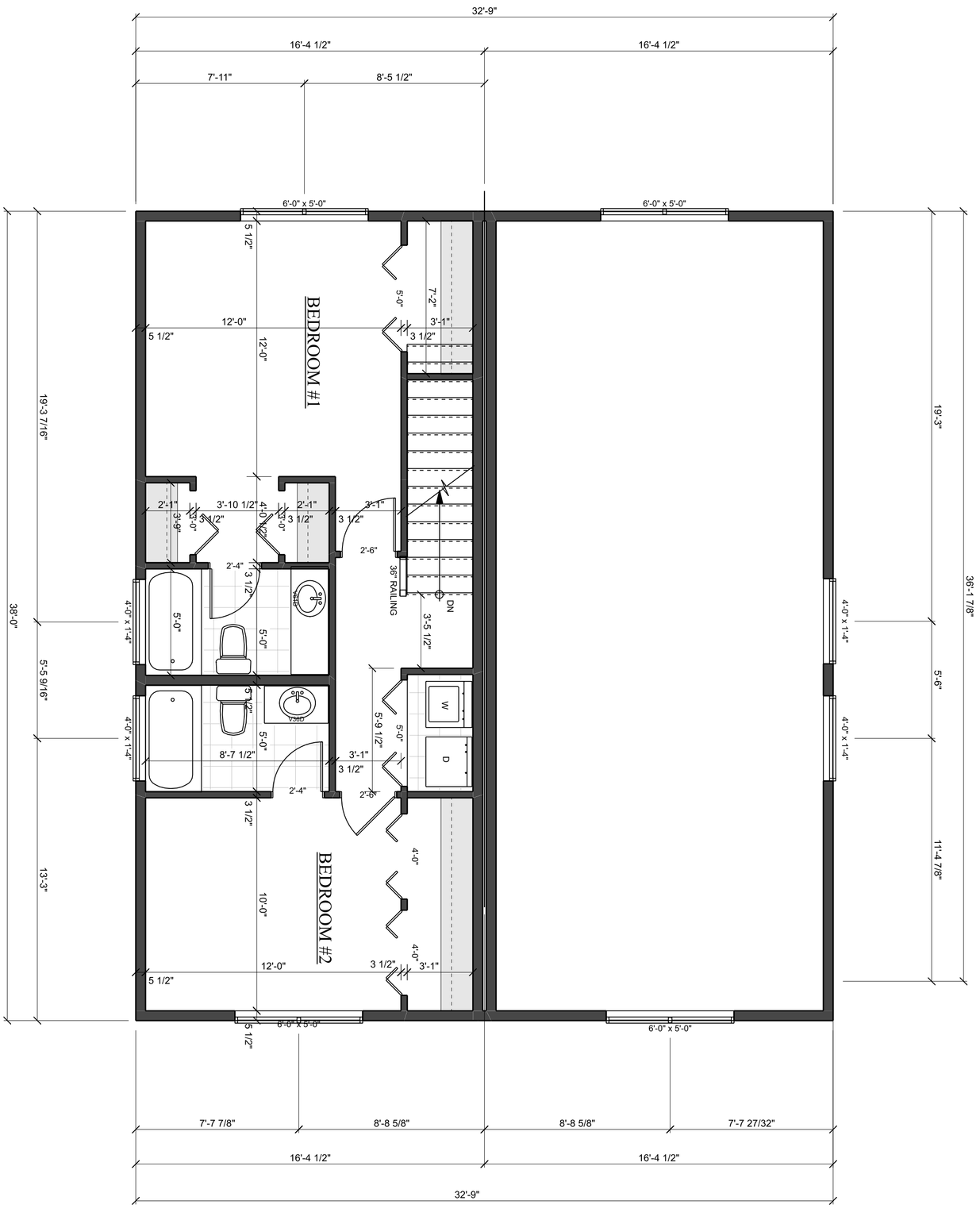
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Lot-7 First Street
Crystal Lake, Illinois

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SECOND FLOOR PLAN

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



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Sheet Number: 4

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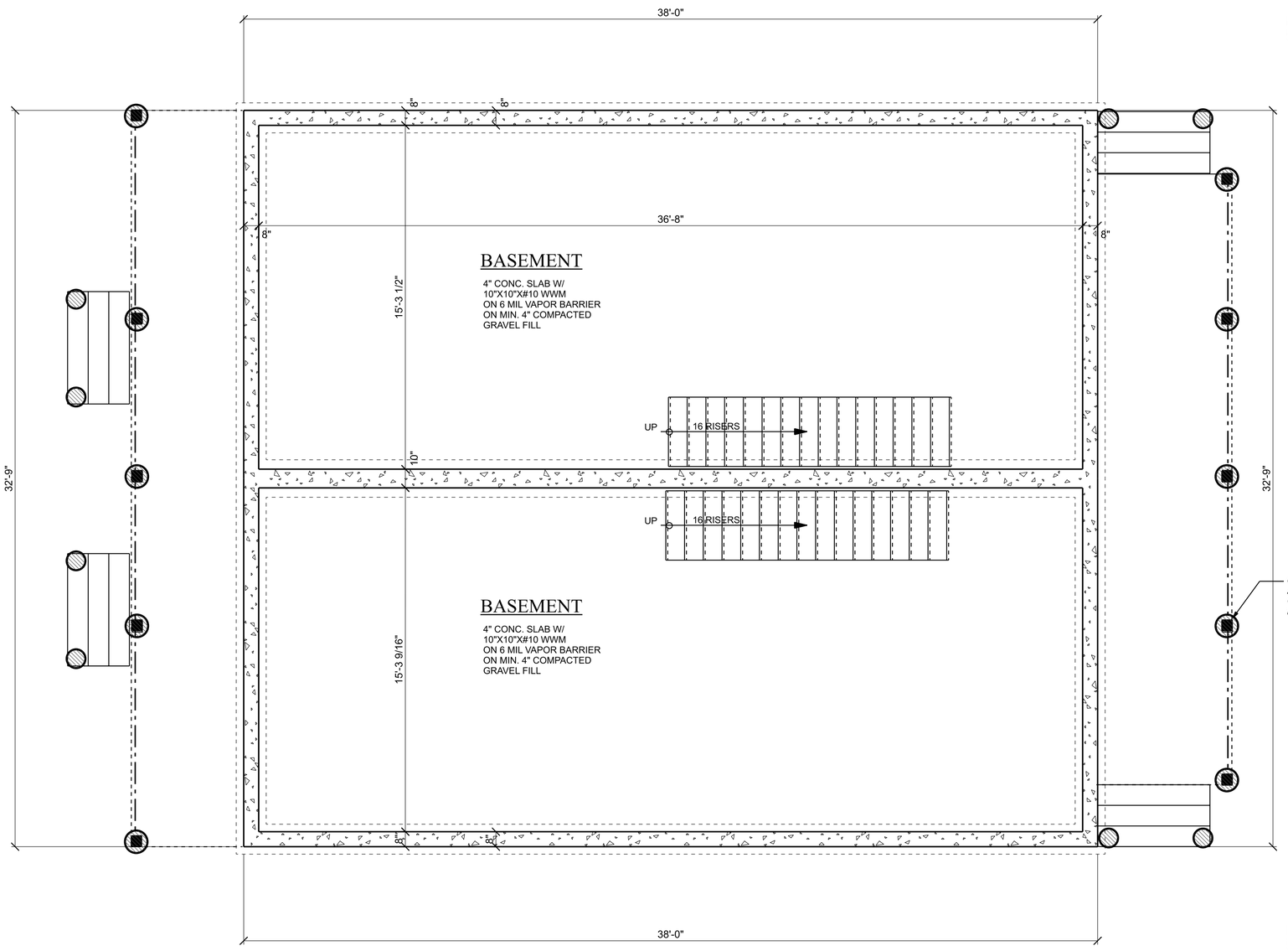
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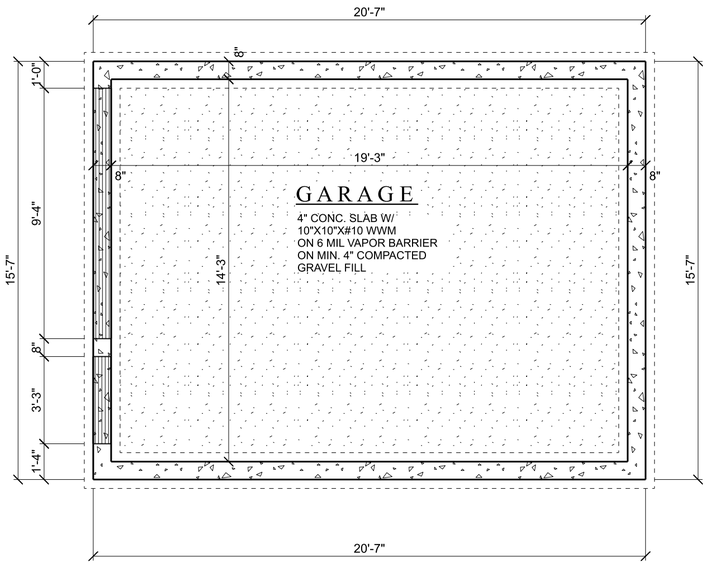
Second Floor Plan

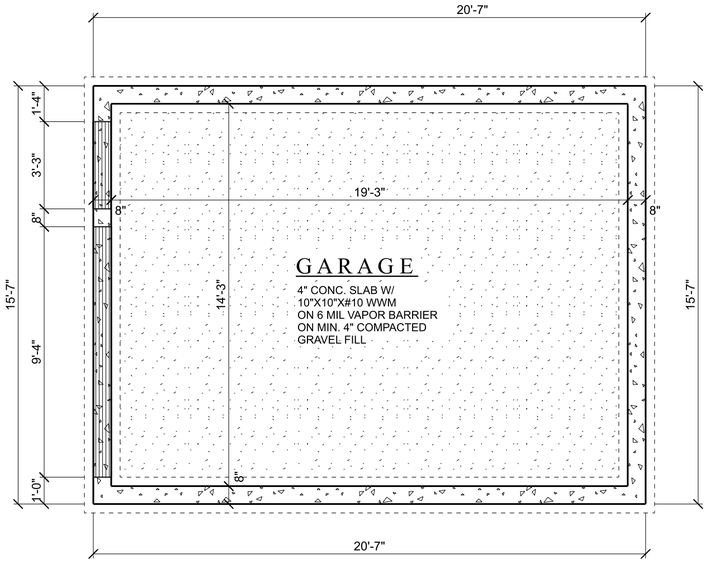
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F O U N D A T I O N P L A N

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

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Foundation Plan

Duplex Residence
Lot-7 First Street
Crystal Lake, Illinois

No.	Date:	Revision
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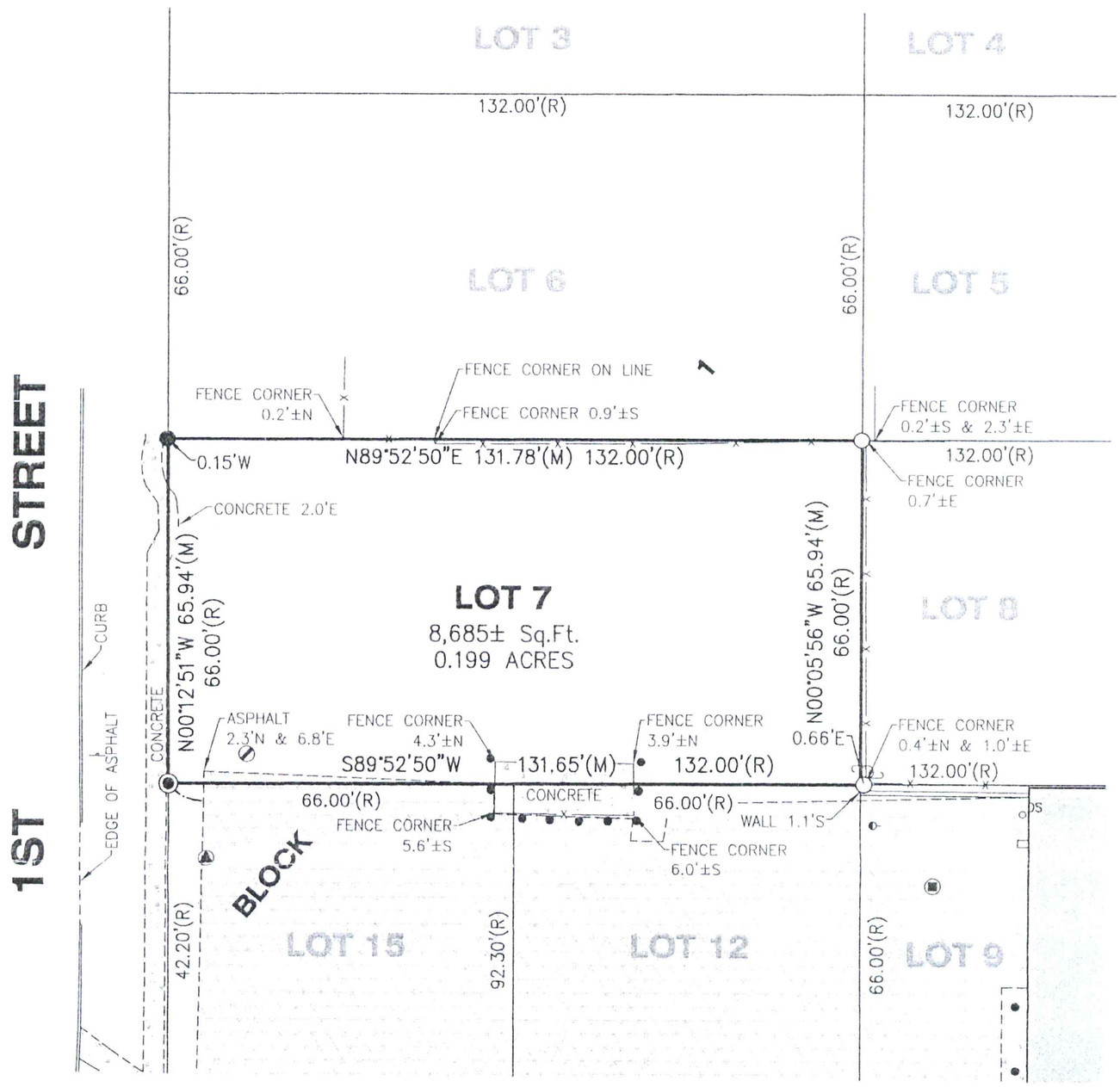
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Plan No:

Sheet Number: **5**

Vanderstappen Surveying &
Engineering, Incorporated
16 North Madison Street, Woodstock, Illinois
815) 337-8310 www.vandersinc.com

PLAT OF SURVEY

Lot 7 in Block 1 in the Original Plat of Nunda, being a Subdivision of part of the East Half of the Southeast Quarter of Section 32, Township 44 North, Range 8 East of the Third Principal Meridian, according to the Plat thereof recorded August 13, 1858, in Book 43 of Deeds, page 296, in McHenry County, Illinois.



LEGEND	
•	BOLLARD
◭	CATCH BASIN
⊷	DOWN GUY
oDS	DOWN SPOUT
●	FOUND IRON BAR
○	FOUND IRON PIPE
⊘	MANHOLE
⊦	SIGN
▣	STORM MANHOLE
⊸	UTILITY POLE

30' 0' 30' 60'

SCALE: 1" = 30'

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

WILLIAM J. VANDERSTAPPEN
PROFESSIONAL LAND SURVEYOR
#035-00...
ILLINOIS
EXP. 11/...

PROPOSED IMPROVEMENTS FOR
1 ST STREET TOWNHOMES
CRYSTAL LAKE, IL

PROPERTY LOCATED AT:
1ST STREET

GENERAL NOTES:

1. TOPOGRAPHY & SURVEY BASED ON SURVEY DONE BY VANDERSTAPPEN SURVEYING AND ENGINEERING ON 1/22/2015. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY VANDERSTAPPEN SURVEYING AND ENGINEERING AND THE CLIENT OF ANY DIFFERING CONDITIONS.
2. DRAIN TILE SYSTEMS DISTURBED DURING DEVELOPMENT MUST BE RECONNECTED BY THOSE RESPONSIBLE FOR THEIR DISTURBANCE UNLESS THE APPROVED ENGINEERING PLANS INDICATE HOW THE DRAIN TILE SYSTEM IS TO BE CONNECTED TO THE PROPOSED STORM WATER MANAGEMENT SYSTEM. ALL ABANDONED DRAIN TILES SHALL BE REMOVED IN THEIR ENTIRETY.

CONTRACTOR NOTES:

1. ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES AND STANDARDS INCLUDING ADA AND OR OTHER HANDICAP ACCESSIBILITY CODES.
2. CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
3. THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION. MATERIAL AND WORKMANSHIP THROUGHOUT.
4. THE DRAWINGS ARE NOT TO BE SCALED. FOR INFORMATION CONCERNING EXISTING CONDITIONS, ETC., VERIFICATION MUST BE DONE IN THE FIELD. LARGE SCALE DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS.
5. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING ABOVE AND BELOW GRADE, UTILITIES, INCLUDING SANITARY SEWER, STORM SEWER, WATER, GAS, ELECTRICAL, TELEPHONE, ETC. ANY DISCREPANCIES IN UTILITY LOCATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER OR OWNER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL BUILDING DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY VARIANCE OR DISCREPANCY AFFECTING NEW CONSTRUCTION PRIOR TO PROCEEDING WITH WORK.
7. THE CONTRACTOR, UPON COMPLETION OF PROJECT, SHALL OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH THE OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS.
8. CONTRACTOR IS RESPONSIBLE FOR ALL SITE CUT & FILL TO ATTAIN FINISH GRADES AS INDICATED ON THESE DRAWINGS. GENERAL CONTRACTOR SHALL INCLUDE THE COST OF ANY TOPSOIL REQUIRED IN ADDITION TO THAT ON SITE.

EXISTING UTILITIES NOTE:

1. WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. THE CONTRACTOR SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.
2. CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.

SOIL EROSION AND SEDIMENT CONTROL NOTES

a. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. AREAS OF THE DEVELOPMENT SITE THAT ARE NOT TO BE GRADED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE UNTIL FINAL SEEDING IS PERFORMED.
b. PROPERTIES AND CHANNELS ADJOINING THE DEVELOPMENT SITE SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION.
c. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
d. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE.
e. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
f. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G., SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURES).
g. ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.
h. A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURES) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION-SITE OF A MAJOR DEVELOPMENT TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
i. SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD-PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF LAKE COUNTY.
j. THE CONTRACTOR SHALL PROVIDE ADEQUATE RECEPTACLES FOR THE DEPOSITION OF ALL CONSTRUCTION MATERIAL DEBRIS GENERATED DURING THE DEVELOPMENT PROCESS. THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE DUMPING, DEPOSITING, DROPPING, THROWING, DISCARDING OR LEAVING OF CONSTRUCTION MATERIAL DEBRIS UPON OR INTO ANY DEVELOPMENT SITE, CHANNEL, WATERS OF THE U.S. OR ISOLATED WATERS OF LAKE COUNTY. THE CONTRACTOR SHALL MAINTAIN THE DEVELOPMENT SITE FREE OF CONSTRUCTION MATERIAL DEBRIS.
k. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN AN EFFECTIVE WORKING CONDITION.
l. THE CONTRACTOR SHALL USE STRAW MULCH TO STABILIZE SEEDED AREAS.





SITE INFORMATION	SQ.FT.	ACRES
TOTAL SITE AREA	8,685	0.20
EXISTING IMPERVIOUS AREA	20	0.00
PROPOSED IMPERVIOUS		
BUILDING	2,500	0.06
CONCRETE	20	0.00
ASPHALT	810	0.02
TOTAL PROP. IMPERVIOUS AREA	3,330	0.08
EXIST IMPERVIOUS TO BE REMOVED	20	0.00
NET IMPERVIOUS AREA ADDED	3,310	0.08
TOTAL SITE IMPERVIOUS AREA AFTER CONSTRUCTION	3,330	0.08
TOTAL DISTURBED (PROJECT AREA)	8,149	0.19

INDEX OF SHEETS	
C1	COVER SHEET / DEMO PLAN
C2	SITE, GRADING & EROSION CONTROL PLAN
C4	NOTES & DETAILS

CLIENT:
TRUE NORTH PROPS, INC
CONTACT:
GEORGE IEHENGIUC
PH: (847) 909-3838

N
S
20' 0' 20' 40'
SCALE: 1" = 20'

EXPIRES 11-30-2015
DESIGN FIRM NO. 184.007297

811
Know what's below.
Call before you dig.
CALL JULIE @ 811 OR (800)892-0123 48 HOURS BEFORE YOU DIG (EXCLUDING SAT, SUN, & HOLIDAY)

NOTE: CONSTRUCTION MEANS, METHODS AND JOB SITE SAFETY ARE THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR

REVISIONS

DATE	NO.	DESCRIPTION

TRUE NORTH PRPOERTIES
1ST STREET TOWNHOMES
CRYSTAL LAKE, IL
COVER PAGE

VSEI
Vanderstappen Surveying & Engineering, Ltd.
1316 North Madison Street, Woodstock, Illinois
(815) 337-4310
www.vanderstappen.com

Designed By	RAK
Drawn By	BTE
Checked By	MJC
Date	4/21/2015
Job Number	150027
Sheet Number	C1

DRAFT - NOT FOR CONSTRUCTION

SITE IMPROVEMENTS FOR DUPLEX RESIDENCE CRYSTAL LAKE, IL

PROPERTY LOCATED AT:
165 AND 167 FIRST STREET

GENERAL NOTES:

1. TOPOGRAPHY & SURVEY BASED ON SURVEY DONE BY VANDERSTAPPEN LAND SURVEYING INC. (VLSI), JOB NUMBER 150027, ON 01/22/2015. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY CALDWELL ENGINEERING LTD. AND THE CLIENT OF ANY DIFFERING CONDITIONS.
2. THE STORM WATER DISCHARGE POINT HAS BEEN RELOCATED SUCH THAT STORM WATER DISCHARGES DIRECTLY EAST OF THE SIDEWALK AT THE NORTHWEST CORNER OF THE SUBJECT PROPERTY. THIS REDESIGN WAS UNDERTAKEN PER THE DIRECTION OF THE CITY OF CRYSTAL LAKE. HOWEVER, AS A RESULT OF THE REDESIGN OF OUR ORIGINAL PLANS, IT IS OUR PROFESSIONAL OPINION THAT A POTENTIAL HAZARD WILL BE CREATED IN WINTER WEATHER AS STORMWATER IS DIRECTED ACROSS THE SIDEWALK.

CONTRACTOR NOTES:

1. ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES AND STANDARDS INCLUDING ADA AND OR OTHER HANDICAP ACCESSIBILITY CODES.
2. CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
3. THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION. MATERIAL AND WORKMANSHIP THROUGHOUT.
4. THE DRAWINGS ARE NOT TO BE SCALED. FOR INFORMATION CONCERNING EXISTING CONDITIONS. ETC., VERIFICATION MUST BE DONE IN THE FIELD. LARGE SCALE DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS.
5. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING ABOVE AND BELOW GRADE, UTILITIES, INCLUDING SANITARY SEWER, STORM SEWER, WATER, GAS, ELECTRICAL, TELEPHONE, ETC. ANY DISCREPANCIES IN UTILITY LOCATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER OR OWNER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL BUILDING DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY VARIANCE OR DISCREPANCY AFFECTING NEW CONSTRUCTION PRIOR TO PROCEEDING WITH WORK.
7. THE CONTRACTOR, UPON COMPLETION OF PROJECT, SHALL OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH THE OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS.
8. CONTRACTOR IS RESPONSIBLE FOR ALL SITE CUT & FILL TO ATTAIN FINISH GRADES AS INDICATED ON THESE DRAWINGS. GENERAL CONTRACTOR SHALL INCLUDE THE COST OF ANY TOPSOIL REQUIRED IN ADDITION TO THAT ON SITE.

EXISTING UTILITIES NOTE:

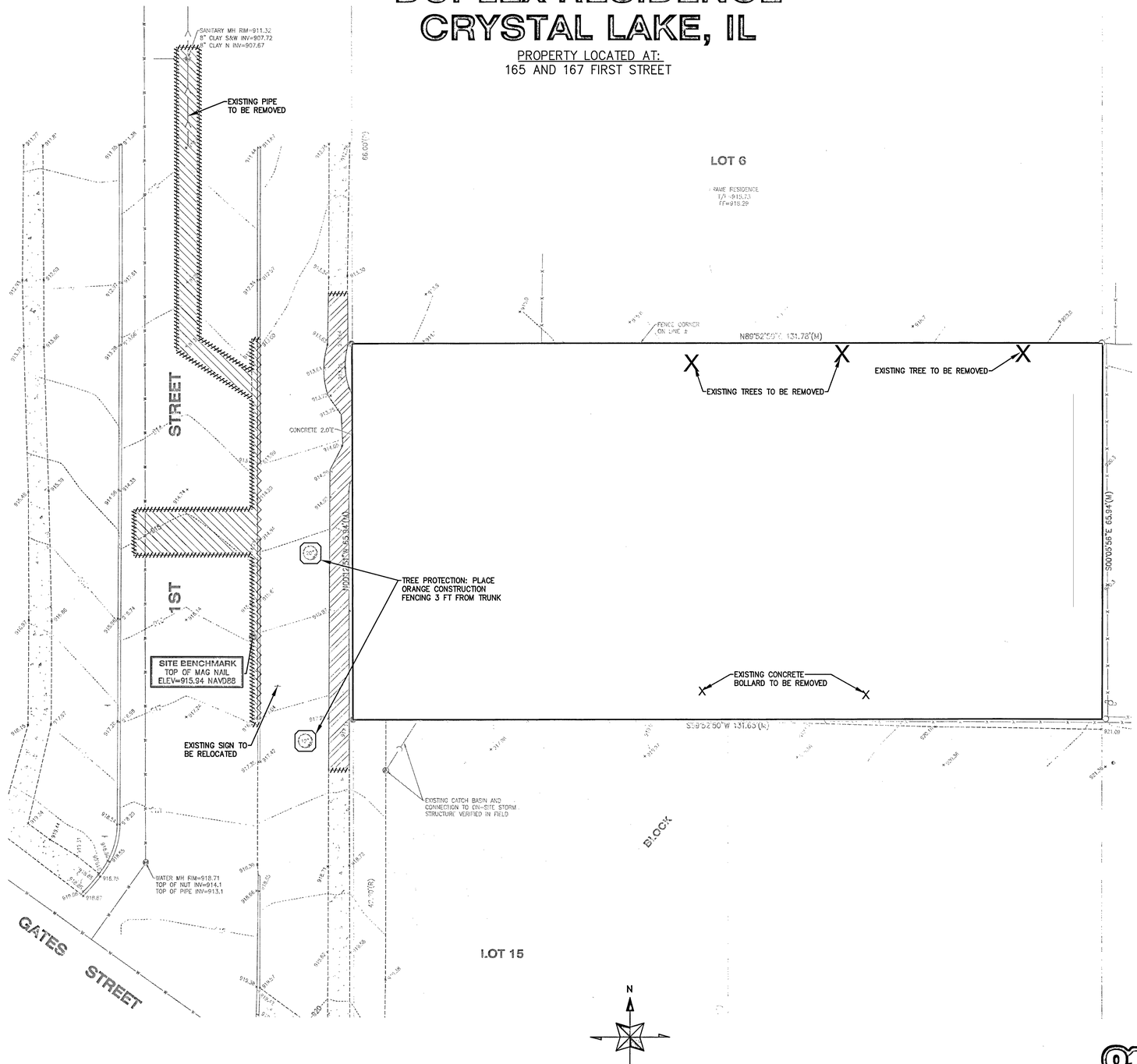
1. WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. THE CONTRACTOR SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.
2. CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.

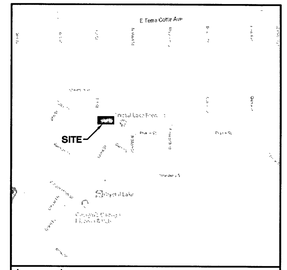
LEGEND

EX		PRO	EX		PRO
	CATCH BASIN			DOWN GUY	
	FIRE HYDRANT			MAILBOX	
	FLARED-END SECTION			GASMETER	
	INLET			ELECTRIC METER	
	SANITARY MANHOLE			SEPTIC LID	
	STORM MANHOLE			TELEPHONE RISER	
	UTILITY POLE			LIGHT POLE	
	VALVE VAULT			TRANSFORMER	
	WATER SHUT-OFF			CABLE TV RISER	
	WATER VALVE			ELECTRIC RISER	
	SOIL BORING			WELL	
	OVERLAND FLOW ROUTE			SEWER CLEANOUT	
	FENCE			SF	
	STORM LINE				
	CULVERT				
	SANITARY LINE				
	WATER LINE				
X 893.2	SPOT ELEVATION		*893.20 TC *892.70 EP		
	OVERLAND FLOW				

LEGEND

- CONCRETE TO BE REMOVED FULL DEPTH
- ASPHALT PAVEMENT TO BE REMOVED FULL DEPTH
- 2" GRIND ASPHALT
- CURB, STORM SEWER AND WALL TO BE REMOVED
- SAW CUT FULL DEPTH
- X — TO BE REMOVED





VICINITY MAP
N.T.S.

SITE INFORMATION

	SQ. FT.	ACRES
TOTAL SITE AREA	8,685	0.20
EXISTING IMPERVIOUS AREA	20	0.00
IMPERVIOUS AREA TO BE REMOVED	20	0.00
PROPOSED IMPERVIOUS AREA	4,688	0.11
NET IMPERVIOUS ADDED	4,668	0.11
TOTAL SITE IMPERVIOUS AFTER CONSTRUCTION	4,688	0.11
TOTAL DISTURBED (PROJECT AREA)	7700	0.18

CONTACT: PETER KOURTIS
PH: 847-804-4113

SITE BENCHMARK

TOP OF MAG NAIL
ELEV=915.94 NAVD88

PROJECT BENCHMARK

STATION "CRYSTAL LAKE-2A"
ELEV=928.36 NAVD88
MCHENRY COUNTY GEODETIC
CONTROL STATION #6934

SHEET INDEX

C1	COVER PAGE & DEMOILITION PLAN
C2	GEOMETRIC & CRYSTAL LAKE NOTES
C3	GRADING, UTILITY & SOIL EROSION CONTROL PLAN
C4	SPECIFICATION NOTES & DETAILS
C5	DETAILS

RECEIVED
MAY 22 2018
BY:

Know what's **below.** **Call** before you dig.
CALL J.U.L.I.E. @ 811 OR (800)892-0123 48 HOURS BEFORE YOU DIG (EXCLUDING SAT, SUN, & HOLIDAYS)

062-063727
REGISTERED PROFESSIONAL ENGINEER OF
STATE OF ILLINOIS
EXPIRES 11-30-2019
DESIGN FIRM NO. 184-007067

NOTE: CONSTRUCTION MEANS, METHODS AND JOB SITE SAFETY ARE THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR

REVISIONS	NO.	DATE
PER CITY COMMENTS	1	05/21/2018

DUPLEX RESIDENCE
165 AND 167 FIRST STREET
CRYSTAL LAKE, IL
COVER PAGE & DEMOILITION PLAN

CE LTD
Caldwell Engineering, Ltd.
1016 North Milwaukee Avenue, Libertyville, Illinois
(815) 912-5504 www.caldwellengineering.com

Designed By	MJC
Drawn By	SAH
Checked By	MJC
Date	02/05/2018
Job Number	CE170053
Sheet Number	C1

FOR PERMIT SUBMITAL

N:\JOBS\2017\CE170053 Kourtis - 1st Street Duplex_Dwg\SPR-170053.dwg-Cover & Demo-5/21/2018 12:47 PM

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 815.356.3615).
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 sweeping conducted by the Contractor. Dirt 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 right-of-way.
6. Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safety and flag 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 above 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 parkway/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 be revisited by the Engineering Division at least 24-hours prior to excavation. Provide two (2) compaction results 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 used onsite as needed for the purposes of dust control as 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 (815.459.2616). Only the City of Crystal Lake Water Division may operate valves and hydrants.

Revised:	Drawing Name	Drawing Number
1. 09/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02a
2.		Date: 01/30/15
3.		Drawn: DD / Checked: AW
4.		City of Crystal Lake Illinois

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 earthen or mineral materials not compatible to planting 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 906 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 Clerk Engineering Division).
3. All manhole or active access 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 bored.

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 biomat.
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 at the project only as 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. Riprap meeting IDR (LW) - RR1 (W) is to be in accordance with Article 281 and placed 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. 09/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02b
2.		Date: 01/30/15
3.		Drawn: DD / Checked: AW
4.		City of Crystal Lake Illinois

GE-02c

SANITARY SEWER:

1. Non-shear stainless steel couplings shall be used when connecting sewer pipes of dissimilar materials and pipes with no bell, joints. When connecting to an existing sanitary sewer by means other than an existing wye or manhole, contractor shall use a Sewer-Tap and hub-wye or hub-tee saddle.
2. Unless an alternate method is approved, water stop gaskets shall be installed at all sanitary sewer manhole connections. Type and manufacturer to be approved by the City.
3. PVC plastic sewer pipe and fittings of sizes 4-inch through 15-inch shall conform to the latest revised specification requirements of ASTM D3034 for type PSM polyvinyl chloride (PVC) sewer pipe and fittings and minimum wall thickness SDR 26.
4. Joints shall be either the solvent weld type conforming to the latest revised specification requirements of ASTM D2564 and ASTM D2855, or elastomeric gasket type conforming to the latest revised specification requirements of ASTM D1869 and ASTM D3212.
5. A thicker walled pipe such as SCH 26 may be specified by the engineer depending on design and/or field conditions.
6. PVC plastic sewer pipe and fittings of sizes 18-inch through 36-inch shall conform to the latest revised specification requirements of ASTM F679 or polyvinyl chloride (PVC) large diameter ribbed gravity sewer pipe and fittings, with integral bell gasketed joints and elastomeric gaskets to form a watertight seal conforming to the latest revised specification requirements of ASTM F477 or ASTM D3212.
7. Pipe and fittings shall be the products of one approved manufacturer only and there shall not be any mixing of pipe and fittings of different manufacturers between manholes.
8. The handling and installation of pipe, assembly of joints, and manhole connections shall be in accordance with the manufacturer's recommendations.
9. Gasket-type watertight sanitary conduit of a neoprene collar and a stainless steel band or other approved manhole watertight shall be installed wherever the pipe passes through the manhole walls to provide a watertight joint to prevent infiltration into the sewer system.
10. PVC pipe shall be installed in accordance with the latest revised specification requirements of ASTM D2321 using either compacted sand or class B granular embedment materials for bedding, haunching, and initial backfill of 12 inches over the top of pipe to provide the necessary support for the pipe so that the maximum deflection does not exceed five percent of the pipe's original internal diameter.
11. The Contractor shall provide the necessary tools and equipment and perform the work necessary to test the deflection in the initial 1,000 feet of installed sewer and test lines (less ten percent (10%) of the total length of the sewer project) at random locations selected by the engineer. In cases that 30 days after backfilling has been completed. In the event that deflections exceeds the maximum limit of five percent (5%) the Contractor shall test all other new flexible type deflection. Deflection shall be tested by the use of either a mandrel or ball not having a diameter equal to ninety-five percent (95%) of the inside diameter of the pipe, and the test shall be performed without using mechanical pulling devices. Wherever the deflection is found to be excessive, the contractor shall uncover the pipe, carefully replace compacted embedment and backfill material, and retest for deflection.
12. The Contractor shall install all sanitary sewers, including service lines, to an air test. Allowable infiltration shall not exceed 100 gallons per inch diameter of size per mile per day.

    The Contractor shall also televise all public sanitary sewers. Televising of sanitary sewer, cost for televising, and testing shall be the responsibility of the Contractor.
13. Cast Iron Soil Pipe: service weight cast iron soil pipe and fittings as following: C.I.S.P.I. Specification 1S-97 cast iron compression type rubber gasket joints conforming to ASTM specification or CISPI, or other suitable materials approved by the City Engineer.

Revised:	Drawing Name	Drawing Number
1. 09/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02c
2.		Date: 01/30/15
3.		Drawn: DD / Checked: AW
4.		City of Crystal Lake Illinois

GE-02d

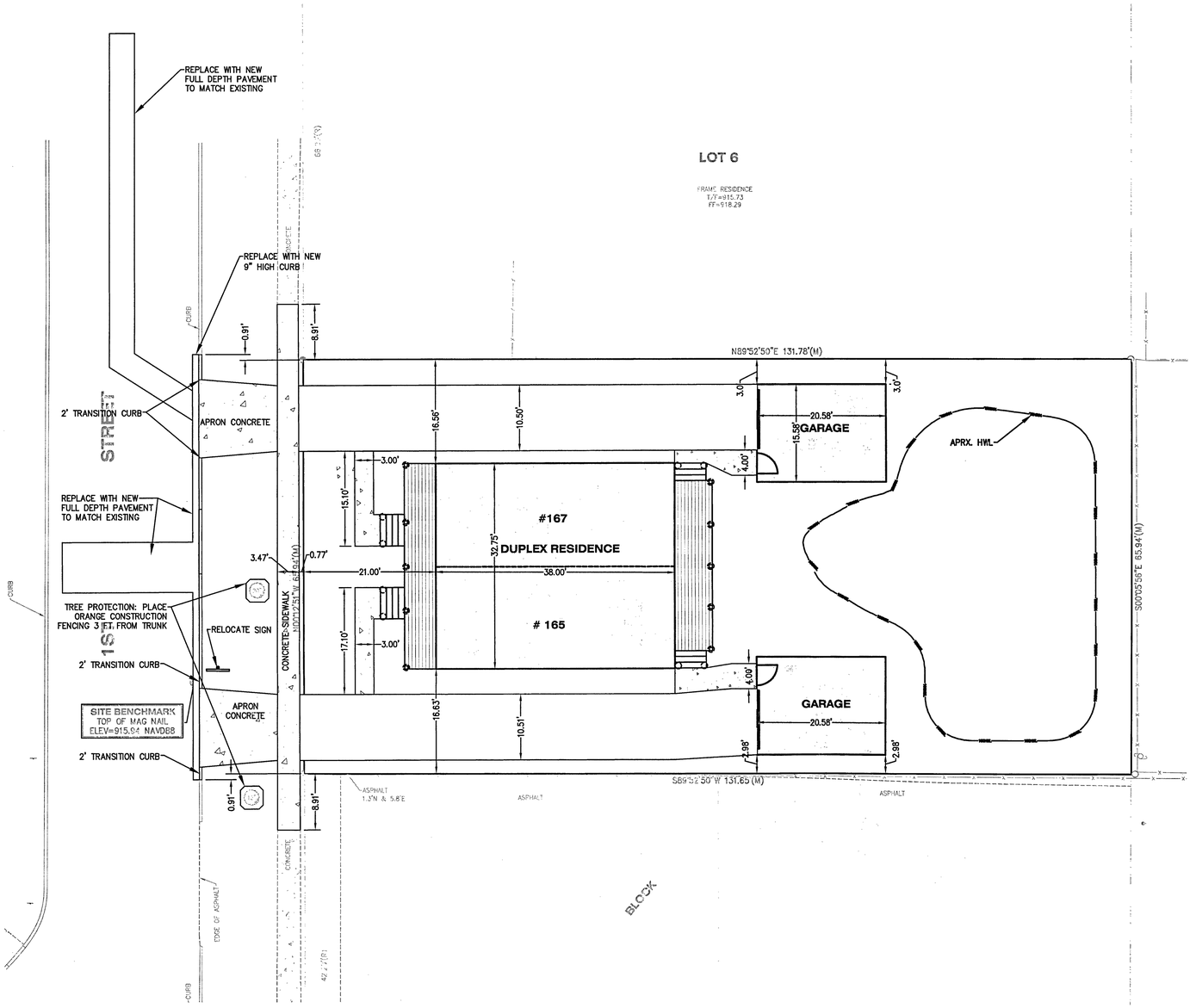
WATER MAIN:

1. Water main shall be Ductile Iron or Molecularly Oriented Polyvinyl Chloride (PVCO).
   a) Ductile iron water main shall be Class 52 conforming to ANSI/AWWA C151/A21.51-96.
   b) Gaskets and cast iron fittings shall conform to ANSI/AWWA C111/A21.11 and ANSI/AWWA C110/A21.10 respectively.
   c) PVCO - Box City Ductil DR-18 and C900.
2. Thrust blocking or Mega-Lug or grip-set retainer gland shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
3. Thrust blocks not permitted with 45 degree vertical bends in water main (these shall be restrained with Mega-Lug lug or approved equal).
4. When specified, ductile iron pipe shall be encased in polyethylene and shall conform with ANSI/AWWA C105/A21.5 - 10 inc. ASTM A674-95.
5. Minimum cover from finished grade to top of water main shall be six (6) feet. Maximum cover shall be eight (8) feet.
6. Water Main Taps: An Illinois licensed plumber is required for any water main tap.
7. All water mains shall be subjected to a pressure test and a separate leakage test at system pressure for 24 hours by the Contractor. Hydrostatic pressure test and leakage test shall be base on 125 PSI for two (2) hrs. Water mains shall be disinfected in accordance with the Standard Specifications.
8. The Underground Contractor shall consider incidental to be our load any disinfection and testing of existing water mains where connections to and construction of such mains is indicated on the drawing.

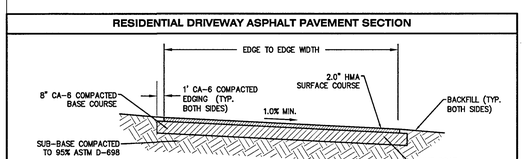
PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavement shall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevation.
3. The Paving Contractor shall ensure that the subgrade has been properly compacted and that the finished top of subgrade elevation has been graded within the tolerances set forth in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to the grading for base course construction, it is understood that the Contractor has approved and accepts responsibility for the subgrade.
4. For the purpose of providing handicap accessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at all curb ramp where public roads or pedestrian paths intersect curb lines at street intersections per other locations as directed.
5. 4 inch thick premolded fiber expansion joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes.
6. ¼ inch thick fiber expansion joints shall be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The ends of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter or all incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines, the cost of which shall be considered incidental to the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be of the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.5 bag mix (or IDOT class SI concrete) and shall develop a minimum of 3,500 psi compressive strength at 28 days (see Specifications). Contractor shall not place concrete when the air temperature is below 40 (f) (4°C) or forecasted to be below that temperature within 24 hrs (during the curing period) and when the sidewalk meets the curb or another sidewalk, at the end of each pour. All sidewalks constructed over utility trenches and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot inserts in length).

Revised:	Drawing Name	Drawing Number
1. 09/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02d
2.		Date: 01/30/15
3.		Drawn: DD / Checked: AW
4.		City of Crystal Lake Illinois



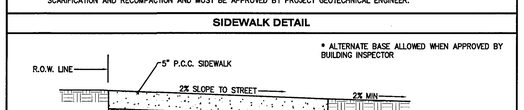
RESIDENTIAL DRIVEWAY ASPHALT PAVEMENT SECTION



GENERAL NOTES:

1. BACKFILL COMPACTED TO 90% OF ASTM D698 & DRESS WITH SUITABLE MATERIAL FROM BACK OF CURB TO PROPERTY LINE.
2. AFTER COMPACTION, THE HMA SURFACE COURSE SHALL BE WITHIN 1/4" ABOVE THE LIP OF GUTTER.
3. SUB GRADE PREPARATION MAY CONSIST OF FLY ASH STABILIZATION, LIME STABILIZATION, CEMENT STABILIZATION, OR SCARIFICATION AND RECOMPACTION AND MUST BE APPROVED BY PROJECT GEOTECHNICAL ENGINEER.

SIDEWALK DETAIL



NOTES:
ALL SIDEWALKS SHALL HAVE CONTRACTION JOINTS AT 5' INTERVALS AND EXPANSION JOINTS AT 25' INTERVALS

LEGEND

ASPHALT PAVEMENT

CONCRETE PAVEMENT

NOTES:

1. FOR BUILDING LAYOUT AND DIMENSIONS SEE THE ARCHITECTURAL PLAN.
2. A 3/4 INCH FIBER EXPANSION JOINT SHALL BE INSTALLED WHEN THE CURB ABUTS A SIDEWALK OR EXISTING CURB, CONCRETE PAVEMENT/SIDEWALK ABUTS A BUILDING OR CONCRETE PAVEMENT/SIDEWALK ABUTS EXISTING SIDEWALK.

NOTE: CONTRACTOR SHALL PROVIDE APPROPRIATE TRAFFIC CONTROL.

N
W E
S

10' 0' 10' 20'
SCALE: 1" = 10'

NO.	DATE	REVISIONS
1	05/21/2018	PER CITY COMMENTS

DUPLEX RESIDENCE
165 AND 167 FIRST STREET
CRYSTAL LAKE, IL
GEOMETRIC & CRYSTAL LAKE NOTES

FOR PERMIT SUBMITTAL

CELTD
Caldwell Engineering, Ltd.
1316 North Madison Street, Woodstock, Illinois
(815) 502-5504 www.caldwellengineering.com

Designed By	MJC
Drawn By	SAH
Checked By	MJC
Date	02/05/2018
Job Number	CE170053
Sheet Number	C2

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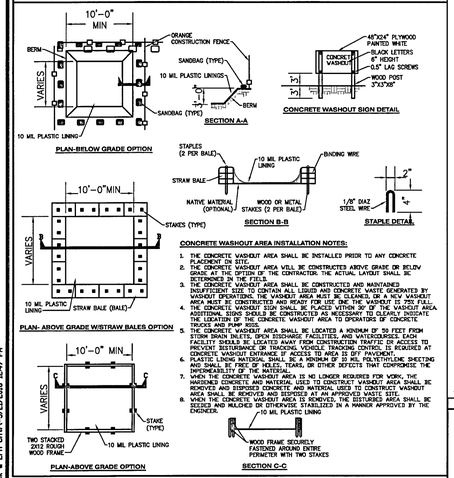
SOIL EROSION AND SEDIMENT CONTROL NOTES:

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:
   - 8.1. WHERE THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE; AND
   - 8.2. 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. 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:
   - 15.1. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATER; AND
   - 15.2. 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.

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.

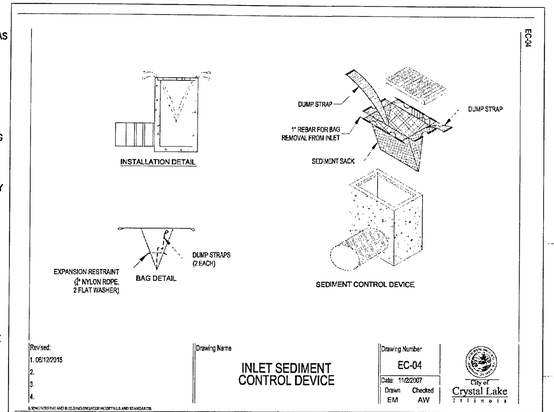
CONCRETE WASHOUT AREA

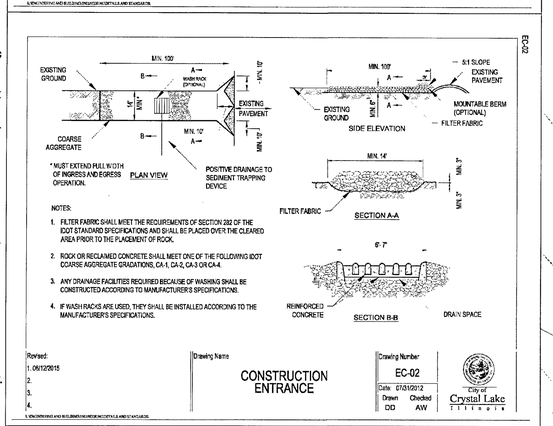


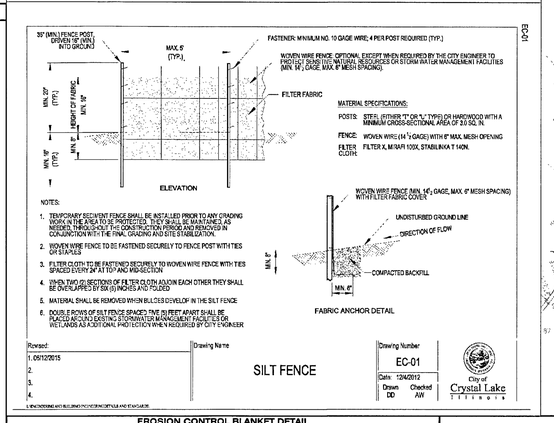
CONCRETE WASHOUT AREA INSTALLATION NOTES:

1. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. THE CONCRETE WASHOUT AREA WILL BE CONSTRUCTED ABOVE GRADE OR BELOW GRADE AT THE OPTION OF THE CONTRACTOR. THE ACTUAL LAYOUT SHALL BE DETERMINED IN THE FIELD.
3. THE CONCRETE WASHOUT AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. THE WASHOUT AREA MUST BE CLEANED, OR A NEW WASHOUT AREA MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
4. THE CONCRETE WASHOUT SIGN SHALL BE PLACED WITHIN 30' OF THE WASHOUT AREA ADDITIONAL SIGNS SHOULD BE CONSTRUCTED AS NECESSARY TO CLEARLY INDICATE THE LOCATION TO THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIG.
5. THE CONCRETE WASHOUT AREA SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DISCHARGE FACILITIES, AND WATERCOURSES. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS TO MINIMIZE THE POTENTIAL FOR SPILLAGE OR TRACKING OF CONCRETE AS REQUIRED AT CONCRETE WASHOUT ENTRANCE IF ACCESS TO AREA IS OFF PAVEMENT.
6. PLASTIC LINING MATERIAL SHALL BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHALL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
7. WHEN THE CONCRETE WASHOUT AREA IS NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE AND MATERIAL USED TO CONSTRUCT WASHOUT AREA SHALL BE REMOVED AND DISPOSED CONCRETE AND MATERIAL USED TO CONSTRUCT WASHOUT AREA SHALL BE REMOVED AND DISPOSED AT AN APPROVED WASTE SITE.
8. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER.

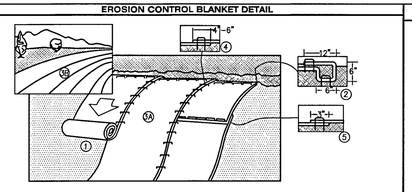








EROSION CONTROL BLANKET DETAIL



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP x 6" TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACK FILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURERS RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 4"-5" OVERLAP DEPENDING ON THE BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURE RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:
1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKET.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION.

SEEDING CHART

STANDARD LAWN MIXTURE
A(1) KENTUCKY BLUEGRASS 50 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE AND CREEPING RED FESCUE 20 LBS/ACRE

SALT TOLERANT MIXTURE
A(2) KENTUCKY BLUE GRASS 44 LBS/ACRE AND RED FESCUE 110 LBS/ACRE
OR
RED FESCUE 35 LBS/ACRE, ALKALI GRASS 35 LBS/ACRE, AND SQUIRRELTAIL GRASS 15 LBS/ACRE

LOW MAINTENANCE NATIVE GRASS MIXTURE
B ANY OF THE FOLLOWING SEED TYPES SHALL BE APPLIED FOR LOW MAINTENANCE NATIVE GRASS AREAS:
–ANDROPOGON GERARDI (BIG BLUE STEM) 5.0 LBS/ACRE
–BOUTELOUVA CURTIPENDULA (SIDE OATS GRAMA) 5.0 LBS/ACRE
–SPOROBOLUS HETEROLEPSIS (PRAIRIE DROPSEED) 0.5 LBS/ACRE
–LOLIUM MULTIFLORUM (ANNUAL RYE GRASS) 30 LBS/ACRE
–LOLIUM PERENNE (PERENNIAL RYEGRASS) 30 LBS/ACRE
(FOR MORE MIXTURES AND DETAILS SEE THE NRCS ILLINOIS URBAN MANUAL)

WETLAND GRASS AND SEDGE MIXTURE
C ANNUAL RYE GRASS 25 LBS/ACRE OATS, SPRING 25 LBS/ACRE WHICH IS IDOT STANDARD SECTION 250.07 TYPE 4B

D SODDING

TEMPORARY SEEDING
E ANY OF THE FOLLOWING SEED TYPES MAY BE APPLIED FOR TEMPORARY SEEDING PURPOSES:
–CEREAL RYE 90 LBS/ACRE
–WHEAT 90 LBS/ACRE
–PERENNIAL RYEGRASS 25 LBS/ACRE

* IRRIGATION NEEDED DURING JUNE AND JULY

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

NOTE: ALL DISTURBED AREAS TO BE SEEDED WITH A(1) UNLESS STATED OTHERWISE
MULCH TO BE ADDED AT IDOT SPECIFIED RATES FOR ALL DISTURBED AREAS

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING				A,B,C								
SODDING				D**								
TEMPORARY SEEDING			E									
DORMANT												

STORM STRUCTURE TABLE

#	STRUCTURE INFORMATION
** 101	24" DIA. CATCH BASIN** RIM=918.16 8" PVC SDR 26 W=915.00 8" PVC SDR 26 E=915.00 8" DIP =917.00
102	TEE CONNECTION RIM=915.23 4" PERF. PIPE N=914.50 4" PERF. PIPE S=914.50 8" PVC SDR 26 W=914.50
103	CLEAN-OUT RIM=915.49 4" PERF. PIPE S=914.50
104	CLEAN-OUT RIM=915.49 4" PERF. PIPE N=914.50 8" PVC SDR 26 SW=914.50
105	CLEAN-OUT RIM=916.18 8" PVC SDR 26 W=915.20 8" PVC SDR 26 NE=915.20
106	NYOPLAST YARD DRAIN RIM=916.50 8" PVC SDR 26 E=916.00
107	ADJUST LID AND FRAME RIM=917.69
108	24" DIA. CATCH BASIN RIM=916.91 8" DIP S=914.50 8" PVC SDR 26 W=914.50
109	24" CATCH BASIN RIM=914.80 8" PVC SDR 26 E=912.50 4" PVC SDR 26 W=912.50
110	CLEAN-OUT RIM=913.80 4" PVC SDR 26 E=912.50

** WITH 2 LF 3" DIA PVC SCHEDULE 40 PIPING GROUTED IN PLACE WITH NON-SHRINK GROUT INSTALLED INTO UPSTREAM END OF STORM PIPE 207.

STORM PIPE TABLE

	#	TYPE	SIZE	LENGTH	SLOPE
*	201	PVC SDR 26	8 IN.	4 FT.	2.93%
	202	PVC SDR 26	8 IN.	44 FT.	1.14%
***	203	PERF. PIPE	4 IN.	16 FT.	0.00%
***	204	PERF. PIPE	4 IN.	17 FT.	0.00%
	205	PVC SDR 26	8 IN.	22 FT.	3.17%
	206	PVC SDR 26	8 IN.	29 FT.	2.72%
	207	DIP	8 IN.	29 FT.	8.57%
	208	PVC SDR 26	8 IN.	35 FT.	5.67%
***	209	PVC SDR 26	4 IN.	32 FT.	0.00%

* LENGTH TO BE DETERMINED. ROOF DOWN SPOUTS TO CONNECT TO PIPE #201.
*** WITH INFILTRATION TRENCH. SEE CITY DETAILS.

SANITARY STRUCTURE TABLE

#	STRUCTURE INFORMATION
301	NEW SANITARY SEWER CONNECT TO EXISTING MANHOLE, REPLACE SOUTH PIPE, CORE, AND BOOT TO MEET ASTM D-923. RIM=911.32 8" PVC SDR 26 S=907.72 8" CLAY N=907.67 8" CLAY W=907.72
302	48" MANHOLE RIM=913.32 8" PVC SDR 26 N=907.94 6" PVC SDR 26 SE=907.94
303	48" DIA. MANHOLE RIM=914.90 6" PVC DR 18 WQ S=908.25 6" PVC SDR 26 NW=908.16 6" PVC SDR 26 E=908.16
304	CLEAN-OUT (PIPE INTERSECTION SHALL BE WITH WYE AND 45 DEGREE BEND) RIM=915.65 6" PVC SDR 26 E=909.45 6" PVC DR 18 WQ N=909.45
305	CONNECT TO FOUNDATION RIM=FINISH FLOOR RIM=920.70 6" PVC SDR 26 W=909.55
306	CONNECT TO FOUNDATION RIM=FINISH FLOOR RIM=920.70 6" PVC SDR 26 W=908.32

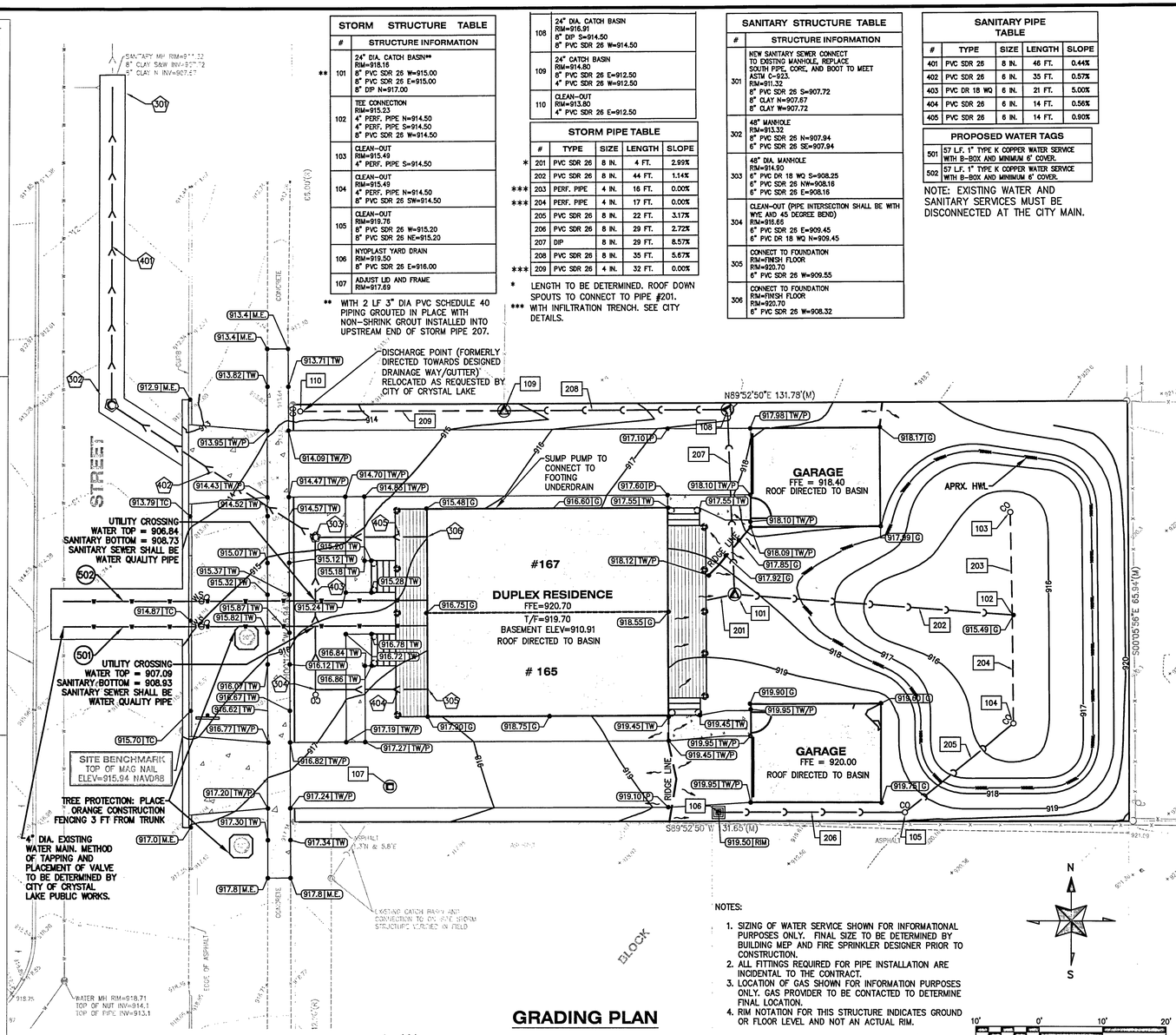
SANITARY PIPE TABLE

#	TYPE	SIZE	LENGTH	SLOPE
401	PVC SDR 26	8 IN.	46 FT.	0.44%
402	PVC SDR 26	6 IN.	35 FT.	0.57%
403	PVC DR 18 WQ	6 IN.	21 FT.	5.00%
404	PVC SDR 26	6 IN.	14 FT.	0.56%
405	PVC SDR 26	6 IN.	14 FT.	0.90%

PROPOSED WATER TAGS

501	57 L.F. 1" TYPE K COPPER WATER SERVICE WITH B-BOX AND MINIMUM 6' COVER.
502	57 L.F. 1" TYPE K COPPER WATER SERVICE WITH B-BOX AND MINIMUM 6' COVER.

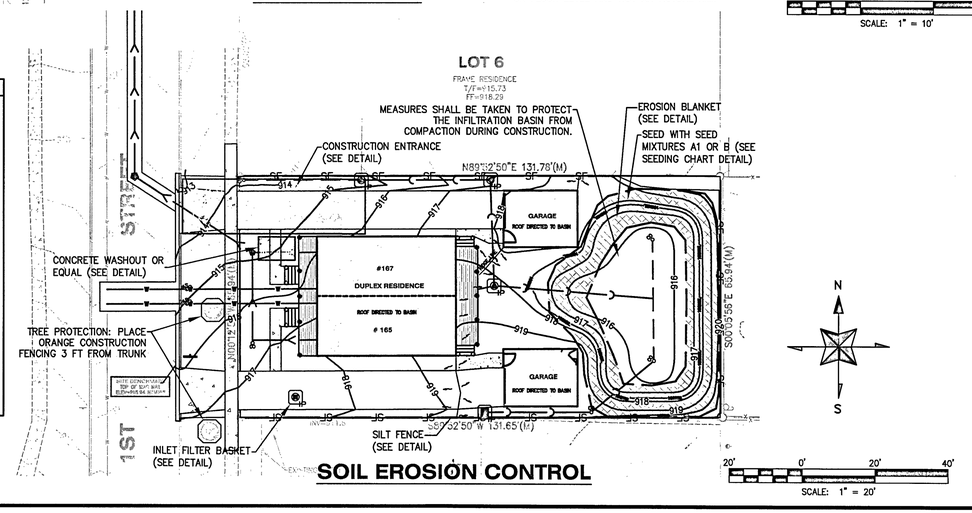
NOTE: EXISTING WATER AND SANITARY SERVICES MUST BE DISCONNECTED AT THE CITY MAIN.



GRADING PLAN

NOTES:
1. SIZING OF WATER SERVICE SHOWN FOR INFORMATIONAL PURPOSES ONLY. FINAL SIZE TO BE DETERMINED BY BUILDING MEP AND FIRE SPRINKLER DESIGNER PRIOR TO CONSTRUCTION.
2. ALL FITTINGS REQUIRED FOR PIPE INSTALLATION ARE INCIDENTAL TO THE CONTRACT.
3. LOCATION OF GAS SHOWN FOR INFORMATION PURPOSES ONLY. GAS PROVIDER TO BE CONTACTED TO DETERMINE FINAL LOCATION.
4. RIM NOTATION FOR THIS STRUCTURE INDICATES GROUND OR FLOOR LEVEL AND NOT AN ACTUAL RIM.

SCALE: 1" = 10'



SOIL EROSION CONTROL

SCALE: 1" = 20'

DUPLEX RESIDENCE
165 AND 167 FIRST STREET
CRYSTAL LAKE, IL
GRADING, UTILITY & SOIL EROSION CONTROL PLAN

REVISIONS		
NO.	DATE	
1	05/12/2015	PER CITY COMMENTS

CE LTD
Caldwell Engineering, Ltd.
1307 Walkup Avenue, Woodstock, Illinois
(815) 308-3599 www.caldwellengineering.com

Designed By	MJC
Drawn By	SAH
Checked By	MJC
Date	02/05/2018
Job Number	CE170053
Sheet Number	C3

FOR PERMIT SUBMITTAL

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