



#PLN-2021-00202
551 Congress Parkway – Preliminary PUD
Project Review for Planning and Zoning Commission

<u>Meeting Date:</u>	January 5, 2022
<u>Request:</u>	1. Comprehensive Land Use Plan Map Amendment from Office to High Density Residential 2. Rezoning from M Manufacturing to R-3B PUD Multi-Family Residential 3. Preliminary Planned Unit Development review for a new 93-unit apartment development
<u>Location:</u>	551 Congress Pkwy
<u>Acreage:</u>	Approximately 6.62 acres
<u>Zoning:</u>	M Manufacturing
<u>Surrounding Properties:</u>	North: M Manufacturing South: M Manufacturing & B-2 General Commercial East: M Manufacturing West: B-2 PUD General Commercial & O PUD Office
<u>Staff Contact:</u>	Katie Rivard (815.356.3612)

Background:

- **Existing Use:** The site is a vacant parcel located near the southeast intersection of Congress Parkway and Exchange Drive.
- **Previous Approvals:** The subject property was annexed in 1987.

Request:

- Rezoning from M Manufacturing to R-3B PUD Multi-Family Residential,
- Preliminary PUD for a 93-unit apartment development, and
- Variations to allow:
 - A density of 14.06 units to the acre,

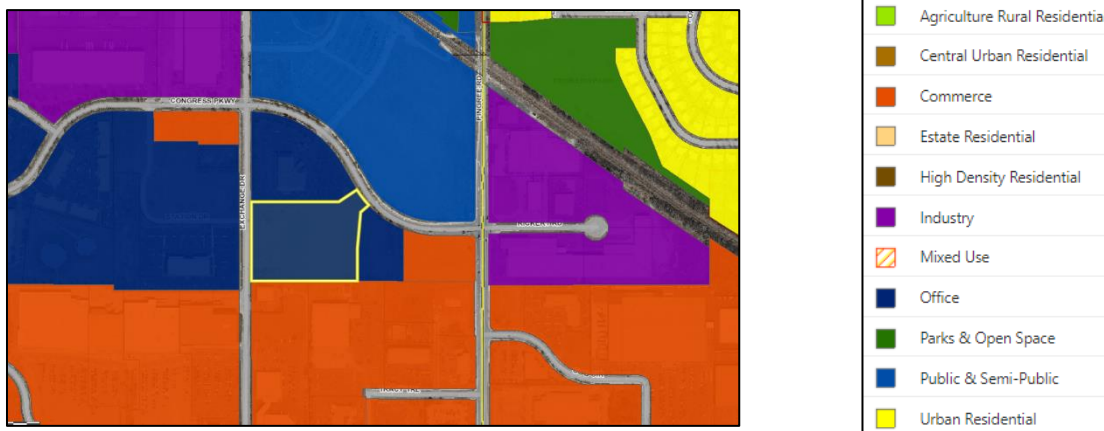
- A lot area of 288,048 square feet, and
- A lot width of 567.23 feet.

Following the Preliminary PUD review the request would come back to the Planning & Zoning Commission and City Council for Final PUD approval. The Preliminary PUD approval provides the opportunity for a project to receive zoning entitlements and have the ability to address conditions of approval and make edits to the PUD plan for Final PUD approval.

Development Analysis:

LAND USE/ZONING

- The site is currently zoned M Manufacturing. It would need to be rezoned to R-3B PUD Multi-Family Residential. The residential zoning could be considered spot zoning since no residential zoning exists in the immediate area.
- The current Comprehensive Plan land use designation is Office and this proposal will require an amendment to the land use plan to change from Office to High Density Residential.



- The Petitioner would request variations in conjunction with the Planned Unit Development. Based on the plans submitted, the following variations are required:
 - Density: The proposed density is 14.06 units to the acre. R-3B allows a maximum of 9 units to the acre. This is a variation of 5.06 units to the acre.
 - Lot area: The lot is an existing vacant parcel at 288,048 square feet. Lot area for multi-family is calculated based on the total number of units, and the number of units proposed requires a lot area of 373,400 square feet. This is a variation of 85,352 square feet. Since this is an existing lot surrounded by development, there is not an opportunity to acquire additional property to increase the lot size. At 9 units to the acre (60 units), a variation would not be required, as the lot area would be 241,400 square feet.

- Lot width: The existing lot width is 567.23 feet measured along both frontages. Lot width for multi-family is calculated based on the total number of units, and the number of units proposed requires a minimum lot width of 980 feet. This is a variation of 412.77 feet. In order to meet the lot width requirements, the development would need to be reduced to 40 units.

SITE

- The proposed development would consist of three 3-story apartment buildings with 31 units each for a total of 93 units. It would feature 21 one-bedroom units and 72 two-bedroom units.
- The proposed development complies with the setback requirements of the R-3B zoning district.

	R-3B requirement	Lot – Proposal
Front Yard Setback	30 feet	>100 feet
Side Yard Setbacks	8 feet	~83 feet
Combined Side Yard Setbacks	30 feet	>100 feet
Rear Yard Setback	20 feet	~98 feet

- The proposed impervious surface coverage is 50%, which meets the UDO requirements of 65%.
- The site layout provides green space throughout the development most predominately between the two center (horizontal) buildings, as well as, on the northeastern and southeastern portions of the development. The amenities include a grassy community area with gazebo and benches, and a dog park (northeast corner) and recreation area (southeast corner).
- The adjacent detention area, while not included in the subject property, provides a buffer between the eastern building and Congress Parkway.

PARKING

- Surface parking would be utilized for the multi-family apartment buildings.
- Based on the submitted plans, 199 parking spaces would be required for the residential units (1.5 space per 1-bedroom unit, 2 spaces per 2-bedroom unit, 0.25 guest stalls per unit), and 199 spaces are provided.

SITE LAYOUT - ACCESS

- Access into the site would be provided off Exchange Drive. Developments that have sprinkle systems and are less than 200 dwelling units may proceed with one access, subject to the requirements of the 2018 International Fire Code (IFC).

- The total width of the community drive aisles are 24 feet, which will require one lane to be marked with “NO PARKING – FIRE LANE” signs.
- Sidewalks and parkway trees are required along all roadway frontages. Sidewalk connections are provided between buildings and throughout the development. The sidewalks will connect to the existing sidewalk along Exchange Drive, as well as, the proposed sidewalk across the property’s frontage along Congress Parkway.

TRAFFIC STUDY

- A traffic study was completed by Sam Schwartz. With implementation of the recommendations below, the area traffic operation would be generally acceptable after completion. The recommendations are as follows:
 - Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane.
 - Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post “Stope Here for Pedestrians” signage on both legs of Exchange Drive.
 - Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
 - Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.
 - The proposed use will increase the average volume of traffic at the Exchange Drive and Congress Parkway intersection by 0.7%. Similar to other projects in the City, it is recommended that the petitioner contribute 0.7% of the cost of the scheduled intersection improvement (roundabout installation).

BUILDING ELEVATIONS

- The buildings are 3-stories with brick on the first level and a combination of smooth Hardie board siding and horizontal Hardie board siding on the second and third floor elevations.
- The proposed elevations meet the design criteria for multi-family residential, and include the following architectural accents:
 - A recessed entry;
 - Pillars, posts or pilasters;
 - Eaves with a minimum six-inch projection from the façade plane; and
 - Varying styles of Hardie board siding (horizontal and smooth siding).
- Each first floor unit will be provided a patio, and each second and third story units will be provided a balcony.
- In order for the proposed architecture to fit in with the character of the area, staff will continue to work with the Petitioner to enhance the side/end and rear elevations and incorporate of additional design elements such as brick bases on the balcony and covered entryway posts.

The petitioner must also include building colors and materials that are compatible with the surrounding area.

LANDSCAPING

- The landscape plan was not submitted as part of the preliminary review. A Final Landscape Plan must be submitted with the Final PUD. The landscaping must meet the UDO requirements of Section 4-400, including but not limited to, parkway trees, parking lot landscaping, foundation landscaping and landscape buffers.

STORMWATER

- Currently, the stormwater detention is shown off-site as part of the Crystal Lake Business Center detention area.

Findings of Fact:

REZONING

- The property is currently zoned M Manufacturing.
- Upon Preliminary Planned Unit Development approval, the property would be rezoned to R-3B Planned Unit Development. The Multi-Family zoning criteria are:
 - ✓ General: This district allows the highest density of residential development. It encourages a wide range of housing types, especially multifamily development, even though single-family detached and two-family dwellings are also allowed, to meet the diverse housing needs of City residents. The intent is to provide higher density housing in areas immediately around the historic downtown, areas near commercial zoning or areas near transit stops where increased density and in-fill development are desirable.
 - ✓ Character: This district is characterized by residential buildings that cover a large percentage of the lot, are taller and spaced closely enough to create a sense of vertical enclosure.
 - ✓ Uses: This district is for higher density residential neighborhoods that meet the community's housing needs, particularly for higher density and in-fill housing development. Single-family and two-family dwellings are also permitted. Complementary uses such as certain civic and recreational uses are permitted, but are subject to restrictions set forth in this Ordinance.

Criteria for Rezoning:

(a) The existing uses and zoning of nearby property.

Meets *Does not meet*

(b) The extent to which property values are diminished by a particular zoning classification or restriction.

Meets *Does not meet*

- (c) The extent to which the destruction of property value of a petitioner property owner promotes the health, safety, morals or general welfare of the public.
 Meets *Does not meet*
- (d) The relative gain to the public as opposed to the hardship imposed on a petitioning property owner.
 Meets *Does not meet*
- (e) The suitability of the subject property for its zoned purposes.
 Meets *Does not meet*
- (f) The length of time the property has been vacant as zoned, considered in the context of land development in the area.
 Meets *Does not meet*
- (g) The Comprehensive Plan designation and the current applicability of that designation.
 Meets *Does not meet*
- (h) The evidence or lack of evidence, of community need for the use proposed.
 Meets *Does not meet*

PRELIMINARY PLANNED UNIT DEVELOPMENT

The petitioner is requesting approval of a Preliminary Planned Unit Development to allow the development of a 93-unit apartment community with variations. 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*

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.

a. Location: A residential PUD can be located anywhere in the City, including any land proposed for annexation.

Meets *Does not meet*

b. Permissible uses: A mix of different residential dwelling types in proximity to each other is encouraged. Neighborhood commercial uses serving the development may be approved as part of a residential PUD where appropriate.

Meets *Does not meet*

c. Nonresidential uses: Any nonresidential use permitted in a residential PUD shall be compatible with the residential nature of the development. Parking areas which are intended to serve nonresidential uses shall be separated from those designed to serve residential areas. Unless commercial and residential uses are combined within a single structure, commercial uses shall be separated from dwelling units by a heavily landscaped buffer zone that meets the requirements of Section 4-400, Landscaping and screening standards.

Meets *Does not meet*

d. Pedestrian paths: Pedestrian paths shall connect residential uses and nonresidential uses within a residential PUD.

Meets *Does not meet*

- e. Growth management: A growth management schedule shall be provided to and approved by the City Council, which indicates the number and type of residential units to be constructed in each calendar year. The maximum number of units to be constructed shall be 25 residential units or 15% of the total number of residential units (including all phases of the proposal), whichever is greater, in any calendar year. The City Council with recommendations from the Planning and Zoning Commission, at final PUD approval can approve, deny or adjust the percentage of an increase in the number of units that can be built in one calendar year. The City Council and the Planning and Zoning Commission shall consider the following criteria in approving an increase in the number of units that can be built annually:
- i. Advance dedication of school and park sites and advance payment of school, park and other impact fees;
 Meets *Does not meet*
 - ii. Payment for installation of road impact improvements or fees applicable by law;
 Meets *Does not meet*
 - iii. Smaller subdivisions which encourage in-filling within an established part of the community;
 Meets *Does not meet*
 - iv. Completion of major and collector road networks and critical linkages in the street systems;
 Meets *Does not meet*
 - v. Fulfill a need for various unit types and income levels such as low and moderate-income housing;
 Meets *Does not meet*
 - vi. Provisions which satisfy needed public facilities;
 Meets *Does not meet*
 - vii. Innovative architectural design, quality of exterior materials and creative use of landscaping;
 Meets *Does not meet*
 - viii. Other criteria or extraordinary amenities, not listed above, which may meet the development goals of the City.
 Meets *Does not meet*

PLANNED UNIT DEVELOPMENT VARIATIONS

The petitioner is requesting approval of a Preliminary Planned Unit Development to allow variations for density, lot area and lot width. 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 Amendment proposed by the Petitioner includes the following variations from the UDO:

1. Article 3-200(A)(6) Maximum net density of 9 dwelling units per acres to allow 14.06 dwelling units per acre.
2. Article 3-200(A)(6) Minimum lot area of 373,400 square feet to allow 288,048 square feet.
3. Article 3-200(A)(6) Minimum lot width of 980 feet to allow 455.8 feet.
4. Article 4-500(D)(1)(e) Growth management requirement of 25 residential units or 15% of the total number of residential units in a calendar year.

Comprehensive Land Use Plan 2030 Vision Summary Review:

Land Use: Residential

The proposed use will require an amendment to the Comprehensive Plan from an Office designation to Residential. The goal of a Residential designation is as follows:

Encourage a diversity of high quality housing in appropriate locations throughout the city that supports a variety of lifestyles and invigorates community character.

The Comprehensive Plan indicates this can be accomplished with the following supporting action:

Supporting Action: Encourage a diversity of housing types throughout the city, which satisfy wide-range needs for all persons regardless of age, race, religion, national origin, physical ability and economic level for existing and future city residents.

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 (Equity Trust Co., dated 11/06/2021, received 11/10/2021)
 - B. Revised Preliminary Site Plan (Paul Swanson, received 12/21/2021)
 - C. Floor Plans (Arthur Swanson & Associates, LTD, dated 11/08/2021, last revised 12/19/2021, received 11/10/2021)
 - D. Revised Colored Elevations (Paul Swanson, dated 12/19/2021, received 12/21/2021)
 - E. Revised Front Colored Rendering (Paul Swanson, received 12/30/2021)
 - F. Revised Preliminary Engineering Plans (Haeger Engineering, dated 11/09/2021, last revised 12/16/2021, received 12/20/2021)
 - G. Executive Summary of Preliminary Engineering Report (Haeger Engineering, dated 11/09/2021, received 11/10/2021)
 - H. Existing Conditions Pond Trib. Area Coverage Exhibit (Haeger Engineering, dated 12/16/2021, received 12/20/2021)
 - I. Development Concept Memo (Paul Swanson, dated 11/09/2021, received 11/10/2021)
 - J. Traffic Impact Study (Sam Schwartz Engineering, dated 12/06/2021, received 12/06/2021)
2. The internal drive aisles shall be posted with "NO PARKING – FIRE LANE" signs on one side of the road.
3. Final Engineering Plans must be submitted with Final Planned Unit Development in compliance with the City's Code and Stormwater ordinance.
4. Landscape Plan/Tree Survey
 - A. A Final Landscape Plan must be submitted with Final Planned Unit Development that complies with the landscape requirements of the UDO of Section 4-400.
 - B. Provide a list of quantities and species for the final landscape plan that comply with the minimum sizing requirements of the UDO.
 - C. Provide quantities of trees on the Tree Survey. Based on the quantities of trees and the Tree Preservation Section of the UDO, additional trees may be required.
 - D. Parkway trees must be planted along the frontage of Exchange Drive and Congress Parkway that comply with the requirements of the UDO.
5. A Final Photometric and Lighting Plan must be submitted with Final Planned Unit Development that complies with the lighting requirements of the UDO.

6. Elevations:

- A. Work with staff on ways to further enhance the side/end and rear elevations, including but not limited to, variation to the roof line and gable peaks.
- B. Work with staff on ways to incorporate additional design elements, including but not limited to, brick on the bases of the balcony posts and entryway posts.
- C. Work with staff to determine the final building and balcony colors and materials, which should include varying Hardi board colors.

7. Traffic Study:

- A. Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane, bookended by dedicated left-turn lanes into Station Drive and the proposed site access driveway, each with a 50-foot storage bay and 50-foot taper transition.
- B. Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post “Stop Here for Pedestrians” signage on both legs of Exchange Drive.
- C. Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
- D. Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.
- E. The petitioner must contribute their proportionate fair share of the construction costs for the improvements to Congress Parkway and Exchange Drive traffic circle (0.7% estimated at \$4,480) based on the projected traffic volume increase for the proposed development as determined by the traffic impact study dated December 6, 2021 by Sam Schwartz.

- 8. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Police and Fire Rescue Departments, as well as the City’s traffic consultant, Sam Schwartz Engineering and stormwater consultant, Christopher B. Burke Engineering, Ltd.

PIQ Map
551 Congress Parkway



City of Crystal Lake Development Application

Office Use Only
File # _____

Project Title: THE COURT YARD @ CONGRESS STATION

Action Requested

- | | |
|---|--|
| <input type="checkbox"/> Annexation | <input checked="" type="checkbox"/> Preliminary PUD |
| <input type="checkbox"/> Comprehensive Plan Amendment | <input type="checkbox"/> Preliminary Plat of Subdivision |
| <input type="checkbox"/> Conceptual PUD Review | <input type="checkbox"/> Rezoning |
| <input type="checkbox"/> Final PUD | <input type="checkbox"/> Special Use Permit |
| <input type="checkbox"/> Final PUD Amendment | <input type="checkbox"/> Variation |
| <input type="checkbox"/> Final Plat of Subdivision | <input type="checkbox"/> Other |

Petitioner Information

Name: TRUSTEES CO. CUSTODIAN
FBO PAUL SWANSON ILLA

Address: 401 E. PROSPECT AVE
MT. PROSPECT, IL 60056

Phone: 847-670-6710

Fax: 847-670-6713

E-mail: PAUL@PSA-INC, BIZ

Owner Information (if different)

Name: WALK IN THE WOOD, INC
JAMES MAC DONALD, PRES

Address: C/O TIMOTHY BILLIMACK
101 N. MAIN ST SUITE 15
CRYSTAL LAKE, IL 60014

Phone: 815-355-0196

Fax: ---

E-mail: BILLIMACKT@GMAIL.COM

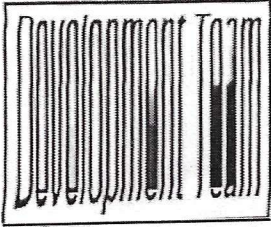
Property Information

Project Description: 3 - 3 STORY 31 UNIT APT. BUILDINGS
W/ 199 CAR# PARKING

Project Address/Location: 551 CONGRESS PKWY

PIN Number(s): 1904427009

Please include address, phone, fax and e-mail



Developer: EQUITY TRUST CO. CUSTODIAN FBO PAUL SWANSON IRA
401 E PROSPECT AVE MT. PROSPECT IL 60056 847-670-6710
PAUL@PSA-INC-BIZ

Architect: PAUL SWANSON ASSOC. INC 401 E. PROSPECT AVE MT. PROSPECT, IL 60056
847-670-6710 PAUL@PSA-INC-BIZ

Attorney: _____ NOT LET

Engineer: HAEBER ENGINEERING 1000 E. STATE PKWY SCHUMBOURG, IL 60173
DAN VANER 847-230-3177 DANIEL-V@HAEBERENGINEERING.COM

Landscape Architect: GARY R. WEBER ASSOC. INC 402 W. LIBERTY DR. WHEATON, IL
RICH OLSON ROLSON@GTZWKINC.COM 630-774-9055 60187

Planner: _____ NONE

Surveyor: VANDER STAPPEN LAND SURVEYING, INC. 1316 N. MADISON ST WOODSTOCK, IL
815-337-8310 KATTYE@VANDER-SINZ.COM 60090

Other: _____

Signatures

P. Swanson EQUITY TRUST CO. CUSTODIAN FBO PAUL SWANSON IRA
PAUL SWANSON AUTHORIZED AGENT 11/4/21

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.

[Signature] 11-06-2021
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 NOTICES

**PUBLIC NOTICE
BEFORE THE PLANNING
AND ZONING COMMISSION
OF THE CITY OF CRYSTAL
LAKE, MCHENRY COUNTY,
ILLINOIS**

**IN THE MATTER OF THE
APPROVAL OF
EQUITY TRUST COMPANY
QUESTIONS**

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 by Paul Swanson, representing Equity Trust Company, on behalf of the owner, Work in the Wood, Inc., for approval of a Re-zoning, Preliminary Planned Unit Development and Variance of the following real estate known as 351 Congress Parkway, Crystal Lake, Illinois 60014, PIN: 15-04-427-039.

The application is filed for the purpose of seeking a Re-zoning from M Manufacturing to R-30 Multifamily Residential and a Preliminary Planned Unit Development for a 30-unit apartment development with a variance to allow for a lot area of 280,045 square feet, a variance of \$5,352 square foot, a lot width of 455.79 feet, a variance of 514.22 feet, a variance for a density of 14.05 units to the acre, a variance of 5.06 units to the acre and any other variances, if necessary to approve the plans as proposed pursuant to Article 2, Article 3, Article 4 and Article 6. Plans for the project can be viewed at the City of Crystal Lake Planning and Economic Development Department at City Hall.

A public hearing before the Planning and Zoning Commission on the request will be held at 7:00 p.m. on Wednesday, December 10, 2021, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time oral and written comments may be heard and any person desiring to be heard may be present.

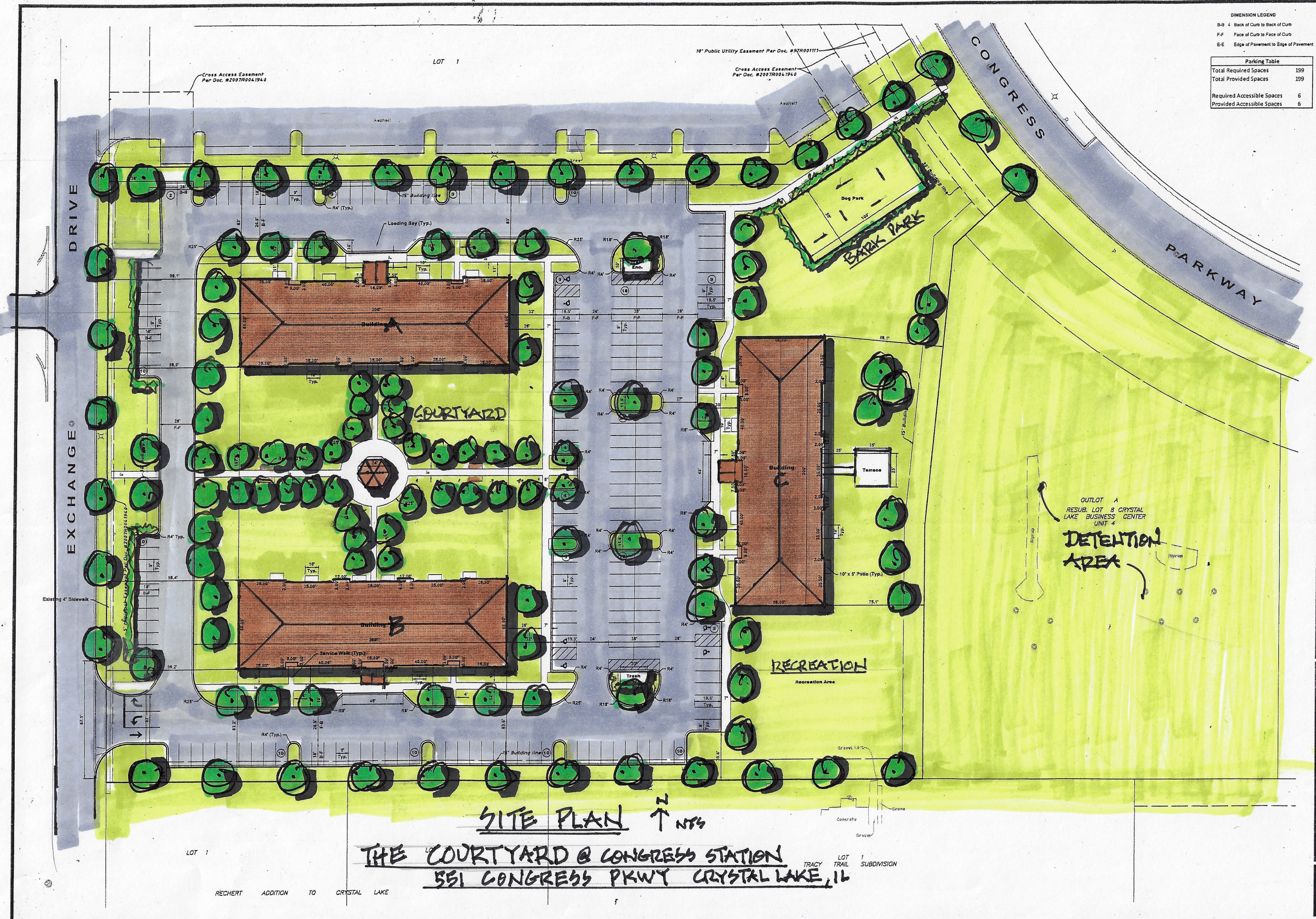
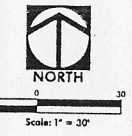
Jeff Casserman, Chairman
Planning and Zoning
Commission
City of Crystal Lake

(Published in Northwest Illinois
and November 27, 2021)
1520150

DIMENSION LEGEND

- B-B Back of Curb to Back of Curb
- F-F Face of Curb to Face of Curb
- E-E Edge of Pavement to Edge of Pavement

Parking Table	
Total Required Spaces	199
Total Provided Spaces	199
Required Accessible Spaces	6
Provided Accessible Spaces	6



SITE PLAN ↑ NTS

THE COURTYARD @ CONGRESS STATION
551 CONGRESS PKWY CRYSTAL LAKE, IL

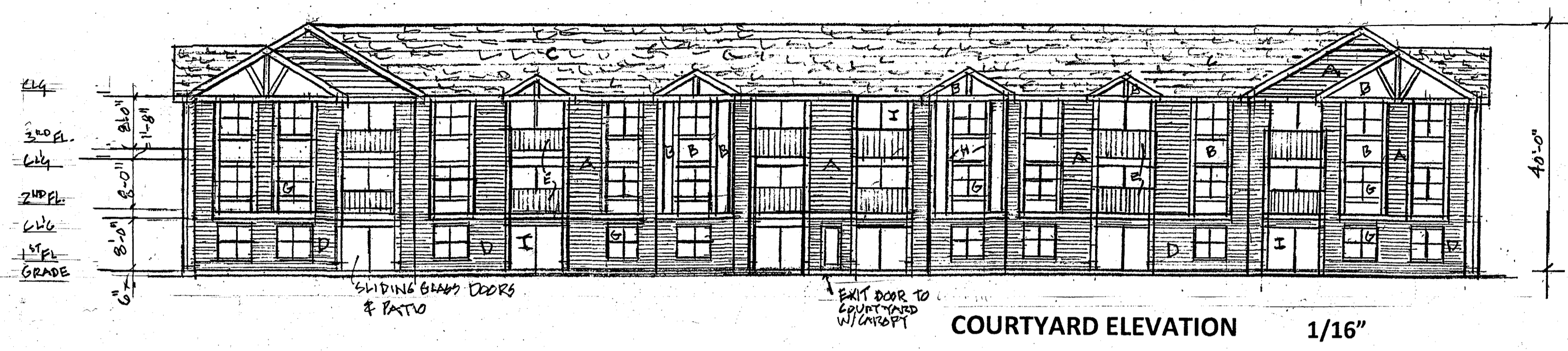
RECHERT ADDITION TO CRYSTAL LAKE

HAEGER ENGINEERING
 consulting engineers • land surveyors
 100 East State Parkway, Suite 100, Crystal Lake, IL 60147
 Phone: 815.434.4600 Fax: 815.434.4608
 Website: www.haegerengineering.com

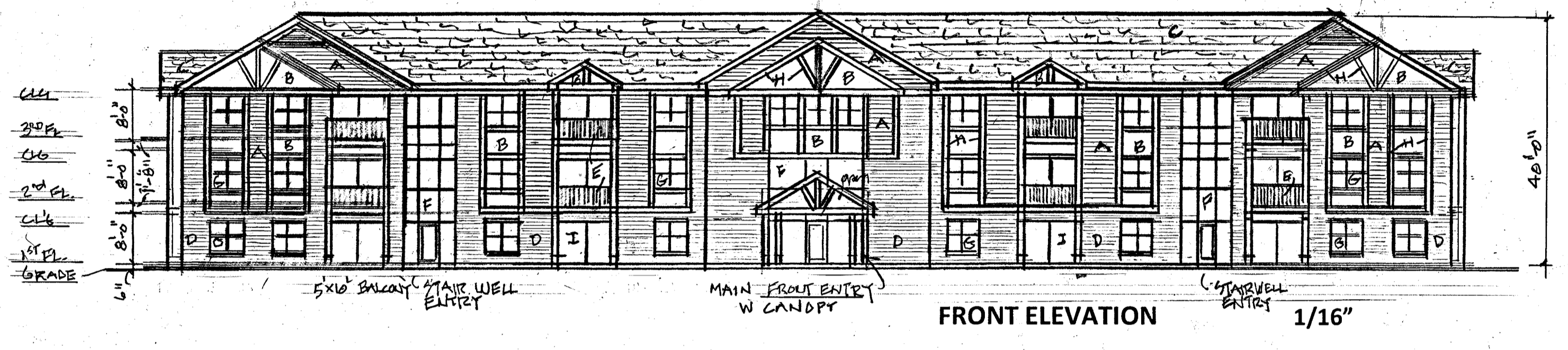
GEOMETRY, PAVING, STRIPING, & SIGNAGE PLAN
PRELIMINARY ENGINEERING
551 CONGRESS PARKWAY
 CRYSTAL LAKE, ILLINOIS

Project Manager: D J V
 Engineer: D J V
 Date: 10/22/2021
 Project No.: 21-215
 Sheet **C3.0** / CS

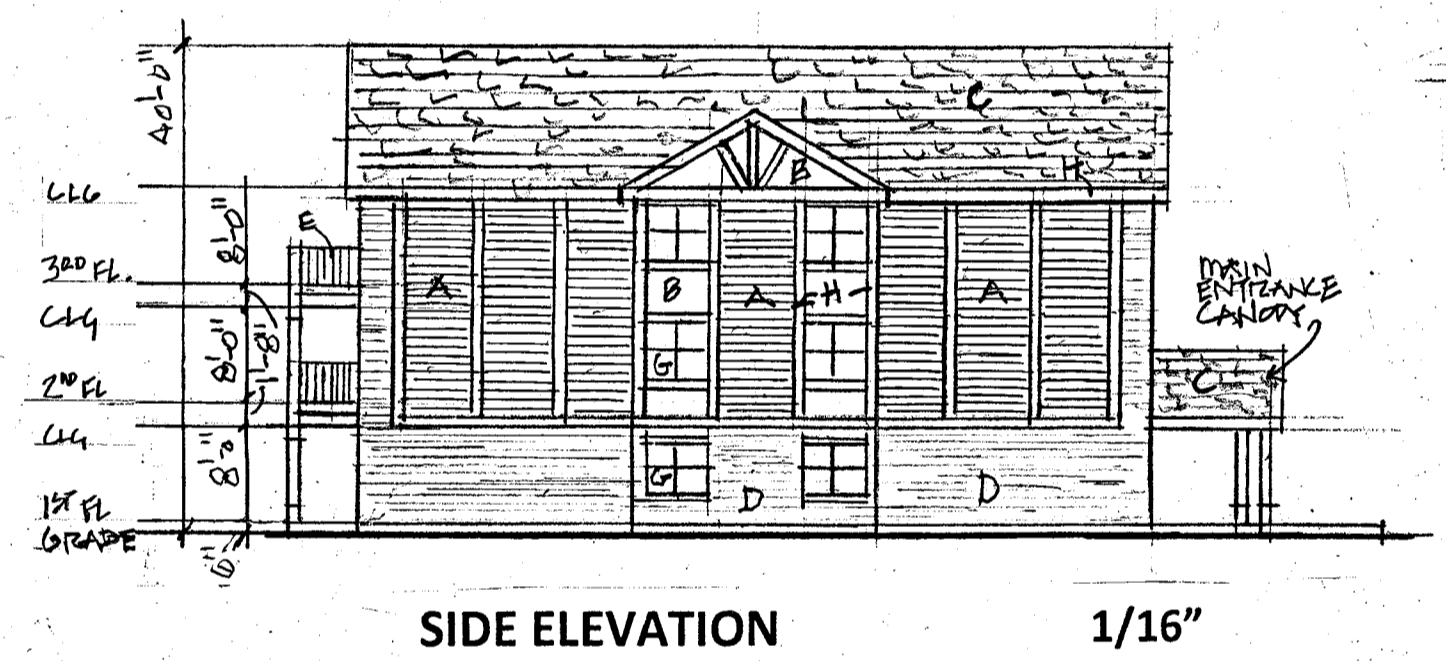
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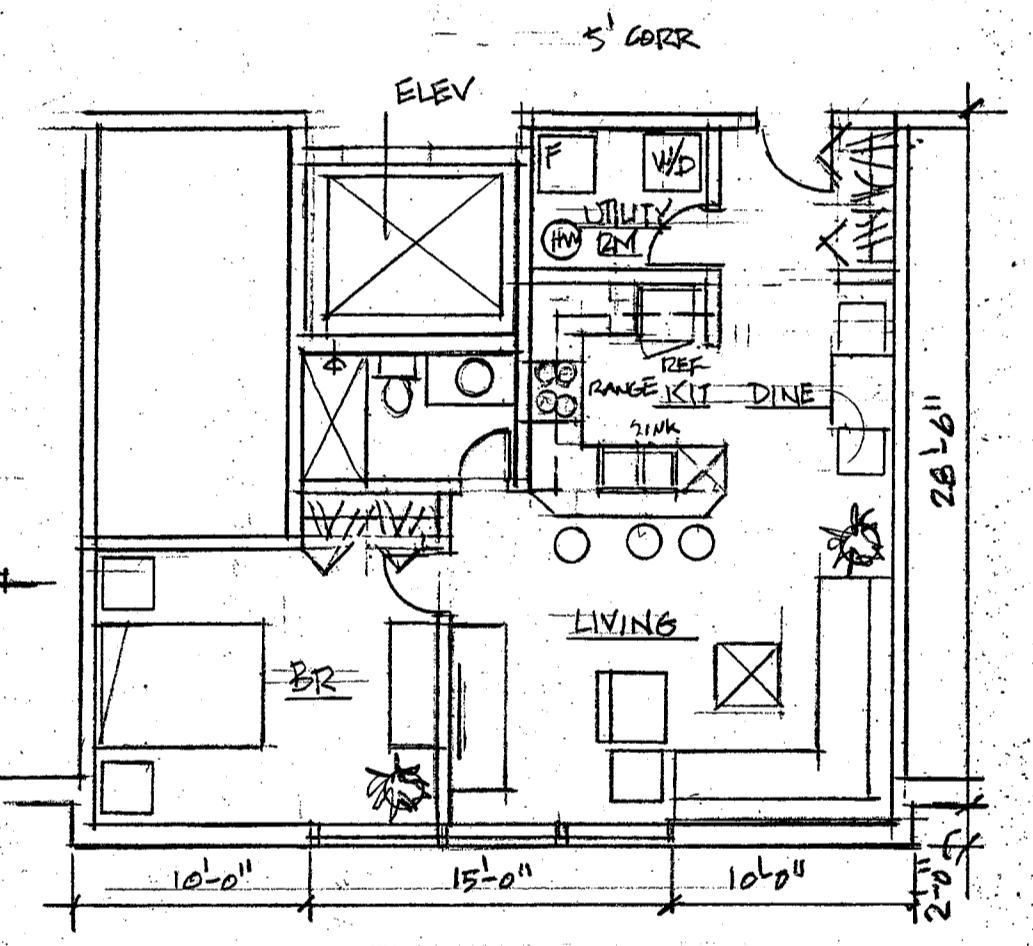
COURTYARD ELEVATION 1/16"



FRONT ELEVATION 1/16"



SIDE ELEVATION 1/16"

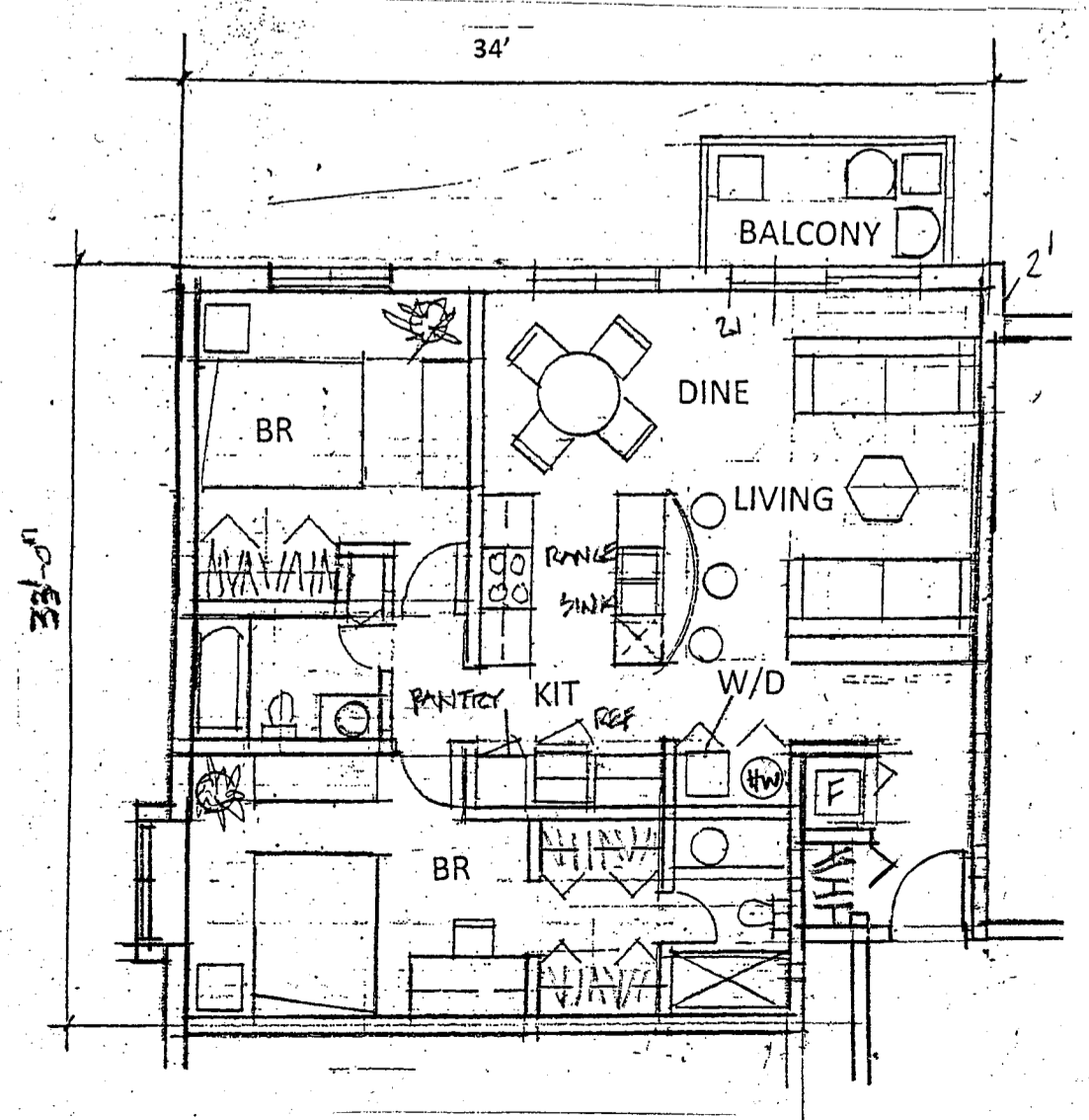


SUITE D 1/8"
766 SF

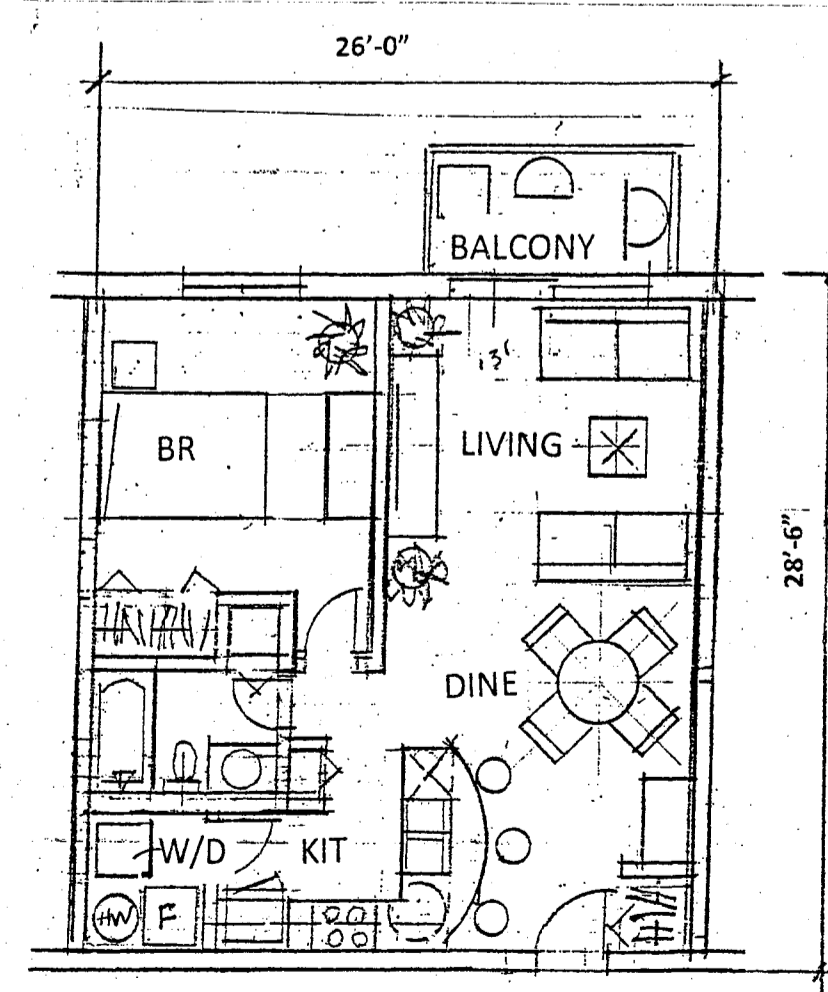
- BUILDING EXTERIOR FINISH SCHEDULE**
- A. SIDING - HORIZONTAL BOARDS HARDI BOARD SIDING
 - B. SIDING - SMOOTH HARDI BOARD SIDING
 - C. ROOF - ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLES
 - D. FACEBRICK -
 - E. BALCONY RAILINGS - BRONZE ANODIZED ALUMINUM
 - F. CURTAIN WALL - BRONZE ANODIZED ALUMINUM FRAMES WITH CLEAR INSULATED GLASS
 - G. WINDOWS - BRONZE FIBERGLASS FRAMES WITH CLEAR INSULATED GLASS
 - H. TRIM BOARDS - 1 X 6 TRIM 1 X 12 FASCIA
 - I. SLIDING GLASS DOORS - BRONZE ANODIZED ALUMINUM WITH CLEAR INSULATED GLASS

RENTAL UNITS

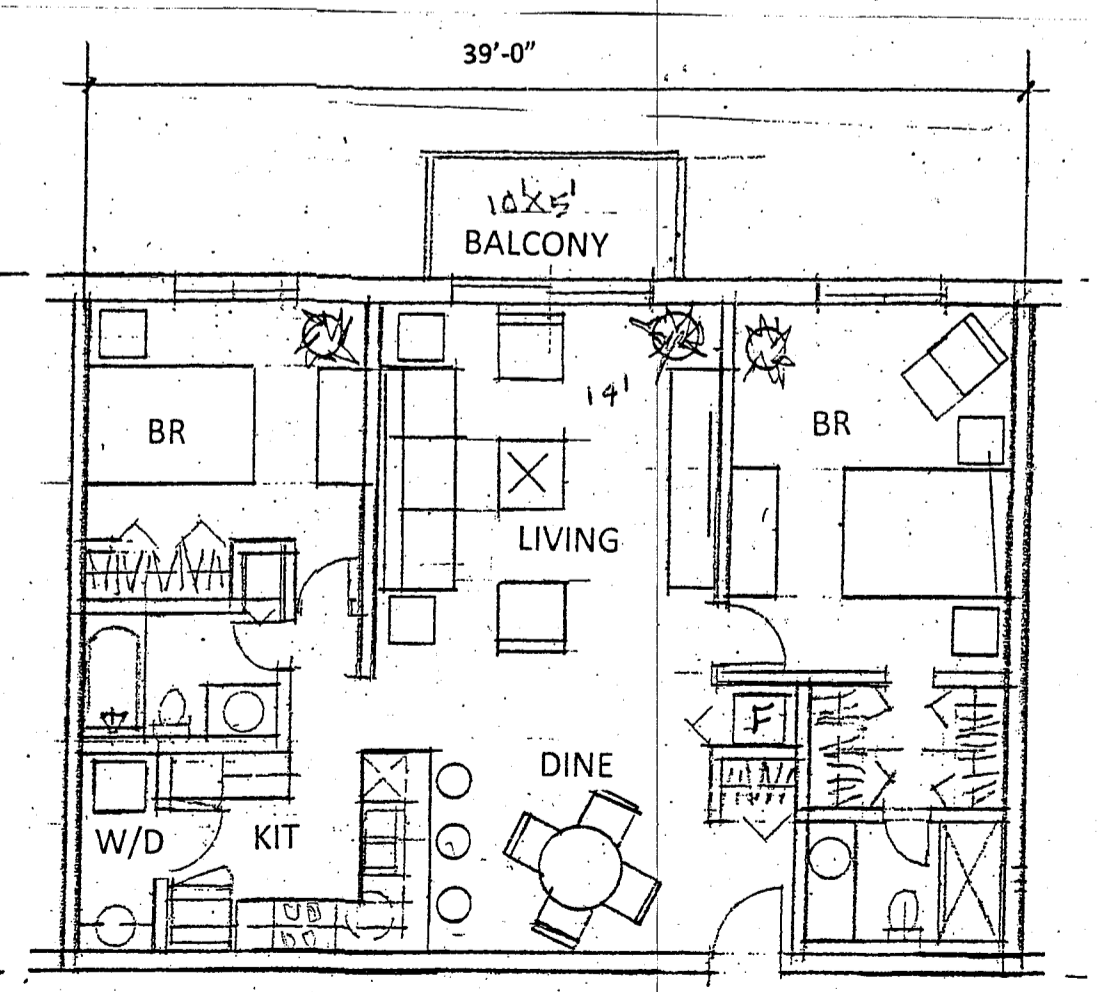
UNITS/BUILDINGS	1 BR	2 BR	TOTAL
7 BUILDINGS	7	24	31
21 BUILDINGS (23%)	21	72	93
TOTAL	28	96	124



SUITE A 1/8"
1,102 SF

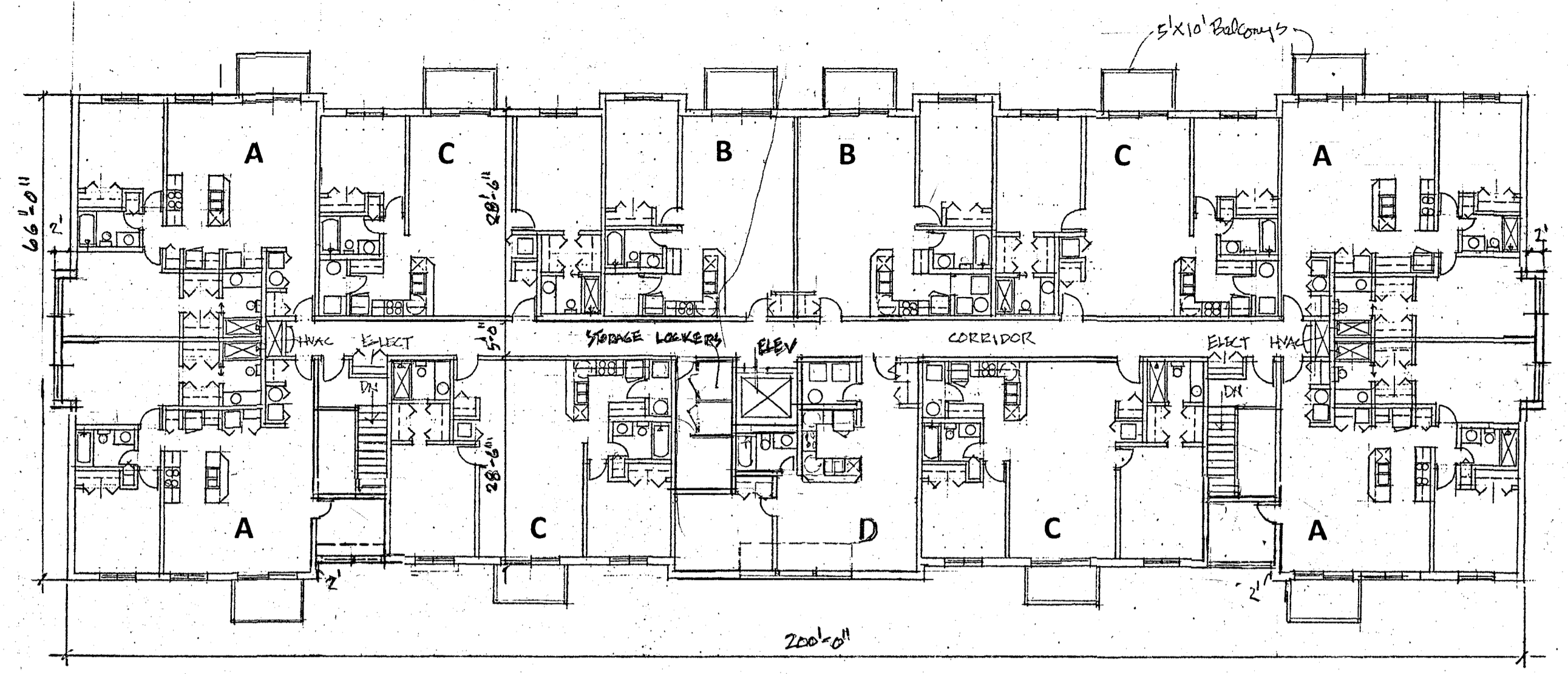


SUITE B 1/8"
741 SF

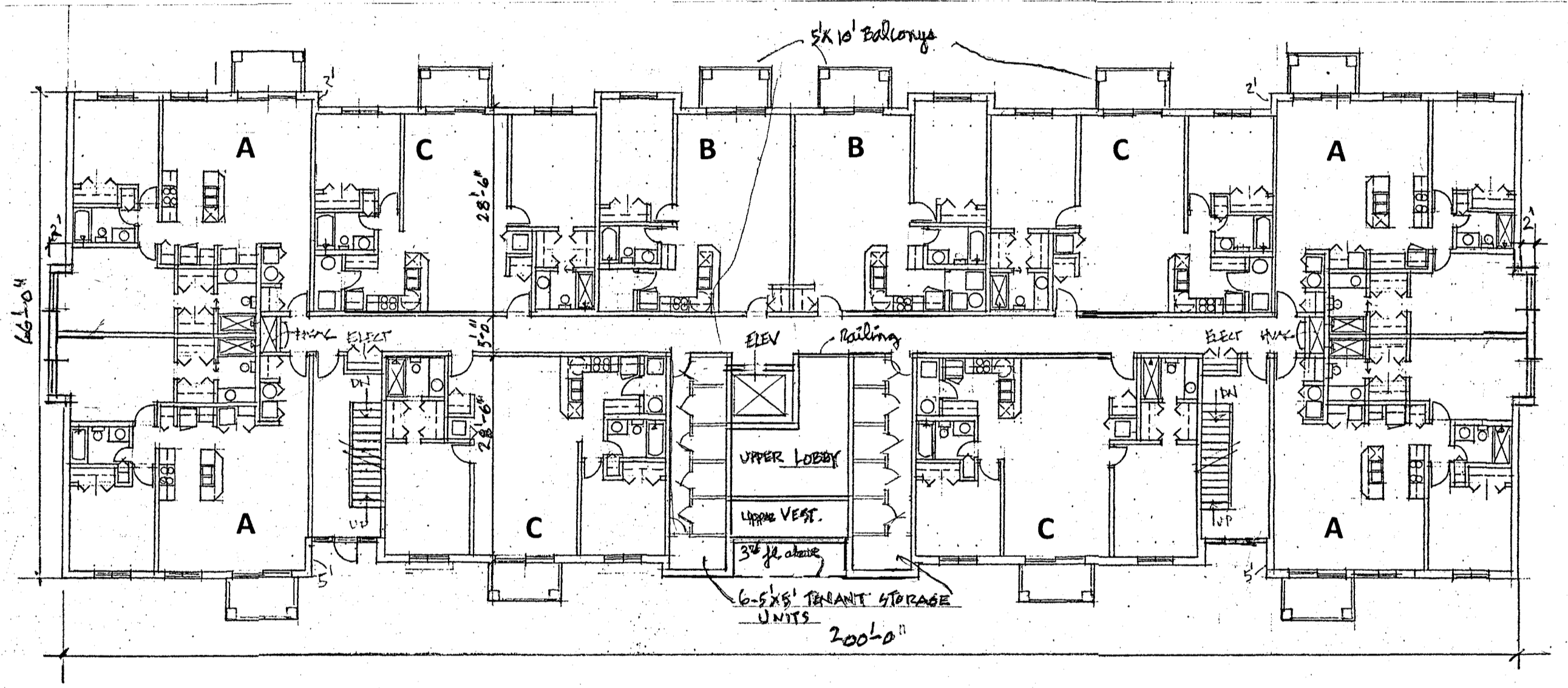


SUITE C 1/8"
1,112 SF

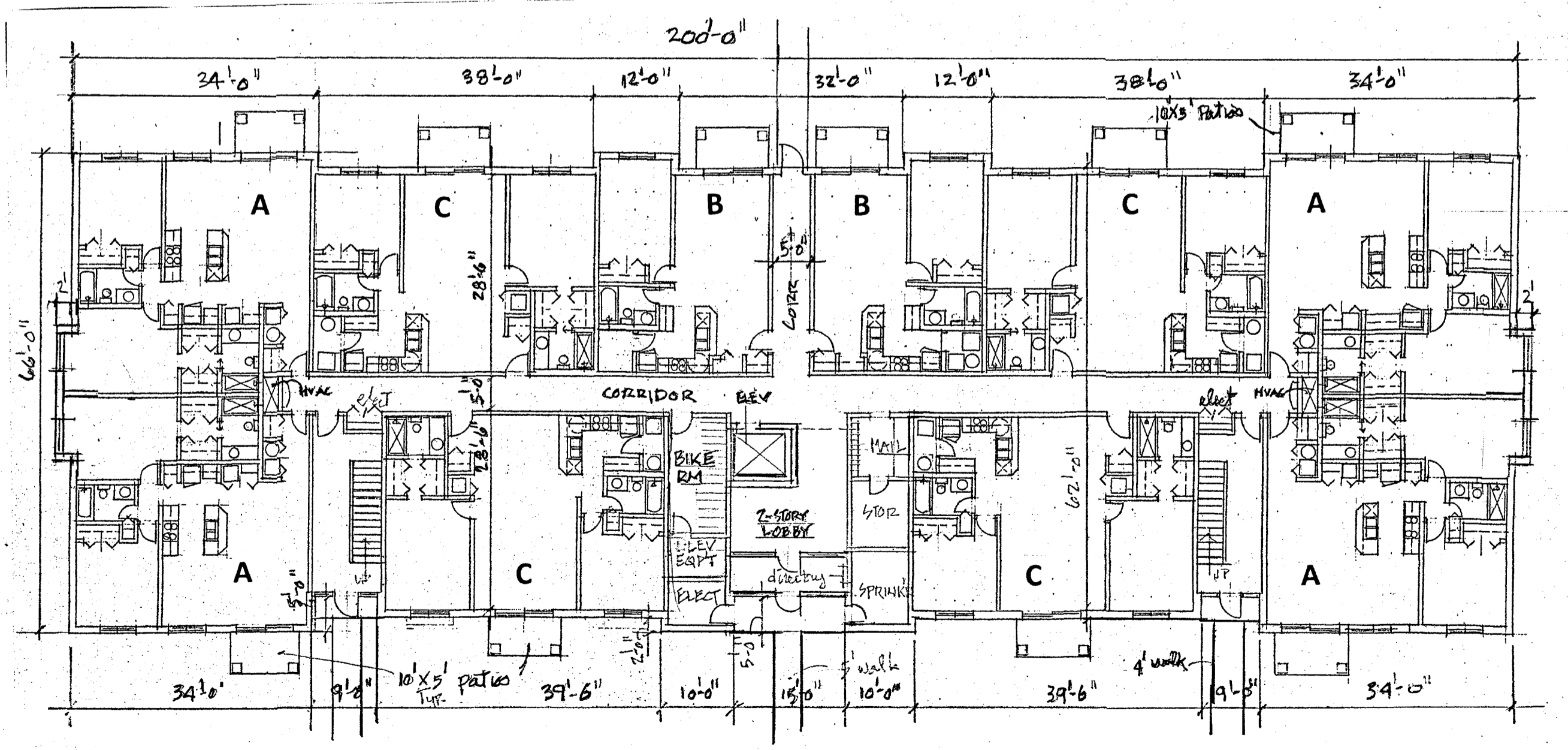
INDIVIDUAL UNIT FLOOR PLANS 1/8"



THIRD FLOOR PLAN 1/16" = 1' - 0"
12,790 SF



SECOND FLOOR PLAN 1/16" = 1' - 0"
12,715 SF



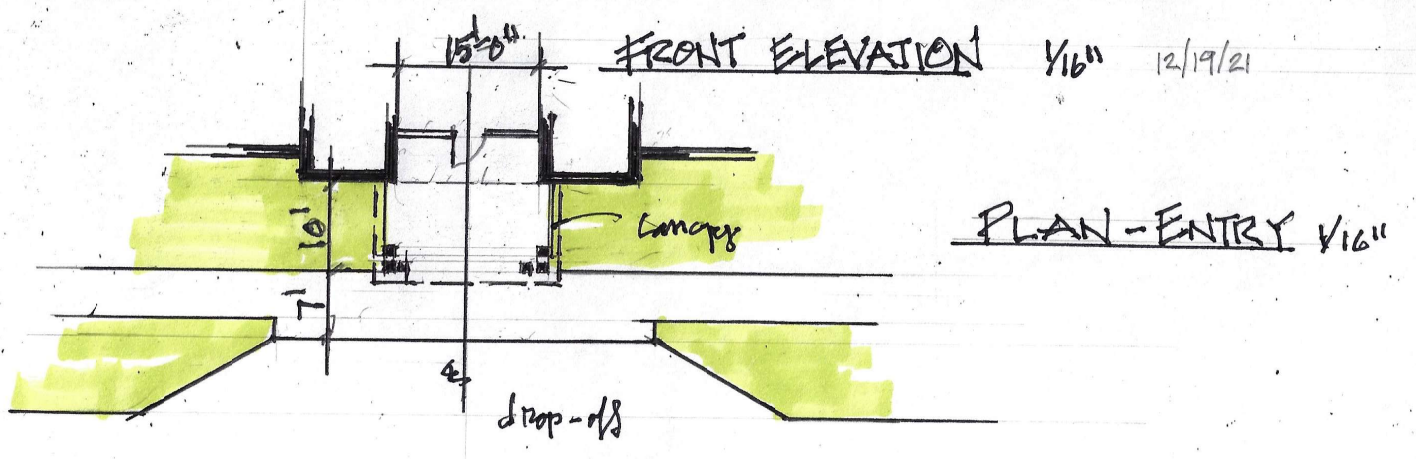
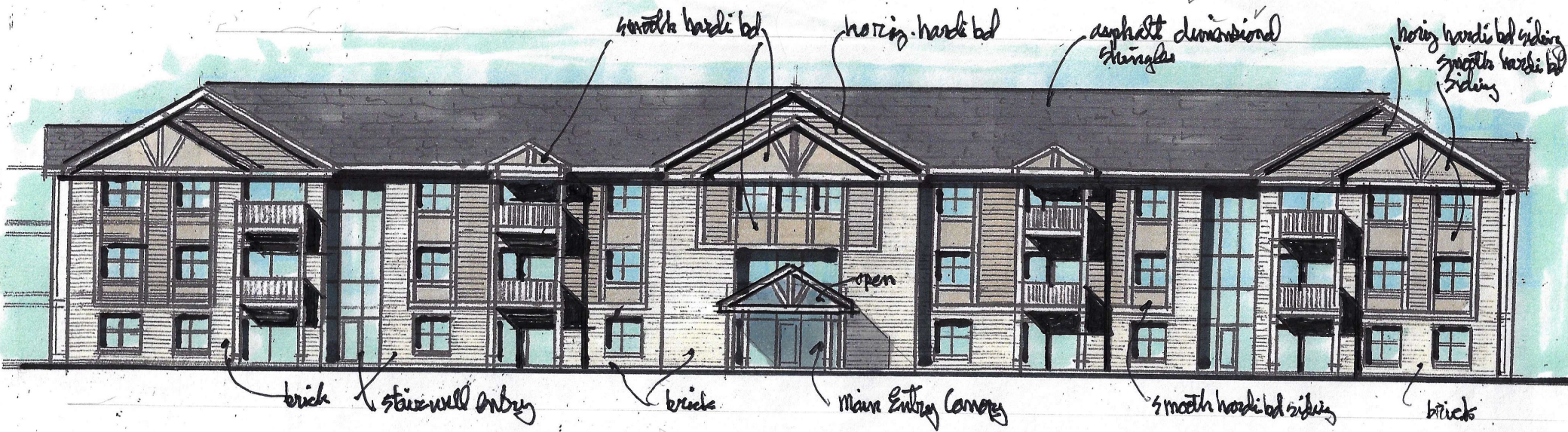
TOTAL BUILDING SF 38,220 SF
FIRST FLOOR PLAN 1/16" = 1' - 0"
12,715 SF

THE COURTYARD AT CONGRESS STATION
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

DATE 11/8/21
JOB NO REV 12/19/21
SHEET NO

A1

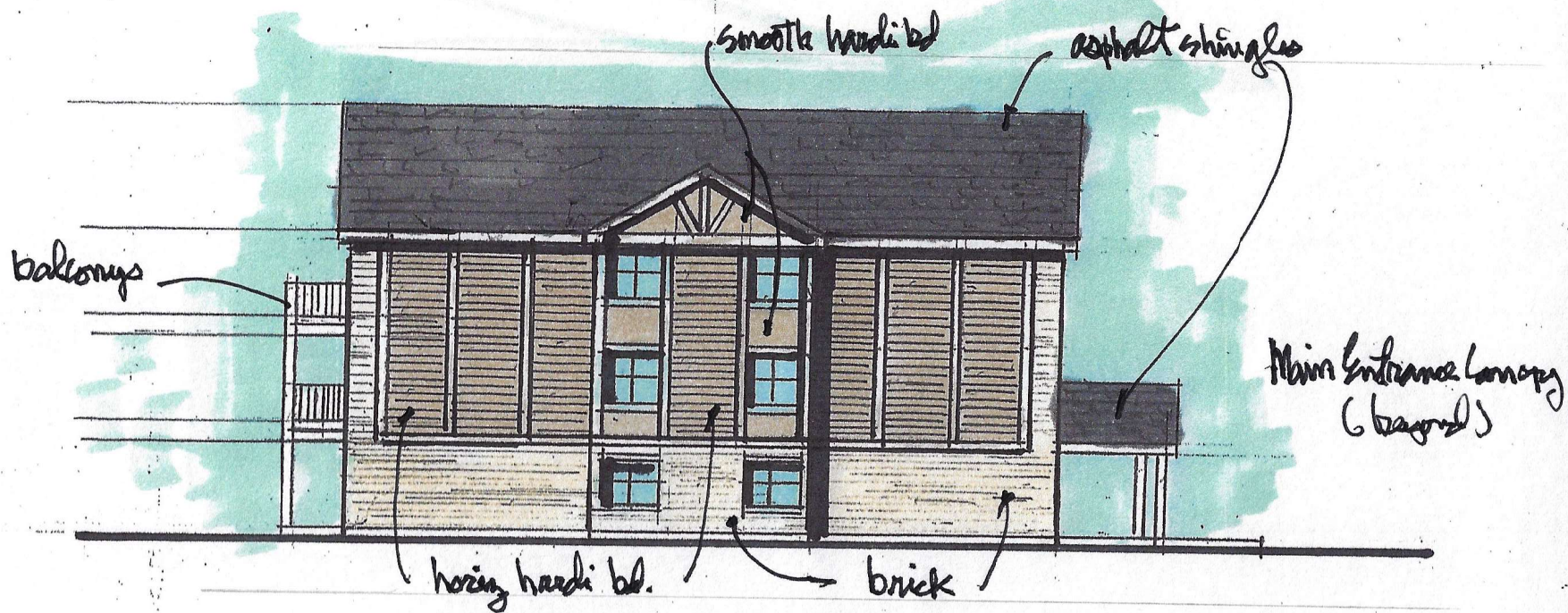
Architectural Services
CS
ARTHUR SWANSON & ASSOCIATES, ILL.
10500 WEST LUNT AVENUE • ROSEMONT, ILLINOIS 60018
Phone: (708) 635-6111 • FAX: (708) 635-6926





COURTYARD (REAR) ELEVATION 1/16"

12/19/21
Rev. 12/27/21



SIDE(END) ELEVATION 1/16"

12/19/21





EXPIRES 02-28-22

551 CONGRESS PARKWAY PRELIMINARY ENGINEERING

SECTION 4 TOWNSHIP 43 NORTH RANGE 8 EAST CRYSTAL LAKE, ILLINOIS MCHENRY COUNTY

OWNER / DEVELOPER:

Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
Mount Prospect, Illinois 60056
Tel: (847) 670-6710

PREPARED BY:

Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway, Schaumburg, IL 60173
Tel: (847) 394-6600
Fax: (847) 394-6608
www.haegerengineering.com

CITY OF CRYSTAL LAKE

100 W. Woodstock Street
Crystal Lake, IL 60014
Tel: (815) 459-2020

BENCHMARKS:

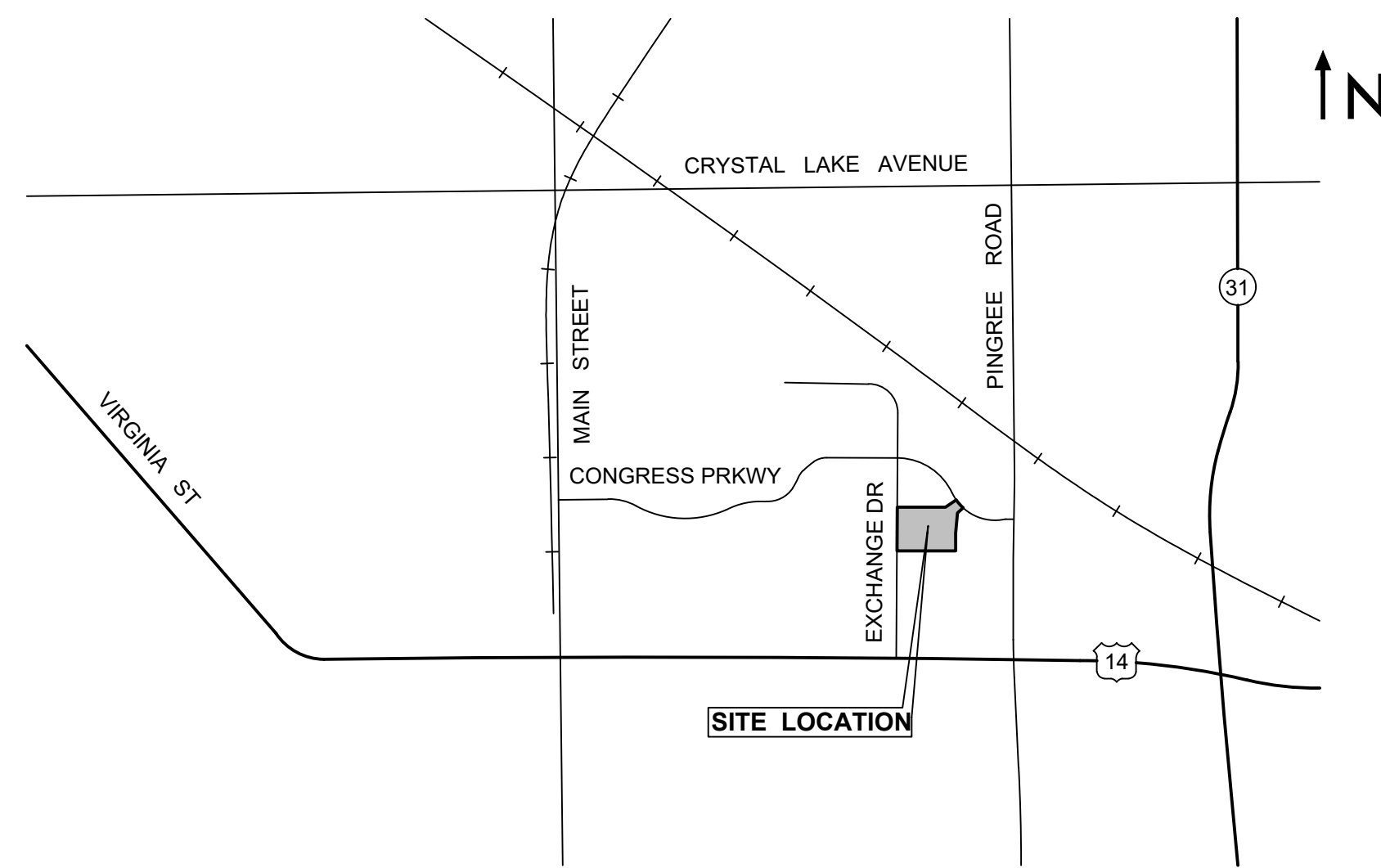
Site Benchmark:

Cut Cross on curb located in parking lot Northeast corner of property & Southeast of Congress Parkway.

Elevation = 906.46

Cut Cross on curb East side of Exchange Drive & South of Station Drive.

Elevation = 913.78



LOCATION MAP
Not To Scale

INDEX TO SHEETS

NO.	DESCRIPTION
C1.0	TITLE SHEET
C2.0	EXISTING CONDITIONS & DEMOLITION PLAN
C3.0	GEOMETRY, PAVING, STRIPING, & SIGNAGE PLAN
C4.0	GRADING & DRAINAGE PLAN
C5.0	UTILITY PLAN

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
	Clean Out	
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
	Force Main	
	Water Main	
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
	B-Box	
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
	Hand Hole	
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
	Gas Valve	
	Gas Line	
	Electric Line	
	Overhead Utility Line	
	Fiber Optic Line	
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Telephone Line	
	Cable TV Line	
	Cable TV Pedestal	
	Flagpole	
	Mailbox	
	Handicapped Parking Stall	
	Number of Parking Stalls	
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
	Curb Elevation and Gutter/Pavement Elevation	
	Pavement Elevation	
	Sidewalk Elevation	
	Ground Elevation	
	Top of Wall Elevation	
	Bottom of Wall Elevation	
	Open Lid Frame & Grate	
	Closed Lid Frame & Lid	
	Finish Grade	
	Garage Floor	
	Top of Foundation	
	Swale	
	Hardscape Flow	
	Softscape Flow	
	Contour Line	
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
	Soil Boring	
	Over Land Flow Route	

Per City of Crystal Lake Review Comments

12/16/2021

Date

1

No.

Revision

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TITLE SHEET
PRELIMINARY ENGINEERING
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

Project Manager: D J V
Engineer: D J V
Date: 11/09/2021
Project No. 21-215
Sheet C1.0



Know what's below.
Call before you dig.

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

LEGAL DESCRIPTION
 LOT 2 IN CRYSTAL LAKE MEDICAL PAVILION, BEING A RESUBDIVISION IN THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED JUNE 18, 2007 AS DOCUMENT 2007R041940, IN MCHENRY COUNTY, ILLINOIS.

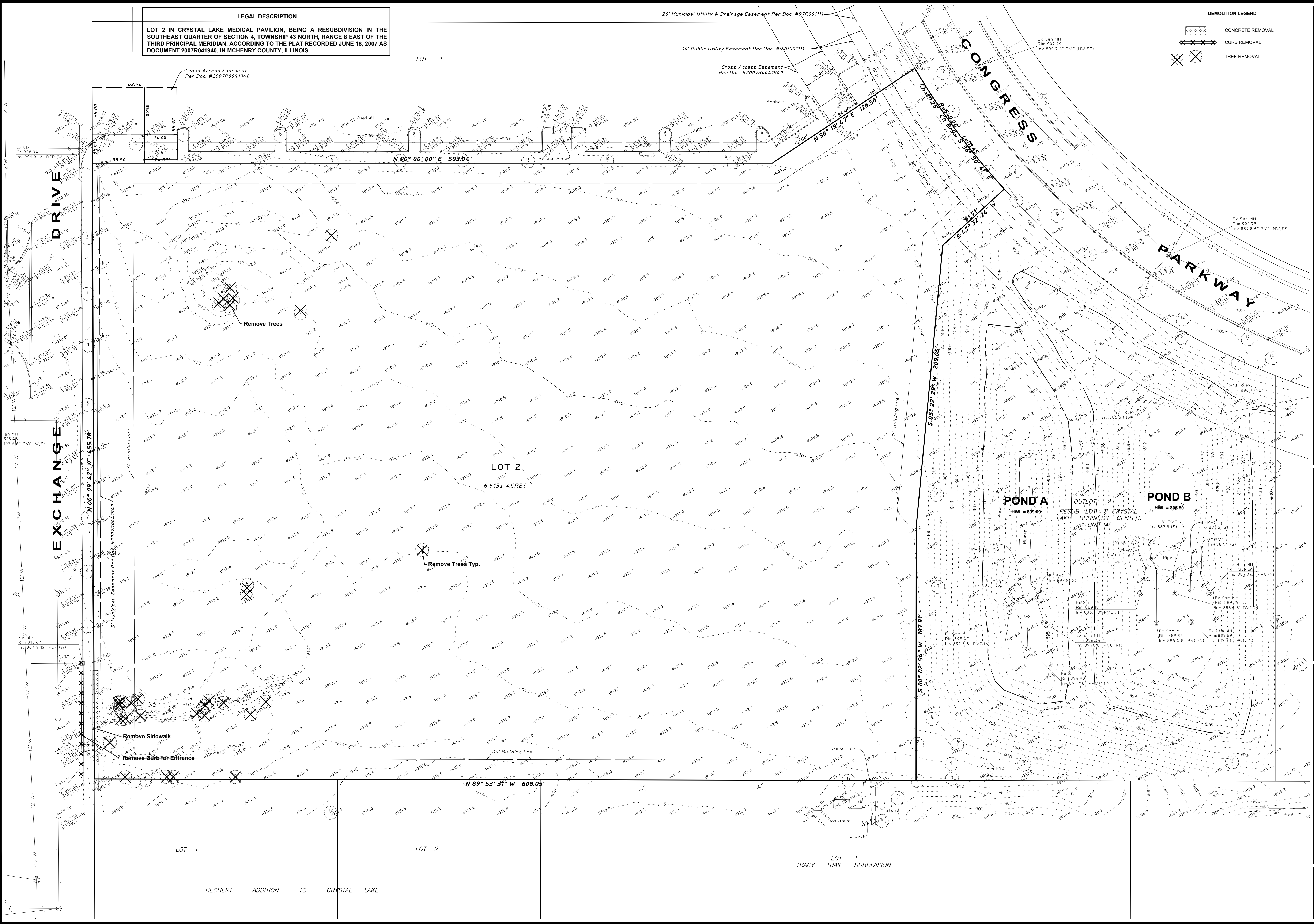
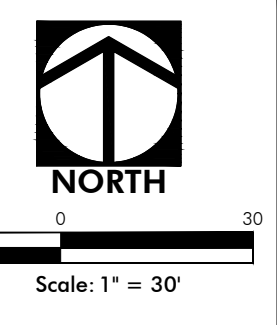
LOT 1

20' Municipal Utility & Drainage Easement Per Doc. #97R001111

10' Public Utility Easement Per Doc. #97R001111

Cross Access Easement Per Doc. #2007R0041940

- DEMOLITION LEGEND**
- CONCRETE REMOVAL
 - CURB REMOVAL
 - TREE REMOVAL



62.46'
 24.00'
 38.50'
 24.00'
 N 90° 00' 00" E 503.04'

LOT 2
 6.613± ACRES

POND A
 HWL = 899.09'

POND B
 HWL = 898.50'

Remove Sidewalk
 Remove Curb for Entrance

Remove Trees

Remove Trees Typ.

LOT 1

LOT 2

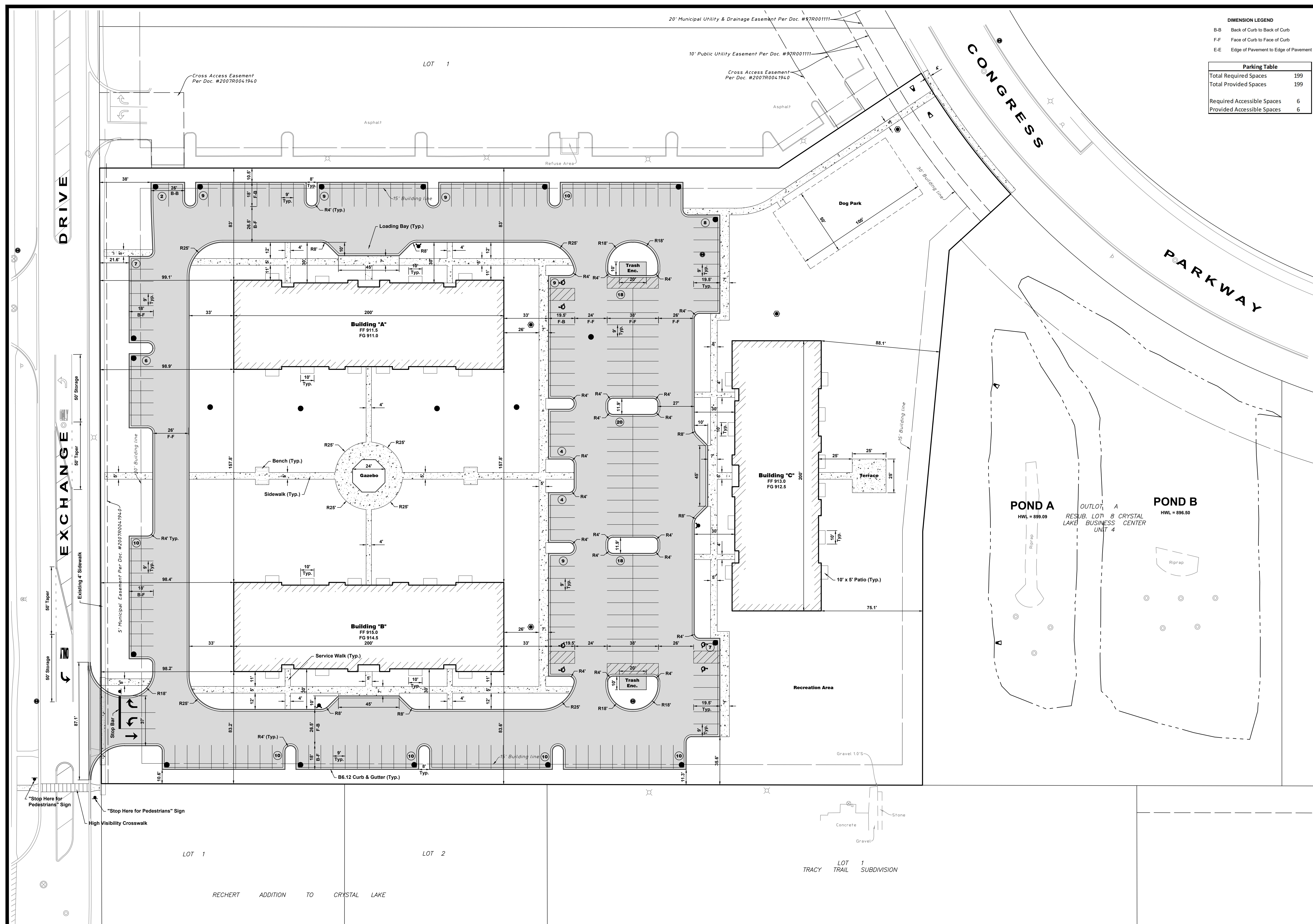
RECHERT ADDITION TO CRYSTAL LAKE

LOT 1
 TRACY TRAIL SUBDIVISION

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EXISTING CONDITIONS & DEMOLITION PLAN
PRELIMINARY ENGINEERING
 551 CONGRESS PARKWAY
 CRYSTAL LAKE, ILLINOIS

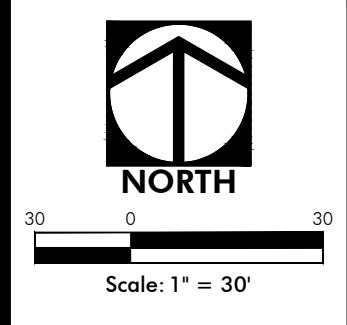
Project Manager: DJV
 Engineer: DJV
 Date: 11/09/2021
 Project No. 21-215
 Sheet **C2.0** / C5



DIMENSION LEGEND

- B-B Back of Curb to Back of Curb
- F-F Face of Curb to Face of Curb
- E-E Edge of Pavement to Edge of Pavement

Parking Table	
Total Required Spaces	199
Total Provided Spaces	199
Required Accessible Spaces	6
Provided Accessible Spaces	6



Per City of Crystal Lake Review Comments
Revision

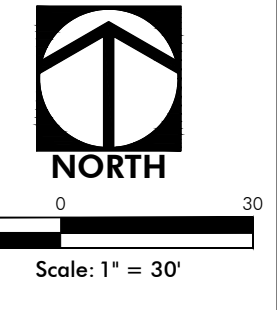
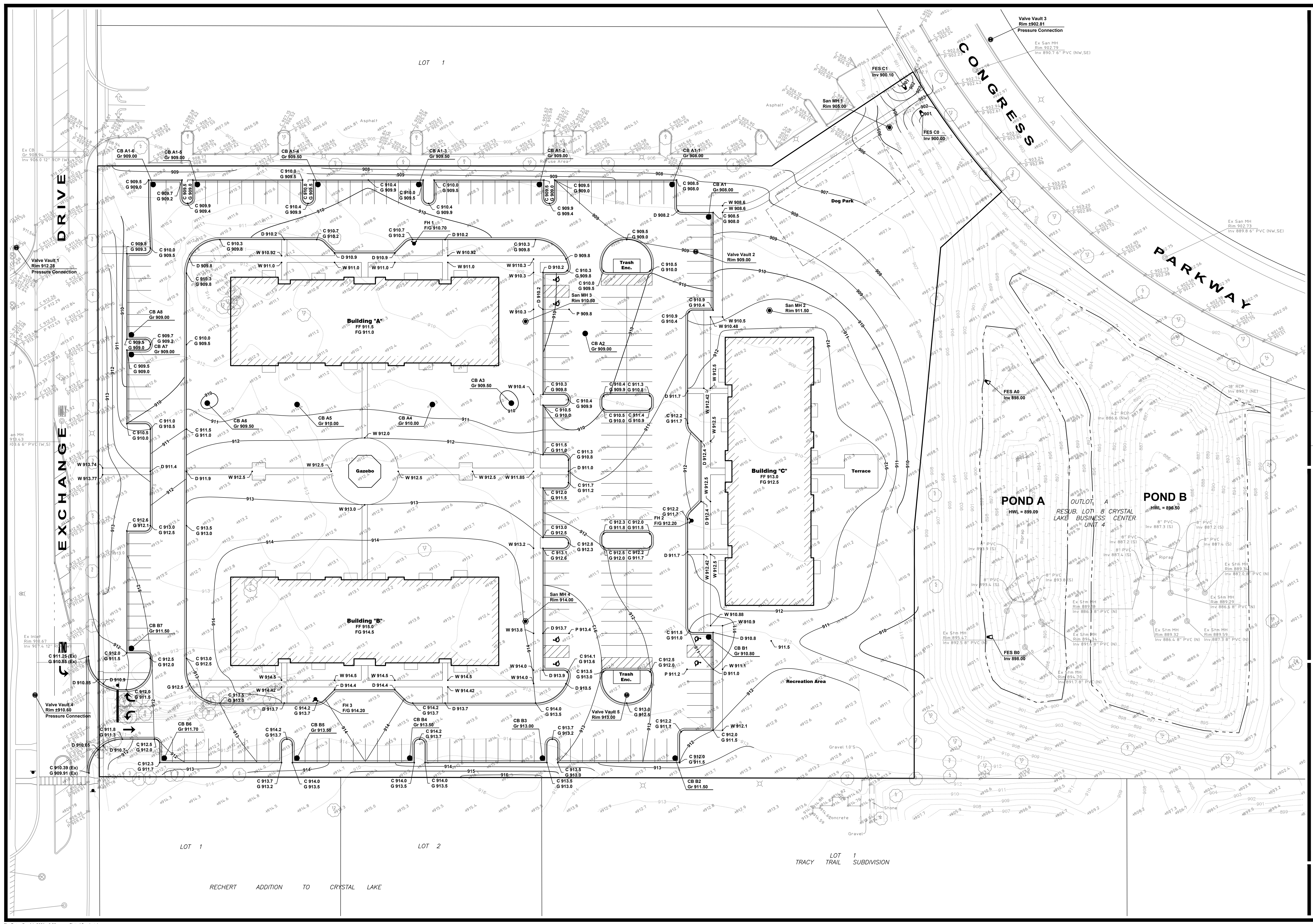
12/16/2021
Date

1
No.

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**GEOMETRY, PAVING
STRIPING, & SIGNAGE PLAN**
PRELIMINARY ENGINEERING
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

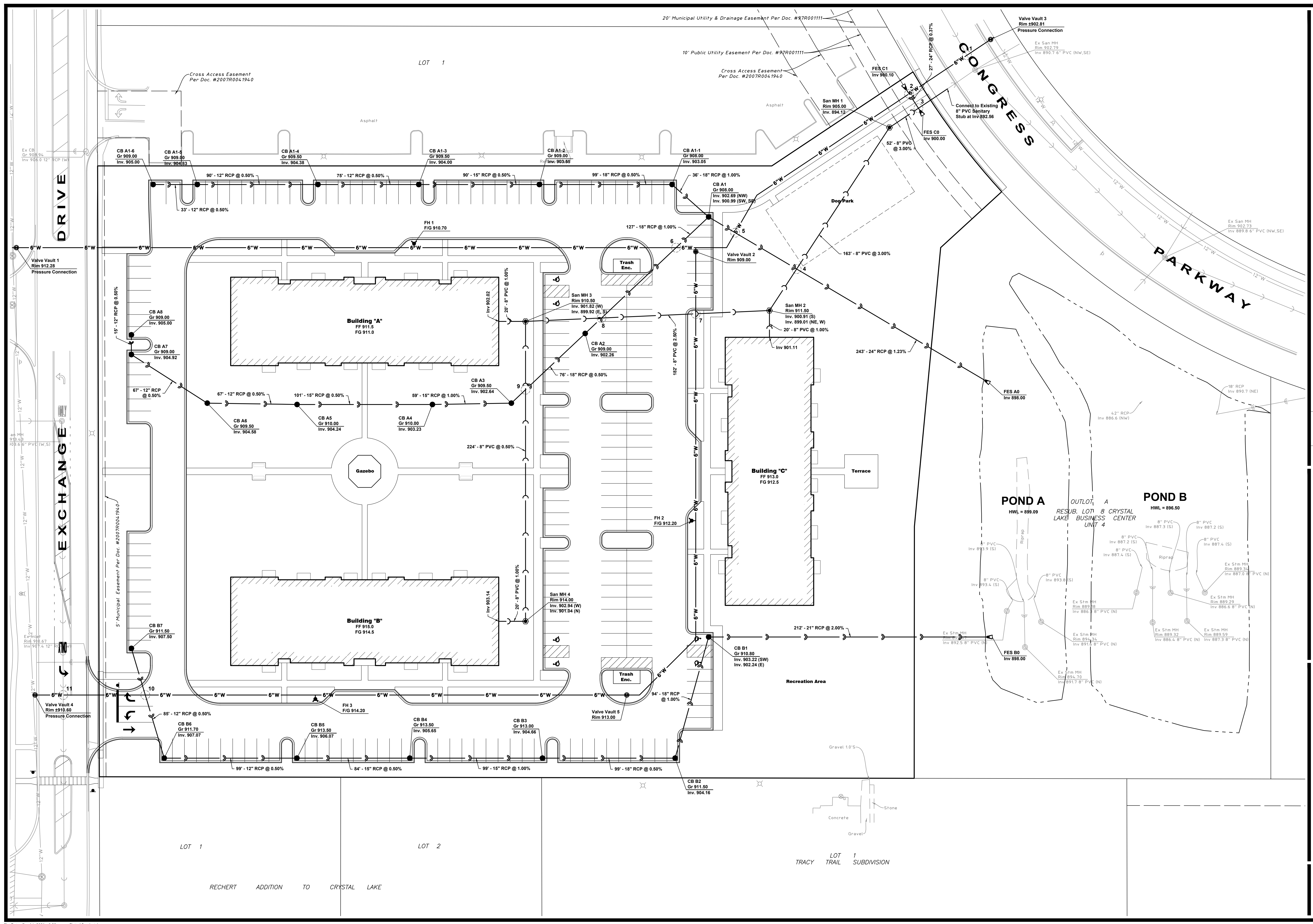
Project Manager: D J V
Engineer: D J V
Date: 11/09/2021
Project No. 21-215
Sheet **C3.0** / C5

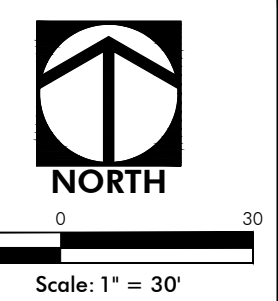


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GRADING & DRAINAGE PLAN
PRELIMINARY ENGINEERING
 551 CONGRESS PARKWAY
 CRYSTAL LAKE, ILLINOIS

Project Manager: DJV
 Engineer: DJV
 Date: 11/09/2021
 Project No. 21-215
 Sheet **C4.0** of C5





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UTILITY PLAN
PRELIMINARY ENGINEERING
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

Project Manager: DJV
Engineer: DJV
Date: 11/09/2021
Project No: 21-215
Sheet **C5.0** / C5

PSA

From: Daniel Vanek <daniel-v@haegerengineering.com>
Sent: Tuesday, November 9, 2021 10:18 AM
To: Paul Swanson
Subject: FW: 551 Congress Parkway - City Preliminary Submittal Documents

Paul,

Here's an executive summary of the Preliminary Engineering Report:

The report aims to give a good understanding of the site in the existing condition and the proposed conditions as well as to prove that all stormwater management requirements are followed. The existing conditions is analyzed in a drainage exhibit and is shown via maps of the project area such as Aerial, NRCS Soils, FEMA, USGS, Hydrologic Atlas, NWI Wetland, and Zoning maps. The site history, being the 1996 Crystal Lake Business Center subdivision and its calculations, is described and lays out the important requirements that the site must meet - in particular being less than 60% impervious and sending about 6 acres of stormwater to Pond A. Then the proposed condition is analyzed via a drainage exhibit and calculations to show that we meet the above requirements. Documents to back up claims made or for easier referencing are provided in appendixes.

Daniel J. Vanek, PE
Project Manager

HAEGER ENGINEERING

From: Daniel Vanek
Sent: Tuesday, November 09, 2021 1:11 AM
To: Paul Swanson <paul@psa-inc.biz>
Subject: 551 Congress Parkway - City Preliminary Submittal Documents

Paul,

We've prepared the Preliminary Engineering Plans, Preliminary Engineering Report, and the Preliminary PUD Plat. Note that this does not include the draft traffic study.

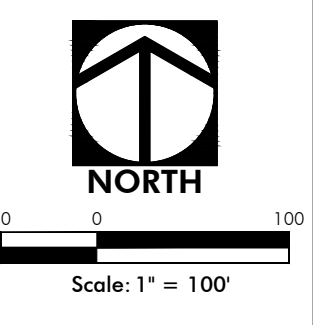
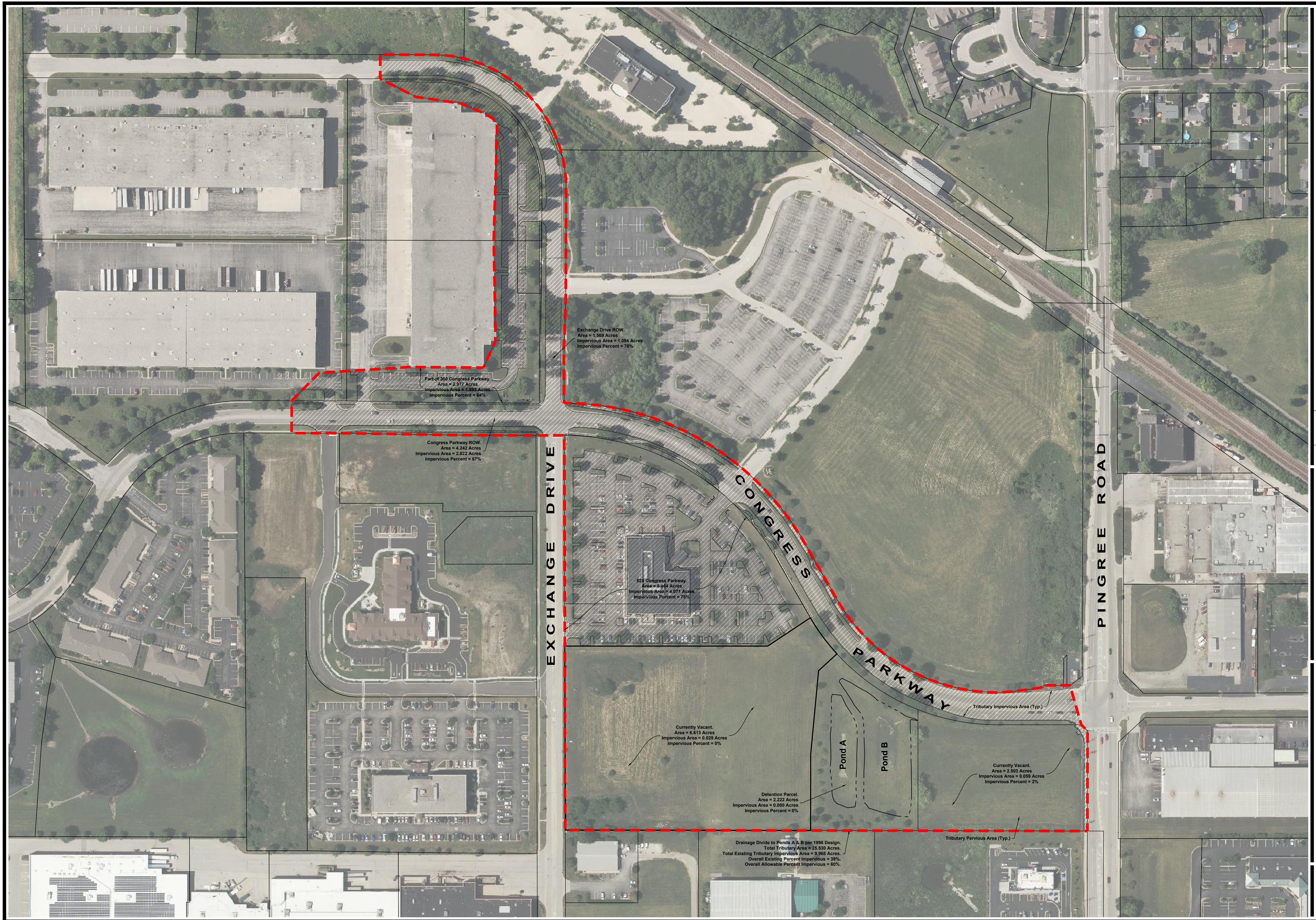
Please follow this link to download the City submittal documents:
[21215-Village Preliminary Submittal Documents](#)

Please let me know if you need anything else.

Daniel J. Vanek, PE
Project Manager

HAEGER ENGINEERING
100 East State Parkway
Schaumburg, IL 60173

direct: 847.230.3177
main: 847.394.6600 fax: 847.394.6608

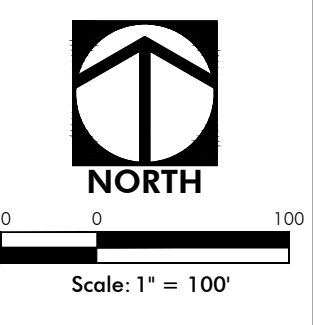
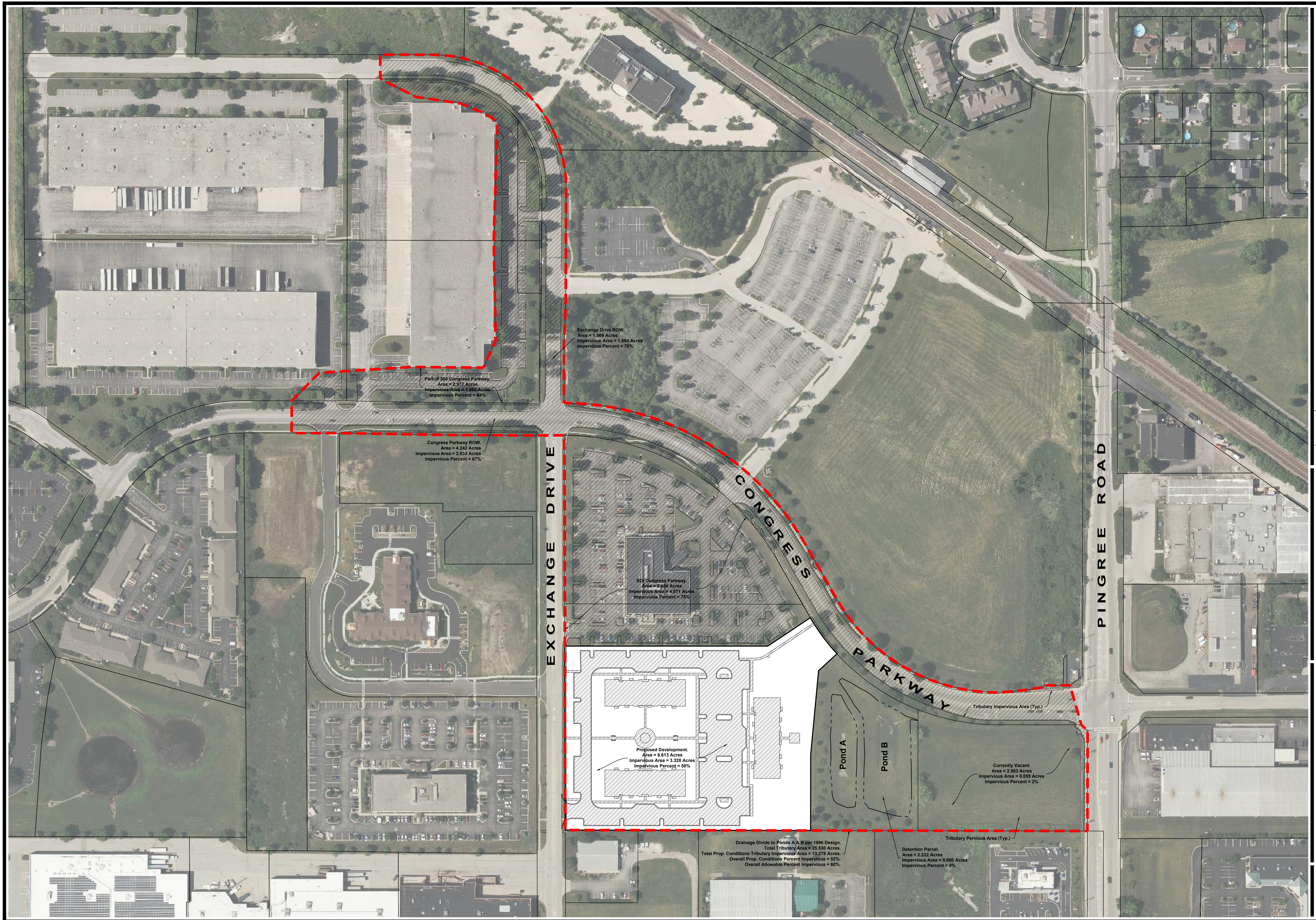


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**EXISTING CONDITIONS POND
TRIB. AREA COVERAGE EXHIBIT**

**551 CONGRESS PARKWAY
SITE IMPROVEMENTS**
CRYSTAL LAKE, ILLINOIS

Project Manager: DJV
Engineer: DJV
Date: 12/16/2021
Project No.: 21-215
Sheet: 1



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**PROPOSED CONDITIONS POND
 TRIB. AREA COVERAGE EXHIBIT**
**551 CONGRESS PARKWAY
 SITE IMPROVEMENTS**
 CRYSTAL LAKE, ILLINOIS

Project Manager: DJV
 Engineer: DJV
 Date: 12/16/2021
 Project No.: 21-215
 Sheet: 1

Development Concept
THE COURTYARD AT CONGRESS STATION
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS
11/9/2021

Overall Concept

The overall Development Concept for **The Courtyard** is to provide an alternative to Home Ownership – being tied down to one place with Mortgage Payments, Real Estate Taxes, Home Upkeep and Repair etc.

Up Scale Rental Residences, such as **The Courtyard**, is a Life Style Choice; not so much built on Economics, (our residences will lease for between \$1,500 a month for a 1 Bedroom/1 Bathroom residence to over \$2,700 a month for our largest 2 Bedroom/2 Bathroom residence but to offer a more mobile attachment free lifestyle.

To attract this upscale clientele, we provide 4 different floor plans, which vary in size and layout, but with features found in upscale homes, such as hardwood floors in all living areas (carpet in bedrooms) ceramic tile floors and walls in bathrooms, kitchens all with designer countertops and appliances including in unit washer and dryers. All utilities are separately metered for future conversion to Condominiums.

Amenities include 2 large Terraces with BBQ areas, large open space, recreational areas, bike room and tenant storage lockers. But the biggest amenity is the location, 1 block from the Metra Train Station and walking distance to many restaurants and retail shopping.

Site Specific Concept

Another plus for these Upscale Residences is the fact that there will be very few school aged children as the Residents will be economically upscale, mobile, young working professionals and older empty nesters.

Site specifically we are presenting 3 – 3 story, 31-unit buildings centered around a large courtyard all with the afore mentioned amenities. Every unit will have either a private patio or balcony while the exterior architecture is more residential in character with a variety of materials building articulation and roof lines.

All the above being said, we are excited about becoming part of the Crystal Lake Community and while looking to present an alternative lifestyle, become a good and stable part of the neighborhood.

Memorandum

To: Abigail Wilgreen PE CFM, City of Crystal Lake
From: Sara Disney Haufe, PE, PTOE, and Kathleen Murphy, PE
Date: December 6, 2021
Re: 551 Congress Apartments – Technical Memorandum

Sam Schwartz Consulting, LLC, (Sam Schwartz) was retained through an existing on-call contract with the City of Crystal Lake to prepare a technical memorandum detailing the projected traffic characteristics of a multifamily residential development proposed on the east side of Exchange Drive south of Congress Parkway in Crystal Lake, Illinois. Under the proposed development plan, three three-story buildings would be constructed providing a total of 93 dwelling units, including 21 one-bedroom units and 72 two-bedroom units. The development would include 199 total parking spaces (including six accessible spaces) in an on-site parking lot that would be accessed via a single driveway on Exchange Drive. A site plan is included in the Appendix.

The following memorandum documents Sam Schwartz's methodology and projections for the traffic characteristics of the proposed site. The contents of this memorandum reflect typical industry practices for estimating traffic for developments of this nature.

Trip Generation Projections

Using the Institute of Transportation Engineers (ITE) manual Trip Generation, 11th Edition, site-generated trip projections were calculated according to data provided for ITE Land Use Code (LUC) 220 – Multifamily Housing (Low-Rise). This category corresponds to multifamily dwellings with two or three stories. Within LUC 220, the ITE manual provides data for a variety of settings, including General Urban/Suburban, Dense Multi-Use Urban, and Center City Core. In addition to these settings, the ITE manual provides data for two subcategories: Close to Rail Transit (defined as within a half-mile walking distance of a rail transit station entrance) and Not Close to Rail Transit. Given the vehicle-centric nature of area development, demonstrated by the large parking lots that are generally located between the street and commercial areas, the study area fits the ITE definition of a General Urban/Suburban setting. Although the proposed site will be approximately one quarter-mile walking distance from the Pingree Road Metra commuter rail station, the Close to Rail Transit subcategory for a General Urban/Suburban setting only has data from one site during the peak hours of adjacent street traffic. Because of this small sample size, using the data for this subcategory and setting is not likely to produce reliable results. Additionally, local census data on area mode split would provide a more representative estimate of potential non-auto trips generated by the subject site than this single-survey data in the ITE manual, as further discussed in the subsequent paragraph. Therefore, data for the Not Close to Rail Transit subcategory in a General Urban/Suburban setting was utilized for the purposes of this evaluation to estimate baseline trip generation potential for the site. This data is shown in **Table 1** on the following page.

Table 1. ITE Trip Generation Data

Land Use	Weekday Daily	Weekday Morning Peak Hour	Weekday Evening Peak Hour
Multifamily Housing (Low-Rise) Setting: General Urban/Suburban Subcategory: Not Close to Rail Transit	$T = 6.41(X) + 75.31$ 50% in / 50% out	$T = 0.40(X)$ 24% in / 76% out	$T = 0.51(X)$ 63% in / 37% out

T = Trips generated
 X = Number of dwelling units

Since the proposed residential development is located in close proximity to the Pingree Road Metra station, it is likely that this development would attract residents who would walk to the station to commute via Metra. Therefore, the trip projections were reduced to account for the projected non-auto mode share, which was determined using local data for commuters in the surrounding neighborhood. The American Community Survey *Means of Transportation to Work* database was referenced to obtain information about commuting patterns for Census Tract 8713.01, shown in **Figure 1**. The location of the proposed development within this census tract is marked below.



Figure 1: Census Tract Boundaries & Area Transit Service

The resulting mode split data reveals that approximately 13.1 percent of residents in the census tract travel to and from work via non-auto modes, which include public transportation, walking, bicycling, and working from home. Census tract data is attached to this memorandum. Since the non-auto mode share for this development may be higher than the census tract average due to its close proximity to transit, a 13.1 percent non-auto mode share can be considered conservative for this evaluation. The baseline trip

generation data was therefore reduced accordingly, and the resulting vehicular trip generation projections for the proposed site are shown in **Table 2**.

Table 2. Site-Generated Vehicle Trip Projections

Land Use	Size	Weekday Daily	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	93 dwelling units	670	10	30	40	30	20	50
<i>Minus Non-Auto Mode Share (13.1%)</i>		<i>-90</i>	<i>-</i>	<i>-5</i>	<i>-5</i>	<i>-5</i>	<i>-</i>	<i>-5</i>
Total Vehicle Trips (rounded to nearest multiple of five)		580	10	25	35	25	20	45

As shown, the proposed development is expected to generate 35 total vehicle trips in the morning peak hour and 45 trips in the evening peak hour. On a typical weekday, approximately 580 total vehicle trips are expected to be generated.

Site Access & Circulation

Access to the site is proposed via a single driveway to Exchange Drive, located approximately 300 feet south of the existing Station Drive. On the site plan, this driveway is shown to provide one left-turn lane and one right-turn lane for outbound traffic, as well as a single receiving lane. Given the relatively low trip projections for the peak hours, which are not expected to exceed 45 vehicles per hour as shown in Table 2, a single outbound lane should sufficiently accommodate peak hour demand; the outbound lane configuration as shown would therefore be expected to provide adequate capacity. The internal traffic circulation shown on the site plan was also found to be acceptable, including the placement of the site access driveway at the southern end of the property.

Warrants for auxiliary turn lanes along Exchange Drive at the site driveway would not be met based on the anticipated site trip projections and a review of existing traffic volumes on Exchange Drive (which were referenced from previously collected count data

Figure 3B-7. Example of Two-Way Left-Turn Lane Marking Applications

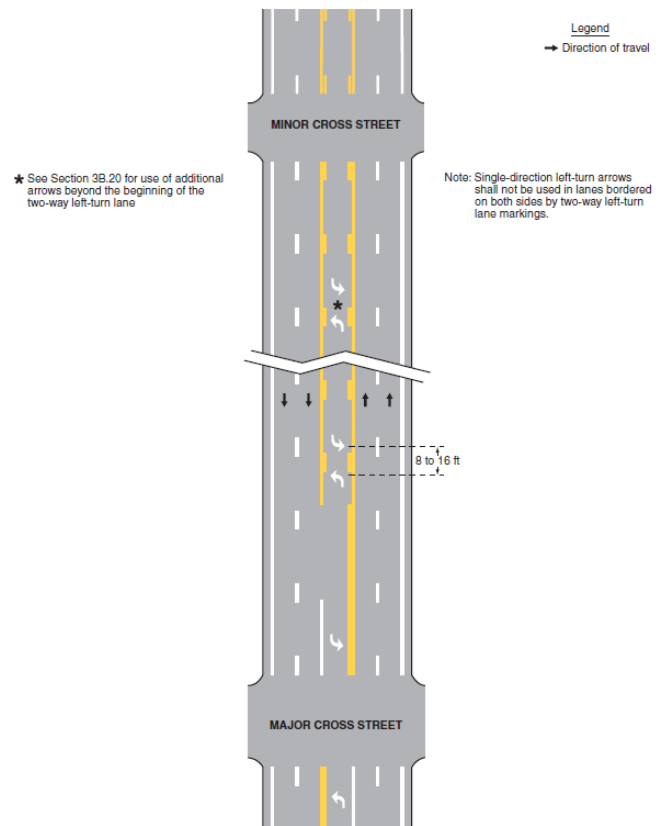


Figure 2: Two-Way Left Turn Lane Application (MUTCD)

at Exchange Drive and Congress Parkway for the nearby Project Cooper development). However, because there is an existing striped median at the access location that transitions into a northbound left-turn lane on Exchange Drive at Station Drive just north of the site driveway, it is recommended that a southbound left-turn lane be striped along Exchange Drive at the site driveway. It is recommended that the median on the roadway segment between Station Drive and the site driveway be restriped as a two-way left-turn lane, with northbound and southbound left-turn lanes on either end consisting of a 50-foot storage bay and a 50-foot taper transition for each. An excerpt from the Manual on Uniform Traffic Control Devices (MUTCD) illustrating this proposed configuration is shown in **Figure 2**.

Area Traffic Operations

The dominant routing of site-generated trips during the weekday peak hours is expected to be to and from the south on Exchange Drive to connect to Northwest Highway (US 14) approximately one quarter-mile south of the site, since this regional arterial route would connect residents to numerous employment centers throughout the metropolitan area. The intersection of Exchange Drive and US 14 currently serves as the main access point to the Bohl Farm Marketplace retail center, which includes several big-box stores, restaurant outlots, and smaller retailers. Based on the traffic projections shown previously in Table 2, anticipated site traffic from this residential development would make up a small percentage of traffic on the southbound approach of Exchange Drive at Northwest Highway. With existing dual southbound left-turn lanes on Exchange Drive at this location, as well as dedicated turn lanes onto Exchange Drive from Northwest Highway and signalized intersection control, the addition of a relatively small number of site trips at this location should have a negligible effect on operations.

Although the majority of site-generated trips are expected to travel to and from the south on Exchange Drive, it is expected that some will travel to and from the north on Exchange Drive and use Congress Parkway to access Main Street to the west or Pingree Road to the east. Using an estimated directional distribution of the site-generated trips, Sam Schwartz expects that approximately 15 percent of site trips would utilize this intersection and has identified the relative increase in traffic attributable to the proposed residential development as compared to existing volumes at the intersection of Congress Parkway and Exchange Drive, shown in **Table 3** below. Similar comparison tables were previously completed for nearby developments to facilitate discussions between the City and area developers regarding future area improvements that would provide benefits to existing and future users.

Table 3. Projected Traffic Volume Increase due to Proposed Development

Intersection	Total Intersection Traffic Volume PM Peak Hour (vehicles per hour)		Percent Increase
	Existing	Existing + Residential Development	
Congress Parkway / Exchange Drive	1,030	1,037	0.7%

Area Pedestrian Access

In addition to being located near the Pingree Road Metra Station, as discussed earlier in this memorandum, the proposed residential development is also located less than a quarter-mile from the Bohl Farm Marketplace retail center. This retail center includes a Fresh Thyme grocery store, a Target, a Planet Fitness gym, and several other retailers and restaurants that would be within walking distance for site residents. Therefore, area pedestrian infrastructure was reviewed for potential improvements that could be made to facilitate this expected pedestrian activity.

The City of Crystal Lake has indicated that there are plans to construct a roundabout at the intersection of Congress Parkway and Exchange Drive, which would include crosswalks on all four legs of the intersection. These proposed crosswalks would create a continuous pedestrian connection from the proposed residential development to the Pingree Road Metra station. A preliminary geometric plan for this intersection reconstruction can be found in the Appendix.

There are existing curb ramps on Exchange Drive at the proposed site driveway location. Since the ramp on the east side of Exchange Drive will have to be demolished in order to construct the site driveway as proposed, it is recommended that both ramps be reconstructed just south of the proposed site driveway. Since residents of the proposed development would be expected to use this crossing to access the shops at the Bohl Farm Marketplace, it is recommended that a high-visibility crosswalk be striped between these ramps and “Stop Here for Pedestrians” signage (MUTCD sign code R1-5b, shown in **Figure 3**) be posted on both legs of Exchange Drive in accordance with the MUTCD. A continuous sidewalk should be provided across the site driveway, and a stop bar should be striped behind the sidewalk.



Figure 3: R1-5b Sign
(MUTCD)

Within the proposed site, some additional sidewalk segments are recommended to connect the internal sidewalk network with the sidewalk on Exchange Drive, which will provide easier pedestrian access both to the Metra station and to the shopping center. First, a sidewalk segment should be constructed along the north side of the site driveway to provide pedestrian access between the proposed sidewalk running south of Building “B” and the sidewalk on Exchange Drive. Another sidewalk segment should be constructed near the north end of the site to connect the proposed sidewalk along the north side of Building “A” to the existing sidewalk along Exchange Drive.

Recommendations and Conclusions

Based on the assumptions and analyses detailed in this memorandum, the following recommendations should be implemented as part of the proposed residential development:

- Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane, bookended by dedicated left-turn lanes into Station Drive and the proposed site access driveway, each with a 50-foot storage bay and 50-foot taper transition.
- Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post “Stop Here for Pedestrians” signage on both legs of Exchange Drive.
- Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
- Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.

With implementation of the above recommendations, it is anticipated that area traffic operation would be generally acceptable after completion of the subject development.

Appendix

Site Plan

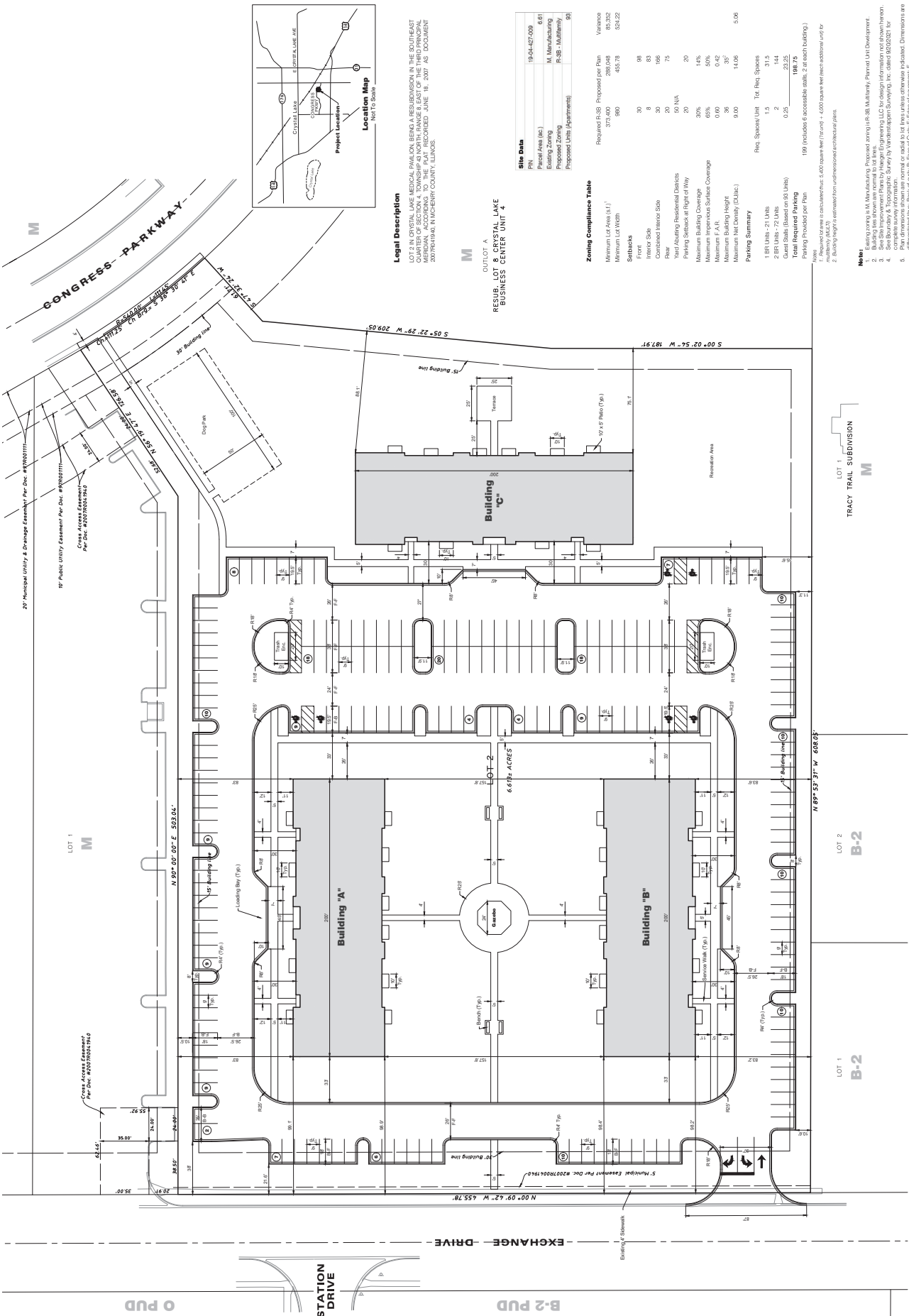
Trip Generation & Census Data

Congress Parkway and Exchange Drive Roundabout Exhibit

Site Plan



Scale: 1" = 30'



Legal Description

SECTION 16, TOWNSHIP 4 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED JUNE 19, 2007 AS DOCUMENT 207861946, IN MCHENRY COUNTY, ILLINOIS.

Site Data

Parcel Area (Ac.)	6.61		
Proposed Zoning	M, Manufacturing		
Proposed Units (Apartments)	R-35, Multi-Family (86)		
Required R-35	Proposed per Plan	Variance	
Minimum Lot Area (S.F.)	373,400	288,048	85,352
Minimum Lot Width	980	455.78	524.22

Zoning Compliance Table

Front Setbacks	30	98
Rear Setbacks	30	168
Complanted/Planted Side	20	75
Yard Abutting Residential Districts	50	N/A
Parking Setbacks at Right of Way	30%	14%
Maximum Building Coverage	60%	50%
Maximum Impervious Surface Coverage	0%	0%
Maximum Building Height	36	36
Maximum Lot Density (D.U./Ac.)	9.00	14.06

Parking Summary

Req. Spaces/Unit	Tot. Req. Spaces	
1 BR Units - 21 Units	1.5	31.5
2 BR Units - 72 Units	2	144
Guest Units (Bosemer 60 Units)	0.25	18
Off-Street Parking	180	180
Parking Provided per Plan	180 (includes 6 accessible stalls, 2 at each building)	

Notes

1. Existing zoning is M, Manufacturing. Proposed zoning is R-35, Multi-Family, Planned Unit Development.
2. See Site Improvement Plan by Haeger Engineering LLC for design information not shown herein.
3. See Site Improvement Plan by Haeger Engineering LLC for design information not shown herein.
4. Construction shall be in accordance with the Survey by Vandalia Surveying, Inc. dated 9/20/2021 for construction information.
5. Plan dimensions shown are normal or radial to lot lines unless otherwise indicated. Dimensions are given in feet and inches. Back of each 'B' mark is 'B' of Edge of pavement. 'E' is Edge of pavement.

Notes

1. Existing zoning is M, Manufacturing. Proposed zoning is R-35, Multi-Family, Planned Unit Development.
2. See Site Improvement Plan by Haeger Engineering LLC for design information not shown herein.
3. See Site Improvement Plan by Haeger Engineering LLC for design information not shown herein.
4. Construction shall be in accordance with the Survey by Vandalia Surveying, Inc. dated 9/20/2021 for construction information.
5. Plan dimensions shown are normal or radial to lot lines unless otherwise indicated. Dimensions are given in feet and inches. Back of each 'B' mark is 'B' of Edge of pavement. 'E' is Edge of pavement.

Responsible Professional Engineer: 600 square feet per unit + 4,000 square feet per access unit for 100 units. All other dimensions are as shown. All dimensions are in feet and inches unless otherwise indicated.

2. All utility lines are shown in accordance with the attached utility plan.

City of Crystal Lake, McHenry County, Illinois
571 Congress Parkway
Crystal Lake, Illinois 60154
Phone: 815.439.4400
Fax: 815.439.4401
www.haegerengineering.com

Project No. 21-215
Date: 11-8-2021
Engineer: [Signature]
Scale: 1" = 30'

Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
Sheet

Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
Sheet

Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
Sheet

Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
Sheet

Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
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Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
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Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
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Project Manager: [Signature]
Engineer: [Signature]
Date: 11-8-2021
Project No. 21-215
Sheet

Trip Generation & Census Data

MEANS OF TRANSPORTATION TO WORK

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Census Tract 8713.01, McHenry County, Illinois		
Label	Estimate	Margin of Error
▼ Total:	2,553	
▼ Car, truck, or van:	2,209	
Drove alone	2,074	
▼ Carpooled:	135	
In 2-person carpool	82	
In 3-person carpool	26	
In 4-person carpool	18	
In 5- or 6-person carpool	9	
In 7-or-more-person carpool	0	
▼ Public transportation (excluding taxicab):	220	
Bus	0	
Subway or elevated rail	0	
Long-distance train or commuter rail	220	
Light rail, streetcar or trolley (carro público in Puerto Rico)	0	
Ferryboat	0	
Taxicab	0	
Motorcycle	0	
Bicycle	8	
Walked	5	
Other means	9	
Worked from home	102	

Table Notes

MEANS OF TRANSPORTATION TO WORK

Survey/Program: American Community Survey

Universe: Workers 16 years and over

Year: 2019

Estimates: 5-Year

Table ID: B08301

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

2019 ACS data products include updates to several categories of the existing means of transportation question. For more information, see: Change to Means of Transportation.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

Workers include members of the Armed Forces and civilians who were at work last week.

The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.

An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.

An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.

An "****" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Land Use: 220

Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is $\frac{1}{2}$ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

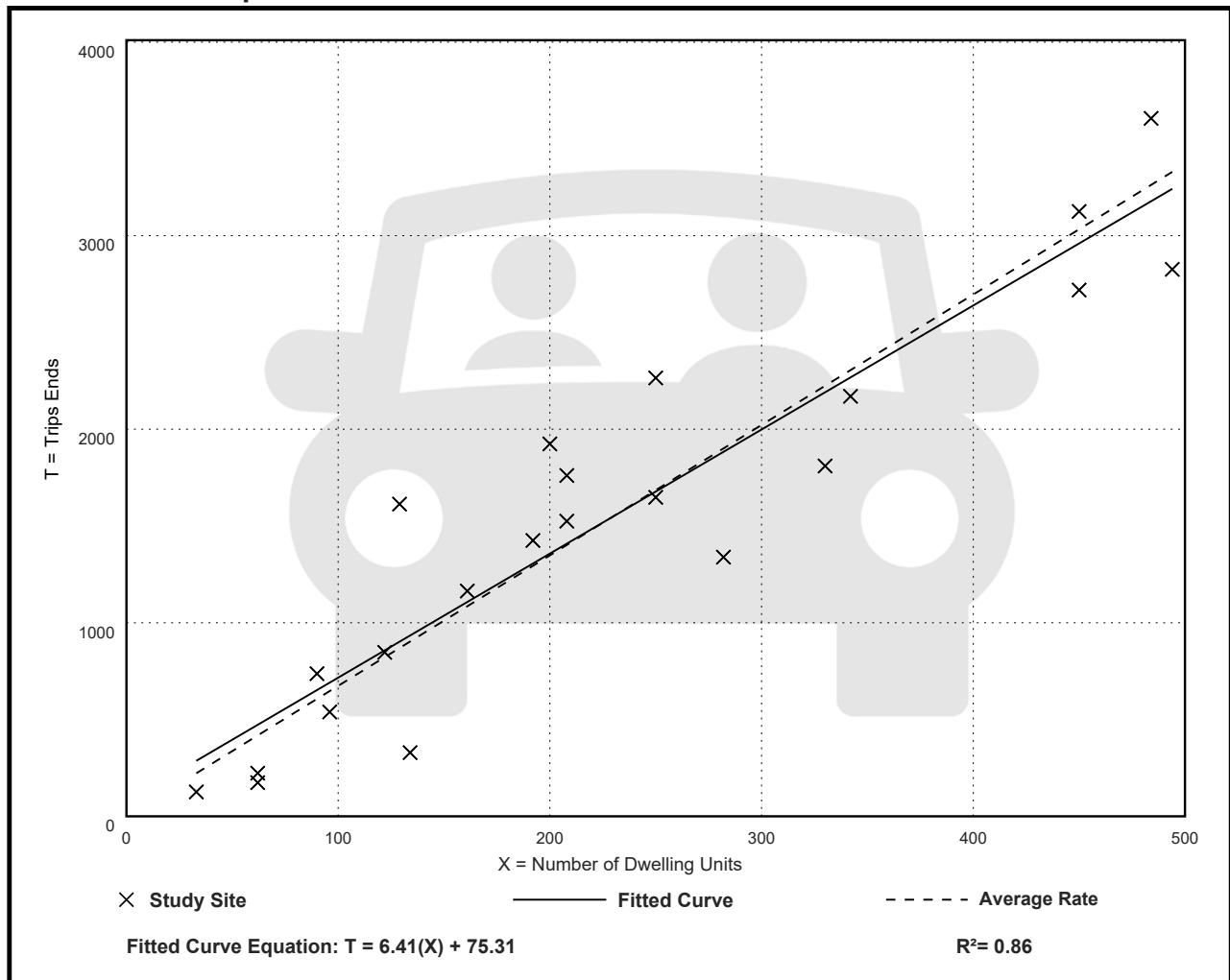
Avg. Num. of Dwelling Units: 229

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

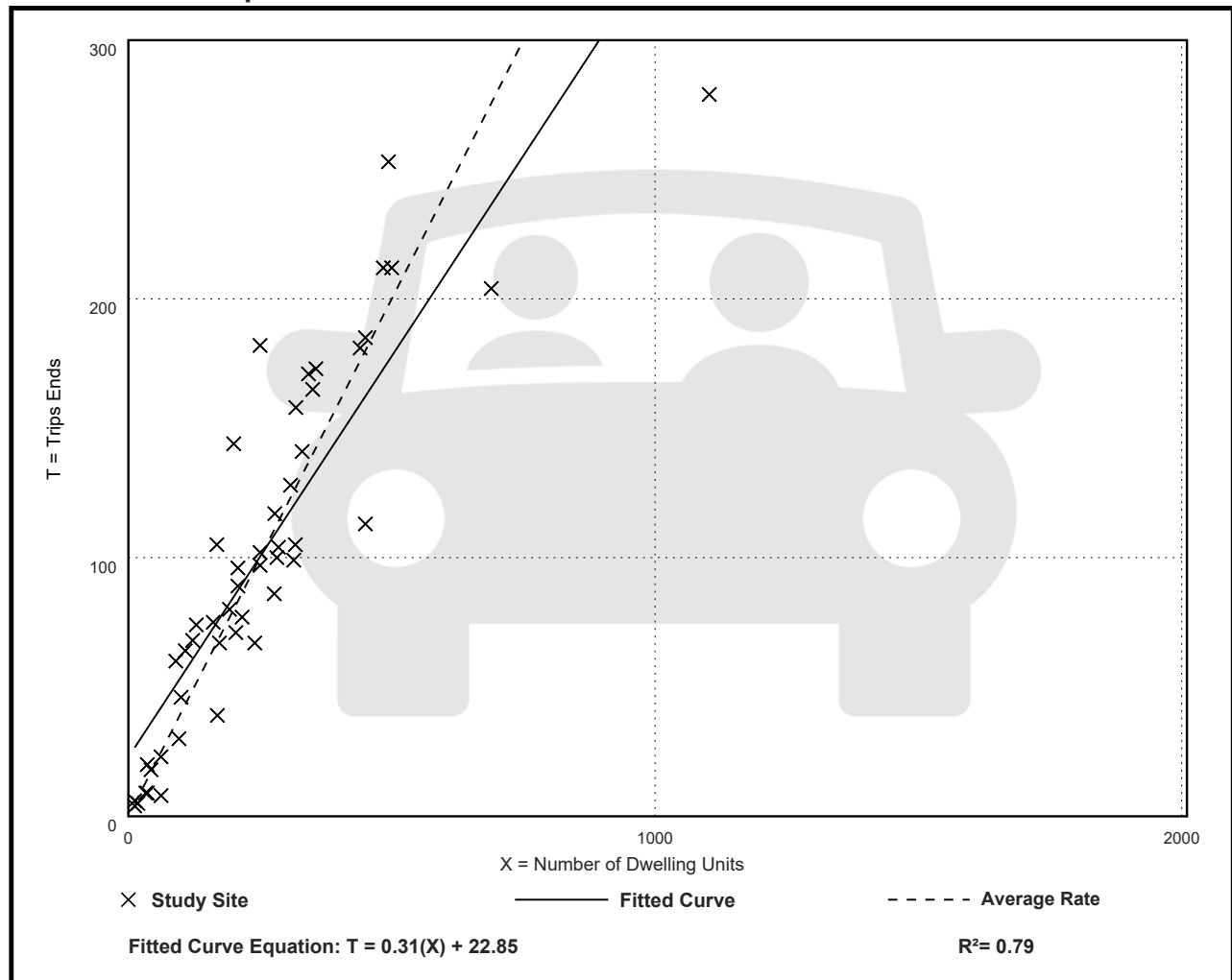
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

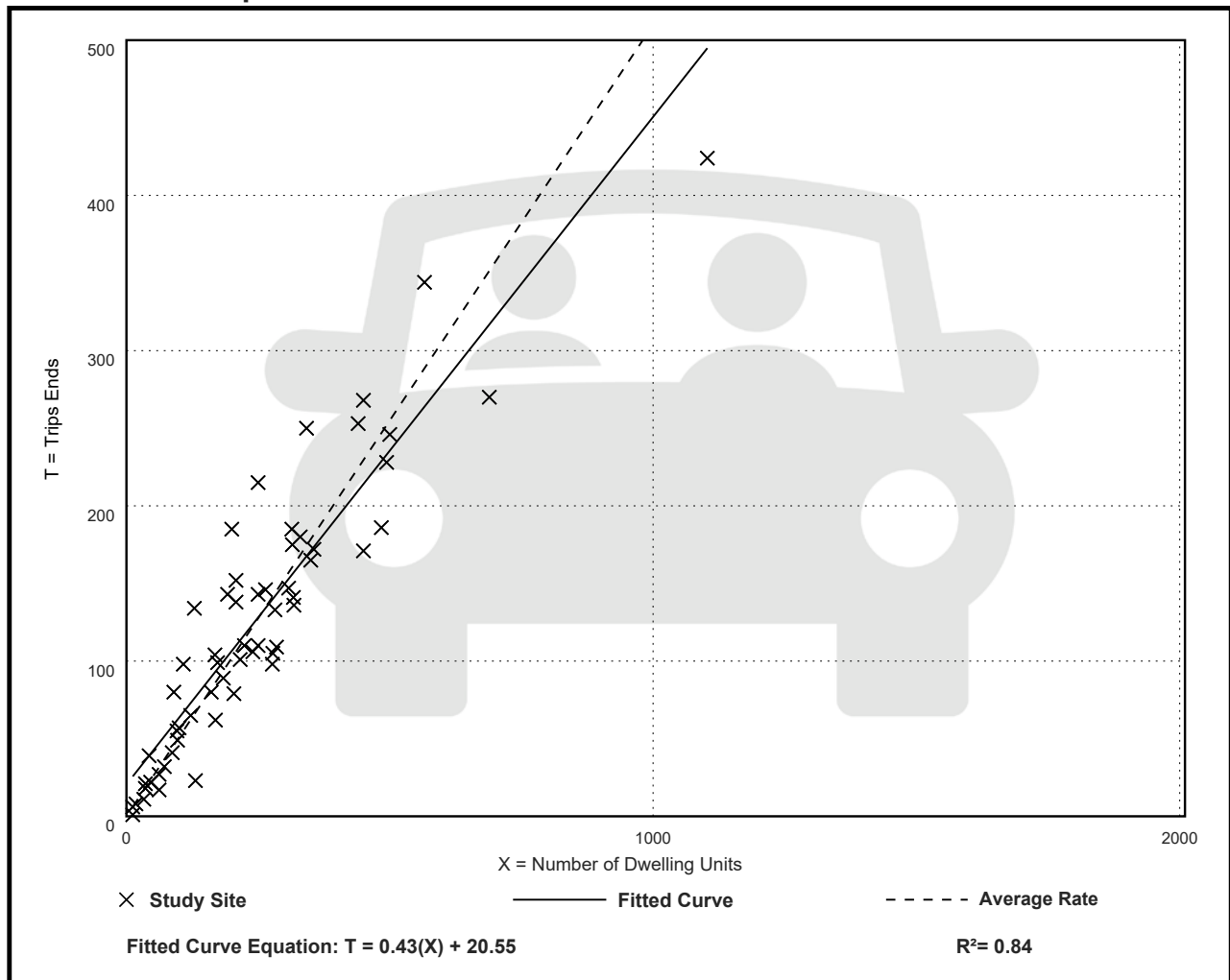
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

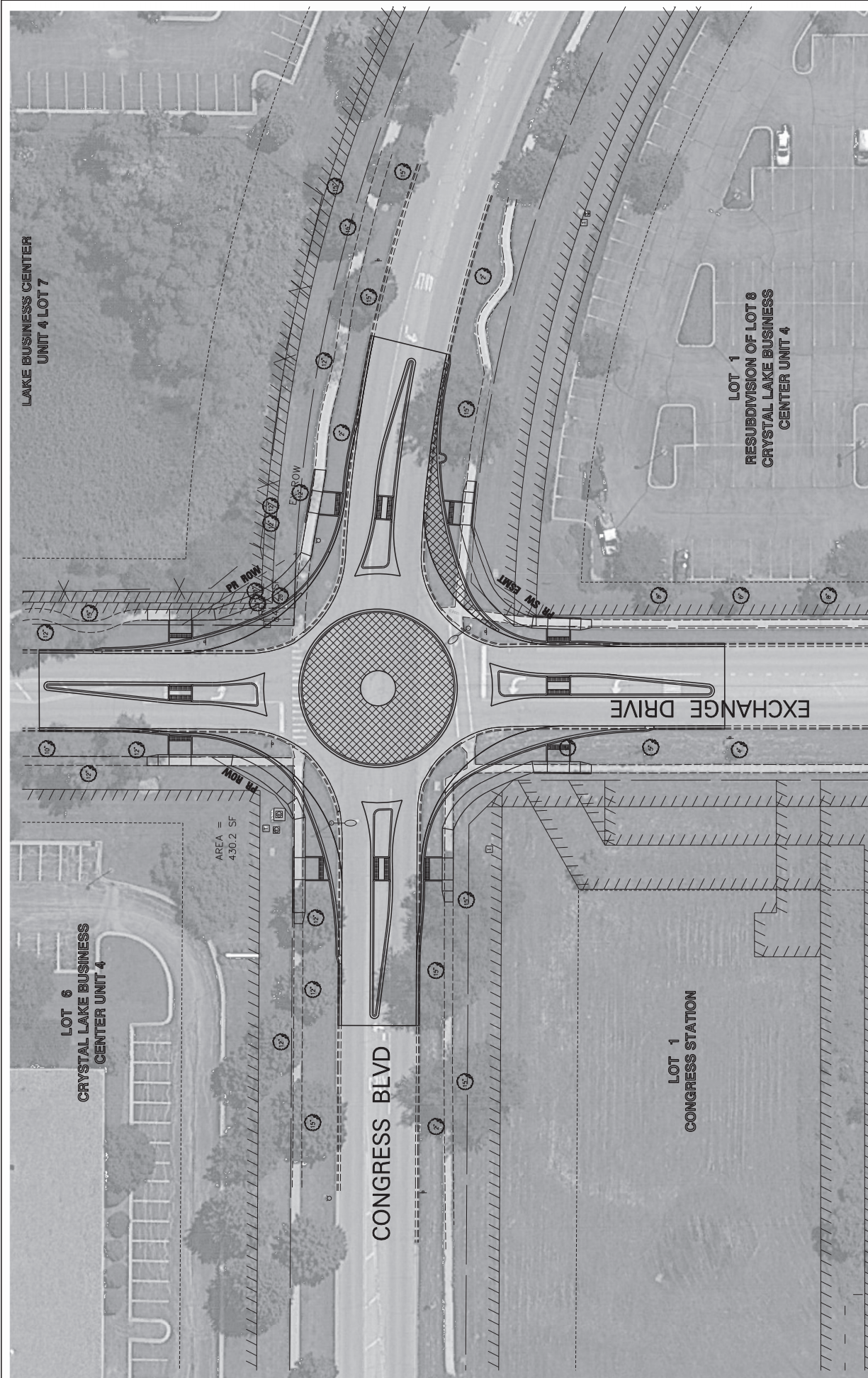
Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



**Congress Parkway and Exchange Drive
Roundabout Exhibit**



DESIGNED -	REVISSED -	 THE CITY OF CRYSTAL LAKE CRYSTAL LAKE, ILLINOIS	PROJECT CONGRESS PARKWAY ROUNDABOUTS	COUNTY MCHEERY CONTRACT NO.	SHEET NO. **
DRAWN -	REVISSED -			SCALE:	
CHECKED -	REVISSED -				
DATE - 1/1/2020	REVISSED -				