CITY OF STOUGHTON
PARKS & RECREATION DEPARTMENT

Dan Glynn, Director
Tony King, Recreation Supervisor
Greg Hoyte, Youth Center Manager
207 S. Forrest Street Stoughton, WI 53589
(608) 873-6746 www.stoughtonrec.com

From: Dan Glynn, Director of Parks & Recreation

To: Jeff Schure, Water Management Specialist

Date: 12/16/2022

Subject: 4th Street Underpass Alternative Analysis

A separated grade crossing of 4th Street at the project site is necessary for public safety. The project is designed for multiple types of users including bikers, walkers/joggers, spectators, and river users. One type of river user for a project like this are tubers. From existing projects in other states, a high percentage of tubers are children. From our experience, children will take their watercraft through the river improvements to a downstream launch area, walk back upstream, go back through the improvements, and repeat the process.

The University of Wisconsin – Madison completed a study for the project that looked at the potential economic impacts of the project. The study states that the development of the project is expected to initially draw local users. With continual site improvements combined with marketing, use will grow to other existing parks and visitors from farther reaches will visit. Our project, especially the south channel, is comparable to the Argo Cascades in Ann Arbor, MI where they average 37,000 kayakers and tubers annually.

The corridor will also become part of the Lower Yahara River trail with Mandt Park and its parking acting as a major trailhead. Additionally, adjacent to the project site is a redevelopment site that will turn a former industrial site into eight multi-family buildings with several hundred housing units. These two factors will significantly contribute significantly to cyclist and pedestrian traffic.

An at-grade crossing is much more dangerous, and would also cause traffic delays during periods of time with high use. The undercrossing also enables a continuous ADA compliant trail along the river through the project. We expect there to be a high usage of the trail by persons with disabilities since there's an existing multi-family housing complex that is located adjacent to the trail.

To provide a separated grade crossing of 4th Street, there are two feasible options:

1. Replace the existing 4th Street bridge with a clear span bridge, and include an underpass with the new bridge project. Replacement of the 4th Street bridge has been brought up multiple times during this process. The City has determined that the bridge is in good shape and replacement would not be considered for at least the next 20 years. Replacement of the bridge just for the purposes of this project would be cost prohibitive. A cost estimate provided by Stand Associates in 2021 stated that the construction of a clear span bridge would be $550,000. This does not include engineering, aesthetic upgrades, lighting, nor any approach work.

2. Utilize one of the existing box culverts for the underpass. The majority of the in-river infrastructure necessary for this underpass is existing, in the form of the concrete box culverts. This provides the opportunity to provide the significant safety benefits of a separated grade crossing cost effectively. The river is currently heavily impacted at this location, providing minimal quality aquatic habitat.

From: Simpson, Zach
To: Dan Glynn; Fisher, Mark
Subject: RE: whitewater park
Date: Thursday, February 18, 2021 10:57:57 AM

Dan,

We requested some guidance from one of our bridge engineers regarding your inquiry:

We typically budget about $200/SF of bridge area for a concrete slab bridge. Assuming a 45' long x 58.5' wide (12' lanes, 10' shoulders, 6' sidewalks, 1.25' parapets), new bridge cost would be about ***$550k****.*

Note that this does not include engineering, extensive aesthetics, lighting, nor any approach work including traffic control. That number would account for basic demo. It's a construction cost budget number assuming a typical bridge.

Please let us know if you would like to discuss further, thanks!

Zach

From: DGlynn@ci.stoughton.wi.us <DGlynn@ci.stoughton.wi.us>
Sent: Monday, February 8, 2021 11:59 AM
To: Simpson, Zach <Zach.Simpson@strand.com>; Fisher, Mark <Mark.Fisher@strand.com>
Subject: FW: whitewater park

Zach and Mark,

Do you know what it would cost to retrofit the 4th Street bridge so the box culverts would converted into one? If a clear-span bridge would be more feasible, do you know what the cost of replacing the bridge would be?

Thanks

Dan Glynn, CPRP
Parks & Recreation Director
City of Stoughton
207 S. Forrest St
Stoughton, WI 53589
608-873-6746
www.stoughtonrec.com

From: Fred Hundt
Sent: Monday, February 8, 2021 11:51 AM
To: Dan Glynn <DGlynn@ci.stoughton.wi.us>
Subject: whitewater park

Sent from my Galaxy

Good morning,Dan. Could you request of Mason Lacy a cost for turning the three rectangle culvert area into one opening? Or possibly the engineering study could include an estimate to support 4th street without the concrete pillars?

Also, could Mason respond to another question? Could we start the whitewater kayaking below 4th street? Thank you, Fred.

SOUTH STREET

7TH STREET

FOURTH STREET

RIVER STREET

PHASE 1

PHASE 1

1
32,530 SF

2
59,570 SF

3
30,790 SF

4
52,200 SF

5
44,960 SF

6
52,200 SF

COMMONS
4,000 SF

7
32,580 SF

8
39,470 SF

POWER HOUSE

STORM WATER RENTENTION

PHASE 1

STORM WATER RENTENTION

YAHARA RIVER

DIMENSIONS ARE TO FACE OF BUILDING
BALCONIES AND PORCHES TO EXTEND APPROXIMATELY 5'-0" FROM FACE OF BUILDING

N

Overall Site Plan

Stoughton Riverfront Redevelopment - 2019.22.00

October 27, 2021

0' 35' 70' 140'

C:\Users\terrancem\Documents\2019.22.00_Stoughton Riverfront Apartments_Site_Connected - Central_terrancem6E6CE.rvt

Potter Lawson
Success by Design

landscape plan not to scale

General Development Plan Site Landscape

Stoughton Riverfront Apartment Site - 2019.22

November 1, 2021

Potter Lawson

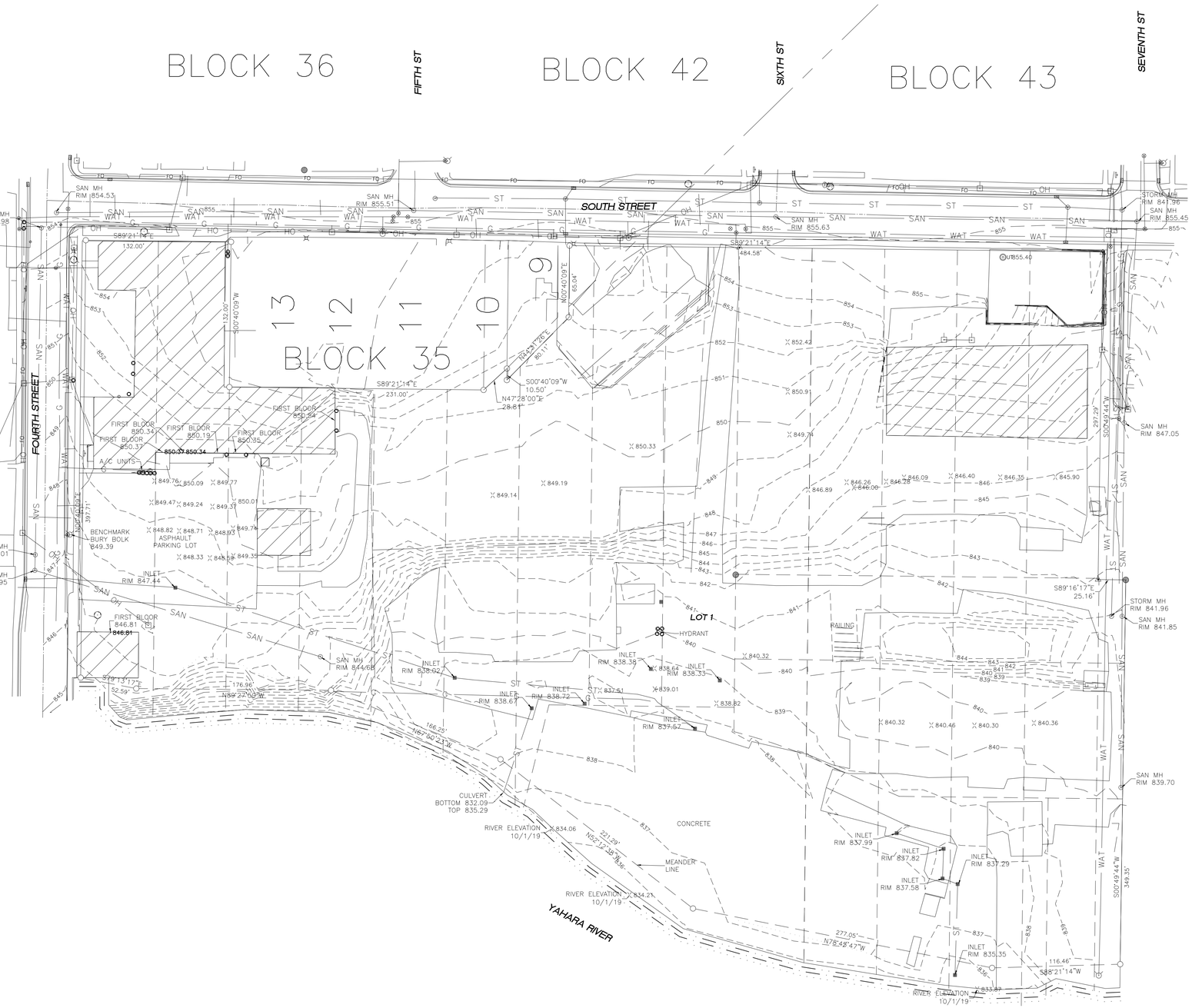
Success by Design

General Development Plan Site Signage & Lighting

Stoughton Riverfront Apartment Site - 2019.22

November 1, 2021

Potter Lawson
Success by **Design**



SCALE 1" = 50'
0 25' 50' 100'

NOTES:
1 ALL HORIZONTAL MEASUREMENTS AND COORDINATES ARE BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM – DANE COUNTY ZONE.
2 ALL ELEVATIONS AND CONTOURS ARE NAVD(88).
3 THE BENCHMARK IS

TOPOGRAPHIC LEGEND

- BENCHMARK
- SECTION CORNER FOUND
- IP — IRON STAKE FOUND
- CONTROL POINT MONUMENT
- SURVEY NAIL
- SIGN
- CANOPY / SHADE TREE
- 000 — CONTOUR LINES
- EVERGREEN TREE
- WAT — WATER MAIN
- SAN — SANITARY SEWER
- ST — STORM SEWER
- E — ELECTRIC
- G — GAS
- OH — OVERHEAD UTILITY LINES
- ST — STORM MH
- GAS/ELECTRIC METER
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- GUY WIRE
- PEDESTAL
- S — MANHOLE
- STORM INLET
- FENCE LINE
- CATCH BASIN

ATTENTION:
ALL UTILITY LOCATIONS ARE SHOWN FROM FIELD OBSERVATION BASED UPON LOCATES AND/OR INFORMATION RECEIVED FROM SOUTHERN WISCONSIN CENTER. BEFORE THE START OF ANY EXCAVATION, A COMPLETE LOCATE OF ALL UTILITIES WITHIN THE CONSTRUCTION AREA SHOULD BE COMPLETED.

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SURVEYED FOR:
CURT VAUGHN BRINK LLC
701 E WASHINGTON AVE #103
MADISON, WI 53703

PLAT OF SURVEY

STOUGHTON REDEVELOPMENT STOUGHTON, WISCONSIN

DWG NO. -
SHEET 1 OF 2
DATE SEPT. 5, 2019
PROJ ID 5019046
FILE 5019046_SV1

NO.	DATE	REVISION	BY	APVD

R:\Logos\OES logo tyre.png
5100 Eastpark Blvd., Suite 300, Madison, WI 53718, ph. 608-241-5170 Job# 2019010

	DSGN	DR	CHK	APVD
	FRT	FRT	FRT	FRT

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

FILE NAME: P:\2019\2019.22.0008 EXISTING INFORMATION\SITE SURVEY\SITE SURVEY OTIE.DWG

BLOCK 36

FIFTH ST

BLOCK 42

SIXTH ST

BLOCK 43

SEVENTH ST

SOUTH STREET

751.39'
S89°21'14"E

BLOCK 34

FOURTH STREET

S89°21'14"E
132.00'

S00°40'09"W 132.00'

N47°28'00"E
28.81'

N00°40'09"E
65.04'

S89°21'14"E
484.58'

N00°40'09"E 397.71'

283.24'

1

13

12

11

10

9

BLOCK 35

3

4

N44°31'26"E
80.11'

LOT 2
134861 sq. ft.
3.10 acres

N28°38'36"W
65.98'

S89°21'14"E
231.00'

S00°40'09"W
10.50'

PHASE 1

LOT 1
76874 sq. ft.
1.76 acres

S00°49'44"W
297.29'

SEVENTH ST

N67°57'32"E
48.15'

2

5

6

PHASE 1

N14°26'33"W
81.36'

N89°10'16"W
419.31'

N89°10'16"W 350.11'

S79°54'29"W
30.83'

S79°54'29"W
72.25'

S89°16'17"E
25.16'

FUTURE RIVER ROAD
61,796 sq. ft. - 1.42 acres

N00°40'09"E
48.47'

S89°10'16"E 349.93'

COMMONS

N89°10'16"W 444.47'

PETERSON'S ADDITION

N89°27'50"W
176.96'

N79°54'29"E
45.87'

S10°05'31"E
47.60'

S57°50'16"E
122.56'

N79°13'17"W
52.59'

N67°50'23"W
166.25'

PHASE 1

7

8

S67°21'44"E
182.04'

LOT 3
83821 sq. ft.
1.92 acres

193.00'

S00°49'44"W 349.35'

N52°12'38"W
221.29'

PHASE 1

PHASE 2

S89°10'16"E
245.39'

OUTLOT 1
98017 sq. ft.
2.25 acres

YAHARA RIVER

LANDS

128.20'

N78°45'47"W
277.05'

S88°21'14"W
116.46'

NOTES:
ALL BEARINGS ARE REFERENCED TO GRID NORTH OF THE WISCONSIN COUNTY COORDINATE SYSTEM – DANE ZONE, NAD83(2011). THE NORTH LINE OF THE NE ¼ BEARS N89°50'42"W.

Proposed Land Divisions

Stoughton Riverfront Redevelopment - **2019.22.00**

May 27, 2021

ONEIDA Engineering Solutions

0' 50' 100'

N

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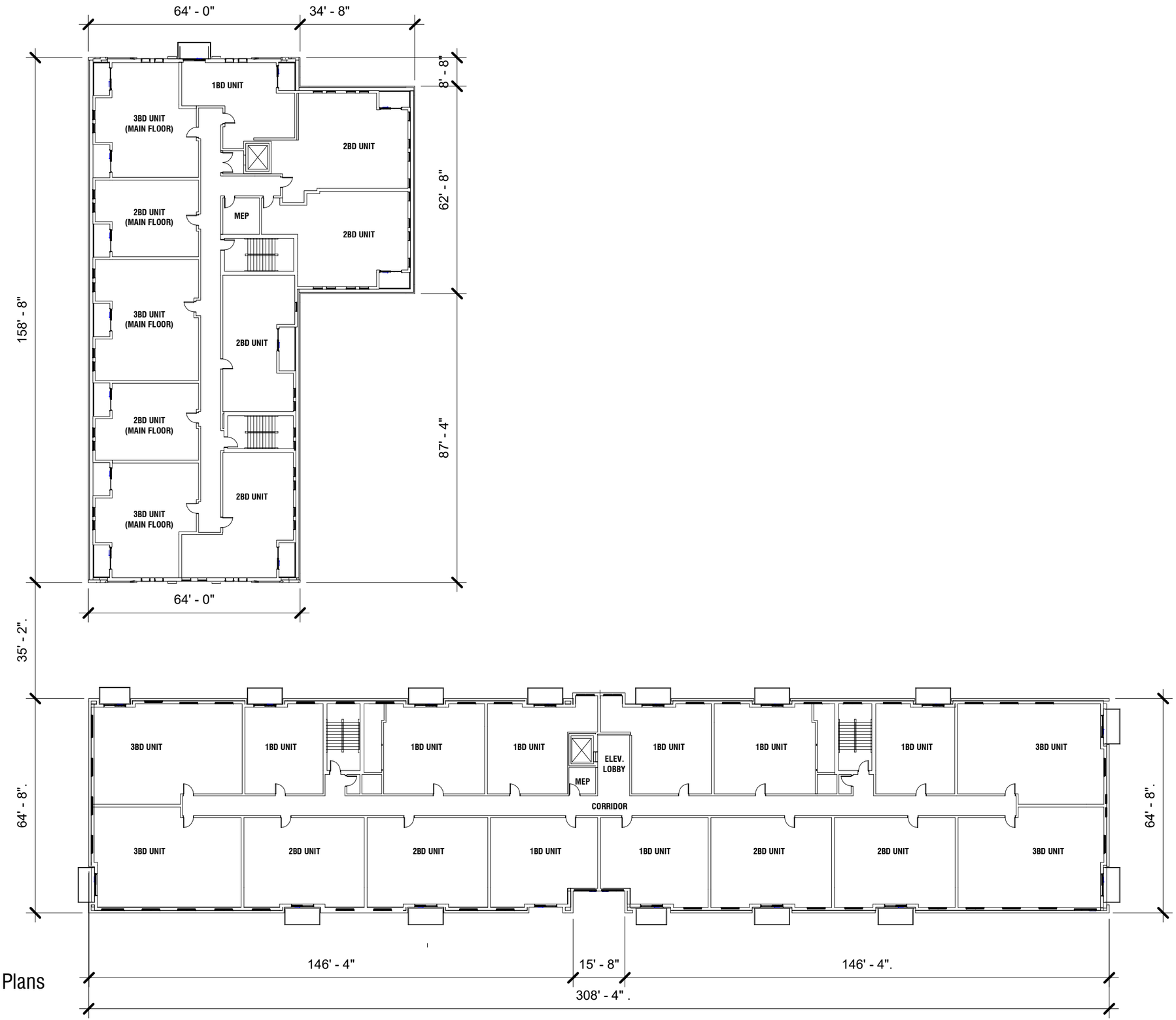

Phase 1
Buildings 1 & 2 - Third Floor Plans

Stoughton Riverfront Apartments
11/01/2021

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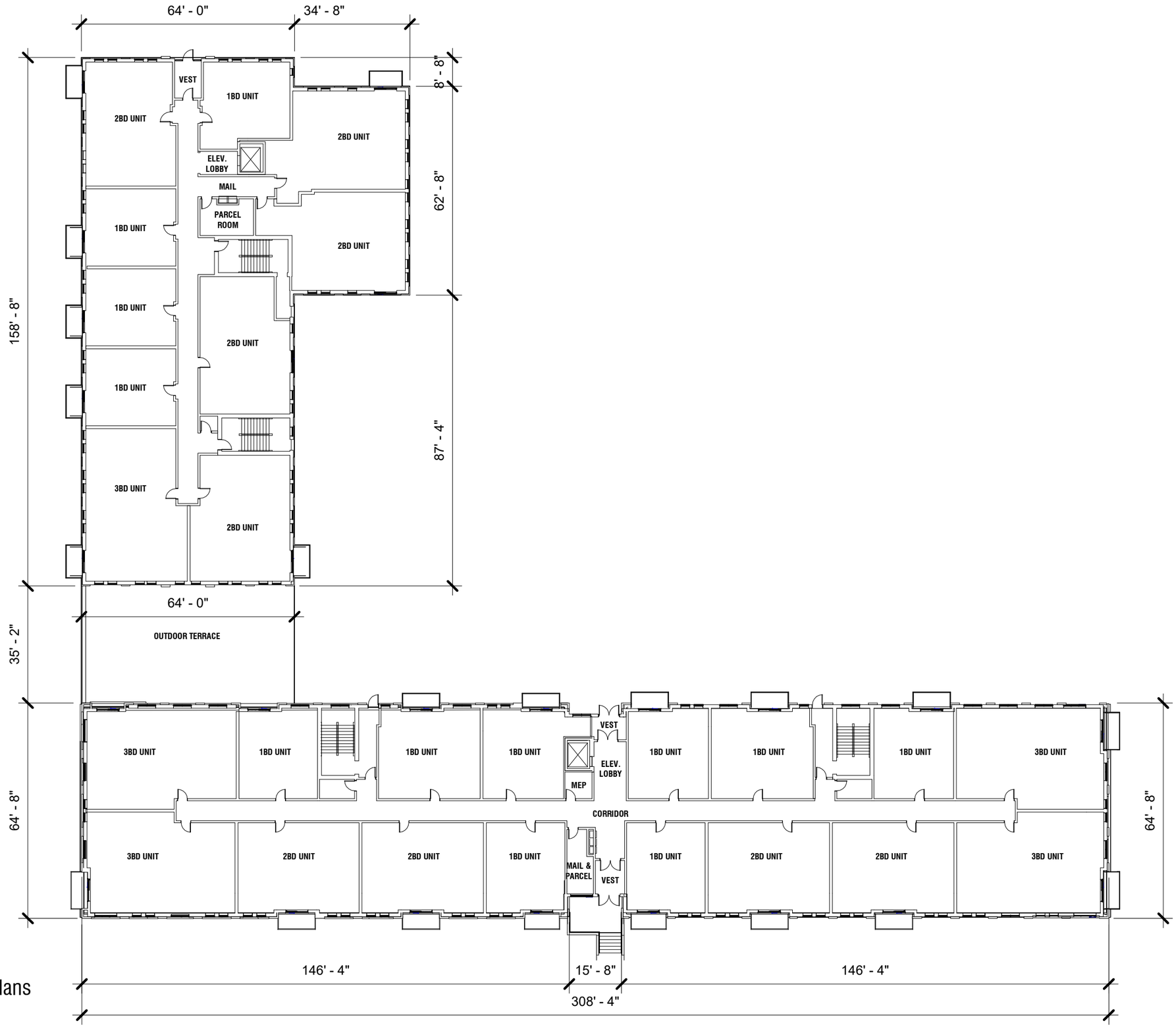

Phase 1
Buildings 1 & 2 - First Floor Plans

Stoughton Riverfront Apartments
11/01/2021

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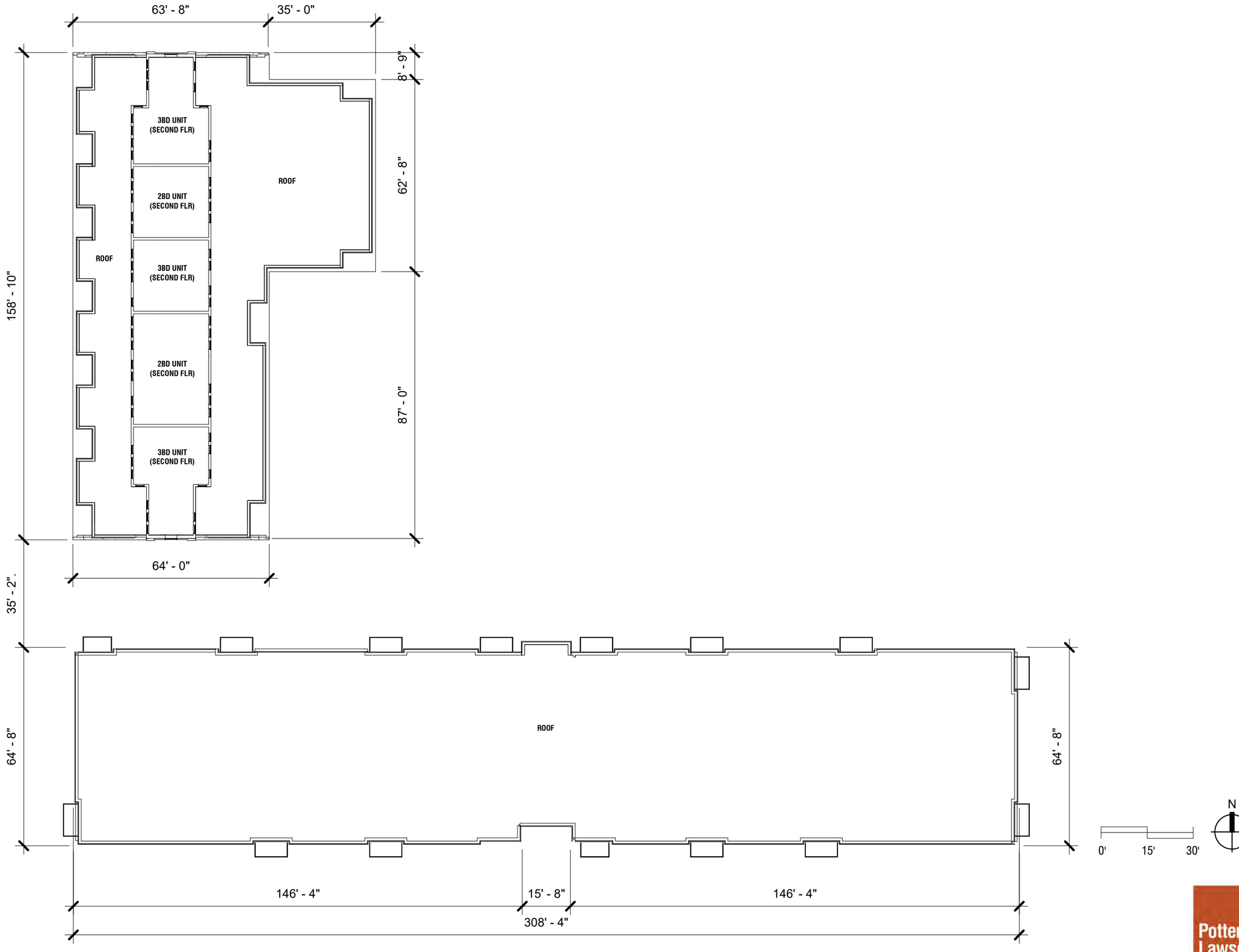

Phase 1
Building 1 Fourth Floor Plan

Stoughton Riverfront Apartments
11/01/2021

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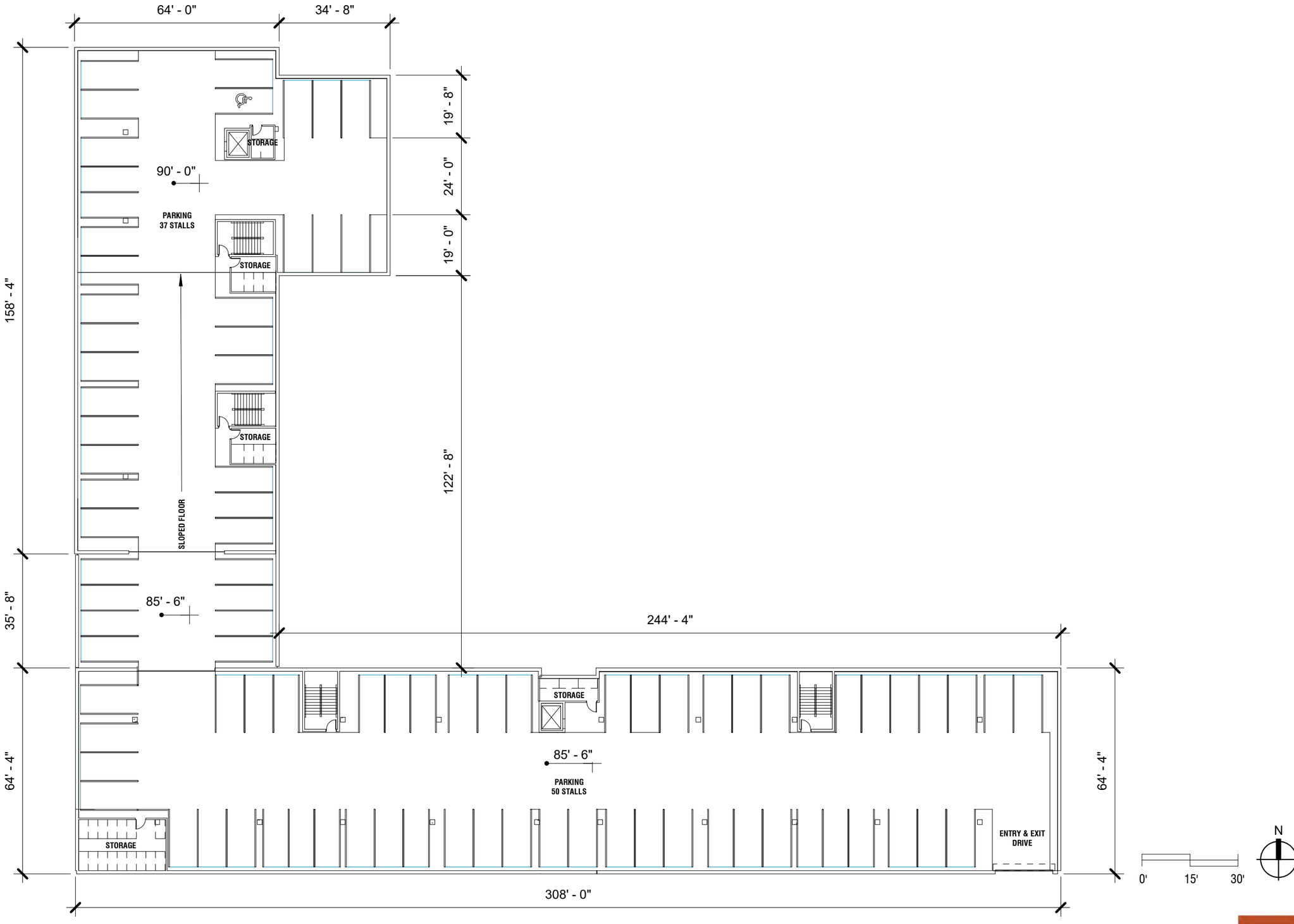

Phase 1
Buildings 1 & 2 - Parking Plans

Stoughton Riverfront Apartments

11/01/2021

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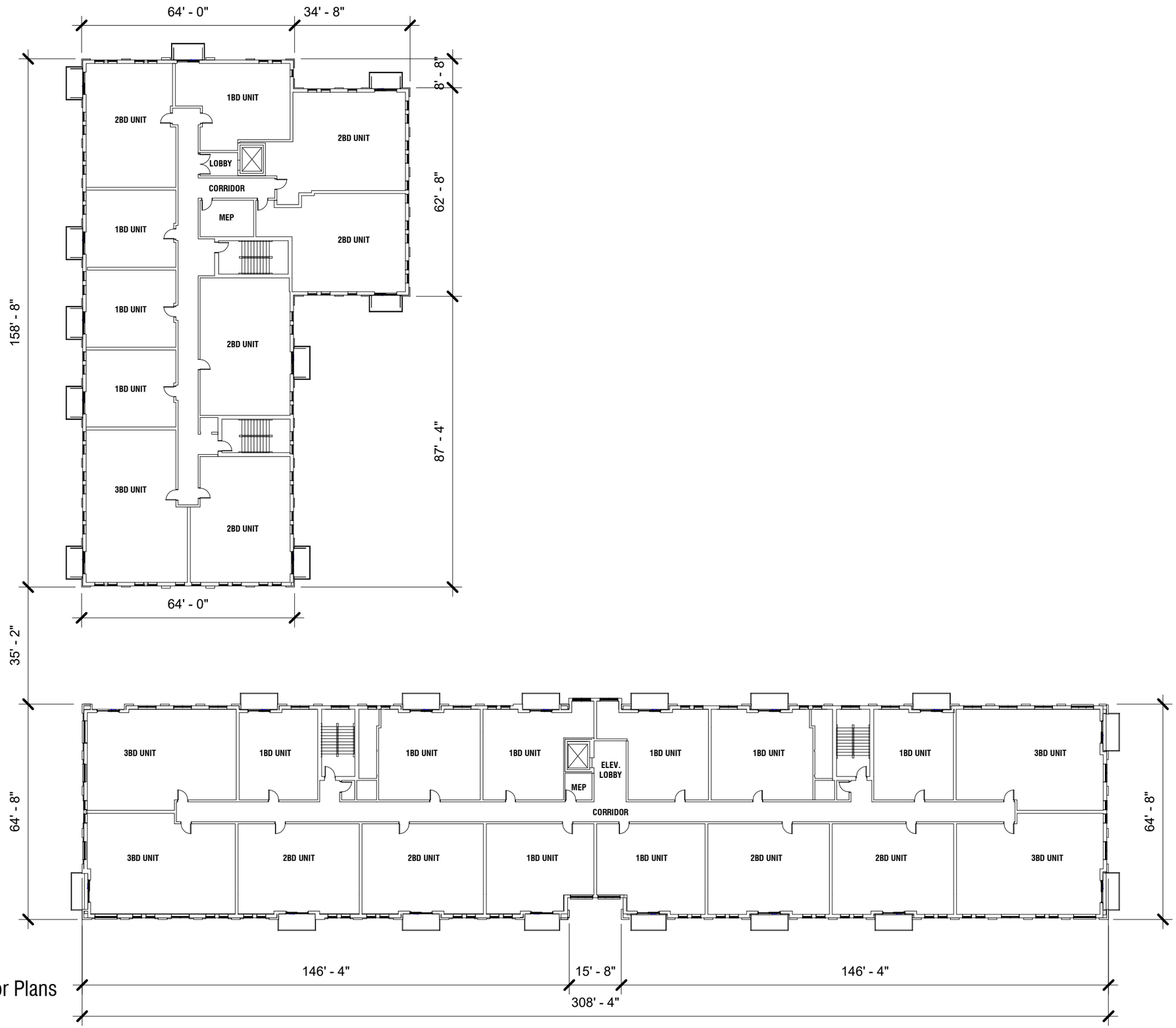

Phase 1
Buildings 1 & 2 - Second Floor Plans

Stoughton Riverfront Apartments

11/01/2021

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Potter Lawson
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Building 1 Entry Perspective - South Fourth & East South Streets

Stoughton Riverfront Apartments

11/01/2021

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Potter Lawson

Success by Design

Building 1 Perspective - South Fourth Street

Stoughton Riverfront Apartments

11/01/2021

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Potter Lawson

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Building 2 Perspective - South Fourth & River Streets

Stoughton Riverfront Apartments

11/01/2021

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Potter Lawson

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Building 2 Entry Perspective - River Street

Stoughton Riverfront Apartments

11/01/2021

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Potter Lawson

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Project Overview

Elven Sted

Affordable Riverfront Apartment Community

623 Eighth Street
Stoughton, WI

Submitted by:

General Capital Group and Movin' Out
6938 North Santa Monica Blvd.
Fox Point, WI 53217

Contact:

David Weiss
david@generalcapitalgroup.com
414-228-3501

David Porterfield
dp@movin-out.org
608-251-4446 x8

Overview of Elven Sted

623Eighth Street
Stoughton, WI

Name: Elven Sted

Location: The site is on the Yahara River near Downtown Stoughton, Wisconsin, a small community of 13,000 approximately twenty miles southeast of Madison, the State Capital.

The site fronts the river and is bounded by the Yahara River to the South, Dunkirk Avenue on the East, a mixed residential area (single and multifamily) to the North, and Eighth Street to the West. The site is located within the boundaries of a newly-formed redevelopment area called the Rail Corridor Tax Increment District #5.

Project Cost: Approximately $6,950,000

Description: Movin' Out has named this new housing community ***Elven Sted***, the Norwegian term for "River Place". The project includes 33 units of new multi-family housing consisting of 4 one-bedroom, 17 two-bedroom and 12 three-bedroom units located on a 2.5 acre site at 623 Eighth Street in Stoughton, a small Wisconsin community with a strong Norwegian heritage.

Elven Sted will provide high quality affordable family housing, with Movin' Out affirmatively marketing units to its target populations of tenants with disabilities, tenants qualifying for workforce housing, including care givers working in the county-administered long term support system and families. Movin' Out will market directly to these target populations, for which there is clearly demonstrated demand. In addition to building on its own previous experience serving the target populations, Movin' Out is marshalling input from the Dane County Department of Human Services, its contracted residential service providers, people with disabilities who live in Stoughton and their families. It is anticipated that no more than one-third of Elven Sted's units will be occupied by tenants with disabilities. The remaining units will be marketed as workforce housing with targeted outreach to community-based caregivers, some of whom may provide in-home support to those Elven Sted tenants who rely on community based long term care.

Movin' Out is a Wisconsin statewide nonprofit organization that assists people with disabilities to secure sustainable housing solutions. Movin' Out provides comprehensive housing counseling, assists many households to achieve home ownership by providing down payment assistance, and develops, owns and operates rental housing for renters with disabilities. With Elven Sted, Movin' Out creates human scale, neighborhood-

friendly, affordable housing that does not require licensure as a residential facility and doesn't congregate people based on disability label.

The three two-story buildings will have an architectural style designed to complement the surrounding residential neighborhood where large, older single-family homes predominate. The units will range in size from 700 square feet for a one-bedroom, 950 square feet for a two-bedroom and 1,400 square feet for a three-bedroom unit.

The project will provide 13 garages and 34 on-site surface parking spaces. The garages will be rented on a first-come, first-served basis. Other amenities include a fully furnished community center of approximately 900 square feet that will house meeting areas, kitchen, bathroom and business center (computer, internet access, copy machine, etc.) at no fee. The project will have an on-site leasing office. Units will have access to additional storage lockers at no additional cost. There will be an outdoor play area. A minimum of 50% of the units will have separate ground floor entries, washers and dryers in the units, private balconies or patios and high speed internet services at no cost.

Because we anticipate that some tenants will require accessibility, the buildings, site grading and features will be designed to maximize accessibility for people with mobility impairments. The design follows principles of universal design and visitability. All units will have no-step entries and all site pathways will maintain a grade allowing for those using wheelchairs to move about the site easily.

Zoning: The Stoughton Redevelopment Plan for this area has identified the future use of this site as "residential multi-family." The City of Stoughton approved rezoning to accommodate the project.

Total Units: **33 Units**

4	1 - Bedrooms
17	2 - Bedrooms
12	3 - Bedrooms

Rent Structure:

# UNITS	BDRMS	BATHS	SF	SETASIDE	RENT
2	1	1	700	30%	$ 400
2	1	1	700	40%	$ 485
2	2	1	950	30%	$ 480
3	2	2	950	40%	$ 625
6	2	2	950	50%	$ 715
6	2	2	950	60%	$ 715
6	3	2	1,400	50%	$ 765
5	3	2	1,400	60%	$ 800
1	3	2	1,400	Market	$ 800
33					

Financing: Elven Sted will be financed using a combination of development financing including affordable housing tax credits, permanent debt and a combination of soft money including City of Stoughton TIF funds and HOME funds. The intent is to finance a high quality, very affordable multifamily housing community enhanced by state-of- the-art technology, best management building practices and ongoing operations.

The total development budget for this project is $6,950,000. The sources identified to cover these costs include:

- Section 42 Low Income Housing Tax Credits - WHEDA (Awarded)
- Conventional First Mortgage
- Federal HOME funding provided by Dane County -$371,257 (Committed)
- Tax Incremental Financing provided by City of Stoughton - $428,000 (Committed)

Development Team

Movin' Out has over 15 years of experience in helping low income families in Dane County and throughout Wisconsin with purchasing homes or attaining permanent affordable rental housing solutions. Movin' Out works in close partnership with state and local human service systems to ensure that households who need supportive services to be successful in their homes have a commitment for those services as part of their housing plan.

Movin' Out is partnering with General Capital Group to implement Elven Sted, leveraging the expertise of a well seasoned affordable housing developer with the specific programming expertise of Movin' Out. Movin' Out/ General Capital will be lead developer/ co-developers and General Capital's affiliate, Bedrock Construction, will be the General Contractor. Movin' Out will retain long term ownership of the asset (as managing general partner of the ownership LLC). The Hoff Group/Northtrack Construction will serve as Construction Manager. ACC Management Group will serve as property manager for Elven Sted. The development team also includes Suby Von Haden and Associates providing accounting services; Foley and Lardner for legal services and Glueck Architects for design and construction supervision services.

Together, this experienced team will plan, develop, construct and operate a high quality affordable housing facility that will serve the needs of many low income individuals and families in a safe and stable neighborhood.

MOVIN' OUT, Project Developer. As project developer, Movin' Out takes lead responsibility for conceptualizing and carrying out the development of Elven Sted. Movin' Out also serves as the long-term project owner in the role of managing general partner for the project. Movin' Out relies on its extensive experience with assisting households that include a family member with a permanent disability in achieving housing solutions.

During the past 15 years Movin' Out has assisted over 1,100 low-income households to purchase and maintain homes in 67 of 72 Wisconsin counties. Additionally, over the past five years, Movin' Out has acquired, developed and currently owns and operates 35 units of scattered-site affordable rental units in four Wisconsin counties. Movin' Out also served as a project sponsor of two large-scale housing developments with another nonprofit resulting in the development of 40 Section 42 rental units and 126 mixed income single family and condominium units. Movin' Out participated in the planning of these projects, provided capital subsidies for the development of the units, housing counseling to prospective tenants and home owners and down payment assistance to many of the home owners in those projects.

Movin' Out's key development expert, Dave Porterfield, has over 25 years of affordable housing development experience and collaborated with and guided Movin' Out through the provision of consulting services throughout the history of the organization. He joined Movin' Out as real estate developer two years ago. During his career he has been key development staff in most of the development projects Movin' Out has carried out and been associated and had extensive additional experience with a wide range of financing programs including Section 42 tax credits.

Movin' Out and/ or Mr. Porterfield have developed or participated in the following projects:

- Stonebridge - Madison, WI.
  - *12 unit affordable rental project integrated within a 300 unit owner occupied condominium project that utilized a combination of Federal Section 811 and HOME funding*
- North Lawn Avenue – Madison, WI
  - *Redevelopment of existing older single family home into a fully accessible rental duplex*
- Shawano Duplex – Shawano, WI
  - *Construction of a fully accessible rental duplex*

- West Bend – West Bend, WI
  - *Acquisition and rehabilitation of a fully accessible rental duplex*
- Vandenberg Heights/Homes – Sun Prairie, WI
  - *Redevelopment of former military housing subdivision consisting of 160 units of single family and duplex units. Sixty units financed with Section 42 tax credits with the balance rehabbed and marketed to lower income home buyers*.
- Coachyard Square – Madison, WI
  - *Development of 23 unit mixed- income condominium project in down town Madison*
- Uplands Condominiums and SF Homes – Sun Prairie, WI
  - *Development of 24 condominium units and 79 single family mixed income development as part of a 143 unit new subdivision*
- Uplands Homes – Sun Prairie, WI
  - *Development of 40 unit affordable rental family project financed with Section 42 Tax Credits as part of a 143 unit new subdivision*
- The Uplands Subdivision – Sun Prairie, WI
  - *Development of a new 40 acre mixed income subdivision included planning, land assembly, obtaining all government approvals, financial packaging, oversight of infrastructure and building construction and marketing of completed owner-occupied units and lots.*
- YWCA of Madison – Madison, WI
  - *Refinancing and complete rehabilitation of 103 unit affordable housing project located on the Capital Square in downtown Madison. Project included the use of Section 42 tax credits, State and Federal Historic Tax Credits, Federal HOME funding and Federal Home Loan Bank AHP funds*. *(Mr. Porterfield provided development consulting to the project owner the YWCA of Madison with responsibilities including assembly and coordination of development team and financial packaging)*

GENERAL CAPITAL, Project Co-Developer. Building on years of experience in real estate, banking, law, accounting, architecture and urban planning, General Capital has established a solid reputation as one of Wisconsin's leading real estate developers. In 1998, General Capital made a strategic decision to diversify its commercial development strength by pursuing affordable housing as a core business.

Over the past twelve years, General Capital has focused its housing effort on producing high quality affordable apartment communities, including the Berkshire brand of affordable senior communities. By building an identifiable brand that is recognized throughout the region, Berkshire projects have earned a great reputation as high quality, well managed properties. In 2003, General Capital earned the Charles Edson Tax Credit Excellence Award for its Berkshire – Grafton project. This award serves as testimony to its success in the tax credit housing business.

General Capital's success in the tax credit housing business can be measured by the list of its successful developments (independently or with joint venture partners):

- Hide House Lofts Milwaukee, WI
  - *60 unit Sect. 42 family housing (currently under construction)*
- Deerwood Crossing Milwaukee, WI
  - *66 unit independent/assisted senior housing*
- MacAuley Apartments (St. Catherine's) Milwaukee, WI
  - *46 unit Sect. 42 family housing*

- Berkshire -- Oconomowoc Oconomowoc, WI
  - *85 unit independent, bond financed senior housing*
- Berkshire – West Allis West Allis, WI
  - *80 unit independent, Sect. 42 senior housing*
- Berkshire at Sunset Waukesha, WI
  - *78 unit independent, Sect. 42 senior housing*
- The Berkshire Grafton, WI
  - *66 unit independent, Sect. 42 senior housing*
- North Port Village Glendale, WI
  - *42 unit independent, market rate senior housing*
- The Silvernail Waukesha, WI
  - *90 unit independent, Sect. 42 senior housing*
- Hunters Ridge I, II, III Plymouth, WI
  - *96 unit Section 42 & mkt. rate housing*
- Hawthorne Woods Plymouth, WI
  - *64 unit Section 8 housing*
- Orchard Ridge Green Bay, WI
  - *43 unit Section 8 housing*

In addition to hundreds of affordable housing units, the partners of General Capital have been involved in development, management and ownership of various market-rate multi-family projects dating back to the 1980's.

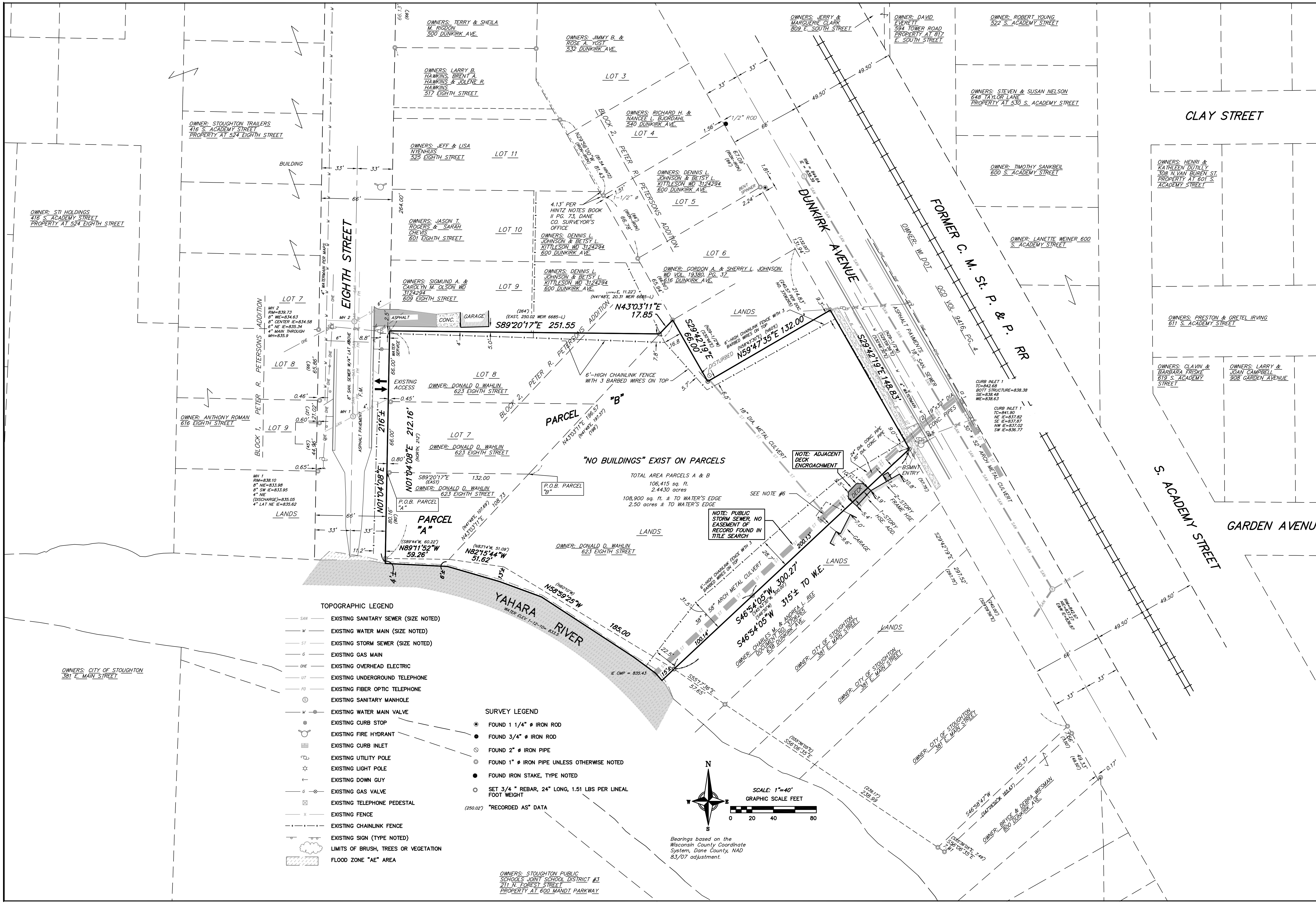
HOFF GROUP, Construction Manager. Recent projects completed by General Capital have used an integrated construction management approach. Elven Sted will take advantage of the strategic alliance with The Hoff Group and its affiliate, Northtrack Construction. Hoff Group will handle all aspects of bidding, negotiation and construction management for General Capital's contractor arm, Bedrock Construction. This partnership produced excellent results for Hide House, Deerwood Crossing, St. Catherine's Residence, Berkshire – West Allis, Berkshire at Sunset and Berkshire – Oconomowoc and will produce a successful outcome for Elven Sted. While maintaining strong relationships with many general contractors and bidding entire jobs or subcontracts in the marketplace, the Hoff Group/Bedrock model has proven to be a highly effective project delivery platform that allows the developer to fully control an open-book, heavily-managed construction process.

David J. Hoff, AIA, Principal of The Hoff Group, will be primarily responsible for construction document review, competitively bidding the project to contractors, and coordinating, scheduling and managing all aspects of construction. The Hoff Group has provided project management and architectural services to over 200 projects in 30 states and Canada, representing more than $1 billion worth of development. The firm's platform endorses a collaborative team approach to enhance project coordination between owner, architect and contractor. This approach has translated to better allocation of resources, improved real-time communication and better control over project costs, timeliness and quality.

Property Manager – ACC Management Group. ACC Management Group will provide ongoing professional management services on a fee-based contract basis. ACC Management has extensive experience with managing affordable rental housing throughout the Midwest.

Glueck Architects – Jim Glueck of Glueck Architects has extensive experience in designing affordable multifamily projects many of which are designed for high energy efficiency.

Developer and Managing Member:	Movin' Out, Inc. http://www.movin-out.org/
Co-Developer :	General Capital Group http://www.generalcapitalgroup.com/
Contractor :	Bedrock Construction Company (General Capital Subsidiary)
Architect :	Glueck Architects
Civil Engineering:	Vierbicher and Associates http://www.vierbicher.com/
Energy Engineering :	The Energy Center of Wisconsin http://www.ecw.org/
Property Manager :	ACC Management Group: http://www.accmanagementgroup.com/
Legal Services:	Foley and Lardner http://www.foley.com/
Accounting Services:	Suby, Von Haden & Associates http://www.sva.com/



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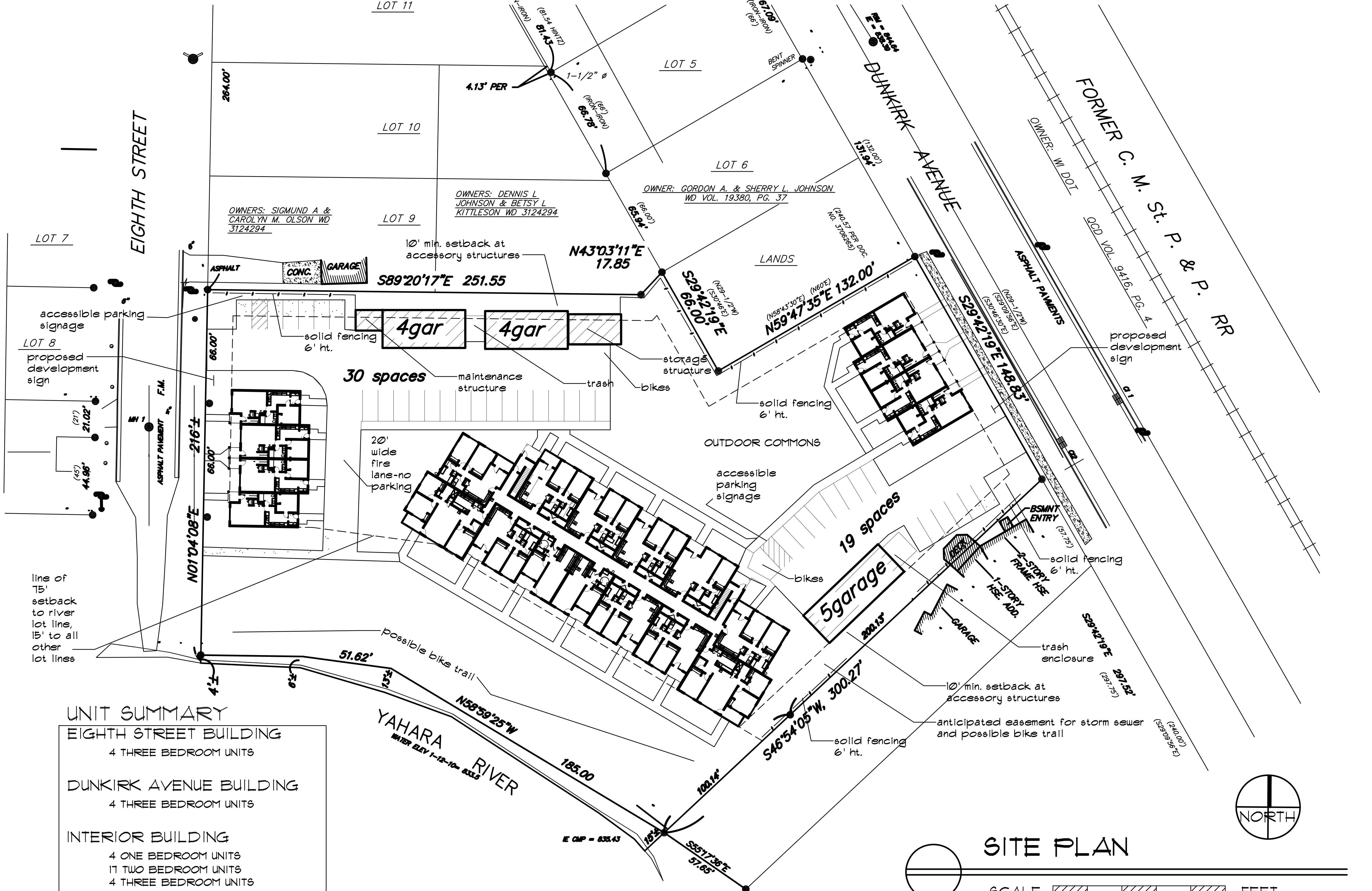
GDP Location Map
Movin' Out
City Of Stoughton
Dane County, Wisconsin

REVISIONS		
NO.	DATE	REMARKS

REVISIONS		
NO.	DATE	REMARKS

SCALE: AS SHOWN
DATE: 7/9/2010
DRAFTER: MKRI, JQUA
CHECKED: JQUA SBAU
PROJECT NO.: 32097081.00
SHEET: C
DWG. NO.: 1


LOT 11
LOT 5
LOT 10
LOT 6
LOT 9
LOT 7
LOT 8
EIGHTH STREET
DUNKIRK AVENUE
FORMER C. M. St. P. & P. RR
OWNER: WI DOT
QCD VOL. 9416, PG. 4
ASPHALT PAVEMENTS
OWNERS: SIGMUND A & CAROLYN M. OLSON WD 3124294
OWNERS: DENNIS L JOHNSON & BETSY L KITTLESON WD 3124294
OWNER: GORDON A. & SHERRY L. JOHNSON WD VOL. 19380, PG. 37
LANDS
4.13' PER
1-1/2" ø
BENT SPINNER
S89°20'17"E 251.55
N43°03'11"E 17.85
S29°42'19"E 66.00'
N59°47'35"E 132.00'
S29°42'19"E 148.83'
S46°54'05"W, 300.27'
N58°59'25"W
N01°04'08"E
S55°17'36"E 57.65'
51.62'
185.00
200.13'
100.14'
216'±
66.00'
284.00'
297.52'
65.94'
131.94'
66.78'
81.43
67.09'
21.02'
44.96'
4'±
6'±
13'±
15'±
ASPHALT
CONC.
GARAGE
4gar
4gar
5garage
30 spaces
19 spaces
10' min. setback at accessory structures
accessible parking signage
proposed development sign
solid fencing 6' ht.
maintenance structure
trash
bikes
storage structure
OUTDOOR COMMONS
20' wide fire lane-no parking
line of 75' setback to river lot line, 15' to all other lot lines
possible bike trail
anticipated easement for storm sewer and possible bike trail
trash enclosure
BSMNT ENTRY
2-STORY FRAME HSE
1-STORY HSE. ADD.
GARAGE
MH 1
F.M.
ASPHALT PAVEMENT
YAHARA RIVER
WATER ELEV 1-12-10= 833.5
IE CMP = 835.43
NORTH

UNIT SUMMARY

EIGHTH STREET BUILDING
4 THREE BEDROOM UNITS

DUNKIRK AVENUE BUILDING
4 THREE BEDROOM UNITS

INTERIOR BUILDING
4 ONE BEDROOM UNITS
17 TWO BEDROOM UNITS
4 THREE BEDROOM UNITS

TOTAL 33 UNITS
4 ONE BEDROOM UNITS
17 TWO BEDROOM UNITS
12 THREE BEDROOM UNITS

SITE PLAN

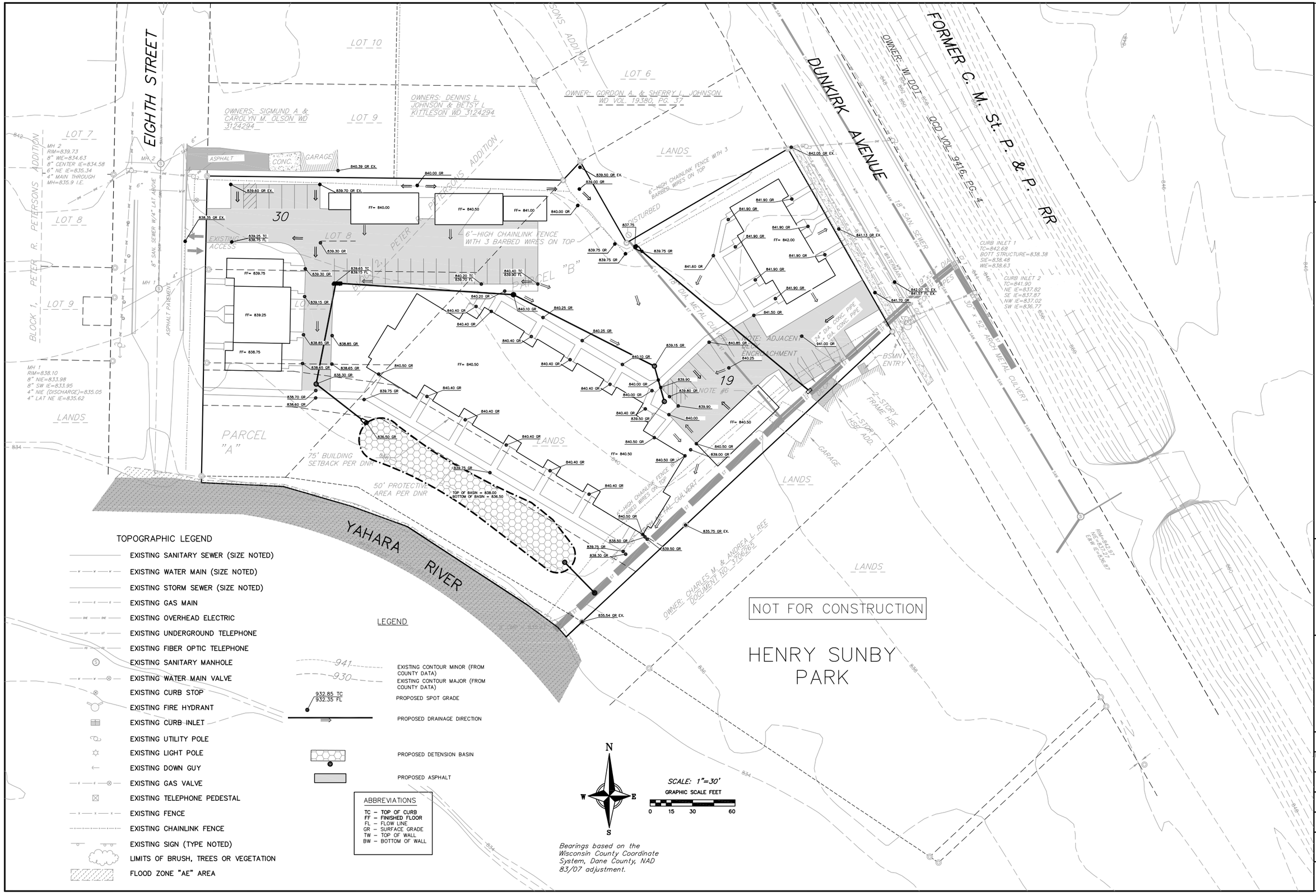
SCALE 0 20 40 60 80 100 FEET

7/1/10

glueck architects
116 North Few Street, Madison, WI 53703 (608)251-2551

MOVIN' OUT, INC.
PROPOSED DEVELOPMENT
EIGHTH AND DUNKIRK
STOUGHTON, WISCONSIN

0962



TOPOGRAPHIC LEGEND

- EXISTING SANITARY SEWER (SIZE NOTED)
- EXISTING WATER MAIN (SIZE NOTED)
- EXISTING STORM SEWER (SIZE NOTED)
- EXISTING GAS MAIN
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- EXISTING FIBER OPTIC TELEPHONE
- EXISTING SANITARY MANHOLE
- EXISTING WATER MAIN VALVE
- EXISTING CURB STOP
- EXISTING FIRE HYDRANT
- EXISTING CURB INLET
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING DOWN GUY
- EXISTING GAS VALVE
- EXISTING TELEPHONE PEDESTAL
- EXISTING FENCE
- EXISTING CHAINLINK FENCE
- EXISTING SIGN (TYPE NOTED)
- LIMITS OF BRUSH, TREES OR VEGETATION
- FLOOD ZONE "AE" AREA

LEGEND

- 941 — EXISTING CONTOUR MINOR (FROM COUNTY DATA)
- 930 — EXISTING CONTOUR MAJOR (FROM COUNTY DATA)
- 932.85 TC / 932.35 FL — PROPOSED SPOT GRADE
- PROPOSED DRAINAGE DIRECTION
- PROPOSED DETENSION BASIN
- PROPOSED ASPHALT

ABBREVIATIONS

TC – TOP OF CURB
FF – FINISHED FLOOR
FL – FLOW LINE
GR – SURFACE GRADE
TW – TOP OF WALL
BW – BOTTOM OF WALL

N W E S

SCALE: 1"=30'
GRAPHIC SCALE FEET
0 15 30 60

Bearings based on the Wisconsin County Coordinate System, Dane County, NAD 83/07 adjustment.

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GDP Grading Plan

Movin' Out
City Of Stoughton
Dane County, Wisconsin

REVISIONS		
NO.	DATE	REMARKS

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NO.	DATE	REMARKS

SCALE: AS SHOWN
DATE: 7/9/2010
DRAFTER: MKRI DEHL SBAU
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PROJECT NO.: 32097081
SHEET: C
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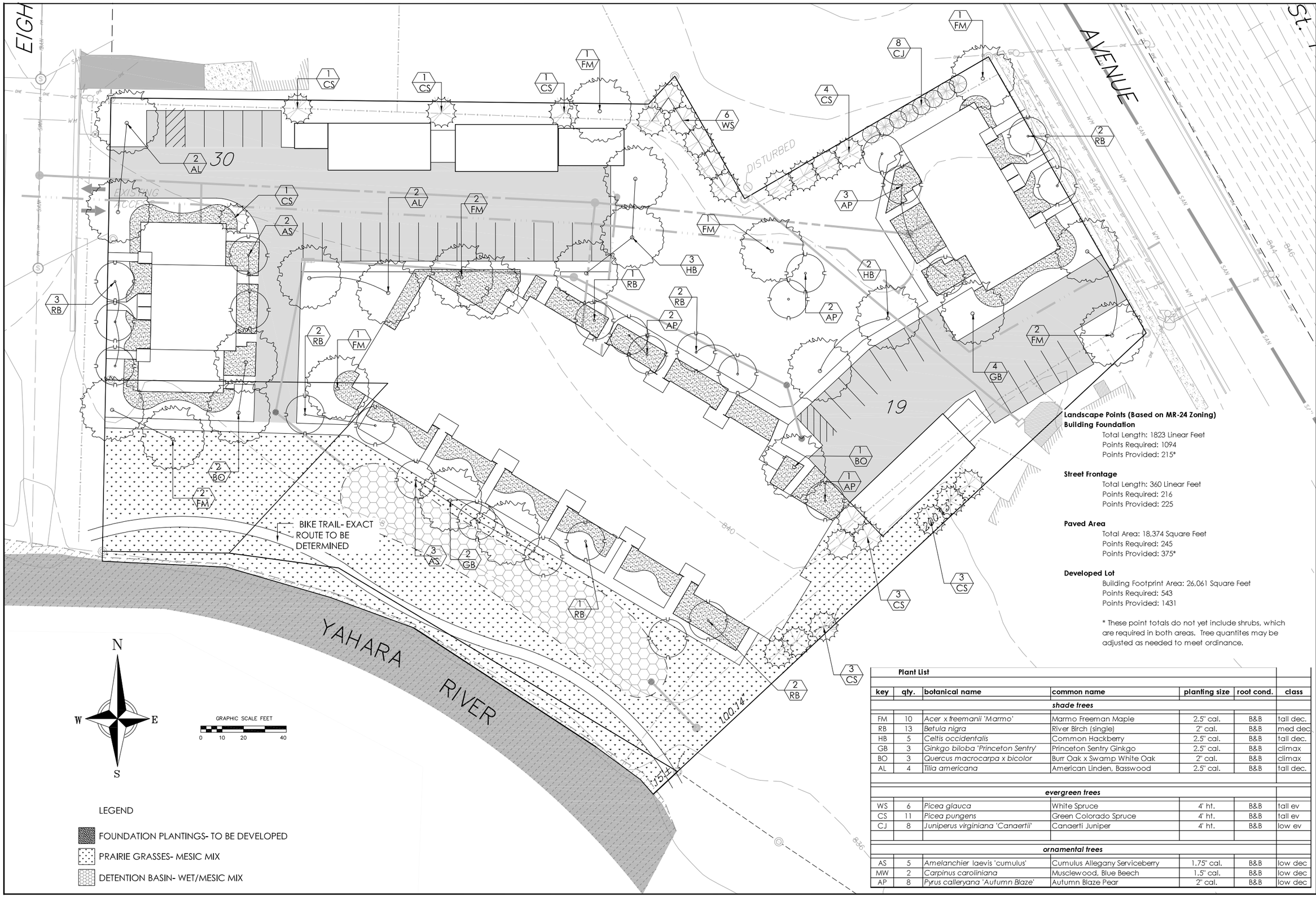

Landscape Points (Based on MR-24 Zoning)

Building Foundation
Total Length: 1823 Linear Feet
Points Required: 1094
Points Provided: 215*

Street Frontage
Total Length: 360 Linear Feet
Points Required: 216
Points Provided: 225

Paved Area
Total Area: 18,374 Square Feet
Points Required: 245
Points Provided: 375*

Developed Lot
Building Footprint Area: 26,061 Square Feet
Points Required: 543
Points Provided: 1431

* These point totals do not yet include shrubs, which are required in both areas. Tree quantites may be adjusted as needed to meet ordinance.

Plant List

key	qty.	botanical name	common name	planting size	root cond.	class
			shade trees			
FM	10	*Acer x freemanii 'Marmo'*	Marmo Freeman Maple	2.5" cal.	B&B	tall dec.
RB	13	*Betula nigra*	River Birch (single)	2" cal.	B&B	med dec.
HB	5	*Celtis occidentalis*	Common Hackberry	2.5" cal.	B&B	tall dec.
GB	3	*Ginkgo biloba 'Princeton Sentry'*	Princeton Sentry Ginkgo	2.5" cal.	B&B	climax
BO	3	*Quercus macrocarpa x bicolor*	Burr Oak x Swamp White Oak	2" cal.	B&B	climax
AL	4	*Tilia americana*	American Linden, Basswood	2.5" cal.	B&B	tall dec.
			evergreen trees			
WS	6	*Picea glauca*	White Spruce	4' ht.	B&B	tall ev
CS	11	*Picea pungens*	Green Colorado Spruce	4' ht.	B&B	tall ev
CJ	8	*Juniperus virginiana 'Canaerti'*	Canaerti Juniper	4' ht.	B&B	low ev
			ornamental trees			
AS	5	*Amelanchier laevis 'cumulus'*	Cumulus Allegany Serviceberry	1.75" cal.	B&B	low dec
MW	2	*Carpinus caroliniana*	Musclewood, Blue Beech	1.5" cal.	B&B	low dec
AP	8	*Pyrus calleryana 'Autumn Blaze'*	Autumn Blaze Pear	2" cal.	B&B	low dec

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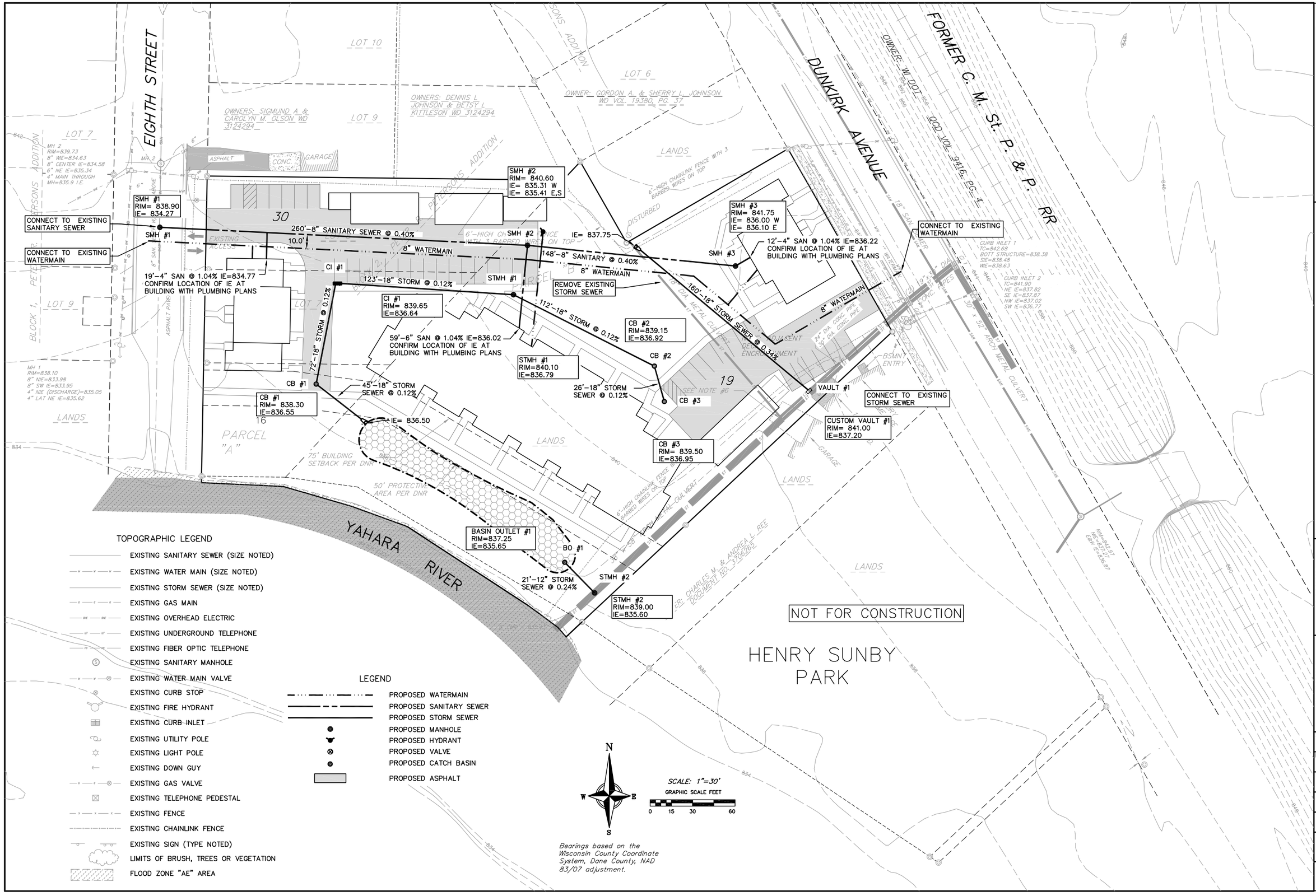
GDP LANDSCAPE PLAN

MOVIN' OUT
CITY OF STOUGHTON
DANE COUNTY, WISCONSIN

REVISIONS		
NO.	DATE	REMARKS

REVISIONS		
NO.	DATE	REMARKS

SCALE: AS SHOWN
DATE: 7/9/2010
DRAFTER: BWOO/SSNY
CHECKED:
PROJECT NO.: 32097081
SHEET: L
DWG. NO.: 1



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999 Fourier Drive, Suite 201 Madison, Wisconsin 53717
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GDP Utility Plan

Movin' Out
City Of Stoughton
Dane County, Wisconsin

REVISIONS			
NO.	DATE	REMARKS	

REVISIONS			
NO.	DATE	REMARKS	

SCALE
AS SHOWN

DATE
7/9/2010

DRAFTER
MKRI DEHL SBAU

CHECKED

PROJECT NO.
32097081

SHEET
C

DWG. NO.
2

STREET (FRONT) ELEVATION

NO SCALE

5/27/10

glueck architects
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MOVIN' OUT, INC.
PROPOSED DEVELOPMENT
EIGHTH AND DUNKIRK
STOUGHTON, WISCONSIN

0962

• VIEW FROM RIVER •

University of Wisconsin – Madison/Cooperative Extension
Department of Planning and Landscape Architecture

Potential Economic Impacts of a Proposed Whitewater Park:

A Market-based Case Study of Stoughton, Wisconsin

Dan Glynn, Tsung-Lun Hsu, Dave Marcouiller, and Bill Ryan*

Applied Research Report 18.1
September 2018

* Dan Glynn is Director of Parks and Recreation with the City of Stoughton, Wisconsin. Tsung-Lun Hsu is a recent graduate of the MS in Urban and Regional Planning at the University of Wisconsin – Madison. Dave Marcouiller and Bill Ryan are with the University of Wisconsin – Madison/Cooperative Extension and serve as Resource Economist and Community Business Development Specialist respectively. Listed in alphabetical order with lead authorship shared equally.

Executive Summary

Whitewater parks are an increasingly credible development option for those communities along rivers seeking to create alternative recreational options and reclaim important natural amenities within their purview. One such effort is taking place in Stoughton, Wisconsin. The proposed Stoughton Whitewater Park will develop a 900 foot stretch of the Yahara River into a whitewater venue that is anticipated to have subtle, yet dramatic, impacts on its downtown while providing an important recreational resource for the residents and visitors within its market boundaries. Once completed, the Stoughton Whitewater Park will be owned and publicly operated by the City.

In this report, we outline the potential market-based economic impacts associated with this proposed whitewater park. First, we assess the market for kayakers within short and long-term drive-times with comparisons to a variety of whitewater parks in other locales across the US. We then apply this market assessment to develop an estimate of whitewater park usage which is then matched with defendable estimates of visitor expenditures at the park and in the surrounding retail and service markets of Stoughton and throughout Dane County. This serves as the basis for economic stimulus thus allowing an estimate of economic impacts. Highlights of our findings include:

1. Conservative estimates suggest that there are at least 30,000 kayakers within a 30-minute drive time to the proposed Stoughton Whitewater Park and 82,000 within 60 minutes. This is of a total population of 400,000 and 1.2 million respectively.

2. Within three hours of Stoughton, there is a total population of nearly 6 million with estimates of this including nearly 434,000 kayakers and over 1 million canoeing enthusiasts.

3. Looking at recent studies that examined 10 other whitewater parks across the US suggests that kayakers spend, on average, over $68 per day on their recreational pursuits. Expenditures could include trip-related spending for food, lodging, automotive, recreational equipment, clothing and supplies among many other items.

4. Certainly, market sizes of whitewater parks vary considerably but average kayaker use from these studies suggest that annual visitation is nearly 15,000 visits per year for annual spending that exceeds $1 million USD.

5. The proposed Stoughton Whitewater Park is analogous to other whitewater parks across the country in drop, release, length and other notable issues associated with whitewater rapids from a recreational asset quality perspective.

6. Development of the Stoughton Whitewater Park is expected to initially draw local kayakers and canoers. With continual site improvements combined with targeted marketing and solid word-of-mouth reviews, use is anticipated to grow in a like fashion to other comparable whitewater parks to attract increasingly large visitor numbers from farther reaches of its market boundaries.

7. Using Stoughton drive-time boundaries to estimate market size can provide specific estimate of potential visitation and visitor spending. If kayakers within 30-minutes visit the Stoughton Whitewater Park once per year, spending will exceed $2 million USD. Extending this market boundary to 60-minutes, this estimate of potential spending increases to over $5.6 million USD annually. And, if extended to 120-minutes (including Milwaukee and the nearby suburbs of Chicago), this estimate of potential spending increases to nearly $30 million USD annually.

8. Depending on additional park components, economic impacts will be generally limited to warm weather months of May through September. Further, these increased receipts are likely to relate to higher visits on weekends. In total, the operation would be available for users 40 to 80 days per year, weather permitting. Revenues generated from the operation would be related to kayak/canoe rentals, lessons, and entrance fees (if any).

9. Non-market economic benefits within this region could involve hedonic premiums placed on real estate values due to the presence of river-based amenities. These increased property values will provide capital appreciation for owners of land in Stoughton. Further, development of the Whitewater Park is likely to generate improved river system function for fisheries and ecosystem function.

10. The Whitewater Park should have a marginal direct benefit on business in Stoughton that are operating on days that the park is open. Local restaurants may see increases in seats occupied, lodging operations could generate room night sales, and retail stores and services may see increased sales, especially those selling sports attire and goods. To generate economic impact, the businesses must be open and participate with other businesses to promote their products and services related to the interests of the whitewater enthusiast.

Potential Economic Impacts of a Proposed Whitewater Park:
A Market-based Case Study of Stoughton, Wisconsin

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Potential Economic Impacts of a Proposed Whitewater Park:
A Market-based Case Study of Stoughton, Wisconsin

1. **Introduction**

Over the past half-century, parks and recreation departments in concert with city planners, locally elected officials, and chambers of commerce across the Upper Midwest have worked diligently to recapture the streams and rivers running through their downtowns. The benefits of this are far-reaching. From adjacent property value enhancements to stimulated demand for local business output resulting in increased local household incomes, rivers are certainly much more than avenues for flood control and transportation. Rejuvenated river towns are witnessing a rebirth in vitality as people reacquaint themselves with more natural open spaces facing the water. Examples across Southern Wisconsin abound and include Sauk City – Prairie du Sac, Baraboo, Jefferson and Fort Atkinson, to name a few. Often, the focal point of these downtowns has become their riverside location with parks and water becoming more in-tune with demands for local restaurants, taverns, accommodations, and specialty shops.[1]

Recreational use of rivers has been a constant over the years. This is particularly so for the mill ponds held up by small dams and the free-flowing water that results downstream. The North American mid-continent has thousands of small and mid-sized dams that were generally installed during the late 19th and early-to-mid 20th Century for flood control and power generation. Water cascading over whitewater rapids has been an important part of the landscape of the Upper Midwest from Sault Ste. Marie, Michigan to Sioux Falls, South Dakota. These flowing waters have also

[1] This is one of a variety of community development strategies recognized as following an "amenity-driven growth" approach which is gaining interest as a fruitful area of research, practice, and literary pursuit (c.f. Cherry and Rickman 2010; Green et al. 2005). A popularized discussion of how water plays a role in successful cities can be found in a recent edition of Outside magazine (August, 2018)

increasingly intrigued recreationists during the recent past [2]. Kayaking, canoeing, and rafting have been shown to be increasing as outdoor recreation activities in recent recreation demand studies. Indeed, roughly 25 percent of Wisconsin residents 16 years and older partake in these three activities (Wisconsin, State of 2011). This accounts for just over 1,000,000 Wisconsin residents. Additionally, the same study estimated that roughly 428,000 Chicagoans come to Wisconsin to canoe, kayak, and raft every year. Certainly, the demand for this type of outdoor recreation is increasingly large.

Parks that cater to whitewater enthusiasts present a unique and interesting community resource. Historic examples abound with one of the likely most well-known and natural venues of the sport since the 1950's being Interstate State Park and the Dalles of the St. Croix River as it flows past Taylors Falls, Minnesota and St. Croix Falls, Wisconsin (City of Taylors Falls 2011). Other examples of developed whitewater parks across the Upper Midwest include the Wisconsin River as it passes through Wausau, WI (WKCC 2015); the Cedar River and Charles City, Iowa (Miller et al. 2011); the Huron River and several Michigan communities including Ann Arbor (Isely et al. 2017); the Grand River as it runs through Grand Rapids, Michigan (Watkins and Bowers 2014) and the Crow River as it passes through Watertown, Minnesota (Schnieder et al 2015) to name just a few.

The case which provides the geographic focus of this report is represented by a proposal to develop a portion of the Yahara River by the city of Stoughton, Wisconsin. The Stoughton Whitewater Park is planned to encompass a 900 foot stretch of the river as it passes just south of downtown in what is now Riverside Drive Park and its adjacent downstream Mandt Park. The most recent version of the site plan for this venue is shown in Figure 1.

[2] While early travelers of the North American continent saw whitewater rapids as an impediment to navigation and developed the "portage" to circumnavigate, more recent perspectives of whitewater rapids as recreational assets have gained popularity. The interested reader is referred to discussion here and here with more discussion of organized rapids guides in Bennett (1996) or McGinnis (2005) .

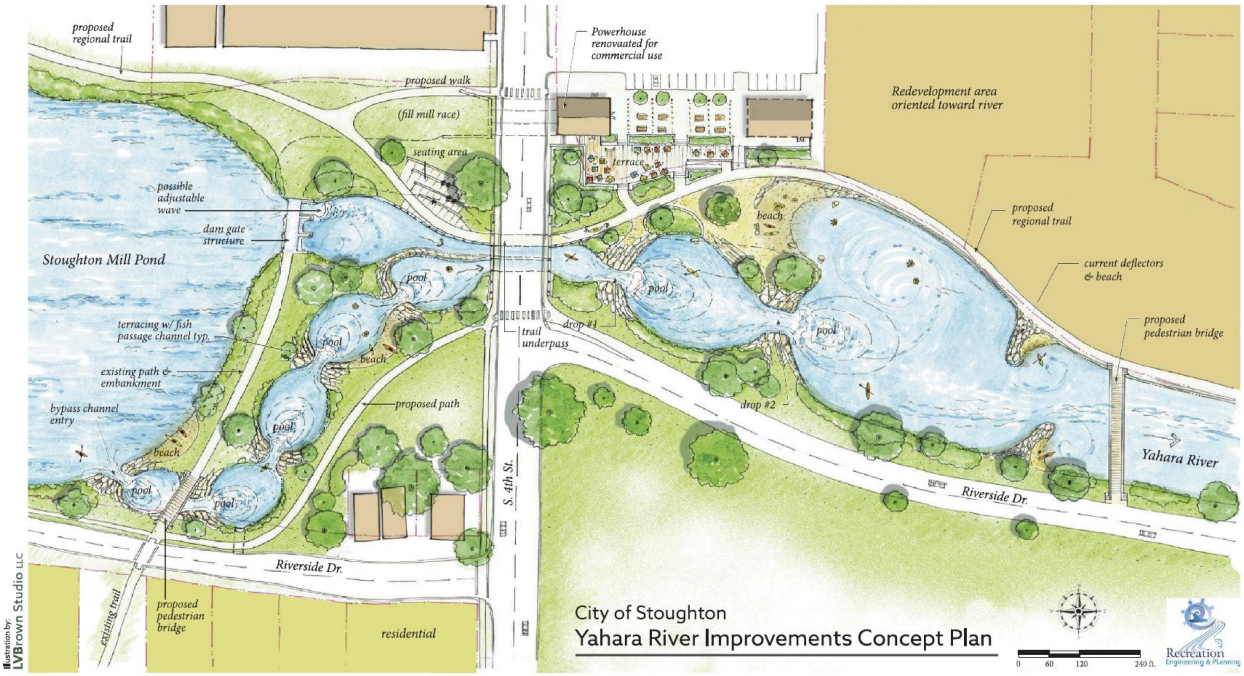

Figure 1. Conceptual plan for the Stoughton Whitewater Park (Recreation Engineering)

Whitewater parks are constructed around areas with elevation change. Depending on the water flow and what class rapid is wanted, eight to twenty-four inches of drop in elevation is required to create a rapid. Dams are a logical location for placement of whitewater parks since they are also built in locations with elevation changes. The Stoughton dam has nine feet of elevation change from the Stoughton Millpond downstream to the Yahara River. This elevation change is sufficient to create a whitewater park. This location also works with the State of Wisconsin riparian laws since the City of Stoughton owns land on both sides of the river from the dam downstream over 1,300 feet.

Recreation Engineering & Planning (REP) from Boulder, CO was selected to develop a conceptual plan for the area in February of 2018. They presented City of Stoughton staff with three options for a whitewater park in Stoughton including (1) dam removal, (2) dam in place with in-stream features downstream of the Stoughton dam, and (3) bypass channel. After discussing the options internally and having initial discussions with stakeholder groups, the bypass channel option was selected. In this

option, the current dam would be maintained but experience lower water flowage due to the existence of a bypass channel in which water would be diverted through a series of rapids. This bypass is what constitutes the whitewater park venue. The reasoning behind this was to minimize impact to the water levels upstream of the Stoughton dam while still creating a destination for paddlers.

This park rehabilitation project is still on the drawing board and is anticipated to cost over 2 million dollars to be completed within the next few years. After completion, the facility will incur operating revenues and expenses, that may or may not break even. Revenues might include equipment rental, concessions, special events and related registrations, camps, and other incomes. Likely expenses will include maintenance and repairs, administrative expenses including insurance, marketing, energy, and payroll.

Once completed, the effects of such a whitewater park will bring benefits to Stoughton and its surrounding region. This topic provides the impetus for the work contained in this report. Here, our problem is to develop estimates of potential market-based economic impacts of a whitewater park in Stoughton. We will outline the experiences of other similar whitewater parks developed during the recent past across the United States. Our attention will focus on the documented economic impacts associated with these whitewater parks. In doing so, we will glean specific characteristics and data to develop a general estimate of expected visitation and potential spending resulting from this visitation. This will serve as a basis upon which we can arrive at a defensible range of anticipated economic impacts specific to the Stoughton Whitewater Park. Other comparable Whitewater parks need to be analyzed carefully to ensure an apples-to-apples comparison. In particular, it will be important to acknowledge differences in length of season as influenced by climate. Also, comparable facilities need to offer similar challenge, thrill, and duration of experience

Market-based benefits provides the scope of our quantification work. While non-market benefits are important and will be discussed, this will be done only conceptually with the impact assessment limited to use values and market-based benefits.

2. Approach **Used to Estimate Potential Economic Impacts**

It is important to note the obvious fact that data detailing characteristic use of this whitewater park do not exist because the park does not exist. Thus, any results found herein should be understood to be nothing more than an educated estimate based on the best available alternative and applicable data. A case study approach will be employed to utilize available data with a plan to return with a longer-term study plan to assess change over time. Specifically, we will develop estimates using a meta-analysis of results from a variety of published documents combined with comparative demographic data pertinent to the Stoughton, WI region. We also apply data on participation rates for kayaking from the demand study portion of a recent Wisconsin Statewide Comprehensive Outdoor Recreation Plan, or SCORP (Wisconsin, State of 2012).[3] This then leads to an estimated range of expected usage. We then will employ expenditure patterns from related research combined with expenditure pattern data from similar parks elsewhere to develop an annualized estimate of visitor spending. This will then become an estimate of the impact on the local and regional economy which will serve as a basis for an overall estimate of regional economic change (Crompton 2010).

In pursuing the available and pertinent literature, we did uncover a variety of peer-reviewed manuscripts that addressed whitewater parks as an increasingly important component of local recreation (c.f. Benson 2015; Kainzinger et al. 2017; Loomis and McTernan 2015; Stephens et al. 2015; Yoachim 2005; Jones et al. 2000; Wu and Liang 2011). While these contributions did focus on a variety of related topics dealing with property rights, legal issues, conceptual development, and an interesting array of non-market benefit assessments, they were not directly relevant to our need to estimate market impacts based on whitewater park user characteristics.

[3] Statewide Comprehensive Outdoor Recreation Plans (SCORPs) have been done in each US state and are normally updated every five years. In Wisconsin at the time of this writing, the "new" Wisconsin SCORP (2018-2023) was not yet published so we have reverted to use of the most recent published in 2012 (2011-2016).

This said, we also found an array of study reports for specific whitewater park assessments that appear as appropriate for comparative purposes. The available literature useful to this assessment can be safely characterized as "gray". Namely, it is found in consultancy reports and planning analyses that, while educated, were not formally peer-reviewed. These reports were typically done by university extension specialists and/or private consultants. These study reports are summarized in Table 1.

Table 1. Reports that addressed and estimated economic impacts of various whitewater parks in the United States

Location	Reference*
Grand Rapids, MI	Watkins and Bowers (2014)
Ann Arbor, MI	Isley et al. (2017)
Watertown, MN	Schneider and students (2015)
Charles City, IA	Miller et al. (2011)
Skowhegan, ME	O'Hara et al. (2016)
Siloam Springs, AR	Deck and Jebaraj (2016)
Durango, CO	RPI Consulting (2006)
Fort Collins, CO	Loomis and McTernen (2011)
Golden, CO	Hagenstad et al. (2000)
Steamboat Springs, CO	Raucher et al. (2005)
Cascade, ID	Braak (2012)
Willamette Valley, OR	ECONorthwest (2015)
Reno/Truckee, NV	TRRP (1999)

* complete reference can be found in the Literature Cited section later in this report.

Important attributes of context are needed for these studies to be useful for application to the Stoughton, Wisconsin situation. Certainly, market size and proximity to demand centers is important. Also, the design of the whitewater park and its comparison to usage of other similar parks requires assessment of usage types. While other parks may offer additional amenities catering to other recreational uses (such as tubing and mountain biking), our assessment of visitation is constrained to the context of kayaking and canoeing usage.

Also, upon opening, growth in visitor numbers will require both site quality maintenance and appropriate marketing. While the former will certainly happen with diligent recreation management practices, the latter requires advertising, networking, and solid word-of-mouth from influential sources. One of the few useful trajectories in growth is documented in the example from Ann Arbor, Michigan --- Gallup Park and Argo Park on the Huron River (City of Ann Arbor 2017; Isely et al. 2017). Developed during the 2000s and open since 2010, this canoe and whitewater park provides a close parallel situation to the Yahara River and Stoughton Whitewater Park. From livery records, the growth in people using canoes and kayaks on the Huron River in Michigan is tracked in Appendix A (Figure A1) as is a summary of livery expenses and revenues (Figure A2). This can assist in our projections of how usage should progress once the Stoughton Whitewater Park opens; projected to occur in 2021.

Our assessment is built on both visitor numbers and individual expenditure patterns in the Park and in the community. Use of expenditure patterns by visitor type from other studies are likewise subject to context and serve as a basis for market-based stimulus to local businesses. While categories of visitor spending vary widely in the studies found in Table 1, we will standardize using proportions found in a recent study of canoers looked at to examine Wisconsin state park impacts (Prey et al. 2013).

3. **Stoughton and the Market for Whitewater Parks**

Stoughton, Wisconsin is an exurban municipality of about 13,000 people in close proximity (within 20 miles) to Madison, WI. Certainly, the Madison region of roughly 400,000 urban residents and a metropolitan area of almost 650,000 serves as a logical market area. Combine this with the regional uniqueness of a whitewater park nearby both Milwaukee (roughly 75 miles distant with a metro population of 1.6 million) and Chicago (roughly 120 miles distant with a metro population of 9.5 million) and the effective market area grows dramatically. Our demographic work compares and contrasts the Stoughton market region with other regions that have comparable whitewater parks.

For context, the location of Stoughton, Wisconsin relative to various markets can be assessed using drive-time analysis. This is made possible using ESRI products. The geographic information system provides drive-times in terms of average traffic and highway conditions and when centered on Stoughton, Wisconsin, is summarized in Figure 2.

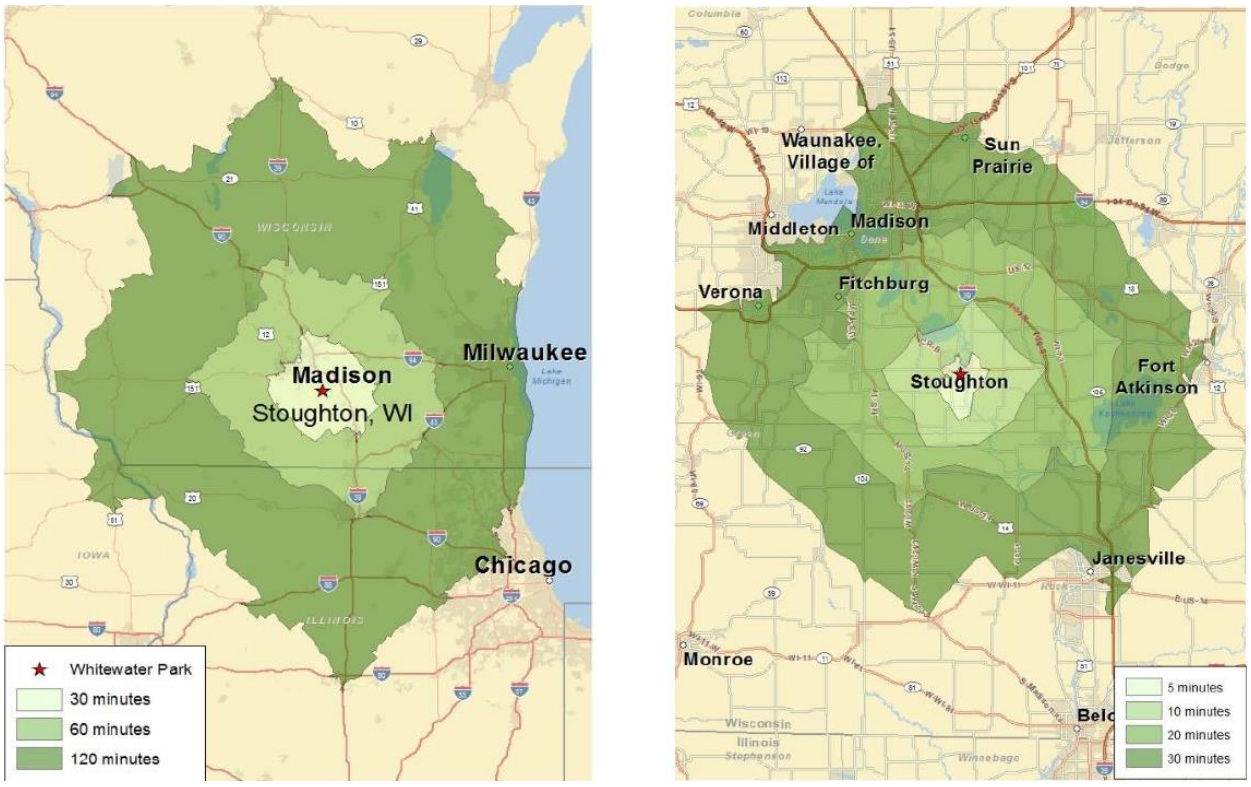

Figure 2. Long-term (left) and short-term (right) drive times to the proposed Stoughton Whitewater Park from surrounding geographies (ESRI).

Drive-times from proximate geographies are shown in Figure 2 for long-term travel (left side) and short-term travel (right side). Note that the short-term 30-minute distance ring covers most of the Madison region up to Sun Prairie and Waunakee, Wisconsin and extends southward to the northern parts of Janesville, Wisconsin. The population within this 30-minute ring is 403,808 according to 2010 US Census (converted by the ESRI Business Analyst Desktop).

The long-term 2-hour distance ring (left side of Figure 2) suggests the potential for a broader Stoughton Whitewater Park market. While the 30-minute distance ring covers the Madison metropolitan region, a 2-hour drive-time to Stoughton extends to Milwaukee, Tomah, and Wausau, Wisconsin, Dubuque, Iowa, and the Illinois cities of Rockford down to the northeastern suburbs of Chicago. This broader market includes a population within the long-term ring of nearly six million (5,943,007) according to the 2010 US Census (converted by ESRI Business Analyst Desktop).[4]

For comparison, the whitewater park cities found in Table 1 have various regional markets. While we did not conduct drive time analyses for these geographies, a gross assessment of populations and proximate urban regions are summarized in Table 2. Note from this Table that roughly close market analogues can be found in several of the case examples where whitewater parks have been analyzed. In particular, Ann Arbor, Michigan and the Colorado case of Golden appear to be particularly useful.

Limiting our assessment of alternative whitewater park case studies on those locations where whitewater parks are completed. Characteristics of completed and operating whitewater parks are summarized in Table 3. It is interesting to note that the proposed Stoughton Whitewater Park at a length of 900 feet and a vertical drop of 9 feet, while at the low end of the range, compare favorably with other whitewater parks. Also note from Table 3 that the Ann Arbor, Michigan case example provides an interesting comparative whitewater park and canoeing river to the Yahara and proposed Stoughton Whitewater Park.

[4] This provides a brief snapshot of the ESRI Business Analyst Desktop results and, for brevity, we highlight only population estimates. Other relevant information includes rough estimates of entertainment and recreation spending of the population; a portion of which could be used for kayaking on the Stoughton Whitewater Park. For instance, estimates suggest that within the short-term 30-minute travel ring, average household entertainment/recreation spending was just over $5,000 with an annual total of over $500 million. Within the 60-minute ring, the average household entertainment/recreation spending was lower with a total of roughly $1.5 billion. And finally, within the 120-minute ring, the average entertainment/recreation spending was almost $3,500 with a total of over $8 billion annually.

Table 2. Whitewater parks found in Table 1 with population and nearby-city data

City	Population	Region Population	Nearby Cities
Cascade, ID	723	9,897	Boise (1.5 hr~)
Watertown, MN	4,298	95,562	Minneapolis (~1 hr), St. Paul (1.5 hr)
Charles City, IA	7,496	16,004	Rochester (1.5 hr), Cedar Rapids (~2 hr), Des Moines (~2.5 hr)
Skowhegan, ME	8,397	51,363	Portland (1.5 hr), Boston (3 hr~)
Steamboat Springs, CO	12,336	23,239	Denver (~3 hr), Boulder (3 hr~),
Durango, CO	17,817	51,917	
Siloam Springs, AR	16,095	525,032	Tulsa (1.5 hr), Springfield (2.5 hr), OKC (3 hr), Little Rock (3 hr~)
Golden, CO	20,268	2,599,504	Denver (0.5 hr), Boulder (0.5 hr), Fort Collins or CO Springs(~1.5 hr)
Oregon City, OR	61,299	2,226,009	Portland (0.5 hr), Vancouver (0.5 hr), Salem (~1 hr), Eugene (1.5 hr)
Ann Arbor, MI	118,087	344,791	Detroit (0.5 hr), Lansing (1 hr), Toledo (1 hr), Cleveland (~3 hr)
Fort Collins, CO	157,251	305,525	Boulder (1 hr~), Denver (1 hr~), Colorado Springs (2 hr~)
Grand Rapids, MI	193,887	988,938	Lansing (1 hr), Ann Arbor (2 hr), Detroit (2.5 hr), Chicago (~3 hr)
Reno, NV	237,121	425,417	Sacramento (2 hr~)

Table 3. Characteristics of completed and operating whitewater park projects

City	Water Flow*	Operator	Vertical Drop	Rental/Concession	Length/# Drops**	Level
Ann Arbor, MI	100-300	City	na	Yes/Yes	1050/9	I-II
Cascade, ID	400-3,500	Private	na	Yes/Yes	1250/na	III
Charles City, IA	200-5,000	City	na	No/No	1200/3	II
Durango, CO	500-6,000	City	na	No/No	1430/na	II-III
Golden, CO	250-1,000	City	na	No/No	800/na	IV
Siloam Springs, AR	na	City	.5	No/No	700/2	II
Steamboat Springs, CO	200-6,000	City	7.7	Yes/No	16,000/na	III
Wausau, WI	650	City	35	Yes/No	1850/6	II-III
Reno, NV	700-3000	City	na	Yes/No	1400/5 + 1200/6	II-III

* Water flow is measured in cubic feet per second
** Length and # drops reflect venue length (in feet) and number of drops (number of pools) of each venue.
"na" indicates data not available.
Source: American Whitewater and/or reports listed in Table 1.

Turning our attention to the Stoughton market drive-time assessment, we have an interesting set of market sizes depending on drive time and type of use. Due to the lack of primary data, we simply apply participation estimates from the recent SCORP (Wisconsin, State of 2012). Participation estimates for kayaking, canoeing, and rafting are applied to the various populations of the Stoughton Whitewater Park market and are summarized in Table 4. Note from this Table that when extended to the three-hour

drive time boundary, estimates suggest the relevant extent of the whitewater market for kayaking, rafting, and canoeing to encompass some 2 million people.[5] The question then becomes how successful the Stoughton Whitewater Park will be in penetrating this market given competition both regionally and nationally from other larger and more challenging destinations. What might its competitive niche be? These questions should be addressed in future work to develop a comprehensive marketing plan for the proposed Stoughton Whitewater Park.

Table 4. Participation rates specific to Wisconsin residents participating in various recreational activities reflective of populations within various drive-times of the proposed Stoughton Whitewater Park.

Participation rate of Wisconsin residents by relevant user groups: *		2010 population within drive-times**		
		0-30 min	0-60 min	0-120 min
		403,808	1,120,974	5,943,007
Canoeing	17.90%	72,282	200,654	1,063,798
Rafting	9.20%	37,150	103,130	546,757
Kayaking	7.30%	29,478	81,831	433,840

* Source: 2011-2016 Wisconsin Statewide Comprehensive Outdoor Recreation Plan, Chapter 2 (Wisconsin, State of 2012).

** Drive time rings from Figure 2 regional delineations and US Census data converted by ESRI Business Analyst Desktop. Total populations by region found in row just below drive-times.

[5] The application of these statewide participation rates to the Stoughton drive-time boundaries could provide pause. In response to this criticism, we would point out that the use of Wisconsin statewide estimates of recreation participation to the Stoughton drive-time markets is likely conservative given the youthful exuberance of the Madison region. We would argue that water-based recreation rates across the board (and kayaking in-particular) would likely be higher. Of course, further research would be needed to confirm this hunch.

4. **The Potential Economic Impacts of Trip-Related Expenditures**

Usable expenditure patterns and annual visitation were outlined in the various reports listed in Table 1. While estimation methods varied widely, if we simply took a macro approach and averaged all visitation numbers and expenditure patterns for specific users, we could generate an "average" of the averages reported in each report. Such a summary is found in Table 5. The obvious problem with this approach is that it completely glosses over the variety of analytical methods, sample sizes, and definitions associated with user groups. For our purposes, this can be best-viewed as a gross starting point for our estimate. It also provides context for the subsequent calculations of visitor expenditures. Given that the Stoughton Whitewater Park will cater primarily to kayakers, we will apply the average daily expenditure for kayakers in subsequent calculations.

Table 5. Expenditures and Visitation Levels of Whitewater Park Visitors*

Population	Daily Expenditure	Annual Visits	Total Annual Expenditure
Average kayakers	$68.40	14,911	$1,019,935
Average tubers	$24.60	22,760	$559,896
Average of all users	$65.97	44,376	$2,927,601

* From the reports listed in Table 1, we averaged only those user types that were relevant to the Stoughton application. Kayakers and tubers were listed as uses in a limited number of studies and the sample averages reported were then averaged. All users average includes more types of use thus this is not the simple sum of the two.

Note from this Table that average daily expenditures and annual visitation figures specific to kayakers lead to an average total expenditure of just over 1 million USD. This provides context to subsequent estimates that are specific to the Stoughton market for kayakers that represent values for the Stoughton Whitewater Park. This contrasts with an average combined value of 37,671 kayakers and tubers using the liveries on the Huron River near Ann Arbor. Were we to use this value as a base for application of the growth trend from the Ann Arbor work, we could generate the

projected trend in visitation that could be expected to occur at the proposed Stoughton Whitewater Park.

Table 6. Potential annualized spending of kayakers visiting the Stoughton Whitewater Park venue by category of spending and in-total.

Spending Category:	Baseline:[1]		Kayaker Spending[2]	Annual Visitor Expenditures:[3]		
	Daily Spending	Percentage		30-minute	60-minute	120-minute
Accommodations	$7.47	8.73%	$5.97	$175,955	$488,451	$2,589,599
Restaurants and Bars	$14.38	16.80%	$11.49	$338,719	$940,284	$4,985,065
Gasoline and Auto	$26.98	31.52%	$21.56	$635,510	$1,764,177	$9,353,063
Groceries and Liquor	$13.33	15.57%	$10.65	$313,986	$871,626	$4,621,065
Entertainment	$2.74	3.20%	$2.19	$64,540	$179,164	$949,866
Miscellaneous Retail	$2.53	2.96%	$2.02	$59,594	$165,432	$877,066
Admissions/fees/licenses	$4.02	4.70%	$3.21	$94,690	$262,861	$1,393,599
Equipment rent & repair	$4.63	5.41%	$3.70	$109,059	$302,748	$1,605,066
Equipment Purchase	$9.52	11.12%	$7.61	$224,242	$622,497	$3,300,265
Total	$85.60	100.00%	$68.40	$2,016,295	$5,597,240	$29,674,656
Kayaking market				29,478	81,831	433,840

1. Baseline applies expenditure pattern for canoers from previous Wisconsin Park System impact study (Prey et al. 2013) to derive percentages by spending category which are then applied to average total spending for kayakers from Table 5.
2. Kayaker spending uses simple percentages by spending category to total average spending from Table 5 and represents an average daily expenditure for kayakers in nominal dollars.
3. Expenditures are annualized assuming that kayakers within each drive-time market (last row of Table 6) make one visit per year to the Stoughton Whitewater Park.

To estimate economic impacts of these potential expenditures, input-output analysis can distinguish among direct impacts, indirect impacts, and induced impacts. Given the very gross estimates of the potential for upfront visitor expenditures resulting from a completed Stoughton Whitewater Park, we will leave this input-output analysis for further research.[6] That said, previous input-output analysis into recreational use impacts for the Wisconsin State Park System (Prey et al. 2013) was conducted and used MicroIMPLAN 3.0 for a 10-county region known as the Southern Gateways Region (including Stoughton and Dane County). This work (ibid Table 5 on page 9) suggested that input-output multipliers for this region ranged from between 1.36 for employment

[6] Development of an input-output model specific to this region and its use with various levels of visitor spending would be an added cost that is not included in the scope of research conducted for this report. It is readily available and can be conducted by the research team authoring this report but remains for future work if desired.

to 1.76 for total value added (1.63 for labor income and 1.70 for output). In addition to estimating inter-industry transactions taking place, the IMPLAN model can account for margining by sector. Margining is important in translating visitor expenditure into economic impact, particularly for retail sectors. These statements notwithstanding, an estimate of total regional economic impacts using input-output models would be generally larger when compared to the level of visitor expenditures and will be based on estimates of income accruing to businesses and households within the region.

Visitor expenditures provide the basis for market-based economic impacts resulting from recreational use of local parks and recreation services (Crompton 2010). Non-market economic returns associated with local recreational asset development could also involve local benefits in important but less tangible community characteristics. These non-market benefits represent improved quality-of-life, resident satisfaction, ecosystem function, and impacts on local real estate. The latter issue associated with proximity of recreational asset developments to local real estate value is an increasingly important area of resource economics research. Using an approach known as hedonic pricing, premiums placed on real estate values due to the presence of river-based amenities can be isolated but remain beyond the scope of research conducted here. These increased property values will provide capital appreciation for owners of land in Stoughton. Further, development of the Whitewater Park is likely to generate improved river system function for fisheries and ecosystem function.

5. Summary, Conclusions, and Policy Implications

In the applied research reported here, we assess the potential for increased local economic stimulus resulting from public investment in the proposed Stoughton Whitewater Park. In this assessment, we use drive-time market analysis combined with recreation participation rates and estimates of visitor spending from other studies to develop potential spending resulting from development and use of the proposed Stoughton Whitewater Park.

Results suggest that that there are at least 30,000 kayakers within a 30-minute drive time to the proposed Stoughton Whitewater Park and 82,000 within 60 minutes. This is of a total population of 400,000 and 1.2 million respectively. Within three hours of Stoughton, there is a total population of nearly 6 million with estimates of this including nearly 434,000 kayakers and over 1 million canoeing enthusiasts.

The proposed Stoughton Whitewater Park is analogous to other whitewater parks across the country in drop, release, length and other notable issues associated with whitewater rapids from a recreational asset quality perspective. Looking at recent studies that examined 10 other whitewater parks across the US suggests that kayakers spend, on average, over $68 per day on their recreational pursuits. Expenditures could include trip-related spending for food, lodging, automotive, recreational equipment, clothing and supplies among many other items.

Certainly, market sizes of whitewater parks vary considerably but average kayaker use from these studies suggest that annual visitation is nearly 15,000 visits per year for annual spending that exceeds $1 million USD. Development of the Stoughton Whitewater Park is expected to initially draw local kayakers and canoers. With continual site improvements combined with targeted marketing and solid word-of-mount reviews, use is anticipated to grow in a like fashion to other comparable whitewater parks to attract increasingly large visitor numbers from farther reaches of its market boundaries.

Using Stoughton drive-time boundaries to estimate market size can provide specific estimate of potential visitation and visitor spending. If kayakers within 30-minutes visit the Stoughton Whitewater Park once per year, potential spending will exceed $2 million USD. Extending this market boundary to 60-minutes, this estimate of potential spending increases to over $5.6 million USD annually. And, if extended to 120-minutes (including Milwaukee and the nearby suburbs of Chicago), this estimate of potential spending increases to nearly $30 million USD annually.

Depending on additional park components, economic impacts will be generally limited to warm weather months of May through September. Further, these increased

receipts are likely to relate to higher visits on weekends. In total, the operation would be available for users 40 to 80 days per year, weather permitting. Revenues generated from the operation would be related to kayak/canoe rentals, lessons, special events, concessions, camps, and other operations.

Non-market economic benefits within this region could involve hedonic premiums placed on real estate values due to the presence of river-based amenities. These increased property values will provide capital appreciation for owners of land in Stoughton. Further, development of the Whitewater Park is likely to generate improved river system function for fisheries and ecosystem function.

The Whitewater Park should have a marginal direct benefit on business in Stoughton that are operating on days that the park is open. Local restaurants may see increases in seats occupied, lodging operations could generate room night sales, and retail stores and services may see increased sales, especially those selling sports attire and goods. To generate economic impact, the businesses must be open and participate with other businesses to promote their products and services related to the interests of the whitewater enthusiast.

Historically, the use of parks and related recreational services have not been thought of as contributing to the local economy through tourism. Large projects like the proposed Stoughton Whitewater Park need to be thought of as economic development projects for a community. This exercise is put forward to provide a picture to stakeholders and elected local officials of the market-based benefits of such a project to Stoughton's economy. The elected officials then can make a choice to invest scarce public funds in such a project. Furthermore, results could also provide information to citizens if such a proposal goes to referendum. Finally, this effort helps provide the Wisconsin Department of Natural Resources with information about how the project would impact and support local businesses related to outdoor recreational use. As part of a grant application to help cost-share investment in this project, our work stands ready for developing additional and more detailed estimates to be used during the grant review and project implementation process.

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Appendix A. Trend in Livery Use on the Huron River, Michigan near Ann Arbor.

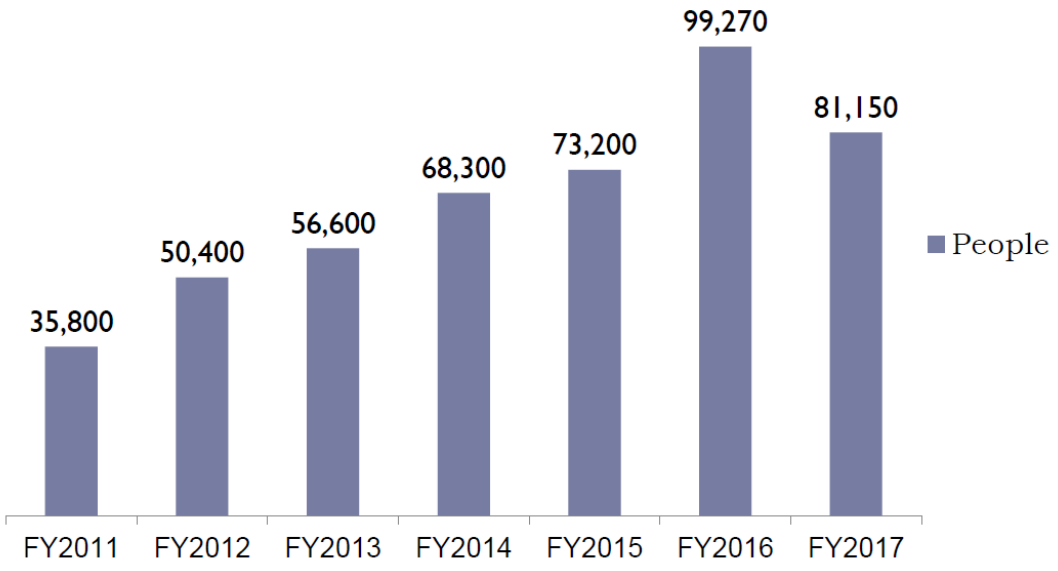

Figure A1. Number of people in livery boats; Huron River liveries of Gallup Park and Argo Park (taken from City of Ann Arbor, 2017).

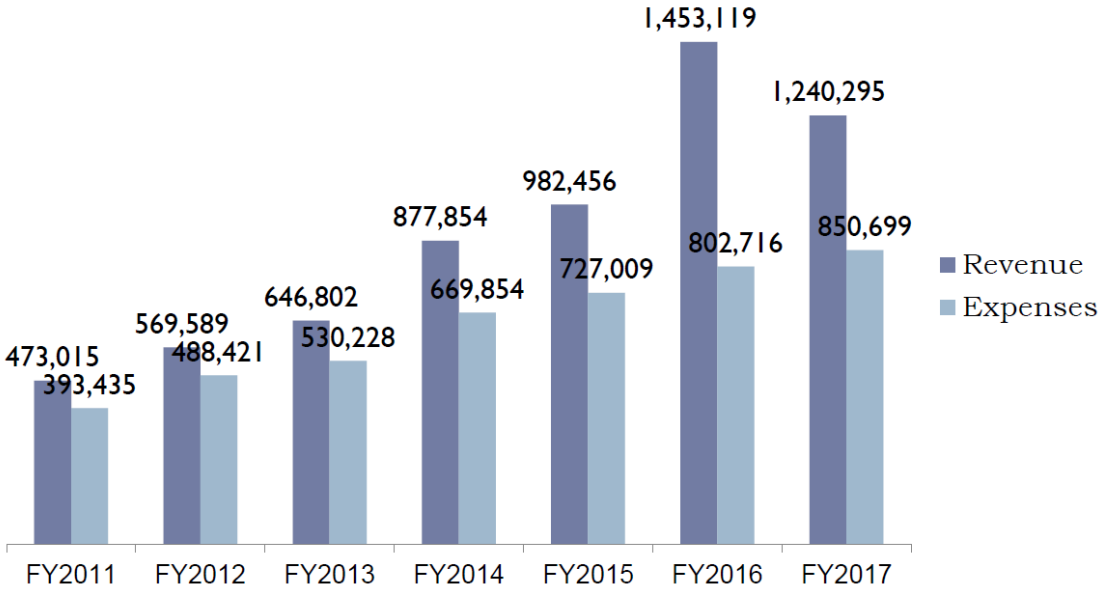

Figure A2. General fund revenue and expenses (from City of Ann Arbor 2017)