

Chapter 1 – INTRODUCTION

PART A – Purpose of Report and Study Objectives

This report is for a Wangard-Reinders planned redevelopment of the property by Wangard Partners and R&R Investments which is bounded by Watertown Plank Road on the south, CP Rail Road on the east, Juneau Blvd on the north and Elm Grove Road (The Cave Road) on the west in Elm Grove, WI. Traffic Engineering Services, Inc. staff has conducted a traffic impact analysis for the defined phase of implementation. A second phase is expected but only defined as retail, office and residential. This site currently has existing warehousing, retail, office and a few apartment uses. The former use was Reinders, Inc. Distribution that used semi-truck shipping and receiving daily for the following: Commercial Mowing Equipment, < Fertilizers, Chemicals, Grass Seed, < Golf Course Irrigation, < Contractor Irrigation, < Parts Department, < Service Department, < Water Softener Salt, < Ice Control & Winter Products, < Landscape Lighting & Water Features, < Holiday Lighting, and < Promotions. < This business relocated to a new facility in Sussex, Wisconsin.

This phase of the site redevelopment provides for residential use on the parcel north and west of the current buildings on the site. New access is proposed to Elm Grove Road (The Cave Road) and to utilize the existing accesses to Watertown Plank Road.

Phase 2 lacks definition to create an analysis. A concept plan is included for reference. There is an expressed desire on the part of the Village staff to connect Elm Gove north and south of Watertown Plank Road. This is an element in the second phase of redevelopment plan for the south portion of the parcel.

Access in Phase 1 is at one point along Elm Grove Road south of Juneau Blvd and utilizing the existing access to Watertown Plank Road., Exhibit 2-3A.

This report documents the procedures, findings and recommendations of the traffic impact analysis for 2016 and 2026 with Phase 1 traffic. The two Watertown Plank Road traffic signals were evaluated as the current operation and optimized with the upgrade of new signal timing for pedestrian crossings. Subsequent analysis was completed for 2016 with projected (background) traffic plus the generated traffic from Phase 1 development. The current two way left turn lane (TWLTL) and left turn lanes approaching the traffic signals were used in the analysis.

PART B – Executive Summary

The Wangard Partners and R&R Investments redevelopment is bounded by Watertown Plank Road on the south and Juneau Boulevard on the north with N. Elm Grove Road on the west and CP Rail Road tracks along the east in the Village of Elm Grove, Waukesha County, Wisconsin. There are two access driveways to Watertown Plank Road for the

Reinders property. West driveway with 2-way traffic is aligned with the one-way in Park-N-Shop driveway and East driveway with 1-way in is aligned with the one-way out Park-N-Shop driveway.

The Manual of Uniform Traffic Control Devices, MUTCD, adopted in 2009 has revised the design speed for pedestrians crossing the street and the width to be considered in the closing. The changes are as follows:

Pedestrian WALKING SPEED has been revised from 4 FT/SEC to 3.5 FT/SEC
CROSSING WIDTH was revised from curb to center of furthest most traveled lane was revised to be FACE OF CURB TO FACE OF CURB within the crosswalk.

Proposed Development

The Wangard Partners and R&R Investments property Phase 1 land use will consist of Residential Mid-Rise Apartments. Lower level parking is proposed for each building plus surface parking and a lot at the north end of the Reinders Warehouse building.

In general Phase 1 is the construction of the new road network on the property and all residential housing east of Elm Grove Road (The Cave Road) and north of existing commercial/residential use fronting Watertown Plank Road. This will have minor modification to the existing retail/office space along the railroad tracks know as Mill Place. The northern most part of the building will be raised for parking.

The principal findings of Phase 1 development are that with the upgrade to new timing for pedestrians all traffic movements operate at LOS (Level of Service) C or better for with or without the proposed Phase 1 development.

The only modification to accommodate the development is the same as is needed for current traffic in the AM & PM peak hours of traffic movement.

Two peak traffic time periods have been established. They are the AM peak hour from 7:30 to 8:30AM peak hour from 4:45 to 5:45 PM peak hour

The proposed Phase 1 development will generate new traffic of 729 daily trips with 50% entering and 50% exiting; total generated trips in the AM peak hour of 58 with 50% entering and 50% exiting and total trips in the PM peak hour of 74 with 50% entering and 50% exiting, Exhibit 4-2A.

Off-Site Development

No off-site development has been considered in this study.

Study Area

The study area includes the following intersections and driveways for the development:

- Elm Grove Road (N) (The Cave Road) and Juneau Boulevard (STOP controlled northbound), Ref #8
- Elm Grove Road (N) (The Cave Road) and Watertown Plank Road (Southbound STOP controlled) Ref #9
- Watertown Plank Road and West Driveway Ref #17
- Watertown Plank Road and East Driveway Ref #20
- Elm Grove Road (S) and Watertown Plank Road (traffic signal controlled) Ref #15
- Watertown Plank Road and Legion Drive/BP Gas Station Driveway (traffic)
- One driveway connecting to Elm Grove Road (The Cave Road) south of Juneau Blvd

Recommended Improvements

The following section address the improvements recommended to accommodate the traffic conditions in the study area.

Implement recommended traffic signal timing:

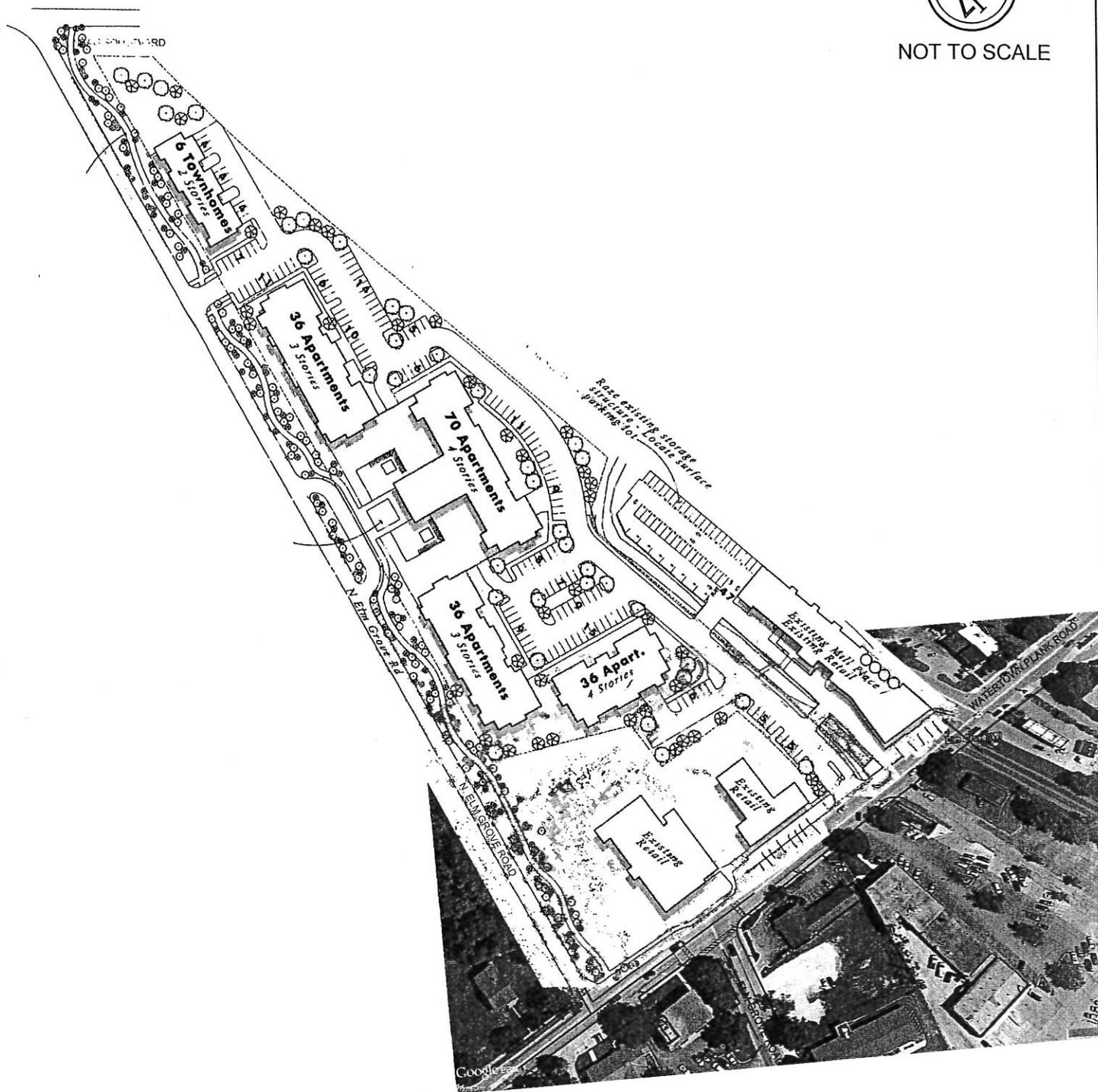
- AM Peak, Off peak and PM Peak with new pedestrian timing and longer cycle length for AM Peak and PM Peak traffic. This existing timing optimized will be appropriate for the completion of Phase 1 and significant occupancy.
Access points to Wangard-Reinders Property:
- Installation of one access point onto Elm Grove Road (The Cave Road) approximately 425-feet south of Juneau Blvd in Phase 1. The roadway centerline should be in the first 10-feet from the existing east edge of the pavement 2% slope down from the street. Then 2% up for 20-feet. Then 2% down for 20-feet. This creates a swale for drainage to the ditch area for entering and exiting the roadway suitable for winter operation. Then the maximum practical slope of 6% down could be used to the grades for development. A typical plan and cross section are shown in Chapter 5 Exhibits. Core sample of roadway is recommended for final design.
- The current west driveway access to Watertown Plank has two lanes exiting and one lane entering. The existing 42-foot driveway should remain with no median for alignment with the Park N Shop one-way entry drive. The one-way entry along the retail should be maintained with connection to the West driveway over the current river bridge. Parking on the river bridge deck exists and is desirable for the retail uses. This should be reviewed for detail operation on final plan preparation.
- The intersection of Elm Grove Road (The Cave Road) and Juneau Blvd should have radii improvements for right turns. The Phase 1 plan includes a dedicated multipurpose path and should connect with the paths on Watertown Plank Road and Juneau Blvd.
- The extension of Elm Grove Road at Watertown Plank Road for connecting to Elm Grove Road (Cave Road) should be incorporated in planning for Phase 2.

Future Considerations

- Connection of the north leg and south leg of Elm Grove Road at Watertown Plank Road with traffic signal modifications.
- Follow the concept plan to have vehicle access to the north side of the building and remove parking on Watertown Plank Road between the west driveway and Elm Grove Road.
- Monitor eastbound left turn queue at Legion Drive and add time to left turn arrow if queue does not clear each cycle.



NOT TO SCALE



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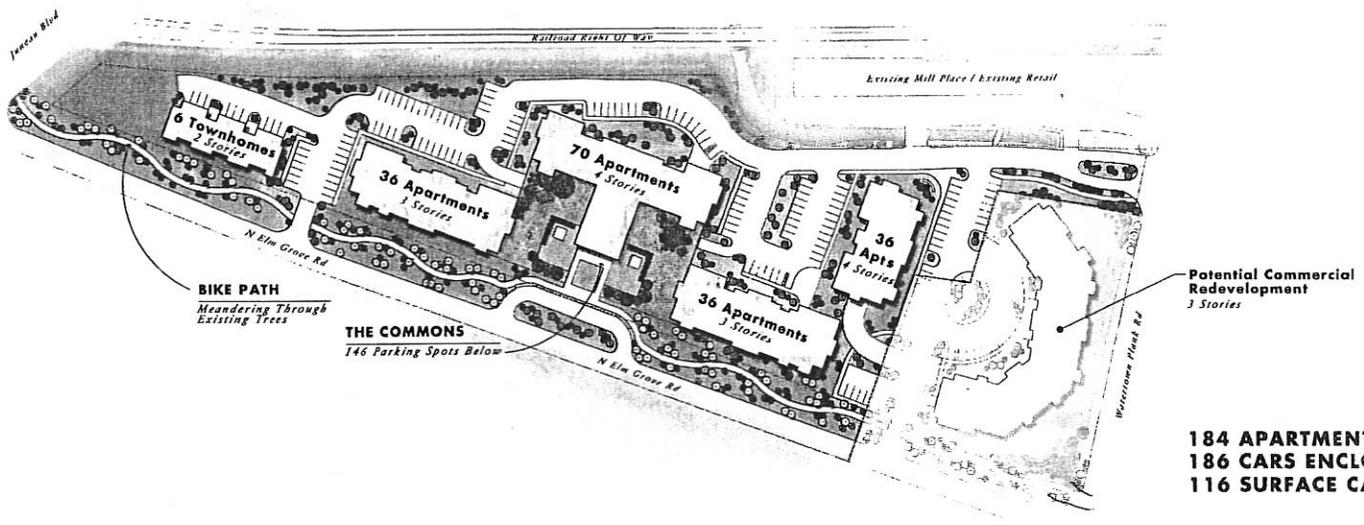
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EXHIBIT 1-1A
SITE PLAN - PHASE 1
MULTIFAMILY DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 02-2016



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184 APARTMENTS
 186 CARS ENCL
 116 SURFACE CAR

21 Aug 2015



Reinders / Wangard Elm Grove
MULTIFAMILY DEVELOPMENT
 Elm Grove, WI

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 SERVICES, INC.**

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EXHIBIT 1-1B
 CONCEPT SITE PLAN - FUTURE
 MULTIFAMILY DEVELOPMENT
 REINDERS / WANGARD
 ELM GROVE, WI
 SUBMITTAL DATE: 02-2016

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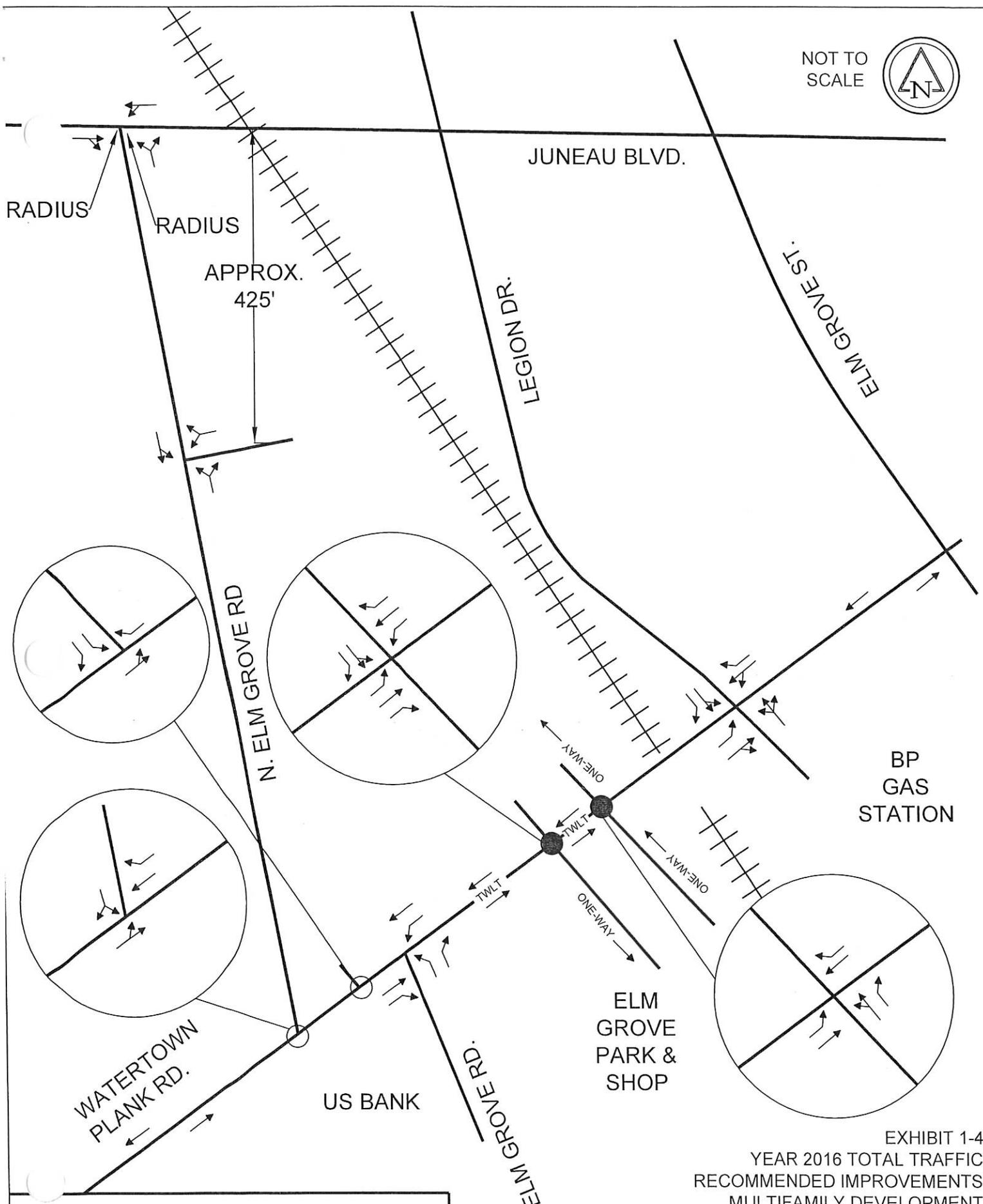


EXHIBIT 1-4
YEAR 2016 TOTAL TRAFFIC
RECOMMENDED IMPROVEMENTS
MULTIFAMILY DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 02-2016

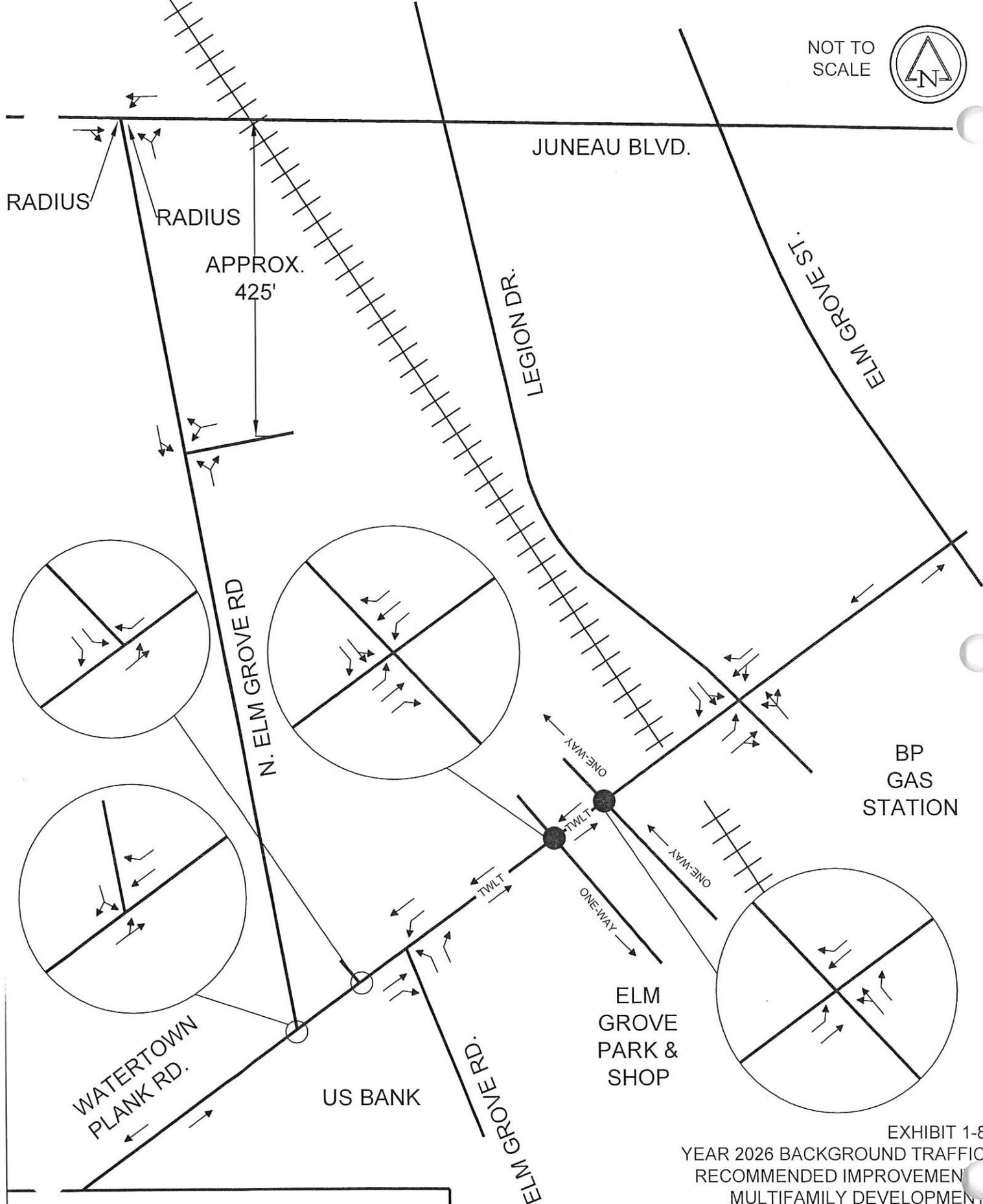


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BP
GAS
STATION

ELM
GROVE
PARK &
SHOP

US BANK

EXHIBIT 1-8

YEAR 2026 BACKGROUND TRAFFIC
 RECOMMENDED IMPROVEMENTS
 MULTIFAMILY DEVELOPMENT
 REINDERS / WANGARD
 ELM GROVE, WI
 SUBMITTAL DATE: 02-2016

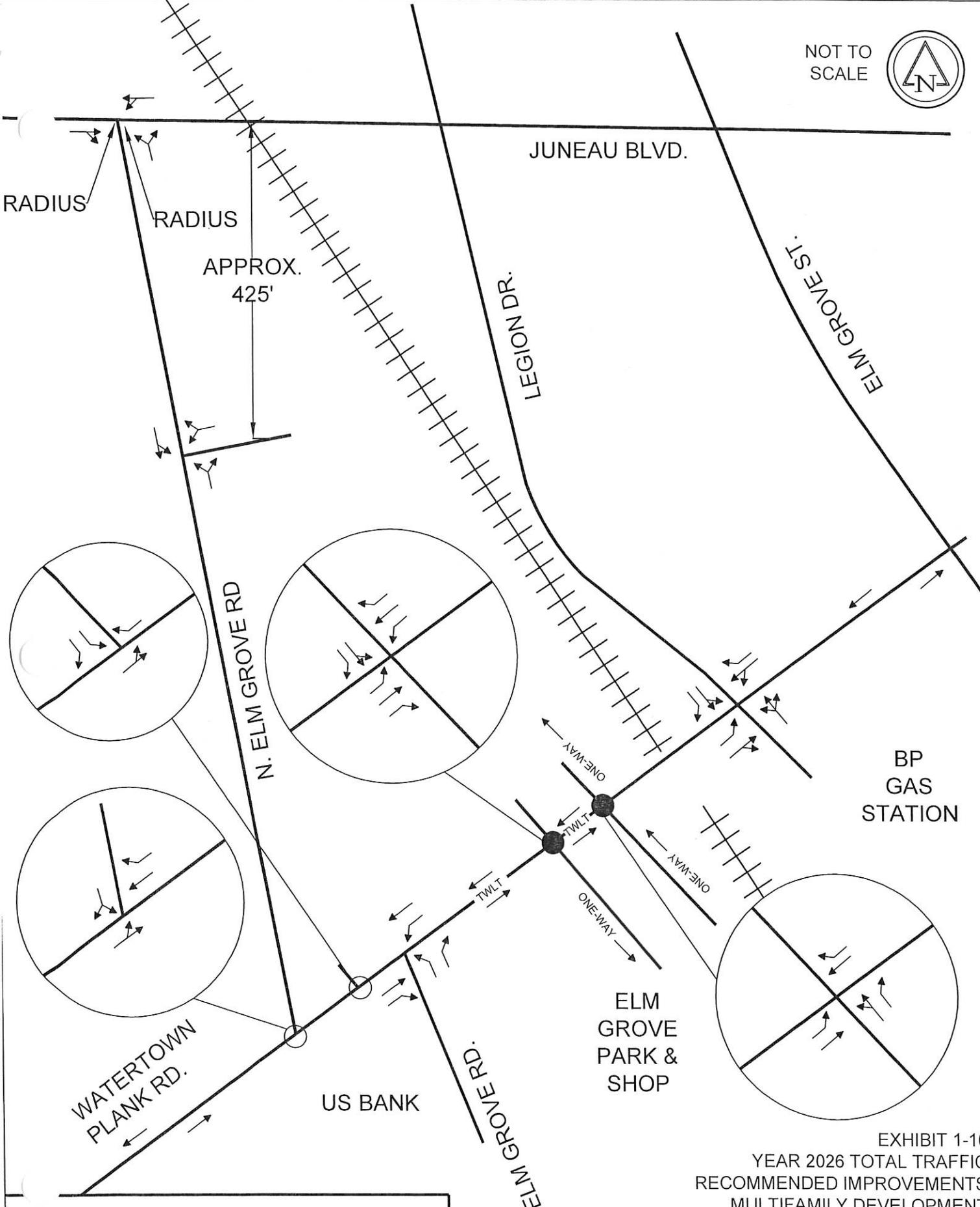


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RADIUS

RADIUS

APPROX. 425'

N. ELM GROVE RD

JUNEAU BLVD.

LEGION DR.

ELM GROVE ST.

BP GAS STATION

ELM GROVE PARK & SHOP

US BANK

WATERTOWN PLANK RD.

ELM GROVE RD.

EXHIBIT 1-10
YEAR 2026 TOTAL TRAFFIC
RECOMMENDED IMPROVEMENTS
MULTIFAMILY DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 02-2016

 TRAFFIC ENGINEERING SERVICES, INC.

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