

Shasta County Department of Public Works

**Superior Avenue at Mackinac Street
Intersection Engineering Study**

Concern

A new 30-unit high-density residential housing complex will increase traffic volumes and create operational challenges at the existing uncontrolled intersection of Superior Avenue and Mackinac Street.

Site Description

Within a residential neighborhood, Superior Avenue and Mackinac Street intersect and terminate, forming an uncontrolled right-angle intersection (“Intersection”) which currently is striped and operates as a 90-degree curve. Access to a private residence across from the termination of Superior Avenue acts as a 3rd leg of the intersection and access to a new 30-unit high-density residential housing complex across from the termination of Mackinac Street will form the new 4th leg of the Intersection. Traffic along Superior Avenue is primarily residential, although the road also provides access to the back of several commercial establishments which front State Route 299. Mackinac Street is a short residential street which operates as a connector between Superior Avenue and State Route 299 while serving several residences and two commercial properties. One streetlamp near the intersection aids in nighttime visibility.

Speed Limit

Both Superior Avenue and Mackinac Street qualify as Residence Districts in accordance with CA CVC Section 515, therefore the prima facie speed limit of 25 MPH is in effect.

Intersection Characteristics

The current Intersection approaches are described as:

SUPERIOR AVENUE

Uncontrolled, level, residential driveway intersections and on-street parking along both sides, no sidewalks. Double-yellow centerline striping.

MACKINAC STREET

Uncontrolled, level, residential driveway intersections and on street parking along both sides, sidewalks are located on either side, one side with curb and gutter. Double-yellow centerline striping.

PRIVATE DRIVEWAY

Uncontrolled, single-family residential driveway

Development of the 30-unit multi-family residential housing complex will add a new multi-family driveway, the 4th leg, to the intersection

Collision History

There have been no reported collisions at the Intersection in the last five years.

Traffic Volumes

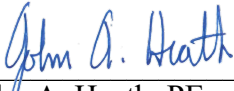
Traffic counts were not performed for this analysis. It is presumed that existing traffic volumes are distributed evenly throughout the day with the highest volumes occurring during morning and afternoon commute times. Since each road terminates at the Intersection, through traffic must travel each road when traversing the Intersection, resulting in equal volumes on both roads.

Addition of the 30-unit multi-family residential housing complex driveway is anticipated to add a significant new volume of traffic to the Intersection.

Analysis and Recommendation

Currently the Intersection operates as a through-route with traffic making the non-stop 90-degree movement to and from Superior Avenue and Mackinac Street freely. The addition of a high-density housing complex driveway as a separate leg to the Intersection will add a significant volume of traffic to the Intersection and may change the operating characteristics as the movement from the driveway on to Mackinac Street to reach SR-299 may become the dominant movement.

Given the contrast between the current and new intersection configurations, it is recommended to change the Intersection from its existing uncontrolled state to all-way stop control for purposes of improving traffic operation characteristics.



John A. Heath, PE
Supervising Engineer

Date: August 15, 2022



Prepared By: William Miller, Assistant Engineer
Attachments: Superior Avenue / Mackinac Street Intersection Layout
Burney Commons Perimeter Fencing Site Plan



SHASTA COUNTY DEPARTMENT OF PUBLIC WORKS

SUPERIOR AVENUE / MACKINAC STREET
INTERSECTION STUDY
INTERSECTION LAYOUT EXHIBIT

SCALE:

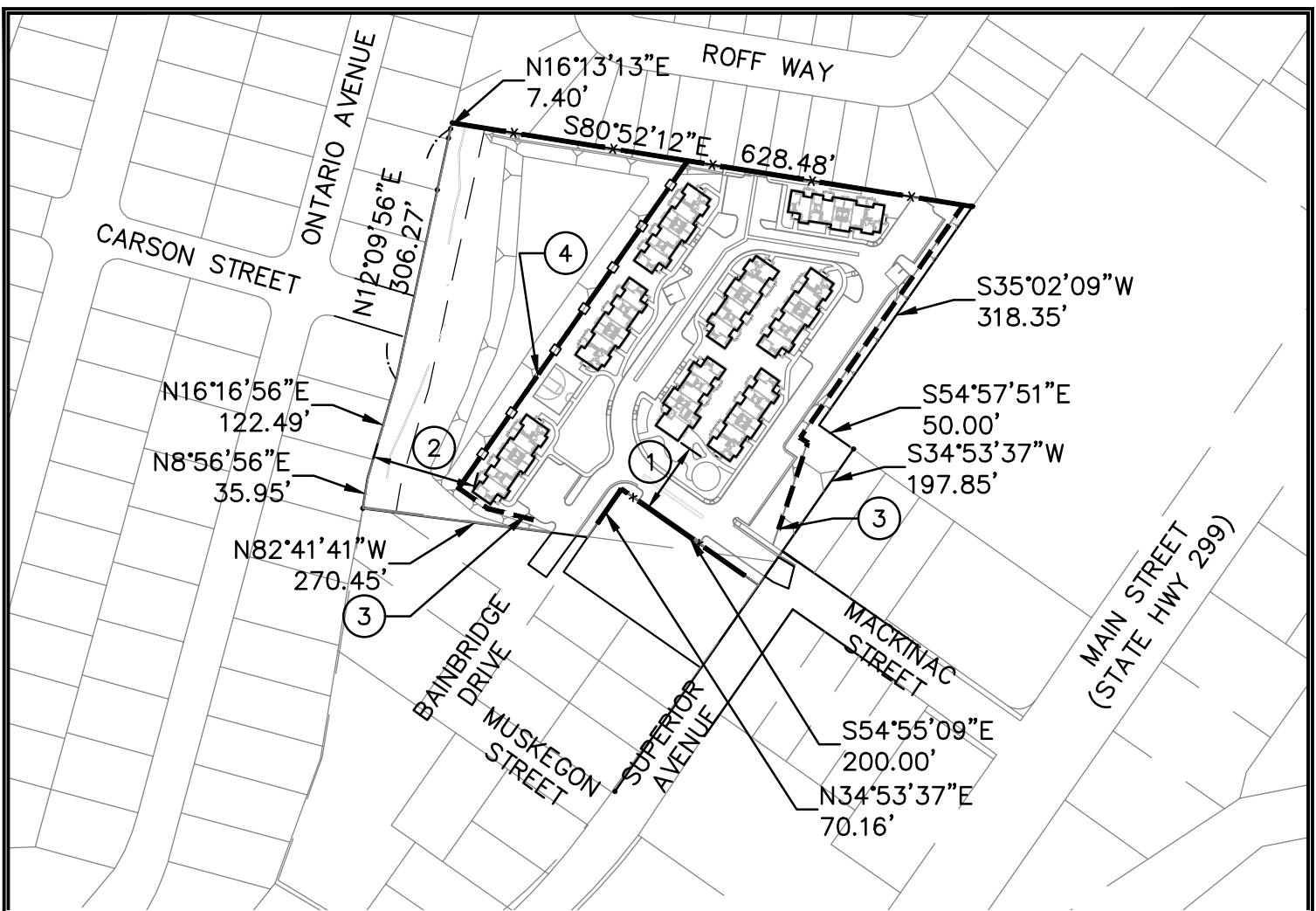
NTS

DATE:

7/25/2022

DRAWN BY:

WILLIAM M.



LEGEND

- x — EXISTING FENCE TO REMAIN
- □ — PROPOSED METAL WOVEN FABRIC WITH SLATS
- - - PROPOSED BLAST/SCREEN WALL
- ① 85.8' BUILDING TO \perp
- ② 124.7' BUILDING TO \perp
- ③ WALL HEIGHT 3' MAX. WITHIN 20' OF ADJACENT ROAD
- ④ PROPOSED PEDESTRIAN ACCESS
- \perp PROPERTY LINE

**BURNEY COMMONS
PERIMETER FENCING
USE PERMIT**

A PORTION OF THE SOUTHEAST 1/4
OF SECTION 17, TOWNSHIP 35 NORTH,
RANGE 3 EAST, M.D.B.&M., IN THE
UNINCORPORATED AREA OF BURNEY,
SHASTA COUNTY, CALIFORNIA

FOR

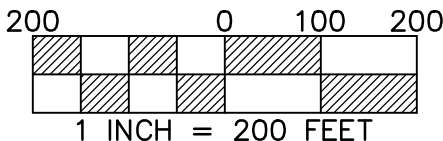
K2 DEVELOPMENT

BY

SHARRAH DUNLAP SAWYER, INC.

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Landscape Architecture • Presentation Graphics

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TO BE USED AS A VISUAL AID ONLY. LINEWORK DOES NOT REPRESENT, NOR IS IT INTENDED TO REPLACE SURVEY OR RECORDED PROPERTY INFORMATION.

DATE: JULY 25, 2022 SCALE: 1"=200' SHEET 1 OF 1