

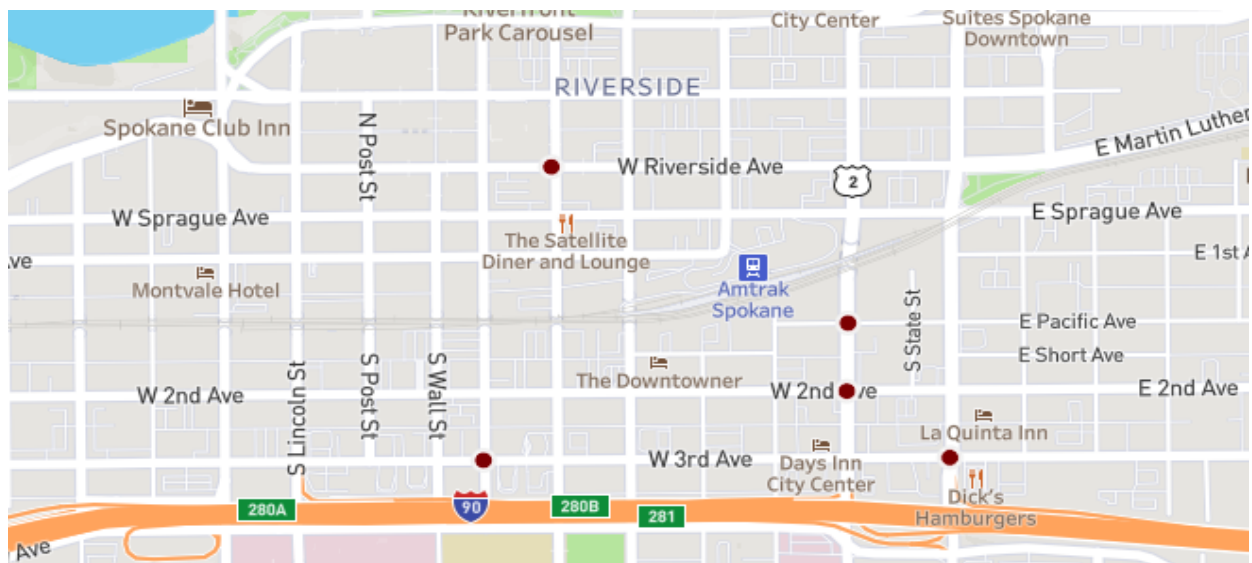
Spokane Traffic Calming Master Plan

District: 1
Neighborhood: Riverside
Project Extent: Downtown Core

Problem Statement: Residents of the Riverside neighborhood raised concerns over pedestrian fatalities at signalized intersections in the downtown area.

Traffic Analysis

Five pedestrian fatal crashes, shown with dots in the figure below, occurred at intersections in the study area over the last five years (2017 to 2021).



Pedestrian Fatalities at Intersections Within Downtown Core

Study intersections are described below:

- Riverside Avenue/Steven Street
 - Riverside Avenue is classified as a minor arterial and Steven Street is classified as major arterial, both with a posted speed limit of 30 miles per hour.
 - Riverside Avenue provides four lanes with two-way traffic, Steven Street provides four lanes serving one-way southbound traffic.
- 3rd Avenue/Howard Street
 - 3rd Avenue is classified as a major arterial and Howard Street is classified as minor arterial, both with a posted speed limit of 30 miles per hour.
 - 3rd Avenue provides four lanes serving one-way eastbound traffic while Howard Street provides two lanes serving two-way traffic.
- Pacific Avenue/Browne Street (SR 2)
 - Pacific Avenue is classified as local access street with a posted speed limit of 25 miles per hour while Browne Street is classified as an urban other principal arterial with a posted speed limit of 30 miles per hour.

Spokane Traffic Calming Master Plan

- Pacific Avenue provides two lanes serving two-way traffic while Browne Street provides four lanes serving southbound traffic.
- 2nd Avenue/Browne Street (SR 2)
 - 2nd Avenue is classified as a major arterial with a posted speed limit of 30 miles per hour.
 - The roadway provides four lanes serving westbound traffic.
- 3rd Avenue/Division Street (SR 2)
 - Division Street is classified as an urban other principal arterial with a posted speed limit of 30 miles per hour.
 - The roadway operates one-way street serving northbound traffic, where the south leg provides five lanes and converges into three lanes on the north leg.

The table below summarizes each of the five reported pedestrian fatal crashes that occurred at a downtown intersection. Two additional pedestrian fatal crashes are summarized which occurred at a midblock location.

Pedestrian Fatal Crashes within Spokane Downtown Core (2017 to 2021)

Location	Date	Control Type	Collision Type	Striking Vehicle Contributing Circumstances	Other Circumstances
Riverside Avenue at Steven Street	May 2021	Signal	Left Turning	Distracted driver	Daytime, dry weather
3 rd Avenue at Howard Street	Dec 2020	Signal	Right Turning	Under influence of drugs	Nighttime, streetlights on, dry weather
Pacific Avenue at Browne Street	Sept 2021	Two-way-stop	Straight	None	Nighttime, streetlights on, dry weather
2 nd Avenue at Browne Street	June 2018	Signal	Left Turning	Did not grant right-of-way to non-motorist	Daytime, dry weather
3 rd Avenue at Division Street	Aug 2017	Signal	Sideswipe	Disregard stop and go light	Daytime, dry weather
Howard Street south of 1 st Avenue	Nov 2017	None	Backing	Did not grant right-of-way to non-motorist	Daytime, dry weather
2 nd Avenue east of Lincoln Street	June 2021	None	Straight	Distracted driver	Nighttime, streetlights on, dry weather

The city has funding to install traffic signals at the Pacific Avenue/Browne Street and Pacific Avenue/Division Street intersections as part of the Pacific Avenue Greenway project.

Recommended Solution:

The signal timing on key downtown corridors, such and 2nd and 3rd Avenues, should be updated to provide a leading pedestrian interval (LPI) to give pedestrians the opportunity to enter the marked crosswalk at an intersection 3 to 7 seconds before opposing vehicles are given a green light indication.

Spokane Traffic Calming Master Plan

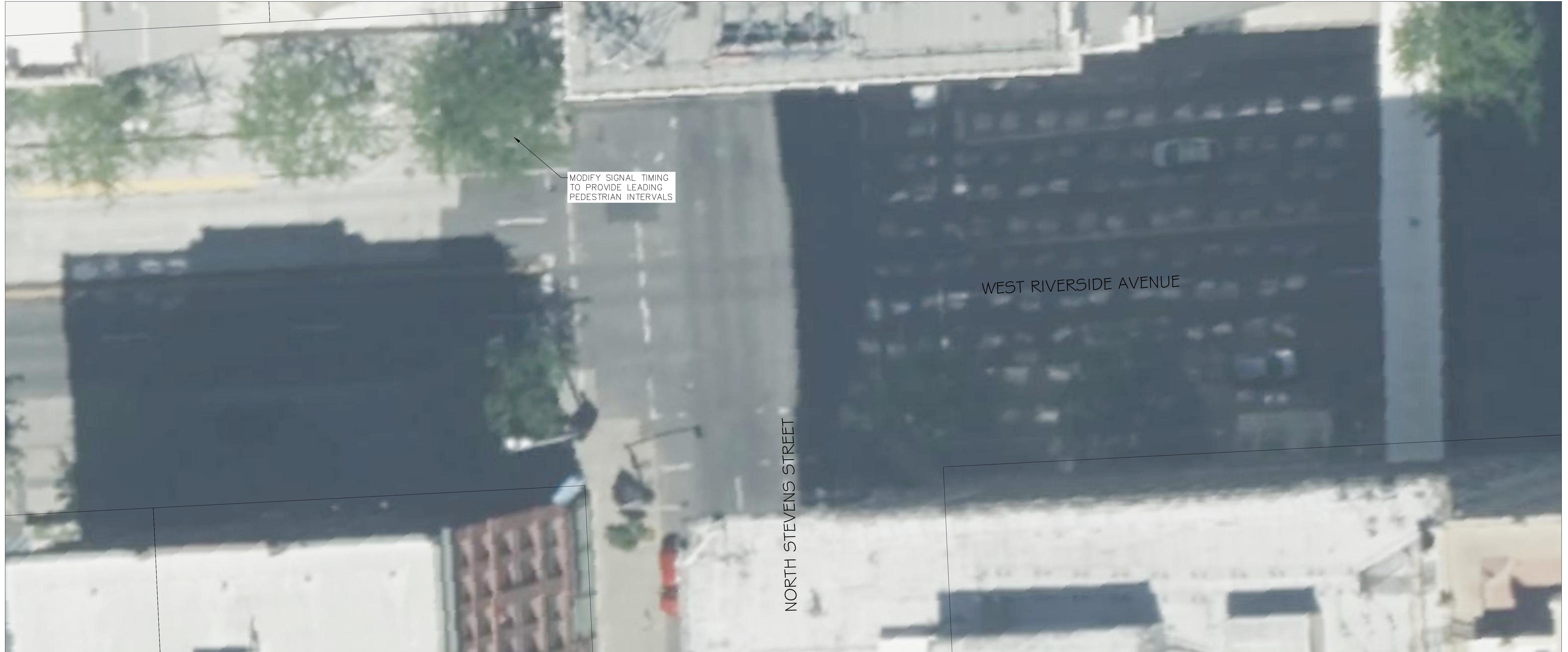
Pedestrians can better establish their presence in the crosswalk before vehicles have a signal to turn right or left. This treatment would increase vehicle delay at the intersection slightly, however implementing a leading pedestrian interval has crash reduction factor¹ of 19% for pedestrian-involved collisions.

Install curb extensions at the following intersection locations to shorten the pedestrian crossing distance and reduce pedestrian exposure:

- 3rd Avenue at Howard Street – east and west leg crosswalks
- 2nd Avenue at Browne Street – east leg crosswalk

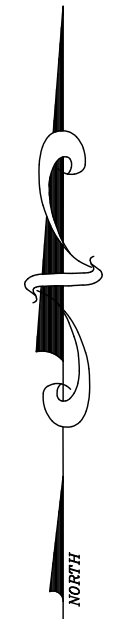
At the Pacific Avenue/Browne Street intersection, add curb extensions on both the east and west legs across Pacific Avenue and marked pedestrian crossings on all intersection approaches.

¹ *Crash Modification Factors Clearinghouse, March 2019*



LEGEND

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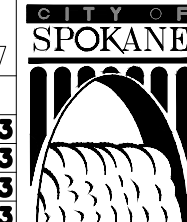
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1
 1 OF 5

RIGHT OF WAY LINES ARE SHOWN FOR
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DATE	BY	PROJ.	DESCRIPTION	DATE	BY	PROJ.	E.F.N. / U.S.N.	FROM	TO	COUNCIL ACCEPT DATE	FROM	TO	ORD. NO.	DATE	FILE NO.
REVISIONS															
AS BUILT															
GRADE ORDINANCE LIST															

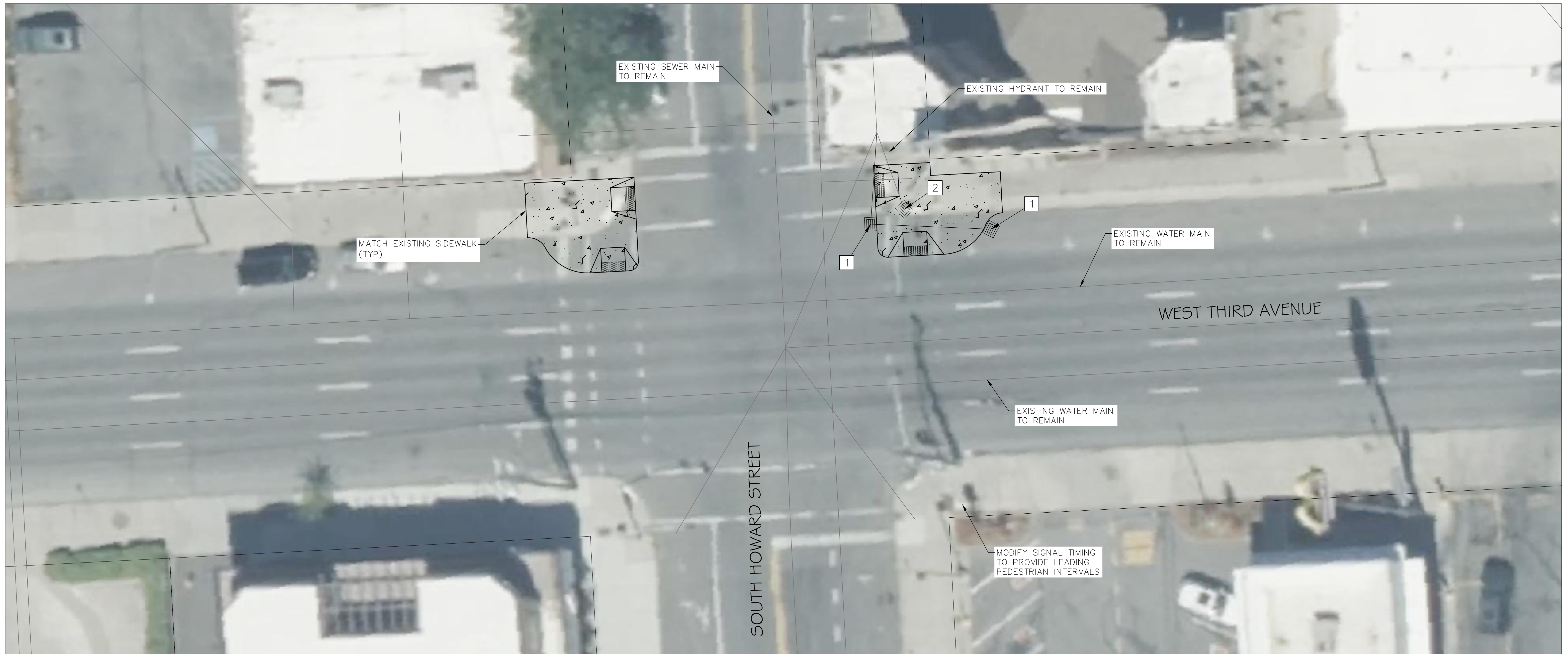
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BENCH MARK LOCATION	NONE GIVEN
NAV88 ELE	NONE GIVEN
CBM NO.	NONE GIVEN
BAR IS ONE INCH ON ORIGINAL DRAWING	HORIZONTAL PLAN/PROFILE 1" = 10'
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	VERTICAL PROFILE ONLY N/A
NAV88 DATUM	SCALE



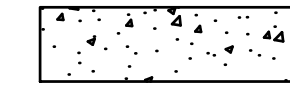
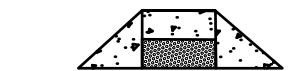
CITY OF SPOKANE, WASHINGTON
 DEPARTMENT OF ENGINEERING SERVICES
 808 WEST SPOKANE FALLS BLVD.
 SPOKANE, WASHINGTON 99201-3343
 (509) 625-6700

PROJECT NAME:	SPOKANE TRAFFIC CALMING MASTER PLAN	
SEGMENT LIMITS:	RIVERSIDE AVENUE AND STEVENS STREET	
PROJECT LIMITS:	RIVERSIDE NEIGHBORHOOD	
TYPE OF IMPROVEMENT:	TRAFFIC	
CITY PROJECT NUMBER	CITY PLAN NUMBER	

Plotted On May 15, 2023 - 4:05pm



LEGEND

- PROPERTY LINE
-  INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-102B
-  INSTALL CURB RAMP PER COS STD PLAN F-105

CONSTRUCTION NOTES

- 1 INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING PIPE WHERE SHOWN.
- 2 REMOVE EXISTING INLET. PLUG AND ABANDON EXISTING PIPE.



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2
 2 OF 5

RIGHT OF WAY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY

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REVISIONS											
AS BUILT											

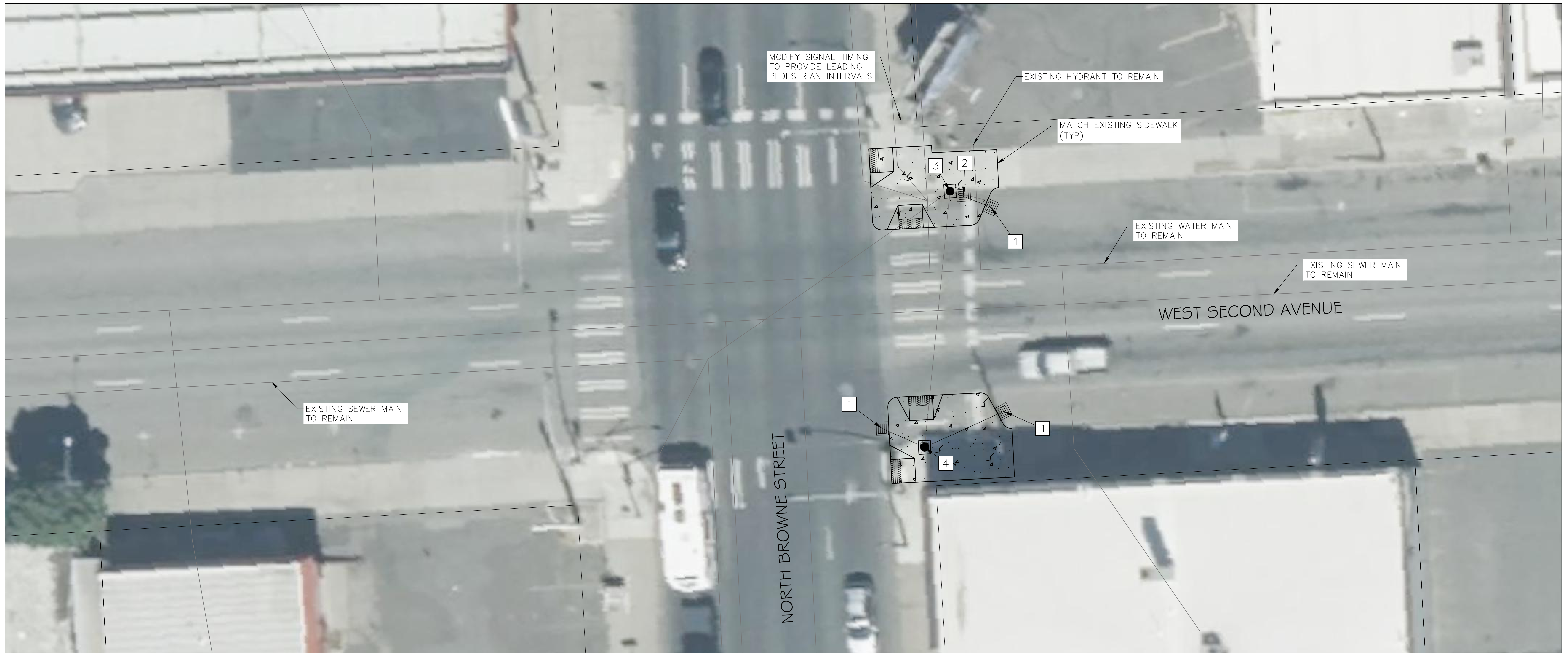
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CBM NO.	NONE GIVEN
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SCALE	SCALE
NAV88 DATUM	SCALE


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PROJECT NAME:	SPOKANE TRAFFIC CALMING MASTER PLAN	
SEGMENT LIMITS:	THIRD AVENUE AND HOWARD STREET	
PROJECT LIMITS:	RIVERSIDE NEIGHBORHOOD	
TYPE OF IMPROVEMENT:	TRAFFIC	
CITY PROJECT NUMBER	CITY PLAN NUMBER	

Plotted On May 15, 2023 - 4:05pm



LEGEND

- PROPERTY LINE
- INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-1.02B
- INSTALL CURB RAMP PER COS STD PLAN F-1.05

CONSTRUCTION NOTES

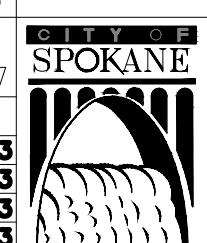
- 1 INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING PIPE OR NEW MANHOLE WHERE SHOWN.
- 2 REMOVE EXISTING INLET. PLUG AND ABANDON EXISTING PIPE.
- 3 EXISTING MANHOLE TO REMAIN IN PLACE.
- 4 REMOVE EXISTING INLET AND INSTALL NEW STORM MANHOLE.

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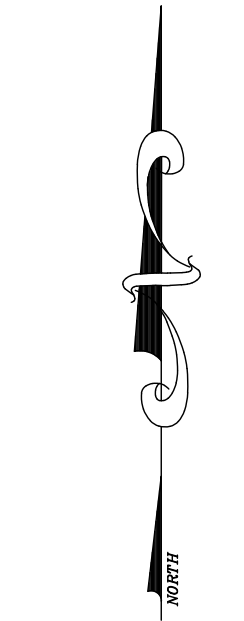
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NAV88 ELE	NONE GIVEN	BAR IS ONE INCH ON ORIGINAL DRAWING	HORIZONTAL PLAN/PROFILE 1" = 10'
CBM NO.	NONE GIVEN	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	VERTICAL PROFILE ONLY N/A
NAV88 DATUM			SCALE



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3
3 OF 5

PROJECT NAME:	SPOKANE TRAFFIC CALMING MASTER PLAN	
SEGMENT LIMITS:	SECOND AVENUE AND BROWNE STREET	
PROJECT LIMITS:	RIVERSIDE NEIGHBORHOOD	
TYPE OF IMPROVEMENT:	TRAFFIC	
CITY PROJECT NUMBER	CITY PLAN NUMBER	

Plotted On May 15, 2023 - 4:05pm



LEGEND

————— PROPERTY LINE



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4
 4 OF 5

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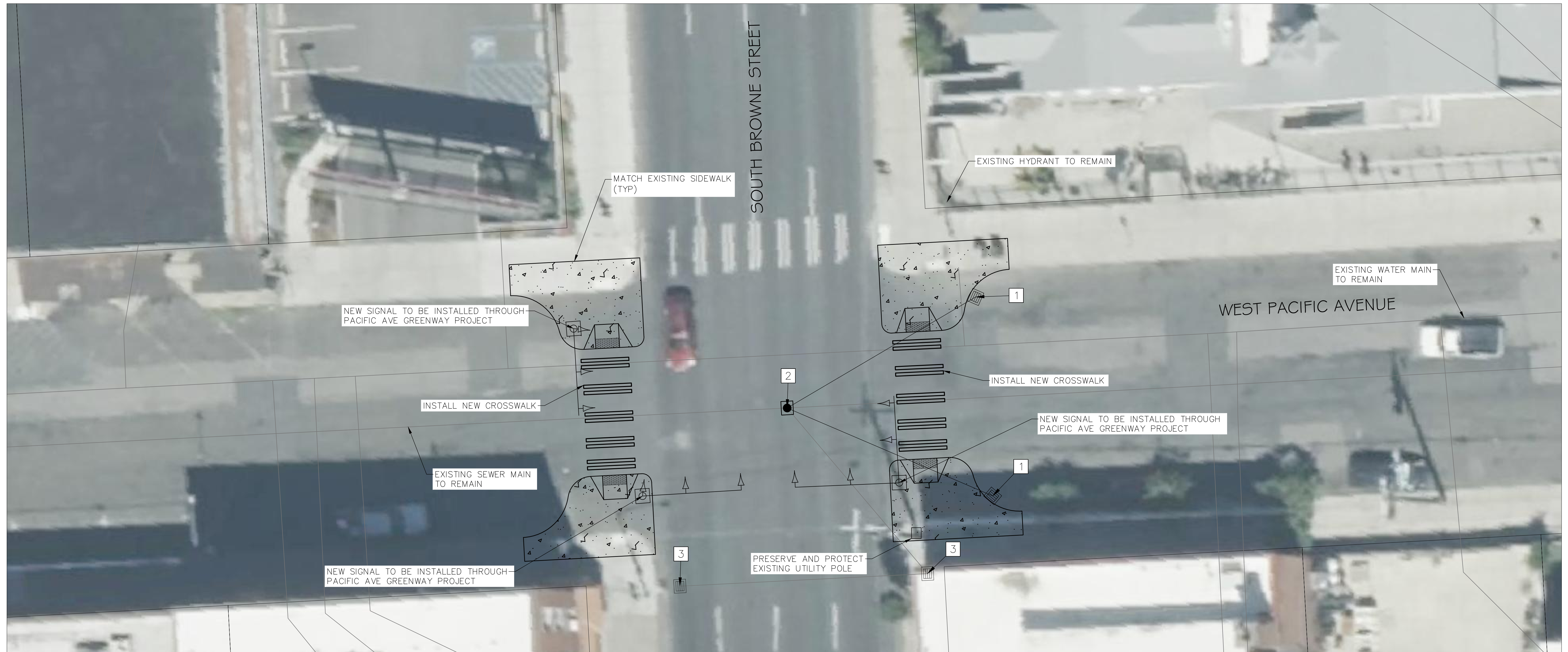
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HORIZONTAL PLAN/PROFILE: 1" = 10'	SCALE
VERTICAL PROFILE ONLY: N/A	
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PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN	TYPE OF IMPROVEMENT: TRAFFIC
SEGMENT LIMITS: THIRD AVENUE AND DIVISION STREET	CITY PROJECT NUMBER: CITY PLAN NUMBER
PROJECT LIMITS: RIVERSIDE NEIGHBORHOOD	

Plotted On May 15, 2023 - 4:05pm



LEGEND

- PROPERTY LINE
- INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-102B
- INSTALL CURB RAMP PER COS STD PLAN F-105

CONSTRUCTION NOTES

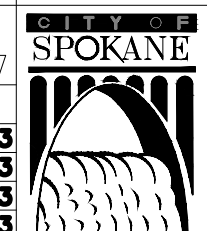
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- 2 EXISTING MANHOLE TO REMAIN IN PLACE.
- 3 EXISTING INLET TO REMAIN IN PLACE.

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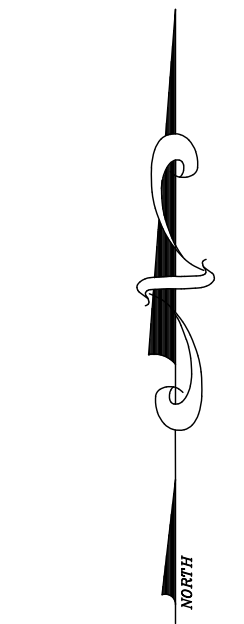
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BENCH MARK LOCATION: NONE GIVEN	BY: KL 03/2023
NAV88 ELE: NONE GIVEN	REVISED: KL 05/2023
CBM NO.: NONE GIVEN	CHECKED: SF 03/2023
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VERTICAL PROFILE ONLY: N/A	



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5
 5 OF 5

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN	TYPE OF IMPROVEMENT: TRAFFIC
SEGMENT LIMITS: PACIFIC AVENUE AND BROWNE STREET	CITY PROJECT NUMBER: CITY PLAN NUMBER
PROJECT LIMITS: RIVERSIDE NEIGHBORHOOD	

Plotted On May 15, 2023 - 4:05pm