APPENDIX A – NRCS SOIL REPORT

United States Department of Agriculture

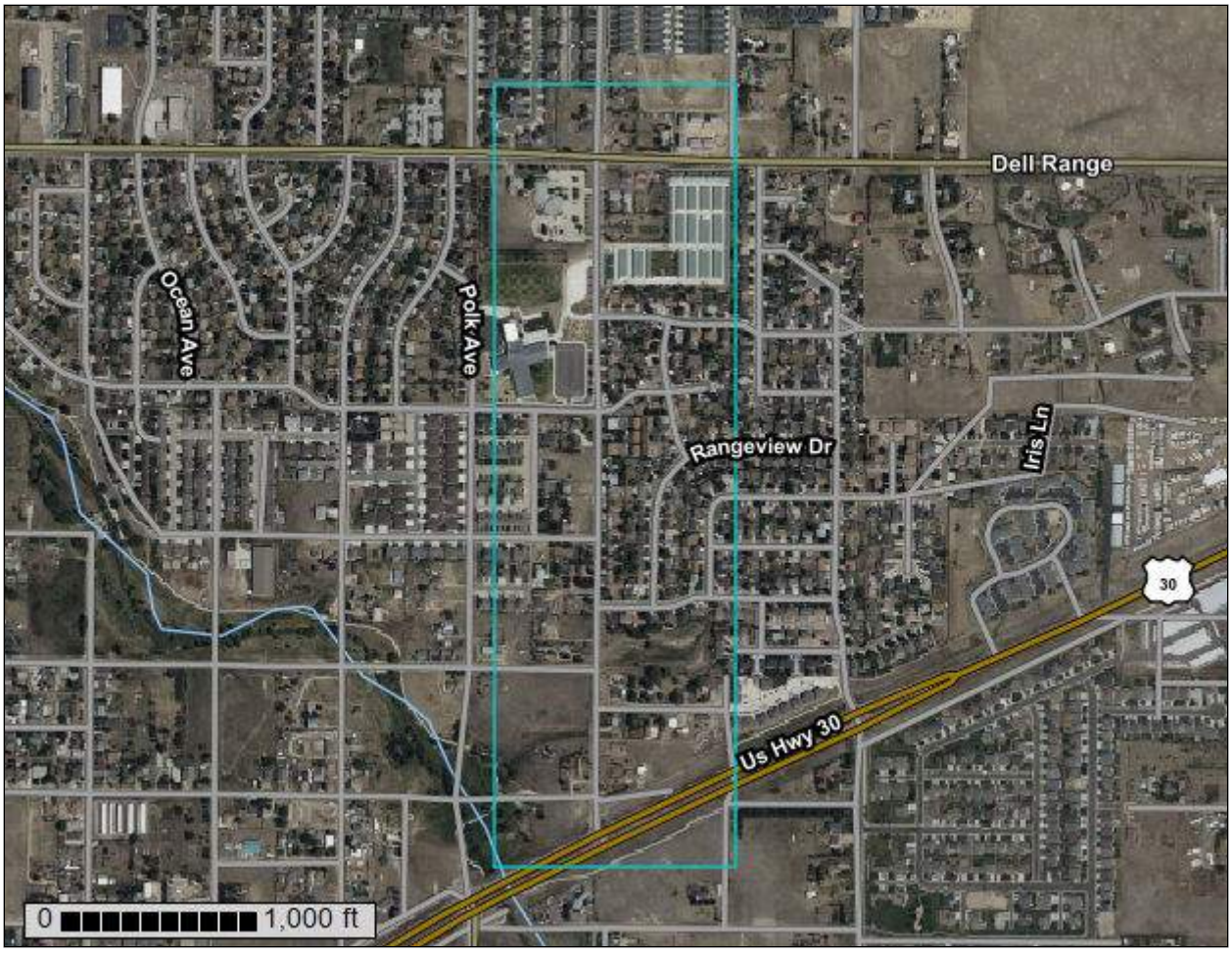
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Laramie County, Wyoming, Western Part

Van Buren Corridor Study



January 4, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

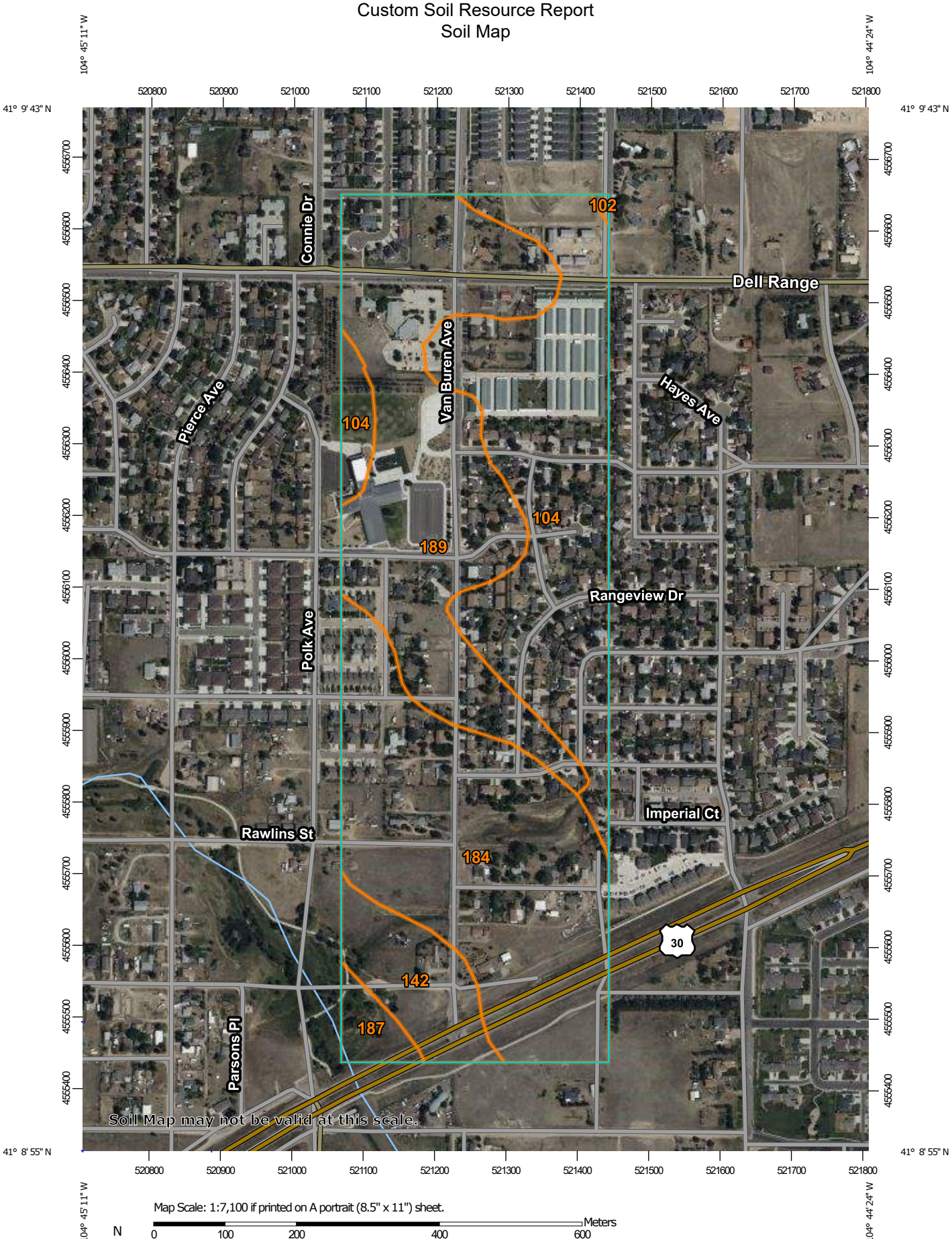
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:7,100 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Laramie County, Wyoming, Western Part
Survey Area Data: Version 15, Sep 9, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 2, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
102	Altvan-Dix complex, 6 to 10 percent slopes	0.1	0.1%
104	Ascalon loam, cool, 0 to 6 percent slopes	33.1	29.4%
142	Manter sandy loam, 0 to 6 percent slopes	7.4	6.6%
184	Urban land-Ascalon complex, 0 to 6 percent slopes	34.5	30.6%
187	Urban land-Merden complex, 0 to 3 percent slopes	2.2	2.0%
189	Urban land-Poposhia-Trimad complex, 3 to 15 percent slopes	35.3	31.3%
Totals for Area of Interest		**112.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Laramie County, Wyoming, Western Part

102—Altvan-Dix complex, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 2tlq8
Elevation: 4,800 to 6,330 feet
Mean annual precipitation: 13 to 19 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 135 days
Farmland classification: Farmland of statewide importance, if irrigated

Map Unit Composition

Altvan and similar soils: 60 percent
Dix and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altvan

Setting

Landform: Interfluves on alluvial fans
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loamy alluvium over tertiary aged sandy and gravelly alluvium

Typical profile

A - 0 to 9 inches: loam
Bt1 - 9 to 13 inches: sandy clay loam
Bt2 - 13 to 25 inches: sandy clay loam
Btk - 25 to 28 inches: sandy clay loam
2C - 28 to 80 inches: very gravelly sand

Properties and qualities

Slope: 6 to 8 percent
Depth to restrictive feature: 28 to 34 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R067AY122WY - Loamy (Ly)

Hydric soil rating: No

Description of Dix

Setting

Landform: Interfluves on alluvial fans
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Tertiary aged sandy and gravelly alluvium

Typical profile

A - 0 to 10 inches: very gravelly sandy loam
C1 - 10 to 28 inches: very gravelly coarse sand
C2 - 28 to 80 inches: very gravelly coarse sand

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): 7s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R067AY112WY - Gravelly (Gr)
Hydric soil rating: No

Minor Components

Wages

Percent of map unit: 10 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY122WY - Loamy (Ly)
Hydric soil rating: No

104—Ascalon loam, cool, 0 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2tlp8
Elevation: 5,400 to 6,550 feet
Mean annual precipitation: 13 to 19 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 135 days
Farmland classification: Farmland of statewide importance, if irrigated

Map Unit Composition

Ascalon, cool, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon, Cool

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wind-reworked sandy alluvium

Typical profile

Ap - 0 to 6 inches: loam
Bt1 - 6 to 12 inches: sandy clay loam
Bt2 - 12 to 19 inches: sandy clay loam
Bk - 19 to 35 inches: sandy clay loam
C - 35 to 80 inches: loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R067AY122WY - Loamy (Ly)
Hydric soil rating: No

Minor Components

Altvan
Percent of map unit: 8 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY122WY - Loamy (Ly)
Hydric soil rating: No

Wages
Percent of map unit: 7 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY122WY - Loamy (Ly)
Hydric soil rating: No

142—Manter sandy loam, 0 to 6 percent slopes

Map Unit Setting
National map unit symbol: 3j68
Elevation: 5,000 to 6,500 feet
Mean annual precipitation: 15 to 17 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 125 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Manter and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manter

Setting
Landform: Knolls, alluvial fans, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits and/or alluvium derived from sedimentary rock

Typical profile

A - 0 to 7 inches: sandy loam
Bt1 - 7 to 19 inches: loam
Bt2 - 19 to 23 inches: fine sandy loam
Ck - 23 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R067AY150WY - Sandy (Sy)
Hydric soil rating: No

Minor Components

Ascalon

Percent of map unit: 8 percent
Ecological site: R067AY150WY - Sandy (Sy)
Hydric soil rating: No

Bayard

Percent of map unit: 7 percent
Ecological site: R067AY150WY - Sandy (Sy)
Hydric soil rating: No

184—Urban land-Ascalon complex, 0 to 6 percent slopes

Map Unit Setting

National map unit symbol: 3j7m
Elevation: 5,000 to 6,500 feet
Mean annual precipitation: 15 to 17 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 125 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 65 percent
Ascalon and similar soils: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon

Setting

Landform: Fan remnants, alluvial fans
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sandstone

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 24 inches: sandy clay loam
H3 - 24 to 60 inches: loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R067AY122WY - Loamy (Ly)
Hydric soil rating: No

Minor Components

Altvan

Percent of map unit: 5 percent
Hydric soil rating: No

Wages

Percent of map unit: 5 percent
Hydric soil rating: No

187—Urban land-Merden complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 3j7q
Elevation: 5,000 to 6,500 feet
Mean annual precipitation: 15 to 17 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 90 to 115 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 65 percent
Merden and similar soils: 30 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merden

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

H1 - 0 to 12 inches: silty clay loam
H2 - 12 to 24 inches: silty clay loam
H3 - 24 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 8 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: R067AY174WY - Subirrigated (Sb)

Hydric soil rating: Yes

Minor Components

Poorly drained loamy soils

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

189—Urban land-Poposhia-Trimad complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 3j7s
Elevation: 6,500 to 7,500 feet
Mean annual precipitation: 15 to 17 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 90 to 115 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 60 percent
Poposhia and similar soils: 15 percent
Trimad and similar soils: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Poposhia

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Alluvium derived from sandstone, siltstone and shale

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R067AY122WY - Loamy (Ly)
Hydric soil rating: No

Description of Trimad

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Gravelly alluvium derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 10 inches: gravelly loam
H3 - 10 to 34 inches: very gravelly loam
H4 - 34 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 6 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: R067AY112WY - Gravelly (Gr)
Hydric soil rating: No

Minor Components

Piezon

Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Hydric soil rating: No

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APPENDIX B – SURVEY PLATS

IMPERIAL VALLEY

A SUBDIVISION SITUATED IN THE NW 1/4, SEC. 26, T14N, R 66 W LARAMIE COUNTY, WYOMING

VICINITY MAP
SCALE: 1" = 1000'

N

100 50 0 100 200

NW COR. SEC. 26 T14N, R66W (Fd 1/2" REBAR)

NORTH LINE SEC. 26, T14N, R66W

DELL RANGE BLVD.

646.49 N88°45'55"W

SUNNYSIDE ADDITION EIGHTH FILING

PATHFINDER AVE.

SUBDIVISION

S0°32'18"W 834.81

LOT 1

LOT 2

VAN BUREN AVE.

N0°32'38"E 611.16

UNPLATTED

N89°04'06"W 60.00

LAKEVIEW EAST

S0°32'18"W 379.77

POLK

S0°58'54"W 60.00

N89°04'06"W 621.56

GREEN RIVER STREET

1545.00 S89°04'06"E

SOUTH LINE NW 1/4, NW 1/4, SEC 26, T14N, R66W

SUNNYSIDE ADDITION SEVENTH FILING

664.00 N 88°55'16" W

BLOCK 2

LIBERTY STREET

BLOCK 3

BLOCK 4

BLOCK 5

BLOCK 6

BLOCK 7

BLOCK 8

GREEN RIVER STREET

GREEN RIVER PLACE

WOODCREST

660.00 N0°19'06"E

UNPLATTED

NE COR SEC 26, T14N, R66W

N89°58'W 2627.22

S88°08'47"W 28.65

POINT OF BEGINNING

658.90 N88°56'39"W

DRIVE

AVENUE

N0°43'35"E 913.89

UNPLATTED

N89°07'58"W 215.48

S0°52'02"W 208.71

SEVENTH FILING ADDITION

S0°32'38"W 1105.53

ROCK SPRINGS STREET

RANGEVIEW

INDEPENDENCE

POTOMAC STREET

HAYES

EASTVIEW

RAWLINS STREET

OPEN SPACE/ACTIVITY AREA
STORM WATER RETENTION

PROPOSED MULTI FAMILY RESIDENTIAL

554.10

1205.12 S 89°14'47" E

SUNNYSIDE ADDITION SIXTH FILING

ARTHUR AVE

S0°35'06"W 99.54

78.69 R/W N64°53'08"E

N0°35'06"E 65.21

N89°12'36"E 84.33

N0°48'04"E 394.71

N89°14'47"W 10.90

NOTES

1. Drainage and Utility Easements as shown by dashed lines are 16.00 feet wide and centered on side and rear lot lines unless shown otherwise.
2. All Bearings are referenced to the North Line of the NE 1/4 of Sec. 26 as per deeds recorded bk. 1037, pg. 204 and 205.
3. All lot and block corners are monumented with 1/2"dia x 24" long rebar with SurvKAP set.
4. ● Denotes iron monument found.
5. [ ] Denotes deed calls.

Easement Lot 4 Block 6 South line 7' Book 1159 Page 506

Easements between Lot 14 and Lots 9 & 10 Lot 4 and Lots 9 Block 12 between Lot 13 and Lot 14 Block 7, Between Lots 3 & 4 Lot 7 and Lot 14 and Lot 15 Block 6 changed from 16' to 10' (5' each side property line.

Norman A Clarke Oct 24, 1979

Affidavit # 549329 Book 1130 Page 570

494390

The State of Wyoming } SS
County of Laramie }

This instrument was filed for record at 10:10 o'clock a M. on the 9th day of August A. D. 19 78 and duly recorded in Plat Cab 4 290

Janet C Whitehead

County Clerk & Ex-Officio Register of Deeds

By Beatrice Bayer Deputy

Faltaus

IMPERIAL VALLEY

A SUBDIVISION SITUATED
IN THE NW 1/4, SEC 26, T 14 N, R 66 W
LARAMIE COUNTY, WYOMING
MAY 1978

BRW/NOBLITT
1709 CAREY AVENUE CHEYENNE, WYOMING 82001 PHONE 307/634-8805
PLANNING/TRANSPORTATION/ENGINEERING/WATER RESOURCES/LAND SURVEYING

IMPERIAL VALLEY
A SUBDIVISION SITUATED IN THE NW 1/4, SEC. 26, T14N, R 66 W LARAMIE COUNTY, WYOMING

ACKNOWLEDGEMENT

STATE OF WYOMING)
)
COUNTY OF LARAMIE)

The dedication instrument was acknowledged before me this 11 day of July, 1978 by Raymond L. Woods, Robert J. Rohn, Elmer F. Garrett and Herbert H. Schemp.

Margie Pepper
Notary Public Laramie County, Wyoming.
My Commission Expires 6-25-81

ACKNOWLEDGEMENT

STATE OF WYOMING)
)
COUNTY OF LARAMIE)

The dedication instrument was acknowledged before me this 19 day of July, 1978 by James Onigkeit, Clarence Brown, and Charles Eggleston.

Margie Pepper
Notary Public Laramie County, Wyoming.
My Commission Expires 6-25-81

ACKNOWLEDGEMENT

STATE OF WYOMING)
)
COUNTY OF LARAMIE)

The dedication instrument was acknowledged before me this 19 day of July, 1978 by George A. Zunker and Byron A. Barry.

Margie Pepper
Notary Public Laramie County, Wyoming.
My Commission Expires 6-25-81

ACKNOWLEDGEMENT

STATE OF WYOMING)
) SS.
COUNTY OF LARAMIE)

The dedication instrument was acknowledged before me this 12 day of July, 1978, by Le Roy K. Conner and Lorraine E. Conner.

Margie Pepper
Notary Public Laramie County, Wyoming.
My Commission Expires 6-25-81

ACKNOWLEDGEMENT

STATE OF WYOMING)
) SS.
COUNTY OF LARAMIE)

The dedication instrument was acknowledged before me this 12 day of July, 1978, by Earl D. Kunkel and Joan M. Kunkel.

Margie Pepper
Notary Public Laramie County, Wyoming.
My Commission Expires 6-25-81

LOT AREAS

Block 1		**Block 4**		**Block 5**		**Block 6**	
Lot 1	260,489 sq.ft.	Lot 1	10,530 sq.ft.	Lot 1	14,977 sq.ft.	Lot 1	8,493 sq.ft.
Lot 2	426,452 sq.ft.	Lot 2	10,342 sq.ft.	Lot 2	9,385 sq.ft.	Lot 2	7,770 sq.ft.
Block 2		Lot 3	9,450 sq.ft.	Lot 3	9,092 sq.ft.	Lot 3	7,770 sq.ft.
Lot 1	10,376 sq.ft.	Lot 4	10,226 sq.ft.	Lot 4	9,348 sq.ft.	Lot 4	7,770 sq.ft.
Lot 2	9,366 sq.ft.	Lot 5	9,473 sq.ft.	Lot 5	12,728 sq.ft.	Lot 5	7,770 sq.ft.
Lot 3	9,384 sq.ft.	Lot 6	9,145 sq.ft.	Lot 6	10,480 sq.ft.	Lot 6	7,546 sq.ft.
Lot 4	9,760 sq.ft.	Lot 7	9,721 sq.ft.	Lot 7	14,102 sq.ft.	Lot 7	6,961 sq.ft.
Lot 5	9,275 sq.ft.	Lot 8	11,110 sq.ft.	Lot 8	9,237 sq.ft.	Lot 8	6,974 sq.ft.
Lot 6	10,049 sq.ft.	Lot 9	10,954 sq.ft.	Lot 9	9,001 sq.ft.	Lot 9	6,366 sq.ft.
Lot 7	10,272 sq.ft.	Lot 10	9,198 sq.ft.	Lot 10	9,229 sq.ft.	Lot 10	6,773 sq.ft.
Lot 8	10,275 sq.ft.	Lot 11	10,696 sq.ft.	Lot 11	9,229 sq.ft.	Lot 11	6,712 sq.ft.
Lot 9	11,110 sq.ft.	Lot 12	7,501 sq.ft.	Lot 12	9,229 sq.ft.	Lot 12	7,719 sq.ft.
Block 3		Lot 13	8,746 sq.ft.	Lot 13	9,229 sq.ft.	Lot 13	7,329 sq.ft.
Lot 1	8,925 sq.ft.	Lot 14	8,467 sq.ft.	Lot 14	9,229 sq.ft.	Lot 14	6,952 sq.ft.
Lot 2	9,625 sq.ft.	Lot 15	7,667 sq.ft.	Lot 15	7,405 sq.ft.	Lot 15	7,700 sq.ft.
Lot 3	9,040 sq.ft.	Lot 16	8,023 sq.ft.	Lot 16	9,606 sq.ft.	Lot 16	7,700 sq.ft.
Lot 4	9,109 sq.ft.	Lot 17	7,247 sq.ft.	Lot 17	9,452 sq.ft.	Lot 17	7,700 sq.ft.
Lot 5	9,452 sq.ft.	Lot 18	7,140 sq.ft.	Lot 18	9,491 sq.ft.	Lot 18	7,000 sq.ft.
Lot 6	10,448 sq.ft.	Lot 19	7,140 sq.ft.	Lot 19	9,539 sq.ft.	Lot 19	10,364 sq.ft.
Lot 7	10,518 sq.ft.	Lot 20	7,140 sq.ft.	Lot 20	9,583 sq.ft.	**Block 7**	
Lot 8	9,433 sq.ft.	Lot 21	7,140 sq.ft.	Lot 21	8,627 sq.ft.	Lot 1	6,182 sq.ft.
Lot 9	7,030 sq.ft.	Lot 22	7,140 sq.ft.	Lot 22	8,670 sq.ft.	Lot 2	6,665 sq.ft.
Lot 10	9,261 sq.ft.	Lot 23	7,140 sq.ft.	Lot 23	8,714 sq.ft.	Lot 3	7,000 sq.ft.
Lot 11	9,255 sq.ft.	Lot 24	6,670 sq.ft.	Lot 24	8,758 sq.ft.	Lot 4	7,000 sq.ft.
Block 8		**Block 12**		Lot 25	10,714 sq.ft.	Lot 5	7,000 sq.ft.
Lot 1	9,152 sq.ft.	Lot 1	6,948 sq.ft.	**Block 10**		Lot 6	7,000 sq.ft.
Lot 2	9,404 sq.ft.	Lot 2	7,000 sq.ft.	Lot 1	8,000 sq.ft.	Lot 7	7,000 sq.ft.
Lot 3	9,435 sq.ft.	Lot 3	7,000 sq.ft.	Lot 2	7,000 sq.ft.	Lot 8	7,000 sq.ft.
Lot 4	9,463 sq.ft.	Lot 4	7,000 sq.ft.	Lot 3	7,000 sq.ft.	Lot 9	8,500 sq.ft.
Lot 5	10,276 sq.ft.	Lot 5	7,000 sq.ft.	Lot 4	7,000 sq.ft.	Lot 10	8,500 sq.ft.
Block 9		Lot 6	7,000 sq.ft.	Lot 5	7,000 sq.ft.	Lot 11	7,000 sq.ft.
Lot 1	10,344 sq.ft.	Lot 7	7,000 sq.ft.	Lot 6	7,000 sq.ft.	Lot 12	7,000 sq.ft.
Lot 2	9,062 sq.ft.	Lot 8	8,000 sq.ft.	Lot 7	7,000 sq.ft.	Lot 13	7,000 sq.ft.
Lot 3	9,890 sq.ft.	Lot 9	8,000 sq.ft.	Lot 8	8,000 sq.ft.	Lot 14	7,000 sq.ft.
Lot 4	9,917 sq.ft.	Lot 10	7,000 sq.ft.	Lot 9	8,000 sq.ft.	Lot 15	7,000 sq.ft.
Lot 5	9,944 sq.ft.	Lot 11	7,000 sq.ft.	Lot 10	7,000 sq.ft.	Lot 16	7,000 sq.ft.
Lot 6	9,972 sq.ft.	Lot 12	7,000 sq.ft.	Lot 11	7,000 sq.ft.	Lot 17	7,336 sq.ft.
Lot 7	9,072 sq.ft.	Lot 13	7,000 sq.ft.	Lot 12	7,000 sq.ft.	**Block 11**	
Lot 8	9,035 sq.ft.	Lot 14	7,000 sq.ft.	Lot 13	7,000 sq.ft.	Lot 1	10,371 sq.ft.
		Lot 15	7,000 sq.ft.	Lot 14	7,000 sq.ft.	Lot 2	7,000 sq.ft.
		Lot 16	8,000 sq.ft.	Lot 15	7,000 sq.ft.	Lot 3	7,000 sq.ft.
				Lot 16	8,000 sq.ft.	Lot 4	9,014 sq.ft.
						Lot 5	8,163 sq.ft.
						Lot 6	8,300 sq.ft.
						Lot 7	8,812 sq.ft.
						Lot 8	118,334 sq.ft.
						Lot 9	233,022 sq.ft.

SURVEYORS CERTIFICATE

STATE OF WYOMING)
) SS.
COUNTY OF LARAMIE)

I, John A. Steil, Registered Land Surveyor in the State of Wyoming, hereby certify that this plat of IMPERIAL VALLEY, a subdivision situated in the NW 1/4, of Section 26, T 14 N,R 66 W of the 6th P. M., was prepared from notes of a survey conducted by me or under my supervision during the month of January, 1978, and that this plat correctly and accurately represents said survey of the lands shown hereon.

John A. Steil
Wyoming L. S. No. 2500

DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS that Laramie County School District No. One, Our Savior Lutheran Church, Herb Associates, a joint venture consisting of Riverton Development Co. and H. E., Inc., Earl D. Kunkel and Joan M. Kunkel, husband and wife; Le Roy K. Conner and Lorraine E. Conner, husband and wife, owners in fee simple of the following described property situated in the Northwest Quarter of Section 26, Township 14 North, Range 66 West of the 6th P.M., Laramie County, Wyoming, more particularly as described as follows:

Commencing at the northeast corner of Section 26, T 14 N, R 66 W of the 6th P. M., thence North 89 degrees 58 minutes West along the north line of said Section 26 (with all bearings contained herein relative thereto) a distance of 33.00 feet; thence South a distance of 40.00 feet; thence North 89 degrees 58 minutes West, a distance of 2621.22 feet; thence South 0 degrees 40 minutes 40 seconds west, a distance of 1267.18 feet to the point of beginning; thence North 88 degrees 36 minutes 39 seconds West, a distance of 658.90 feet; thence North 0 degrees 19 minutes 06 seconds East, a distance of 660.00 feet; thence North 88 degrees 43 minutes 16 seconds west, a distance of 664.00 feet to the west line of the NE 1/4 NW 1/4 of said Section 26; thence North 00 degrees 32 minutes 38 seconds East along said west line of the NE 1/4 NW 1/4, a distance of 611.16 feet to a point 40.00 South of the north line of said Section 26; thence North 88 degrees 43 minutes 16 seconds west parallel with said north line of Section 26, a distance of 946.49 to the northeast corner of East Lakeview Subdivision; thence South 00 degrees 12 minutes 18 seconds west along the east line of said East Lakeview Subdivision, a distance of 814.81 feet; thence North 89 degrees 04 minutes 06 seconds West, a distance of 60.00 feet; thence South 00 degrees 12 minutes 18 seconds West, a distance of 329.12 feet; thence North 89 degrees 04 minutes 06 seconds West, a distance of 621.36 feet; thence South 00 degrees 48 minutes 54 seconds west, a distance of 60.00 feet; thence South 89 degrees 04 minutes 06 seconds East, a distance of 1343.00 feet; thence North 0 degrees 32 minutes 02 seconds West, a distance of 208.71 feet; thence North 89 degrees 07 minutes 38 seconds west, a distance of 27.48 feet; thence South 0 degrees 32 minutes 38 seconds West, a distance of 1303.33 feet to the north line of Sunnyside Addition 6th Filing, thence South 89 degrees 14 minutes 47 seconds East along the north line of said Sunnyside Addition 6th Filing, a distance of 1205.12 feet; thence South 0 degrees 33 minutes 06 seconds west, a distance of 99.34 feet to the northerly right of way of U. S. Highway No. 30; thence North 64 degrees 33 minutes 08 seconds East, along said northerly right of way line, a distance of 28.69 feet to the west line of U. S. Hwy 30 right of way; thence North 0 degrees 33 minutes 06 seconds East along said west line of U.S. Hwy 30 right of way, a distance of 93.21 feet; thence South 89 degrees 14 minutes 47 seconds West, a distance of 10.90 feet; thence North 0 degrees 48 minutes 04 seconds East, a distance of 394.71 feet; thence South 89 degrees 12 minutes 36 seconds East, a distance of 84.33 feet; thence North 0 degrees 43 minutes 35 seconds East, a distance of 913.89 feet; thence South 88 degrees 08 minutes 2 seconds West, a distance of 28.65 feet to the point of beginning. Containing 69.43 acres more or less.

Have caused the same to be surveyed, platted and known as IMPERIAL VALLEY, do hereby declare that the subdivision of said land as it appears on this plat, to be their free act and deed and in accordance with their desires, and do hereby dedicate to the use of the public forever the streets, drives, avenues, places, open space/activity area and grant the easements for the purposes indicated hereon.

HERB ASSOCIATES, a joint venture consisting of:

Riverton Development Co. — H. E. Inc.

Raymond L. Woods, President — Robert J. Rohn, Secretary — Elmer F. Garrett, President — Herbert H. Schemp, Secretary

OUR SAVIOR LUTHERAN CHURCH of Cheyenne, Wyoming

James Onigkeit, Trustee — Clarence Brown, Trustee — Charles Eggleston, Trustee

SCHOOL DISTRICT NO. ONE OF LARAMIE COUNTY

George A. Zunker, Chairman of Board — Byron A. Barry, Supt. of Schools

LeRoya K. Conner — Lorraine E. Conner

Earl D. Kunkel — Joan M. Kunkel

APPROVALS

Approved by the Cheyenne-Laramie County Regional Planning Commission this 5th day of JUNE 1978.

Attest Keith E. Hansen, Secretary — Chairman

Approved by the City Council of the City of Cheyenne, Wyoming this 26th day of JUNE, 1978.

Attest Jane Crawford, CITY CLERK — Don Erickson, MAYOR

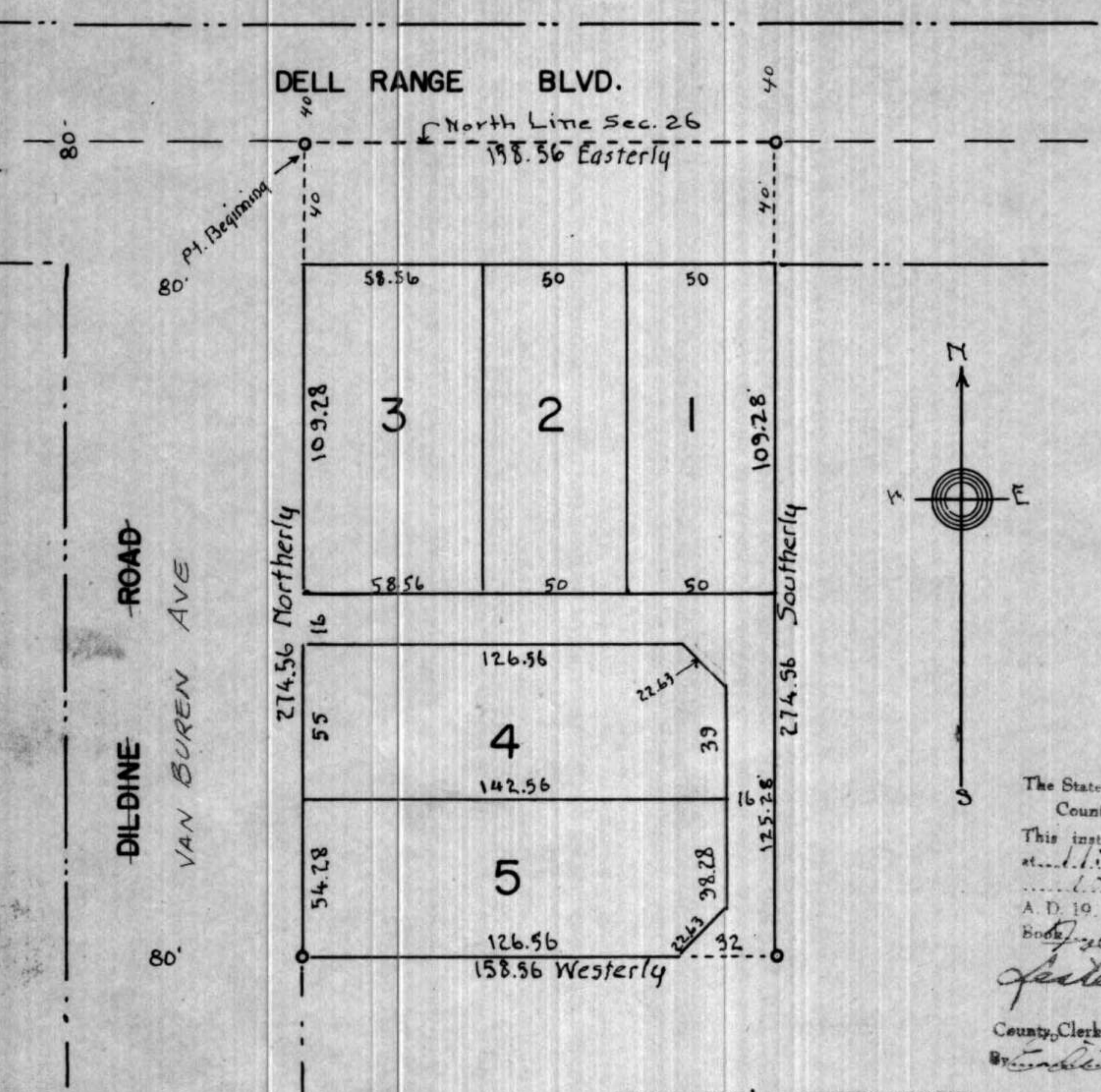
Approved by the Board of County Commissioners of Laramie County, Wyoming this 5 day of July, 1978.

Attest Janet C Whitehead, County Clerk — Elmo Foster, Chairman

494390
The State of Wyoming } SS
County of Laramie
This instrument was filed for record at 10:12 o'clock a M. on the 7th day of August A. D. 1978 and duly recorded in Plat Book 4 — 290.
Janet C Whitehead
County Clerk & Ex-Officio Register of Deeds
By Bertina Bryan Palmer Deputy

IMPERIAL VALLEY
A SUBDIVISION SITUATED
IN THE NW 1/4, SEC. 26, T 14 N, R 66 W
LARAMIE COUNTY, WYOMING
MAY 1978

BRW WOBLITT
1709 CAREY AVENUE CHEYENNE, WYOMING 82001 PHONE 307/634-8805
PLANNING/TRANSPORTATION/ENGINEERING/WATER RESOURCES/LAND SURVEYING



795740

The State of Wyoming } SS
County of Laramie

This instrument was filed for record at 11:30 o'clock A M. on the 12 day of August A.D. 19 57 and duly recorded in Book Plats page 157

Lester R. Hopp

County Clerk & Ex-Officio Register of Deeds
By Estelle McCann Deputy

DEDICATION

Know all men by these presents, that Earl M. Johnson and Edith M. Johnson, owners in fee simple of the land embraced in SUNNYSIDE ADDITION, EIGHTH FILING, do hereby declare the subdivision of said land, as appears on this plat, to be their free act and deed and in accordance with their desires; and do hereby dedicate to the use of the public forever all of the streets and alleys shown hereon.

Witness Mary Swalde — Earl M. Johnson

Witness Mary Swalde — Edith M. Johnson

ACKNOWLEDGEMENT

The State of Wyoming } ss
County of Laramie

On this 10 day of Aug AD 1957, before me, a Notary Public in and for the State of Wyoming, personally appeared Earl M. Johnson and Edith M. Johnson, to me known to be the persons described in and who executed the within and foregoing dedication, and acknowledged said instrument to be their free act and deed and for the purpose therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of my office the day and year first above written.

My commission expires 2/2/60 — Mary Swalde, Notary Public

Residing at Cheyenne Wyo

ENGINEER'S CERTIFICATE

The State of Wyoming } ss
County of Laramie

I, T.H. Baldwin, of Cheyenne, Wyoming, hereby certify that this plat of SUNNYSIDE ADDITION, EIGHTH FILING, was made from notes taken during an actual survey made under my direction in April, 1957; that it correctly represents the lots, blocks, streets and alleys as marked on the ground by iron pipe set at all lot corners and that the land embraced in this subdivision is described as follows; A tract of land in the W 1/2 NE 1/4 NW 1/4 Section 26, T. 14 N., R. 66 W., 6th P.M., Laramie County, Wyoming, containing one acre, more or less, and being more particularly described as follows: Beginning at the NW corner of the W 1/2 NE 1/4 NW 1/4 of said Section 26; thence Easterly, along the north line of said Section 26, a distance of 158.56 feet to a point; thence Southerly, parallel to the west line of said W 1/2 NE 1/4 NW 1/4, a distance of 274.56 feet to a point; thence Westerly, parallel to the north line of said Section 26 a distance of 158.56 feet to a point on the west line of said W 1/2 NE 1/4 NW 1/4; thence Northerly, along the west line of said W 1/2 NE 1/4 NW 1/4, a distance of 274.56 feet to the point of beginning.

T. H. Baldwin
Engr. Wyo. Reg. No. 19

part of

SUNNYSIDE ADDITION, EIGHTH FILING
A SUBDIVISION OF W 1/2 NE 1/4 NW 1/4
SECTION 26, T.14N., R.66W., 6th P.M.
LARAMIE COUNTY, WYOMING

SCALE 1" = 50' — APRIL, 1957

K-36

Approved as to form only:
D. White
Date: 8/19/2014

RESOLUTION NO. 5620

ENTITLED: **"A RESOLUTION AUTHORIZING THE MAYOR AND THE CITY CLERK TO SIGN A FINAL PLAT FOR DEL-VAN STORAGE PARK, BEING A REPLAT OF ALL OF GOODWATER ADDITION, GOODWATER DRIVE, AND WATER BLUE LANE AND A PORTION OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, T.14N., R.66W., 6TH P.M., CHEYENNE, WYOMING (LOCATED SOUTH OF AND ADJACENT TO DELL RANGE BLVD., EAST OF AND ADJACENT TO VAN BUREN AVE.)."**

WHEREAS, the owners of the property described herein have subdivided said land in accordance with the statutes in such cases made and provided; and

WHEREAS, the owners of the property described herein have caused a subdivision plat of said land to be made, acknowledged, and certified, particularly describing the lot, block, easements and right-of-way; and

WHEREAS, the above described subdivision plat has been presented to the City of Cheyenne Planning Commission for consideration and the Planning Commission has recommended that the Governing Body approve the subdivision plat; and

WHEREAS, the plat has been duly executed by the Development Office.

NOW, THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF CHEYENNE, WYOMING, THAT the subdivision described as Del-Van Storage Park, a replat of all of Goodwater Addition, Goodwater Drive, and Water Blue Lane and a portion of the NE¼ of the NW¼ of Section 26, T.14N., R.66W., 6th P.M., Cheyenne, Wyoming, be and the same hereby is approved and confirmed as presented, and that the Mayor and the City Clerk be and are hereby authorized, empowered, and directed to execute said plat when Community Facility Fees are paid and after an executed copy of Del-Van Storage Park Annexation has been filed with the County Clerk and Ex-Officio Register of Deeds for Laramie County, Wyoming. If the final plat of Del-Van Storage Park is not acted on and recorded within 18 months of the date below, this approval shall be void in accordance with Section 2.1.3.c.5(a) of the UDC.

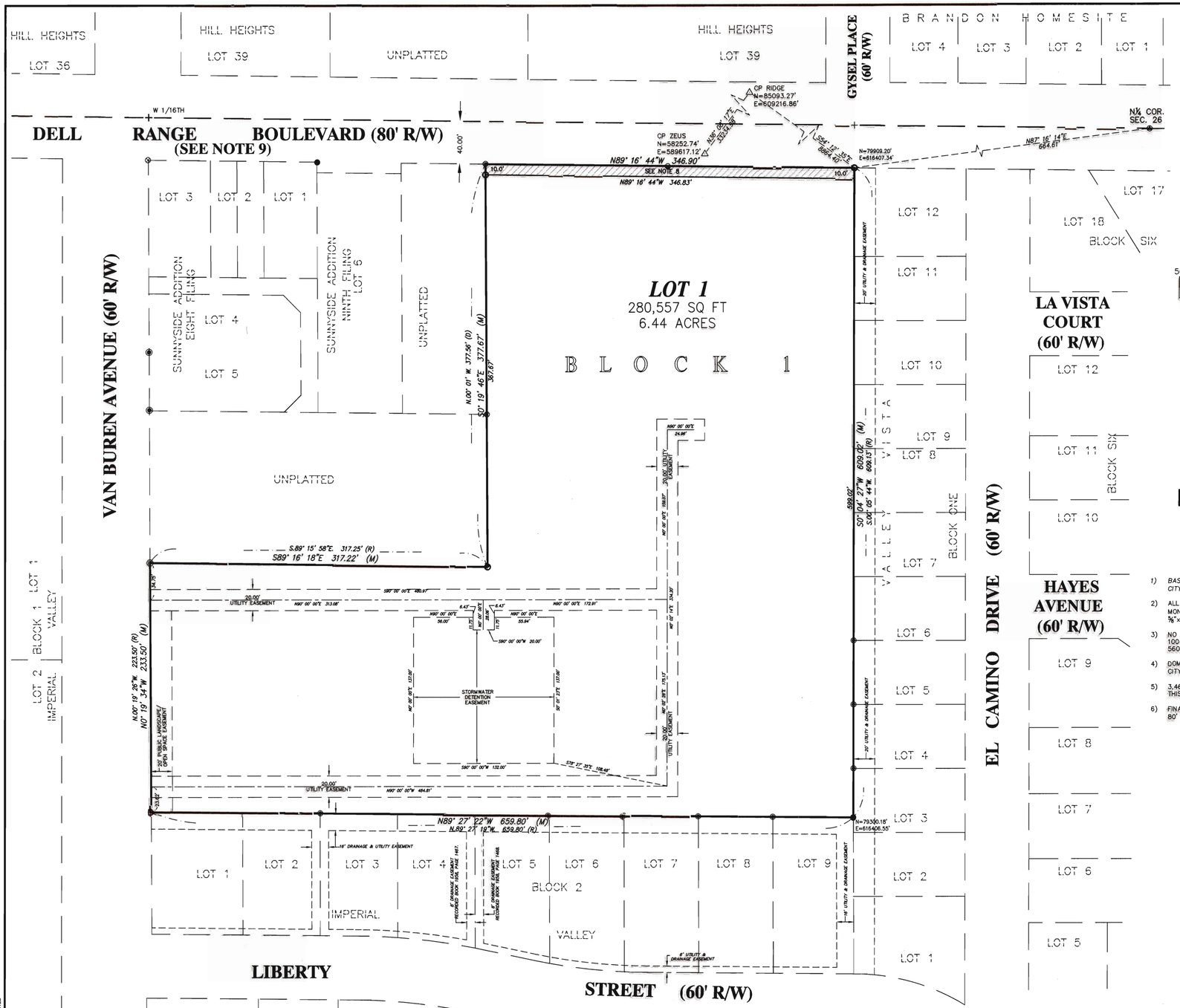
PRESENTED, READ AND ADOPTED THIS 22nd **DAY OF** September**, 2014.**

RICHARD L. KAYSEN, MAYOR

(SEAL)
ATTEST:

Kristy B. Anderson
~~CARRIE KOZEKER, CITY CLERK~~
Kristy B. Anderson, Deputy City Clerk

DEVA -01



VICINITY MAP

DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS THAT: Dell-Vann Storage, LLC, a Wyoming Limited Liability Company, owner in fee simple of the following described parcels of land:

PARCEL 'A'

a portion of the NE¼NW¼ Section 26, Township 14N, Range 66W of the 6th P.M., City of Cheyenne, Laramie County, Wyoming, being more particularly described as follows:

Beginning at the northwest corner of said NE¼NW¼; thence S 89°17'01"E, along the north line of said Section 26, also being the north line of said NE¼NW¼, a distance of 317.23 feet (record east 317.13'); thence S00°19'30"E, a distance of 50.01 feet, to the south right-of-way line of Dell Range Boulevard; thence S°89 17'01"E, along said south Right-of-Way line, a distance of 141.66 feet, to the west line of Goodwater Drive; thence S00°19'35"E, along said west line, a distance of 217.74 feet; thence S17°07'52"W, along said west line, a distance of 100.00 feet, to the northeast corner of Block 1, Goodwater Addition; thence N89°15'58"W, along the north line of said Block 1, a distance of 111.46 feet; thence N00°19'30"W, a distance of 367.65 feet to the Point Of Beginning.

AND

PARCEL 'B'

a portion of the NW¼NE¼NW¼ Section 26, Township 14N, Range 66W of the 6th P.M., Laramie County, Wyoming, being more particularly described as follows:

Beginning at a point on the north line of said Section 26, which point is 488.57 feet east from the northwest corner of said NW¼NE¼NW¼; thence easterly along said north line of Section 26, a distance of 175.6 feet, to the northeast corner of said NW¼NE¼NW¼; thence southerly, along the east boundary of said NW¼NE¼NW¼, a distance of 510 feet; thence westerly, parallel with the north boundary of said Section 26, a distance of 173.2 feet; thence northerly, parallel with the west boundary of said NW¼NE¼NW¼, a distance of 510 feet to the Point Of Beginning.

AND

PARCEL 'C'

all of Block One, Block Two and Block 3, and those portions of adjacent rights-of-way as known as Water Blue Lane, Goodwater Drive and the southerly 10.00 feet of Dell Range Boulevard, Goodwater Addition, City of Cheyenne, Laramie County, Wyoming,

Have caused the same to be vacated, platted and/or re-platted and known as DEL-VAN STORAGE PARK, and do hereby declare the subdivision of said land as it appears on this plat, to be their free act and deed and in accordance with their desires and do hereby grant the easements for the purposes described and dedicate to the public the right-of-way as indicated hereon.

Dell-Vann Storage, LLC

by: Jerry Ciz

Jerry Ciz as member

ACKNOWLEDGEMENT

STATE OF WYOMING)
) SS
COUNTY OF LARAMIE)

The foregoing instrument was acknowledged before me this 5th day of May, 2015 by Jerry Ciz as member for Dell-Vann Storage, LLC.

TERRI D. APPLEGARTH - NOTARY PUBLIC
COUNTY OF LARAMIE STATE OF WYOMING
MY COMMISSION EXPIRES APRIL 20, 2018

Terri Applegarth

Notary Public, Laramie County, WY

My Commission Expires: April 20, 2018

CERTIFICATE OF SURVEYOR

I, Jeffrey B. Jones, Registered Professional Land Surveyor in the State of Wyoming, for and on behalf of Steil Surveying Services, LLC, hereby state, to the best of my knowledge, information and belief, that this map was prepared from field notes taken during an actual survey made by me or under my direct supervision; and that this map correctly shows the results of said survey and that the monuments found or set are as shown.

JEFFREY B. JONES 5910
5/5/15

LEGEND

◒	FOUND 1 ½" ALUMINUM CAP P.L.S. 2500.
+	DEED CORNER NOT MONUMENTED
⊙	SET ⅝" X 24" LONG REBAR WITH 1½" ALUMINUM CAP STAMPED "SSS P.L.S. 5910"
▲	FOUND 3 ¼ " ALUMINUM CAP MARKED "PLS 2500"
●	FOUND 1½" ALUMINUM CAP ILLEGIBLE
◉	FOUND 1½" ALUMINUM CAP STAMPED "PLS 9843"
Ⓟ	FOUND ½" IRON PIPE
△	CITY OF CHEYENNE CONTROL MONUMENT
▨	LANDS DEDICATED AS PUBLIC RIGHT-OF-WAY THIS PLAT
(R)	DENOTES RECORD DATA FROM PREVIOUS PLATS & DEEDS
(D)	DENOTES MEASURED DATA THIS SURVEY

NOTES

1) *BASIS OF AZIMUTH – CITY OF CHEYENNE DATUM REFERENCED FROM CITY CONTROL MONUMENTS "CP RIDGE" & "CP ZEUS".*
2) ALL LOT CORNERS, ANGLE POINTS, AND POINTS OF CURVATURE TO BE MONUMENTED WITH 1½" ALUMINUM CAP STAMPED "SSS P.L.S. 5910" ON ⅝"x24" REBAR.
3) NO PORTION OF THE SUBJECT PROPERTY FALLS WITHIN FEMA SPECIAL 100-YEAR FLOOD HAZARD AREA AS SHOWN ON F.I.R.M PANEL # 56021C1091F; DATED JANUARY 17, 2007.
4) DOMESTIC WATER AND SANITARY SEWER SERVICES TO BE PROVIDED BY CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES (BOPU).
5) 3,468 SQUARE FEET OF STREET RIGHT-OF-WAY TO BE DEDICATED THIS PLAT.
6) FINAL PLAT DELL RANGE BOULEVARD (RECP# 037406) IDENTIFIES AN 80' ADDITIONAL R/W ESTABLISHED BY ADJOINING PLATS AS SHOWN.

APPROVALS

Approved by the City of Cheyenne Planning Commission this 2ND day of SEPTEMBER, 2014.

Development Director, City of Cheyenne, Wyoming

Approved by the Council of the City of Cheyenne, Wyoming this 22ND day of SEPTEMBER, 2014.

Mark D T Rinne DDS

Mayor (Acting)

ATTEST: Carol Intlekofer

City Clerk

VACATION STATEMENT

IT IS THE INTENT OF THIS REPLAT TO VACATE ALL OF GOODWATER ADDITION INCLUDING ALL PLATTED EASEMENTS AND RIGHTS-OF-WAY ADJACENT THERETO (GOODWATER DRIVE, WATER BLUE LANE AND THE SOUTHERLY 10.00 FEET OF DELL RANGE BOULEVARD) RECORDED APRIL 30TH, 2007 IN PLAT CABINET 9, SLOT 26 IN LARAMIE COUNTY CLERKS OFFICE, CHEYENNE WYOMING

FILING RECORD

RECP #: 660688
RECORDED 5/7/2015 AT 10:33 AM BK# 10 PG# 124
Debra K. Lathrop, CLERK OF LARAMIE COUNTY, WY PAGE 1 OF 1

DEL[redacted]-VAN[redacted] STORAGE PARK

SITUATED ON A PORTION OF
THE NE¼NW¼ OF SECTION 26
T.14N. R.66W. 6TH P.M. AND ALL OF
GOODWATER ADDITION,
CITY OF CHEYENNE,
LARAMIE COUNTY, WYOMING

PREPARED SEPTEMBER 2014

REVISED: 4/3/2015

\\STORAGE2013\DRAWINGS\2014 DWG\14131 GOODWATER DEL-VAN\14131 FINAL.DWG

STEIL SURVEYING SERVICES, LLC
PROFESSIONAL LAND SURVEYORS
1102 WEST 19th ST. CHEYENNE, WY. 82001 ○ (307) 634 -7273
756 GILCHRIST ST. WHEATLAND, WY. 82201 ○ (307) 322 -9789
www.SteilSurvey.com ○ info@SteilSurvey.com

DEVA-01

RESOLUTION NO. 1047

ENTITLED: "A RESOLUTION AUTHORIZING THE MAYOR AND CITY CLERK OF THE CITY OF CHEYENNE TO EXECUTE IN BEHALF OF SAID CITY AN APPROVAL FOR FILING OF THE PLAT OF LAND SUBDIVISION OF TRACTS 303 AND 304 SUNNYSIDE ADDITION 7th FILING, LARAMIE COUNTY, WYOMING."

WHEREAS, Walter H. Land and Ida E. Land have heretofore offered to the City of Cheyenne, for its approval of the filing thereof, a certain plat entitled Land Subdivision of Tracts 303 and 304 Sunnyside Addition 7th Filing, Laramie County, Wyoming; and

WHEREAS, Chapter 29, Section 1102, Wyoming Compiled Statutes, 1945, State of Wyoming, provides that plats of land adjacent to or within one mile of the boundaries of any incorporated city or town shall be jointly approved by both the Board of County Commissioners and the legislative body of such city or town before such plat shall be filed and recorded in the office of the County Clerk; and

WHEREAS, no good reason appears to the Council why the plat aforesaid should not be filed for record with the County Clerk, it being understood that the same does not constitute an addition to the City of Cheyenne, nor in any manner obligate the said City to improve or maintain said subdivision or any part thereof;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF CHEYENNE:

That the City does approve for filing in the office of the County Clerk and Ex-officio of Deeds of Laramie County, Wyoming, the plat heretofore referred to as Land Subdivision of Tracts 303 and 304 Sunnyside Addition 7th Filing acknowledged and subscribed by Walter H. Land and Ida E. Land; and that the Mayor and City Clerk be, and they hereby are, authorized and empowered to execute on such plat the written approval of said City, for the purpose of entitling the same to record.

PRESENTED, READ, ADOPTED AND PASSED THIS 10th DAY OF January, 1955.

V S Christensen
MAYOR

(SEAL)

ATTEST:

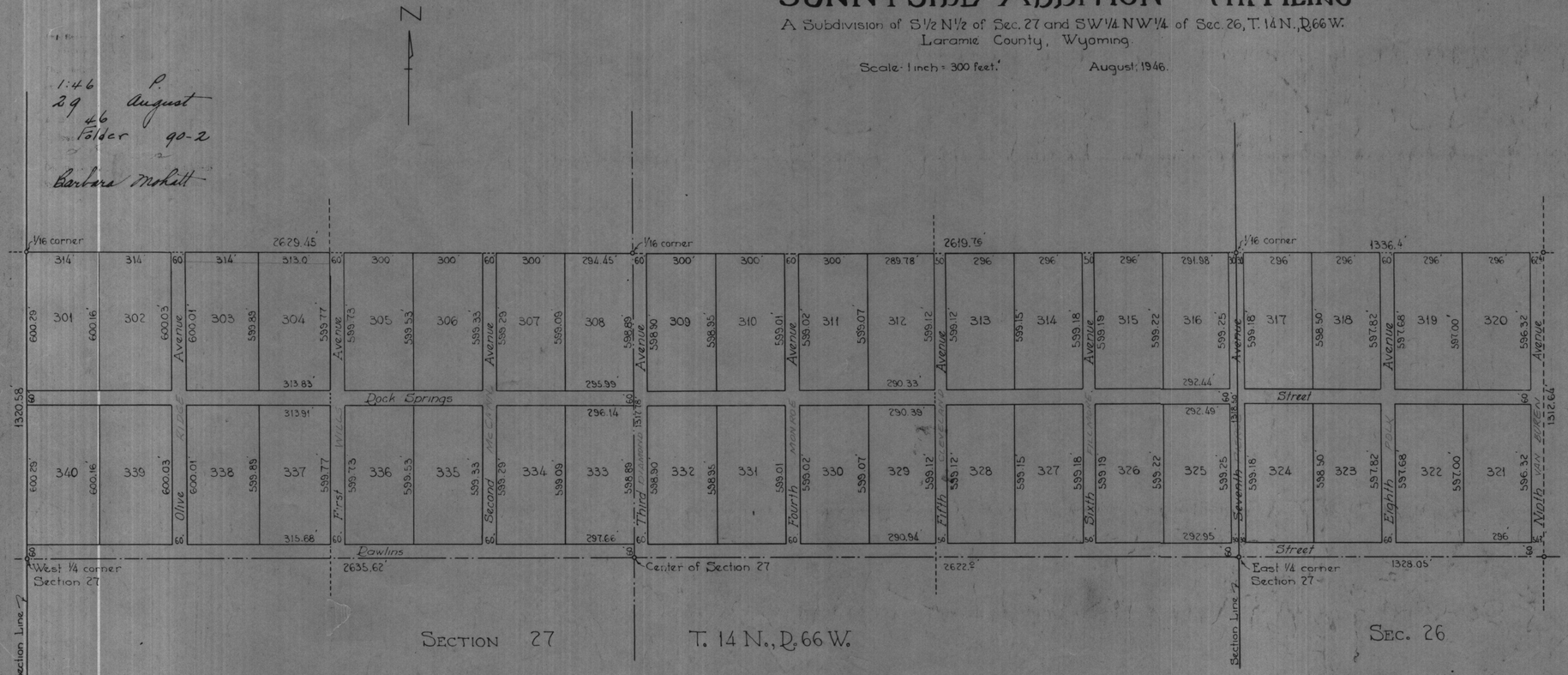
H M Halterscheid
CITY CLERK

SUNNYSIDE ADDITION - 7TH FILING

A Subdivision of S½ N½ of Sec. 27 and SW¼ NW¼ of Sec. 26, T. 14 N., R. 66 W.
Laramie County, Wyoming.

Scale: 1 inch = 300 feet. August, 1946.

1:46 P.
29 August
46
Folder 90-2
Barbara Mokett



SECTION 27 T. 14 N., R. 66 W. SEC. 26

ENGINEER'S CERTIFICATE

State of Wyoming }
County of Laramie } ss

I, C. E. Gattis, of Cheyenne, Wyoming, hereby certify that this map of Sunnyside Addition - 7th Filing, was made from notes taken during an actual survey made by me from July 24th to August 18th, 1946, and that it correctly represents the tracts as marked on the ground by iron stakes set at each corner and embraces the S½ N½ of Section 27 and the SW¼ NW¼ of Section 26, T. 14 N., R. 66 W., 6th P.M. and containing 200 acres more or less.

C. E. Gattis
Registration No. 138.

DEDICATION

Know all men by these presents that Frank R. Dildine, owner in fee simple, to the land embraced in the above plat and description of "Sunnyside Addition - 7th Filing", do hereby declare this plat to be his free and voluntary act and deed and do hereby dedicate to the use of the public forever all streets shown hereon.

Witness Mary M. Lapman

Frank R. Dildine
Owner

ACKNOWLEDGEMENT

State of Wyoming }
County of Laramie } ss

On this 26th day of August, A. D. 1946, before me appeared Frank R. Dildine, to me personally known to be the individual described in and who executed the within and foregoing dedication and acknowledged the said instrument to be his free and voluntary act and deed for the purpose therein mentioned.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year first above written.

Mary M. Lapman
Notary Public

Residing at Cheyenne, Wyoming.
My Commission expires October 14 1946

B-1

Approved as to form only:
Date: 11/18/2015

RESOLUTION NO. 5732

ENTITLED: **"A RESOLUTION AUTHORIZING A STREET NAME CHANGE FROM MONROE AVENUE TO FRANK COURT FOR THE PORTION OF THE STREET LOCATED NORTH OF ROCK SPRINGS STREET AND ORIGINALLY PLATTED WITH SUNNYSIDE ADDITION, 7TH FILING, CITY OF CHEYENNE, LARAMIE COUNTY, WYOMING."**

WHEREAS, a plat has been submitted, Dry Creek Business Park, which proposes creating a new segment of Monroe Avenue; and

WHEREAS, the new segment of Monroe Avenue is a logical extension of the segment of Monroe Avenue platted in 1993 in Swartz Subdivision; and

WHEREAS, having parallel streets with the same name is generally undesirable and confusing; and

WHEREAS, the only structure potentially affected by this change is currently addressed on Frank Court;

NOW, THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF CHEYENNE, WYOMING, THAT the requested street name change from Monroe Avenue to Frank Court for the portion of the street located north of Rock Springs Street and originally platted with Sunnyside Addition, 7th Filing, is hereby approved and the City Engineer or his designated representative is directed to change the City of Cheyenne Official Map.

PRESENTED, READ AND ADOPTED THIS 14th **DAY OF** December**, 2015.**

RICHARD L. KAYSEN, MAYOR

(SEAL)
ATTEST:

CAROL INTLEKOFER, CITY CLERK

Street Name Change

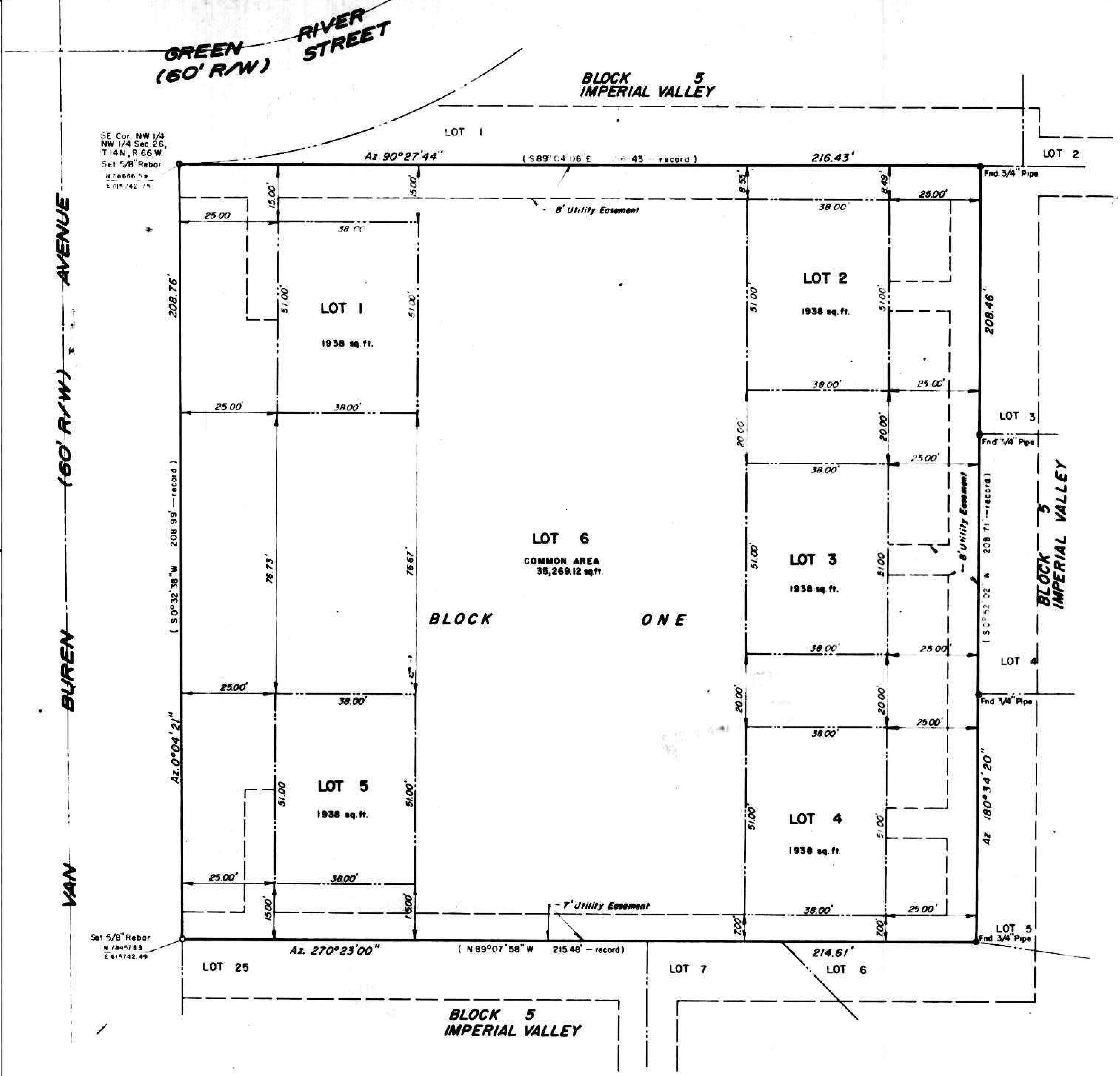
Legend

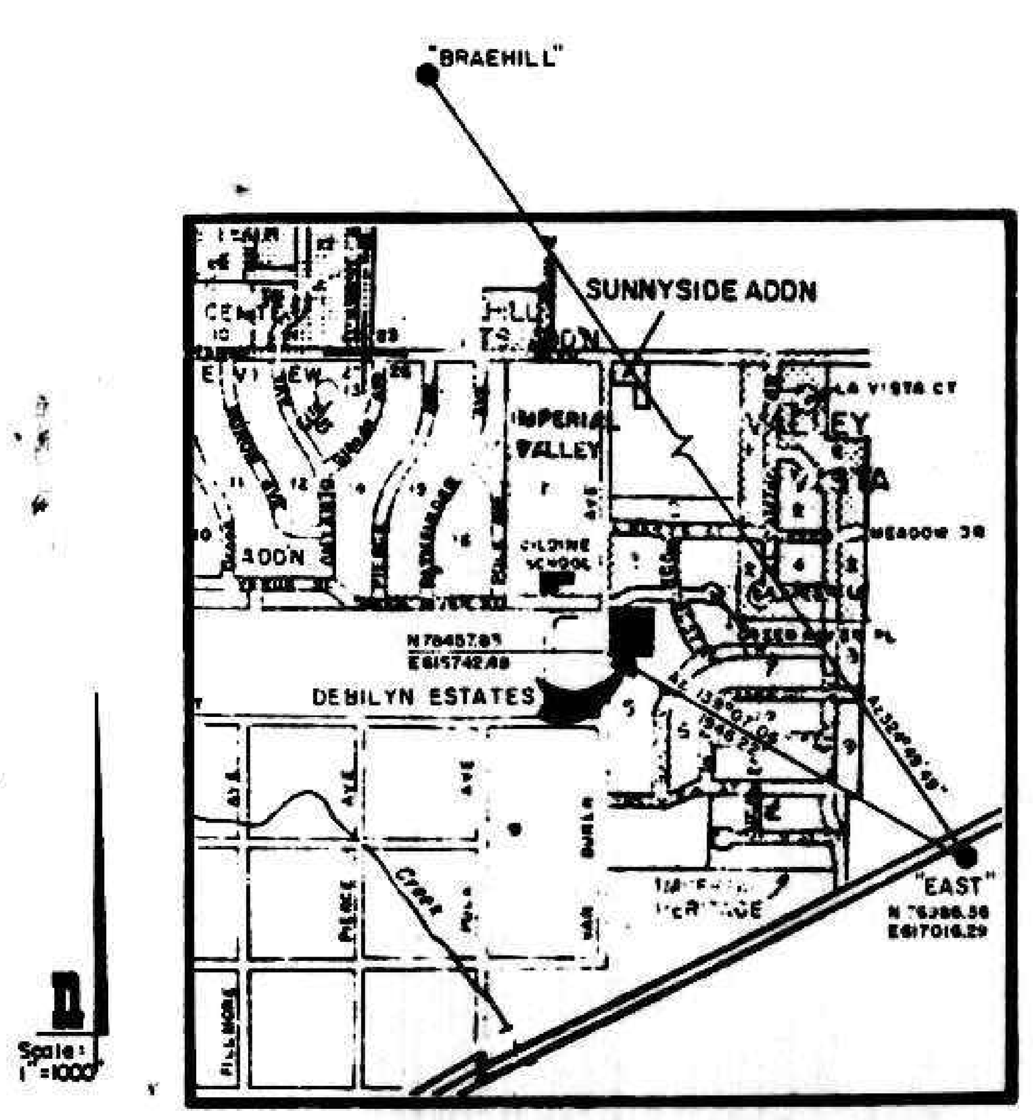
City Street Centerline

Ownership

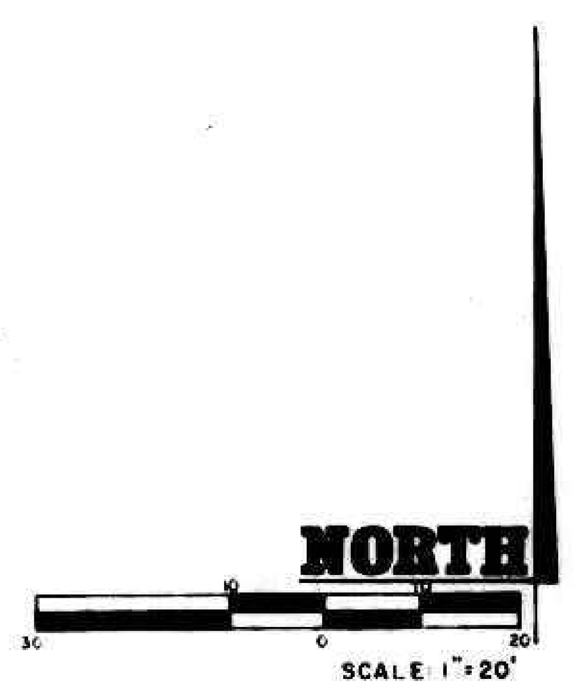
This map is made possible through the Cheyenne and Laramie County Cooperative GIS (CLCCGIS Program and is for display purposes only. The CLCCGIS invokes its sovereign and governmental immunity in allowing access to or use of this dat

Date: 11/17/2015





VICINITY MAP & HORIZONTAL CONTROL DIAGRAM



NOTE:

Basis of Azimuth - Horizontal Control Diagram, City of Cheyenne

LEGAL DESCRIPTION

A tract of land situated within the SE¼ of the NW¼ of Section 26, T. 14N., R. 66W., 6th p.m., Laramie County, Wyoming, being more particularly described as follows:

Beginning at the southeast corner of the NW¼ of the NW¼ of Section 26;

Thence on an Azimuth of 90°27'44" along the North line of the SE¼ of the NW¼ and the South Boundary line of Lot 1, Block 5, Imperial Valley Subdivision a distance of 216.43 feet to a point on the West Boundary line of Lots 3-5, Block 5, Imperial Valley Subdivision and monumented by a 3/4" Pipe.

Thence on an Azimuth of 180°34'20" along the West Boundary line of Lots 3-5, Block 5, Imperial Valley Subdivision a distance of 208.46 feet to the northeast corner of Lot 6, Block 5, Imperial Valley Subdivision and monumented by a 3/4" Pipe;

Thence on an Azimuth of 270°23'00" along the North Boundary line of Lots 6, 7 and 25, Block 5, Imperial Valley Subdivision a distance of 214.61 feet to a point on the East Boundary line of Van Buren Avenue and monumented by a 5/8" rebar;

Thence on an Azimuth of 0°04'21" along the East Boundary line of Van Buren Avenue a distance of 208.76 feet to the Point of Beginning.

Said parcel of land contains 44,959.12 square feet or 1.03 acres, more or less.

DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Debilyn Enterprises, a partnership of Roy L Howell, Theodore L. Romano and William McIlvain, owners in fee simple of Lots 1-6, Block 1, Debilyn Estates, do hereby declare this subdivision of said lands, as appears on this Plat to be their free act and deed and in accordance with their desires, and does hereby grant the easements for the purposes indicated hereon.

Roy L. Howell

Theodore L. Romano

Bill McIlvain

SURVEYOR'S CERTIFICATE

I, Jon L. Anderson, a Professional Engineer and Land Surveyor registered in the State of Wyoming, hereby certify that this Plat of Debilyn Estates ... recorded documents on file at the Laramie County Clerk's ... from an actual survey made under my direct supervision during the month of November, 1980 of the Land described hereon and so monumented as indicated hereon. I further certify that this plat correctly and accurately shows said boundary of said Debilyn Estates to the best of my knowledge.

Jon L. Anderson
Wyoming P.E. & L.S. No. 2331

ACKNOWLEDGMENT

State of Wyoming)
County of Laramie) ss

The dedication instrument was acknowledged before me by Debilyn Enterprises, a partnership of Roy L. Howell, Theodore L. Romano and Bill McIlvain this 29th day of April, 1981.

Notary Public: Michael W. Pell

My Commission Expires: August 9, 1983

MICHAEL W. PELL - NOTARY PUBLIC
COUNTY OF LARAMIE — STATE OF WYOMING
My Commission Expires Aug. 9, 1983

Lots 5 ... feet see affidavit page 1176 page 146

APPROVALS

Approved by the Cheyenne-Laramie County Regional Planning Commission this 18th day of MAY, 1981.

Secretary — Chairman

Approved by the City Council of the City of Cheyenne, Wyoming this 22nd day of June, 1981.

City Clerk — Mayor

Approved by the County Commissioners of Laramie County, Wyoming this 28 day of ___, 1981

County Clerk — Chairman

A FINAL PLAT OF

DEBILYN ESTATES

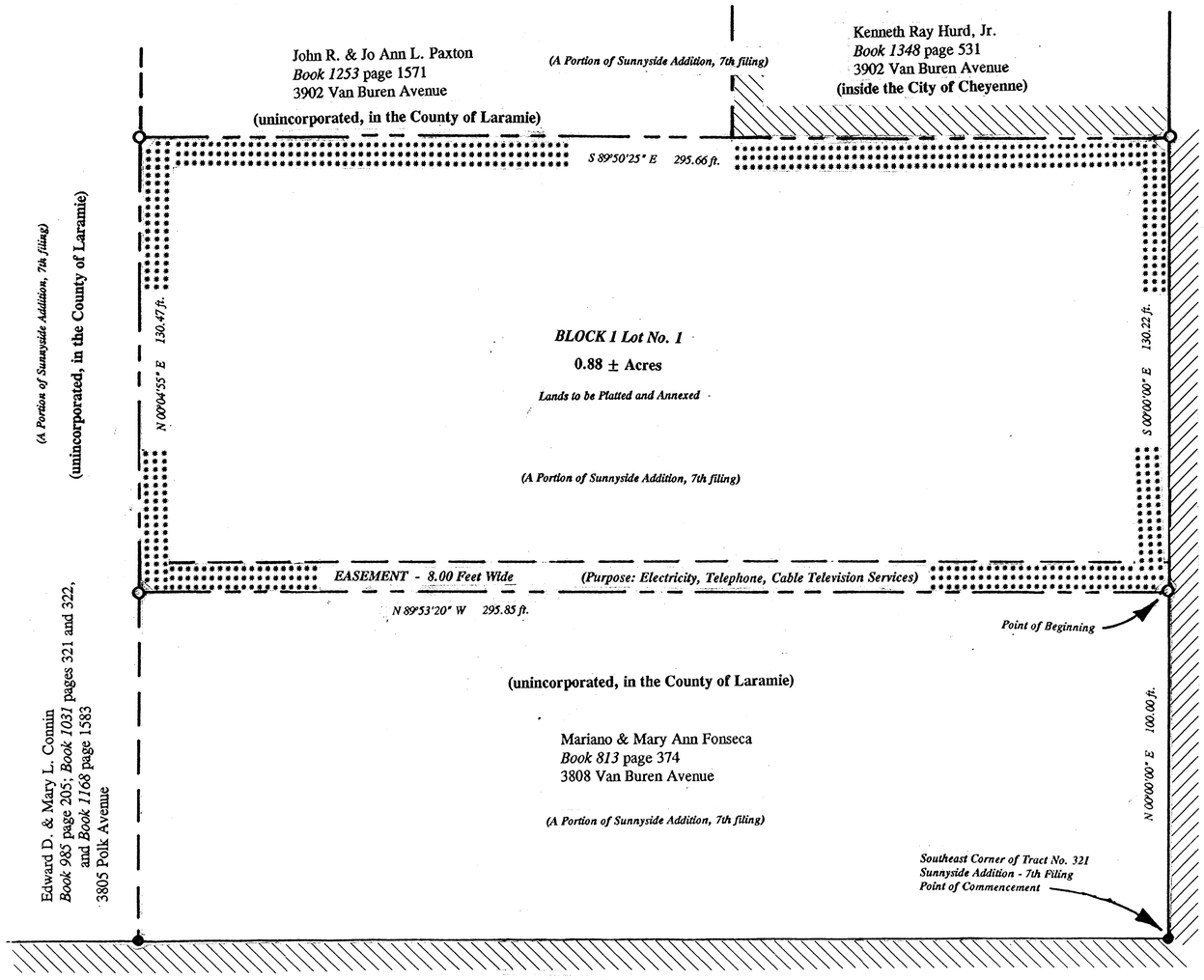
A MULTI-FAMILY COMPLEX SITUATED WITHIN THE SE 1/4 OF THE NW 1/4, SECTION 26, T.14N., R.66W., 6th P.M., LARAMIE COUNTY, WYOMING.

FILE RECORD

job no: 80.307
surveyed by: r.c.
drawn by: m.p.
date: 3.31.81
reviewed by: r.c.
approved by: l.a.

project title: final plat
client: debilyn enterprises

sheet 1 of 1



Symbols:

- ○ Monuments set at corners of replatted property (2 inch diameter aluminum caps)
- ● Found, ½ inch diameter rebar with yellow plastic cap stamped "DMH 558."
- ////// Current boundary of the City of Cheyenne.
- ▪▪▪▪▪ Boundary of the lands to be platted and annexed to the City of Cheyenne.

Coordinates and Ties to City of Cheyenne Geodetic Control

Station	*x*-coordinate	*y*-coordinate
Δ *DEL RANGE*	622,372.04	79,786.04
Δ *EAST*	617,016.21	76,966.42
Southeast Corner of Subdivision	615,687.5	77,495.8

From Station	*To Station*	*Bearing*	*Distance*
Δ *DEL RANGE*	*S.E. Corner*	*S 71°05'15" W*	*7,066 ft.*
Δ *EAST*	*S.E. Corner*	*N 68°16'35"E*	*1,430 ft.*

Filing Record

Reception: 254485

State of Wyoming } *SS*
County of Laramie }

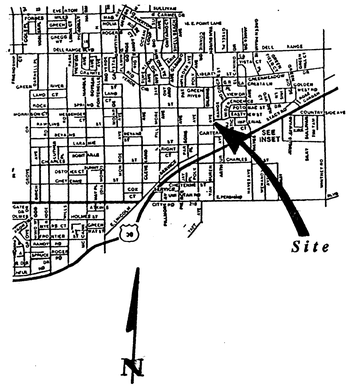
This instrument was filed for record at 3:41 O'clock P m, on the 18th day of June A.D. 19 99 duly recorded at Book 1524 Page 1061 PC/7/185 Rec 1

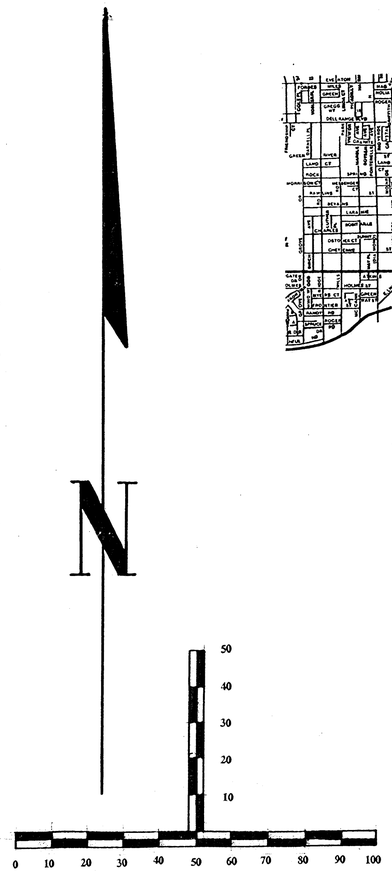
Laramie County Clerk & Ex-Officio Registrar of Deeds: Debbie K. Shuffrey

by Susan Rivera, Deputy

Vicinity Map

(Not Drawn to Scale)





Scale: one inch equals twenty feet (1:240)

Notes:

1. The basis of bearings is the westerly boundary of Van Buren Avenue, as monumented, being N 00°00'00" E.
2. The original corners for the parcel of land to be replatted were found and replaced. The southwest corner was a ½ inch diameter rebar without a plastic cap. The remaining three corners were ½ in diameter rebars with plastic caps marked "DMH 558" [Donald M. Hopkins, P.E.&P.L.S.].
3. The eight foot wide easement along the southerly boundary is for the existing pole line for the purposes of electricity, telephone, and cable television service to 3808 Van Buren Avenue and 3814 Van Buren Avenue.
4. The monuments for the corners of this parcel of land are 2 inch diameter aluminum caps affixed to iron pipes and stamped: *PE/PLS 3723.*

Certificate of the Surveyor

I, Dr. Herbert W. Stoughton, Wyoming Professional Engineer and Professional Land Surveyor No. 3723, hereby certify that this plat was prepared by me from a survey performed under my supervision during the month of July 1998, that the monuments are set as shown, and that the plat correctly and accurately depicts said survey.

Note: The originals of this plat are signed in red ink and an embossed PE/PLS seal was affixed.

Herbert W. Stoughton

Dr. Herbert W. Stoughton, P.E., P.L.S., C.P.
Geodetic Engineer

Monuments set 2/26/1999 at 14:00 hrs. MST. Date signed: 26 February 1999

DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS THAT: Ethel M. French, also known as Minnie E. French, owner in fee simple of the following described tract, situate in a portion of the Southwest one-quarter of the Northwest one-quarter (SW ¼, NW ¼) of Section 26, Township 14 North, Range 66 West of the *Sixth Principal Meridian*; County of Laramie, State of Wyoming; being more particularly described as follows:

Commencing at the southeast corner of Tract No. 321, *Sunnyside Addition - 7th Filing*, said southeast corner is also the northwest corner of the intersection of Van Buren Avenue and Rawlins Street; thence N 00°00'00" E along the easterly boundary of said Tract No. 321, also being the westerly boundary of said Van Buren Avenue, a distance of 100.00 feet to the *Point of Beginning*; thence N 89°53'20" W, a distance of 295.85 feet to a point in the westerly boundary of said Tract No. 321; thence N 00°04'55" E along said westerly boundary of Tract No. 321, a distance of 130.47 feet to a point; thence S 89°50'25" E, a distance of 295.66 feet to a point in easterly boundary of Tract No. 321 and said westerly boundary of Van Buren Avenue; thence S 00°00'00" E along said westerly boundary of Van Buren Avenue, a distance of 130.22 feet to the *Point of Beginning*.

Containing 0.88 acres of land, more or less.

Together with and including an easement for the purposes of electricity, telephone, and cable television service, as depicted of the accompanying plat; said easement is eight feet in width, measured at right angles, lying adjacent to the southerly boundary of the aforedescribed parcel of land, and extending westerly from the westerly boundary of Van Buren Avenue to the westerly boundary of said aforesaid described parcel of land.

Minnie E. French

Ethel M. French (also known as Minnie E. French)

ACKNOWLEDGMENT

State of Wyoming

County of Laramie

The dedication instrument was acknowledged before me this 11th day of May, 1998, by Ethel M. French, sole owner of the above described parcel of land.

Lisa Howell

LISA HOWELL - NOTARY PUBLIC
COUNTY OF LARAMIE STATE OF WYOMING
My Commission Expires September 23, 2001

Notary Public, Laramie County, Wyoming

My Commission expires: 9-23-01

APPROVALS

Approved by the Cheyenne-Laramie County Regional Planning Commission this 8th day of September 1998.

Dorothy A. Wilson

Development Director

Approved by the City Council of the City of Cheyenne, Wyoming, this 14th day of December 1998.

Mayor

Carol A. Intlekofer

City Clerk

Final Plat

MINNIE FRENCH ADDITION
An Addition to the City of Cheyenne

Replat of a portion of Tract 321, *Sunnyside Addition, 7th Filing*

Situate in the SW ¼ of the NW ¼ of Section 26; T. 14 N., R. 66 W.; *Sixth Principal Meridian*
County of Laramie ***State of Wyoming***

Surveyed & Drafted: July 1998

Dr. Herbert W. Stoughton, P.E., P.L.S. & C.P.
2821 Carey Avenue
Cheyenne, Wyoming 82001
(307) 632-7460

SUNNYSIDE ADDITION - 6TH FILING.

A Subdivision of the N½ N½ of S½, Section 27 and the N½ SW¼ of Section 26,
T. 14 N., R. 66 W., 6th. P.M.

LARAMIE COUNTY, WYOMING.

Scale - 1" = 300'. April, 1946.

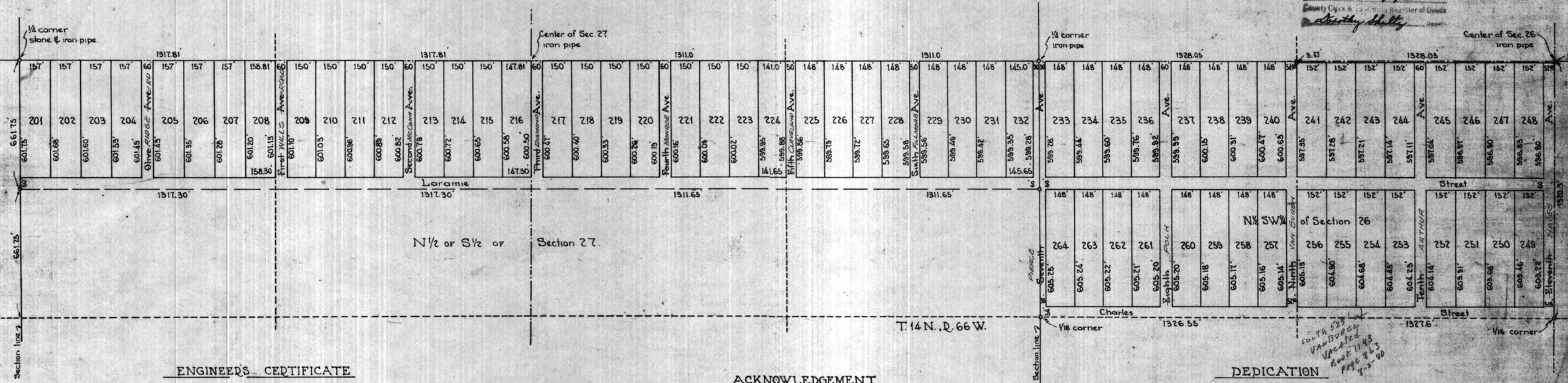
The State of Wyoming } ss
County of Laramie }

This instrument was filed for record at 1:50 o'clock P. M. on the 14 day of May A. D. 19 46 and duly recorded in Book 90-1 of R. Page

County Clerk & ex-officio Registrar of Deeds

By Dorothy Shelby Deputy

44580



ENGINEER'S CERTIFICATE

State of Wyoming }
County of Laramie } ss

I, C.E. Gattis, of Cheyenne, Wyoming, hereby certify that this map of Sunnyside Addition - 6th Filing was made from notes taken during an actual survey made by me from March 3rd. to April 21st, 1946, and that it correctly represents the tracts as marked on the ground by iron stakes set at each corner and embraces the N½ N½ of S½ of Section 27 and the N½ SW¼ of Section 26, T. 14 N., R. 66 W., 6th. P.M. and containing 160 acres more or less.

C.E. Gattis
Registration No. 138.

ACKNOWLEDGEMENT

State of Wyoming }
County of Laramie } ss

On this 9 day of May, A.D. 1946, before me appeared Frank R. Dildine, to me personally known to be the individual described in and who executed the within and foregoing dedication and acknowledged the said instrument to be his free and voluntary act and deed for the purpose therein mentioned.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year first above written.

Residing at Cheyenne Wyoming
My Commission expires October 19 1946

Notary Public.

DEDICATION

Know all men by these presents that Frank R. Dildine, owner in fee simple to the land embraced in the above plat and description of Sunnyside Addition - 6th Filing, do hereby declare this plat to be his free and voluntary act and deed and do hereby dedicate to the use of the public forever all streets shown hereon.

Witness: Mary M. Chapman

Frank R. Dildine
Owner.

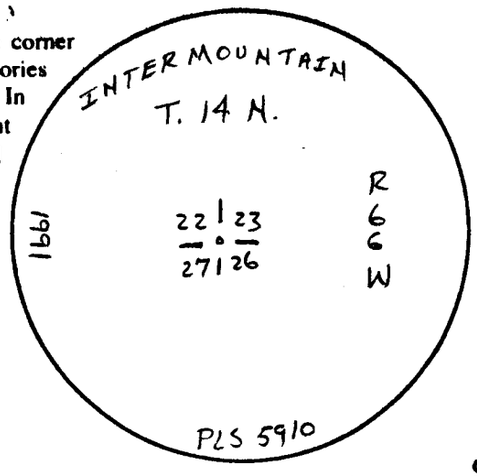
South 528 Van Buren Vacated Book 1143 Page 863 8-2-90

K-3

Wyoming Certified Land Corner Recordation Certificate

This form is to be completed in accordance with W.S. 36-11-101, printed in black ink or typed, and shall be for one individual corner.

Describe below, or show in sketch attached to this form, the corner evidence found. Include condition and type of monument, accessories and ties. Describe any maintenance or rehabilitation performed. In the circle to the right, show monument inscription. If monument is determined lost or obliterated, restate the GLO or BLM original field note record; describe or show the procedure used to reestablish the corner and all data as above for a found monument.



Monument Inscription

Field Date 27 DEC 91 Office Reference 2245

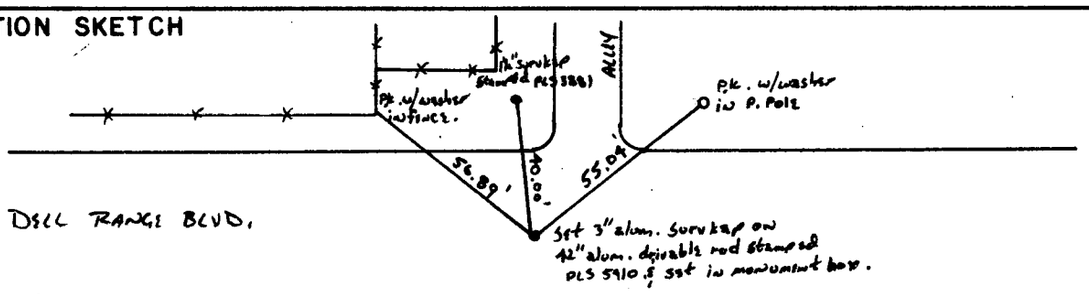
EVIDENCE FOUND: 1/2" Iron pipe.

GLO RECORD: None

MONUMENT SET: 3" alum surv cap stamped PLS 5910 on 42" alum. drivable 3/4" rod. Cap & rod set inside monument box

REFERENCE POINTS SET: Set 2 pk. nails w/ washers. (See sketch)

LOCATION SKETCH



State of Wyoming
Office of County Clerk
County of _____

This Certified Land Corner Recordation Certificate was filed for record on the _____ day of _____, 19 ___, in Book No. T 14N, R 66W, on Alpha-Numeric coordinates R-17 and was noted on the Cross Index Plat.

County Clerk

Corner Type: ☒ Aliquot Corner ☐ Other
Section(s) 22, 23, 27, 26 Meridian 6th P.M.
Corner Name Section Corner Township 14N. Range 66W Page 1
Sheet 1 of 1

RECEIVED
LARAMIE COUNTY
CHEYENNE, WY.
'92 JAN 3 PM 12 10
094086

1481

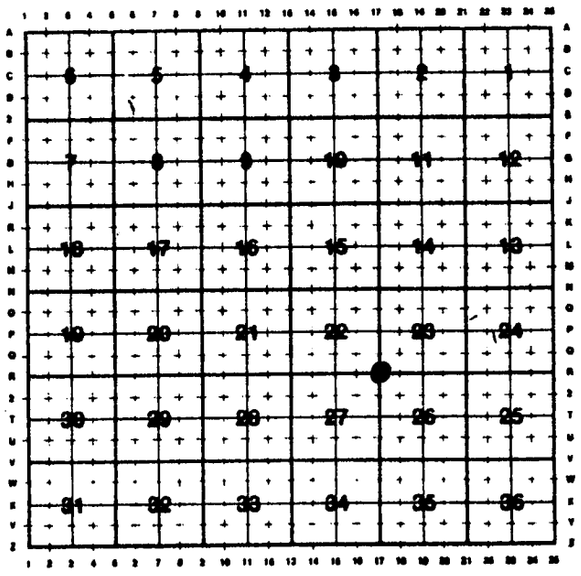
BOOK 1313

Directions for using the Cross Index Plat

Section, quarter and sixteenth corners will be marked with a dot at the corner location. The alpha-numeric coordinate number is then determined for the intersection of the two lines. A corner that applies to two or more townships shall be filed under all that apply by the use of photo copies.

Closing corners will be indexed under the township in which they control ownership. For 1/64, 1/256, 1/1024 and non-aliquot corners lying between grid designations, mark the appropriate grid area with a dot and use the index code to the north and west (local systems may be used if the method is approved by the County Surveyor or Clerk and a written description of its use is filed in the front of each book of certificates).

Cross Index Plat



State Plane Coordinates (optional)

Zone W WC EC E **feet/meters**

☐ NAD 1927 ☐ NGVD 1929 ☐ NAD 1983 ☐ NAVD 1988

North (Y) = _____ **East (X) =** _____ **EL =** _____

Latitude _____ **Longitude** _____

Scale Factor _____ **Geoid Height** _____

Certification

I, Jeffrey B. Jones, Wyoming PLS ~~PE~~ 5910 certify that I, or others under my supervision, have performed the work as described above and completed this form.

Company or Agency INTERMOUNTAIN PROFESSIONAL SERVICES, INC.
Mailing Address 1816 CENTRAL AVENUE
Street Address
City, State, ZIP CHEYENNE, WYOMING 82001
Telephone, FAX PH. 307-632-3138 FAX 307-632-3194

Professional Land Surveyor JEFFREY B. JONES 5910 WYOMING

Signature, Seal, and Date
Date 12/30/94

Sheet 1 of 1

1482

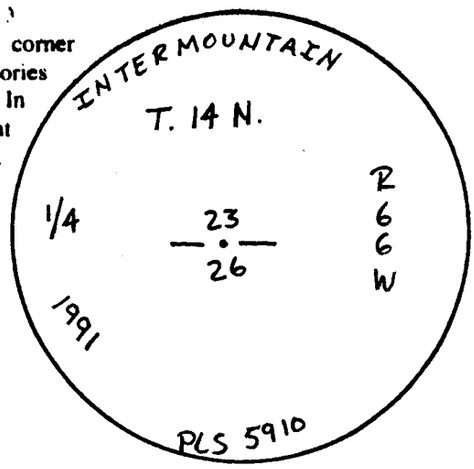
BOOK 1313

Wyoming Certified Land Corner Recordation Certificate

This form is to be completed in accordance with W.S. 36-11-101, printed in black ink or typed, and shall be for one individual corner.

Describe below, or show in sketch attached to this form, the corner evidence found. Include condition and type of monument, accessories and ties. Describe any maintenance or rehabilitation performed. In the circle to the right, show monument inscription. If monument is determined lost or obliterated, restate the GLO or BLM original field note record; describe or show the procedure used to reestablish the corner and all data as above for a found monument.

Field Date 27 DEC 91 Office Reference 2245



Monument Inscription

EVIDENCE FOUND: 1/2" Iron pipe.

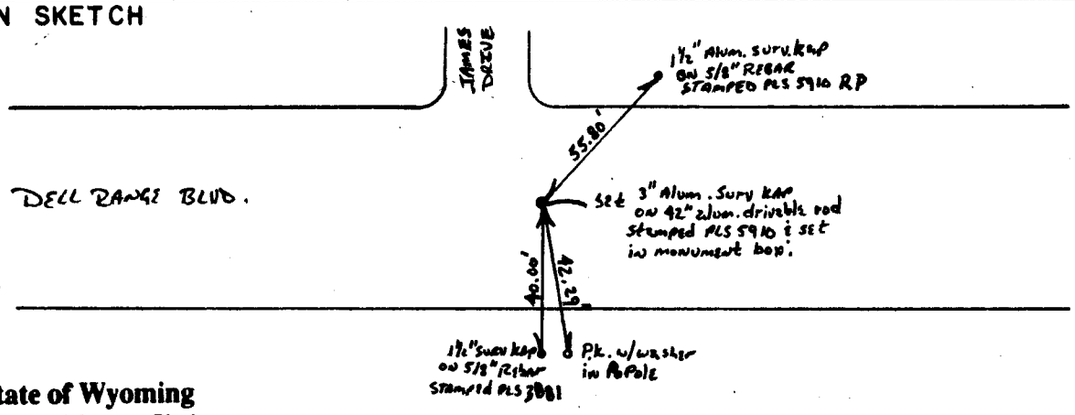
GLO RECORD: NONE

MONUMENT SET: 3" Alum. Surv Kap stamped PLS 5910 on 42" alum. drivable 3/4" rod. Cap & rod set inside monument box.

REFERENCE POINTS SET: 1 pk. nail w/ washer in South power pole. 1 1/2" Alum surkap on 5/8" rebar stamped PLS 5910 R.P. (See sketch)

RECEIVED
LARAMIE COUNTY
CHEYENNE, WY.
'92 JAN 3 PM 12 10
034088

LOCATION SKETCH



State of Wyoming
Office of County Clerk
County of _____

This Certified Land Corner Recordation Certificate was filed for record on the _____ day of _____, 19 ___, in Book No. T 14 N., R 66 W, on Alpha-Numeric coordinates R-19 and was noted on the Cross Index Plat.

County Clerk

Corner Type: ☒ Aliquot Corner ☐ Other
Corner Name 1/4 Corner
Section(s) 23, 26
Township 14 N.
Meridian 6th PM.
Range 66 W
Page 1
Sheet 1 of 1

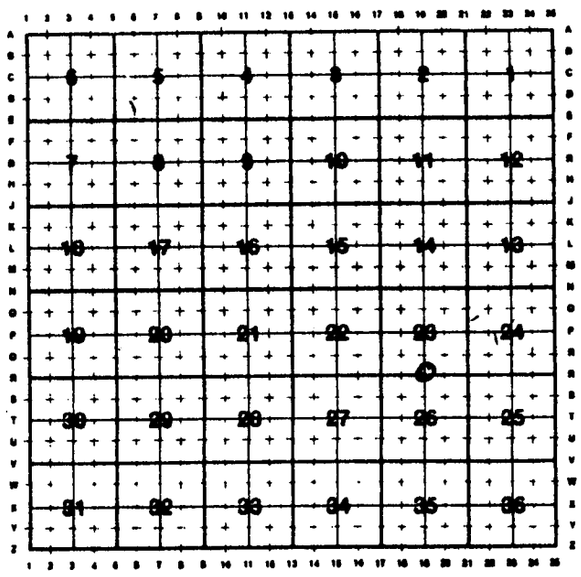
BOOK 1313

Directions for using the Cross Index Plat

Section, quarter and sixteenth corners will be marked with a dot at the corner location. The alpha–numeric coordinate number is then determined for the intersection of the two lines. A corner that applies to two or more townships shall be filed under all that apply by the use of photo copies.

Closing corners will be indexed under the township in which they control ownership. For 1/64, 1/256, 1/1024 and non–aliquot corners lying between grid designations, mark the appropriate grid area with a dot and use the index code to the north and west (local systems may be used if the method is approved by the County Surveyor or Clerk and a written description of its use is filed in the front of each book of certificates).

Cross Index Plat



State Plane Coordinates (optional)

Zone W WC EC E **feet/meters**

☐ NAD 1927 ☐ NGVD 1929 ☐ NAD 1983 ☐ NAVD 1988

North (Y) = _____ **East (X) =** _____ **EL =** _____

Latitude _____ **Longitude** _____

Scale Factor _____ **Geoid Height** _____

Certification

I, Jeffrey B. Jones, Wyoming PLS ~~RE~~ 5910 certify that I, or others under my supervision, have performed the work as described above and completed this form.

Company or Agency INTERMOUNTAIN PROFESSIONAL SERVICES, INC.
Mailing Address 1816 CENTRAL AVENUE
Street Address
City, State, ZIP CHEYENNE, WYOMING 82001
Telephone, FAX PH. 307-632-3138 FAX 307-632-3194

Professional Land Surveyor JEFFREY B. JONES 5910 WYOMING

_____
Signature, Seal, and Date

Sheet 1 of 1

BOOK 1313

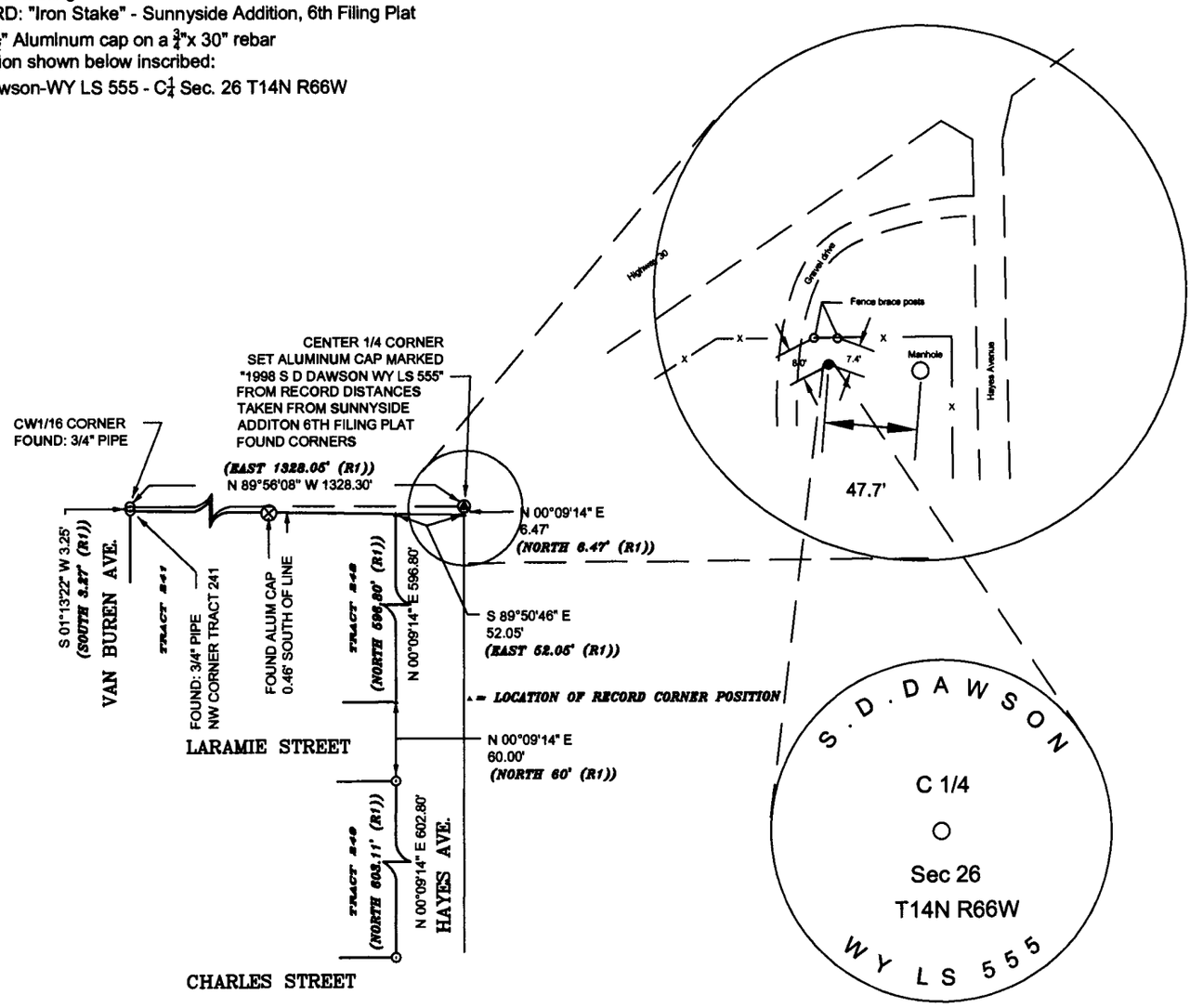
State of Wyoming Corner Record

(In compliance with the *CORNER PERPETUATION AND FILING ACT*, Wyoming Statutes, 1997 Section 33-29-140 et. seq., and the Rules and Regulations of the Board of Professional Engineers and Professional Land Surveyors)

Reverse side of this form may be used if more space is needed.

Record of original survey and citation of source of historical information (if corner is lost or obliterated). Description of corner monumentation evidence found and/or monument and accessories established to perpetuate the location of this corner. Sketch of relative location of monument, accessories, and reference points with course and distance to adjacent corner(s) (if determined in this survey). Method and rationale for reestablishment of lost or obliterated corner.

FOUND: Nothing
RECORD: "Iron Stake" - Sunnyside Addition, 6th Filing Plat
SET: 2½" Aluminum cap on a ¾"x 30" rebar
at location shown below inscribed:
S.D.Dawson-WY LS 555 - C¼ Sec. 26 T14N R66W

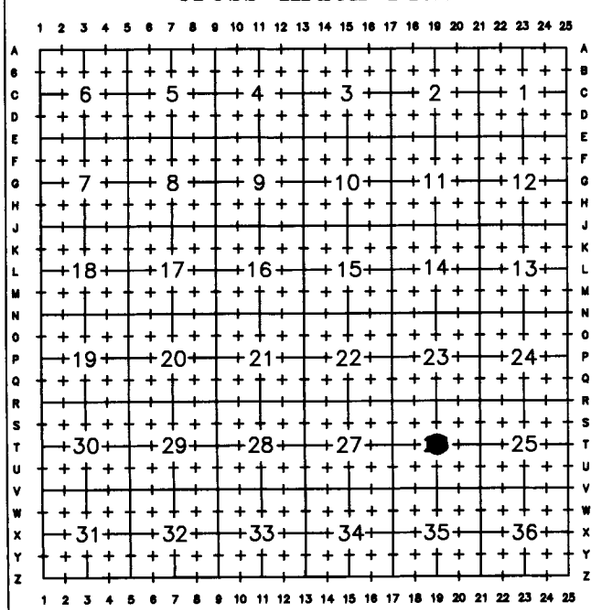


Monument location

Monument Inscripition

Date of Field Work: April 1998 Office Reference: 9812

Cross Index Plat



Firm/Agency, Address

Cornerstone Surveying Company
2120 Dey Avenue
Cheyenne, Wyoming 82001

Telephone Number: 1-307-637-6958

This corner record was prepared by me or under my direction and supervision.

SEAL & SIGNATURE

Professional Land Surveyor S. D. DAWSON 555 Date 3-20-04 WYOMING

RECORDED 3/22/2004 AT 12:48 PM REC# 381968 BK# 1799 PG# 1193
DEBRA K. LATHROP, CLERK OF LARAMIE COUNTY, WY PAGE 1 OF 1

Corner Name: Center 1/4 Corner, Section 26 , T14N, R66 W, 6th P.M. Cross-Index No.:T-19
County: Laramie, Wyoming

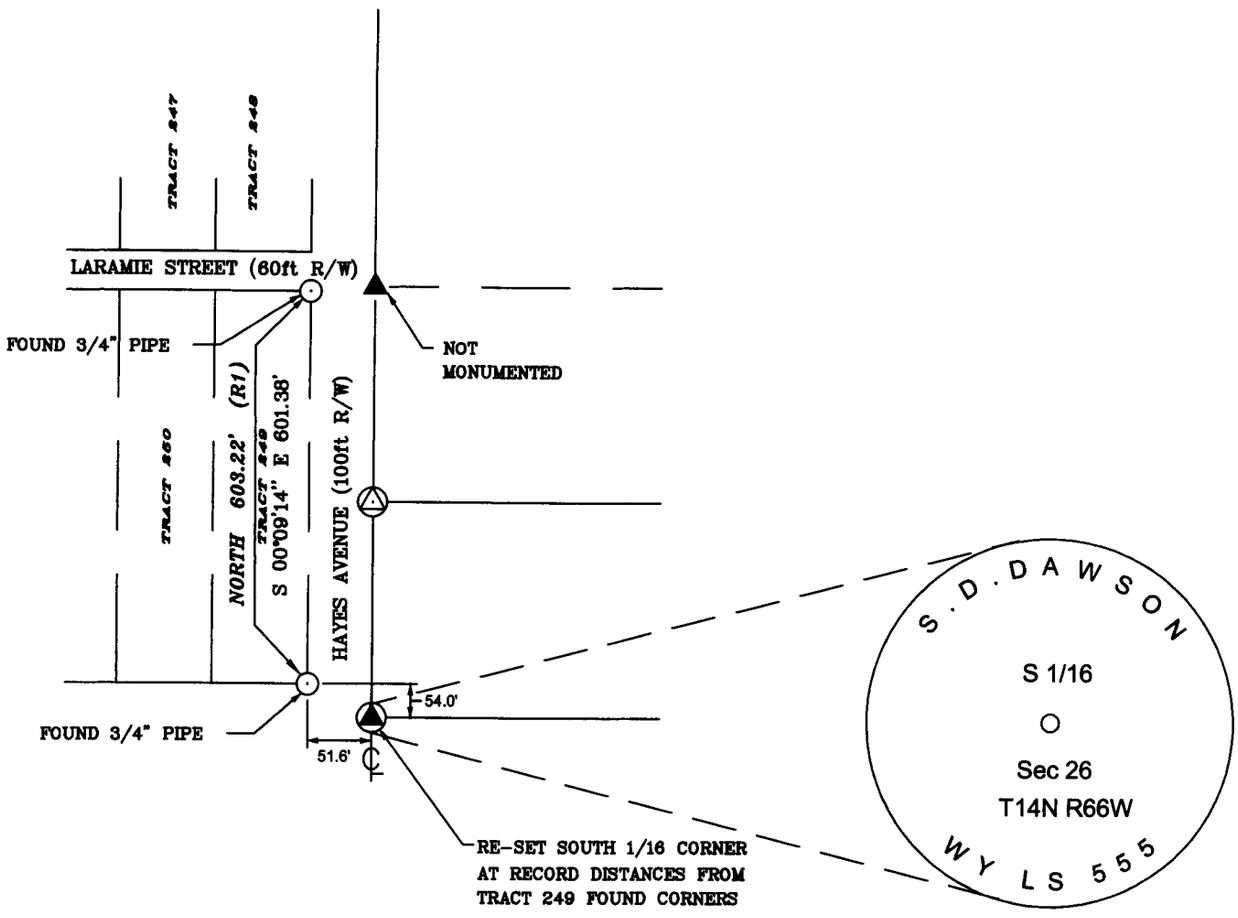
State of Wyoming Corner Record

(In compliance with the *CORNER PERPETUATION AND FILING ACT*, Wyoming Statutes, 1997 Section 33-29-140 et. seq., and the Rules and Regulations of the Board of Professional Engineers and Professional Land Surveyors)

Reverse side of this form may be used if more space is needed.

Record of original survey and citation of source of historical information (if corner is lost or obliterated). Description of corner monumentation evidence found and/or monument and accessories established to perpetuate the location of this corner. Sketch of relative location of monument, accessories, and reference points with course and distance to adjacent corner(s) (if determined in this survey). Method and rationale for reestablishment of lost or obliterated corner.

FOUND: Nothing
RECORD:"Iron Stake" - Sunnyside Addition, 6th Filing Plat
SET: 2½" Aluminum cap on a ¾"x 30" rebar as shown below inscribed: S.D.Dawson-WY LS 555 - S1/16 Sec. 26 T14N R66W

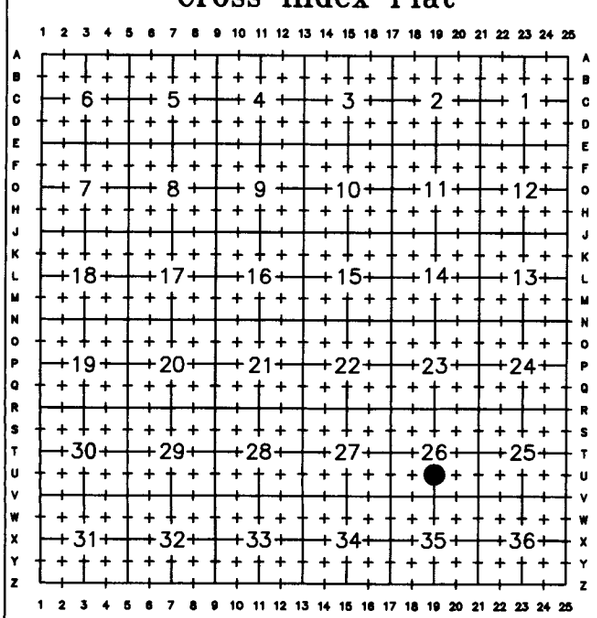


Monument location

Monument Inscripition

Date of Field Work: April 1998 Office Reference: 9812

Cross Index Plat



Firm/Agency, Address

Cornerstone Surveying Company
2120 Dey Avenue
Cheyenne, Wyoming 82001

Telephone Number: 1-307-637-6958

This corner record was prepared by me or under my direction and supervision.

SEAL & SIGNATURE

RECORDED 3/22/2004 AT 12:47 PM REC# 381966 BK# 1799 PG# 1191
DEBRA K. LATHROP, CLERK OF LARAMIE COUNTY, WY PAGE 1 OF 1

Corner Name: S 1/16, Section 26 , T14N, R66 W, 6th P.M.
County: Laramie, Wyoming

Cross-Index No.:U-19

CERTIFIED LAND CORNER RECORDATION

DESCRIPTION OF CORNER EVIDENCE FOUND, AND ORIGINAL RECORD (If known)

DESCRIPTION OF MONUMENT AND ACCESSORIES ESTABLISHED TO PERPETUATE THE ORIGINAL LOCATION OF THIS CORNER:

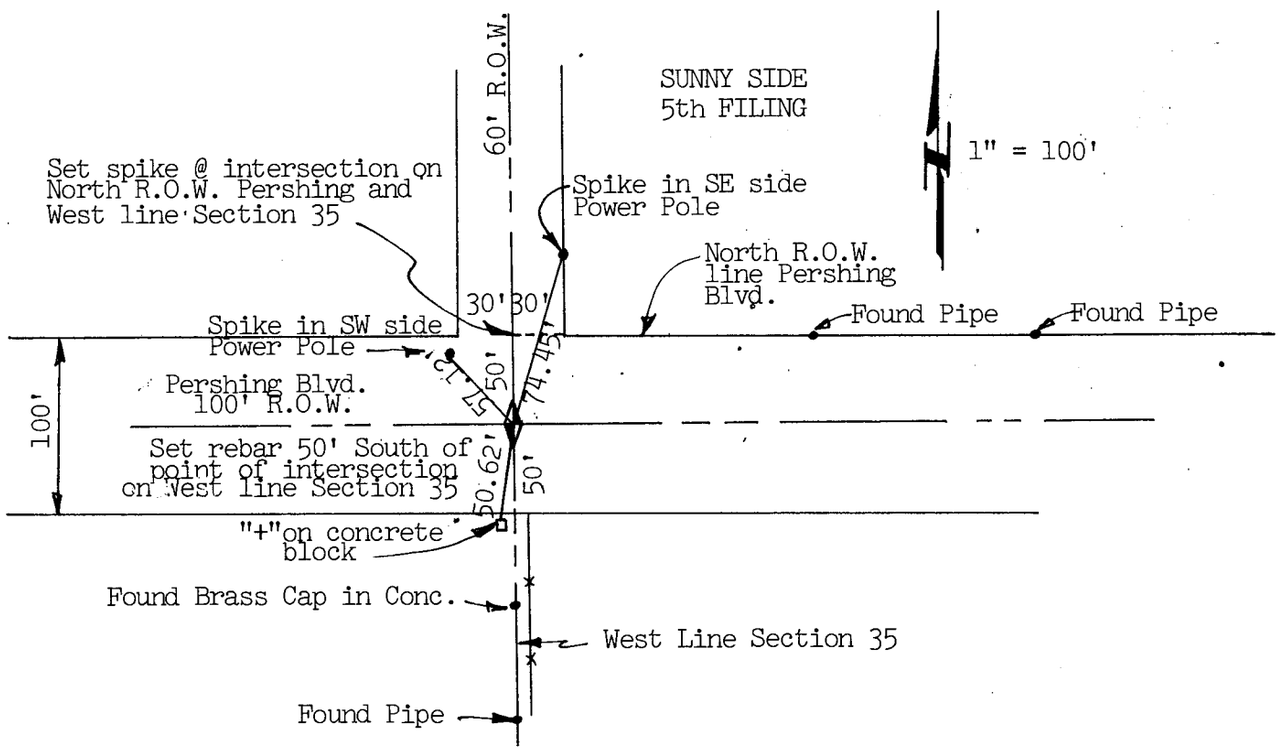
Location

Sec 27	Sec 26
Sec 34	Sec 35

Township 14 N Range 66 W
6th P. M.

Set a 3/8" rebar flush with the asphalt from ties to corner platted in Sunny Side 5th Filing.

SKETCH, WITH COURSE AND DISTANCE TO ADJACENT CORNER IF DETERMINED IN THIS SURVEY.
(May Sketch or Paste Reproduction on Reverse Side.)



I, S. D. Dawson certify that I have carefully ~~performed or~~ reviewed the work done on the diagrammed corner as reported on this recordation form and approve the same.

Signature of Surveyor — Wyoming R.L.S. # 555 — Registration No.

STATE OF WYOMING,
Office of Clerk and Recorder,
County of Laramie

This "corner record" was filed for record on the 16 day of August, 19 74, was noted on the cross-index plat and is assigned page No. _____, in book No. _____.

John B. Huisman
County Official

Cross Index No. V 17 T. 14 R. 66 6 Mer.
_____ T. _____ R. _____ Mer.
_____ T. _____ R. _____ Mer.
_____ T. _____ R. _____ Mer.
_____ T. _____ R. _____ Mer.
_____ T. _____ R. _____ Mer.
_____ T. _____ R. _____ Mer.

V-17 14-66

State of Wyoming Corner Record

(In compliance with the CORNER PERPETUATION AND FILING ACT, Wyoming Statutes, 1977, Section 36-11-101, et. seq., and the Rules and Regulations of the Board of Registration for Professional Engineers and Professional Land Surveyors)

Reverse side of this form may be used if more space is needed.

Record of original survey and citation of source of historical information (if corner is lost or obliterated). Description of corner monumentation evidence found and/or monument and accessories established to perpetuate the location of this corner. Sketch of relative location of monument, accessories, and reference points with course and distance to adjacent corner(s) (if determined in this survey). Method and rationale for reestablishment of lost or obliterated corner.

G.L.O. Notes: Unknown

Subsequent Records: Wenandy Acres, (circa April 25, 1946). Certified Land Corner Recordation form filed April 16, 1974, by Mr. D. Dawson, Wyoming L.S. No. 555.

Found: A No. 5 x 24" rebar with a 2" aluminum cap marked "A.V.I. P.C. T14N R66W S26 S35 1994 P.L.S. 2927". This monument was set by me after construction of the East Pershing Boulevard Reconstruction project done under the design by A.V.I., p.c..
Reset: A No. 6 x 30" rebar with 3 ¼" Aluminum Cap with a small amount of anchor concrete, approximately 0.1' below the asphalt roadway and in the approximate centerline of East Pershing Boulevard (Old U.S. Hwy 30). The 3 ¼" aluminum cap was marked as noted below.

Aluminum Cap Markings
A.V.I. P.C.
T.14N. R.66W.
S26
1/4 ———
S35
1997
PLS 2927

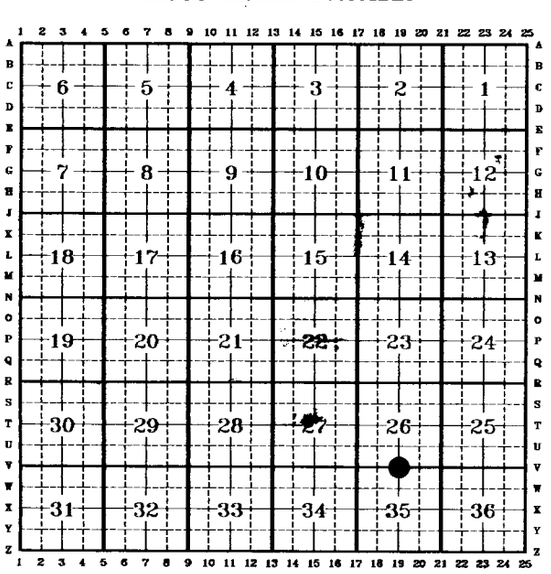
TIES FROM THE CORNER OF THIS RECORD:
BASIS OF BEARINGS AND MEASURED BY THE TRIMBLE RTK GPS METHODS

Corner Identification	Monumentation	Bearing	Distance
NW Cor. Sec. 35	3 ¼" Aluminum Cap	N89°28'40"W	2650.88'
SW Cor Wenandy Acres	3/4" Iron Pipe	N00°29'29"E	67.82'
SE Cor Tract 7 Wenany Acres	1/2" Iron Pipe	N74°10'21"E	235.52'

97 JUN 3 AM 10 55
LARAMIE COUNTY CLERK
CHEYENNE, WY.
203705

Date of Field Work: 9, May, 1997 Office Reference: Job No. 2-2022.97

CROSS INDEX DIAGRAM

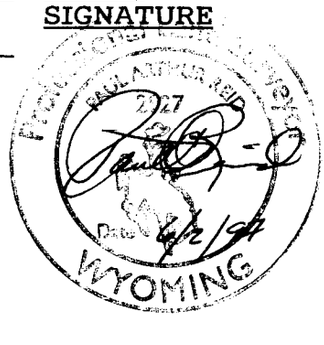


Firm/Agency, Address

Paul A. Reid, A.V.I.p.c.
2035 Westland Road
Cheyenne, WY 82001

Telephone Number:
(307)-637-6017

This corner record was prepared by me or under my direction and supervision.
SEAL & SIGNATURE



Corner Name: N ¼ Corner Section: 35 T 14N R 66W;6TH P.M. Cross-Index No.: V-19

184967

LARAMIE COUNTY CLERK
CHEYENNE, WY.

'96 JUN 18 AM 10 58

EASEMENT

KNOW ALL MEN BY THESE PRESENTS: That the undersigned, Lyle Wayne Keto, hereinafter referred to as GRANTOR, in consideration of the sum of two thousand one hundred dollars ($2,100.00+), the receipt of which is hereby acknowledged, hereby warrants, grants, bargains, sells and conveys to the CITY OF CHEYENNE and its BOARD OF PUBLIC UTILITIES, their successors and assigns, hereinafter collectively referred to as GRANTEE, a perpetual utility easement to construct, reconstruct, operate, maintain and remove such water and sewer pipelines and appurtenances thereto, including any necessary utilities, on, over, under, through and across certain lands owned by the GRANTOR, a strip of land being 20 feet in width, being a portion of Tracts 237, 238, 239 and 240, Sunnyside Addition, 6th Filing, Laramie County, Wyoming, being more particularly described on Exhibit "A" attached hereto and by this reference incorporated herein.

GRANTEE shall have the right of ingress and egress over and across the Land of the Grantor to and from the above described property and the right to clear obstructions on the easement premises.

GRANTOR reserves the right to occupy and use said Easement for all purposes not inconsistent with, nor interfering with the rights herein granted, specifically, the right to cross said easement with a water line at approximately the boundrary line between Tracts 238 and 239; and the right to construct a road or street.

The rights, conditions and provisions of this easement shall inure to the benefit of and be binding upon the heirs, executors, administrators, successors and assigns of the respective parties hereto, and by the execution and acknowledgement thereof, GRANTOR jointly and severally waives any homestead rights to the above-described lands so far as the same may be affected by this agreement.

IN WITNESS WHEREOF, I have hereunto set my hand this 17th day of June, 1996.

GRANTOR

Lyle Wayne Keto

Lyle Wayne Keto

State of Wyoming)
County of Laramie)

On this 17th day of June, 1996, before me personally appeared Lyle Wayne Keto, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his free act and deed.

Given under my hand and notarial seal this 17th day of June, 1996.

Notary Public

My Commission Expires: 11/12/97

c:\logo\easement\keto.ev1

LAND DESCRIPTION

A strip of land being 20 feet in width, being a portion of Tracts 237, 238, 239 and 240, Sunnyside Addition, Sixth Filing, Laramie County, Wyoming, and being more particularly described as follows:

Beginning at a point on the east line of said Tract 240, said point lying 359° 50′ 35" (with all azimuths being angles right from North and being based on the City of Cheyenne Control Net,) a distance of 289.74 feet from the southeast corner of said Tract 240;

thence 359° 50′ 35", along said east line, a distance of 20.00 feet to a point;

thence 270° 06′ 29", a distance of 327.58 feet to a point;

thence 221° 37′ 14", a distance of 194.29 feet, more or less, to a point on the northeast line of Dry Creek Parkway;

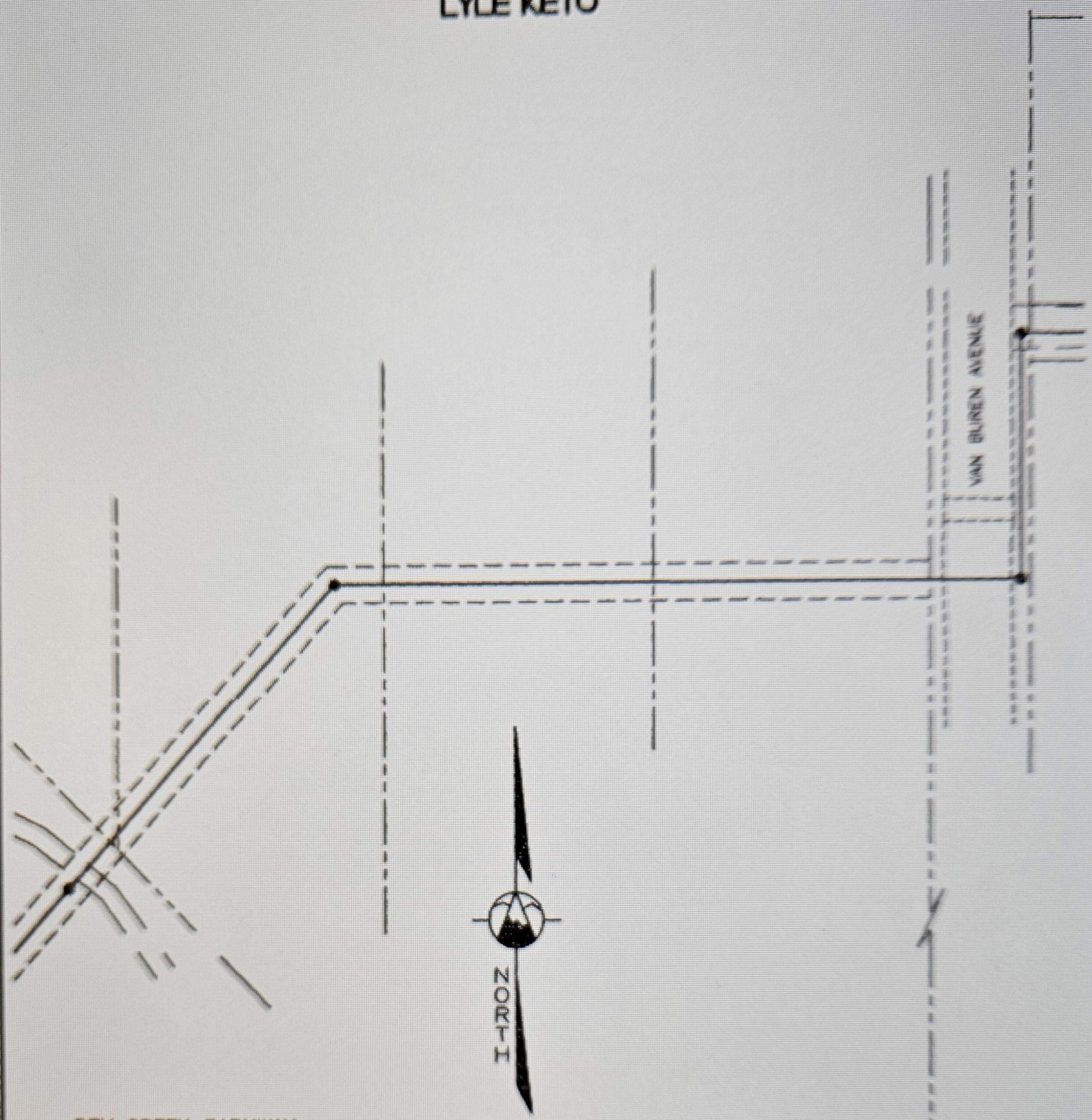
thence 135° 46′ 42", along said northeast line, a distance of 20.05 feet to a point;

thence 41° 37′ 14", a distance of 186.74 feet to a point;

thence 90° 06′ 29", a distance of 318.66 feet, more or less, to a point on the east line of said Tract 240, being the point of beginning;

said strip of land containing 0.24 acres, more or less.

LYLE KETO



NOT TO SCALE

INTERMOUNTAIN PROFESSIONAL SERVICES, INC.
5801 OSAGE AVENUE CHEYENNE, WYOMING 82009
PH: (307) 632-3138 FAX: (307) 632-3194
JOB NO. 2770 DATE: 02/28/94 DWN. BY: DED

BOOK 1426

1471

APPENDIX C – DRAINAGE CALCULATIONS

Calculation of Peak Runoff using Rational Method

Designer: Adrienne Lemmers/Elizabeth Landry
Company: Y2 Consultants
Date: 6/12/2023
Project: Van Buren Ave Corridor Plan
Location: Cheyenne, WY

Version 2.00 released May 2017

Cells of this color are for required user-input
Cells of this color are for optional override values
Cells of this color are for calculated results based on overrides

Subcatchment Name	Area (ac)	NRCS Hydrologic Soil Group	Percent Imperviousness	Runoff Coefficient, C						
				2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
Pre-Development	23.30	B	2.0	0.01	0.01	0.07	0.26	0.34	0.44	0.54
Post-Development	23.30	B	30.0	0.20	0.23	0.30	0.44	0.50	0.57	0.65

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_i^{0.33}}$$

$$t_t = \frac{L_t}{60K\sqrt{S_t}} = \frac{L_t}{60V_t}$$

$$\text{Computed } t_c = t_i + t_t$$

$$\text{Regional } t_c = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$$

$t_{minimum} = 5$ (urban)
$t_{minimum} = 10$ (non-urban)

$$\text{Selected } t_c = \max\{t_{minimum}, \min(\text{Computed } t_c, \text{Regional } t_c)\}$$

Subcatchment Name	Overland (Initial) Flow Time					Channelized (Travel) Flow Time						
	Overland Flow Length L_i (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Overland Flow Slope S_i (ft/ft)	Overland Flow Time t_i (min)	Channelized Flow Length L_t (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Channelized Flow Slope S_t (ft/ft)	NRCS Conveyance Factor K	Channelized Flow Velocity V_t (ft/sec)	Channelized Flow Time t_t (min)
Pre-Development	500.00	6085.00	6062.70	0.045	26.81	4579.74	6085.00	5980.00	0.023	7	1.06	72.01
Post-Development	300.00	6085.00	6073.70	0.038	17.54	4579.74	6085.00	5980.00	0.023	20	3.03	25.20

	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
1-hour rainfall depth, P1 (in) =	0.71	1.10	1.40	1.87	2.28	2.92	3.14

Rainfall Intensity Equation Coefficients =	a	b	c
	28.50	10.00	0.786

$$I(in/hr) = \frac{a * P_1}{(b + t_c)^c}$$

$$Q(cfs) = CIA$$

Subcatchment Name	Time of Concentration			Rainfall Intensity, I (in/hr)							Peak Flow, Q (cfs)						
	Computed t_c (min)	Regional t_c (min)	Selected t_c (min)	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
Pre-Development	98.83	79.98	79.98	0.59	0.91	1.16	1.55	1.89	2.42	2.61	0.12	0.26	1.98	9.45	14.95	24.57	32.98
Post-Development	42.74	59.09	42.74	0.90	1.39	1.77	2.36	2.88	3.69	3.96	4.27	7.48	12.32	24.06	33.23	48.57	59.65

EXISTING STREET CAPACITY CALCULATIONS

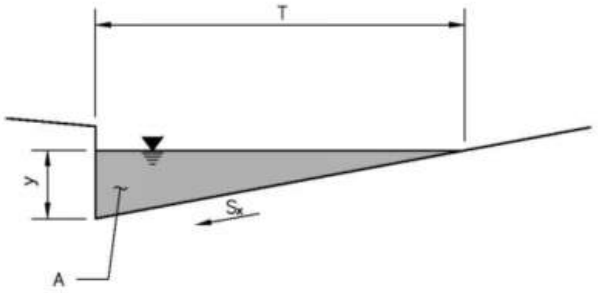


Figure 7-1. Gutter section with uniform cross slope

For a triangular cross section as shown in Figure 7-1, Manning's equation for gutter flow is written as:

$$Q = \frac{1.8}{n} A R^{2/3} S_o^{1/2} = \frac{0.56}{n} S_x^{5/3} S_o^{1/2} T^{8/3} \qquad \text{Equation 7-1}$$

Where:

Q = calculated flow rate for the half-street (cfs)

n = Manning's roughness coefficient (0.016 for asphalt street with concrete gutter, 0.013 for concrete street and gutter)

R = hydraulic radius of wetted cross section = A/P (ft)

A = cross-sectional area (ft^2)

P = wetted perimeter of cross section (ft)

S_x = street cross slope (ft/ft)

S_o = longitudinal slope (ft/ft)

T = top width of flow spread (ft).

The flow depth can be found using:

$$y = TS_x \qquad \text{Equation 7-2}$$

Where:

y = flow depth at the gutter flowline (ft).

Note that the flow depth generally should not exceed the curb height during the minor storm based on Table 7-2. Manning's equation can be written in terms of the flow depth, as:

$$Q = \frac{0.56}{nS_x} S_L^{1/2} y^{8/3} \qquad \text{Equation 7-3}$$

The cross-sectional flow area, A, can be expressed as:

$$A = \frac{S_x T^2}{2} \qquad \text{Equation 7-4}$$

The gutter velocity at peak capacity may be found from continuity ($V = Q/A$).

EXISTING STREET CAPACITY CALCULATIONS

n=	0.016	for asphalt with concrete curb and gutter	A=	23.3	acres
y=	0.5	curb height (ft)	Q1 minor (10 year)=	12.32	cfs
			Q1 major (100 year)=	48.57	cfs

STA	Roadway Slope (%)	Reduction Factor for Gutter Flow	Reduction Factor for Gutter Flow	Road Width (ft)	Road Cross Slope (%)	Total Catchmet Area (ac)	% of Total Catchment Area (ac)	Peak Flow rate (cfs)	Allowable Flow rate, Major Storm (cfs)	Calculated Runoff for Minor Storm, 10 year (cfs)	Allowable Flow rate, Minor Storm (cfs)	Calculated Runoff for Major Storm, 100 year (cfs)	Runoff with Inlets, Minor Storm (cfs)	Runoff with Inlets, Major Storm (cfs)	Notes
13.054	-6	0.43	0.34	41	2	9.3	0.399	165.4	56.2	4.92	71.1	19.39			Begin new alignment, flows to the south
60.762	-0.5	1	1	41	2	10.02	0.430	13.8	13.8	5.30	13.8	20.89			Another flat spot
85.137	0.25	1	1	41	2	10.05	0.431	6.9	6.9	5.31	6.9	20.95			Another flat spot
130.363	-4.20	0.56	0.46	41	2	10.17	0.436	115.8	53.2	5.38	64.8	21.20			
202.937	-6	0.43	0.34	41	2	10.33	0.443	165.4	56.2	5.46	71.1	21.53			
309.332	-2.8	0.78	0.64	41	2	10.57	0.454	77.2	49.4	5.59	60.2	22.03			Low/flat point
469.228	-0.40	1	1	41	2	10.95	0.470	11.0	11.0	5.79	11.0	22.83			Another flat spot
542.429	-0.7	1	1	41	2	11.14	0.478	19.3	19.3	5.89	19.3	23.22			Another flat spot
667.81	-0.65	1	1	41	2	11.47	0.492	17.9	17.9	6.06	17.9	23.91			Another flat spot
764.882	-1	1	1	41	2	11.75	0.504	27.6	27.6	6.21	27.6	24.49			
801.605															Inlet location from drainage report
816.111	-1.6	1	0.99	41	2	11.9	0.511	44.1	43.7	6.29	44.1	24.81	0.69	15.21	Intersection with Liberty at 8+38
1026.334	-4	0.6	0.48	41	2	12.39	0.532	110.2	52.9	6.55	66.1	25.83	0.95	16.23	
1183.557	-2.7	0.8	0.66	41	2	12.67	0.544	74.4	49.1	6.70	59.5	26.41	1.10	16.81	
1256.884	-1.4	1	1	41	2	12.79	0.549	38.6	38.6	6.76	38.6	26.66	1.16	17.06	
1275.938															Inlet location from drainage report
1290.862	-4	0.6	0.48	41	2	12.84	0.551	110.2	52.9	6.79	66.1	26.77	0.00	7.57	
1312.987	1.85	1	0.9	41	2	12.87	0.552	51.0	45.9	6.81	51.0	26.83	0.00	7.63	Intersection with Green River at 13+20
1331.053	-0.40	1	1	41	2	12.9	0.554	11.0	11.0	6.82	11.0	26.89	0.00	7.69	Low/flat point
1378.065	-1	1	1	41	2	12.99	0.558	27.6	27.6	6.87	27.6	27.08	0.00	7.88	
1563.73	0.20	1	1	41	2	13.4	0.575	5.5	5.5	7.09	5.5	27.93	0.00	8.73	I'll see if we can improve the slope in this area
1726.669	-0.1	1	1	41	2	13.75	0.590	2.8	2.8	7.27	2.8	28.66	0.00	9.46	to improve the drainage capacity of the street
1808.109	-2.00	0.99	0.84	41	2	13.93	0.598	55.1	46.3	7.37	54.6	29.04	0.00	9.84	Intersection with Rock Springs at 19+74
1965.383															Inlet location from drainage report
2136.629	-4.60	0.56	0.44	41	2	14.61	0.627	126.8	55.8	7.73	71.0	30.46	0.00	8.36	
2262.239	-2.30	0.94	0.76	41	2	14.85	0.637	63.4	48.2	7.85	59.6	30.96	0.00	8.86	Low/flat point, intersection with Eastview at 23+1
2357.501															Inlet location from drainage report
2459.078	-0.70	1	1	41	2	15.12	0.649	19.3	19.3	7.99	19.3	31.52	0.00	7.42	
2836.365	-1.20	1	1	41	2	18.87	0.810	33.1	33.1	9.98	33.1	39.34	0.00	15.24	Intersection with Carter at 28+39
2964.086	-0.60	1	1	41	2	21	0.901	16.5	16.5	11.10	16.5	43.78	0.00	19.68	Low point where concrete pan is, need inlets.
3025.896	2.80	0.78	0.64	41	2	21.71	0.932	77.2	49.4	0.84	60.2	3.31	0.00	3.31	Add this to the 16.68=
3107.599	5.60	0.46	0.37	41	2	22.49	0.965	154.3	57.1	0.43	71.0	1.69	0.00	1.69	
3175.713	2.10	0.64	0.5	41	2	23.01	0.988	57.9	28.9	0.15	37.0	0.60	0.00	0.60	
															Top of hill on south end of Van Buren, flows to the north,
3266.117	0.40	1	0.86	41	2	23.3	1.000	11.0	9.5	0.00	11.0	0.00	0.00	0.00	intersection with Laramie at 32+91
3363.853	-5.80	0.44	0.36	41	2			159.9	57.5	0.00	70.3	0.00			
3468.408	-3.00	0.75	0.6	41	2			82.7	49.6	0.00	62.0	0.00			
3520.583	1.40	1	1	41	2			38.6	38.6	0.00	38.6	0.00			
3562.064	-1.70	1	0.99	41	2			46.9	46.4	0.00	46.9	0.00			End of new alignment

Inlet information from drainage report				Inlet interception capacity (cfs)		Flow bypassing inlet (cfs)	
Station	Number of inlets	Location	Conc. Point	Minor	Major	Minor	Major
801.605	2 inlets	NW and NE of Liberty intersection	C1	2.8	4.8	7.2	27.5
1275.938	2 inlets	NW and NE of Green River intersection	C3	2.9	4.8	7.1	22.5
1965.383	1 inlet	NE of Rock Springs intersection	C4	2	2.9	4	8.7
2357.501	1 inlet	SE of Eastview intersection	C5	1	2	1	3.9

NEW STREET CAPACITY CALCULATIONS

STA	Roadway Slope (%)	Minor Storm Reduction Factor for Gutter Flow	Major Storm Reduction Factor for Gutter Flow	Road Width (ft)	Road Cross Slope (%)	Total Catchment Area (ac)	% of Total Catchment Area (ac)	Peak Flow rate (cfs)	Allowable Flow rate, Major Storm (cfs)	Calculated Runoff for Minor Storm, 10 year (cfs)	Allowable Flow rate, Minor Storm (cfs)	Calculated Runoff for Major Storm, 100 year (cfs)	Runoff with Inlets, Minor Storm (cfs)	Runoff with Inlets, Major Storm (cfs)	Notes
73.83															Begin new alignment, flows to the south
80.88	-0.5	1	1	41	2	10.07	0.432	13.8	13.8	5.32	13.8	21.00			
98.722	-1.2	1	1	41	2	10.11	0.434	33.1	33.1	5.35	33.1	21.09			
113.876	-3.70	0.63	0.51	41	2	10.14	0.435	102.0	52.0	5.36	64.2	21.15			
134.75	-5.3	0.46	0.37	41	2	10.19	0.437	146.1	54.0	5.39	67.2	21.25			
181.35	-6.5	0.4	0.32	41	2	10.3	0.442	179.1	57.3	5.45	71.7	21.48			
199.96	-5.70	0.45	0.37	41	2	10.34	0.444	157.1	58.1	5.47	70.7	21.57			
219.259	-3.6	0.64	0.52	41	2	10.38	0.445	99.2	51.6	5.49	63.5	21.65			
239.22	-1.4	1	1	41	2	10.43	0.448	38.6	38.6	5.51	38.6	21.76			
766.99	-0.7	1	1	41	2	11.87	0.509	19.3	19.3	6.28	19.3	24.76			
794.98	-1.25	1	1	41	2	11.96	0.513	34.5	34.5	6.32	34.5	24.95			
801.61															Inlet location from drainage report
836.07	-2.6	0.82	0.68	41	2	12.09	0.519	71.7	48.7	6.39	58.8	25.22	0.79	15.62	Intersection with Liberty at 8+38
874.35	-4.3	0.54	0.44	41	2	12.2	0.524	118.5	52.1	6.45	64.0	25.45	0.85	15.85	
924.64	-5	0.5	0.4	41	2	12.33	0.529	137.8	55.1	6.52	68.9	25.72	0.92	16.12	
1007.53	-4.4	0.56	0.45	41	2	12.52	0.537	121.3	54.6	6.62	67.9	26.11	1.02	16.51	
1116.99	-3	0.75	0.6	41	2	12.74	0.547	82.7	49.6	6.74	62.0	26.57	1.14	16.97	
1239.21	-1.4	1	1	41	2	12.98	0.557	38.6	38.6	6.86	38.6	27.07	1.26	17.47	
1275.94															Inlet location from drainage report
1704.17	-0.5	1	1	41	2	13.96	0.599	13.8	13.8	7.38	13.8	29.12	0.00	9.92	Intersection with Green River at 13+20
1755.5	-1.20	1	1	41	2	14.07	0.604	33.1	33.1	7.44	33.1	29.35	0.00	10.15	
1818.93	-2.6	0.82	0.68	41	2	14.22	0.610	71.7	48.7	7.52	58.8	29.66	0.00	10.46	
1883.92	-4.20	0.56	0.46	41	2	14.36	0.616	115.8	53.2	7.59	64.8	29.95	0.00	10.75	
1965.38															Inlet location from drainage report
1974.11	-5	0.5	0.4	41	2	14.55	0.624	137.8	55.1	7.69	68.9	30.35	0.00	8.25	
2042.54	-4.50	0.54	0.44	41	2	14.7	0.631	124.0	54.6	7.77	67.0	30.66	0.00	8.56	Intersection with Rock Springs at 19+74
2141.01	-3.30	0.7	0.56	41	2	14.9	0.639	91.0	50.9	7.88	63.7	31.08	0.00	8.98	
2253.65	-1.80	1	0.83	41	2	15.12	0.649	49.6	41.2	7.99	49.6	31.54	0.00	9.44	
2357.5															Inlet location from drainage report
2903.67	-1.00	1	1	41	2	20.24	0.869	27.6	27.6	10.70	27.6	42.22	0.00	18.12	Low/flat point, intersection with Eastview
2926.61	-0.60	1	1	41	2	20.55	0.882	16.5	16.5	10.87	16.5	42.86	0.00	18.76	
2995.46	1.50	1	1	41	2	21.39	0.918	41.3	41.3	11.31	41.3	44.62	0.00	20.52	24.3
2995.46	4.50	0.44	0.54	41	2	21.39	0.918	124.0	67.0	0.96	54.6	3.80	0.00	3.80	
3064.43	4.50	0.44	0.54	41	2	22.12	0.949	124.0	67.0	0.58	54.6	2.27	0.00	2.27	Intersection with Carter at 28+39
3067.85	6.00	0.43	0.34	41	2	22.15	0.951	165.4	56.2	0.56	71.1	2.21	0.00	2.21	
3103.47	5.30	0.46	0.37	41	2	22.47	0.964	146.1	54.0	0.39	67.2	1.54	0.00	1.54	
3165.7	3.20	0.72	0.58	41	2	22.95	0.985	88.2	51.2	0.14	63.5	0.54	0.00	0.54	
3211.74	1.00	1	1	41	2	23.21	0.996	27.6	27.6	0.00	27.6	0.00	0.00	0.00	Top of hill on south end of Van Buren, flov
3259.97	-1.00	1	1	41	2			27.6	27.6	0.00	27.6	0.00			
3295.54	-2.80	0.78	0.64	41	2			77.2	49.4	0.00	60.2	0.00			End of new alignment

INLET CAPACITY AND DESIGN

n=	0.016	for asphalt with concrete curb and gutter
L=	3	ft, grate length for Type A inlet
W=	2.5	ft, grate width for Type A inlet
α=	0	
β=	0.68	
γ=	0.06	
η=	0.0023	
V_0=	1.56	ft/sec Splash Over Velocity

D=	0.67	Water depth at gutter flow line outside the local depression at the inlet, ft
H_c=	0.5	Height of curb opening throat (ft)

Q_W=	6.09	Wier Flow, CFS, Sump
Q_O=	5.15	Orifice Flow, CFS, Sump
Q_{Open}=	5.72	Capacity of curb opening, CFS, Sump
Q_T=	9.7	Total combination capacity, CFS, Sump

2.4 inlets to take in this whole flow

N_W=	1	
C_W=	3.7	Values are from Table 7-7
N_0=	1	for Curb
C_0=	0.66	opening for Type 13/ No 16
C_m=	0.86	Combination
Q_W=	10.47	Wier Flow, CFS
Q_O=	28.09	Orifice Flow, CFS
Q_M=	14.74	Mixed Flow, CFS
Q_i=	10.47	Interception Capacity (cfs)

Leftover flow

4.85 CFS

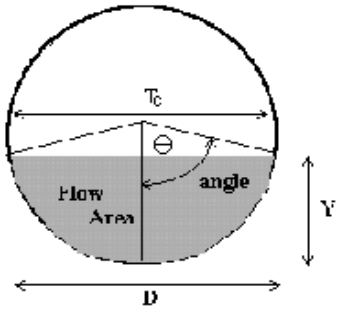
This is much lower than the allowable flow rate, to prevent Curb overtopping. 2 inlets are okay.

CIRCULAR CONDUIT FLOW (Normal & Critical Depth Computation)

MHFD-Culvert, Version 4.00 (May 2020)

Project: Van Buren Corridor Study

Pipe ID: Inlet Pipes to Manhole



Design Information (Input)			
Pipe Invert Slope	So =	0.0100	ft/ft
Pipe Manning's n-value	n =	0.0130	
Pipe Diameter	D =	18.00	inches
Design discharge	Q =	9.70	cfs

Full-Flow Capacity (Calculated)			
Full-flow area	Af =	1.77	sq ft
Full-flow wetted perimeter	Pf =	4.71	ft
Half Central Angle	Theta =	3.14	radians
Full-flow capacity	Qf =	10.53	cfs

Calculation of Normal Flow Condition			
Half Central Angle (0<Theta<3.14)	Theta =	2.11	radians
Flow area	An =	1.43	sq ft
Top width	Tn =	1.29	ft
Wetted perimeter	Pn =	3.16	ft
Flow depth	Yn =	1.13	ft
Flow velocity	Vn =	6.76	fps
Discharge	Qn =	9.70	cfs
Percent of Full Flow	Flow =	92.1%	of full flow
Normal Depth Froude Number	Fr_n =	1.13	supercritical

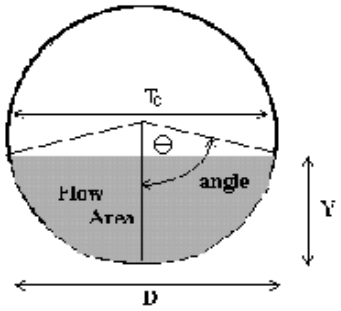
Calculation of Critical Flow Condition			
Half Central Angle (0<Theta-c<3.14)	Theta-c =	2.22	radians
Critical flow area	Ac =	1.52	sq ft
Critical top width	Tc =	1.20	ft
Critical flow depth	Yc =	1.20	ft
Critical flow velocity	Vc =	6.39	fps
Critical Depth Froude Number	Fr_c =	1.00	

CIRCULAR CONDUIT FLOW (Normal & Critical Depth Computation)

MHFD-Culvert, Version 4.00 (May 2020)

Project: Van Buren Corridor Study

Pipe ID: Stormwater Pipe to Dry Creek



Design Information (Input)			
Pipe Invert Slope	So =	0.0100	ft/ft
Pipe Manning's n-value	n =	0.0130	
Pipe Diameter	D =	24.00	inches
Design discharge	Q =	19.40	cfs

Full-Flow Capacity (Calculated)			
Full-flow area	Af =	3.14	sq ft
Full-flow wetted perimeter	Pf =	6.28	ft
Half Central Angle	Theta =	3.14	radians
Full-flow capacity	Qf =	22.68	cfs

Calculation of Normal Flow Condition			
Half Central Angle (0<Theta<3.14)	Theta =	2.01	radians
Flow area	An =	2.39	sq ft
Top width	Tn =	1.81	ft
Wetted perimeter	Pn =	4.02	ft
Flow depth	Yn =	1.42	ft
Flow velocity	Vn =	8.11	fps
Discharge	Qn =	19.40	cfs
Percent of Full Flow	Flow =	85.5%	of full flow
Normal Depth Froude Number	Fr_n =	1.24	supercritical

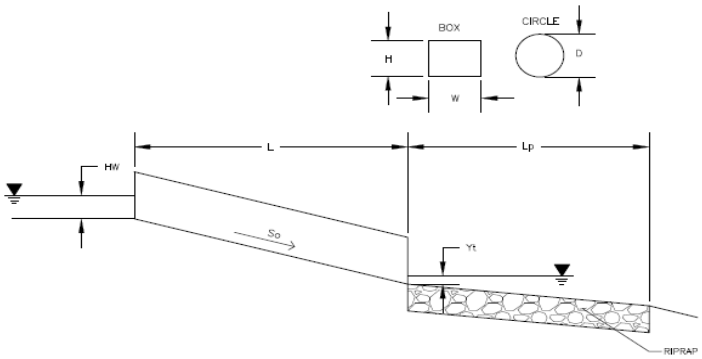
Calculation of Critical Flow Condition			
Half Central Angle (0<Theta-c<3.14)	Theta-c =	2.19	radians
Critical flow area	Ac =	2.67	sq ft
Critical top width	Tc =	1.62	ft
Critical flow depth	Yc =	1.58	ft
Critical flow velocity	Vc =	7.27	fps
Critical Depth Froude Number	Fr_c =	1.00	

DETERMINATION OF CULVERT HEADWATER AND OUTLET PROTECTION

MHFD-Culvert, Version 4.00 (May 2020)

Project: **Van Buren**

ID: **Dry Creek Outlet**



Soil Type:
Choose One:
○ Sandy
○ Non-Sandy

Supercritical Flow! Using Adjusted Diameter to calculate protection type.

Design Information:

Design Discharge	Q =	19.4	cfs
Circular Culvert:			
Barrel Diameter in Inches	D =	24	inches
Inlet Edge Type (Choose from pull-down list)		Grooved Edge Projecting	
OR:			
Box Culvert:		**OR**	
Barrel Height (Rise) in Feet	H (Rise) =		ft
Barrel Width (Span) in Feet	W (Span) =		ft
Inlet Edge Type (Choose from pull-down list)			
Number of Barrels	# Barrels =	1	
Inlet Elevation	Elev IN =	5979	ft
Outlet Elevation **OR** Slope	Elev OUT =	5965.5	ft
Culvert Length	L =	840	ft
Manning's Roughness	n =	0.012	
Bend Loss Coefficient	k_b =	0	
Exit Loss Coefficient	k_x =	1	
Tailwater Surface Elevation	$Y_{t,\ Elevation}$ =	5974	ft
Max Allowable Channel Velocity	V =	5	ft/s

Calculated Results:

Culvert Cross Sectional Area Available	A =	3.14	ft^2
Culvert Normal Depth	Y_n =	1.14	ft
Culvert Critical Depth	Y_c =	1.58	ft
Froude Number	Fr =	1.90	**Supercritical!**
Entrance Loss Coefficient	k_e =	0.20	
Friction Loss Coefficient	k_f =	8.84	
Sum of All Loss Coefficients	k_s =	10.04	ft
Headwater:			
Inlet Control Headwater	HW_I =	2.57	ft
Outlet Control Headwater	HW_O =	N/A	ft
Design Headwater Elevation	**HW =**	**5981.57**	**ft**
Headwater/Diameter OR Headwater/Rise Ratio	**HW/D =**	**1.29**	

Outlet Control Headwater Approximation Method Inaccurate for Low Flow - Backwater Calculations Required

Outlet Protection:			
Flow/(Diameter^2.5)	Q/D^2.5 =	3.43	$ft^{0.5}/s$
Tailwater Surface Height	Y_t =	8.50	ft
Tailwater/Diameter	Yt/D =	4.25	
Expansion Factor	1/(2*tan(Θ)) =	6.70	
Flow Area at Max Channel Velocity	A_t =	3.88	ft^2
Width of Equivalent Conduit for Multiple Barrels	W_{eq} =	-	ft
Length of Riprap Protection	**L_p =**	**6**	**ft**
Width of Riprap Protection at Downstream End	**T =**	**3**	**ft**
Adjusted Diameter for Supercritical Flow	Da =	1.57	ft
Minimum Theoretical Riprap Size	d_{50} min=	0	in
Nominal Riprap Size	d_{50} nominal=	6	in
MHFD Riprap Type	**Type =**	**VL**	

APPENDIX D – PUBLIC PARTICIPATION

PUBLIC MEETING #1 RESULTS

1. SIGN IN-SHEETS
2. DRAINAGE
3. SPEED OPTIONS – MID TO LONG TERM
4. SPEED OPTIONS – SHORT TERM
5. NON-MOTORIZED OPTIONS – MID TO LONG TERM
6. NON-MOTORIZED OPTIONS - SHORT TERM
7. AERIAL IMAGERY WITH POST IT NOTE COMMENTS
8. SURVEY RESULTS

VAN BUREN CORRIDOR PLAN

PUBLIC MEETING #1 SIGN-IN SHEET

JANUARY 25, 2023 FROM 6:00PM TO 7:30PM, 4312 VAN BUREN AVENUE, DILDINE ELEMENTARY

Name	Email	Phone Number	Agency (If Applicable)
Amy Robinson	sarobinson0818@msn.com	307-421-2912	
Jim Boyd	jlboyd6@gmail.com	816-739-0489	
Barbara Boyd	blboyd7@msn.com	816-716-8722	CAC
WILLIE & KATHY WILLIAMS	5015 GREEN RIVER	307-634-2445	
TERRY ZUIKER	TZUIKER@BRESNAN.NET	3077782983	
GARY M. WILSON	garywilson7190@gmail.com	307-640-4868	
Ann Marie Taylor	AnnMarie@Y2Consultants.com	632-5656	Y2 Consultants
KEVIN ERICKSON	kevin.erickson@wyo.gov	631-6322	WYDOT
Charles Bloom	cbloom@cheyennecity.org	4303	City of Chy
Connor White	cwhite@cheyennecity.org	307-638-4342	City of Cheyenne

VAN BUREN CORRIDOR PLAN

CONSULTANTS

PUBLIC MEETING #1 SIGN-IN SHEET

JANUARY 25, 2023 FROM 6:00PM TO 7:30PM, 4312 VAN BUREN AVENUE, DILDINE ELEMENTARY

Name	Email	Phone Number	Agency (If Applicable)
Lyle Keto and Ruth		635-1004	
Barb Stolp		286-6877	
Steele Evans		970-632-8777	
Chad Dunn		307-286-8736	
Jeremy + Mima Padgett		307 631 4588	
Tim Wold		307 630 6746	
Jean Vetter		307.638.4379	
Riggs Zuiker		307-778-2983	
Cassie Pickett			
DELBERT MCOMIE		307-421-2767	Y2
Nancy Monckton			
Cody Lewis		254-383-0009	

VAN BUREN AVENUE CORRIDOR STUDY

DRAINAGE OPTIONS

SUBSURFACE DRAINAGE

SURFACE DRAINAGE

CHEYENNE METROPOLITAN PLANNING ORGANIZATION

Y2 CONSULTANTS

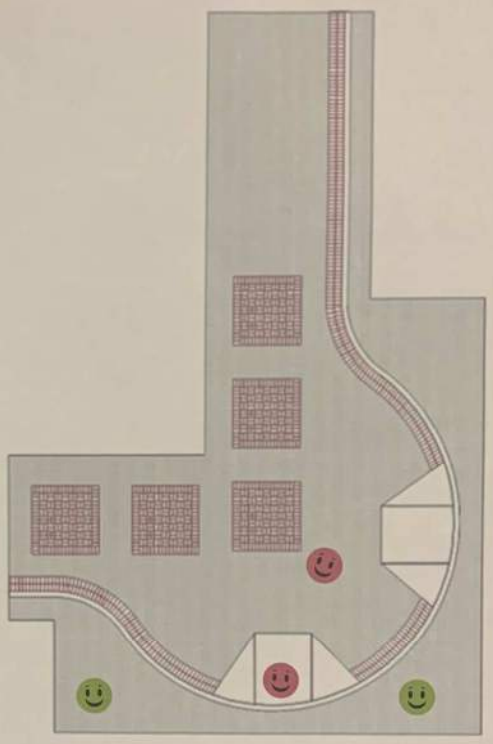
Thank you for your input!

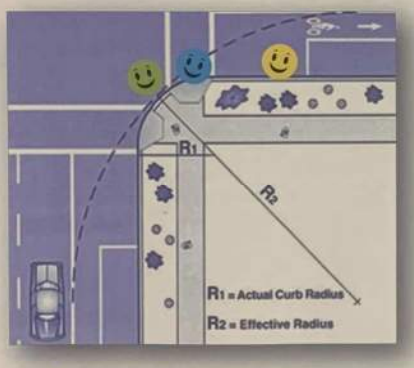
VAN BUREN AVENUE CORRIDOR STUDY

SPEED OPTIONS
(MID TO LONG TERM)

CROSSWALK MARKING AND SIGNAGE

BUMP OUTS





RAISED CURB RADII

DRAIN PANS

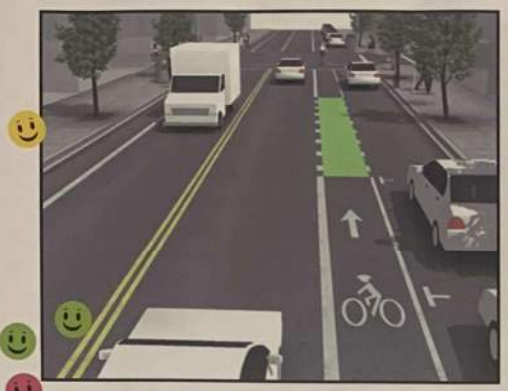
CHEYENNE METROPOLITAN PLANNING ORGANIZATION

Y2 CONSULTANTS

Thank you for your input!

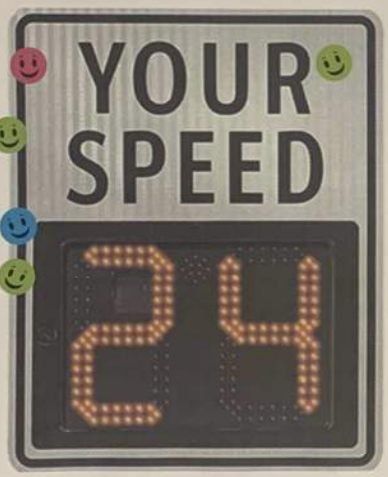
VAN BUREN AVENUE CORRIDOR STUDY

SPEED OPTIONS
(SHORT TERM)



STRIPING

SPEED ENFORCEMENT



FEEDBACK SPEED SIGN

INCREASED SIGNAGE

CHEYENNE METROPOLITAN PLANNING ORGANIZATION

Y2 CONSULTANTS

Thank you for your input!

VAN BUREN AVENUE CORRIDOR STUDY

NON-MOTORIZED OPTIONS
(MID TO LONG TERM)

SIDEWALK INSTALL & INFILL

MINI ROUNDABOUT

MULTI-USE PATHWAY

CHEYENNE MPO
CHEYENNE METROPOLITAN PLANNING ORGANIZATION

Y2 CONSULTANTS

Thank you for your input!

VAN BUREN AVENUE CORRIDOR STUDY

NON-MOTORIZED OPTIONS
(SHORT TERM)

SHARROWS, SIGNAGE, AND BIKE LANES

CHEYENNE METROPOLITAN PLANNING ORGANIZATION

Y2 CONSULTANTS

Thank you for your input!

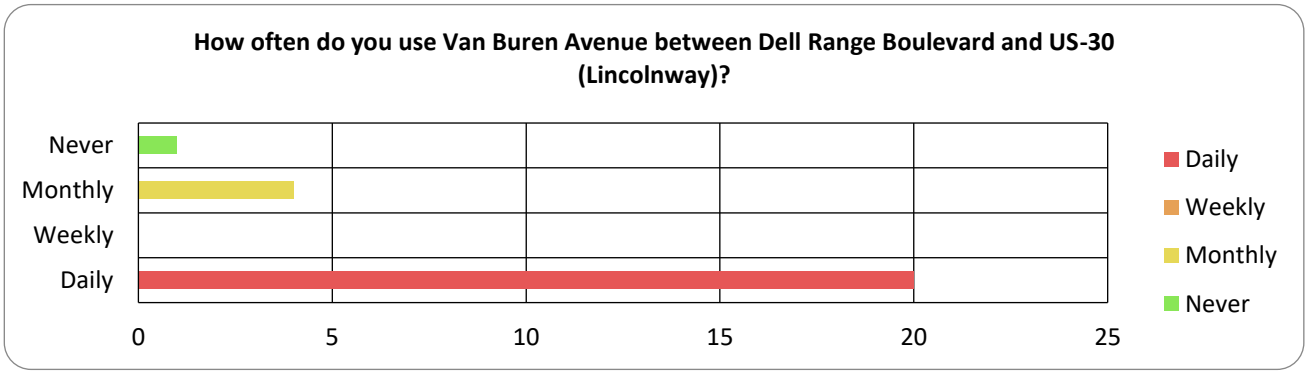

Drainage issue for cross streets
DRAINAGE ISSUE FOR CROSS STREETS
Winter snow plow / icing issue
WINTER SNOW PLOW

ICING ISSUE

Phase 1 Van Buren Avenue Corridor Plan Survey

Q1 How often do you use Van Buren Avenue between Dell Range Boulevard and US-30 (Lincolnway)?

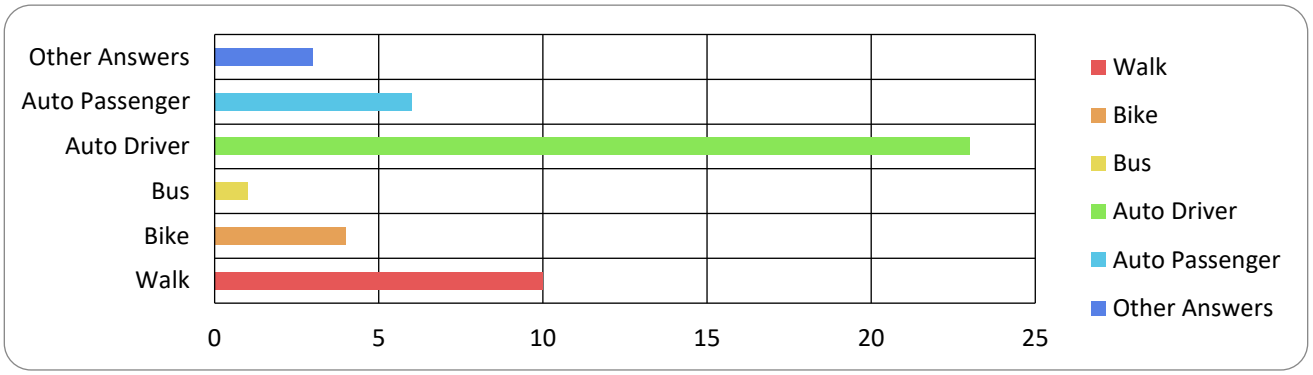
Choice	Responses	
Daily	20	80.00%
Weekly	0	0.00%
Monthly	4	16.00%
Never	1	4.00%
How many people answered survey	**25**	
Skipped	**0**	



phase 1 Van Buren Avenue Corridor Plan Survey

Q2 How do you most often use Van Buren Avenue (Can select multiple answers)

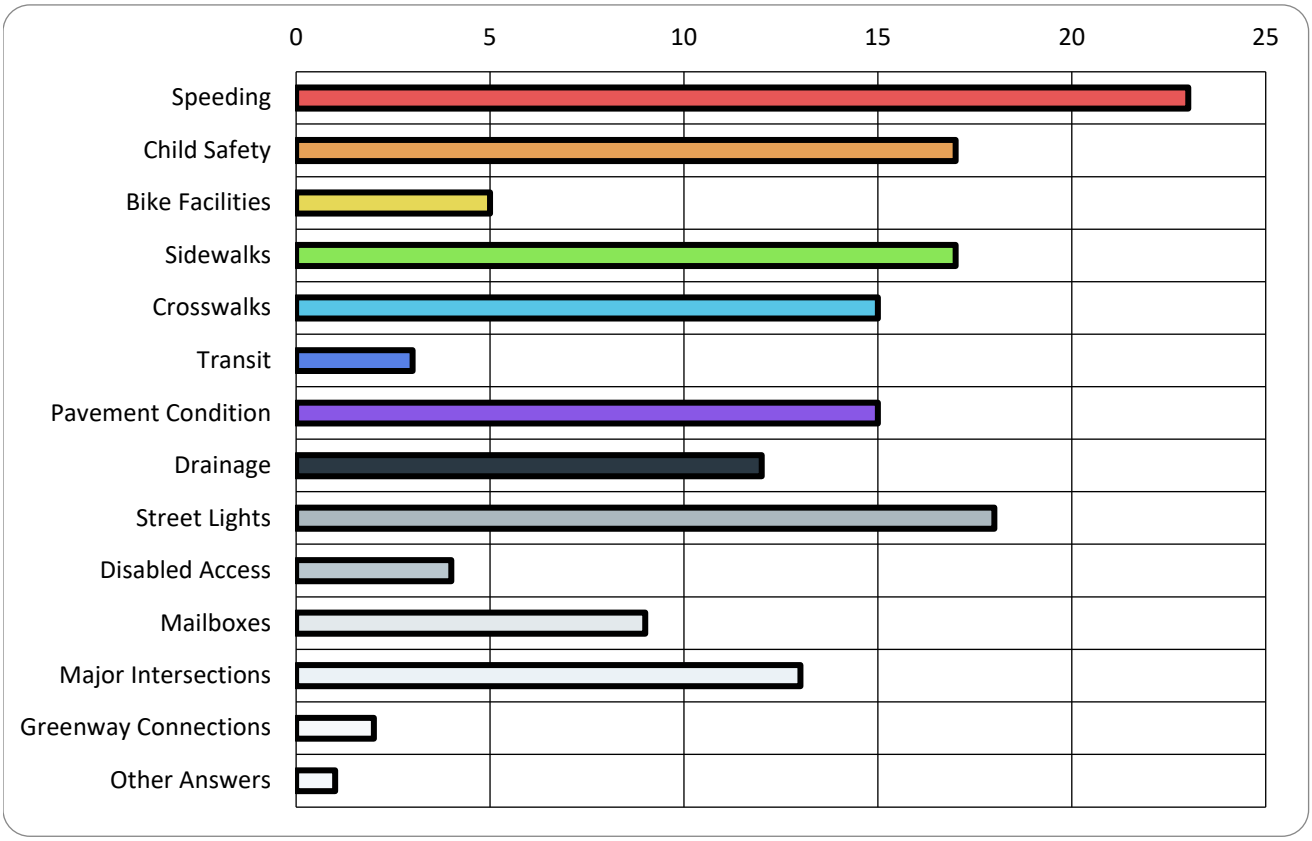
Choice	Responses	
Walk	10	41.67%
Bike	4	16.67%
Bus	1	4.17%
Auto Driver	23	95.83%
Auto Passenger	6	25.00%
Other Answers	3	12.50%
I live on Van Buren Ave.		
Residence		
How many people answered survey	**24**	
Skipped	**1**	



Phase 1 Van Buren Avenue Corridor Plan Survey

Q3 What concerns do you have about Van Buren Avenue? (Can select multiple answers)

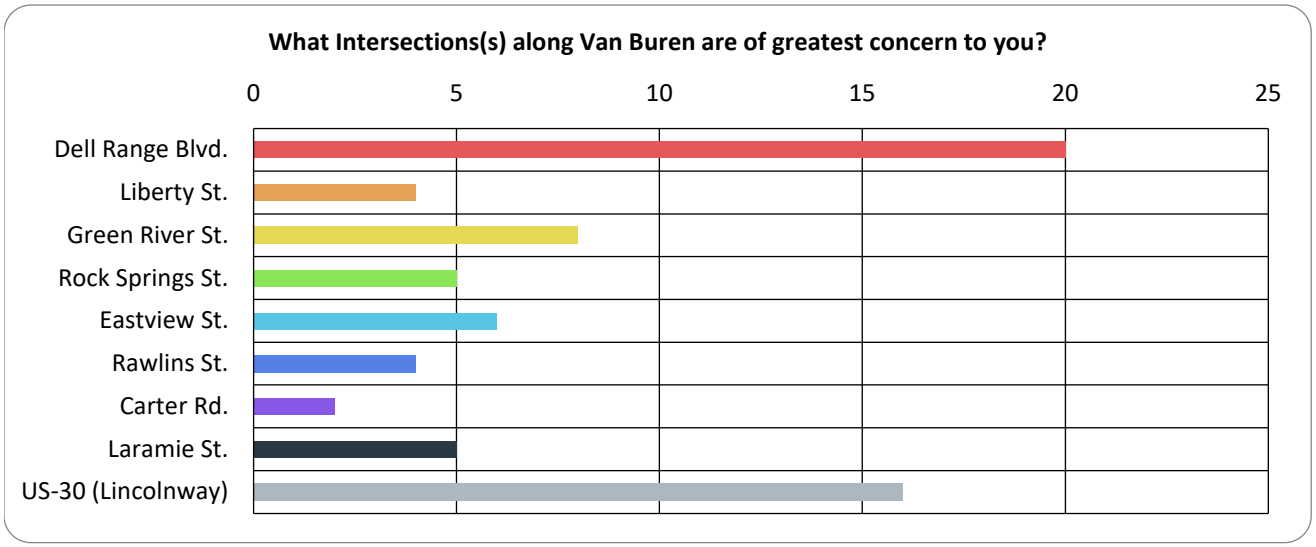
Choice	Responses	
Speeding	23	95.83%
Child Safety	17	70.83%
Bike Facilities	5	20.83%
Sidewalks	17	70.83%
Crosswalks	15	62.50%
Transit	3	12.50%
Pavement Condition	15	62.50%
Drainage	12	50.00%
Street Lights	18	75.00%
Disabled Access	4	16.67%
Mailboxes	9	37.50%
Major Intersections	13	54.17%
Greenway Connections	2	8.33%
Other Answers	1	4.17%
There is too much traffic on Van Buren.		
How many people answered survey	**24**	
Skipped	**0**	



Phase 1 Van Buren Avenue Corridor Plan Survey

Q4 What Intersections(s) along Van Buren are of greatest concern to you?
(Can select multiple answers)

Choice	Responses	
Dell Range Blvd.	20	83.33%
Liberty St.	4	16.67%
Green River St.	8	33.33%
Rock Springs St.	5	20.83%
Eastview St.	6	25.00%
Rawlins St.	4	16.67%
Carter Rd.	2	8.33%
Laramie St.	5	20.83%
US-30 (Lincolnway)	16	66.67%
How many people answered survey	**24**	
Skipped	**0**	



Phase 1 Van Buren Avenue Corridor Plan Survey

Q5 What improvement(s) would you most like to see along Van Buren Avenue?

Response
I would like to see 6' sidewalks, curb and gutter along the entire length, with shared vehicle-bicycle lanes, parking on one side only, and small roundabouts at Green River and Rawlins intersections to manage traffic and constrain driving speeds.
Ban large construction vehicles using VB as a shortcut.
It should not be a major cross street between Dell Range and Hwy 30 because it is a residential neighborhood with a major elementary school.
More lighting, slow down the auto traffic
With the large development of family homes and the increased amount of children crossing dell range it's crucial to have a safe way for children to cross dell range. I have witnessed people blow thru when the crosswalk lights are on. To be proactive and prevent another tragic incident it would be wise to install a bridge or tunnel for that crossing.
Sidewalks and maintenance of sidewalks. The sidewalks are so bad it's hard to safely ride or walk, and the other side has no sidewalks. Limited street lighting not only on that street but entire neighborhood. People go so fast on that street and only crosswalks are near the school. Also safety of the kids crossing del range from van buren. Most drivers don't notice the flashing crosswalk light there. Also during after school hours and busy times it's hard to make a left hand turn onto dell range.
I live on Van Buren and see people speeding numerous times a day. Two days ago a speeding car hit a street sign. There are no lights on long stretches of Van Buren. And despite the fact that children walk down this busy road to get on the bus before sunrise and get off the bus sometimes after sunset, there are also long stretches that do not have sidewalks.
Stop lights
Not sure but definitely need more lanes on Dell Range. Maybe somehow a stoplight at Van Buren and Dell Range.

Response	
Safety of people crossing road, new road paved, speed enforcement, curbing and sidewalk on Van Buren, annexation of county pockets (cost to homeowner), stop light at Van Buren and Dell Range, parking on both sides of Van Buren makes driving go down to one lane and congests the road and dangerous at times. Do not like the roundabout idea at all for this neighborhood	
4 way stop at Green River and Van Buren, remove the "connector street" designation, traffic light on Dell Range and Van Buren	
Slow speed to 25. Drainage is a problem.	
Traffic light on Dell Range. Drainage.	
Drainage	
Slower traffic, better sidewalks, stop light at Dell Range	
Traffic control at Dell Range, better mailbox access	
Slow down traffic! More lighting, access to mailboxes	
Slow down traffic - for kids, walkers and others. Better lighting at night. Better access to your mailboxes.	
Bike lanes, sidewalks (detached), safety for students, lower speeds, street trees, native grass (unirrigated), tree boulevards	
Speed zones with tickets issued.	
How many people answered survey	**20**
Skipped	**5**

PUBLIC MEETING #2 RESULTS

1. SIGN IN-SHEETS

2. SURVEY RESULTS

VAN BUREN CORRIDOR PLAN

CONSULTANTS

PUBLIC MEETING #2 SIGN-IN SHEET

JUNE 1ST, 2023 FROM 6:00PM TO 7:30PM, 4312 VAN BUREN AVENUE, DILDINE ELEMENTARY

Name	Email	Phone Number	Agency (If Applicable)
Lucille Hill		634-4570	
John A Fulk	john.fulk@yahoo.com	631-8755	
Riggs Zuiker	tzuiker@bresnan.net	778-2983	
Terry Zuiker			
George Porter	momma.1990@Live1.Com	631-4161	
Bart A. Stolp	4115 Van Buren Ave	286-6877	
John Shipman	5720 Liberty St.	2566123	
Teri Shipman	5700 Liberty ST	2568134	
Kathy Scheurman	4505 Van Buren Ave	631-4045	
Sharon Carlberg	4413 Van Buren Ave	287-5584	
Arden Carlberg	" " "	640-1861	
Conner White		638-4342	City Planning
Mel Deckleman	mdpdonthego@gmail.com	630-4758	Church
Cassie Pickett			City Engineer

VAN BUREN CORRIDOR PLAN

Y2 CONSULTANTS

PUBLIC MEETING #2 SIGN-IN SHEET

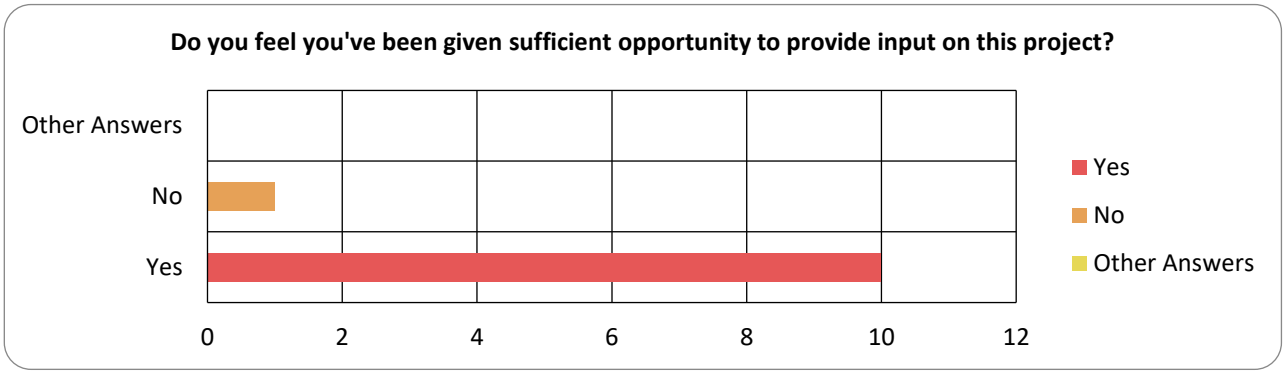
JUNE 1ST, 2023 FROM 6:00PM TO 7:30PM, 4312 VAN BUREN AVENUE, DILDINE ELEMENTARY

Name	Email	Phone Number	Agency (If Applicable)
Lyle Keto			
Lisa Sothan	ldsothan@gmail.com	307.220.2029	
Alan Richardson	arichardson592@Gmail	307823-2089	
Lee R. Brown	5706 Rockspring Dr	307 634 5355	
Nancy Monckton	4507 Van Buren	307 214-1918	
Willie Williams	5015 Green Rd Dr	307-286-0257	

Phase 2 Van Buren Avenue Corridor Plan Survey

Q1 Do you feel you've been given sufficient opportunity to provide input on this project?

Choice	Responses	
Yes	10	90.91%
No	1	9.09%
Other Answers	0	0.00%
How many people answered survey	**11**	
Skipped	**0**	



Phase 2 Van Buren Avenue Corridor Plan Survey

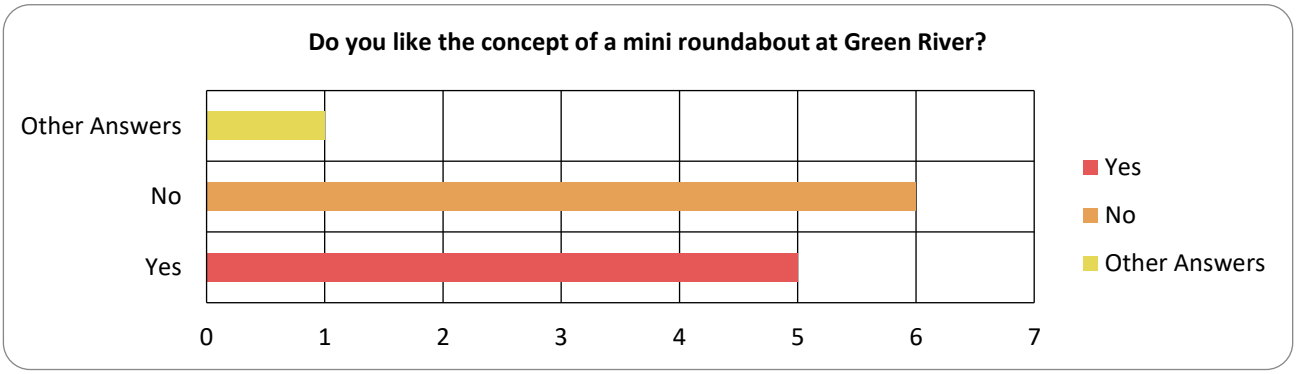
Q2 Do you have any concerns that have not been addressed?

Response	
Many of the proposed changes will decrease the value of people's homes by decreasing lawn size, removing established Trees and Landscaping, and bringing the public easements closer to individuals houses. This is not only a concern aesthetically, but is also a huge safety concern by allowing the public closer access to resident's front doors. Adding bike lanes and full width sidewalks in some areas will drastically reduce the size of individual yards and require removing well-established Trees and Landscaping, as well as relocating cable lines, fiber optic lines, utility lines, and even mailboxes which would require approval by the Postal Service. Bike lanes are not necessary in this neighborhood as we have almost zero bike traffic. Many of these ideas are clearly not well thought out, and have not taken into consideration how they will affect the lives of the people who live here.	
1) I am still uncertain where my front property line is vs. the easement for utilities and, apparently, the new configuration of the sidewalk. How much of what I thought was "my" yard (recognizing that utility co.s could dig to access their underground lines) will now be taken up by the 6" wide sidewalks and the green area buffering the sidewalks from the street? 2) Who will maintain the new, wider sidewalks and the grass closest to the street? If both are the responsibility of the homeowner, has anyone considered a) the increased stress of snow removal on older homeowners, and b) the lack of such maintenance on similar type sidewalks along portions of Dell Range, leading to lots of weeds, unshoveled walks, etc.? 3) Where will crosswalks be at the "mini-roundabout" for the school children and other members of the public? 4) I do not see any advantage to the mini-roundabout, since the presenter said people would just be able to drive right over the raised cement that comprises the roundabout. Additionally, how will both snow removal trucks and general traffic be able to see where the roundabout is when there is snow on the street??	
NO	
NO	
Excellent idea for traffic light at Dell Range / Van Buren - ASAP	
The speed of vehicles must be slowed Thank you	
Mail box locations on Van Buren Ave	
Extreme hazard to retrieve our mail, given the intense speed of vehicles on Van Buren Ave.	
How many people answered survey	**8**
Skipped	**3**

Phase 2 Van Buren Avenue Corridor Plan Survey

Q3 Do you like the concept of a mini roundabout at Green River?

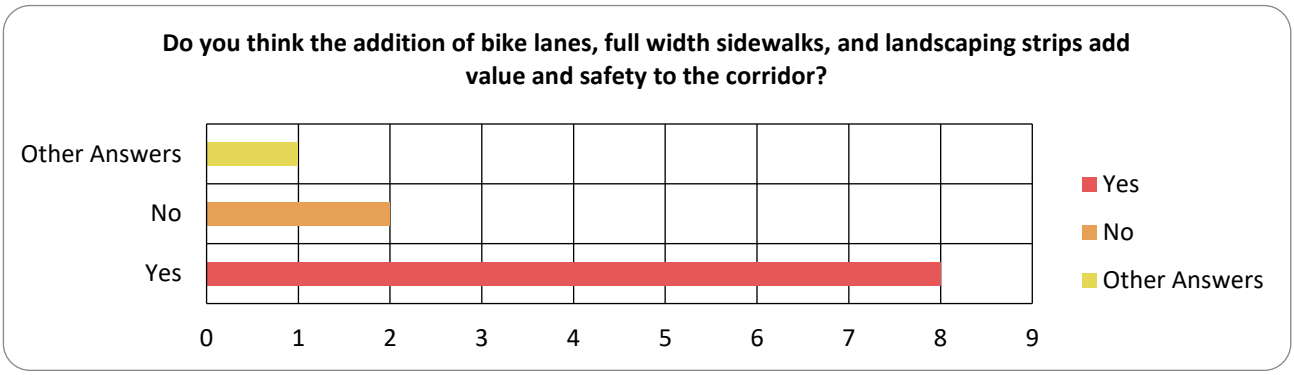
Choice	Responses	
Yes	5	45.45%
No	6	54.55%
Other Answers	1	9.09%
Prefer speed bumps for speeding, often people drive 45-50 MPH		
How many people answered survey	**11**	
Skipped	**0**	



Phase 2 Van Buren Avenue Corridor Plan Survey

Q4 Do you think the addition of bike lanes, full width sidewalks, and landscaping strips add value and safety to the corridor?

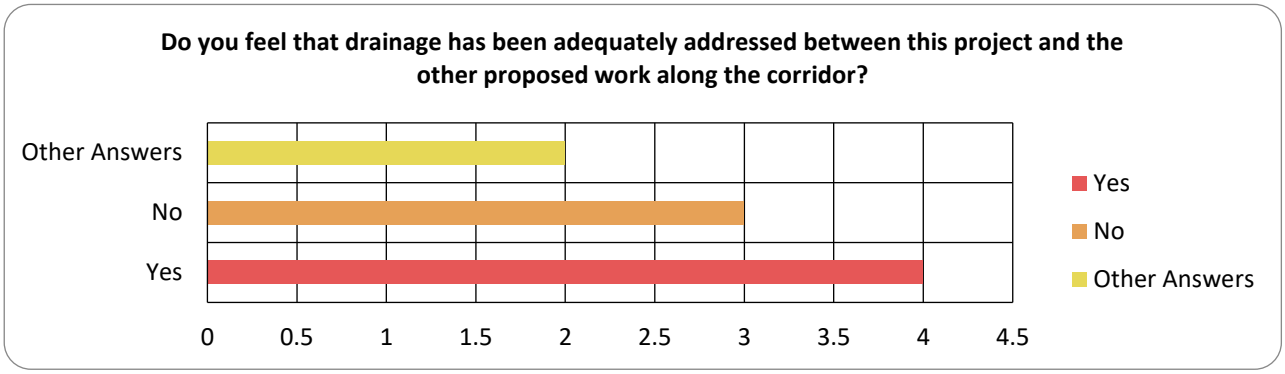
Choice	Responses	
Yes	8	72.73%
No	2	18.18%
Other Answers	1	9.09%
As described above, I have questions about the sidewalk configuration. I also wonder how necessary bike lanes are on both sides of the street--I see bikes daily, but they always use the sidewalk on the west side of Van Buren, never on the east.		
How many people answered survey	**11**	
Skipped	**0**	



Phase 2 Van Buren Avenue Corridor Plan Survey

Q5 Do you feel that drainage has been adequately addressed between this project and the other proposed work along the corridor?

Choice	Responses	
Yes	4	44.44%
No	3	33.33%
Other Answers	2	22.22%
I really don't know		
I don't know! I was in the hospital during the first public meeting, when apparently at least some info. was presented about the drainage plan; at the meeting June 1st, no info. at all was presented to us. I have a call in to the City to try to get information, but have not heard anything back yet. I don't feel like there has been sufficient info. provided through any other public means that I have seen or heard--just that there is a project in the works, but no details about what to expect. Therefore, I can't determine if this topic has been been adequately addressed.		
How many people answered survey	**9**	
Skipped	**3**	



APPENDIX E – TRAFFIC DATA AND ANALYSIS

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: South of Dell Range Blvd

A study of vehicle traffic was conducted with the device having serial number 404055. The study was done in the Southbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 08/31/2022 at 12:00 AM and concluded on 09/01/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 682 vehicles passed through the location with a peak volume of 29 on 08/31/2022 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 08/31/2022 at [11:45 PM-12:00 AM]. The AADT count for this study was 682.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 28 MPH with 9.73% vehicles exceeding the posted speed of 30 MPH. 0.60% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 33.90 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
1	3	42	170	223	164	48	7	3	3	0	0	2	1	1

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 311 which represents 47 percent of the total classified vehicles. The number of Vans & Pickups in the study was 303 which represents 45 percent of the total classified vehicles. The number of Busses & Trucks in the study was 37 which represents 6 percent of the total classified vehicles. The number of Tractor Trailers in the study was 17 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
311	259	44	11	14	15	6	8							

CHART 2

HEADWAY

During the peak traffic period, on 08/31/2022 at [03:15 PM-03:30 PM] the average headway between vehicles was 30 seconds. During the slowest traffic period, on 08/31/2022 at [11:45 PM-12:00 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 68.00 and 122.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: South of Dell Range Blvd

A study of vehicle traffic was conducted with the device having serial number 404061. The study was done in the Northbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 08/31/2022 at 12:00 AM and concluded on 09/01/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 660 vehicles passed through the location with a peak volume of 23 on 08/31/2022 at [03:30 PM-03:45 PM] and a minimum volume of 0 on 08/31/2022 at [10:00 PM-10:15 PM]. The AADT count for this study was 660.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 28 MPH with 7.72% vehicles exceeding the posted speed of 30 MPH. 1.10% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 33.06 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
1	6	30	151	277	121	26	7	2	6	1	1	0	2	4

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 346 which represents 54 percent of the total classified vehicles. The number of Vans & Pickups in the study was 248 which represents 39 percent of the total classified vehicles. The number of Busses & Trucks in the study was 18 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 23 which represents 4 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
346	220	28	5	7	12	9	8							

CHART 2

HEADWAY

During the peak traffic period, on 08/31/2022 at [03:30 PM-03:45 PM] the average headway between vehicles was 37.5 seconds. During the slowest traffic period, on 08/31/2022 at [10:00 PM-10:15 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 68.00 and 124.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Green River St

A study of vehicle traffic was conducted with the device having serial number 404091. The study was done in the Southbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 08/31/2022 at 12:00 AM and concluded on 09/01/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 663 vehicles passed through the location with a peak volume of 28 on 08/31/2022 at [08:15 AM-08:30 AM] and a minimum volume of 0 on 08/31/2022 at [10:15 PM-10:30 PM]. The AADT count for this study was 663.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 31 MPH with 26.56% vehicles exceeding the posted speed of 30 MPH. 3.84% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 39.74 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
7	14	53	104	149	132	76	28	14	11	13	5	3	6	10

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 231 which represents 37 percent of the total classified vehicles. The number of Vans & Pickups in the study was 288 which represents 46 percent of the total classified vehicles. The number of Busses & Trucks in the study was 69 which represents 11 percent of the total classified vehicles. The number of Tractor Trailers in the study was 37 which represents 6 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
231	217	71	24	26	23	12	21							

CHART 2

HEADWAY

During the peak traffic period, on 08/31/2022 at [08:15 AM-08:30 AM] the average headway between vehicles was 31.034 seconds. During the slowest traffic period, on 08/31/2022 at [10:15 PM-10:30 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 70.00 and 127.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Green River St

A study of vehicle traffic was conducted with the device having serial number 404022. The study was done in the Northbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 08/31/2022 at 12:00 AM and concluded on 09/01/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 668 vehicles passed through the location with a peak volume of 37 on 08/31/2022 at [03:30 PM-03:45 PM] and a minimum volume of 0 on 08/31/2022 at [10:30 PM-10:45 PM]. The AADT count for this study was 668.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classifed vehicles was 31 MPH with 28.35% vehicles exceeding the posted speed of 30 MPH. 1.54% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 38.63 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
0	12	45	114	127	167	117	34	14	6	3	2	3	2	3

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 167 which represents 26 percent of the total classified vehicles. The number of Vans & Pickups in the study was 405 which represents 63 percent of the total classified vehicles. The number of Busses & Trucks in the study was 49 which represents 8 percent of the total classified vehicles. The number of Tractor Trailers in the study was 27 which represents 4 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
167	302	103	19	19	16	7	16							

CHART 2

HEADWAY

During the peak traffic period, on 08/31/2022 at [03:30 PM-03:45 PM] the average headway between vehicles was 23.684 seconds. During the slowest traffic period, on 08/31/2022 at [10:30 PM-10:45 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 72.00 and 129.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Rock Springs St

A study of vehicle traffic was conducted with the device having serial number 404061. The study was done in the Southbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 09/13/2022 at 12:00 AM and concluded on 09/14/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 877 vehicles passed through the location with a peak volume of 45 on 09/13/2022 at [03:30 PM-03:45 PM] and a minimum volume of 0 on 09/13/2022 at [10:15 PM-10:30 PM]. The AADT count for this study was 877.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 29 MPH with 9.95% vehicles exceeding the posted speed of 30 MPH. 0.58% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 34.03 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
1	2	21	131	397	226	54	11	8	5	3	1	0	1	3

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 539 which represents 62 percent of the total classified vehicles. The number of Vans & Pickups in the study was 276 which represents 32 percent of the total classified vehicles. The number of Busses & Trucks in the study was 25 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 24 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
539	258	18	6	4	21	12	6							

CHART 2

HEADWAY

During the peak traffic period, on 09/13/2022 at [03:30 PM-03:45 PM] the average headway between vehicles was 19.565 seconds. During the slowest traffic period, on 09/13/2022 at [10:15 PM-10:30 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 54.00 and 117.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Rock Springs St

A study of vehicle traffic was conducted with the device having serial number 404055. The study was done in the Northbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 09/13/2022 at 12:00 AM and concluded on 09/14/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 879 vehicles passed through the location with a peak volume of 32 on 09/13/2022 at [03:45 PM-04:00 PM] and a minimum volume of 0 on 09/13/2022 at [12:00 AM-12:15 AM]. The AADT count for this study was 879.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 29 MPH with 11.27% vehicles exceeding the posted speed of 30 MPH. 1.28% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 34.18 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
1	4	24	140	387	208	52	20	6	4	4	1	4	1	5

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 442 which represents 51 percent of the total classified vehicles. The number of Vans & Pickups in the study was 350 which represents 41 percent of the total classified vehicles. The number of Busses & Trucks in the study was 37 which represents 4 percent of the total classified vehicles. The number of Tractor Trailers in the study was 31 which represents 4 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
442	298	52	12	17	9	15	16							

CHART 2

HEADWAY

During the peak traffic period, on 09/13/2022 at [03:45 PM-04:00 PM] the average headway between vehicles was 27.273 seconds. During the slowest traffic period, on 09/13/2022 at [12:00 AM-12:15 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 57.00 and 115.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Rawlins St

A study of vehicle traffic was conducted with the device having serial number 404022. The study was done in the Southbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 09/13/2022 at 12:00 AM and concluded on 09/14/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,136 vehicles passed through the location with a peak volume of 39 on 09/13/2022 at [08:15 AM-08:30 AM] and a minimum volume of 0 on 09/13/2022 at [11:15 PM-11:30 PM]. The AADT count for this study was 1,136.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classifed vehicles was 35 MPH with 44.77% vehicles exceeding the posted speed of 30 MPH. 1.53% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 42.22 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
1	3	7	70	209	322	265	142	52	13	7	3	2	4	8

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 383 which represents 35 percent of the total classified vehicles. The number of Vans & Pickups in the study was 619 which represents 56 percent of the total classified vehicles. The number of Busses & Trucks in the study was 63 which represents 6 percent of the total classified vehicles. The number of Tractor Trailers in the study was 42 which represents 4 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
383	510	109	19	34	15	7	31							

CHART 2

HEADWAY

During the peak traffic period, on 09/13/2022 at [08:15 AM-08:30 AM] the average headway between vehicles was 22.5 seconds. During the slowest traffic period, on 09/13/2022 at [11:15 PM-11:30 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 54.00 and 113.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Rawlins St

A study of vehicle traffic was conducted with the device having serial number 404091. The study was done in the Northbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 09/13/2022 at 12:00 AM and concluded on 09/14/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,061 vehicles passed through the location with a peak volume of 41 on 09/13/2022 at [03:45 PM-04:00 PM] and a minimum volume of 0 on 09/13/2022 at [12:00 AM-12:15 AM]. The AADT count for this study was 1,061.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classifed vehicles was 32 MPH with 24.73% vehicles exceeding the posted speed of 30 MPH. 2.85% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 38.67 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
0	4	20	114	313	316	135	47	22	11	8	9	2	3	15

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 320 which represents 31 percent of the total classified vehicles. The number of Vans & Pickups in the study was 584 which represents 57 percent of the total classified vehicles. The number of Busses & Trucks in the study was 67 which represents 7 percent of the total classified vehicles. The number of Tractor Trailers in the study was 48 which represents 5 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
320	456	128	24	30	16	14	31							

CHART 2

HEADWAY

During the peak traffic period, on 09/13/2022 at [03:45 PM-04:00 PM] the average headway between vehicles was 21.429 seconds. During the slowest traffic period, on 09/13/2022 at [12:00 AM-12:15 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 54.00 and 115.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Laramie St

A study of vehicle traffic was conducted with the device having serial number 404055. The study was done in the Southbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 09/15/2022 at 12:00 AM and concluded on 09/16/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,206 vehicles passed through the location with a peak volume of 47 on 09/15/2022 at [08:00 AM-08:15 AM] and a minimum volume of 0 on 09/15/2022 at [11:30 PM-11:45 PM]. The AADT count for this study was 1,206.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 30 MPH with 15.72% vehicles exceeding the posted speed of 30 MPH. 0.75% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 35.27 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
0	3	21	141	488	360	128	27	14	6	5	3	1	0	5

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 638 which represents 53 percent of the total classified vehicles. The number of Vans & Pickups in the study was 488 which represents 41 percent of the total classified vehicles. The number of Busses & Trucks in the study was 44 which represents 4 percent of the total classified vehicles. The number of Tractor Trailers in the study was 31 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
638	436	52	11	26	15	9	15							

CHART 2

HEADWAY

During the peak traffic period, on 09/15/2022 at [08:00 AM-08:15 AM] the average headway between vehicles was 18.75 seconds. During the slowest traffic period, on 09/15/2022 at [11:30 PM-11:45 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 61.00 and 100.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Cheyenne
Street: Van Buren Ave
Location: North of Laramie St

A study of vehicle traffic was conducted with the device having serial number 404061. The study was done in the Northbound lane at Van Buren Ave in Cheyenne, WY in Laramie county. The study began on 09/15/2022 at 12:00 AM and concluded on 09/16/2022 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,098 vehicles passed through the location with a peak volume of 39 on 09/15/2022 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 09/15/2022 at [11:15 PM-11:30 PM]. The AADT count for this study was 1,098.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classifed vehicles was 28 MPH with 7.31% vehicles exceeding the posted speed of 30 MPH. 0.74% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 33.07 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
0	2	25	230	527	218	36	16	10	2	7	1	4	2	1

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 603 which represents 56 percent of the total classified vehicles. The number of Vans & Pickups in the study was 414 which represents 38 percent of the total classified vehicles. The number of Busses & Trucks in the study was 33 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 31 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
603	359	55	14	14	9	16	11							

CHART 2

HEADWAY

During the peak traffic period, on 09/15/2022 at [03:15 PM-03:30 PM] the average headway between vehicles was 22.5 seconds. During the slowest traffic period, on 09/15/2022 at [11:15 PM-11:30 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 59.00 and 100.00 degrees F.

HCS Two-Way Stop-Control Report

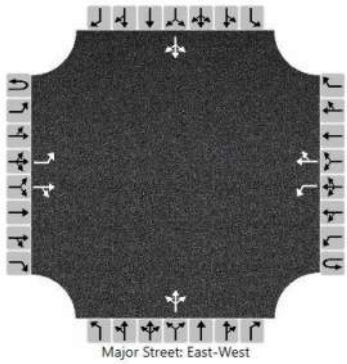
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/22/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Dell Range Blvd and Van Buren Ave
Jurisdiction	
East/West Street	Dell Range Blvd
North/South Street	Van Buren Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		15	207	48		17	532	5		52	6	5		0	9	27
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		17				19					70				40	
Capacity, c (veh/h)		975				1273					229				402	
v/c Ratio		0.02				0.01					0.31				0.10	
95% Queue Length, Q_{95} (veh)		0.1				0.0					1.2				0.3	
Control Delay (s/veh)		8.8				7.9					27.5				14.9	
Level of Service (LOS)		A				A					D				B	
Approach Delay (s/veh)	0.5				0.2				27.5				14.9			
Approach LOS	A				A				D				B			

HCS Two-Way Stop-Control Report

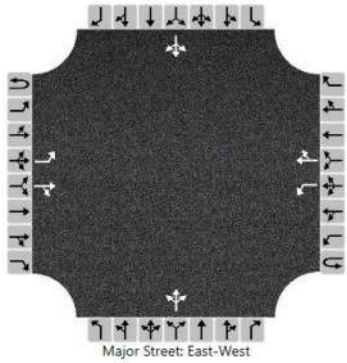
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/22/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Dell Range Blvd and Van Buren Ave
Jurisdiction	
East/West Street	Dell Range Blvd
North/South Street	Van Buren Ave
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		13	482	47		8	401	3		39	9	13		1	3	15
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		14				9					67				21	
Capacity, c (veh/h)		1111				988					226				434	
v/c Ratio		0.01				0.01					0.30				0.05	
95% Queue Length, Q_{95} (veh)		0.0				0.0					1.2				0.2	
Control Delay (s/veh)		8.3				8.7					27.5				13.7	
Level of Service (LOS)		A				A					D				B	
Approach Delay (s/veh)	0.2				0.2				27.5				13.7			
Approach LOS	A				A				D				B			

HCS Two-Way Stop-Control Report

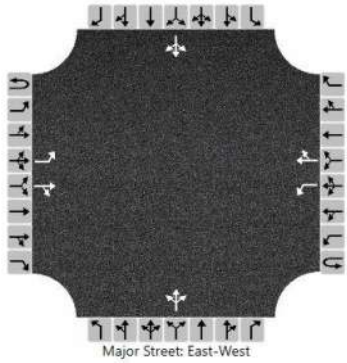
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/22/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Dell Range Blvd and Van Buren Ave
Jurisdiction	
East/West Street	Dell Range Blvd
North/South Street	Van Buren Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		17	225	48		21	575	7		55	8	7		0	12	32
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		19				23					78				49	
Capacity, c (veh/h)		934				1252					197				362	
v/c Ratio		0.02				0.02					0.39				0.14	
95% Queue Length, Q_{95} (veh)		0.1				0.1					1.7				0.5	
Control Delay (s/veh)		8.9				7.9					34.6				16.5	
Level of Service (LOS)		A				A					D				C	
Approach Delay (s/veh)	0.5				0.3				34.6				16.5			
Approach LOS	A				A				D				C			

HCS Two-Way Stop-Control Report

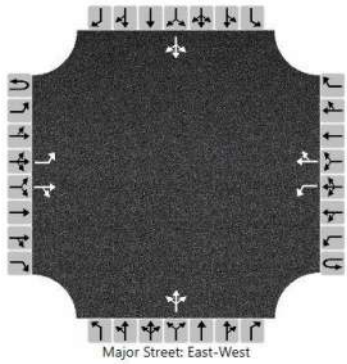
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/22/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Dell Range Blvd and Van Buren Ave
Jurisdiction	
East/West Street	Dell Range Blvd
North/South Street	Van Buren Ave
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		15	519	49		11	433	4		39	12	16		1	4	18
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		16				12					74				25	
Capacity, c (veh/h)		1077				952					200				394	
v/c Ratio		0.02				0.01					0.37				0.06	
95% Queue Length, Q_{95} (veh)		0.0				0.0					1.6				0.2	
Control Delay (s/veh)		8.4				8.8					33.1				14.8	
Level of Service (LOS)		A				A					D				B	
Approach Delay (s/veh)	0.2				0.2				33.1				14.8			
Approach LOS	A				A				D				B			

HCS Two-Way Stop-Control Report

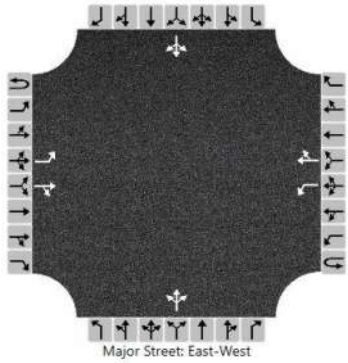
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/22/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Dell Range Blvd and Van Buren Ave
Jurisdiction	
East/West Street	Dell Range Blvd
North/South Street	Van Buren Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		41	391	37		59	942	59		62	46	28		1	73	119
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		46				66					151				214	
Capacity, c (veh/h)		624				1081					0				125	
v/c Ratio		0.07				0.06									1.71	
95% Queue Length, Q_{95} (veh)		0.2				0.2									16.1	
Control Delay (s/veh)		11.2				8.5									411.5	
Level of Service (LOS)		B				A									F	
Approach Delay (s/veh)	1.0				0.5								411.5			
Approach LOS	A				A								F			

HCS Two-Way Stop-Control Report

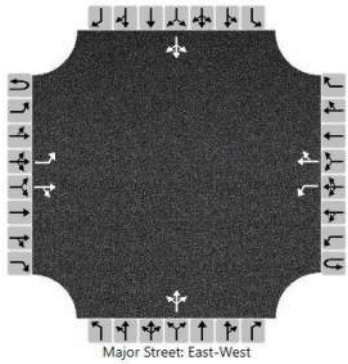
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/22/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Dell Range Blvd and Van Buren Ave
Jurisdiction	
East/West Street	Dell Range Blvd
North/South Street	Van Buren Ave
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		38	852	51		42	706	40		30	53	49		17	30	54
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		42				46					145				111	
Capacity, c (veh/h)		805				693					42				0	
v/c Ratio		0.05				0.07					3.45					
95% Queue Length, Q_{95} (veh)		0.2				0.2					16.2					
Control Delay (s/veh)		9.7				10.6					1302.8					
Level of Service (LOS)		A				B					F					
Approach Delay (s/veh)	0.4				0.6				1302.8							
Approach LOS	A				A				F							

HCS Two-Way Stop-Control Report

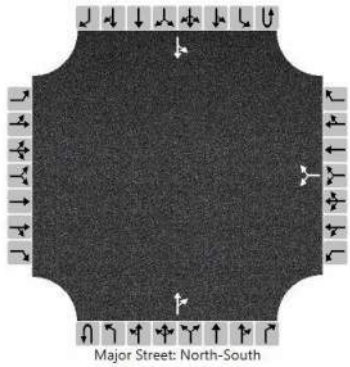
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Liberty St
Jurisdiction	
East/West Street	Liberty St
North/South Street	Van Buren Ave
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						16		3			69	1		1	85	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							23							1		
Capacity, c (veh/h)							816							1503		
v/c Ratio							0.03							0.00		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							9.5							7.4	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.5								0.1		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

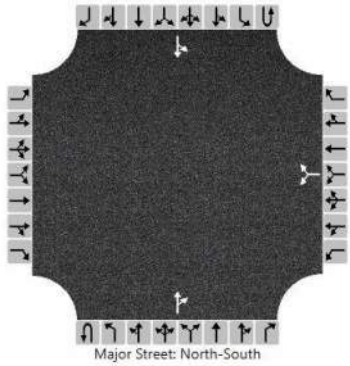
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Liberty St
Jurisdiction	
East/West Street	Liberty St
North/South Street	Van Buren Ave
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						9		7			76	15		9	61	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							21							12		
Capacity, c (veh/h)							834							1462		
v/c Ratio							0.03							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							9.4							7.5	0.1	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.4								1.0		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

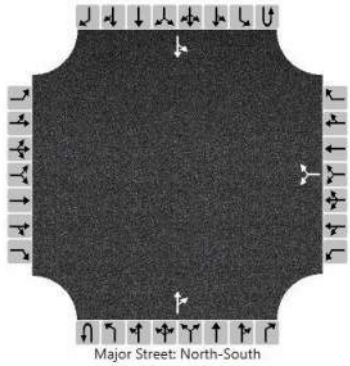
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Liberty St
Jurisdiction	
East/West Street	Liberty St
North/South Street	Van Buren Ave
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						16		3			76	1		1	94	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							23							1		
Capacity, c (veh/h)							797							1493		
v/c Ratio							0.03							0.00		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							9.7							7.4	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.7								0.1		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

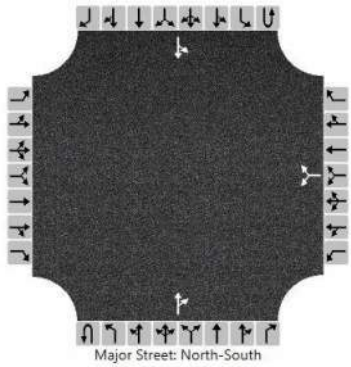
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Liberty St
Jurisdiction	
East/West Street	Liberty St
North/South Street	Van Buren Ave
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						9		7			85	15		9	69	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							21							12		
Capacity, c (veh/h)							814							1447		
v/c Ratio							0.03							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							9.5							7.5	0.1	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.5								0.9		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

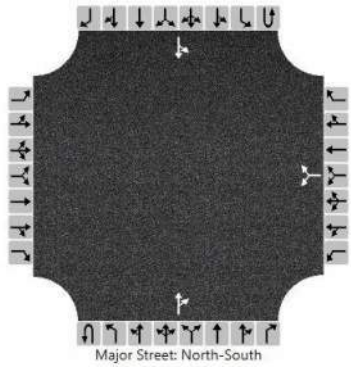
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Liberty St
Jurisdiction	
East/West Street	Liberty St
North/South Street	Van Buren Ave
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						17		2			151	1		1	186	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							23							1		
Capacity, c (veh/h)							608							1381		
v/c Ratio							0.04							0.00		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							11.2							7.6	0.0	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						11.2								0.0		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

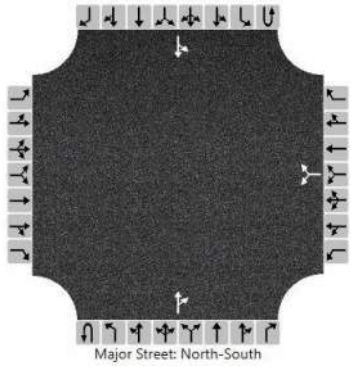
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Liberty St
Jurisdiction	
East/West Street	Liberty St
North/South Street	Van Buren Ave
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						10		6			180	17		8	145	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							21							11		
Capacity, c (veh/h)							622							1300		
v/c Ratio							0.03							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							11.0							7.8	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						11.0								0.5		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

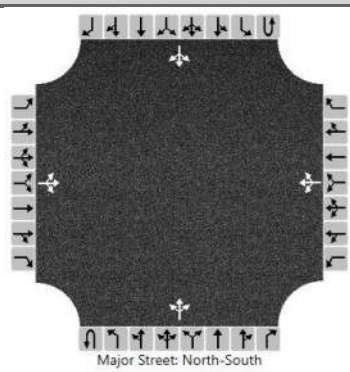
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green River St
Jurisdiction	
East/West Street	Green River St
North/South Street	Van Buren Ave
Peak Hour Factor	0.73
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		38	1	54		6	1	2		51	29	4		2	42	63
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			127				12			70				3		
Capacity, c (veh/h)			778				610			1433				1556		
v/c Ratio			0.16				0.02			0.05				0.00		
95% Queue Length, Q_{95} (veh)			0.6				0.1			0.2				0.0		
Control Delay (s/veh)			10.5				11.0			7.6	0.4	0.4		7.3	0.0	0.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)	10.5				11.0				4.8				0.2			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

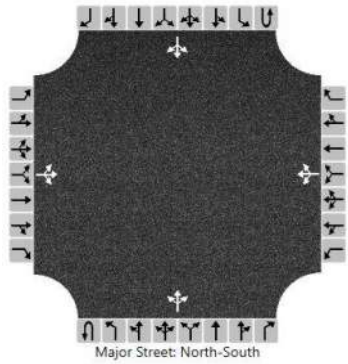
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green River St
Jurisdiction	
East/West Street	Green River St
North/South Street	Van Buren Ave
Peak Hour Factor	0.71
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		37	6	60		4	1	2		54	55	2		3	52	27
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			145				10			76				4		
Capacity, c (veh/h)			751				580			1472				1511		
v/c Ratio			0.19				0.02			0.05				0.00		
95% Queue Length, Q_{95} (veh)			0.7				0.1			0.2				0.0		
Control Delay (s/veh)			10.9				11.3			7.6	0.4	0.4		7.4	0.0	0.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)	10.9				11.3				3.9				0.3			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

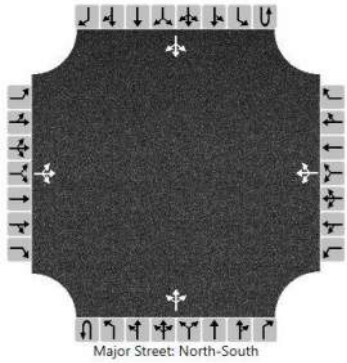
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green River St
Jurisdiction	
East/West Street	Green River St
North/South Street	Van Buren Ave
Peak Hour Factor	0.73
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		39	1	54		6	1	2		51	36	4		2	52	65
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			129				12			70				3		
Capacity, c (veh/h)			754				589			1413				1544		
v/c Ratio			0.17				0.02			0.05				0.00		
95% Queue Length, Q_{95} (veh)			0.6				0.1			0.2				0.0		
Control Delay (s/veh)			10.8				11.2			7.7	0.4	0.4		7.3	0.0	0.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)	10.8				11.2				4.5				0.1			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

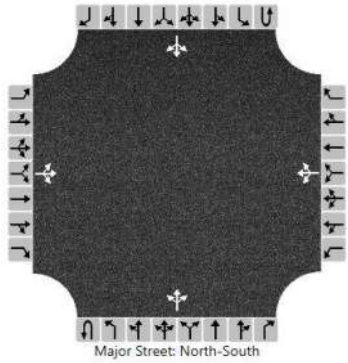
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green River St
Jurisdiction	
East/West Street	Green River St
North/South Street	Van Buren Ave
Peak Hour Factor	0.71
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		61	6	37		4	1	2		54	64	2		3	60	27
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			146				10			76				4		
Capacity, c (veh/h)			652				584			1458				1495		
v/c Ratio			0.22				0.02			0.05				0.00		
95% Queue Length, Q_{95} (veh)			0.9				0.1			0.2				0.0		
Control Delay (s/veh)			12.1				11.3			7.6	0.4	0.4		7.4	0.0	0.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)		12.1				11.3				3.7				0.3		
Approach LOS		B				B				A				A		

HCS Two-Way Stop-Control Report

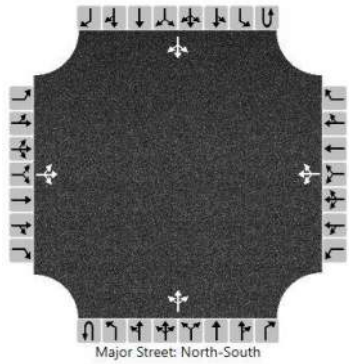
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green River St
Jurisdiction	
East/West Street	Green River St
North/South Street	Van Buren Ave
Peak Hour Factor	0.73
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		49	0	49		6	0	3		48	107	4		3	149	80
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			134				12			66				4		
Capacity, c (veh/h)			541				453			1241				1423		
v/c Ratio			0.25				0.03			0.05				0.00		
95% Queue Length, Q_{95} (veh)			1.0				0.1			0.2				0.0		
Control Delay (s/veh)			13.8				13.2			8.1	0.5	0.5		7.5	0.0	0.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)		13.8				13.2				2.8				0.1		
Approach LOS		B				B				A				A		

HCS Two-Way Stop-Control Report

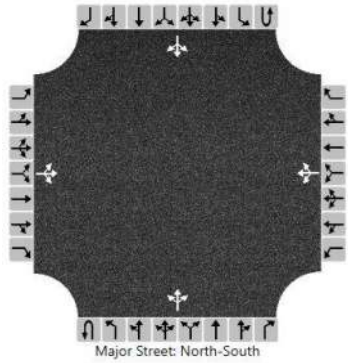
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green River St
Jurisdiction	
East/West Street	Green River St
North/South Street	Van Buren Ave
Peak Hour Factor	0.71
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		43	3	64		4	0	2		55	152	3		5	143	30
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			155				8			77				7		
Capacity, c (veh/h)			547				390			1317				1345		
v/c Ratio			0.28				0.02			0.06				0.01		
95% Queue Length, Q_{95} (veh)			1.2				0.1			0.2				0.0		
Control Delay (s/veh)			14.2				14.4			7.9	0.5	0.5		7.7	0.0	0.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)	14.2				14.4				2.5				0.3			
Approach LOS	B				B				A				A			

HCS Roundabouts Report

General Information

Analyst	Elizabeth Landry
Agency or Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green Ri...
E/W Street Name	Green River St
N/S Street Name	Van Buren Ave
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.73
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	0	38	1	54	0	6	1	2	0	51	29	4	0	2	42	63
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (v_{PCE}), pc/h	0	54	1	76	0	8	1	3	0	72	41	6	0	3	59	89
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		131			12			119			151	
Entry Volume, veh/h		127			12			116			147	
Circulating Flow (v_c), pc/h	70			167			58			81		
Exiting Flow (v_{ex}), pc/h	10			162			98			143		
Capacity (c_{pce}), pc/h		1285			1164			1301			1271	
Capacity (c), veh/h		1247			1130			1263			1234	
v/c Ratio (x)		0.10			0.01			0.09			0.12	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		3.7			3.3			3.6			3.9	
Lane LOS		A			A			A			A	
95% Queue, veh		0.3			0.0			0.3			0.4	
Approach Delay, s/veh | LOS	3.7	A		3.3	A		3.6	A		3.9	A	
Intersection Delay, s/veh | LOS	3.7						A					

HCS Roundabouts Report

General Information

Analyst	Elizabeth Landry
Agency or Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green Ri...
E/W Street Name	Green River St
N/S Street Name	Van Buren Ave
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.71
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	0	37	6	60	0	4	1	2	0	54	55	2	0	3	52	27
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (v_{PCE}), pc/h	0	54	9	87	0	6	1	3	0	78	80	3	0	4	75	39
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		150			10			161			118	
Entry Volume, veh/h		146			10			156			115	
Circulating Flow (v_c), pc/h	85			212			67			85		
Exiting Flow (v_{ex}), pc/h	16			118			137			168		
Capacity (c_{pce}), pc/h		1265			1112			1289			1265	
Capacity (c), veh/h		1229			1079			1251			1229	
v/c Ratio (x)		0.12			0.01			0.12			0.09	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		3.9			3.4			3.9			3.7	
Lane LOS		A			A			A			A	
95% Queue, veh		0.4			0.0			0.4			0.3	
Approach Delay, s/veh | LOS	3.9	A		3.4	A		3.9	A		3.7	A	
Intersection Delay, s/veh | LOS	3.8						A					

HCS Roundabouts Report

General Information

Analyst	Elizabeth Landry
Agency or Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green Ri...
E/W Street Name	Green River St
N/S Street Name	Van Buren Ave
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.73
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	0	39	1	54	0	6	1	2	0	51	36	4	0	2	52	65
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (v_{PCE}), pc/h	0	55	1	76	0	8	1	3	0	72	51	6	0	3	73	92
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		132			12			129			168	
Entry Volume, veh/h		128			12			125			163	
Circulating Flow (v_c), pc/h	84			178			59			81		
Exiting Flow (v_{ex}), pc/h	10			165			109			157		
Capacity (c_{pce}), pc/h		1267			1151			1299			1271	
Capacity (c), veh/h		1230			1117			1262			1234	
v/c Ratio (x)		0.10			0.01			0.10			0.13	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		3.8			3.3			3.7			4.0	
Lane LOS		A			A			A			A	
95% Queue, veh		0.3			0.0			0.3			0.5	
Approach Delay, s/veh | LOS	3.8	A		3.3	A		3.7	A		4.0	A	
Intersection Delay, s/veh | LOS	3.8						A					

HCS Roundabouts Report

General Information

Analyst	Elizabeth Landry
Agency or Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green Ri...
E/W Street Name	Green River St
N/S Street Name	Van Buren Ave
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.71
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	0	37	6	61	0	4	1	2	0	54	64	2	0	3	60	27
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (v_{PCE}), pc/h	0	54	9	88	0	6	1	3	0	78	93	3	0	4	87	39
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		151			10			174			130	
Entry Volume, veh/h		147			10			169			126	
Circulating Flow (v_c), pc/h	97			225			67			85		
Exiting Flow (v_{ex}), pc/h	16			118			150			181		
Capacity (c_{pce}), pc/h		1250			1097			1289			1265	
Capacity (c), veh/h		1214			1065			1251			1229	
v/c Ratio (x)		0.12			0.01			0.14			0.10	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.0			3.5			4.0			3.8	
Lane LOS		A			A			A			A	
95% Queue, veh		0.4			0.0			0.5			0.3	
Approach Delay, s/veh | LOS	4.0	A		3.5	A		4.0	A		3.8	A	
Intersection Delay, s/veh | LOS	3.9						A					

HCS Roundabouts Report

General Information

Analyst	Elizabeth Landry
Agency or Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green Ri...
E/W Street Name	Green River St
N/S Street Name	Van Buren Ave
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.73
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	0	49	0	49	0	6	0	3	0	48	107	4	0	3	149	80
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (v_{PCE}), pc/h	0	69	0	69	0	8	0	4	0	68	151	6	0	4	210	113
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		138			12			225			327	
Entry Volume, veh/h		134			12			218			317	
Circulating Flow (v_c), pc/h	222			288			73			76		
Exiting Flow (v_{ex}), pc/h	10			181			224			287		
Capacity (c_{pce}), pc/h		1100			1029			1281			1277	
Capacity (c), veh/h		1068			999			1244			1240	
v/c Ratio (x)		0.13			0.01			0.18			0.26	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.5			3.7			4.4			5.2	
Lane LOS		A			A			A			A	
95% Queue, veh		0.4			0.0			0.6			1.0	
Approach Delay, s/veh | LOS	4.5	A		3.7	A		4.4	A		5.2	A	
Intersection Delay, s/veh | LOS	4.8						A					

HCS Roundabouts Report

General Information

Analyst	Elizabeth Landry
Agency or Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Green Ri...
E/W Street Name	Green River St
N/S Street Name	Van Buren Ave
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.71
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	0	43	3	64	0	4	0	2	0	55	152	3	0	5	143	30
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (v_{PCE}), pc/h	0	62	4	93	0	6	0	3	0	80	221	4	0	7	207	44
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		159			9			305			258	
Entry Volume, veh/h		154			9			296			250	
Circulating Flow (v_c), pc/h	220			363			73			86		
Exiting Flow (v_{ex}), pc/h	15			124			286			306		
Capacity (c_{pce}), pc/h		1103			953			1281			1264	
Capacity (c), veh/h		1071			925			1244			1227	
v/c Ratio (x)		0.14			0.01			0.24			0.20	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.6			4.0			5.0			4.7	
Lane LOS		A			A			A			A	
95% Queue, veh		0.5			0.0			0.9			0.8	
Approach Delay, s/veh | LOS	4.6	A		4.0	A		5.0	A		4.7	A	
Intersection Delay, s/veh | LOS	4.8						A					

HCS Two-Way Stop-Control Report

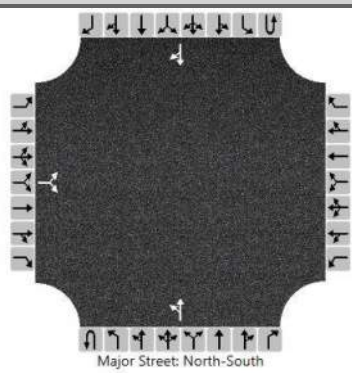
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rock Springs St
Jurisdiction	
East/West Street	Rock Springs St
North/South Street	Van Buren Ave
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		1		28						10	87				100	2
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			35							12						
Capacity, c (veh/h)			918							1458						
v/c Ratio			0.04							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.1							7.5	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.1								0.8						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

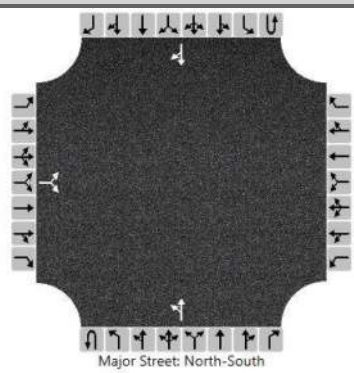
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rock Springs St
Jurisdiction	
East/West Street	Rock Springs St
North/South Street	Van Buren Ave
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		2		19						23	115				103	6
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			28							31						
Capacity, c (veh/h)			867							1431						
v/c Ratio			0.03							0.02						
95% Queue Length, Q_{95} (veh)			0.1							0.1						
Control Delay (s/veh)			9.3							7.6	0.2					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.3								1.4						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

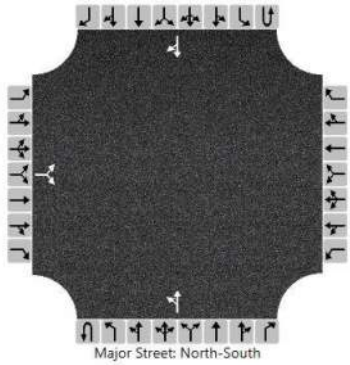
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rock Springs St
Jurisdiction	
East/West Street	Rock Springs St
North/South Street	Van Buren Ave
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		1		29						10	95				109	2
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			36							12						
Capacity, c (veh/h)			905							1445						
v/c Ratio			0.04							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.1							7.5	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.1								0.8						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

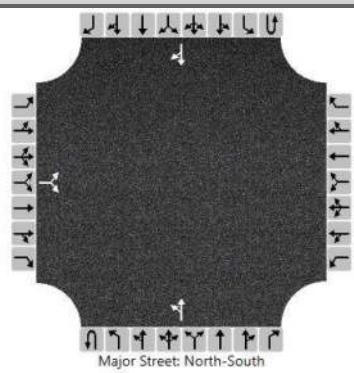
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rock Springs St
Jurisdiction	
East/West Street	Rock Springs St
North/South Street	Van Buren Ave
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		2		19						24	126				113	5
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			28							32						
Capacity, c (veh/h)			850							1416						
v/c Ratio			0.03							0.02						
95% Queue Length, Q_{95} (veh)			0.1							0.1						
Control Delay (s/veh)			9.4							7.6	0.2					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.4								1.4						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

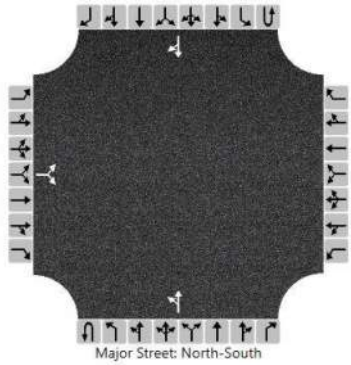
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rock Springs St
Jurisdiction	
East/West Street	Rock Springs St
North/South Street	Van Buren Ave
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		31						13	170				192	1
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			37							16						
Capacity, c (veh/h)			805							1329						
v/c Ratio			0.05							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.7							7.7	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.7								0.6						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

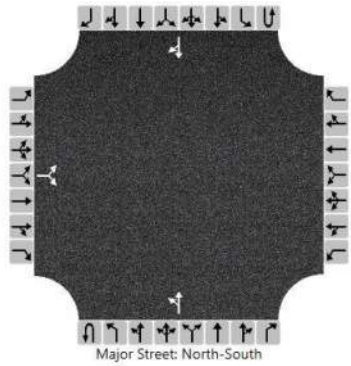
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rock Springs St
Jurisdiction	
East/West Street	Rock Springs St
North/South Street	Van Buren Ave
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		1		22						30	230				203	3
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			31							40						
Capacity, c (veh/h)			736							1283						
v/c Ratio			0.04							0.03						
95% Queue Length, Q_{95} (veh)			0.1							0.1						
Control Delay (s/veh)			10.1							7.9	0.3					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.1								1.2						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

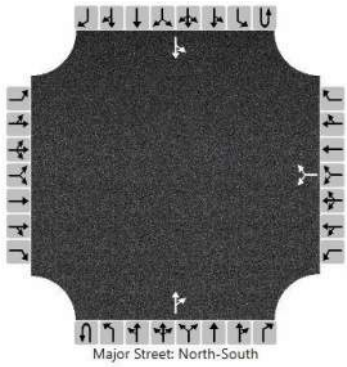
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Eastview St
Jurisdiction	
East/West Street	Eastview St
North/South Street	Van Buren Ave
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						21		20			77	10		10	119	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							47							11		
Capacity, c (veh/h)							824							1486		
v/c Ratio							0.06							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							9.6							7.4	0.1	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.6								0.6		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

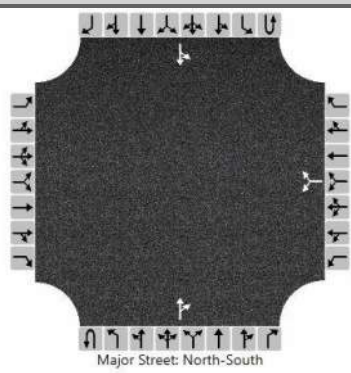
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Eastview St
Jurisdiction	
East/West Street	Eastview St
North/South Street	Van Buren Ave
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						10		11			128	16		12	109	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							27							15		
Capacity, c (veh/h)							746							1387		
v/c Ratio							0.04							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							10.0							7.6	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.0								0.8		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

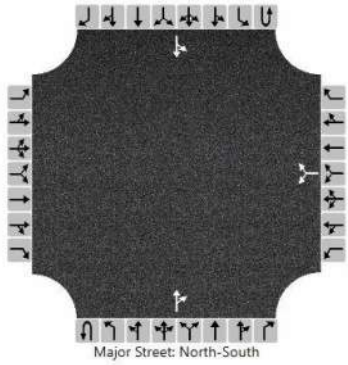
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Eastview St
Jurisdiction	
East/West Street	Eastview St
North/South Street	Van Buren Ave
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						21		20			85	10		10	130	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							47							11		
Capacity, c (veh/h)							806							1475		
v/c Ratio							0.06							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							9.7							7.5	0.1	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.7								0.6		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

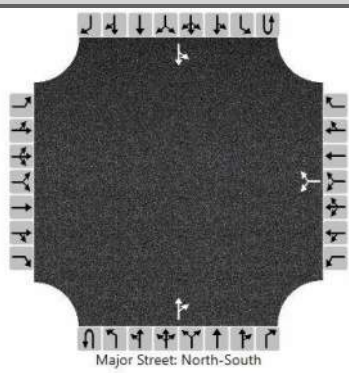
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Eastview St
Jurisdiction	
East/West Street	Eastview St
North/South Street	Van Buren Ave
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						10		11			140	16		12	119	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							27							15		
Capacity, c (veh/h)							725							1369		
v/c Ratio							0.04							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							10.2							7.7	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.2								0.8		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

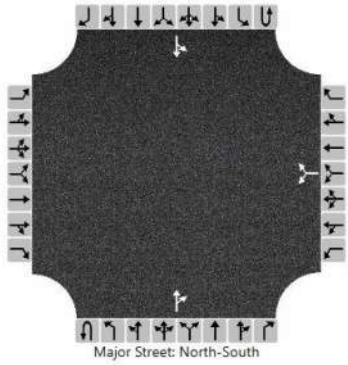
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Eastview St
Jurisdiction	
East/West Street	Eastview St
North/South Street	Van Buren Ave
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						20		21			155	9		10	234	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							47							11		
Capacity, c (veh/h)							667							1380		
v/c Ratio							0.07							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							10.8							7.6	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.8								0.4		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

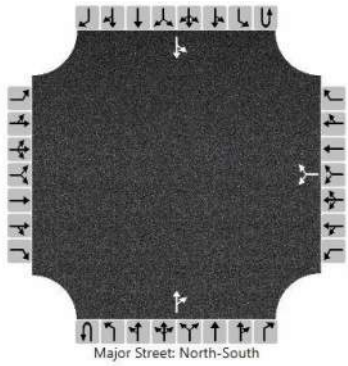
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/18/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Eastview St
Jurisdiction	
East/West Street	Eastview St
North/South Street	Van Buren Ave
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						10		11			255	17		12	217	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							27							15		
Capacity, c (veh/h)							542							1209		
v/c Ratio							0.05							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							12.0							8.0	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						12.0								0.5		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

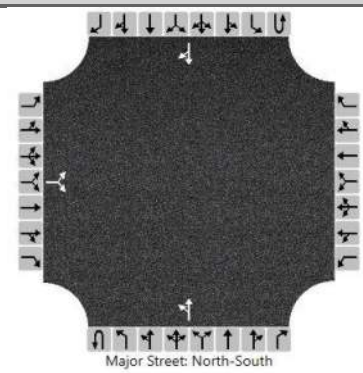
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rawlins St
Jurisdiction	
East/West Street	Rawlins St
North/South Street	Van Buren Ave
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		3		8						3	84				132	8
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			14							4						
Capacity, c (veh/h)			815							1393						
v/c Ratio			0.02							0.00						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.5							7.6	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.5								0.3						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

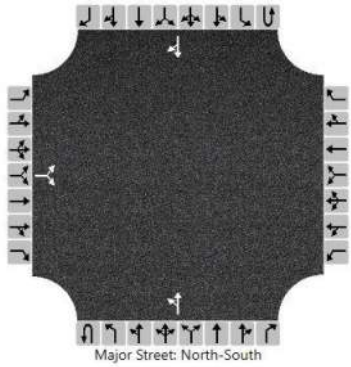
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rawlins St
Jurisdiction	
East/West Street	Rawlins St
North/South Street	Van Buren Ave
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		5		7						7	127				124	4
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			16							9						
Capacity, c (veh/h)			759							1403						
v/c Ratio			0.02							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.8							7.6	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.8								0.4						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
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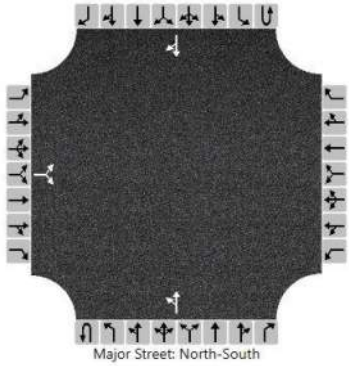
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rawlins St
Jurisdiction	
East/West Street	Rawlins St
North/South Street	Van Buren Ave
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		5		6						2	88				142	10
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			14							3						
Capacity, c (veh/h)			768							1375						
v/c Ratio			0.02							0.00						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.8							7.6	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.8								0.2						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

General Information

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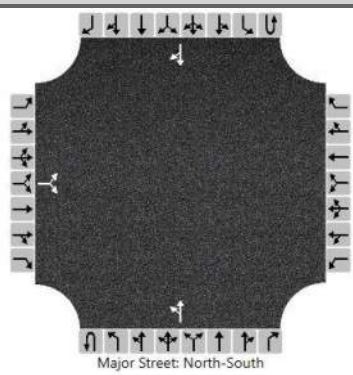
Site Information

Intersection	Van Buren Ave and Rawlins St
Jurisdiction	
East/West Street	Rawlins St
North/South Street	Van Buren Ave
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		7		5						5	133				133	6
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			16							7						
Capacity, c (veh/h)			708							1386						
v/c Ratio			0.02							0.00						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			10.2							7.6	0.0					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.2								0.3						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

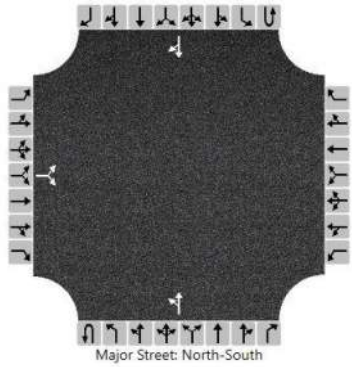
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rawlins St
Jurisdiction	
East/West Street	Rawlins St
North/South Street	Van Buren Ave
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		13		0						0	112				246	18
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			16							0						
Capacity, c (veh/h)			554							1220						
v/c Ratio			0.03							0.00						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			11.7							8.0	0.0					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		11.7								0.0						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

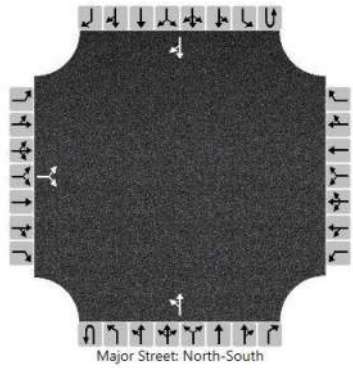
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Rawlins St
Jurisdiction	
East/West Street	Rawlins St
North/South Street	Van Buren Ave
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		14		0						0	172				224	17
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			18							0						
Capacity, c (veh/h)			506							1237						
v/c Ratio			0.04							0.00						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			12.4							7.9	0.0					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		12.4								0.0						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

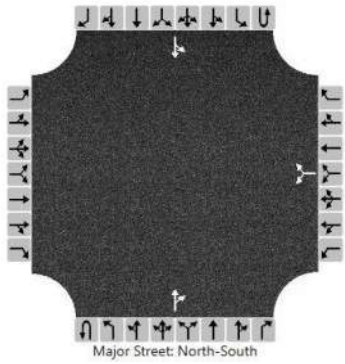
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Carter Rd
Jurisdiction	
East/West Street	Carter Rd
North/South Street	Van Buren Ave
Peak Hour Factor	0.80
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						1		1			1	1		0	141	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							3							0		
Capacity, c (veh/h)							925							1613		
v/c Ratio							0.00							0.00		
95% Queue Length, Q_{95} (veh)							0.0							0.0		
Control Delay (s/veh)							8.9							7.2	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						8.9								0.0		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

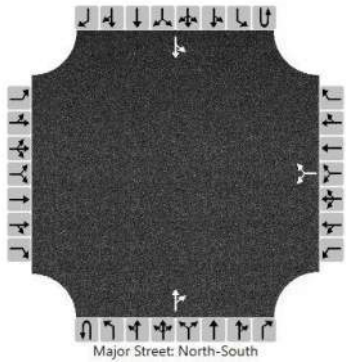
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Carter Rd
Jurisdiction	
East/West Street	Carter Rd
North/South Street	Van Buren Ave
Peak Hour Factor	0.77
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						0		0			133	2		2	131	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							0							3		
Capacity, c (veh/h)							0							1395		
v/c Ratio														0.00		
95% Queue Length, Q_{95} (veh)														0.0		
Control Delay (s/veh)														7.6	0.0	
Level of Service (LOS)														A	A	
Approach Delay (s/veh)													0.1			
Approach LOS													A			

HCS Two-Way Stop-Control Report

General Information

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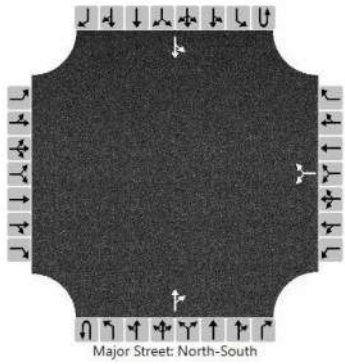
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Carter Rd
Jurisdiction	
East/West Street	Carter Rd
North/South Street	Van Buren Ave
Peak Hour Factor	0.80
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						1		1			1	1		0	146	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							3							0		
Capacity, c (veh/h)							921							1613		
v/c Ratio							0.00							0.00		
95% Queue Length, Q_{95} (veh)							0.0							0.0		
Control Delay (s/veh)							8.9							7.2	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						8.9								0.0		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

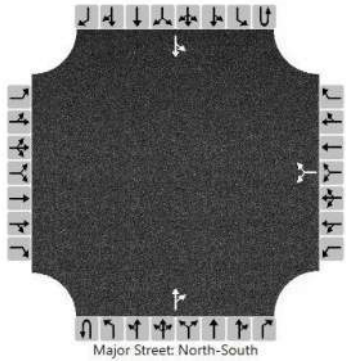
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Carter Rd
Jurisdiction	
East/West Street	Carter Rd
North/South Street	Van Buren Ave
Peak Hour Factor	0.77
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						0		0			138	2		2	135	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							0							3		
Capacity, c (veh/h)							0							1387		
v/c Ratio														0.00		
95% Queue Length, Q_{95} (veh)														0.0		
Control Delay (s/veh)														7.6	0.0	
Level of Service (LOS)														A	A	
Approach Delay (s/veh)													0.1			
Approach LOS													A			

HCS Two-Way Stop-Control Report

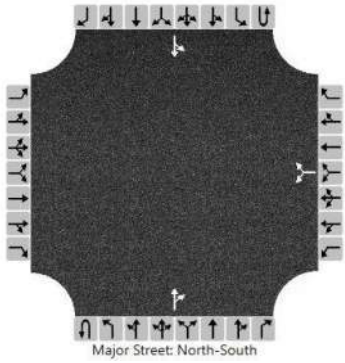
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Carter Rd
Jurisdiction	
East/West Street	Carter Rd
North/South Street	Van Buren Ave
Peak Hour Factor	0.80
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						1		1			2	1		0	181	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							3							0		
Capacity, c (veh/h)							889							1611		
v/c Ratio							0.00							0.00		
95% Queue Length, Q_{95} (veh)							0.0							0.0		
Control Delay (s/veh)							9.1							7.2	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.1								0.0		
Approach LOS						A								A		

HCS Two-Way Stop-Control Report

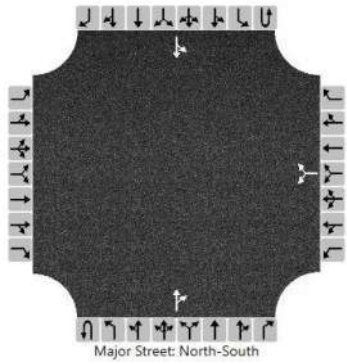
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Carter Rd
Jurisdiction	
East/West Street	Carter Rd
North/South Street	Van Buren Ave
Peak Hour Factor	0.77
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						0		0			172	2		2	169	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							0							3		
Capacity, c (veh/h)							0							1337		
v/c Ratio														0.00		
95% Queue Length, Q_{95} (veh)														0.0		
Control Delay (s/veh)														7.7	0.0	
Level of Service (LOS)														A	A	
Approach Delay (s/veh)													0.1			
Approach LOS													A			

HCS Two-Way Stop-Control Report

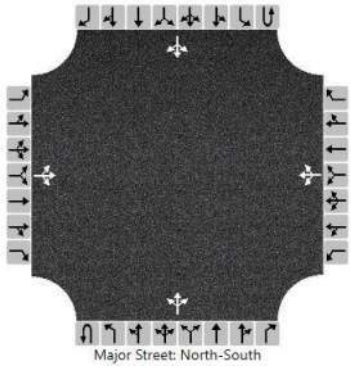
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Laramie St
Jurisdiction	
East/West Street	Laramie St
North/South Street	Van Buren Ave
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	2		0	0	0		1	101	0		0	139	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			2				0			1				0		
Capacity, c (veh/h)			884				0			1414				1468		
v/c Ratio			0.00							0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			9.1							7.5	0.0	0.0		7.5	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)		9.1								0.1				0.0		
Approach LOS		A								A				A		

HCS Two-Way Stop-Control Report

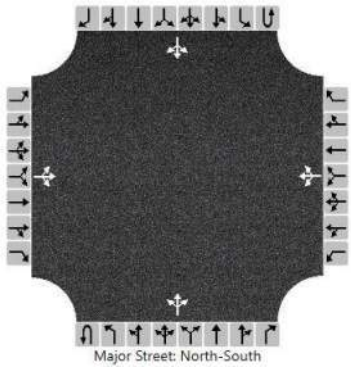
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Laramie St
Jurisdiction	
East/West Street	Laramie St
North/South Street	Van Buren Ave
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	0	2		0	0	0		1	148	0		0	117	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			5				0			1				0		
Capacity, c (veh/h)			755				0			1442				1403		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			9.8							7.5	0.0	0.0		7.6	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)		9.8								0.1				0.0		
Approach LOS		A								A				A		

HCS Two-Way Stop-Control Report

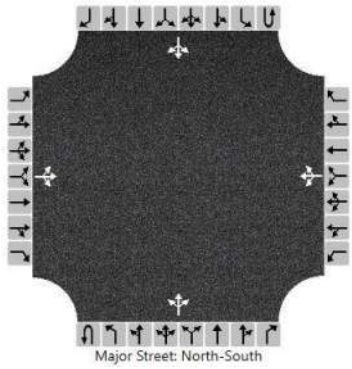
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2025
Time Analyzed	2025 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Laramie St
Jurisdiction	
East/West Street	Laramie St
North/South Street	Van Buren Ave
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	2		0	0	0		1	104	0		0	144	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			2				0			1				0		
Capacity, c (veh/h)			878				0			1407				1464		
v/c Ratio			0.00							0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			9.1							7.6	0.0	0.0		7.5	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)	9.1								0.1				0.0			
Approach LOS	A								A				A			

HCS Two-Way Stop-Control Report

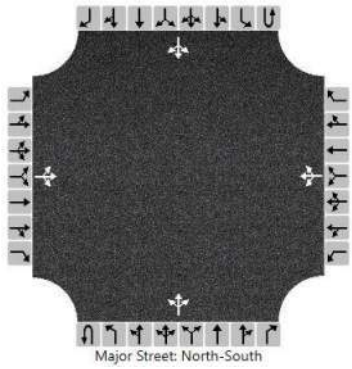
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2025
Time Analyzed	2025 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Laramie St
Jurisdiction	
East/West Street	Laramie St
North/South Street	Van Buren Ave
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	0	2		0	0	0		1	153	0		0	121	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			5				0			1				0		
Capacity, c (veh/h)			747				0			1436				1397		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			9.9							7.5	0.0	0.0		7.6	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)	9.9								0.1				0.0			
Approach LOS	A								A				A			

HCS Two-Way Stop-Control Report

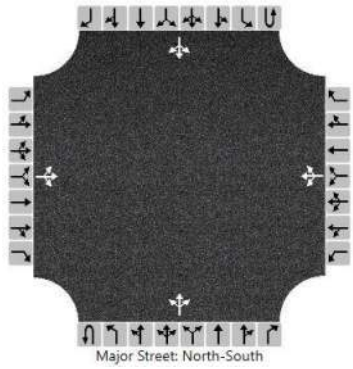
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Laramie St
Jurisdiction	
East/West Street	Laramie St
North/South Street	Van Buren Ave
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		1	0	5		0	0	0		2	129	0		0	178	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				0			2				0		
Capacity, c (veh/h)			782				0			1360				1429		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			9.6							7.7	0.0	0.0		7.5	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)		9.6								0.1				0.0		
Approach LOS		A								A				A		

HCS Two-Way Stop-Control Report

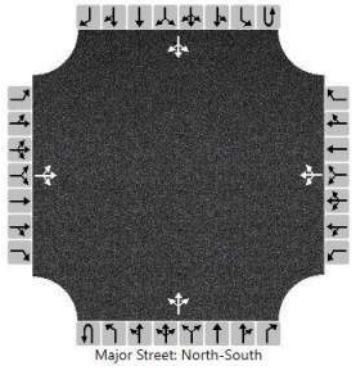
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	North-South
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and Laramie St
Jurisdiction	
East/West Street	Laramie St
North/South Street	Van Buren Ave
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		5	0	5		0	0	0		3	189	0		0	148	7
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			11				0			3				0		
Capacity, c (veh/h)			683				0			1394				1349		
v/c Ratio			0.02							0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.1							0.0				0.0		
Control Delay (s/veh)			10.4							7.6	0.0	0.0		7.7	0.0	0.0
Level of Service (LOS)			B							A	A	A		A	A	A
Approach Delay (s/veh)		10.4								0.1				0.0		
Approach LOS		B								A				A		

HCS Two-Way Stop-Control Report

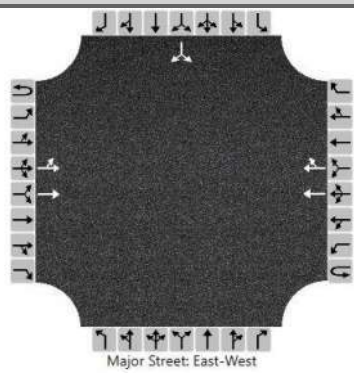
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	East-West
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and US-30
Jurisdiction	
East/West Street	US-30 (Lincolnway)
North/South Street	Van Buren Ave
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		45	241				705	17						4		122
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		48													134	
Capacity, c (veh/h)		835													596	
v/c Ratio		0.06													0.22	
95% Queue Length, Q_{95} (veh)		0.2													0.9	
Control Delay (s/veh)		9.6	0.4												12.8	
Level of Service (LOS)		A	A												B	
Approach Delay (s/veh)		1.9												12.8		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

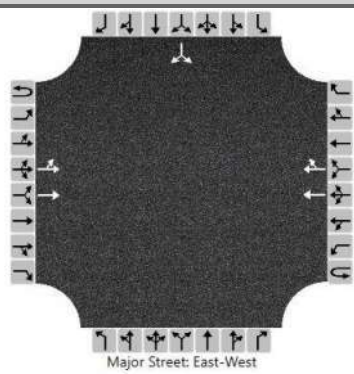
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	East-West
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and US-30
Jurisdiction	
East/West Street	US-30 (Lincolnway)
North/South Street	Van Buren Ave
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		142	672				376	6						7		71
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		146													80	
Capacity, c (veh/h)		1154													706	
v/c Ratio		0.13													0.11	
95% Queue Length, Q_{95} (veh)		0.4													0.4	
Control Delay (s/veh)		8.6	0.9												10.8	
Level of Service (LOS)		A	A												B	
Approach Delay (s/veh)		2.3												10.8		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information

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Date Performed	5/19/2023
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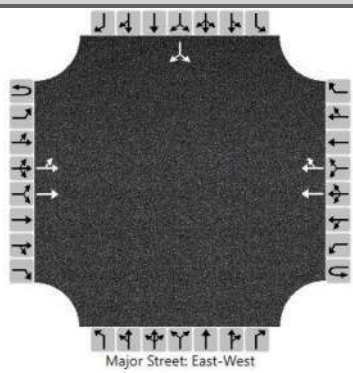
Time Analyzed	2025 AM Peak
Intersection Orientation	East-West
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and US-30
Jurisdiction	
East/West Street	US-30 (Lincolnway)
North/South Street	Van Buren Ave
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		49	252				737	15						3		127
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		52													138	
Capacity, c (veh/h)		812													585	
v/c Ratio		0.06													0.24	
95% Queue Length, Q_{95} (veh)		0.2													0.9	
Control Delay (s/veh)		9.7	0.5												13.0	
Level of Service (LOS)		A	A												B	
Approach Delay (s/veh)		2.0												13.0		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information

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Agency/Co.	Y2 Consultants
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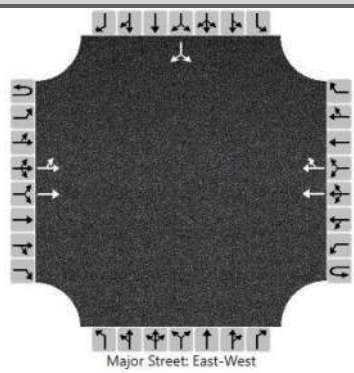
Intersection Orientation	East-West
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and US-30
Jurisdiction	
East/West Street	US-30 (Lincolnway)
North/South Street	Van Buren Ave
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		149	707				393	5						6		75
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		154													84	
Capacity, c (veh/h)		1138													708	
v/c Ratio		0.13													0.12	
95% Queue Length, Q_{95} (veh)		0.5													0.4	
Control Delay (s/veh)		8.7	1.0												10.8	
Level of Service (LOS)		A	A												B	
Approach Delay (s/veh)		2.4												10.8		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information

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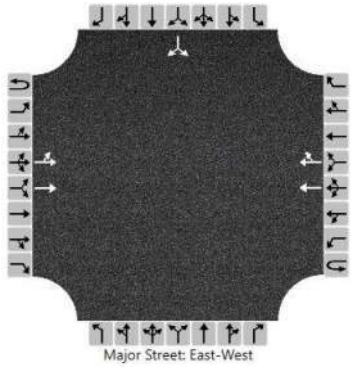
Site Information

Intersection	Van Buren Ave and US-30
Jurisdiction	
East/West Street	US-30 (Lincolnway)
North/South Street	Van Buren Ave
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		77	346				980	5						1		161
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		82													172	
Capacity, c (veh/h)		654													492	
v/c Ratio		0.13													0.35	
95% Queue Length, Q_{95} (veh)		0.4													1.6	
Control Delay (s/veh)		11.3	1.1												16.2	
Level of Service (LOS)		B	A												C	
Approach Delay (s/veh)		2.9												16.2		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

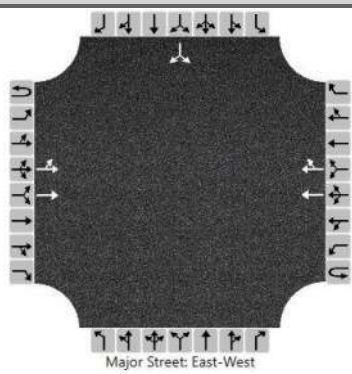
General Information

Analyst	Elizabeth Landry
Agency/Co.	Y2 Consultants
Date Performed	5/19/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak
Intersection Orientation	East-West
Project Description	Van Buren Corridor

Site Information

Intersection	Van Buren Ave and US-30
Jurisdiction	
East/West Street	US-30 (Lincolnway)
North/South Street	Van Buren Ave
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		204	1000				520	1						1		99
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage																
	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		210													103	
Capacity, c (veh/h)		1020													706	
v/c Ratio		0.21													0.15	
95% Queue Length, Q_{95} (veh)		0.8													0.5	
Control Delay (s/veh)		9.4	1.9												11.0	
Level of Service (LOS)		A	A												B	
Approach Delay (s/veh)		3.2												11.0		
Approach LOS		A												B		

APPENDIX F – UTILITY LOCATE INFORMATION FROM UCS

CHEYENNE

Underground Consulting Solutions

Private/Engineering Facility Location Sketch

P
E
RO

Work Address VAN BUREN & DELRANGE

Contractor/Name WESTERN R&D

Billing Address ON file

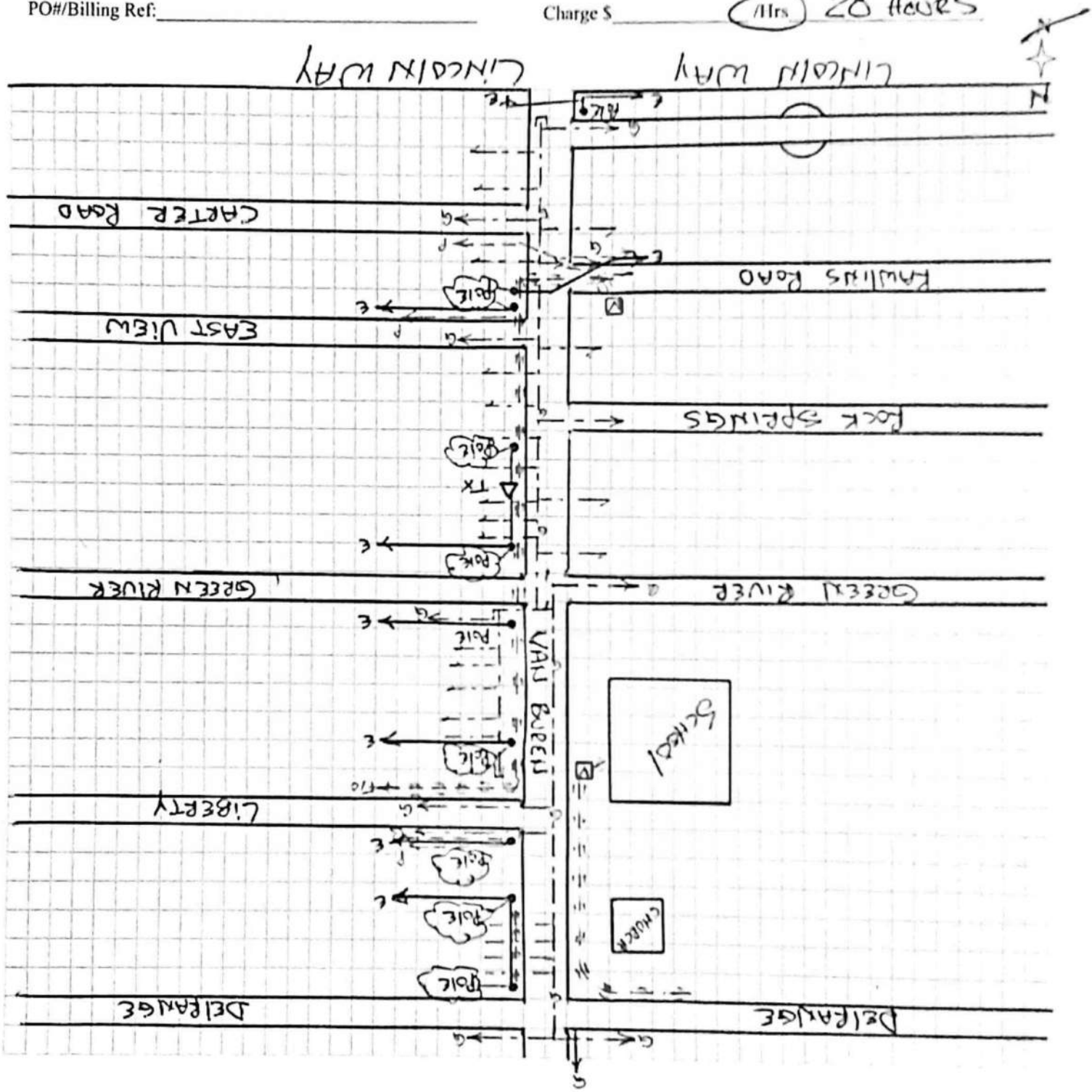
PO#/Billing Ref:

Contact Name ED WADDELL

Contact Phone # 307-632-5656

Date 12/1/2022

Charge $ /Hrs 20 HOURS



Utility depiction conforms to ASCE 38-02 Utility Quality Level B using appropriate surface geophysical methods and interpretation. Additional utility information obtained as available for best representation. UCS is not liable for utility data that cannot be found, is unknown, or unlocateable, improper or unregulated underground utility construction practices which hinder search techniques, or lack of full data by utility owners which may cause an incomplete representation.

Receipt of Utility Locating Depiction

I understand that this locate is by [illegible] of electronic devices and that there are no guarantees, written or implied. The aforementioned company and any clients or affiliates shall indemnify and hold UCS, its clients, agents, employees, all persons hereunder harmless from and against any and all claims of any nature resulting from the performance of the work or accuracy of the locate itself. Acceptance/usage of this sketch without signature will constitute agreement of such terms.

ues

X

Name/Company:

MINOR/WATER

CHEYENNE

Underground Consulting Solutions

Private/Engineering Facility Location Sketch

P
E
RO

Work Address VAN BUREN & DELRANGE

Contractor/Name WESTERN R&D

Billing Address ON file

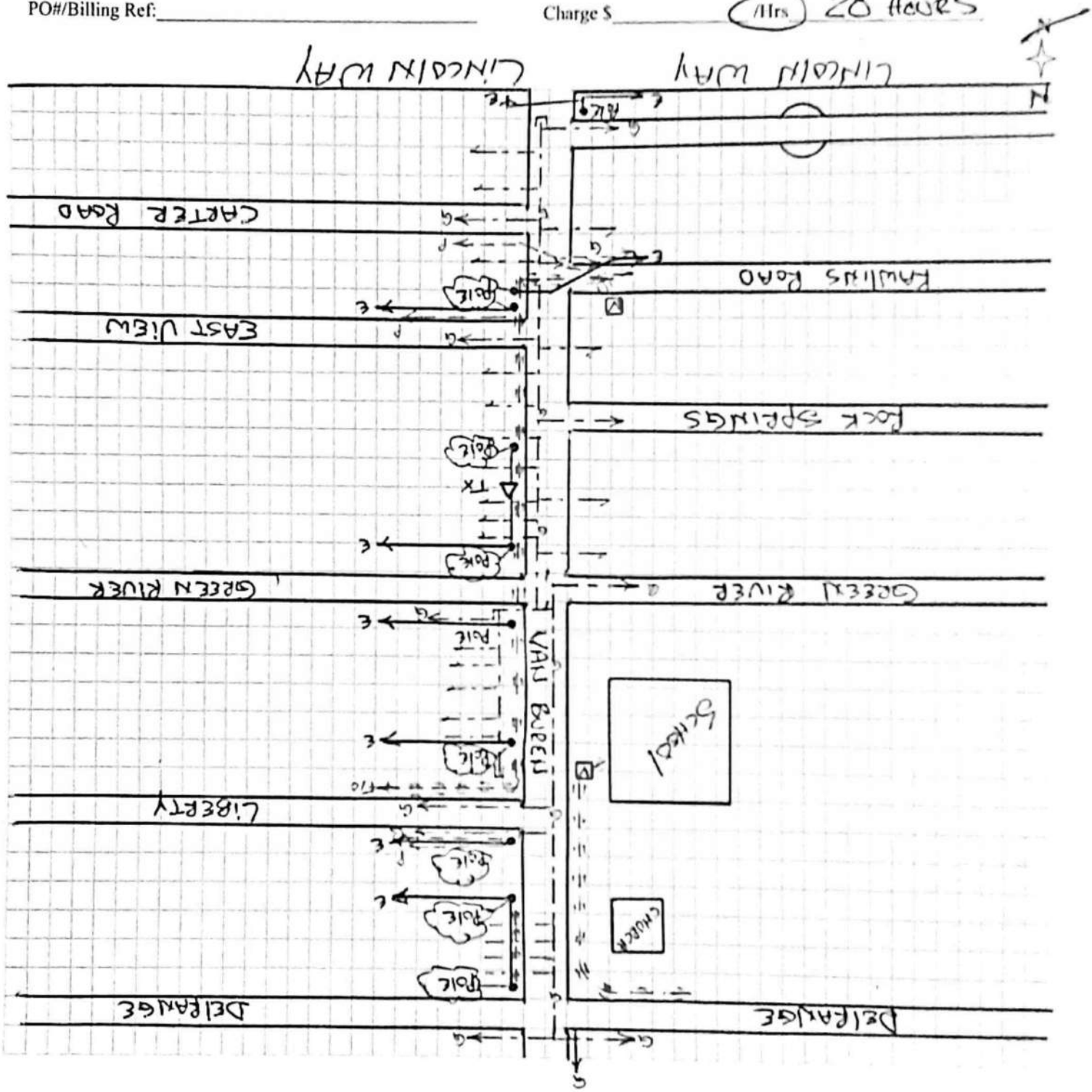
PO#/Billing Ref:

Contact Name ED WADDELL

Contact Phone # 307-632-5656

Date 12/1/2022

Charge $ /Hrs 20 HOURS



Utility depiction conforms to ASCE 38-02 Utility Quality Level B using appropriate surface geophysical methods and interpretation. Additional utility information obtained as available for best representation. UCS is not liable for utility data that cannot be found, is unknown, or unlocateable, improper or unregulated underground utility construction practices which hinder search techniques, or lack of full data by utility owners which may cause an incomplete representation.

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ues

X

Name/Company:

MINOR/WATER

RE: Van Buren Avenue Project Utility Locates

"Ed Waddell" [Ed@y2consultants.com]

Sent: 11/29/2022 10:57 AM

To: ""UCS"" <ucs@dontdigwithoutucs.com>, ""Ken Goff"" <Ken.goff@dontdigwithoutucs.com>

Cc: ""Adrienne Lemmers"" <adrienne@y2consultants.com>, ""Maxwell Waite"" <mwaite@y2consultants.com>, ""Liberty Blain"" <Liberty@y2consultants.com>

Hi Ken / UCS:

- We'd like to coordinate our surveyors' work with your locates along Van Buren Avenue.
- Do you know when UCS will be out there?
- Ed

From: Ed Waddell
Sent: Tuesday, November 8, 2022 11:01 AM
To: UCS <ucs@dontdigwithoutucs.com>; Ken Goff <Ken.goff@dontdigwithoutucs.com>
Cc: Adrienne Lemmers <adrienne@y2consultants.com>; Maxwell Waite <mwaite@y2consultants.com>; Liberty Blain <Liberty@y2consultants.com>
Subject: RE: Van Buren Avenue Project Utility Locates

Hi Ken:

- We received the go-ahead on this project and would like to coordinate with our surveyors schedule so they can record your locates.
- What is UCS' availability over the next few weeks?
- Ed

From: UCS <ucs@dontdigwithoutucs.com>
Sent: Monday, July 25, 2022 3:59 PM
To: Ed Waddell <Ed@y2consultants.com>; Ken Goff <Ken.goff@dontdigwithoutucs.com>
Subject: RE: Cost estimate: needed

Ed,

This will be 20 hours, $2000.00. Please feel free to call with any questions. Thanks.

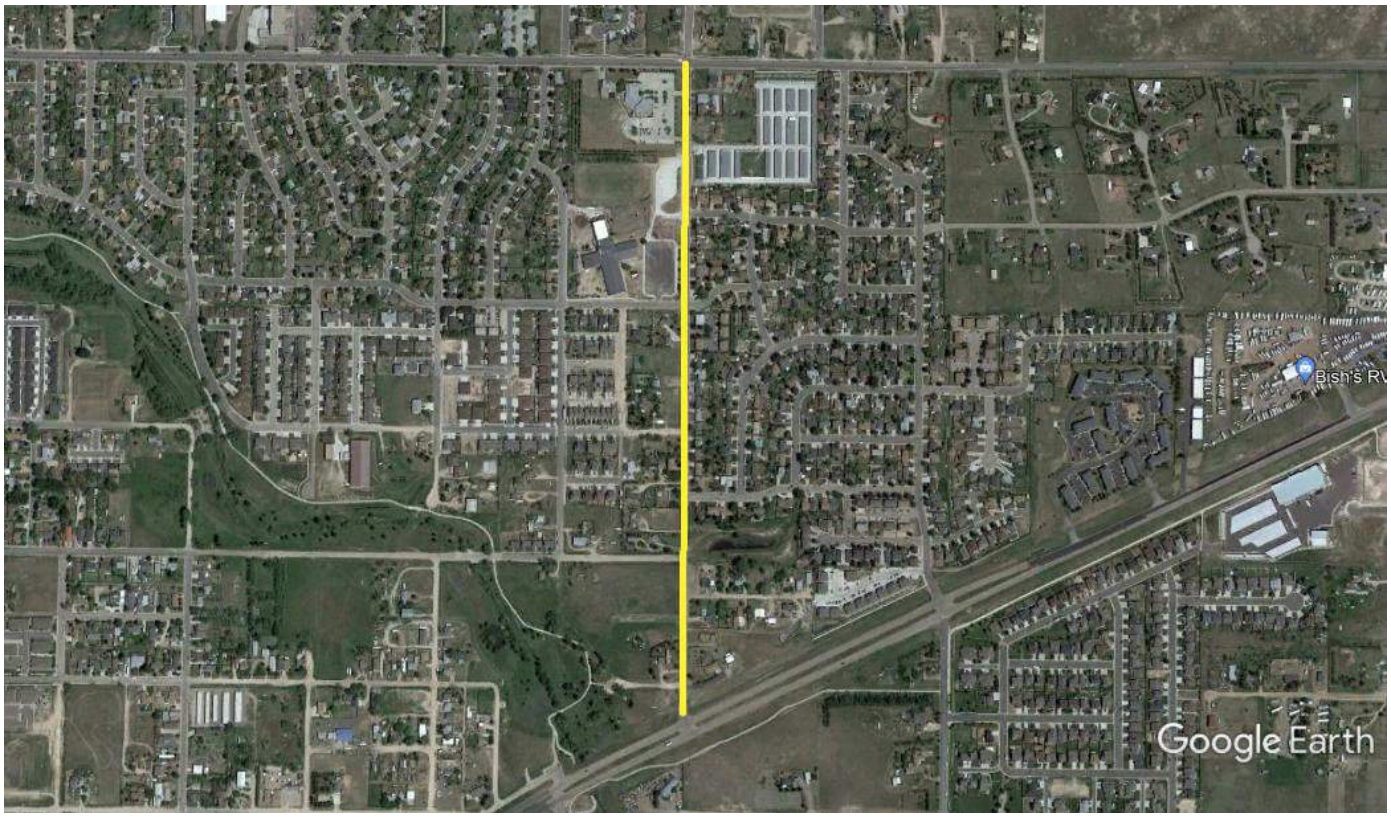
Kenneth Goff
Director of Operations
U C S
Underground Consulting Solutions

5778 Kelly Avenue
Littleton, Colorado 80125
O 303.904.7422
F 720.554.7889
C 303.523.8473
DBE/WBE/EBE/SBE/Level 1 ESB Certification
Utility Locators – Private – Engineering | Potholing / Hydro-Excavation | High Accuracy Utility Mapping

--------- Original Message---------
Subject: Cost estimate: needed
From: "Ed Waddell" <Ed@y2consultants.com>
Date: 7/25/22 2:08 pm
To: "UCS" <ucs@dontdigwithoutucs.com>, "Ken Goff" <Ken.goff@dontdigwithoutucs.com>

Hi Ken:

- I hope this finds all the folks at UCS happy and healthy.
- I need your estimate to locate buried dry utilities within 100' of centerline for 0.65 miles of Van Buren Avenue, between Dell Range Boulevard and US-30 (Lincolnway). Here's a map:

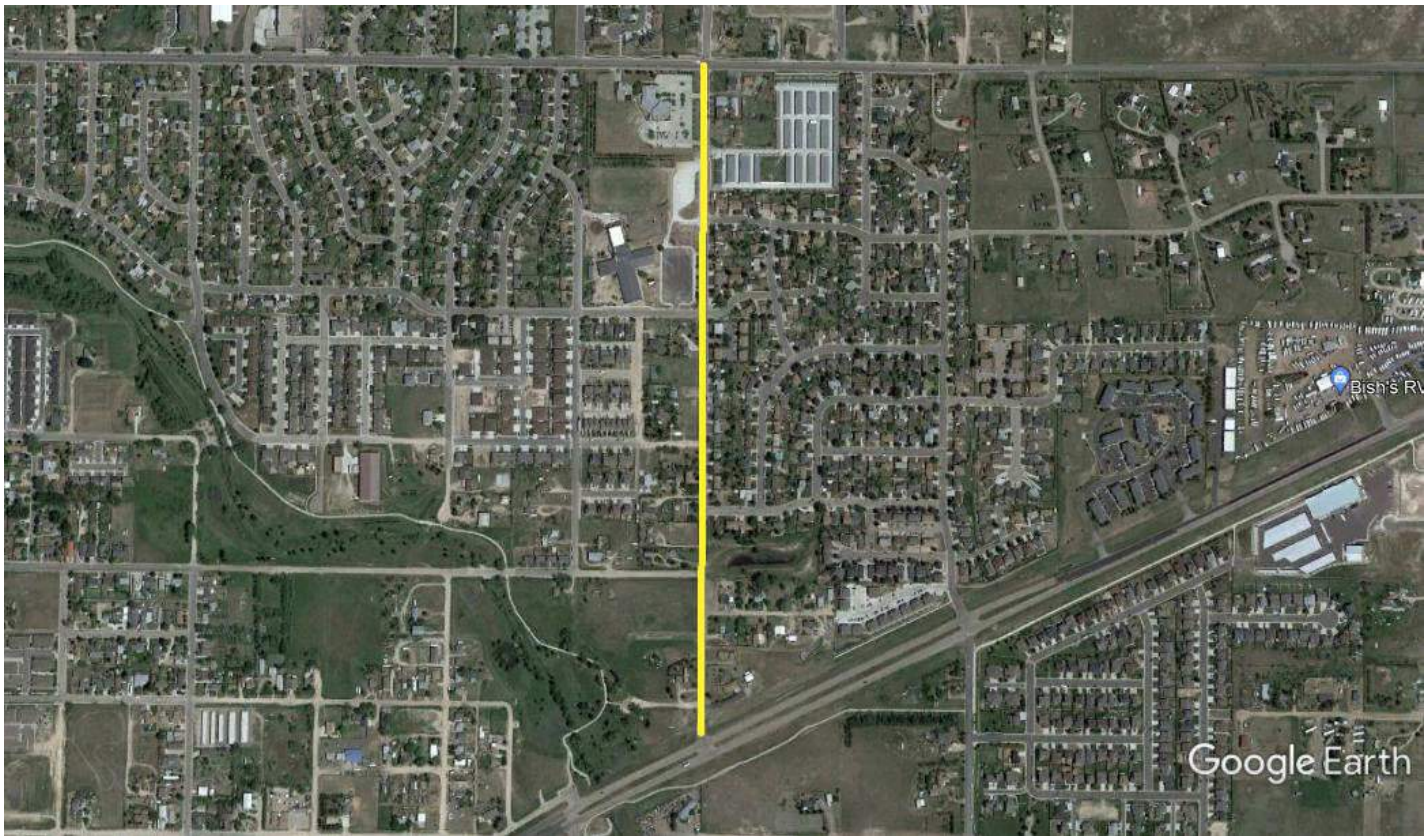


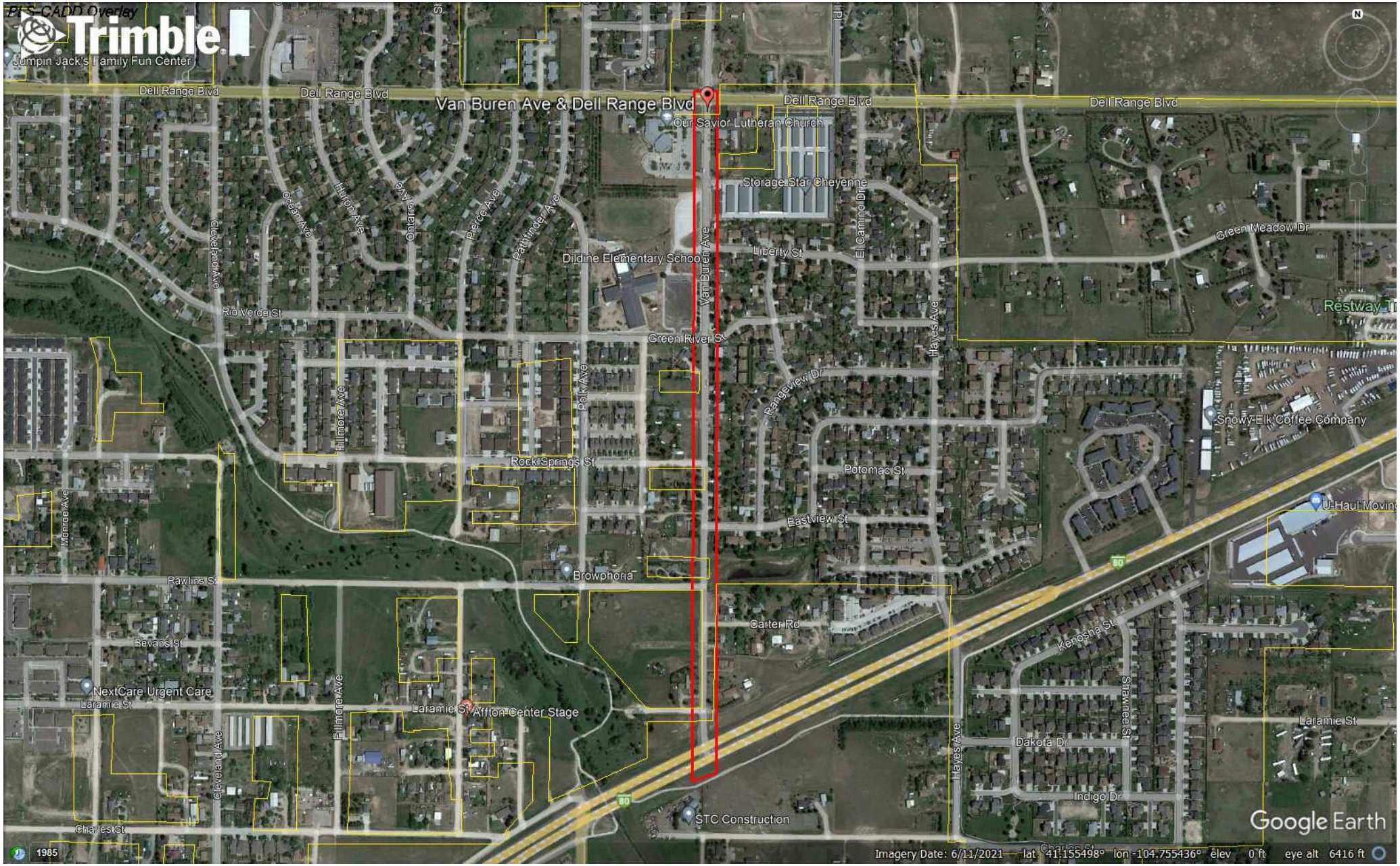
Thanks,

- Ed

Ed Waddell, MUP
Community & Transportation Planner
Ed@Y2consultants.com
Y2 Consultants, LLC
1725 Carey Avenue
Cheyenne, WY 82001-4419
(307) 632-5656 / Fax (307) 635-0410

responsibility to determine if differences are present. The recipient agrees to indemnify and hold harmless Western Research and Development and its subconsultants and each of their partners, officers, shareholders, directors and employees from all claims, judgments, suits, liabilities, damages, costs or expenses (including reasonable defense and attorneys fees) arising from either: 1) Recipient's failure to comply with any of the conditions stated herein; 2) a defect, error or omission in the electronic file or the information contained therein, which defect, error or omission was not contained in the paper hard-copied documents, or where use of such paper hard-copied document would have prevented the claim, judgment, suit, liability, damage, cost or expense; or 3) recipient's transfer of electronic files to other users without including this agreement.


Bish's RV
Google Earth

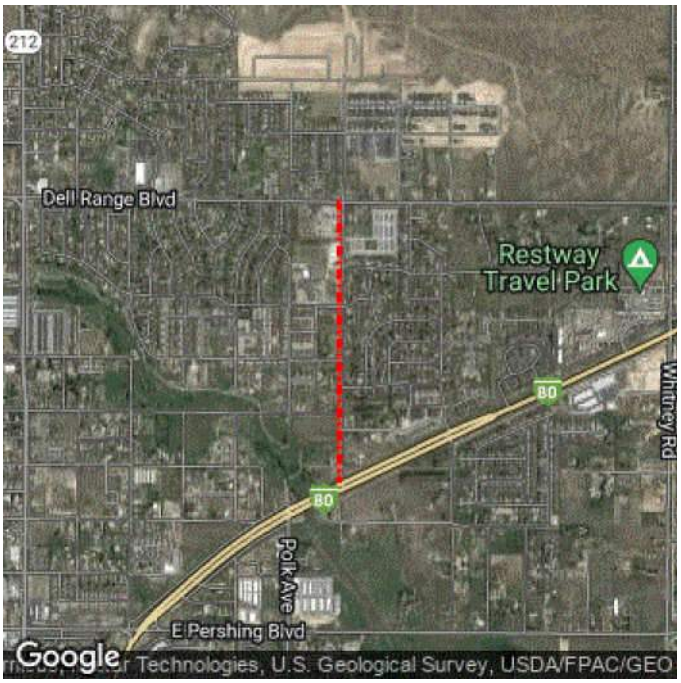

PLS-CADD Overlay
Trimble
Jumpin Jack's Family Fun Center
Dell Range Blvd
Van Buren Ave & Dell Range Blvd
Our Savior Lutheran Church
Storage Star Cheyenne
Dildine Elementary School
Liberty St
Green Meadow Dr
Restway Tr
Rio Verde St
Green River St
Rangeview Dr
Snowy Elk Coffee Company
Rock Springs St
Potomac St
Eastview St
U-Haul Moving
Browphoria
Rawlins St
Carter Rd
Kenosha St
Bevans St
NextCare Urgent Care
Laramie St
Affton Center Stage
Dakota Dr
Indigo Dr
STC Construction
Charles St
Cleveland Ave
Ocean Ave
Huron Ave
Ontario Ave
Pierce Ave
Pathfinder Ave
Van Buren Ave
El Camino Dr
Hayes Ave
Polk Ave
Fillmore Ave
Monroe Ave
Shawnee St
80
Google Earth
1985
Imagery Date: 6/11/2021 lat 41.155498° lon -104.755436° elev 0 ft eye alt 6416 ft

Ticket No: 20224800831

Excavator Details

Caller Id: 9778
Contact: Kenneth Goff
Company: Underground Consulting Solutions
Phone: 303.904.7422
Mobile: 303.523.8473
Email: ucs@totalspeed.net

Dig Site and Ticket Details



Open Map

This is a design ticket. Please send all utility mapping to ucs@totalspeed.net. Loc from on Van Buren ROW to ROW from Dell Range south to Lincoln Hwy. Access is open.

Ticket Medium	Web
Ticket Status	Original
Ticket Type	Planning & Design
Previous Ticket No.	Not Supplied
User Reference	Client
Ticket Date (MTZ)	2022/11/30 11:30 AM
Work Start Date (MTZ)	2022/12/02 11:30 AM
Work Expire Date (MTZ)	2022/12/22 11:30 AM
Address	Van Buren Ave Cheyenne 82001
Nearest Cross Street	Dell Range Blvd
Type of work	Construction
Activity	Expose & Survey
Excavation Method	Mechanical Excavation
Excavation Depth	>48in
Public Property	Public Property
Private Property	None
Onsite Contact	Ken Goff
Onsite Phone	303-904-7422
Municipality	Not Supplied
Nearest Community	Not Supplied
Rural Subdivision	Not Supplied

Your Responsibilities

- Do not proceed with any excavation until all notified asset owners have responded by providing clearance, OR by identifying the location of their facilities with maps OR by placing locate marks on the ground.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using the OneCall of Wyoming service, you agree to our privacy policy and the terms and conditions set out at on our web site.
- **For more information, visit www.onecallofwyoming.com**

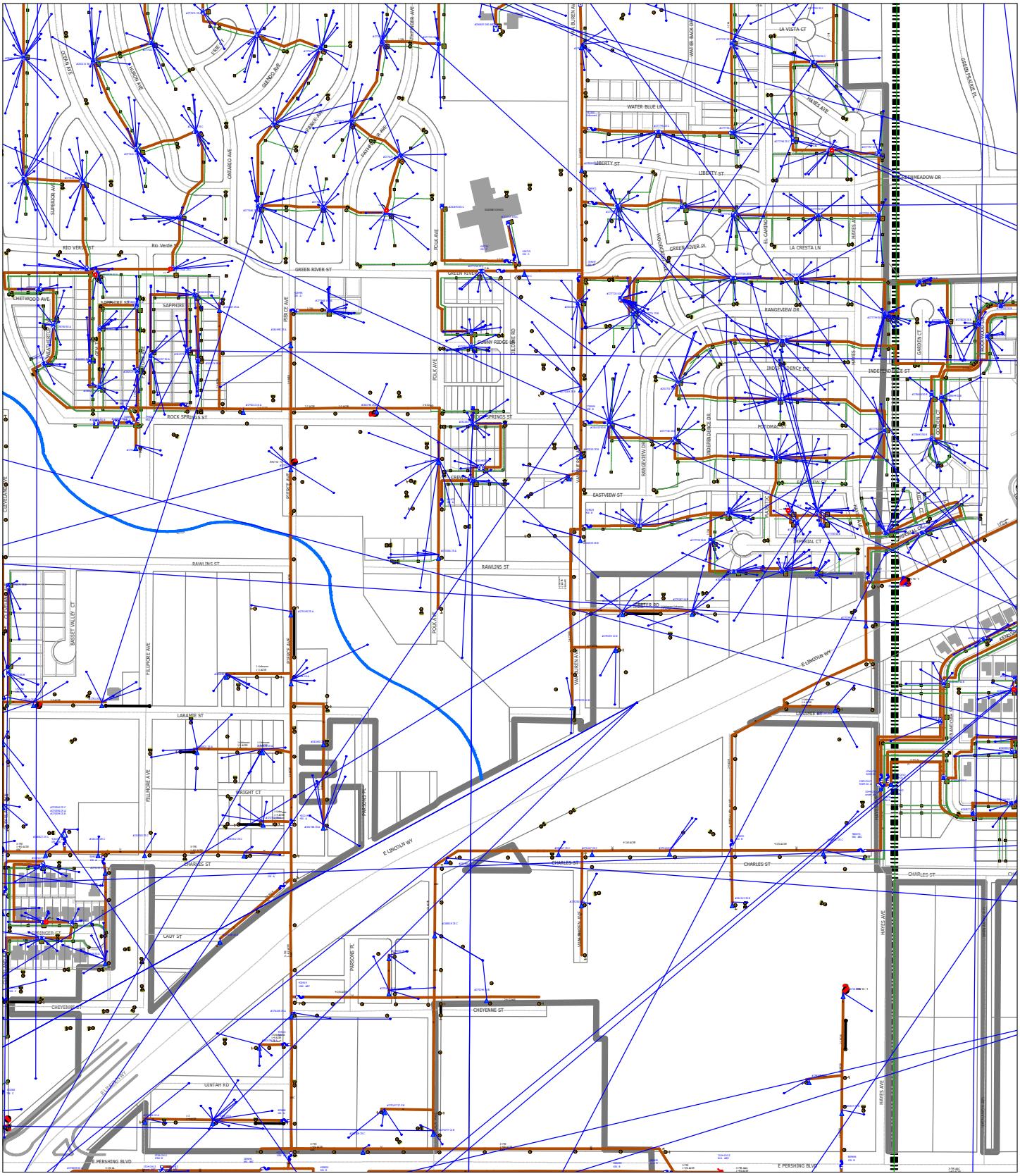
Utility Owner Details

The public utility owners listed below with a Status of "Notification Sent" have been requested to respond to your request. They may contact you directly for clarification of your request details.

Station Code	Authority Name	Phone	Status
CLF	BLACK HILLS ELECTRIC (CLF)	3077782165	Notification Sent
WYG	Black Hills Gas	3077782161	Notification Sent
BLP	Bluepeak (BLP)	307-214-6949	Notification Sent
QL1	CENTURYLINK (QL1)	877-366-8344	Notification Sent
TI4	CHARTER COMMUNICATIONS (TI4)	307-632-8114	Notification Sent
CCD	CHEYENNE CITY DEPARTMENT OF PUBLIC WORKS (CCD)	307-637-6288	Notification Sent
CBP	CHEYENNE WATER DEPARTMENT (CBP)	3076370852	Notification Sent

WD1	WYOMING DEPARTMENT OF TRANSPORTATION (WD1)	412-415-5050	Notification Sent

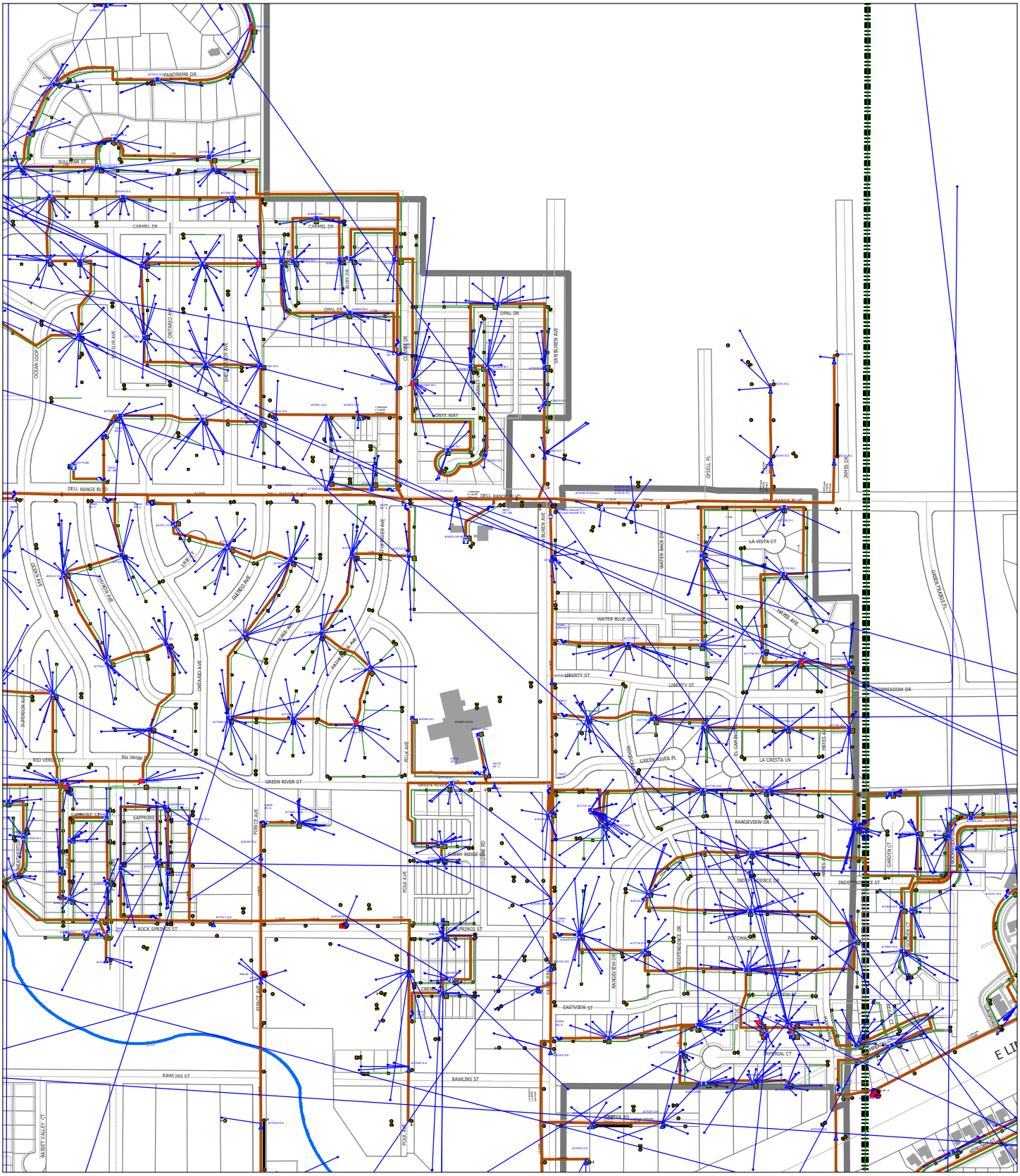
END OF UTILITIES LIST



Time: 11/30/2022 11:41:49 AM
Session: D:\Utility Maps and Info back up programs\Richs st\Black Hills\NE-SD-WY\Joint Use Inventory BHP-CLFP.gtm

Black Hills Corporation Mobile GIS

Black Hills Corporation hereby disclaims any warranty, express or implied with regard to the accuracy or usefulness of Mobile GIS and its associated maps and records. Distribution of County Parcel Data outside of Black Hills Corporation is a violation of Black Hills Corporation's data sharing agreement.
[Extract dates] BHC: 03/31/2013, Pennington: 03/17/2010, Meade: 01/30/2009, Lawrence: 12/10/2009, Fall River: 06/30/2009, Custer 4/12/2011



Time: 11/30/2022 11:42:10 AM
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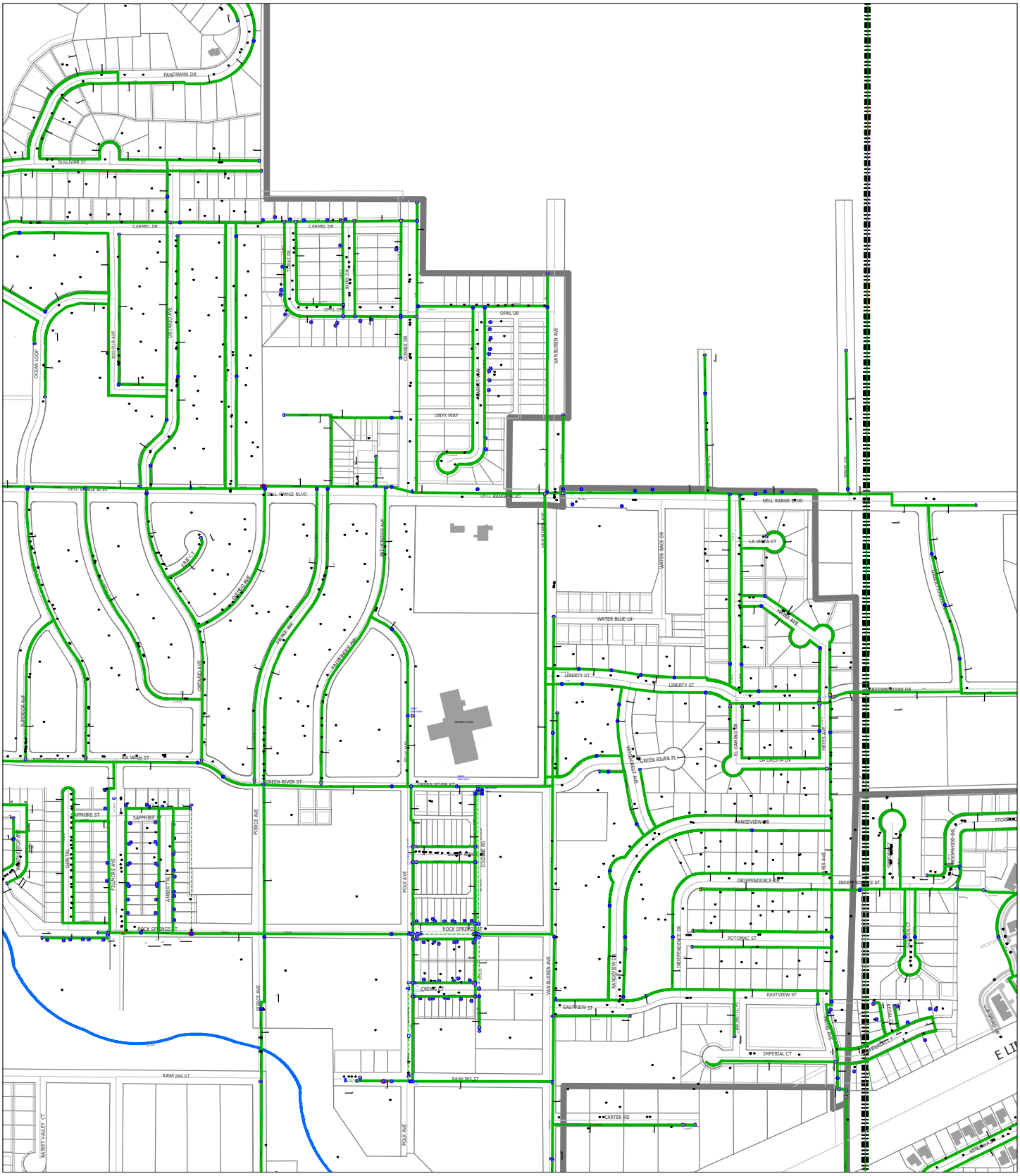
[Extract dates] BHC: 03/31/2013, Pennington: 03/17/2010, Meade: 01/30/2009, Lawrence: 12/10/2009, Fall River: 06/30/2009, Custer 4/12/2011



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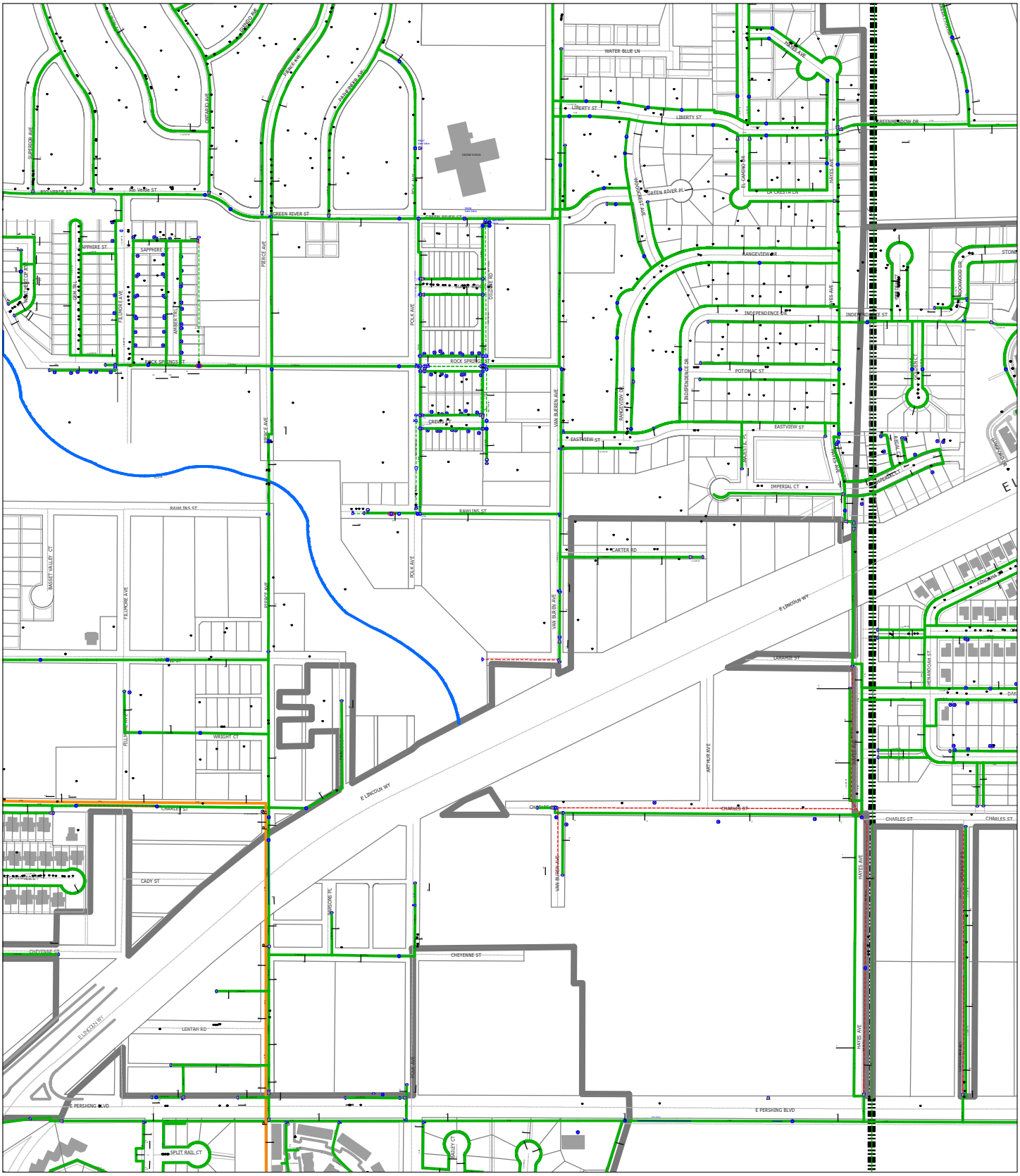

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Black Hills Corporation Mobile GIS

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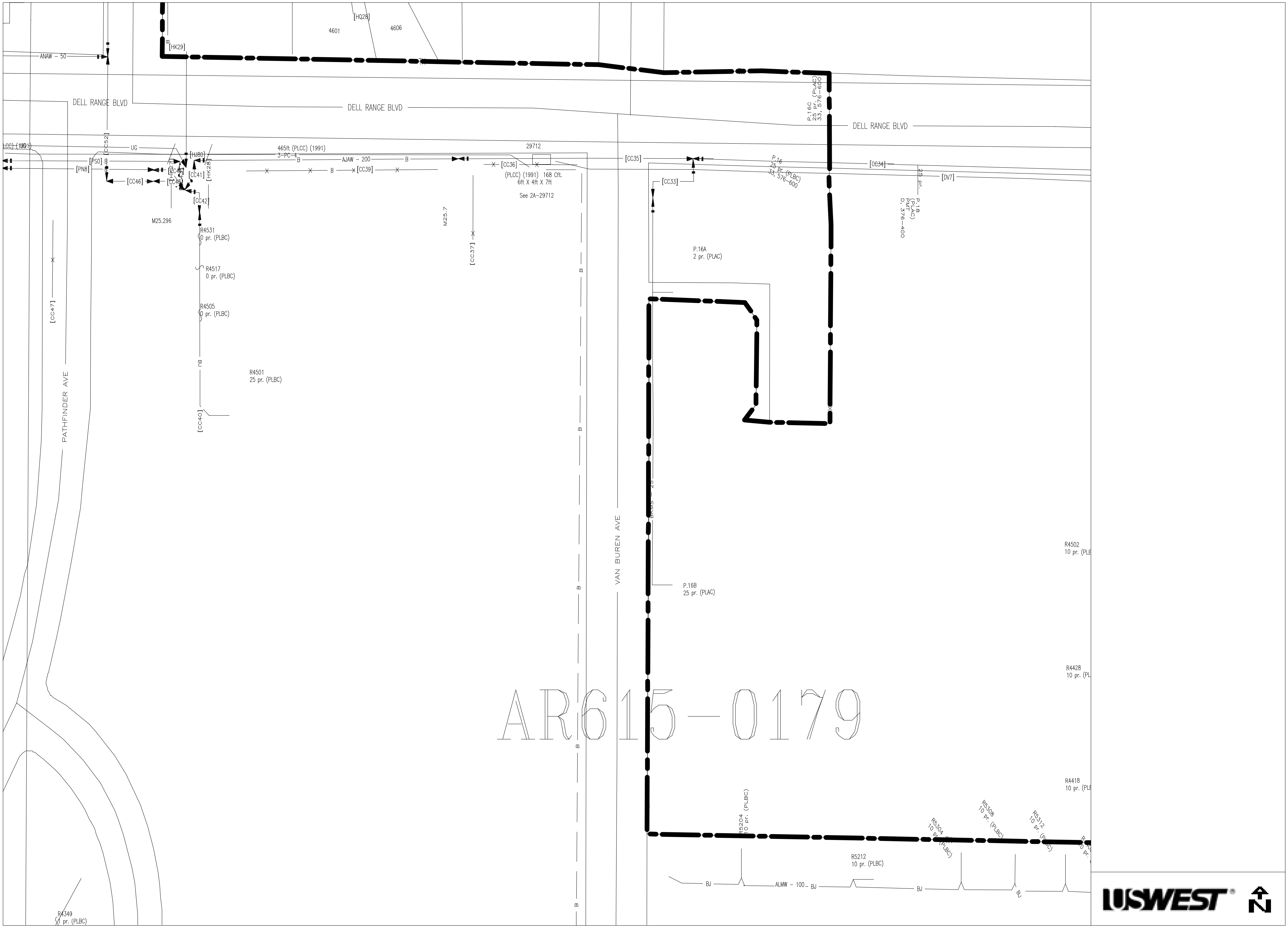
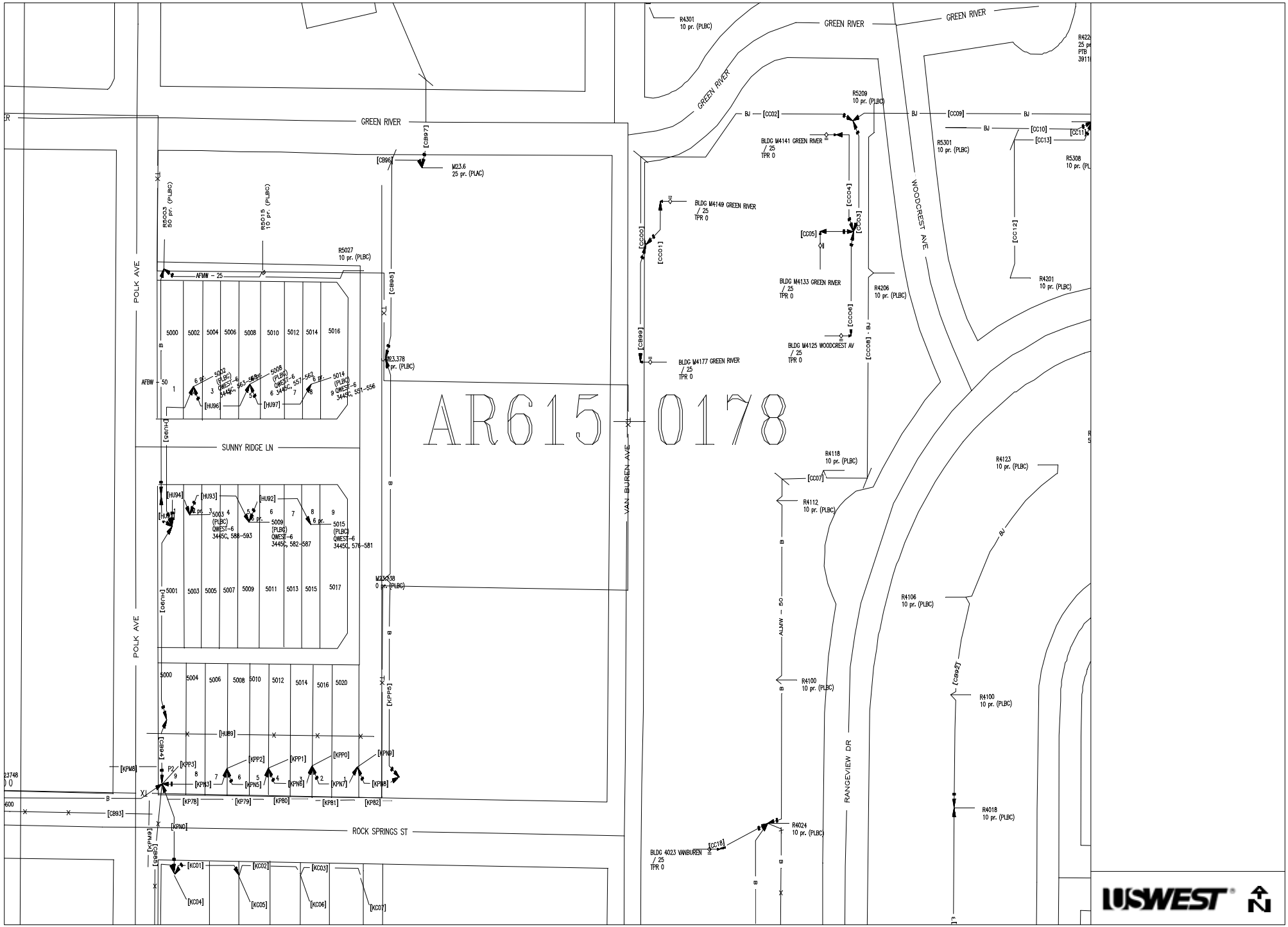
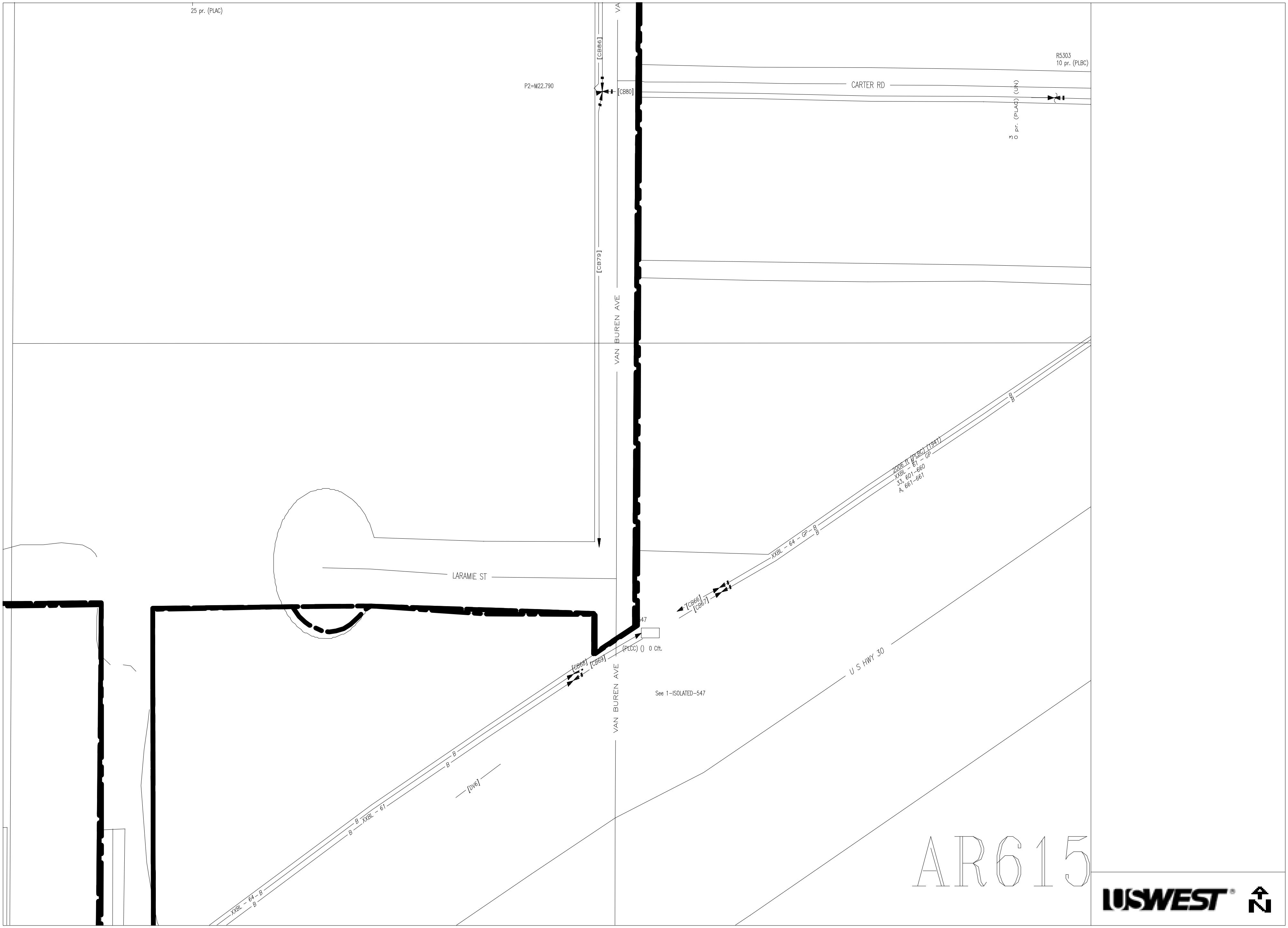
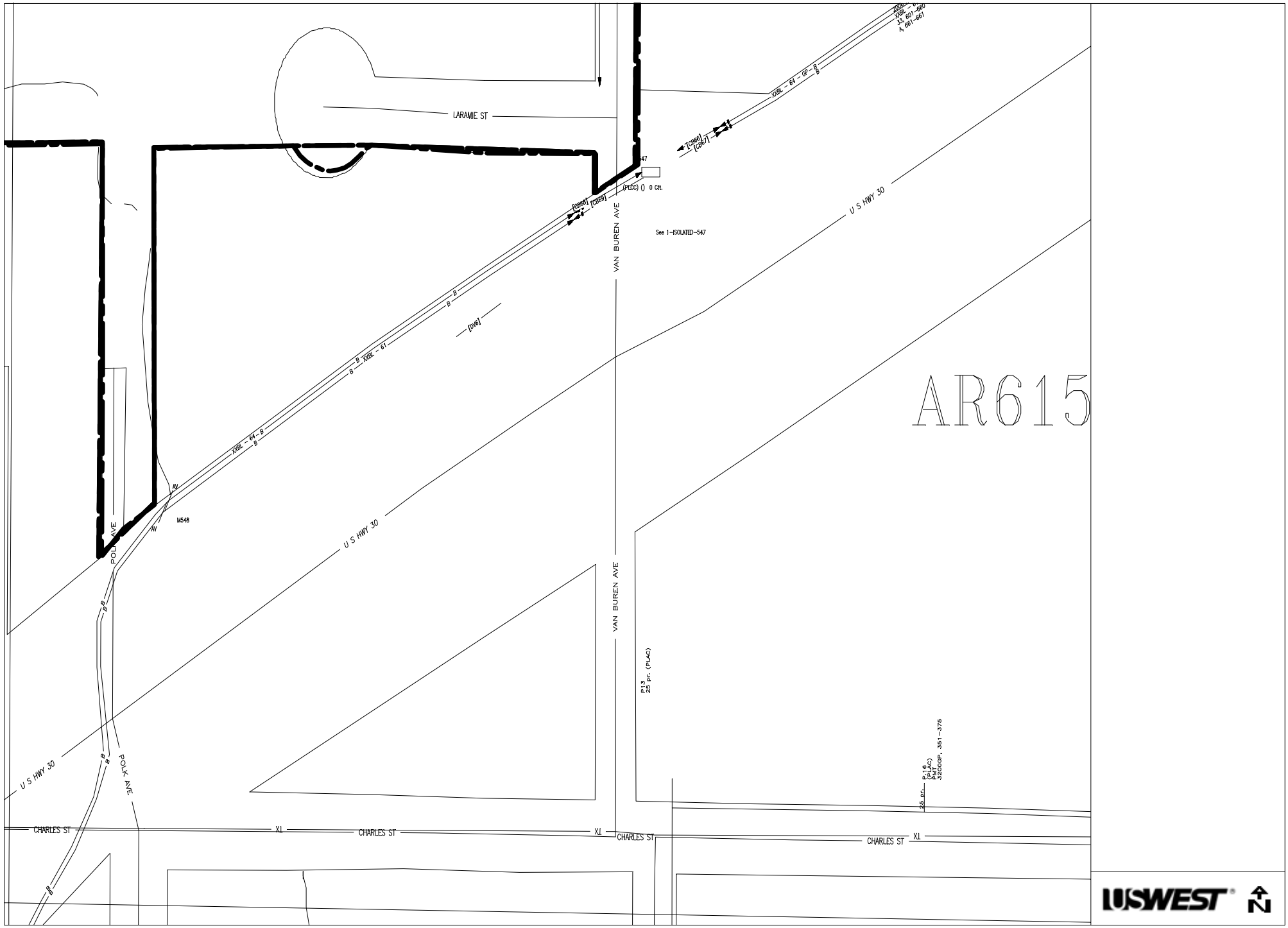

DELL RANGE BLVD
DELL RANGE BLVD
DELL RANGE BLVD
PATHFINDER AVE
VAN BUREN AVE
[HK29]
[HQ28]
4601
4606
ANAW - 50
[CC52]
[PS0]
[PN8]
[CC46]
[CC41]
[CC42]
[HK28]
[HJ80]
465ft (PLCC) (1991)
3-PC-4
AJAW - 200
[CC39]
[CC36]
29712
(PLCC) (1991) 168 Cft.
6ft X 4ft X 7ft
See 2A-29712
[CC35]
[CC33]
[CC34]
[DV7]
M25.296
M25.7
[CC37]
[CC47]
[CC40]
R4531
0 pr. (PLBC)
R4517
0 pr. (PLBC)
R4505
0 pr. (PLBC)
R4501
25 pr. (PLBC)
P.16A
2 pr. (PLAC)
P.16B
25 pr. (PLAC)
P.16C
25 pr. (PLAC)
33, 576-600
R4502
R4428
R4418
R5204
R5212
10 pr. (PLBC)
ALMW - 100
R4349
AR615-0179

USWEST


AR616-0179
R4418
10 pr. (PLBC)
R5204
10 pr. (PLBC)
R5212
10 pr. (PLBC)
R5304
R5308
R5312
BJ
ALMW - 100
R4349
pr. (PLBC)
[CC20]
POLK AVE
[JD13]
(PLBC) (2006)
BSW - 3
DD, 1-3
30427
See MH-30427
(PLCC) (2006)
BLDG UN POLK AV
/ 25
TPR 0
[CC22]
[JD13]
[JD11]
CBO
FDP
[CC21]
DILDINE SCHOOL
PLAF
CLLI CHYNWYMA
LCF11, 91-92
D, 3-6
DD, 7-24
[JD11]
(INBF) (2006)
PC-5B42LT - 24
LCF11, 91-92
D, 3-6
DD, 7-24
[CB98]
VAN BUREN AVE
LIBERTY
R4317
10 pr. (PLBC)
R4312
10 pr. (PLBC)
[CC30]
[CC31]
[CC32]
[CC27]
[CC28]
R4306
10 pr. (PLBC)
WOODCREST AVE
R5308
10 pr. (PLBC)
[CC24]
[CC23]
R5308A
10 pr. (PLBC)
R4301-A
10 pr. (PLBC)
[CC14]
R4301
10 pr. (PLBC)
GREEN RIVER
R5209
10 pr. (PLBC)
[CC02]
[CC09]
[CC10]
[CC13]
BLDG M4141 GREEN RIVER
/ 25
TPR 0
R5301
10 pr. (PLBC)
R5308
10 pr. (PLBC)
[CB97]
[CB96]
M23.6
25 pr. (PLAC)
R5003
50 pr. (PLBC)
R5015
10 pr. (PLBC)
BLDG M4149 GREEN RIVER
/ 25
TPR 0
[CC04]
[CC03]
WOODCREST
USWEST


GREEN RIVER
POLK AVE
SUNNY RIDGE LN
ROCK SPRINGS ST
VAN BUREN AVE
WOODCREST AVE
RANGEVIEW DR
R4301 10 pr. (PLBC)
R5209 10 pr. (PLBC)
R5003 50 pr. (PLBC)
R5015 10 pr. (PLBC)
R5027 10 pr. (PLBC)
R5301 10 pr. (PLBC)
R5308 10 pr. (PLBC)
R4201 10 pr. (PLBC)
R4206 10 pr. (PLBC)
R4118 10 pr. (PLBC)
R4123 10 pr. (PLBC)
R4112 10 pr. (PLBC)
R4106 10 pr. (PLBC)
R4100 10 pr. (PLBC)
R4018 10 pr. (PLBC)
R4024 10 pr. (PLBC)
BLDG M4141 GREEN RIVER / 25 TPR 0
BLDG M4149 GREEN RIVER / 25 TPR 0
BLDG M4133 GREEN RIVER / 25 TPR 0
BLDG M4125 WOODCREST AV / 25 TPR 0
BLDG M4177 GREEN RIVER / 25 TPR 0
BLDG 4023 VANBUREN / 25 TPR 0
M23.6 25 pr. (PLAC)
M23,378 pr. (PLBC)
M23,038 0 pr. (PLBC)
AFMW – 25
AFBW – 50
AMW – 50
5003 (PLBC) QWEST–6 3445C, 586–593
5009 (PLBC) QWEST–6 3445C, 582–587
5015 (PLBC) QWEST–6 3445C, 576–581
5002 (PLBC) QWEST–6 3445C, 563–568
5008 (PLBC) QWEST–6 3445C, 557–562
5014 (PLBC) QWEST–6 3445C, 551–556
AR615 0178




LARAMIE ST
VAN BUREN AVE
U S HWY 30
POLK AVE
CHARLES ST
See 1-ISOLATED-547
M548
AR615


DELL RANGE BLVD
DELL RANGE BLVD
CROWN SUBDIVISION 01
PARK
SUNNYSIDE 08
LA VISTA CT
EAST LAKEVIEW CORR
GLENDO AVE
VAN BUREN AVE
DEL-VAN STORAGE PARK
GREENMEADOW ESTATES 02
EL CAMINO DR
PATHFINDER AVE
VALLEY VISTA
GREENMEADOW ESTATES 01
POLK AVE
LIBERTY ST
PIERCE AVE
WOODCREST AVE
MAYES AVE
GREENMEADOW ESTATES 02
GREEN RIVER PL
LA CRESTA LN
RIO VERDE ST
GREEN RIVER ST
GREEN RIVER ADDITION
SUNNYSIDE MEADOWS
IMPERIAL VALLEY
SAPPHIRE ST
DEBILYN ESTATES
RANGEVIEW DR
BRADNEY AVE
SUNNY RIDGE POINTE
DILDINE RD
PKT SUBDIVISION
INDEPENDENCE DR
SUNNYSIDE 07
SATTERFIELD SUB 02
DILDINE COMMONS
DIAMOND ESTATES
ROCK SPRINGS ST
DILDINE VILLAS


BRAD
DILDINE COMMONS
DILLE
SUNNYSIDE 07
SATTERFIELD SUB
ROCK SPRINGS ST
IMPERIAL VALLEY
RANGEVIEW DR
POTOMAC ST
DIAMOND ESTATES 05
POLK AVE
HAYES AVE
NAVY SUBDIVISION
DILDINE VILLAS
CREWS CT
EASTVIEW ST
VAN BUREN AVE
IMPERIAL HERTG REF A
MAJESTIC PL
REGAL CT
MINNIE FRENCH ADDITION
IMPERIAL HERITAGE
SATTERFIELD 03
HABITAT 02
IMPERIAL HERTG REF B
IMPERIAL CT
UNNYSIDE 07
RAWLINS ST
IMPERIAL HERTG REF C
CARTER COTTAGES
CARTER RD
PIERCE AVE
DRY CREEK PARKWAY
BRUTSMAN
LARAMIE ST
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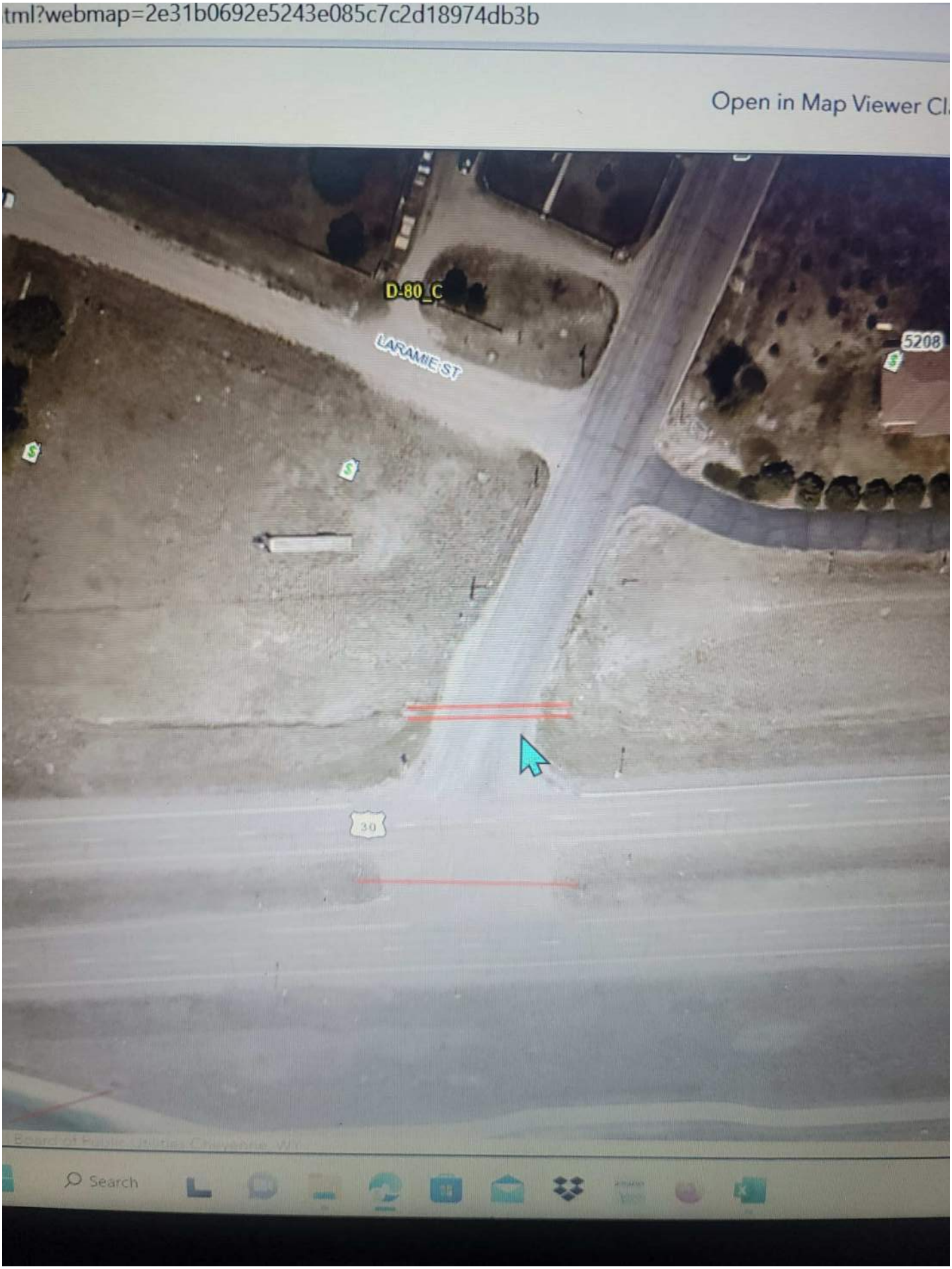
DAKOTA CROSSING
DAKOTA DR
SUNNYSIDE 04
NLIGHT
SUNNYSIDE 06
WRIGHT CT
PARSONS
PARSONS PL
US-30 SERVICE RD N

Print | Close Window

Subject: Water and sanitation sewer ticket # 20224800831
From: Jessica Hanson <j2g2hanson@yahoo.com>
Date: Wed, Nov 30, 2022 8:24 pm
To: "ucs@totalspeed.net" <ucs@totalspeed.net>
Attach: 20221130_202005.jpg
20221130_201957.jpg
20221130_201846.jpg
20221130_201814.jpg
20221130_201722.jpg

Please see the attached. If you have any questions please call Steve or Jessica at 307-630-1010.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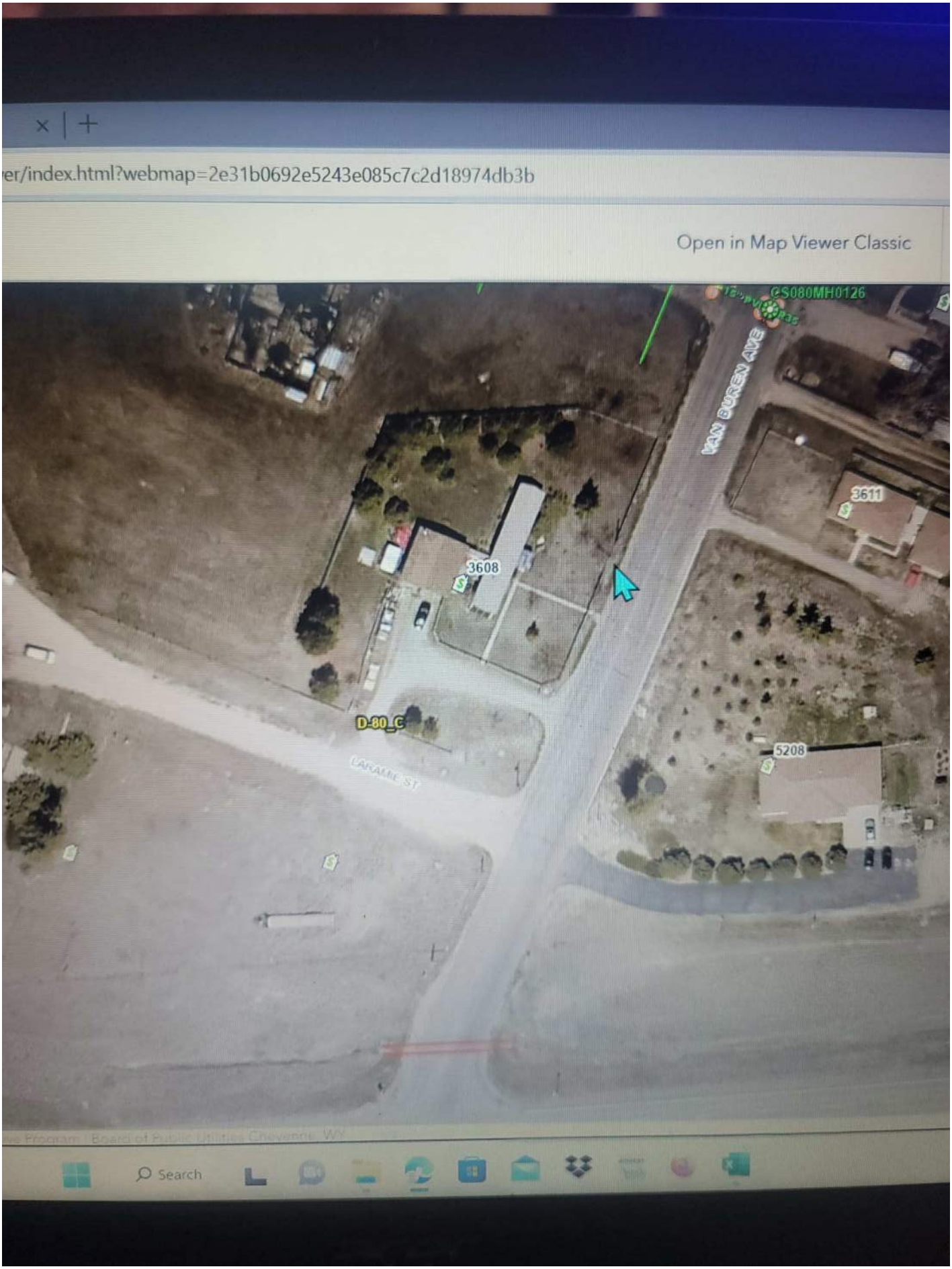
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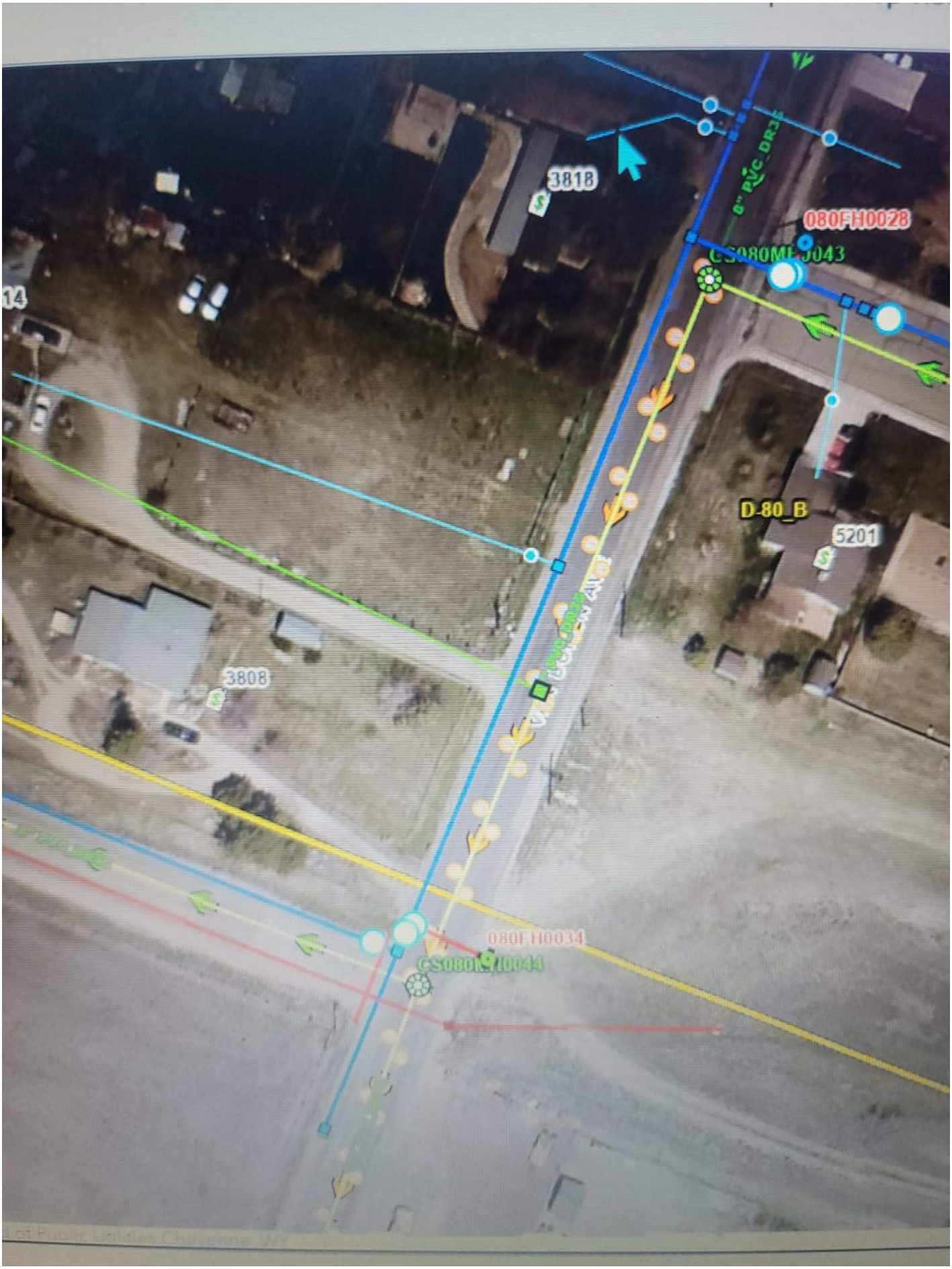
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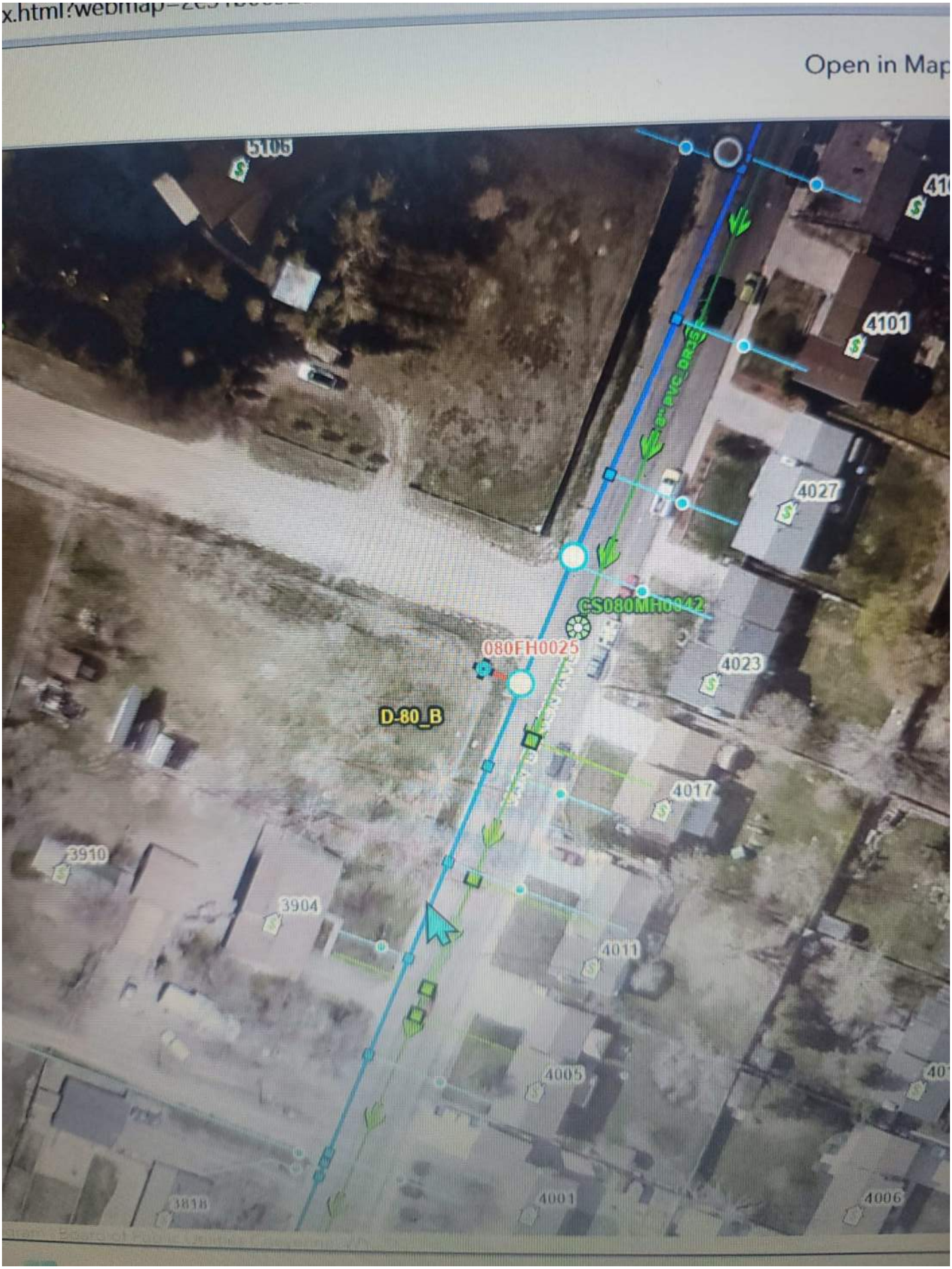
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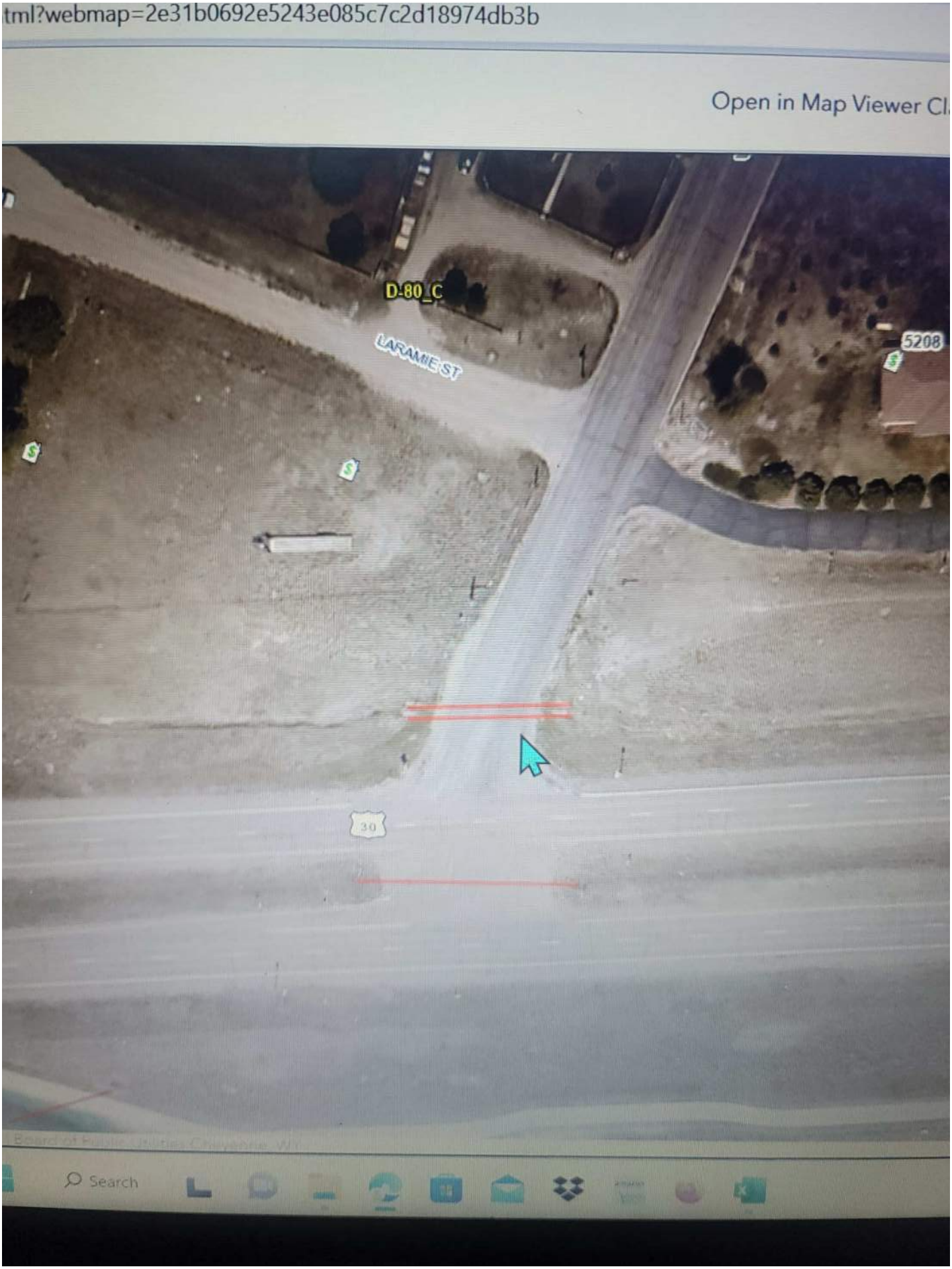
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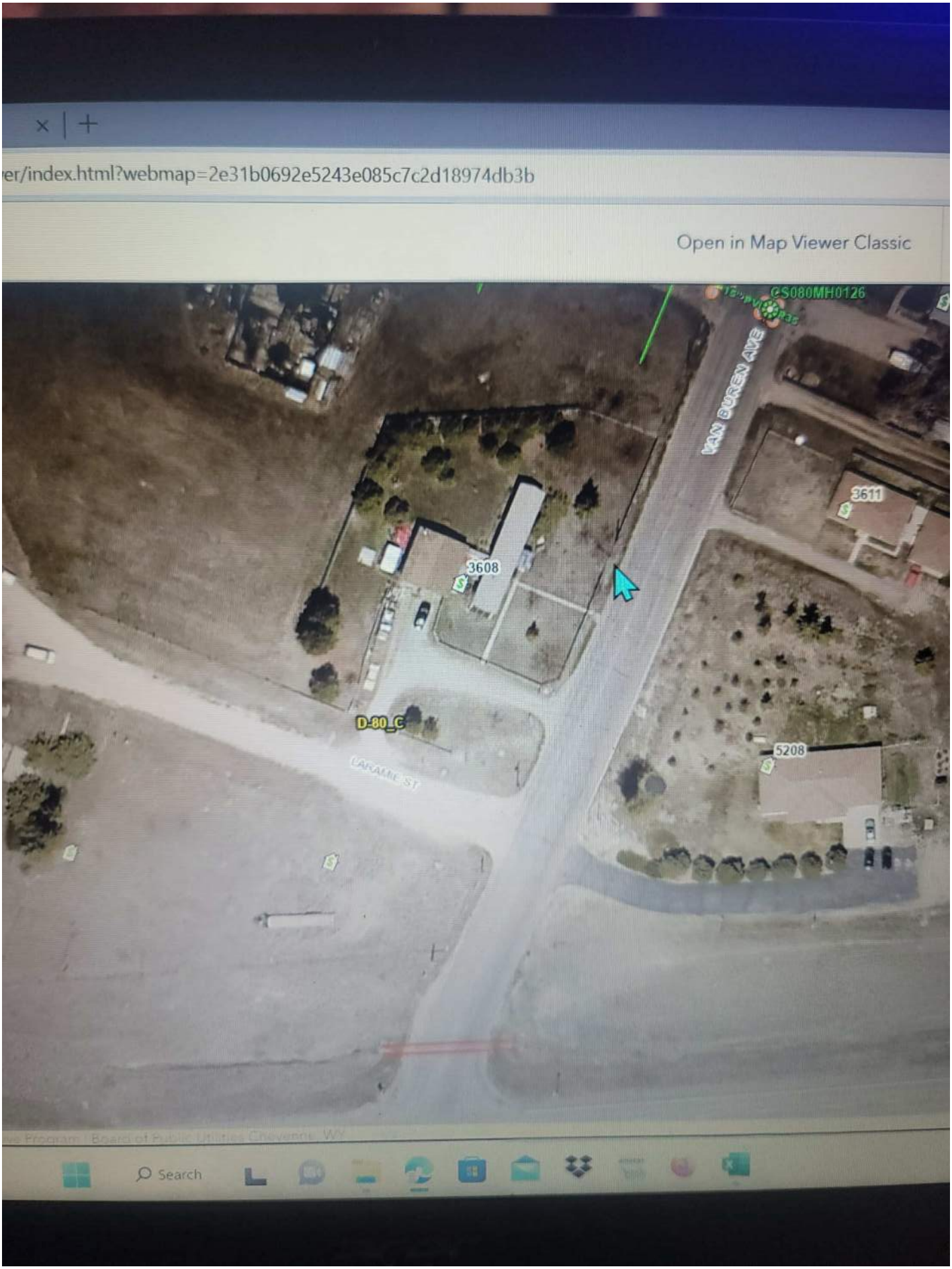
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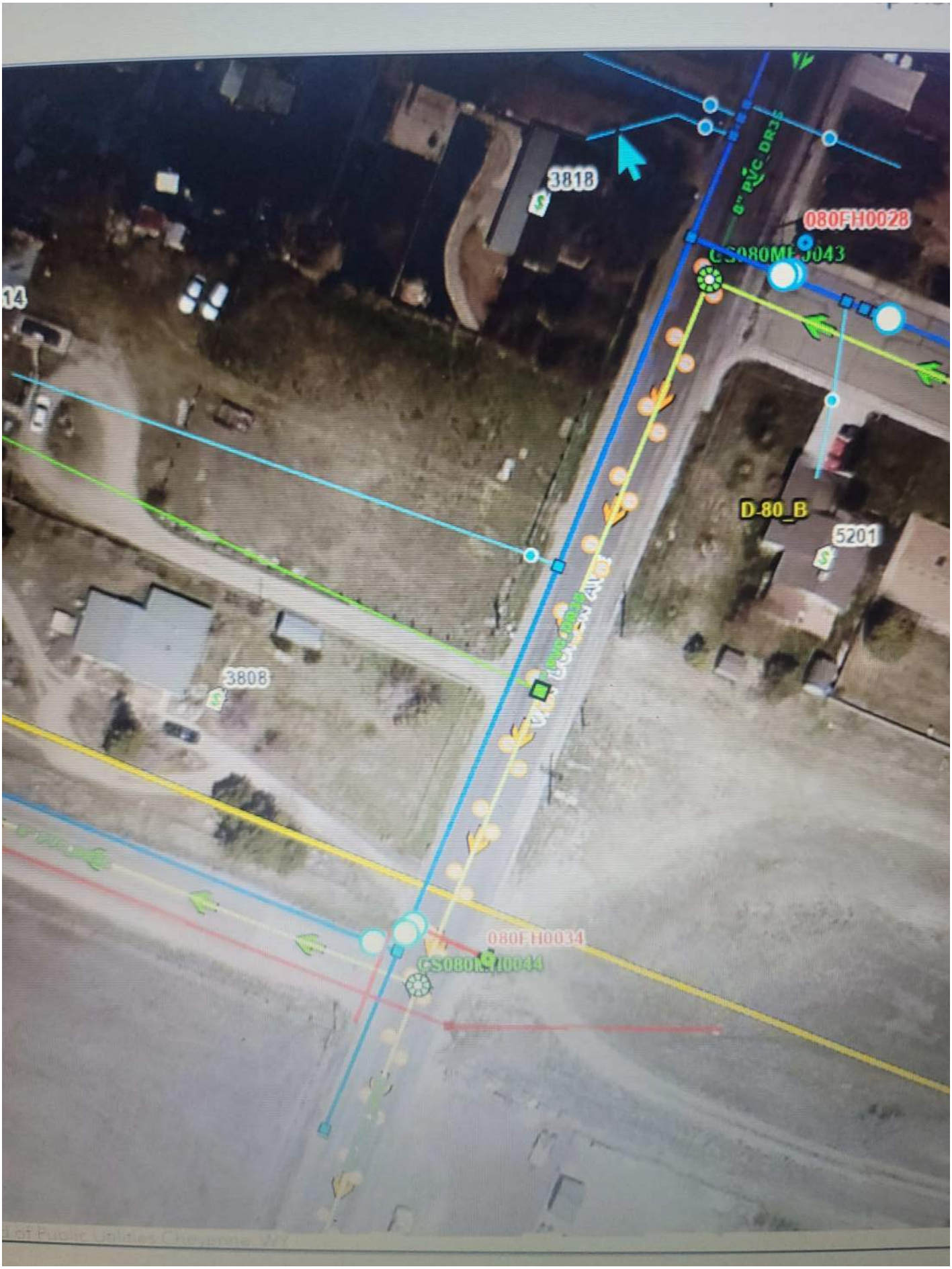
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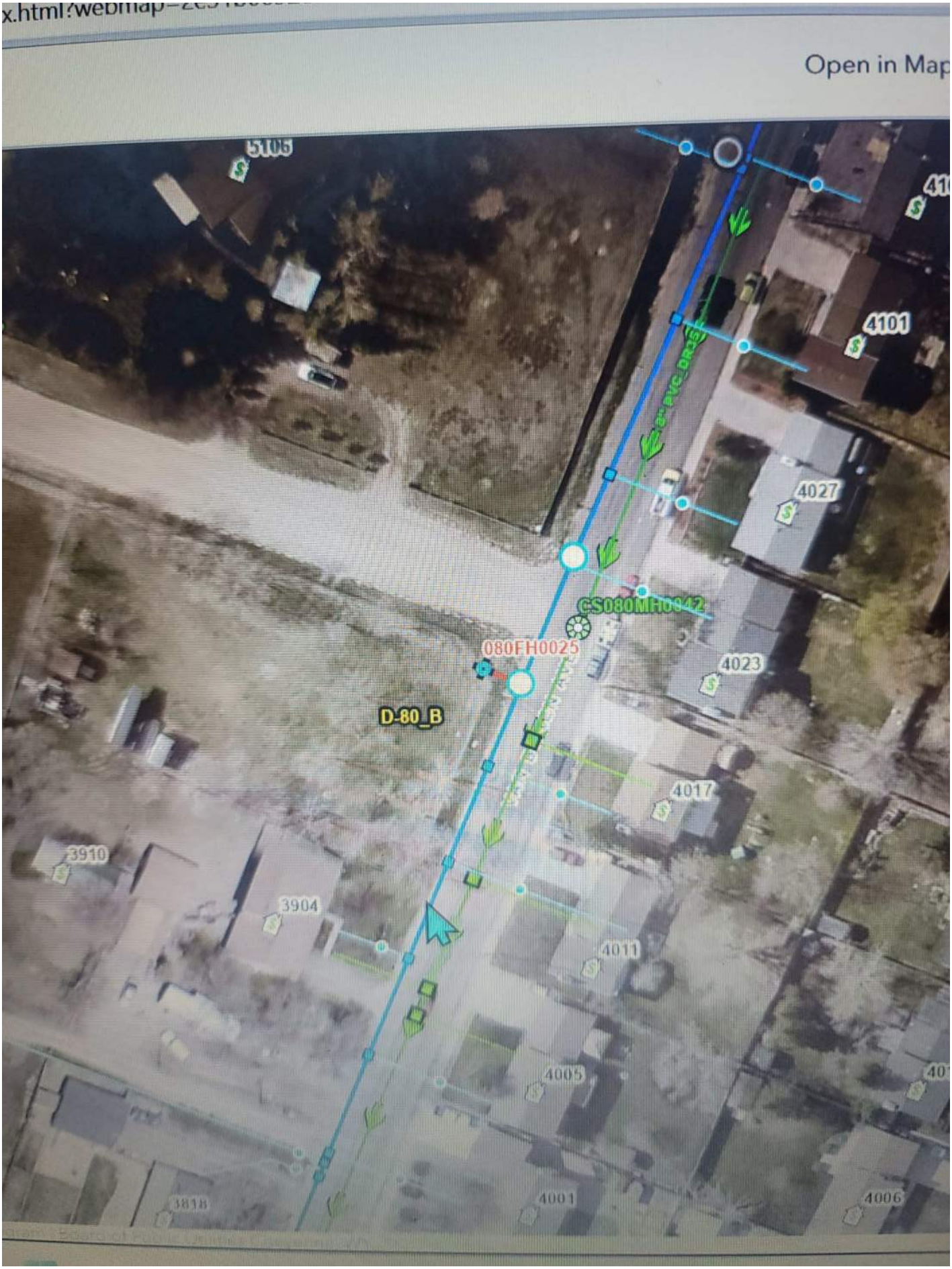
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APPENDIX G – COST ESTIMATES

ROW Cost Estimate

Street/Legal Address	2022 Value	Lot Size (ft^2)	Value Per Square Foot ($)	Estimated Cost for Land ($/ft^2$)	Land Req'd for 70' ROW (ft^2)	Price fo 70' ROW ($)	Land Req'd for 80' ROW (ft^2)	Price fo 80' ROW ($)
4120 Van Buren Ave	$411,327	26835	$15.33	$16.00	1506.05	$24,096.80	3328.53	$53,256.48
4101 Dildine Road	$178,033	43512	$4.09	$6.00	1357.85	$8,147.10	2812.89	$16,877.34
Sunny Side Addition, 7th Filing: East 156' of the North 78' of the South 268 of Tract 320	$40,808	12168	$3.35	$5.00	784.61	$3,923.05	1563.92	$7,819.60
Sunny Side Addition, 7th Filing: South 190' of Tract 320	$414,643	56192	$7.38	$9.00	2079.97	$18,719.73	3978.39	$35,805.51
Sunny Side Addition, 7th Filing: East 197.32' of the North 102' of the South 268 of Tract 321	$15,938	20127	$0.79	$6.00	126.49	$758.94	248.13	$1,488.78
3904 Van Buren Ave	$339,534	25872	$13.12	$15.00	1722.49	$25,837.35	3042.32	$45,634.80
3902 Van Buren Ave	$3,720	1875	$1.98	$6.00	202.78	$1,216.68	352.65	$2,115.90
3818 Van Buren Ave	$205,491	14625	$14.05	$16.00	1632.06	$26,112.96	2801.02	$44,816.32
3814 Van Buren Ave	$207,305	38333	$5.41	$8.00	1921.42	$15,371.36	3222.47	$25,779.76
3808 Van Buren Ave	$163,145	29600	$5.51	$8.00	1549.97	$12,399.76	2551.29	$20,410.32
3608 Van Buren Ave	$79,221	177725	$0.45	$6.00	9777.22	$58,663.32	15778.53	$94,671.18
258 Laramie St	$17,093	36155	$0.47	$6.00	919.73	$5,518.38	1538.99	$9,233.94
	Average, used as minimum cost=		$6.00		23580.64	**$200,765.43**	41219.13	**$357,909.93**

VAN BUREN AVENUE
PLANNING COST ESTIMATE

GENERAL CONTRACT ITEMS					
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**	
Mobilization, Demobilization and General Contract Requirements	1	LS	3,530.90	$ 3,531	
Traffic Control	1	LS	176.55	$ 177	
Stormwater Prevention Plan and Implementation	1	LS	529.64	$ 530	
Contingency	1	LS	3,530.90	$ 3,531	
			SUBTOTAL=	$ 7,768	

SHORT-TERM IMPROVEMENT COSTS					
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**	
Striping	13020	LF	0.25	$ 3,255	
Feedback Speed Signs	2	EA	7,500.00	$ 15,000	
Thermoplastic Crosswalk & Stop Bar Markings	377.5	SF	38.00	$ 14,345	
Painted Markings	154.5	SF	2.00	$ 309	
Crosswalk Signs	6	EA	400.00	$ 2,400	
			SUBTOTAL=	$ 35,309	
			TOTAL ESTIMATED PROJECT COST=	$ 43,077	2023 Estimate
				$ 61,417	2035 Estimate, 3% Inflation
				$ 82,540	2045 Estimate, 3% Inflation

Van Buren Avenue
Planning Cost Estimate

DESIGN FROM 35% TO 100%					
Item	**Quantity**	**Unit**	**Unit Price**		**Total Cost**
Corridor Survey for Design	1	LS	12,274.94	$	12,275
Engineering Design to 100% Contract Documents	1	LS	29,459.87	$	29,460
Permitting	1	LS	9,819.96	$	9,820
Bid Assistance and Construction Inspection	1	LS	24,549.89	$	24,550
			SUBTOTAL=	$	76,105

GENERAL CONTRACT ITEMS					
Item	**Quantity**	**Unit**	**Unit Price**		**Total Cost**
Mobilization, Demobilization and General Contract Requirements	1	LS	28,794.90	$	28,795
Traffic Control	1	LS	1,439.75	$	1,440
Stormwater Prevention Plan and Implementation	1	LS	4,319.24	$	4,319
Contingency	1	LS	28,794.90	$	28,795
			SUBTOTAL=	$	63,349

STORMWATER IMPROVEMENTS					
Item	**Quantity**	**Unit**	**Unit Price**		**Total Cost**
Type A Inlets	2	EA	7,500.00	$	15,000
Stormwater Manholes (6' Diameter)	3	EA	8,500.00	$	25,500
18" Stormwater Pipe	70	LF	90.00	$	6,300
24" Stormwater Pipe	840	LF	110.00	$	92,400
Riprap (Type VL)	1	CY	500.00	$	500
			SUBTOTAL=	$	139,700

MINI-ROUNDABOUT					
Item	**Quantity**	**Unit**	**Unit Price**		**Total Cost**
ROW Acquisition	1	LS	25,000.00	$	25,000
Remove Curb & Gutter	700	LF	16.00	$	11,200
Remove Existing Sidewalk	300	SY	20.00	$	6,000
Remove Existing Asphalt	1800	SY	22.00	$	39,600
Remove Existing Concrete Valley Pans	160	SY	30.00	$	4,800
Remove Signs	3	EA	25.00	$	75
Relocated Type A Inlets	2	EA	3,000.00	$	6,000
Curb & Gutter (24")	820	LF	90.00	$	73,800
Concrete Flatwork	535	SY	125.00	$	66,875
Asphalt (Hot Plant Mix)	325	Ton	70.00	$	22,750
Striping	1340	LF	0.25	$	335
Painted Markings	92	SF	2.00	$	184
Thermoplastic Crosswalk & Stop Bar Markings	235	SF	38.00	$	8,930
Detectable Warning Plates	16	EA	250.00	$	4,000
Luminaires	12	EA	1,200.00	$	14,400
Signs	10	EA	400.00	$	4,000
			SUBTOTAL=	$	287,949

TOTAL ESTIMATED PROJECT COST=	$	490,998
2035 Estimate, 3% Inflation	$	700,045
2045 Estimate, 3% Inflation	$	940,803

Van Buren Avenue
Planning Cost Estimate

DESIGN FROM 35% TO 100%				
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
Corridor Survey for Design	1	LS	22,714.59	$ 22,715
Engineering Design to 100% Contract Documents	1	LS	227,145.93	$ 227,146
Permitting	1	LS	22,714.59	$ 22,715
Bid Assistance and Construction Inspection	1	LS	45,429.19	$ 45,429
			SUBTOTAL=	$ 318,004

GENERAL CONTRACT ITEMS				
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
Mobilization, Demobilization and General Contract Requirements	1	LS	165,710.94	$ 165,711
Traffic Control	1	LS	8,285.55	$ 8,286
Stormwater Prevention Plan and Implementation	1	LS	24,856.64	$ 24,857
Contingency	1	LS	165,710.94	$ 165,711
			SUBTOTAL=	$ 364,564

DEMOLITION				
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
Remove Curb & Gutter	2541	LF	16.00	$ 40,648
Remove Existing Sidewalk	1129	SY	20.00	$ 22,587
Remove Existing Asphalt	12304	SY	22.00	$ 270,688
Remove Existing Concrete Paving	768	SY	30.00	$ 23,027
Remove/Relocate Existing Signs & Mailboxes	1	LS	2,000.00	$ 2,000
			SUBTOTAL=	$ 358,950

ROAD IMPROVEMENTS				
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
ROW Acquisition	1	LS	175,765.43	$ 175,765
Curb & Gutter (24")	6554	LF	90.00	$ 589,860
Concrete Flatwork	5202	SY	125.00	$ 650,283
Asphalt (Hot Plant Mix)	3173	Ton	70.00	$ 222,092
Striping	13020	LF	0.25	$ 3,255
Relocate Feedback Speed Signs	2	EA	150.00	$ 300
Thermoplastic Crosswalk & Stop Bar Markings	377.5	SF	38.00	$ 14,345
Painted Markings	154.5	SF	2.00	$ 309
Relocate Crosswalk Signs	6	EA	150.00	$ 900
Detectable Warning Plates	21	EA	250.00	$ 5,250
			SUBTOTAL=	$ 1,657,109

UTILITY IMPROVEMENTS				
Item	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
Relocate Type A Inlets	4	EA	3,000.00	$ 12,000
Adjust Existing Manholes (Sanitary & Storm)	22	EA	2,600.00	$ 57,200
Relocate Power Poles	7	EA	10,000.00	$ 70,000
New Power Lines	1600	LF	10.00	$ 16,000
Communication Line Adjustments	1	LS	12,500.00	$ 12,500
Fire Hydrants	3	EA	5,000.00	$ 15,000
New 8" Waterline	700	LF	100.00	$ 70,000
New 6" Waterline	30	LF	90.00	$ 2,700
Luminaire	3	Ea	1,050.00	$ 3,150
			SUBTOTAL=	$ 255,400

TOTAL ESTIMATED PROJECT COST=	$	2,954,028
2035 Estimate, 3% Inflation	$	4,211,737
2045 Estimate, 3% Inflation	$	5,660,222