

COUNCIL WORK SESSION
Tuesday, May 14, 2013, 4:30 p.m.
Council Meeting Room
Casper City Hall

AGENDA

1. Community Development Block Grant Annual Action Plan
2. Joshua's Storehouse Request
3. Mercer Family Resource Center Request
4. Blackmore Road/Donegal/East 21st Street/Wyoming Boulevard Traffic Study
5. Construction of New Kelly Walsh High School

May 8, 2013

MEMO TO: John C. Patterson, City Manager

FROM: Liz Becher, Community Development Director
Kristin Edwards, Community Development Technician

SUBJECT: Proposed Uses of Program Year 2013/2014 Community Development Block Grant Funds

Recommendation:

That Council review the draft of the City of Casper's Annual Action Plan for Program Year 2013/2014 Community Development Block Grant (CDBG) funds.

Summary:

As a recipient of entitlement Community Development Block Grant (CDBG) funds from the U.S. Department of Housing and Urban Development (HUD), the City has solicited community opinion over the past 30 days for the drafting of an Annual Action Plan outlining its proposed use of CDBG funds. After taking into account community input, the Housing and Community Development Division has prepared a draft of the Annual Action Plan for Council and HUD review. Based on an estimated 20% decrease in funding, the City projects that it will receive approximately \$207,600 for Program Year 2013/14. A summary of the proposed projects follows:

- Ridership tickets for the Casper Area Transportation Coalition (CATC) to provide tokens to low-income individuals, and the working poor, on The Bus and CATC - \$28,500;
- Emergency Repairs for low-income Casper homeowners - \$5,000;
- Housing Rehabilitation Assistance Program, which along with youth volunteers, provides materials and expertise in assisting low/moderate income Casper homeowners with repairs - \$10,000;
- City Core Redevelopment in the Old Yellowstone District and downtown: qualifying activities include Economic Revitalization-Revolving Loans (\$40,000), Commercial Façade Matching Grants (\$40,000), Matching Tap Fee Grants (\$5,000), and Demolitions (\$5,996) to reduce slum and blight;
- Program administrator expenses - \$73,165.

The projects must meet one of three national objectives of the CDBG program: benefiting the low-income population of Casper, addressing slum and blight, and/or urgent need. Upon Council approval, the draft final Annual Action Plan will be sent to HUD on May 15, 2013. Final review and approval will be concurrent with budget approval.



Casper Wyoming

Annual Action Plan

July 1, 2013 through June 30, 2014

**Prepared for the U.S. Department of Housing and Urban
Development**

**Prepared by the City of Casper Community Development
Department**



Fourth Program Year Action Plan

July 1, 2013 to June 30, 2014

Introduction



The City of Casper is the second largest City in Wyoming, situated in the north central part of the state. The towns of Bar Nunn, Evansville and Mills help create the Casper urbanized area.

This year’s report is to serve as an application from the City of Casper for its Community Development Block Grant (CDBG) Entitlement funds from the U. S. Department of Housing and Urban Development (HUD) for the period covering July 1, 2013 through June 30, 2014. The report is the Fourth Program Year Action Plan as required by HUD and Federal regulations. The report will be an update of

current conditions and issues in the community. It will also outline the proposed uses for Federal Fiscal Year 2013/2014 CDBG allocation. The City of Casper will use all of its CDBG funds to meet one of three national objectives: to address needs of low-moderate income persons, to address slum and blight, or to address urgent need. This report is designed to provide a snapshot of Casper as a viable community. The primary focus of this report is about the community of Casper and its low-moderate income population. The City is working to better utilize its allocation of Community Development Block Grant funds (CDBG) to improve quality of life by addressing issues of economic development, housing, special needs, homeless and neighborhood programs.

The City of Casper is minimally diverse. The following chart from the 2010 U. S. Census shows the race breakdown of the population in casper:

Wyoming: Casper, Wyoming		
	Total	Percentage
White	51,048	92.3%
Black or African American	560	1.0%
American Indian and Alaska Native	521	0.9%
Asian	436	0.8%
Native Hawaiian and Other Pacific Islander	26	0.0%
Some Other Race	1,295	2.3%
Two Or More Races	1,430	2.6%
Hispanic or Latino	4,070	7.4%

Source: U.S. Census Bureau

Wyoming: Casper, Wyoming		
Population by Sex/Age		Percentage
Male	27,517	49.7%
Female	27,799	50.3%
Under 18	13,222	23.9%
18 & over	42,094	76.1%
20 - 24	3,968	7.2%
25 - 34	8,119	14.7%
35 - 49	10,419	18.8%
50 - 64	10,847	19.6%
65 & over	7,116	12.9%

Approximately 10.9% of households in Casper are female heads of household with no husband present, and 11.2% of households are someone living *alone* over the age of 65. In 2013, median income for a family of four is \$60,900. Although many citizens are enjoying the benefits of an energy boom, over 7.9% of the population lives in poverty.

Four years ago, the City of Casper submitted a Five Year Consolidated Plan for the period covering July 1, 2010 through June 30, 2015. As a part of the preparation of that report, the City discussed the issues of jobs and economic development, the development and maintenance of affordable housing, the provision of social services to special needs populations, and the community’s homeless persons and families. Several themes were dominant:

- Continue economic development efforts, especially in the core of the community.
- Increase inventory of affordable single family and rental housing stock.
- Continue to support the dial-a-ride and fixed route transit systems and consider expansion to full weekend service.
- Support LifeSteps Campus.
- Promote and support programs that improve neighborhoods.
- Use CDBG funds to leverage other funding sources for development and/or implementation of programs that benefit low-moderate income persons.

Casper has amenities of a much more urban area, but still has a “small town feel” where its residents many times take care of each other. Local organizations provide a wide array of services to assist low income residents. The community works together to resolve community issues; for example, the redevelopment of the Old Yellowstone District, a 12/24 Club to support persons trying to maintain sobriety, converting a vacant orphanage into social services/housing, or planning for affordable housing in an old historic bank building. The City doesn’t receive a sufficient amount of Community Development Block Grant funds to make a huge impact, but there has been an attempt to leverage other available monies to expand the entitlement grant’s influence.

Executive Summary

The City of Casper is pleased to present its Fiscal Year 2013/14 Annual Action Plan to the U. S. Department of Housing and Urban Development (HUD). These projects are an effort to work toward achievement of the larger accomplishments set forth in the Five Year Consolidated Plan for 2010-2015, which include providing decent housing, suitable living environments, and economic opportunity. The City is yet unsure of the allocation of Community Development Block Grant funds (CDBG) due to delays at the federal level. However, in anticipation of a likely drop in the amount of the total allocation, it is estimated that the City will receive approximately \$207,000 for FY2013/14. In addition, \$12,000 of program income is estimated for FY13/14 and is derived from loan interest and principal repayments by homeowners whom have borrowed from the City to make needed repairs on their homes. Carryover funds of \$42,165 are from the prior year HUD allocation. The following is the estimated breakdown of CDBG funds to allocate for FY13/14:

HUD Allocation	\$207,631
Program Income	12,000
Carryover Funds from Prior Year	<u>42,165</u>
Total	\$261,796

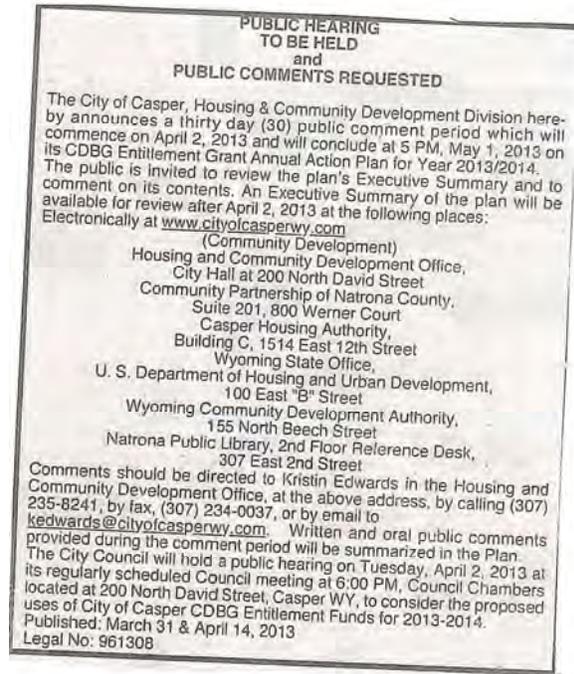
CDBG funds will be directed toward projects that support the community transit systems, exterior rehabilitation of homes of low-moderate income homeowners, emergency repairs for low-moderate income homeowners, urban redevelopment in the Old Yellowstone District and the City core, and program administration. The proposed projects for this program year based on the estimated HUD allocation of \$207,631 are:

- Housing Rehabilitation Assistance Program – \$15,000 for assistance to low-moderate income homeowners with emergency repairs and the summer Mission Serve project, and program related administration costs, including 10% of the Community Development Technician’s salary and benefits.
- Casper Area Transportation Coalition – \$28,500 for ridership tickets on The Bus and CATC.
- City Core Revitalization Activities – \$90,996 for matching tap grants, façade matching grants, demolitions, and Economic Revitalization Revolving Loan Program assistance to businesses.
- Administration -- \$73,165 to provide for program administration costs including 90% of the Community Development Technician’s salary and benefits.

The City’s 2013-2014 Annual Action Plan is written with hopes of continuing to support the above programs that have proven successful and effective in the past program year.

Citizen Participation

The City of Casper met the citizen participation requirements identified in the 2010-2015 Consolidated Plan, and the public's input was sought in the preparation of the Plan. As required by the Consolidated Plan, City staff has solicited input from the community through citizen boards such as the Casper Area Transportation Coalition, the Old Yellowstone District, and City Council. The City of Casper also prepared and advised key stakeholders and the community of the public comment period and public hearing for the discussion of proposed uses of Community Development Block Grant funds.



Public Hearing

One public hearing was held as part of the regular City Council meeting on April 2, 2013 to discuss the proposed uses of CDBG funding for the year, including brief presentations from community members that have been positively impacted by past CDBG monies.



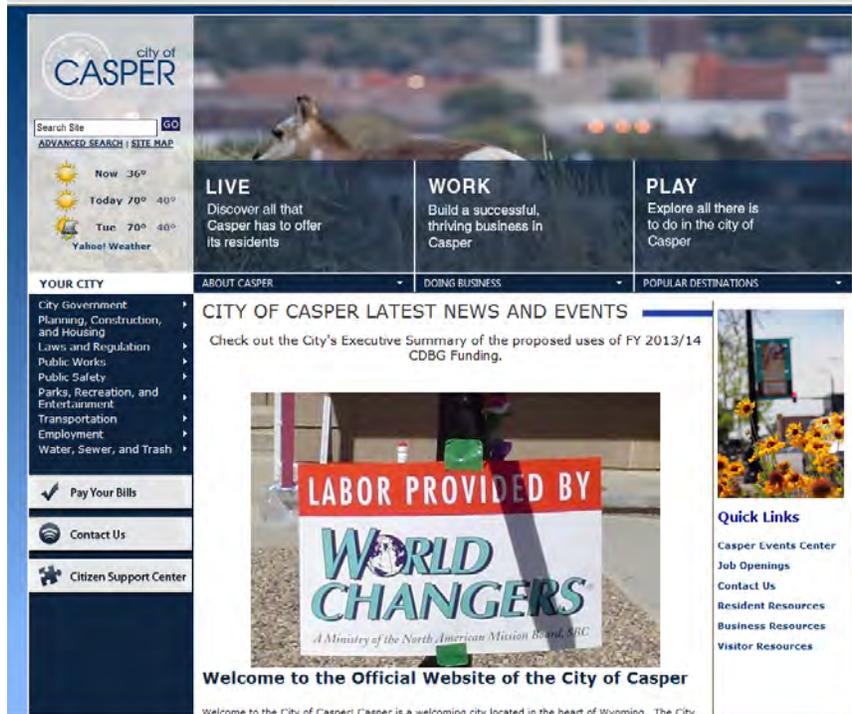
Advertisement

The public hearing and comment period were advertised in the Casper Star Tribune, and a copy of the Executive Summary was made available to the public at various locations throughout the community, in addition to the City's Community Development Department as listed below:

- Casper Housing Authority, LifeSteps Campus
- Community Action Partnership of Natrona County
- Wyoming Community Development Authority
- Casper Area Transportation Authority
- Natrona County Public Library, 2nd Floor Reference
- Wyoming Field Office, U. S. Department of Housing and Urban Development

In addition, the Summary was made available on www.cityofcasperwy.com and was advertised using the City’s newly installed flash banner on the main webpage.

From www.cityofcasperwy.com:



Key stakeholders, including those aforementioned, in addition to the United Way of Natrona County, the Downtown Development Association, and the Casper Area Economic Development Alliance, were sent the Executive Summary of the Plan. Special mention was made that their input was desired. The City made staff available to meet in person regarding the proposed uses and to comment on the percentage of funds that the organization would like to see used on each project.

Citizen Comments

The public and cooperating organizations were invited to make presentations to the Council regarding the type of projects they would like to see funded. Mayor Schlager opened the meeting to a public hearing, and the public was invited to comment.

CDBG Activity	Speaker’s Name	Summary of Comments
CATC Bus	Marge Cole	Ms. Cole summarized the benefits that the CDBG funding has for CATC and the low-income population that uses the tokens. She requested from Council that the funding be allowed.

CATC Bus	Carol Montgomery	As a rider of CATC and the Bus, Ms. Montgomery also expressed support for the continuation of funding toward tokens for the low-income applicants. She underlined the benefit that it had been in her own personal life.
ER-RLF	Brian Duerloo	As a member of the Montessori School of Casper Board, Mr. Duerloo expressed support for the continuation of CDBG support to new businesses in the Old Yellowstone District via the ER-RLF

In addition to public comments expressed in the public hearing, the Executive Director of United Way of Natrona County, Mike Burnett, also expressed support of the proposed uses by phone conversation. He expressed one concern regarding the use of CATC tokens, desiring to make sure that no free tokens are given directly to the Probation and Parole Office of Wyoming. Follow-up contact was made with Mr. Burnett by City staff, and his concern was addressed.

Many of the City Council members have also expressed concern regarding the great need for affordable housing in Casper, and they have asked City staff to be creative in their planning for the use of CDBG funding. They would like to see the issue of affordable housing addressed. The City staff has prepared the following plan in response to these comments and is working toward a solution to the housing problem in Casper. The City is in process of planning a larger project, to be funded by the City's general fund, in partnership with other community organizations.

The Annual Action Plan

Each year the U. S. Department of Housing and Urban Development (HUD) distributes to the City of Casper an allocation of Community Development Block Grant (CDBG) funds. The City must expend these funds on projects and activities that meet one of three national objectives within the City of Casper. CDBG funds must be used to:

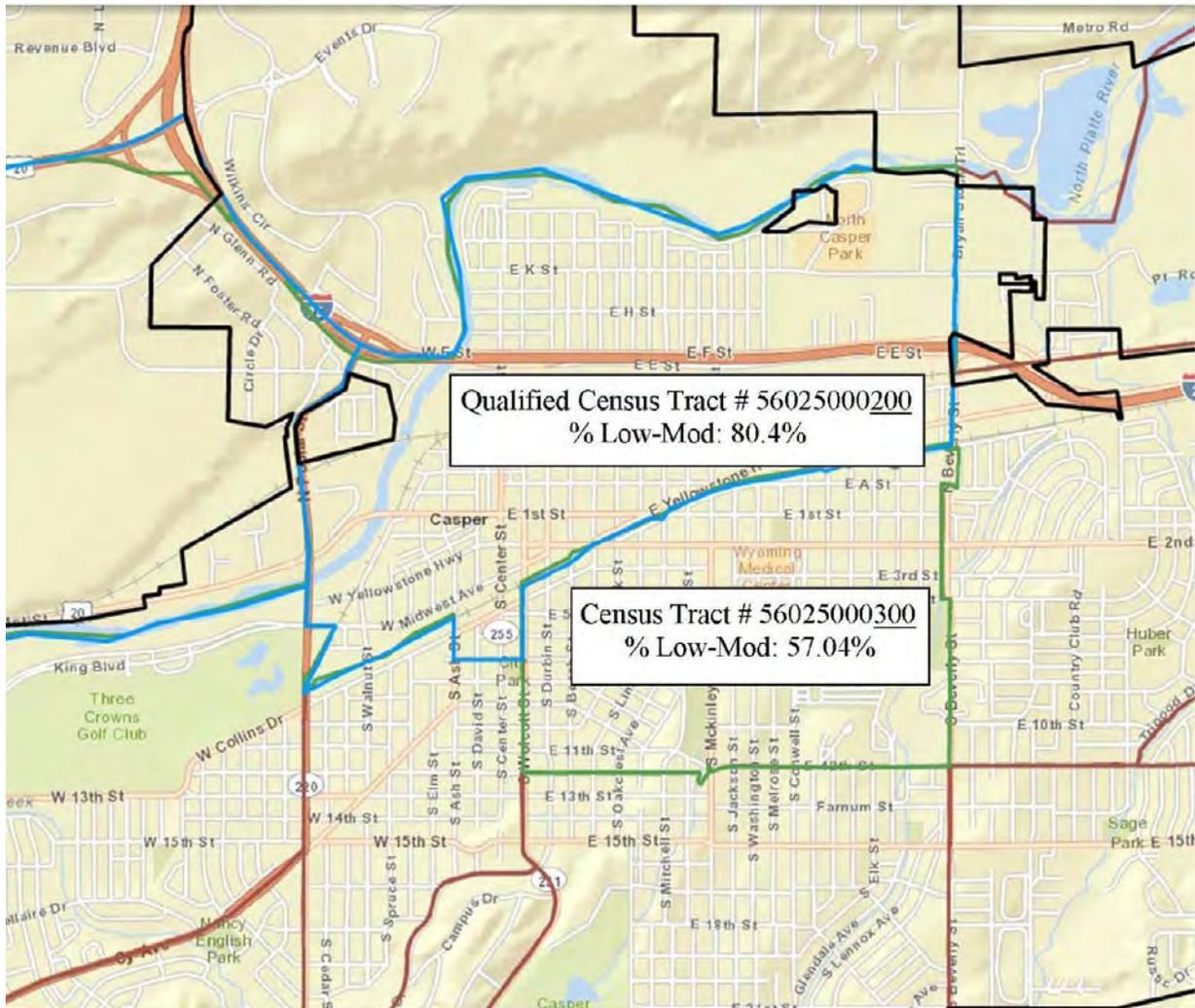
- Benefit persons who earn at or below 80% of Area Median Income as defined by HUD;
- Address slum and/or blight on an area or spot basis; or,
- Meet an urgent community need.

The City will focus its CDBG funded projects in the City's core area, bounded by the North Platte River on the north, Beverly Street on the east, 12th Street on the south and Poplar Street on the west. Some of the City's low-moderate income areas are also located west of Poplar Street (see Map #1). In addition to these areas, residents within Casper city limits that are low-income qualified may apply individually for assistance through the applicable programs (see Map #2). This plan year, the City anticipates it will receive \$207,631 in CDBG funds, anticipates receiving \$12,000 in program income from loan interest and principal repayments, and will re-obligate an additional \$42,165. The following is a detailed description of how the City intends to use its CDBG funds. In the event that the City receives more money than expected, it will devote the remainder of the funds to the HRAP Program and continued support for major maintenance issues at Lifesteps Campus, as outlined below.

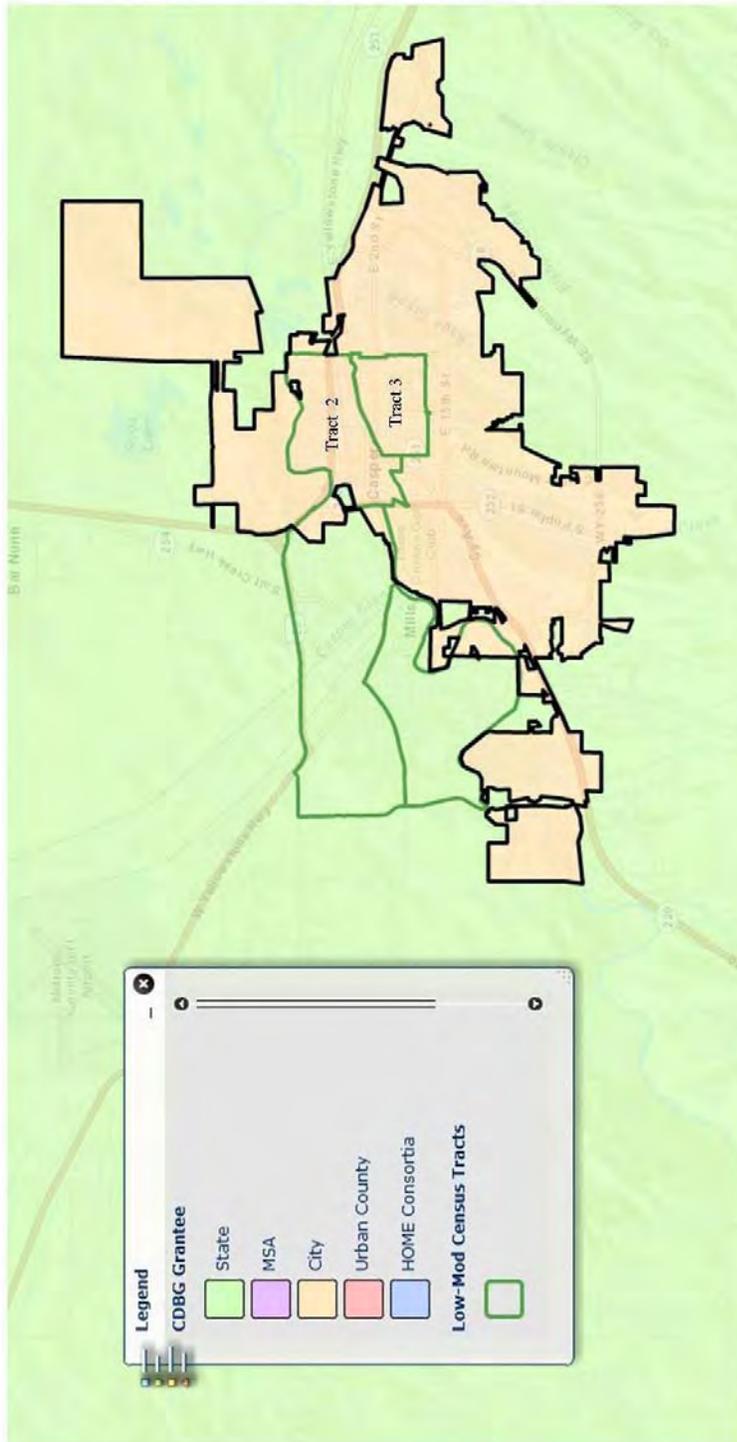
Note:

The City owns and manages LifeSteps Campus, a 6.5 acre tract of land on East 12th Street. The purpose of the campus is to provide space for nonprofit organizations that provide supportive services to homeless persons, transitional housing programs, and housing for populations that may be hard to house in neighborhoods. CDBG funding was previously used to support the campus. However, due to funding cuts, the City, along with the support of the City Council, has set aside general fund monies to support LifeSteps in an amount that far exceeds the ability of CDBG funding to keep up with the needs. If the allocation were more than expected, CDBG funds would be applied to major maintenance expenses of LifeSteps.

Map 1



Map 2



Decent Housing

Housing Rehabilitation Assistance Program (HRAP):

Activities: Emergency Repairs and Mission Serve

The City of Casper has a great need for affordable housing. Although the City does not receive a large CDBG Entitlement Grant, it has traditionally used the funds to support affordable housing in the way that will be most sustainable and most effective with the small amount. The City's long-established Housing Rehabilitation Assistance Program (HRAP) consists of two ways to help low-moderate income homeowners who need to complete unexpected or necessary repairs and cannot afford to pay for it themselves.

Emergency Repairs

Emergency Repair Site for Program Year 2012/2013-Plumbing Repair



The first portion of the HRAP Program is the City's Emergency Repair Program, which is designed to help mitigate an emergency, such as a furnace that quits in the winter or a roof that leaks. The program will help homeowners with repairs that pose an immediate danger to the health and/or safety of the residents of that particular housing unit. The work is limited to homeowners that earn at or below 80% of area median income, along with those that live within Casper city limits and are the owners of the residence in question. If the homeowner meets the eligibility requirements of the program, a grant is

given in the amount of the necessary repair, and the City arranges to have the repair completed in a timely manner.

Mission Serve

A 2012 World Changers Project in Progress



To achieve the second portion of the HRAP Program, the City performs an activity which allows for less-urgent (but still imperative to owners' safety and health) repairs to be done on homes of low-moderate income Casper residents. Since 1997, the City had partnered with World Changers to provide an annual program where roofs were replaced, windows and doors were repaired or replaced, houses were painted, fences were fixed and/or ramps were constructed for accessibility by persons with disabilities. During the course of this program, the City completed 436 housing units during sixteen (16) project weeks. Due to World Changers becoming a program of LifeWay Christian Resources, their area of service was changed to not include Casper. In their absence, the City has located a similar organization called Mission Serve that will take the place of World Changers for PY 2013/2014. For 2012-2013, a local Southern Baptist Association has assumed the role of providing volunteers. The youth-based program provides volunteer labor to perform such construction activities. Over 50 requests for assistance are processed to identify the approximately seven (7) to twenty (20) homes that will receive assistance through the Program. The work is done for the homeowner in the form of a grant. Although income and asset holdings are primary considerations for selection,

houses that appear to be the worst looking property on the block, residents who are elderly or disabled, or young families are given extra consideration. Preference is given to housing units located within the areas outlined in Map 1.

In addition to the rehabilitation activities, ten percent (10%) of the Community Development Technician's time is allocated to HRAP administration duties such as processing applications, environmental reviews, and verification of income/assets. A contract inspector develops bid specifications for all projects and provides the necessary construction oversight. Press releases identify the source of funding (CDBG Entitlement Grant) for these projects.

Objective: to maintain decent and affordable housing for low-moderate income homeowners by assisting the homeowners with rehabilitation costs.

Outcome – Sustainable provision of decent and affordable housing:

Existing housing stock will be preserved and neighborhood appearances will be improved. Up to this point, 436 homes have been rehabilitated, and the effects have been noted and celebrated throughout the community.

<i>Service</i>	<i>Beneficiaries</i>	<i>Number to be Served</i>
Emergency Repair	LMI households	5
Mission Serve FY13	LMI households	8
		13

CDBG Funding Level

\$15,000

Suitable Living Environments

Casper Area Transportation Coalition (CATC)



Quality of life is often measured by availability and affordability of reliable transportation. For persons without personal transportation, getting to and from destinations within Casper used to be costly in terms of both money and time. People relied upon friends, family, or a taxi service to go anywhere. Today, services such as the dial-a-ride

(CATC) and the fixed route system (The Bus) are available. The planning efforts of the Five Year Consolidated Plan for the period covering July 1, 2000 through June 30, 2005, focused mainly on addressing transportation issues in the community for low-moderate income persons, especially the elderly and disabled. Those agencies that served special needs populations also joined the planning effort. The Metropolitan Planning Organization program manager and CATC provided key data and input into the new system. In the end, CATC agreed to operate and manage a fixed route system, called “the Bus”. The Bus system was designed to stop at key destinations for low-moderate income persons – medical, employment, and social service destinations. The Bus would also lower the demand on the dial-a-ride system operated by CATC by providing many bus stops, desirable destinations, low costs, and schedule frequency. Nearly eight years after The Bus system was implemented, routes have been expanded to Bar Nunn, Mills and Evansville. Ridership is over 100,000 rides per year.

The following chart identifies the different funding sources required to keep CATC and The Bus operational. It costs more than \$1.9 million dollars each year to make these transportation options available to the community.

SOURCE OF FUNDING	BUDGETED AMOUNT	BUDGETED AMOUNT
	CATC	BUS
City of Casper	\$246,977	\$132,225
City of Casper MPO Match	\$3,200	\$0
1% Optional Sales Tax Monies for Weekend Service	\$49,711	\$131,067
CBDG Funding	\$14,250	\$14,250
Town of Evansville	\$8,400	\$400

Town of Mills	\$8,500	\$500
Bar Nunn	\$1,000	\$0
State of Wyoming	\$111,423	\$124,425
Natrona County	\$10,000	\$0
Service Contracts	\$29,754	\$12,400
Advertising	\$0	\$0
FTA	\$520,715	\$499,760
Total Budgeted/Received	\$1,003,930	\$915,027

The City plans to use as much as possible of its eligible CDBG public service funds to purchase ridership tickets for low-moderate income persons who ride CATC and the Bus. CATC receives CDBG funds from the City and is responsible for verifying the income eligibility of each applicant onsite. In addition, CATC gives a portion of the tokens to local nonprofit organizations to use for homeless and income eligible clientele. Nonprofit organizations that provide supportive services, especially to homeless persons and families, give their clients bus tokens and CATC tickets so their clients have access to transportation for medical appointments and other necessary business.

Objective: to provide a more suitable living environment by providing affordable and accessible transportation services for elderly, disabled, and low-moderate income persons.

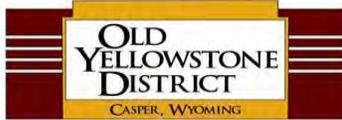
Outcome – Affordability for the purpose of creating suitable living environments:

Transit services are affordable and available to low-moderate income persons, especially elderly persons and persons with disabilities. Thus recipients have affordable transportation to employment, education, medical and social activities.

<i>Service</i>	<i>Beneficiaries</i>	<i>Number to be Served</i>
Tickets for dial-a-ride (CATC)	LMI elderly/disabled	125
Tickets for The Bus	LMI	170
Tickets for agencies	homeless	80
CDBG Funding Level		\$ 28,500

Economic Opportunity

City Core Revitalization Activities: Demolitions, Façade Matching Grants, Tap Fee Matching Grants, and Economic Revitalization Revolving Loans



Creating economic opportunities requires creative thinking, public and private stakeholders, and investment. Through its urban development activities, the City has brought all of these key factors to the table. When the Old Yellowstone District was initially established as the Casper Urban Renewal Area (CURA), the seeds were planted for the redevelopment of a designated blighted area. The plans stagnated in the beginning without leadership. However, about five years ago, the City hired an Urban Renewal Manager who is skilled in bringing together stakeholders, development concepts, and locating funding to create a new momentum in the area. The “plan” is coming together! Streets have been reconstructed. An identity for the area has been established. Businesses are seeking spaces to locate in the area. Property owners are investing in their property. Even homeowners are investing in former commercial buildings and creating urban living spaces.

*New Montessori School of Casper (located in a remodeled warehouse):
Program Year 2012/13 Façade Grant, Matching Tap Grant, and ER-RLF Recipient*



These activities will continue to further the goal of assisting the City Core with redevelopment. Each activity will benefit the overall area in one form or another. Some of the buildings in the space no longer have any economic value. However, the land they occupy is situated in such a location that it could be redeveloped to create jobs for low-moderate income persons. Clearance and demolition funds will facilitate redevelopment efforts. One way to make the area more appealing to the community and to attract people into the neighborhood is to provide businesses with small façade matching grants to rehabilitate their building entrances. An attractive entrance will entice shoppers to come inside, look around and hopefully spend money. The continuity of the “look” of the neighborhood is also conducive to its overall identity. The Economic Redevelopment Revolving Loan Fund (ER-RLF) monies will be used to assist businesses. One of the requirements for the use of ER-RLF funds is to create at least one (1) full time equivalent job for low-moderate income persons for every \$30,000 borrowed from the City. Funds will also be available to pay a 50% match for tap fees on behalf of income qualified businesses that are located in the target area. These tap fees are incredibly important to businesses who wish to revitalize a building that has not been in use for many years. In successful cases, new businesses have opened in abandoned buildings and have provided several LMI jobs.

Category	Amount
Demolition	\$ 5,996
Façade Matching Grants	\$ 40,000
ER-RLF	\$ 40,000
Tap Matching Grants	\$ 5,000
	\$ 90,996

Objective: to create economic opportunities and implement redevelopment plans in an urban renewal area with a special focus in Census Tracts 200 and 300.

*Outcome:
Affordability for the purpose of creating economic opportunities for low-moderate income persons and/or the redevelopment of the City core.*

<i>Service</i>	<i>Beneficiaries</i>	<i>Number to be Served</i>
ER-RLF	LMI area business	1
Façade Grants	Spot Blight; LMI area business	4
Tap Matching Grants	LMI area business	2
Job Creation through loans and/or Tap Matching Grants	LMI persons	7
Demolitions	Spot Blight; LMA	2

CDBG Funding Level

\$ 90,996

Administration:

HUD regulations allow for a portion of CDBG funds to be used to offset the costs to administer the CDBG program. Eligible expenses include salary, benefits, supplies, interdepartmental expenses, and materials.

A new position was created in 2012 to assume the Housing Rehabilitation Assistance Program (HRAP) responsibilities and assist the Urban Renewal Manger with economic development CDBG funded activities. This position title is Community Development Technician and is currently filled by Kristin Edwards.

CDBG Funding Level

\$73,165

General Information



The City of Casper is located in the heart of Wyoming, the country's ninth (9th) largest state (97,914 square miles), and the country's lowest population. The City is located in the north central quadrant of the state, situated on Interstate 25 that traverses the state in a north/south direction. The Natrona County International Airport is served by commuter airlines that link passengers to hub cities such as Denver, CO, Salt Lake City, UT and Las Vegas, NV. Burlington Northern Railway provides freight rail service, and a private company offers bus transit service between Billings, MT and Denver, CO. Usually, the personal vehicle is the favored transportation choice. The vistas of Wyoming offer wildlife, wild flowers, grand mountains and deserts. Casper may be small in size, 55,316 persons according to the decennial census conducted in 2010, but it has some of the benefits of a larger urban area. The population has grown 11.4% since the 2000 census. Casper offers regional medical services, shopping, performing arts, and summer and winter recreation opportunities.

Nearly three fourths of Natrona County residents live in Casper. There are three neighboring communities - Bar Nunn to the north, Evansville to the east and Mills to the west. According to the 2010 Census, Evansville grew to 2,544 persons or 33.6%. Bar Nunn to the north, grew from 936 persons to 2,213 with an increase of 136.4%. Mills grew from 2,591 persons to 3,461 or 33.6%. Natrona County, which also includes the communities of Midwest and Edgerton about 40 miles to the north, saw a 13.4% population growth between 2000 and 2010.

Casper is situated on Interstate 25, the main north-south thoroughfare, cutting through the center of the state, moving traffic from the Montana state line to the north, to the Colorado state line to the south. The City of Casper has a City manager form of government. There are nine (9) Council members, three from each ward. Growth patterns have favored the east and west boundaries of town. Casper Mountain limits growth to the south. The North Platte River remains the northern boundary.

Census tracts 200 and 300 have poverty rates in excess of 20% of the population. Block group 1 of Census tract 400, block groups 2 and 3 of Census tract 700, and block groups 1 and 3 of Census tract 800 have more than 51% of their population that earn less than 80% of the area median income. Together with Census tracts 200 and 300, these geographic areas make up Casper's low-moderate income areas. CDBG funds will be directed to provide assistance in these areas. Eligibility for the City's Homeownership Rehabilitation Assistance Programs (HRAP) – Emergency Repairs and Mission Serve – is determined by income.

The combination of private and public investment is needed to make any housing or redevelopment project financially feasible. Some of the public funds that are used, or are expected to be used in projects in the next year, include the Low Income Housing Tax Credit, HOME funds, American Dream Downpayment Initiative, Community Service Block Grant funds, Emergency Shelter Grant (ESG), and HUD's Continuum of Care funds. Low Income Housing Tax Credits (LIHTC), HOME, and American Dream Downpayment Initiative (ADDI) funds are allocated to the state housing finance agency – Wyoming Community Development Authority (WCDA). These funds are available for projects statewide. The Community Action Partnership of Natrona County (CAP), contracted with the City of Casper to provide social services and housing needs, administers the CSBG grant program as well as disbursing ESG funds. The agency is also a recipient of the Continuum of Care funds for its transitional housing program at LifeSteps Campus.

Managing the Process

The City of Casper, Housing and Community Development Division (H&CD), Community Development Department is the lead agency responsible for overseeing the development and administration of the Five Year Consolidated Plan and the Annual Action Plan. Due to funding reductions, the City will only have a full time technician to provide all program administration. Program oversight is provided by the Community Development Director, the City Manager, and City Council.

The City's Community Development Technician has typically been very involved in the community. Position requirements are such that the employee is a member of the regional homeless collaborative and is active in the state's housing and redevelopment officials organization. The division works closely with code enforcement, metropolitan planning, City engineering, and the urban redevelopment divisions in the Community Development Department of the City.

Institutional Structure

The State of Wyoming has a four percent (4%) state sales tax; however, every four years, the citizens of Natrona County are given an opportunity to add an additional one percent (1%) sales tax on goods. Funds are used for projects that benefit everyone, and have always been used to enhance the quality of life for all citizens in the community. For the City of Casper, 100% of Optional 1% Sales Tax is used for capital improvements. Entire sections of streets, major infrastructure projects, parks, storm sewers, and recreational amenities such as the new Aquatics Center, the Senior Center, the Recreation Center, and the Casper Events Center have been funded through Optional 1% Sales Tax.

The Casper Housing Authority is not an entity of the City of Casper, although it is closely associated. It has a separate board of commissioners appointed by the City, and a City Council person is appointed as a liaison between the City and the Housing Authority. The Housing Authority continues to lease its office space from the Community Action

Partnership of Natrona County at LifeSteps Campus. However, the organization has tentative plans to move locations in the coming year in order to expand its role and office space.

The City works closely with non-profit organizations, for-profit and non-profit developers to address housing, homeless, special needs populations, and economic development issues.

Monitoring

The City of Casper maintains files on each CDBG Activity. The Community Development Technician reviews and approves all Housing Rehabilitation Assistance Program (HRAP) files to insure income and assets are calculated correctly, environmental reviews are conducted, bids and contracts are in place, and all payments are in compliance with the work accomplished. The Community Development Technician also approves all payments made by the City on behalf of the homeowner. Files are also kept on all non-HRAP files. The files include the environmental review documentation, contracts with non-City providers, bid specifications, correspondence, and all payments.

Finally, the City is audited each year by Porter, Muirhead, Cornia and Howard, a local accounting firm that reviews the CDBG program to ensure the City meets programmatic requirements, HUD regulations and general accounting practices. New grant management policies and procedures are being implemented on a regular basis to ensure compliance with all regulations.

Lead-based Paint

According to 2010 census data, 83.2% of owner occupied housing units were built prior to 1979 and 78.7% of rental units were constructed in the same time frame. Of the total units, 32% of owner occupied units were built prior to 1950 and 47.5% of rental units were constructed during this same time period. The older housing stock, particularly units constructed prior to 1950 are found in Census Tracts 200 and 300, where over 51% of the residents earn at or below area median income. These two census tracts have poverty rates that exceed 20%. Census Tract 200 has a 30% poverty rate and Census Tract 300 has a poverty rate of 20%. These census tracts are bounded by the North Platte River on the north, Beverly Street on the east, East 12th Street on the south and Poplar Street on the west. Many of Casper's moderate income persons live in neighborhoods next to these boundaries, just south of 12th Street, east of Oakcrest Street, west of Walsh Drive, and north of Yellowstone Highway.

Approximately 50 to 60% of Casper's housing units are found within the boundaries outlined above. The oldest housing stock is found in this area. Thus, it can be concluded that low-moderate income persons, especially those living in poverty, reside in the City's older housing stock. No specific testing program has been undertaken to determine the

exact number of units where lead based paint hazards exist or those number of units that are occupied by persons of extremely low or low incomes.

A review of Census 2010 data reveals 5.3% of families with children under the age of 18 live in poverty. If the age level is dropped to under 5 years of age, the percentage climbs to 13.5%. Over 19% of female heads of households live in poverty. If the female has children under the age of five, the percentage of persons living in poverty climbs to 47.3%. The lower cost rental units are also located within these boundaries. As stated above, older housing stock is found in the same areas. It is quite possible that children under the age of six who reside with a female head of household live in poverty and are at risk of being exposed to lead based paint.

The Housing and Community Development Division presumes the presence of lead based paint in any house constructed prior to 1978 and takes necessary precautions when conducting rehabilitation activities in such a unit. Precautions include isolating the work space, advising homeowners of the possibility of the presence of lead in their homes, encouraging families to have children under the age of six tested at the local health department, and following through with lead safe work practices on each job. The City encouraged many contractors to attend the lead safe work practices training provided by HUD. As a result, over 20 contractors are certified in lead safe work practices. Two contractors are also certified as risk assessors and clearance technicians including the facilities must be conducted by certified renovation firms, using renovators with accredited training, and following the work practice requirements of the rule (Environmental Protection Agency, 2010). The City's inspector has updated all of his training and certifications.

The City has limited resources and personnel to launch a larger effort to eradicate the presence of lead-based paint on its housing stock; however, it can eliminate the hazard one house at a time thus reducing the number of housing units where lead-based paint may be present. No testing is done on emergency repair projects if painted surfaces are not disturbed as a part of the scope of work to be done. In addition, the Casper Housing Authority conducts Housing Quality Standards inspections on each rental unit on the Section 8 Housing Voucher Program. Many of their contracts are on rental units that were constructed prior to 1978. Their efforts reduce the number of units with lead-based paint hazards in rental units.

HOUSING

Realtors continue to report a strong market of buyers, and the inventory is not yet to the necessary level needed to exceed demand. The chart below reflects the residential statistics for Casper comparing January 2012 and January 2013 (Wyoming Multiple Listing Service).

Category	January 2013	January 2012
Number of Total Listings	126 (75 sold)	112 (95 sold)
Average List Price	\$ 232, 514	\$ 203,309
Average Sold Price	\$ 204, 891	\$ 204, 126
Median Sold Price	\$ 187,000	\$ 189, 500
Sales/List Price Ratio	88%	98%
Average Days on Market	56	91

The results are mixed. The listing prices are higher, and the buyer is paying a lower percentage of the listing price when the house is sold. The owners also have their housing unit on the market for far fewer days than in 2012. Although these comparisons are for the month of January, one of the slowest months in the real estate industry, it is an indicator of things to come: a slightly higher sold price and far less time on market, reflecting the demand for housing in Casper overall.

Single family housing units rent in excess of \$1,000 plus utilities per month. Apartments, depending upon number of bedrooms, range between \$600 per month to over \$1,200 plus utilities. There are approximately 4,400 rental units in Casper, of which 30% are located in Census Tract 200 (627 units) and 300 (685 units). The units in these census tracts are older and have far more housing condition problems than newer complexes. Casper's rental housing stock suffers from deferred maintenance and the need to make major systems' repairs.

Rental units are still at a premium, although additional units are being built at a steady pace. Still, with the additional units, very low income persons, especially those with felony records, poor rental/credit histories, or the disabled have problems finding affordable housing. The community as a whole is becoming more aware of the problems, and efforts are slowly being made to address it. One example of the community's efforts can be found in the Sunshine Apartments, which were built in place of the KC Apartments by an affordable housing developer. These are LEED certified, "green", and have a total of 44 units. They have made a large difference in the safety of the neighborhood and have provided much needed affordable housing. In addition, the City has reopened the once vacated South Kimball Drive for access to Collins Drive where additional improvements are being made. The removal of the barriers gives the neighborhood ready access to the transit transfer station and the downtown area. In

addition, an LIHTC project at “Juniper Ridge” on the far eastern side of Casper is under construction. It will supply 34 affordable apartment units and is slated to be completed the summer of 2013. This project is a result of a partnership between the Wyoming Housing Network and the Wyoming Community Development Association. It is the goal of the City and the social services community to continue to make provisions for more affordable housing in Casper. In 2013, the City is in the process of closing the Star Apartments, due to code violations. Plans are being made for the current tenants’ living arrangements and for the eventual rehabilitation of the apartments for affordable housing.

Public Housing Needs

The Casper Housing Authority (CHA) manages 75 units of public housing comprised of 15 scattered site single-family housing, 24 units in Provence Court and 36 units scattered in the North Casper neighborhood. CHA also manages 16 units of single-room occupancy for persons with mental disabilities at Columbine Group Home and the Upstreet Group Home. In addition to site specific housing assistance, CHA also administers approximately 500 Section 8 vouchers. The Housing Authority also reports that housing assistance payments have been streamlined to equal 30% of individual tenant’s income. The waiting lists are very long. As of April 1, 2013, there were over 600 names on the public housing waiting list, and an additional 600 names on the Section 8 Housing Voucher waiting list. The City is enthusiastic about new leadership at The Casper Housing Authority, and there are multiple projects being planned in conjunction with them to address Casper’s housing situation.



The number of persons on the waiting lists are indicative of affordable housing needs in Casper. To the extent possible, the Casper Housing Authority could use additional vouchers to assist families, elderly and disabled persons faced with housing cost burdens. The rental

housing market at the end of 2012 was at a 1.6% vacancy rate, making it extremely difficult to locate new housing units.

The Housing Authority receives its funding from the U. S. Department of Housing and Urban Development (HUD). Its Annual Contributions Contract with HUD authorizes approximately \$200,000 per month in housing assistance payments. The Casper Housing Authority is not an entity of the City of Casper. It operates with a separate board of directors; however, one member of City Council acts as a liaison.

The Casper Housing Authority is not designated as a troubled housing authority.

Barriers to Affordable Housing

Infrastructure development is one of the most costly aspects of developing raw land and has a negative effect on the cost of lots where housing can be constructed. Converting raw land into a livable neighborhood is a complicated process. Effective planning and zoning allow for the development of neighborhoods that not only provide a place to live but also a place that has amenities such as parks, walk-able neighborhoods, streets and parking. Addressing regulatory costs and their impact on the cost of housing is one major component of the affordable housing planning process. The first step to removal of barriers is to identify what barriers are in place, the impact on developing housing costs and how these barriers could be addressed. The City and its housing and social service agencies, development community, utility partners, and local non-profit foundations are currently partnering to create new initiatives.

HOME/American Dream Down Payment Initiative (ADDI)

The City of Casper does not receive American Dream Down Payment Initiative funds or HOME monies. These funds are directed through the Wyoming Community Development Authority, the State of Wyoming's housing finance agency.

HOMELESS

The homeless population of Casper, Wyoming mirrors homeless populations in most communities. Casper has single men, single women, single men with children, single women with children, and families with and without children. The reasons for homelessness are as individual as the affected person/family. Because Casper has a high per capita use of methamphetamines, there are people who choose to purchase drugs instead of paying rent or mortgages. In addition, new arrivals to Casper have come looking for jobs associated with the energy boom and are unable to find affordable housing. The result is homelessness. Homeless population demographics include seriously and persistently mentally ill persons, dually diagnosed (mentally ill and substance abusers), veterans, persons with HIV/AIDS, and youth.

In January of 2013, the regional homeless collaborative conducted a point-in-time count of homeless persons. The count was supervised by Interfaith of Natrona County. A committee of local service providers and the Casper Police Department organized into special teams. Training of participating agencies, identifying key personnel at each agency and having one person to field questions for the entire day added to the accuracy of the count. Dozens of motels and hotels frequented by homeless persons were visited. Shelter providers conducted a count of residents. Some teams went to places such as the library and locations along the river where homeless persons often camp. The breakdown of the count is as follows: 517 homeless persons were counted; 213 were sheltered in the homeless shelters. Thirty-three persons counted were unsheltered.

Through the statewide Continuum of Care (CoC), Casper is a part of a regional continuum. The Wyoming CoC is currently undergoing a change in leadership and has been criticized for ongoing disorganization. Steps are being taken to fill the gap in leadership, and the annual CoC Conference in May 2013 will try to address this issue in a realistic and effective way. In Casper, the transitional housing program for families on LifeSteps Campus receives renewal CoC funding.

The United Way of Natrona County, local private foundations, and private donations provide the remainder of funding for nonprofit organizations who offer services for persons/families who are homeless. The United Way of Natrona County raises over \$1 million dollars annually that are disbursed to about 25 member nonprofit organizations during the plan year. The McMurry Foundation, the Tate Foundation, and the Wyoming Community Foundation are key players who provide matching funds for other grant requests. The total amount of private donations is unknown.

Homeless prevention activities are carried out by Interfaith of Natrona County. In the past, Interfaith has been funded with CDBG Entitlement funds; however, due to other community priorities established by City Council, it no longer receives CDBG Entitlement funds. City Council allocates funds to the Community Action Partnership of Natrona County (CAP), the same agency that administers the Emergency Shelter Grant (ESG) and Community Services Block Grant (CSBG) programs. Interfaith is a program funded by both CSBG and ESG funds.

Emergency Shelter Grants (ESG)

The Emergency Shelter Grant is administered on the state level.

COMMUNITY DEVELOPMENT

Casper continues to develop. Building permits are a prime indicator of the growth of a community. In 2012, 197 single family building permits were issued and permits for 14 buildings consisting of 146 multifamily dwelling permits were issued. There were 34 new commercial permits issued, along 3 new school permits, 6 school remodel permits, and 2 hospital remodel permits also issued. There were 213 residential remodel permits issued

and 65 commercial remodel permits issued. The valuation of all permits issued, including fences, signage, demolitions, garages, and residential repairs was \$142,839,886.74. The first three months of this calendar year (2013) permits were issued for a total valuation of \$38,762,381.42.

In the past few years, Casper has taken a more balanced approach to development and its retail districts have been expanded to both its east and western boundaries. The western expansion includes Wal-Mart Superstore, restaurants, car dealerships, retail and financial institutions. A new development just east of the western leg of Wyoming Boulevard houses a wide variety of housing units – from market rate housing to Low Income Housing Tax Credit projects for families and elderly persons. Additional multifamily housing has been constructed just south of the WalMart store. The East side continues to see heavy growth in big box retail, multiple chain restaurants, and hotels. To date, the residential development in the East has been primarily that of high income residents.

The Wyoming Medical Center is in process of expanding (to include a \$24 million addition) to provide for a more efficient delivery of medical services.

Casper College, a two-year junior college, is continuing to expand. They recently completed a new Gateway Building (one stop student services) and a new residence hall, and are still in the process of completing an early childhood learning center, a music building, and a new student union/UW building. Approximately 220,000 square feet of classroom and student services' space is being created as well as 113,000 square feet of residential space for students.

In the near future, the new business incubator program, currently operated by the Casper Area Economic Development Agency, will be transferred over to the University of Wyoming Incubator for operation. This will offer more experience on the part of the University. Currently being built is the Mesa Addition, which will be home to a new movie theater complex and market-rate, single-family homes. A new conference center is still being discussed for downtown Casper. The project would include large facilities to accommodate conventions that are 500-1000 persons in size. The old Coca Cola building (formerly the Source Gas utility site) in the Old Yellowstone District is undergoing some significant improvements. Street amenities were completed to West Yellowstone Highway in the Old Yellowstone District from Spruce to Walnut Streets.

New office buildings, new commercial development, new housing units, and new streets and infrastructure mean growth and development. The interest is not only for new buildings but also to rehabilitate older buildings and repurpose them into economic usefulness. Casper continues to have positive growth.

Antipoverty Strategy

The true measure of a community is how it assists its most impoverished citizens. If such a test were to be taken in Casper, the community would measure high on the scale. The number of people assisted each year by the various social service agencies can measure

the level of the community's commitment to caring. The staffs of these agencies work closely to maximize the use of very scarce resources. Volunteers step forward to fill in gaps and preserve precious funds for services. Whenever possible, persons receiving assistance are encouraged and supported to change their circumstances, obtain job skills and become productive citizens. Achieving self-sufficiency and personal independence is a primary goal of most social service agencies.

The 2010 Census estimated that 7.9% of Casper's population are at or below poverty levels. Poverty guidelines are the Federal Government's statistical poverty thresholds and used by the Census Bureau to estimate the number of persons living in poverty. The guidelines determine financial eligibility for some Federal programs. Through a wide variety of agencies in Casper, assistance takes the form of meeting basic needs such as shelter, food, clothing, personal care items, utility payment assistance, medical needs, transportation, adult day care, home delivered meals, job training, employment recruitment, independent living skills, home health care and personal care, supportive housing, assistive devices for independent living, counseling, case management, childcare, parenting classes, General Education Diploma, tuition assistance, academic and career guidance, auto repair and gasoline.

The City of Casper does not receive enough Community Development Block Grant (CDBG) funds to have a significant impact on the overall quality of life for persons living in poverty. However, Casper will to the extent possible, continue its commitment and leverage its CDBG funding to encourage and facilitate the efforts of agencies assisting citizens in need as well as preventing such needs from occurring whenever possible.

NON-HOMELESS SPECIAL NEEDS HOUSING

Non-homeless Special Needs (91.220 (c) and (e))

A large portion of CDBG funds will be directed towards non-homeless needs. The funds will be directed towards the redevelopment of the Old Yellowstone District. Activities include clearance and demolition to prepare sites in the City Core for redevelopment or interior improvements, matching façade grants to improve the slum and blight of abandoned or very old buildings in the City Core, matching tap fee grants to allow new businesses to have water and sewer lines in dilapidated buildings, and Economic Revitalization Revolving Loans to qualified businesses in order to create jobs.

Housing Opportunities for People with AIDS

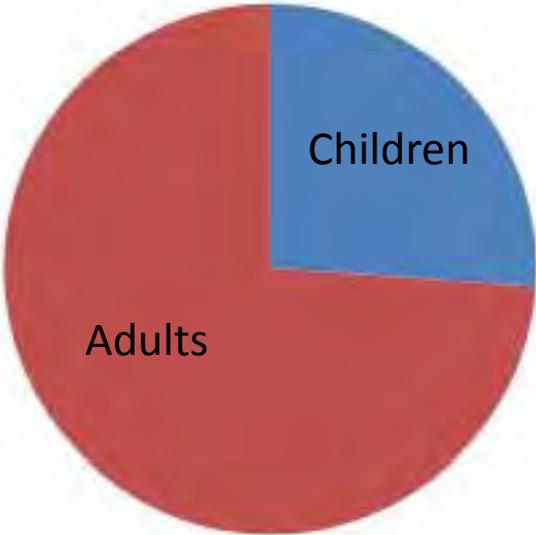
This program is administered by the State of Wyoming.

Joshua's Storehouse

An Integral Part of the Community

Numbers Served

April, 2013

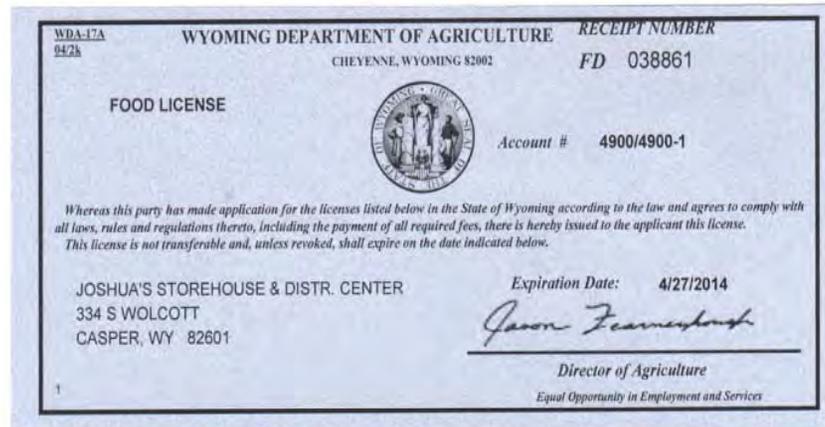


564 Children	Approximately 26.14 %
1,594 Adults	Approximately 73.86 %
2,158 Total	100.00%

Joshua's Clients Deserve Help.

- The vast majority of our clients are between jobs.
- Many others are elderly, or disabled, or both.
- Many are single parents.
- One of our principal objectives is to help children, by helping single-parent & 2-parent families to provide enough food for their children.

Joshua's is licensed by the Wyoming Department of Agriculture.



Joshua's is fully licensed to take in bulk food and divide it into smaller portions. This includes not just dry goods, but also frozen meats. This allows us to better serve the nutritional needs of our Clients in an economical way.

Joshua's is a 501(c)(3) Non-Profit.

(Item #10)
Page 1 of 4

INTERNAL REVENUE SERVICE
DISTRICT DIRECTOR
1100 COMMERCE STREET
DALLAS, TX 75242-0000

DEPARTMENT OF THE TREASURY

Date: AUG 18 1994

Employer Identification Number:
83-0307148
Case Number:
754187033

JOSHUAS STOREHOUSE & DISTRIBUTION
CENTER
~~1111 ALTAZ~~ 334 S. WOLCOTT ST.
CASPER, WY 82601-2828

Contact Person:
SHARI FLOWERS
Contact Telephone Number:
(214) 767-6023
Accounting Period Ending:
December 31
Foundation Status Classification:
509(a)(1)
Advance Ruling Period Begins:
March 8, 1994
Advance Ruling Period Ends:
December 31, 1998
Addendum Applies:
No

Dear Applicant:

Based on information you supplied, and assuming your operations will be as stated in your application for recognition of exemption, we have determined you are exempt from federal income tax under section 501(a) of the Internal Revenue Code as an organization described in section 501(c)(3).

Because you are a newly created organization, we are not now making a final determination of your foundation status under section 509(a) of the Code. However, we have determined that you can reasonably expect to be a publicly supported organization described in sections 509(a)(1) and 170(b)(1)(A)(vi).

Accordingly, during an advance ruling period you will be treated as a publicly supported organization, and not as a private foundation. This advance ruling period begins and ends on the dates shown above.

Within 90 days after the end of your advance ruling period, you must send us the information needed to determine whether you have met the requirements of the applicable support test during the advance ruling period. If you establish that you have been a publicly supported organization, we will classify you as a section 509(a)(1) or 509(a)(2) organization as long as you continue to meet the requirements of the applicable support test. If you do not meet the public support requirements during the advance ruling period, we will classify you as a private foundation for future periods. Also, if we classify you as a private foundation, we will treat you as a private foundation from your beginning date for purposes of section 507(d) and 4940.

Grantors and contributors may rely on our determination that you are not a private foundation until 90 days after the end of your advance ruling period. If you send us the required information within the 90 days, grantors and contributors may continue to rely on the advance determination until we make a final determination of your foundation status.

If we publish a notice in the Internal Revenue Bulletin stating that we

Letter 1045 (DO/CG)

STATE OF WYOMING
Office of the Secretary of State

I, MAX MAXFIELD, SECRETARY OF STATE of the STATE OF WYOMING, do hereby certify that according to the records of this office,

Joshua's Storehouse & Distribution Center

is a
NonProfit Corporation

formed or qualified under the laws of Wyoming did on **March 8, 1994**, comply with all applicable requirements of this office. Its period of duration is Perpetual. This entity has been assigned entity identification number **1994-000289256**.

This entity is in existence and in good standing in this office and has filed all annual reports and paid all annual license taxes to date, or is not yet required to file such annual reports; and has not filed Articles of Dissolution.

I have affixed hereto the Great Seal of the State of Wyoming and duly generated, executed, authenticated, issued, delivered and communicated this official certificate at Cheyenne, Wyoming on this 9th day of January, 2013 at 9:18 PM. This certificate is assigned 013140516.



Max Maxfield
Secretary of State

Notice: A certificate issued electronically from the Wyoming Secretary of State's web site is immediately valid and effective. The validity of a certificate may be established by viewing the Certificate Confirmation screen of the Secretary of State's website <http://wyobiz.wy.gov> and following the instructions displayed under Validate Certificate.



DEPARTMENT OF REVENUE

JIM GERINGER, GOVERNOR
LISA K. BURGESS, INTERIM DIRECTOR

Herschler Building ☐ 2nd Floor West
122 W. 25TH STREET ☐ CHEYENNE, WYOMING 82002-0110
TELEPHONE (307) 777-7961 ☐ E-MAIL: dor@rev.state.wy.us
WEB SITE: http://revenue.state.wy.us

November 9, 1998

Joshua's Storehouse & Distribution Center
~~1700 W. 1st Street #1~~ 334 S. Walcott
Casper, WY 82604

Based on the information you have furnished this office, we find that the Joshua's Storehouse & Distribution Center qualifies for exemption from Wyoming sales/use tax under W.S. 39-15-105 and 39-16-105.

This exemption extends to *all purchases by the organization* in or for the regular charitable functions and activities of the organization. Purchases by the organization of services and tangible personal property used to provide benefits to members or employees, such as housing, clothing, transportation, food, etc., would not be exempt the tax.

As a charitable organization, your occasional sales for fund-raising purposes are also exempt from sales tax under W.S. 39-15-105 and 39-16-105. However, if you make regular or routine sales for fund-raising purposes, such regular sales are not exempt. If such regular sales are made by your organization, you are required to obtain a Wyoming Sales/Use Tax license and file regular tax returns with this department for your sales. If you have any questions about the classification of sales made by your organization, we urge you to submit written evidence of your activities and request a ruling.

This exemption does not extend to personal purchases made by employees or members of the organization, nor to contractors who may be performing for the organization. Purchases made by employees or members of the organization with later reimbursement by the organization are subject to the tax. To obtain your exemption at the time of purchase please provide your vendors with a completed copy of the enclosed Form ETS 101 for the vendor's retention. Your Revenue ID number is 88618. This exemption has been in effect and continuous since 9/26/1994.

Sincerely,

Robert C. Tompkins
Special Services Coordinator
Excise Tax Division

Raymond L. Martin
Special Projects Coordinator
Excise Tax Division

Joshua's is conveniently located in the center of Downtown Casper.



Everyone is an unpaid Volunteer.



Joshua's Provides Free Groceries on a Weekly Basis to the Needy



We are storing so much food that we are bursting at the seams.



Racks are used extensively.



There is barely enough working-room currently because of insufficient storage-space.



We desperately need more space for the walk-in refrigerator & freezer which have already been donated. There's not enough room now.



Our Client Services area is often even more congested than this.



We are already adding a separate exit-door to make client-flow more efficient.



Grant Application

OPTIONAL 1% #14 SALES TAX
FUNDING REQUEST APPLICATION

Due Date: May 8, 2013.
PLEASE PROVIDE ONE ORIGINAL

Date:	<u>05/08/2013</u>
Total Amount of Optional 1% Sales Tax Funds Requested	\$267,000.00
<u>PROJECT DESCRIPTION</u>	
Project Name:	<u>Joshua's Storehouse: Storage Addition Building Project</u>
Name and Address of Sponsoring Organization/Agency:	<u>Joshua's Storehouse, 334 So. Wolcott St., Casper, WY 82601-2828</u>
Name, Mailing Address, Email and Telephone Numbers of Authorized Representative/Contact Person:	Jay Martin, Director of Joshua's Storehouse 334 So. Wolcott Street (307) 265-0242 ph. jlmartin@bresnan.net

WYOMING CONSTITUTION

§ 6. Loan of credit; donations prohibited; works of internal improvement

Neither the state nor any county, city, township, town, school district, or any other political subdivision, shall loan or give its credit or make donations to or in aid of any individual, association or corporation, except for the necessary support of the poor, nor subscribe to or become the owner of the capital stock of any association or corporation, except that funds of public employee retirement systems and the permanent funds of the state of Wyoming may be invested in such stock under conditions the legislature prescribes. The state shall not engage in any work of internal improvement unless authorized by a two-thirds (2/3) vote of the people.

Joshua's Storehouse is a non-profit food-bank whose work is entirely dedicated to caring for the poor and needy.

WYOMING STATE STATUTES

§ 15-1-111. Appropriations for advertisement of resources authorized; exception.

- (a) The governing body of any city or town may make appropriations from the city or town general fund for:
 - (i) Advertising the resources of the city or town;
 - (ii) Furthering its industrial development; or
 - (iii) Encouraging exhibits at fairs, expositions and conventions.
- (b) No appropriation may be for the express aid of any private citizen, firm or corporation.

Joshua's is in compliance with this Statute.

Project Narrative (Please provide a detailed description of the project. Include information on proposed location and status of project development such as formal plans, contracts, funding. Attach additional pages, if needed.)

Joshua's Storehouse plans an expansion of its existing facility at 334 So. Wolcott with a two story 30' by 57' addition located directly behind the existing structure. A second phase with a second story will be executed in the future. Total square footage is 1710 sq. ft. Over 1,200 sq. ft of storage space will be added, with an overhead door for unloading at the rear of the new structure. The current business office will be moved to the rear of the building where two offices and a small conference room/kitchen area will be located. The existing building space will be reorganized with the current office and kitchen area cleared, and existing coolers and freezers relocated more centrally in the building. Another entrance will be placed at the front of the building, and the service line will be re-routed with the public entering at one location, and exiting the other. This will significantly reduce congestion in the foyer.¹ No parking will be lost.

The principal purpose of the addition is to house a refrigerated cooler with a 27' by 8' by 8' footprint, and one freezer with a 12' by 8' by 8' footprint.² The coolers have been donated, and are valued at \$32,500.00. Recently, Joshua's, in an effort to further stretch its donated dollars, began purchasing meat in larger quantities and cutting it into portions. The large storage freezer will allow storage of bulk meat products and achieve a more effective economy of scale. The remaining space in the proposed addition will be divided between shelf space and palleted food products. A unisex handicapped restroom will be added. The current restroom will be returned to storage.

The existing structure has approximately 970 Sq. ft. available for the storage of canned goods and perishables. The new addition will more than double that space. The following figures are provided for reference:

Existing storage	970 Sq. ft.
Storage in existing structure gained by addition	250 Sq. ft.
New Storage in Addition	1,200 Sq. ft.
Total additional storage area	<u>1,450 Sq. ft.</u>
Total storage area	2420 Sq. ft.

¹ See Attachment 1- Drawings of proposed addition and modified facilities.

² See Attachment 2- Photos of donated coolers.

Percentage increase in storage capacity	150%
Current capacity for refrigerated perishables	1475 Cu. ft.
Increase in capacity for refrigerated perishables	<u>2496 Cu. ft.</u>
Total refrigerated capacity	3971 Cu. ft.
Percentage increase in refrigerated capacity	270%

This expansion is desperately needed. Joshua's has been tracking the number of people served and the volume of food distributed since 2011. Those figures are summarized below:

2011	2012	2013 to date
New Individuals Served 1507	New Individuals Served 1032	New Individuals Served 380
Total Served 16,784	Total Served 20,871	Total Served 8,781
total food volume (lbs) 356,403	total food volume (lbs) 456,191	total food volume (lbs) 192,108

The current facility is full most of the time.³ Joshua's population increased 19% between 2011 and 2012, (the first year numbers were kept) and the total volume of food distributed increased 21%. If the activity for the first quarter of 2013 is projected through the end of the year, growth in population served and volume of food served will increase an additional 20% over 2012.

The added expansion will allow a greater economy of scale and should meet the needs of Joshua's growing population for many years.

No contracts have been let for the project at this time, however, cost estimates have been produced by the project architect, Pat Amend of Amend and Associates.⁴ Joshua's has

³ See Power Point photos of current storage space.

⁴ See Attachment Four.

completed the Optional 1% Sales Tax Proposed Project Budget Form.⁵

Joshua's wishes to partner with the city for roughly 22% of the overall funding. The anticipated project cost is \$343,070. Joshua's will expend roughly \$18,000 in cash payments for 1) the soils report, 2) the new ingress/egress to the facility, 3) the cost of moving the coolers into the building and 4) miscellaneous costs for architectural fees, shelving for the new building, building permits, utility connection fees, etc. Joshua's will commit to a \$25,000 cash contribution from funds on hand. A significant portion of the contribution by Joshua's to the project is the donated value of the two coolers, to be considered an equipment acquisition. The coolers have been valued at \$32,500.00. Shelving for the new facility will be contributed in kind by Joshua's and is valued at \$500.00.

The remaining funds for the project will be the one-cent #14 sales tax grant by the City.

Ownership of Project (Wyoming State Statutes prohibit the City from allocating public funds to construct or acquire an asset that is not owned by a public entity. If the proposed project involves the purchase of equipment or construction of a building or facility, which public agency has agreed to own and maintain this building or equipment? If a formal agreement exists between the applicant and a public entity, please provide copies of that agreement to support the application.)

Joshua's is willing to enter into a contractual relationship with the City to provide food supplies, and children's clothing through its "KIDS" program as requested and as available by the Casper Police Department, the Casper Fire Department and other city agencies to meet the needs of families in emergency situations.⁶ The KIDS program is sponsored by hundreds of major companies worldwide. They donate new clothing, educational supplies, and toys to children through their partner agencies, of which Joshua's is one.

⁵ See Attachment Five.

⁶ Joshua's presently provides services to Seton House, American Red Cross, CLIMB, DFS upon request, Interfaith, the Self-Help Center, the Natrona County School District and other local agencies.

Population to be Served by Project (Please identify who will be served by this project. The description should identify the target population to be served, and include an estimate of the numbers, based on a verifiable source to support the estimate.)

Joshua's serves members of the public who need to supplement their food supply with donated food. It includes the elderly who are living on a fixed income. It includes single mothers or fathers with young children and an inadequate food supply for the family. It also includes individuals and families between jobs or underemployed, and those who are confronted by personal misfortune of an emergent nature.

Joshua's "Milk for Minors" program provides non-refrigerated quart milk cartons for minor children. In 2012, the "Milk for Minors" program served 6,430 children the quart cartons once a month. In 2013 to date, 1,690 children have been served four quart cartons per month.⁷ Joshua's does not currently track its service to the elderly, but estimates that 65% of its food is donated to persons 55 or older.

Joshua's provides two basic food services:

- 1. The up-front box which is available once a week to qualifying individuals and families. The up-front box consists of bread, fresh vegetables, milk and bakery goods, ice cream, juice or soda pop.*
- 2. The voucher box is available once a month and contains canned goods, meat, soups, boxed dinners, pasta and sauce for five meals for each member of the family. Turkeys are provided at Thanksgiving.*

Those who receive services from Joshua's must fill out an application. The application identifies those who will receive food donations from each family, and family or individual income. Joshua's often provides relief food supplies for families with temporary needs.

All of the work at Joshua's is done by volunteers. There are no federal funds involved. There are no state funds involved. Joshua's does pay a small stipend to reimburse Jay Martin, the director for gas and other expenses related to his full time service. Last year, Joshua's volunteers contributed 16,356 hrs of service, which at \$10.00 per hour, amounts to over \$163,500.00 contributed to serving the poor and elderly in the Casper area.

In 2012 Joshua's served 5,197 children and 11,587 adults. In 2013 to date, Joshua's has served 2,479 children and 6,302 adults.

⁷ The "Milk for Minors" program has increased its distribution of milk to four quarts per child per month.

Funding Sources (What other sources of funds will be used to support this project. If optional 1% is not available, or not available in the amount requested, will the project still go forward?)

The project will not go forward if one-cent funding is not available

Project Costs

Basic construction costs for addition	\$265,000
Demolition	\$5,000
Present in-progress ingress/egress door installation	\$4,470
Tetra-tech Soils Report	\$3,600
Architect fees (Estimated)	\$5,000
Contingency fund (10%)	\$27,000
Equipment costs (refrigerated coolers and shelving)	\$33,000
TOTAL ESTIMATED CONSTRUCTION COSTS	\$343,070

Joshua's cash contribution

Tetra-Tech Soils Report (cash)	\$3,600
Lee's Glass ingress/egress door installation (cash)	\$4,470
Cost of transporting coolers to new addition (Burbach's Est.)(cash)	\$3,000
Miscellaneous permits and fees (cash)	\$2,000
Architect Fees (Estimated)	\$5,000
Commitment for cash contribution by Joshua's (on hand)	<u>\$25,000</u>
Cash Contribution Sub-total	\$43,070

Joshua's in-kind contributions

Value of Coolers, Grimshaw Investments (in kind donation)	\$32,500
Value of shelving contributed for new addition (in kind)	\$500

Total Value of Joshua's contribution **\$76,070**

Total building cost with 10% contingency	\$343,070
One-cent #14 optional sales tax funds	\$267,000

Proposed Completion (Is it anticipated that this project will be completed in phases? Will it require funding from a future Optional Sales Tax or funding from some other public source? If yes, please describe how this will be accomplished and identify the source and amount.)

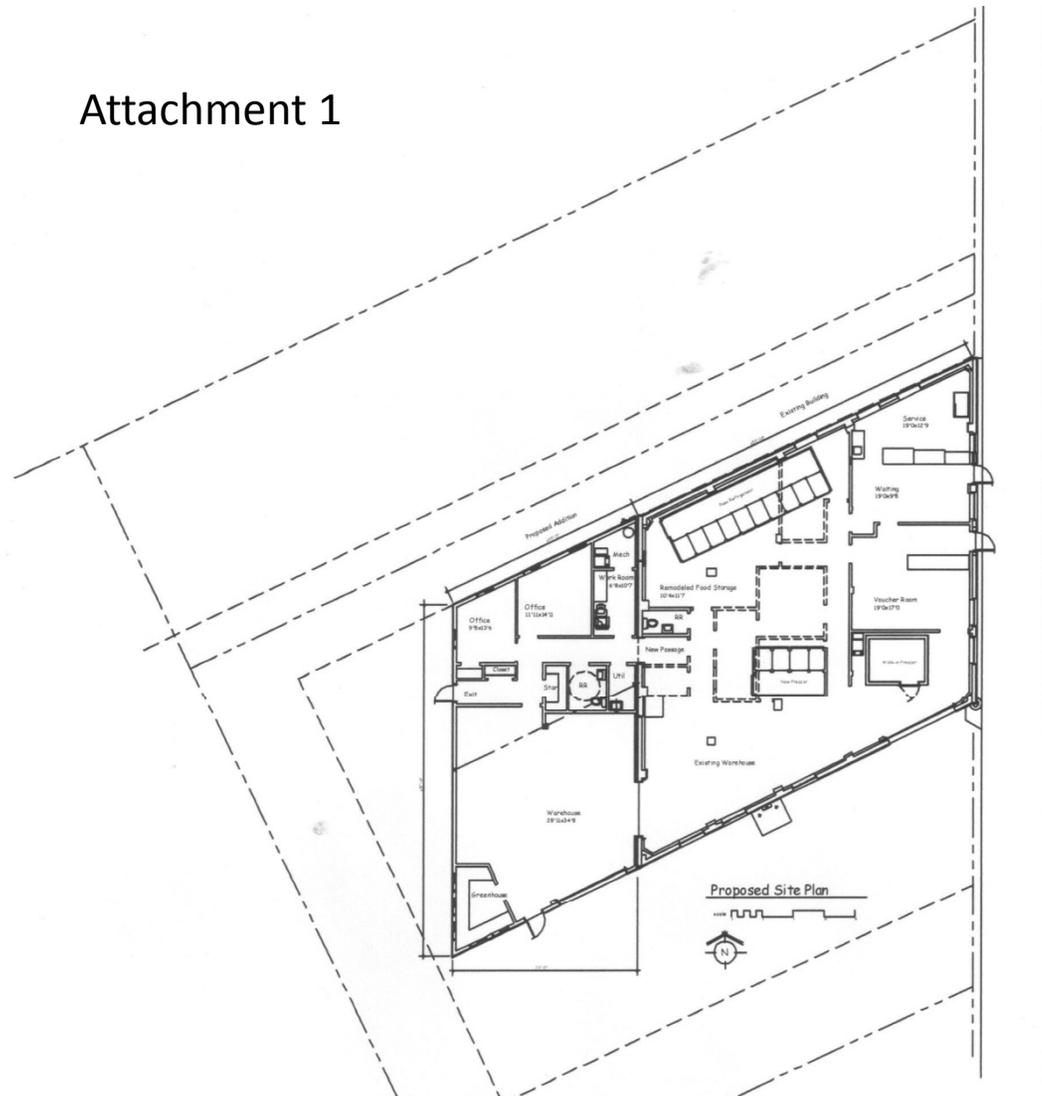
The project will not be conducted in phases. The contract will be let immediately following the funding by optional one-cent #14 Sales Tax funds. It is anticipated that the completion date of the contract will be six months from commencement, with completion by the June of 2014.

Citizen's Survey (Does this proposed project fit within the priorities identified by the citizen survey? Please explain.)

The proposed project will provide a direct benefit to the Human Services of the City. This benefit will be in furtherance of the provision of food for the poor and needy of the community. The project will also directly benefit senior citizen services in that one of the most vulnerable populations in our community are the elderly poor. This group is also perhaps the most deserving of our attention and charity. Joshua's provides a significant contribution to the needed food assistance of the elderly in our community. The proposed Joshua's addition will allow a significant expansion of the refrigerated and frozen foods that could be made available to the poor and the aged of our community. It will allow Joshua's to acquire purchased food in larger quantities at a lower cost. It will allow for the storage of a larger quantity of donated items. It will allow for a more efficient traffic pattern in and out of the building.

Proposed Addition to Joshua's Storehouse

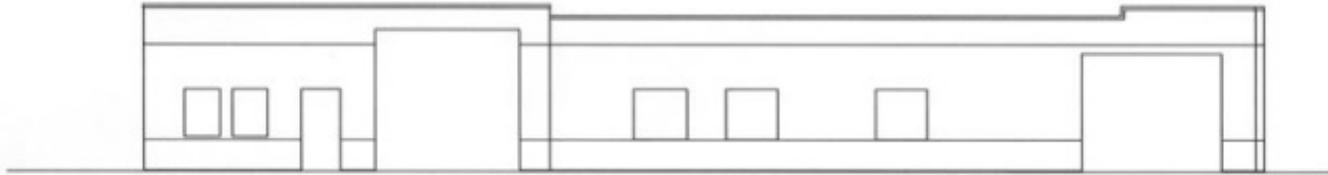
Attachment 1



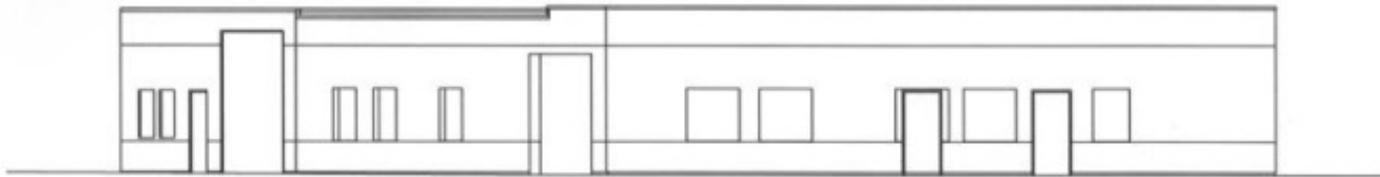
Architect Pat Amend's artwork showing the proposed addition.



Remodeled Floor Plan



Proposed South Elevation



Proposed East Elevation



Proposed Addition to
Joshua's Storehouse & Distribution Center

334 South Walcott Street Gosport, WY



Diagram by Architect Pat Amend.

Exhibit 2





Cost of Proposed Addition

TOTAL ESTIMATED CONSTRUCTION COST	\$310,000
-----------------------------------	-----------

Estimate prepared by Pat Amend of Pat Amend + Associates.

Attachment 5 – City’s Budget Form

OPTIONAL 1% SALES TAX
PROPOSED PROJECT BUDGET FORM



Project Name: Joshua's Storehouse- Storage Addition Building Project

Proposed Project Funding

	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>
Optional 1% Sales Tax	\$ 266,500	\$ 0.00	\$ 0.00	\$ 0.00
Grants:				
Private	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Federal	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
State	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
*Donations (cash)	\$ 43,070	\$ 0.00	\$ 0.00	\$ 0.00
*Donations (in-kind)	\$ 33,000	\$ 0.00	\$ 0.00	\$ 0.00
Project Income	\$ N/A	\$ N/A	\$ N/A	\$ N/A
**Loans	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
TOTAL FUNDING AVAILABLE	<u>\$ 342,570</u>	<u>\$ 0.00</u>	<u>\$ 0.00</u>	<u>\$ 0.00</u>

* Please include donations of cash and/or in-kind materials and services.
** Please provide information on proposed source of loan and payback schedule.

If the project requires new construction or remodeling, then fill out this page.

Estimated Capital Project Costs (Please indicate who developed these cost estimates.)

The cost estimates for the project were developed by the architect over the project, Pat Amend, of Amend and Associates.

The estimated capital project costs are:

Engineering/Architectural Fees (Design/Construction Administration)	\$ 5,000
• Contingency	\$ 0.00
Land Costs	\$ 0.00
Construction Costs (Labor and Materials)	\$ 278,570
• Contingency	\$ 27,000
Furnishings	\$ 0.00
Equipment Acquisition	\$ 32,500
TOTAL	\$ 343,070
Estimated Annual Operating/Maintenance Costs	\$ 0.00

Source of Funding for Operating Costs

- Please provide specific revenue source(s) to support this project

The new Joshua's Storage Addition will be staffed by volunteers. There will be no future operating costs.

Mercer Family Resource Center Capital Campaign “Prevention with Purpose”



535 W. Yellowstone
Casper, WY 82601
265-7366

Mercer FRC Overview



Mercer Family Resource Center (Mercer FRC) provides education, counseling, and referral services that build stronger and healthier youth and families in our community. Mercer FRC promotes healthy lifestyle planning to encourage communication with friends, family and the community. Mercer FRC professional staff have extensive experience and training in counseling, child development, substance abuse and education. Through dedication and hard work, staff work with individuals and families to form lasting connections within Natrona County.

Mercer FRC History

The Mercer Family Resource Center was created by the community, for the community and was originally known as Drug Abuse Resources Inc., in 1971. Parents and professionals alike were concerned about local substance abuse issues. Drug Abuse Resources later became Mercer House, and in 2010 changed its name to the Mercer Family Resource Center (Mercer FRC) when they moved into their new location in the “Old Yellowstone District.”

Mercer FRC Today

Family & Parenting

Programming for parents and youth ages birth through adolescence. Programs focus on family communication, understanding, and critical thinking skills, as well as addressing issues connected to family conflict and stress management.

- Make Parenting A Pleasure (MPP)
- MPP Spanish
- Strengthening Families
- Becoming a Love and Logic Parent

Intervention

Programming for individuals, that have already started experimenting or regularly using alcohol, tobacco, or other drugs. Youth programs provide education about substances, as well as tools to reduce or quit using.

- DUI/Drug and Alcohol Education (adults)
- ASI/Substance Evaluations (adults)
- Insight II (substance use education youth)
- Corrective Thinking
- Something for Nothing
- Anger Management
- Tobacco Education

Community Connections

Programming designed to create connections and collaborations within Natrona County that add support services to youth and parents.

- Child In Need of Supervision (CHINS)
- Case Management
- Community Service
- Short-Term Counseling
- Youth Empowerment Council (YEC): Pro Social Events, Policy Change, Bullying Prevention & Suicide Prevention Awareness Team (SPAT)

Environmental Strategies

Promoting the decrease in youth risk factors, and increase in youth protective factors, at the broad community level.

- Natrona County Prevention Coalition
- Chronic Disease Subcommittee
- Parenting Subcommittee
- Youth Substance Committee
- Policy Change & Media Campaigns
- Community Ed & Outreach



mercercfamilyresourcecenter

Mercer FRC Program Numbers

While 22% of Natrona County Residents are considered low-income, twice the poverty level according to federal guidelines, 86% of Mercer Family Resource Center clients are in the low to moderate category.

By June of 2013 Mercer FRC is projected to provide services for 2,000 unduplicated clients.

Mercer FRC Programs	2010-2011	2011-2012	2012-2013 3/4 Year
Counseling Services	75	44	19
Substance Abuse Evaluations	88	80	99
Family Resource Center	232		
Baby Steps	32	6	
Children In the Middle		21	
Raising a Thinking Child/ Make Parenting A Pleasure	32	39	29
Strengthening Families	39	50	19
Love and Logic	99	103	30
CHINS	74	84	65
Tobacco Education	75	41	35
Anger Management	58	76	47
DUI Education Class	89	88	86
Insight II	91	46	50
Corrective Thinking	26	38	10
Youth Empowerment Council	90	133	89
Something 4 Nothing	48	50	25
SPAT Presentations	884	756	892

Totals	1344	1655	1495
Environmental Strategies 80% of Population		60,360	62,897

(1993
projected)

Program Outcomes

WY Survey & Analysis Center (WYSAC) data for the last ten years, showed positive program outcomes for risk and protective factors including:

- Decreased positive attitude toward drug use
- Decreased future intent to use drugs
- Decreased family conflict
- Decreased rebelliousness
- Decreased poor family management
- Increase in peer/individual social skills
- Increase in opportunities for pro-social involvement

Prevention Cost Effectiveness



For every dollar spent on prevention services the City and State save \$7.41.

SAMSHA Substance Abuse Prevention: Dollar and Cents 2009

“Evidence-based family skills training programmes have been found to be the most effective way to prevent substance use among children and adolescents. These programmes target the whole family and offer skills-building for parents on monitoring and supervision of children's activities, communication and setting age appropriate limits.”

United Nations Office of Drugs and Crime

SPAT (Suicide
Prevention Awareness
Team) Presentation
Testimonial



Dear Youth Empowerment Group,
Thank you very much for coming to our class and teaching us about suicide. Your presentation really helped me to learn the risks and consequences of suicide. I loved the slogan or saying, "Suicide is a permanent fix to a temporary problem." I don't remember the exact words, but it definitely stuck with me. I really love the music videos you guys played, it was really cool but sad to see how many people of different types have committed or tried suicide. Having seen this I've come to realize that "emo" kids are not the only ones to be experimenting with suicide. Once again thanks so much for talking to us about this issue. I now feel more confident talking to people about this issue.

8th Grade Dean Morgan Student

Client Testimonial Statements

- ✓ Everyone was very caring and helpful.
- ✓ I enjoyed it. The instructor was familiar with what she was teaching. The price was good.
- ✓ Learned new coping skills. No one felt alone, kids were talkative and friendly.
- ✓ The counselor was very informative.
- ✓ The people were nice and understanding, acceptable.
- ✓ That I learned a lot about everything, and probably won't do it again.
- ✓ That everyone was open and non-judgmental.
- ✓ Very professional, non-judgmental, supportive, and helpful.
- ✓ I was treated with courtesy and respect.
- ✓ The staff and people in group have their own experiences and share their points.
- ✓ Very informative and helpful with my specific concerns.
- ✓ Nice staff, easy going.
- ✓ The fun learning activities.
- ✓ Helpful
- ✓ The information and way it's given to you.
- ✓ The communication.
- ✓ How we did the program as a group.
- ✓ I could easily understand the info we were taught.
- ✓ Learning more about things that I thought I knew everything about.
- ✓ The learning experience was great.
- ✓ It was very helpful. It was a learning tool. Taught different and better ways to do things.

The Problem

Mercer House had been consistently looking for nearly a decade for a new place to call home. Mercer House not only outgrew the three CY locations, requiring them to rent additional office-space downtown, but the houses were becoming more and more dilapidated with time, as well as a safety concern. Split foundations, water leaks, structural folds, crumbling and falling drywall, as well as electrical and power outages, were just a few of the issues.

The Facility Task Force, which was established through Strategic Planning, explored alternate options for many years and were relieved to finally find a building under one million dollars, with enough square footage to meet program requirements. Rental options were explored prior to purchase however costs were higher than projected mortgage payments, and the former location faced being condemned after inspections. The original one million dollar plan to build new on the CY location was estimated to cost closer to three million at the time of the Yellowstone property purchase.

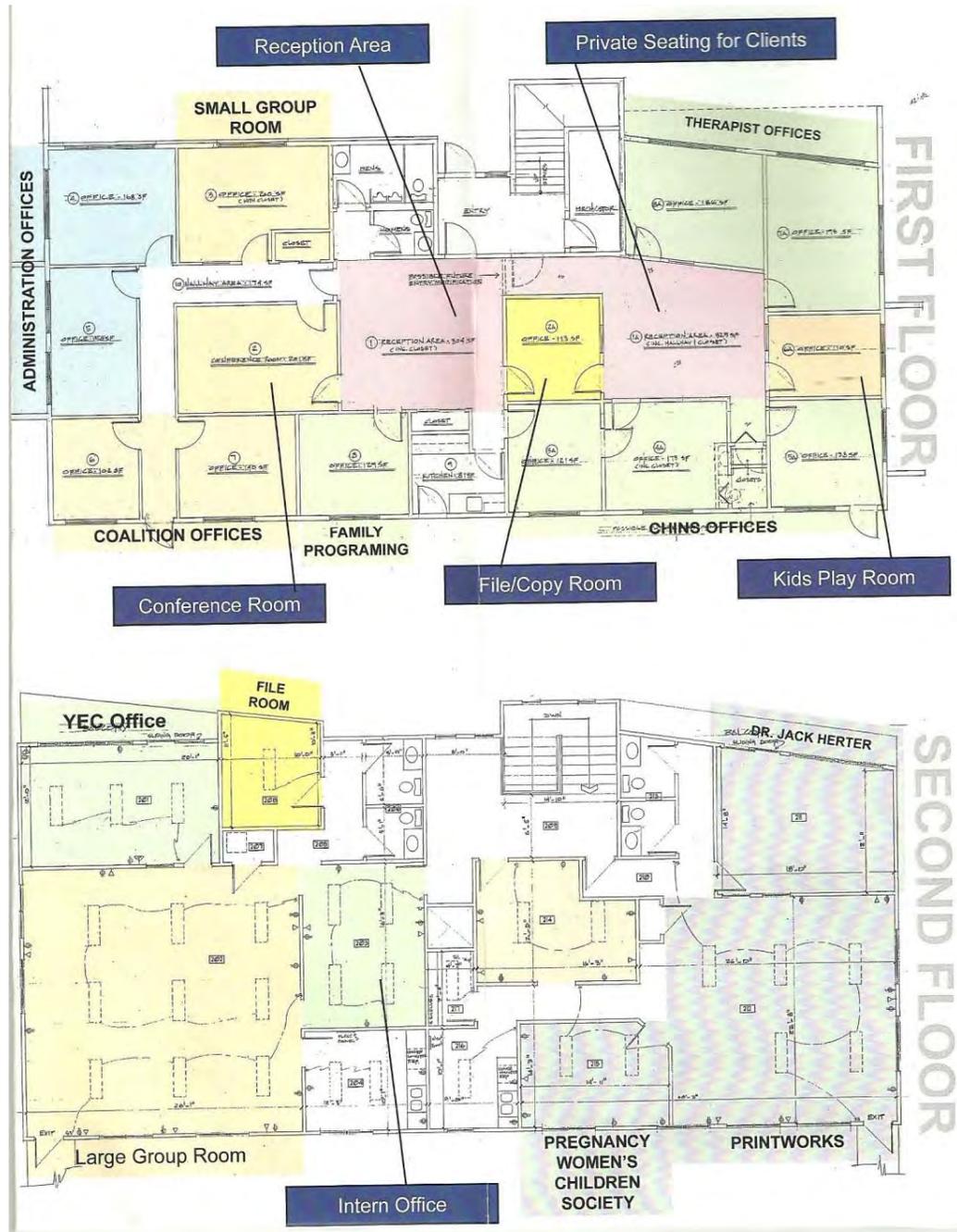
The Solution

The new building located in the “Old Yellowstone District” allows all the Mercer FRC employees to be under one roof, and provides space for groups and families to be adequately served. While the Yellowstone building is 30 years old, it is new to Mercer FRC staff, and quite newer than the former Mercer House built 92 years ago. This agency inhabited the former house for 37 of their 40 + years serving Natrona County and the local community.



Ribbon Cutting Ceremony
2010





Campaign Details

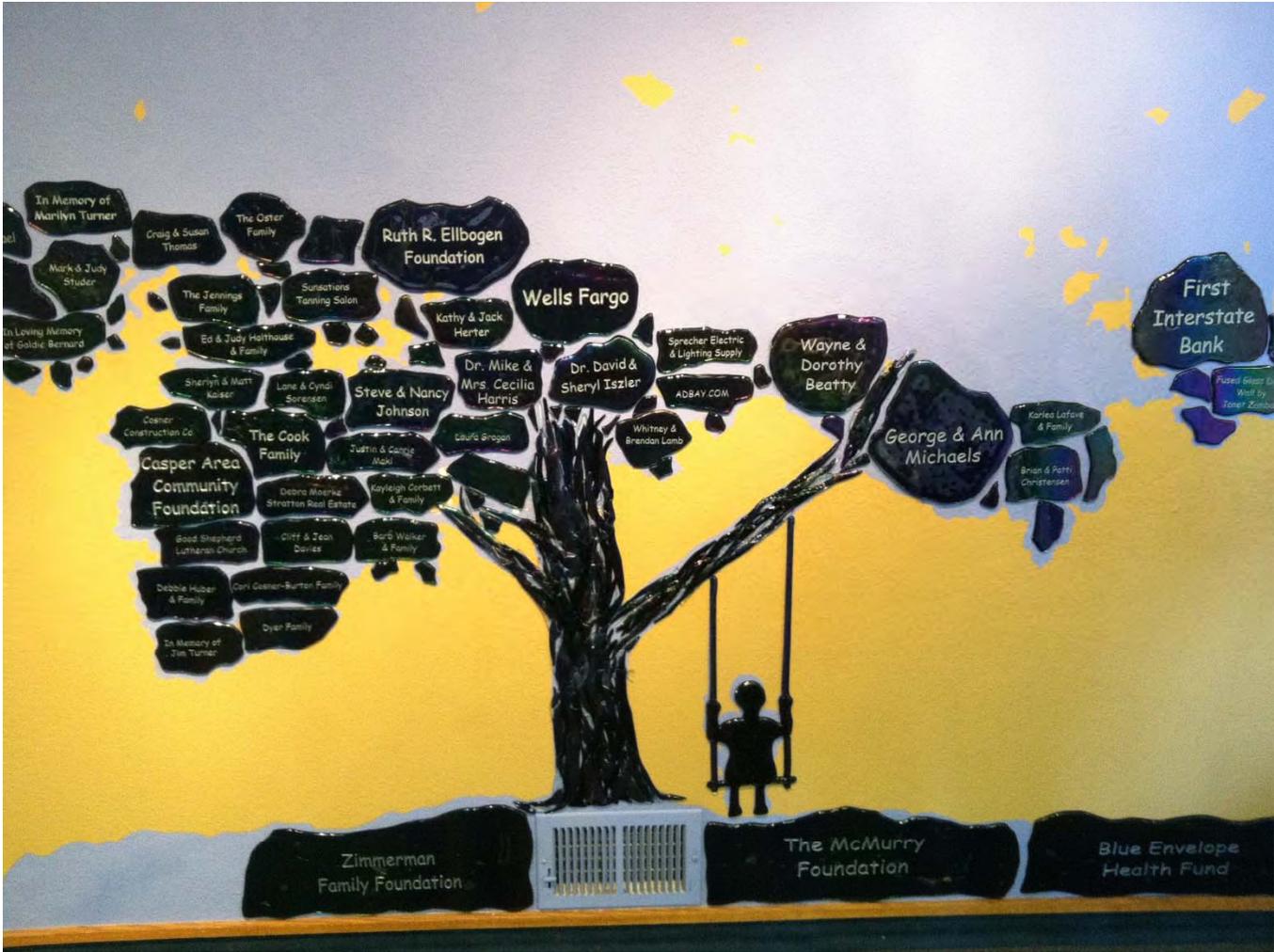
- Mercer Family Resource Center purchased the new building October 28, 2010 for \$750,000 (total cost to be over \$850,000 with interest).
- Mercer FRC has launched a multi-year, \$1.2 million capital campaign—“Prevention with Purpose.” Monies raised will pay off the note on the building as well as sustain the maintenance and operations of the building.
- Mercer FRC sold all three CY locations in 2011 and has been using these funds, in addition to already received donations and grant funds, to pay the mortgage.
- Mercer FRC receives \$15,000 a year in rental income for four units to pay the mortgage (Jack Herter Psychologist, Print Works, Wyoming Children’s Society, Stepping Stones Counseling)
- Currently Mercer FRC has raised 75% of the \$1.2 million dollar goal with donations and pledges.
- Mercer FRC mortgage loan matures 11/2015. The hope is to have the building paid in full by the end of 2014.
- Public Campaign to be kicked off May 21st.
- In thanks, all donations above \$250.00 will receive a glass tile on our “Giving Tree” located in our lobby. (By artist Janet Zambai)

City Of Casper Request

Contract for services for \$100,000 to pay Mercer FRC to serve youth and families in early intervention and education. We are requesting a first mortgage for the unpaid balance, in a plan for services of \$25,000 per year for four years. Mercer FRC is the only agency in Natrona County offering these particular intervention services. The Natrona County Prevention Coalition (a program of Mercer FRC) ensures that there are no duplications of services. Mercer FRC is dedicated to keeping youth in school, out of the juvenile justice system, and helping teens make better decisions.

It is important to us to be fiscally responsible as a non-profit agency in Natrona County, and our staff and board are determined to meet our campaign goal. Extensive efforts and sacrifices have been made through the facilitation of our solid strategic plan, which was developed over seven years ago. We are in the final phase and the culmination of a well thought through capital campaign goal that will allow Mercer continued growth toward self-sustainability. We know that by reaching our capital campaign goal, our mission will be fulfilled for years to come in a community that is worth it.

Giving Tree



Campaign Outcomes

- With the purchase of the new building Mercer FRC was able to serve nearly 2,000 clients with direct services (more than double from past years) and an additional 62,897 through Environmental Strategies (Media Campaigns, Policy Change, and Community Outreach) .
- All clients are able to go to one location for services. In addition, it is easier to connect clients with wrap-around services (i.e. a parent in parenting class can easily be connected with an on-site counselor).
- All staff are in one building making internal communication more efficient, as well as increasing staff moral and professionalism.



Board of
Directors



Mercer
Staff 2013

May 7, 2013

MEMO TO: John C. Patterson, City Manager

FROM: Liz Becher, Community Development Director
Sally Kerpchar, MPO Planner

SUBJECT: Presentation of Findings Regarding the Blackmore Road to Hat Six
Eastside Subarea Planning Study

The Casper City Council requested the MPO to fund a subarea traffic calming study for Blackmore Road between Wyoming Boulevard and East 2nd Street in the summer of 2011. Fehr and Peers was contracted to perform the study in June 2012. In August of 2012, the contract was amended to expand the boundaries of the study north to Highway 20/26 in Evansville. This was done in recognition of the increased traffic generated by the industrial, commercial and residential growth in east Casper and Evansville. In September of 2012, the study area was amended again to expand the southern boundary to include Country Club Road. This change was intended to address the impact of future development that is anticipated in this area. The study area now encompasses the area bound between Highway 20/26 to the north, Wyoming Boulevard to the west, Country Club Road to the south and Hat Six Road to the east.

The scope of the study requested an assessment and recommendations on the following:

1. Plan and cost estimates for improvements to streets and traffic control systems to alleviate vehicle conflicts, volumes and speeds.
2. Public outreach methods including community workshops, stakeholder meetings and updates to the Casper City Council.
3. A list of recommended capital improvements and maintenance programs including cost estimates.

The total cost of this study is \$178,761 with funding from the Federal Highway Administration in the amount of \$161,761, and a local match of \$17,000 from the participating MPO members.

Fehr & Peers, the consulting firm conducting the Blackmore Road to Hat Six Eastside Subarea Planning Study, will be presenting their findings on the project at the May 14, 2013, Council work session.

FINAL REPORT FOR

Blackmore Road Sub Area TRANSPORTATION PLAN



Submitted To:

Casper Area MPO
200 N. David
Casper, WY 82601

May 2013

Prepared By:

FEHR & PEERS

Fehr & Peers
621 17th Street, Suite 2301
Denver, CO 80293
303-296-4300

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Acknowledgements

This project would not have been possible without the commitment and participation of the following people. Thank you!

PROJECT MANAGEMENT TEAM

Sally Kerpchar, MPO Project Manager
Liz Becher, City of Casper Community Development Director

PROJECT CONSULTING TEAM

Ann Bowers, Fehr & Peers Project Manager
Molly Veldkamp, Fehr & Peers
Matt Williams, WLC

MPO POLICY COMMITTEE

Mayor Philip G. Hinds, CHAIR – Town of Evansville
Bill McDowell, VICE CHAIR – Natrona County
Lowell Fleenor – WYDOT
Craig Hedquist – City of Casper Councilman
Josh Brown – Town of Bar Nunn
Mayor Jerry Petty – Proxy for Bar Nunn
Mayor Marrolyce Wilson – Town of Mills
John Patterson – City of Casper
Linda Witko – Proxy for City of Casper
Dale Brown – Proxy for Town of Evansville

Ex Officio

Carol Crump – Citizen Commission
Jeff Purdy – FHWA
Kevin McCoy – WYDOT
Liz Becher – City of Casper

MPO TECHNICAL COMMITTEE

Voting Members

Liz Becher, CHAIR – City of Casper
Bill Johnston, VICE CHAIR – Town of Bar Nunn
Andrew Beamer – City of Casper
Michael D. Haigler – Natrona County Road and Bridge
Mike Coleman – Town of Mills
Chad Aagard – WYDOT
Jack Stone – (alternate with Chad Aagard for WYDOT)
Mayor Philip G. Hinds – Proxy for Evansville
Dale Brown – Town of Evansville

Ex Officio Members

Jeff Purdy – FHWA

Marge Cole – CATC
Kevin McCoy – WYDOT

CITIZENS' TRANSPORTATION ADVISORY COMMISSION

Representing the City of Casper

Steve Loftin
Lou Grunewald
Judith R. Williams
Gloria Monroe, Esq.
Robin Broumley
Kristan Rose
Carol Crump

Representing Natrona County

Steve Emery
Robert Krug

Representing the Town of Bar Nunn

Kristi Desch
Paula Stewart

Representing the Town of Mills

LaWanda Cogdill

Ex Officio Members

Kevin McCoy, WYDOT
Jeff Purdy, FHWA
Sheila Foertsch, Wyoming Trucking Association

CITIZEN ADVISORY COMMITTEE

Representing the City of Casper

Andrew Beamer
Constance Lake
Craig Collins
Kale Prewitt
Kenyne Schlager
Liz Becher
Liz Hepp
Maury Daubin
Paul Bertoglio

Representing local landowners and developers

Mick McMurry
Rich Fairservis
Dan Guerttman
Dan Reiner
Dennis Bay

Dick Bratton
Don Davis
Jason Gutierrez
Jeff Van Horn
John Johnson
Keith Tyler
Bob West
Peg Ingram
Phil Schmidt
Randy Hall
Scott Radden

Representing local residents

Amber Alexander
Andy and Tori McClanahan
Bill Knickerbocker
Deborah Shugart
Dr. and Mrs. Katz
Gene Smith
Greg Rierson
Marie Celine Stegelman
Mark Stegelman
Mike Huston
Mike Johnson
Mike Reid
Roger Domson
Sean Garris

Representing the Casper Area MPO

MPO Policy Committee
MPO Tech Committee
MPO Citizens' Transportation Commission

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Executive Summary

On the east side of Casper, new development, both commercial and residential, is spurring transportation investment in infrastructure and, in turn, more travel in the area. As a result, traffic is finding the connection between Second Street and Wyoming Boulevard via Blackmore Road (on the South side of I-25) as an easier route to the south and west side of town and a way to circumvent the Second Street and Wyoming Boulevard intersection. This appears to be causing increased volumes and speeds on Blackmore Road and the surrounding neighborhoods, including Donegal Street and the area around Centennial Junior High School.

This project grew out of community concern expressed to the City of Casper and the Casper Area Metropolitan Planning Organization (MPO). As such, the community involvement component of the project was critical. Recommendations for the Blackmore Road Sub Area were developed over the course of a nine-month process of active engagement between the Casper Area MPO, City and County Staff, the consultant team, stakeholders, and the public. Including users of Casper's transportation network throughout the evolution of the study ensured that critical information was collected and that recommendations reflect the community's needs and values. The project team engaged the community and stakeholders through the following meetings:

- July 26, 2012 – MPO Committee Kick-Off
- October 6, 2012 – Community Kick-Off
- November 13, 2012 – MPO Committee Update
- November 13, 2012 – Casper City Council Update
- February 4-8, 2013 – MPO Committee Survey
- February 20, 2013 – Community Meeting
- February 21-28, 2013 – Community Survey
- March 26, 2013 – Meetings with Evansville and Casper Staff
- May 14, 2013 – Final Presentations to MPO Committees and Casper City Council

In addition to the robust community and stakeholder outreach, the project team undertook an inventory and review process to understand areas of concern from a technical standpoint. Roadways, transit, bicycle and pedestrian infrastructure are essential components of an efficient street network that accommodates all modes of travel now and in the future. The transportation system in the Blackmore Road Sub Area will play a critical role as development on the east side of Casper continues to grow. The existing condition of infrastructure for each mode was catalogued and described.

An overview of recommendations for each mode from several important planning documents completed in the past few years was also completed. Plans evaluated for this study include:

- Casper MPO Long Range Transportation Plan, 2006
- Transit Development and Coordination Plan Update, 2010
- Casper Walkability Study, 2008
- Elkhorn Valley/Eastside Master Trail Plan, 2010
- Casper Wyoming Safe Routes to School, 2011
- The Ridge at Blackmore Traffic Impact Study, 2009
- Blackmore Marketplace Traffic Impact Study, 2010
- Community Health Center Traffic Impact Study, 2011
- Casper East Belt Loop Corridor Study, 2000

In addition to completing an inventory and understanding of existing conditions for each mode, the project team evaluated key intersections and roadways segments for existing and future capacity constraints. Evaluation was completed to understand intersection capacity and roadway segment capacity.

A traffic calming toolbox has been prepared that identifies several traffic calming tools, their advantages and disadvantages, their effectiveness, and planning level costs. Some of these tools may be applicable within the study area to address the safety and volume issues identified.

In addition, a roadway planning systems document has also been prepared that identifies principles of roadway planning to build networks that “share the burden” of traffic and provide for all modes of travel. These principles can be applied to those areas within the study area where roadway networks have not been planned.

Through the community and MPO Committee feedback, 10 locations were consistently identified as locations of concern. They are:

1. Blackmore/Donegal and Blackmore/Landmark Intersections
2. Blackmore/Wyoming and Blackmore/Viking Ct. Intersections
3. Wyoming/2nd Street Intersection
4. 21st/Waterford Roundabout
5. Highway 20-26/WY 256 Intersection
6. Blackmore Road Corridor
7. Donegal Street Corridor
8. 2nd Street Corridor
9. 21st Street Corridor
10. Country Club Road Corridor

Using all of the information collected from the community input, inventory and review, and needs assessment, a variety of potential solutions were developed for each of these locations. The solutions reflect the community input, MPO Committee feedback, and engineering judgment of the project team. Potential solutions vary from easy to implement with relatively low cost to difficult to implement with high cost. Where applicable, a continued monitoring alternative is also identified for some locations. The next steps for implementation will involve determining funding for the potential solutions and MPO and City of Casper coordination to determine which solutions will be implemented.

Project Introduction

Every day people wake up, ready themselves for the day, and head out to work, shop, play, and do the myriad of other things that make our society run. And while each person goes about their day in a slightly different way, they all have something in common. They use transportation infrastructure to get where they are going. Some people walk, others bike or use transit. However, the vast majority of people in the United States head out the door each day and hop into a car. This is certainly the case for residents of the Casper Area, 93% of whom travel to work in their car, truck, or van according to the 2010 census.

On the east side of Casper, new development, both commercial and residential, is spurring transportation investment in infrastructure and, in turn, more travel in the area. As a result, traffic is finding the connection between Second Street and Wyoming Boulevard via Blackmore Road (on the South side of I-25) as an easier route to the south and west side of town and a way to circumvent the Second Street and Wyoming Boulevard intersection and the 2nd Street corridor. Residents in the area have cited increased volumes and speeds on Blackmore Road and the surrounding neighborhoods, including Donegal Street and the area around Centennial Junior High School.

FIGURE 1: IMAGE FROM THE STUDY AREA



FIGURE 2: STUDY AREA BOUNDARY



Community Involvement

This project grew out of community concern expressed to the City of Casper and the Casper Area MPO. As such, the community involvement component of the project was critical. Recommendations for the Blackmore Road Sub Area were developed over the course of a nine-month process of active engagement between the Casper Area MPO, City and County Staff, the consultant team, stakeholders, and the public. Including users of Casper's transportation network throughout the evolution of the study ensured that critical information was collected and that recommendations reflect the community's needs and values.

Project Website

From the outset of the study, www.blackmoreroad.com was set up to provide regular project updates and to solicit input from website visitors. Comments were received from community members who were unable to attend meetings in person.

MPO COMMITTEE KICK-OFF

The Casper MPO Technical and Policy Committees, the project management team, and consultant team met to launch the study on July 26th 2012. This meeting was an opportunity to finalize the scope, set project goals, and determine measures of success for the project. Using a post-it note brainstorming session with meeting attendees, the following measures of success were generated:

FIGURE 3: PROJECT SUCCESS BRAINSTORM



- Community involvement, ownership and implementation
- Community understanding for complete roadway networks
- Long-term effectiveness of plan and projects
- Traffic signals are not the only solution
- Drainage, views, and bus stops should be considered
- Traffic cannot be redirected solely to the state highway system
- Efficient traffic operations at intersections
- Plan is implemented and it works
- The committees and Community endorse the plan
- Consultant delivers a quality product
- The plan recognizes cohesion with the communities bordering the project area
- Identification of perception vs. reality – i.e. speeding, cut-through, etc.

Maps of the study area were used to facilitate conversations about issues and opportunities within the study area. Comments were focused on cut-through traffic on Blackmore Road, congestion at the intersection of Second Street and Wyoming Boulevard, and heavy truck traffic traversing the study area. Attendees recognized an opportunity to plan for future development.

FIGURE 4: MEETING ATTENDEES DISCUSSING STUDY AREA ISSUES AND OPPORTUNITIES



COMMUNITY KICK-OFF

The project team hosted the first public meeting at the Eastridge Mall, located within the study area on October 6th, 2012. A large format, vinyl aerial map, or “floor aerial,” was used to facilitate dialogue and capture input from the broader community regarding the range of transportation concerns they have as well as potential solutions. Approximately 150 Casper residents and employees stopped by to draw on the aerial, voice their opinions, and learn about the project.

FIGURE 5: FLOOR AERIAL AND CASUAL CONVERSATIONS AT THE COMMUNITY KICK-OFF MEETING



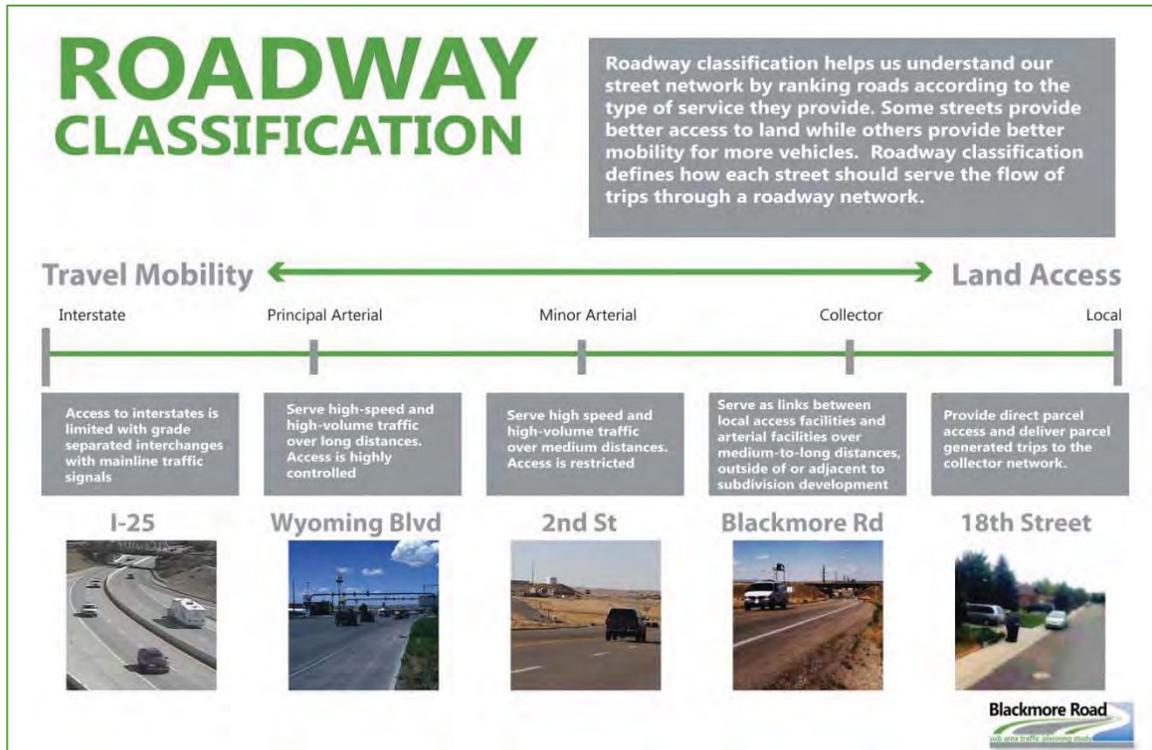
While the public voiced a range of opinions regarding the transportation network, several locations were repeatedly brought up throughout the course of the workshop.

FIGURE 6: IMAGES FROM THE FLOOR AERIAL SHOWING BLACKMORE AND DONEGAL AS WELL AS PROPOSED AND DISPUTED CONNECTIONS AT 12TH AND 21ST STREETS



In addition to the floor aerial, boards were displayed to provide information on ideas and terms related to roadway analysis. The boards included descriptions of Roadway Classification, Safety vs. Speed, Signal Warrants, Level of Service, and New Connections. These boards were used throughout the process to familiarize meeting attendees about transportation planning and engineering concepts that were used to guide decision making during this study.

FIGURE 7: THE FIVE BOARDS USED TO DISCUSS TRANSPORTATION PLANNING AND ENGINEERING CONCEPTS



SAFETY vs. SPEED



School zones Downtown Casper Neighborhood Streets



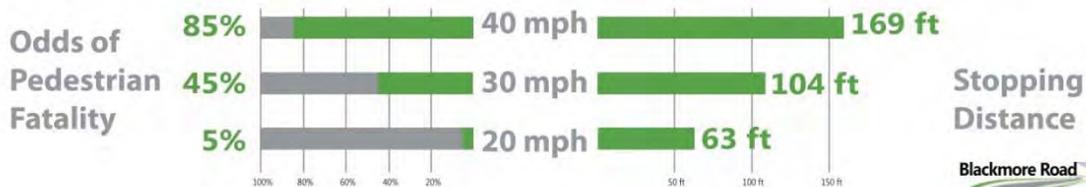
Arterial Roadways I-25

100% Safety

- Promote safety for all modes of transportation
- Willing to accept greater vehicle delay and congestion for increased safety

- Encourage motor vehicle transportation with minimal delay
- Willing to accept fewer safety amenities for all modes

100% Speed



SIGNAL WARRANTS



What is the purpose of traffic signals?

Traffic signals are used to assign vehicular and pedestrian right-of-way and to prevent excessive delay. Traffic signals should be considered when one of the warrants specified by the Manual on Uniform Traffic Control Devices (MUTCD) has been satisfied. The installation of a traffic signal also requires sound engineering judgment, and must balance the following, sometimes conflicting, goals:

- Moving traffic in an orderly fashion
- Minimizing delay to vehicles and pedestrians
- Reducing crash-producing conflicts
- Maximizing capacity for each intersection approach

Why not have signals at every intersection? ➔

Unjustified or improper traffic control signals can result in one or more of the following disadvantages:

- Excessive delay
- Excessive disobedience of the signal
- Increased use of less adequate routes as road users attempt to avoid the traffic control signals
- Significant increases in the frequency of crashes



LEVEL of SERVICE



Definition

Level of service (LOS) is a measure used by transportation engineers to determine the efficiency of transportation infrastructure. One way to think about it is by identifying how long you wait at an intersection before proceeding through.



When is traffic considered congested?

Congestion results when traffic **demand** approaches or exceeds the available **capacity** of the system

Traffic **demands** can change depending on the season of the year, the day of the week, and even the time of day

Capacity can change due to weather, work zones, traffic incidents, or other non-recurring events

Delay per Vehicle (seconds) Signalized Intersections	LOS	Flow Conditions	Delay per Vehicle (seconds) Unsignalized Intersections	Technical Descriptions
<10	A		<10	Free traffic flow No delay
11-20	B		10-15	Stable traffic flow Very short delay
21-35	C		15-25	Stable traffic flow Minimal delay
36-55	D		25-35	Traffic flow becoming unstable Minimal delay
56-80	E		35-50	Unstable traffic flow Significant Delays
>80	F		>50	Heavily congested traffic flow Considerable delays

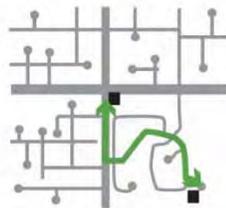


NEW CONNECTIONS

New development means expanding the roadway system. What kind of system makes sense in the Blackmore Road Study Area?



Dendritic System

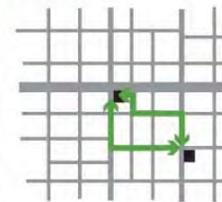


These systems direct vehicles to collector or arterial streets. Local streets are intended to carry fewer through trips.

Where do we want traffic?



Grid System



Grid systems provide a variety of routes between destinations and distribute traffic more evenly throughout the network.

What about cut-through traffic?

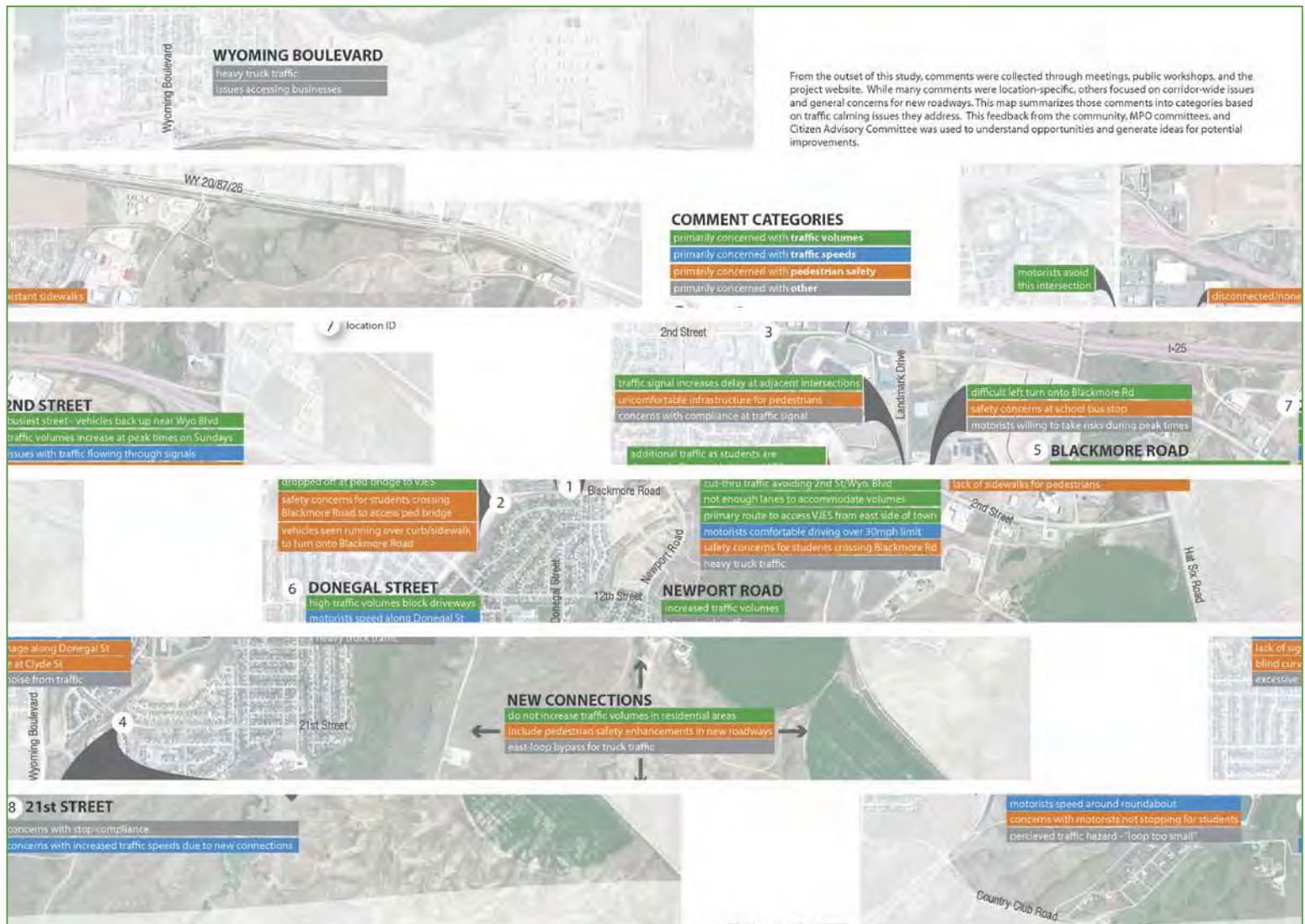
Cut-through driving is using secondary roads or residential side streets instead of the intended main roads. Motorists may take different routes to avoid heavy traffic, long delays at traffic signals or other obstacles.



The kick-off meeting revealed similar as well as diverging opinions. In particular, some attendees wanted to see more capacity and higher posted speeds along Blackmore Road for quicker access to Wyoming Boulevard and Second Street. Others desired implementing traffic calming or control devices and lower speeds to discourage vehicles from using Blackmore Road.

Opinions on new roadway connections were also varied. Some attendees expressed the need for more east-west connections to alleviate traffic on Blackmore Road. Both 12th Street and 21st Street were mentioned as logical roadways to extend further east. Several residents attending the workshop, however, were opposed to building any new roadways that may impact their neighborhood. Figure 8 shows the summarized input and comments from the MPO Committees and the community.

FIGURE 8: PUBLIC INPUT AND COMMENT SUMMARY



COMMITTEE UPDATE

The project team met with the MPO Policy and Technical Committees as well as the Citizen Advisory Committee on November 13th to report on existing conditions in the study area and to review and receive input on the traffic calming toolbox and the principles of roadway network planning.

Keypad polling was used to evaluate meeting attendee preferences about the tools in the traffic calming toolbox. These preferences were used to influence recommendations to address the areas of concern identified by the public and committees. Overall, results indicate that meeting attendees prefer trying non-physical traffic calming measures first. When physical measures are appropriate, raised crosswalks, center island narrowing, roundabouts, median barriers, neckdowns, and chokers are the preferred tools. Meeting attendees had less appetite for traffic circles, chicanes, speed tables, raised intersections, half closures, speed humps, full closures, and diagonal diverters. The following table summarizes the polling results from meeting attendees. Detailed results of the polling can be found in the Appendix A.

FIGURE 9: KEYPAD POLLING PRESENTATION



TABLE 1: MPO COMMITTEE KEYPAD POLLING RESULTS REGARDING TRAFFIC CALMING PREFERENCES

Traffic Calming Tool	% Polling “Yes”	% Polling “No”	% Polling “Maybe”
Non Physical Measures	97%	3%	0%
Raised Crosswalks	69%	19%	13%
Center Island Narrowing	66%	34%	0%
Roundabout	65%	32%	3%
Median Barriers	53%	37%	10%
Neckdowns	53%	41%	6%
Chokers	52%	45%	3%
Traffic Circles	45%	45%	9%
Chicanes	42%	58%	0%
Speed Tables	40%	50%	10%
Raised Intersections	39%	48%	12%
Half Closures	33%	52%	15%
Speed Humps	23%	63%	13%
Full Closures	20%	80%	0%
Diagonal Diverters	16%	74%	10%

COUNCIL UPDATE

On November 13, 2012, the project team presented the Existing Conditions, Traffic Calming Toolbox, and Principles of Roadway Network Planning to the Casper City Council.

COMMITTEE SURVEY

Using the direction the MPO Committees provided through keypad polling, the project team set out to begin generating optional solutions for the locations of concern in the study area. The project team used an online survey to preview the proposed solutions for the study area. The survey was open from February 4-8, 2013, for members of the MPO Policy and Technical Committees. The survey included summary descriptions of each of the locations that stood out based on community comments at meetings, comments from the project website comments and emails, and data collection and analysis. Respondents were asked to add to or comment on each of the location concern descriptions.

Options were created for each of the locations as potential solutions. The options were varied and each included a summary of pros and cons. Survey respondents were asked which options they were comfortable bringing to the community meeting as well as which options they would support for installation. The effort led to several options being removed due to overwhelming negative response from survey respondents. However, the majority of the options were retained for the community meeting. For complete results of the survey, please see Appendix B.

COMMUNITY MEETING

The second, and final, community meeting was held on February 20th at the Evansville Community Center. The project team brought boards describing each of the locations where concerns were raised as well as boards describing the potential solutions for each of the locations.

The meeting started with a presentation and was then opened up for meeting attendees to survey the room. The project team provided boards for each location describing concerns as well as a variety of options to address those concerns for each location.

Meeting attendees were encouraged to provide input about the location concerns as well as about the options. Each attendee was provided access to dots. The dots were placed on options that attendees preferred and wanted to see implemented. Results from the community meeting can be found in Appendix C.

In order to accommodate community members who could not physically attend the community meeting, the project team set up an online survey to solicit feedback about the proposed solutions for the study area. A small handful of responses were gathered from the community, mostly reiterating the feedback that was received at the community meeting. Results of the survey are in Appendix D.

MEETINGS WITH CASPER AND EVANSVILLE

The project management team met with the Town of Evansville and City of Casper staff on March 26 to gather final concerns for areas in Evansville and near Country Club Road. These meetings highlighted several areas that were not community concerns but important to address through this study. Two additional locations were added to the list for consideration.

FINAL PRESENTATION TO MPO COMMITTEES AND CASPER CITY COUNCIL

The project management team made final presentations to the MPO Committees and the Advisory Committee and then to the City Council at a work session on May 14th.

Inventory and Review

In addition to the robust community and stakeholder outreach, the project team undertook an inventory and review process to understand areas of concern from a technical standpoint.

The transportation system in the Blackmore Road Sub Area will play a critical role as development on the east side of Casper continues to grow. Roadways, transit, bicycle and pedestrian infrastructure are essential components of an efficient street network that accommodates all modes of travel now and in the future. The existing condition of infrastructure for each mode is described in this section.

Additionally, this section provides an overview of recommendations for each mode from several important planning documents that have been completed in the past few years. Existing plans, policies, and studies related to this study are included. Plans evaluated for this study include:

- Casper MPO Long Range Transportation Plan, 2006
- Transit Development and Coordination Plan Update, 2010
- Casper Walkability Study, 2008
- Elkhorn Valley/Eastside Master Trail Plan, 2010
- Casper Wyoming Safe Routes to School, 2011
- The Ridge at Blackmore Traffic Impact Study, 2009
- Blackmore Marketplace Traffic Impact Study, 2010
- Community Health Center Traffic Impact Study, 2011
- Casper East Belt Loop Corridor Study, 2000

Previous Plans

The Casper Area has completed a lot of planning efforts across the City that affect the study area. High level policy direction was incorporated into this project and guided the recommendations that were made.



ROADWAYS

Existing conditions

The roadways within the Blackmore Road Sub Area provide access to neighborhoods, schools, commercial areas, and employment centers. The major roadway classifications were obtained from the Casper MPO Long Range Transportation Plan (LRTP) and are summarized below.

Interstates: Interstates make up a system of highways extending between major cities of the United States. Access to interstates is limited with grade separated interchanges.

- I-25 is the primary roadway within the study area serving high-speed and high-volume regional traffic. I-25 connects to U.S. Highways 20/26 and 87 on the north border of the study area.

Principal Arterials: These are roadways that serve high-speed and high-volume traffic over long distances. Access is typically highly controlled with a limited number of intersections, medians with infrequent openings, and no direct parcel access. Adjacent, existing and future, land uses shall be served by other network roadways, service roads and inter-parcel connections. Principal arterials included in the study are US 20/26/87, Wyoming Boulevard, and 2nd Street.

- US 20/26/87 is functionally classified as a principal arterial to the west of the WY 256 intersection. It is a divided rural four-lane facility with at-grade intersections. Direct access to subdivisions and business on the north side of US 20/26/87 has been restricted, and a service road provides that land access.
- Wyoming Boulevard (Wyoming 258) is a four-lane, north-south principal arterial and is the western boundary of the study area. Wyoming Boulevard connects to numerous county and local roads.
- 2nd Street is a five-lane east-west principal arterial between Wyoming Boulevard and Landmark Drive.

Minor Arterials: These are roadways that currently serve high speed and high-volume traffic over medium to long distances. Access is restricted through prescribed distances between intersections, use of medians, and no or limited direct parcel access. Minor arterials within the study include Hat Six Road and 2nd Street.

- Hat Six Road has two lanes in each direction and runs north and south. Hat Six Road is the eastern boundary of the study area. Hat Six is classified as a minor arterial between US 20/26/87 and 2nd Street.
- 2nd Street is a five-lane east-west minor arterial between Landmark Drive and Hat Six Road.

Collectors: These are roadways that serve as links between local access facilities and arterial facilities over medium distances, outside of or adjacent to subdivision developments. Collectors provide more land access than arterial streets and distribute traffic to the local streets. Collectors within the study area are WY 256, Hat Six Road, Newport Street, Landmark Drive, Blackmore Road, E. 12th Street and E. 21st Street.

- WY 256 is a two-lane asphalt highway running north and south within the study area.
- Hat Six Road is classified as a collector street south of 2nd Street.
- Landmark Drive is a three-lane, north-south roadway that extends north from Blackmore Road to E. 2nd Street and provides access to developments within that corridor.
- Blackmore Road is a two-lane roadway extending north and south from 2nd Street, and turning west at Newport Street to the intersection with Wyoming Boulevard. The Blackmore Road extension opened in the summer of 2006. Blackmore Road is classified as a collector street.
- East 12th Street is a three-lane east-west roadway classified as a collector between Wyoming Boulevard and Newport Street.
- East 21st Street is a two-lane east-west roadway classified as a collector between Waterford Street and Newport Street.

Locals: Local roadways provide direct parcel access and deliver parcel generated trips to the collector network. All other roadways in the study area are designated as local roadways. Newport Street and Donegal Street are classified as local streets in Casper's functional classification system.

- Newport Street is a two-lane roadway extending in a southeasterly direction from the intersection with Blackmore Road. It distributes traffic to local neighborhood streets and through a shopping center.
- Donegal Street is a two-lane roadway that primarily runs north-south. Donegal provides access through a residential neighborhood to connect Blackmore Road and East 12th Street.

Average Daily Traffic Volumes

Available traffic volumes for roadways within the study area ranged from years 2005 to 2011. Volumes were calibrated to reflect year 2013 volumes assuming an annual growth rate of three percent. Figure 10 shows average daily traffic volumes and roadway classifications in the vicinity of the study area.

FIGURE 10: ROADWAY CLASSIFICATIONS AND TRAFFIC VOLUMES WITHIN THE BLACKMORE ROAD STUDY AREA



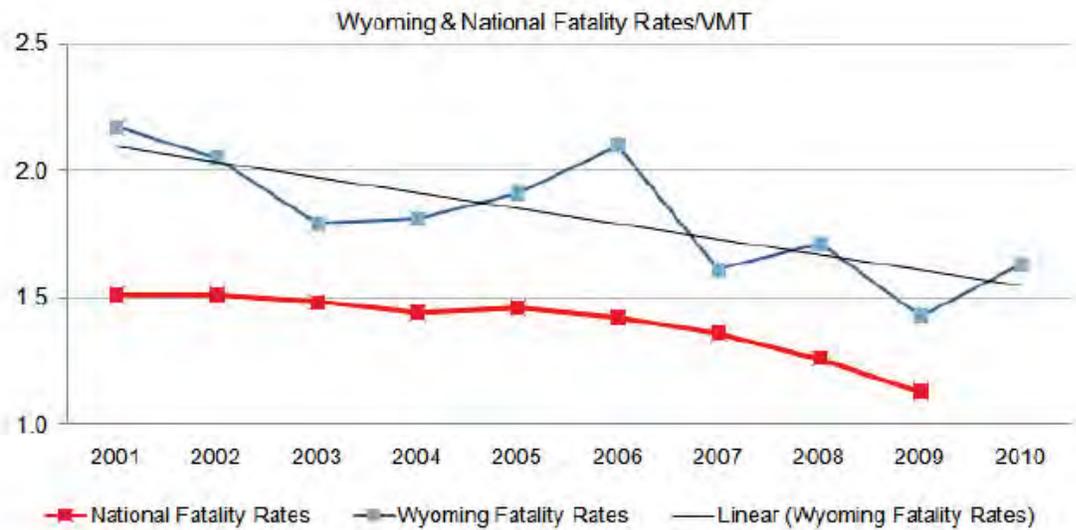
What do ADTs tell us?

Review of the study area ADT shows that roadways are carrying levels of traffic appropriate for their designation. The Interstate and Principal Arterials are carrying the highest volumes while collectors are carrying lower volumes.

Crash History

The Wyoming DOT provides a study of crash history for the entire state of Wyoming as part of the Highway Safety Program. The latest report was published in 2012. The study provides an overview of the crashes throughout the state and breaks down the information for each County. The Wyoming and National Fatality Rates are reported for Vehicle Miles Traveled. Overall, Wyoming notices a higher rate than the National Average. However, the trend in rates has dropped from 2001 to 2010. See Figure 11.

FIGURE 11: WYOMING AND NATIONAL FATALITY RATES, 2000-2010



The following information was reported for Natrona County:

TABLE 2: NATRONA COUNTY CRASH INFORMATION

	Fatal Crashes	Injury Crashes	Property Damage	Total
2008	13	600	2,119	2,732
2009	11	582	1,897	2,490
2010	8	518	1,639	2,165
Total	32	1,700	5,655	7,387
(Average)	(11)	(567)	(1,885)	(2,462)

As indicated in Table 2, and consistent with the statewide average, the average number of crashes in Natrona County has dropped over the past three years. On average, 90% of the fatalities were within an incorporated City/town. 45% of the all traffic crashes occurred on a Friday, Saturday, or Sunday.

There were 40 urban crashes that involved bicyclists and 58 urban crashes that involved pedestrians.

Crash history information for the City of Casper was also obtained for the corridors related to this study. The history details pedestrian and vehicular crashes from 2007 through October of 2012. Table 3 details the crash history for our study locations including:

- Donegal between 12th & Blackmore
- Landmark between 2nd & Blackmore
- Blackmore between 2nd & Wyoming
- Wyoming between I-25 and Blackmore

TABLE 3: STUDY AREA CORRIDOR CRASH INFORMATION

	Donegal	Landmark	Blackmore	Wyoming
2007	2	5	9	99
2008	0	6	18	94
2009	1	5	14	81
2010	0	4	19	70
2011	2	4	16	59
2012*	2	6	12	37
Total	7	34	88	440

*The information reported for 2012 is 10 months, opposed to 12 months

As shown in Table 3, Wyoming Boulevard notices the highest number of crashes followed by Blackmore Road. Most crashes occur at intersections. There has been a steady drop in crashes along Wyoming Boulevard over the past 5 years. This drop is most likely attributed to the protected left turn improvements at the intersection of 2nd and Wyoming. Blackmore Road noticed a significant increase in crashes from 2007 to 2008 and the crashes appear to remain steady over the past 4 years. Donegal and Landmark have noticed steady crash history in the past 5 years.

Of the reported crashes, 0 were fatalities.

Table 4 shows the comparative crash information of the corridor and the county, based upon available data.

TABLE 4: STUDY AREA CRASH INFORMATION AS A PERCENT OF NATRONA COUNTY CRASHES

	Countywide Total	% crashes on Donegal	% crashes on Landmark	% crashes on Blackmore	% crashes on Wyoming
2008	2,732	0	0.2	0.7	3
2009	2,490	0	0.2	0.6	3
2010	2,165	0	0.2	0.9	3

As shown in the table the crashes associated with the corridors in this study consist of 0 to 3% of the total crashes in Natrona County.

The 2011 traffic study for the Baker Hughes Facility at Yellowstone Highway (Hwy 20/26/287)/Cole Creek (WY 256) found that there have been 12 crashes in the past five years. Of those 12 accidents, eight were angle crashes with failure to yield the right of way noted as the driver action. There were no fatalities, but 11 people were injured in six crashes. While the number of crashes is not high, the injury rate is. That rate would be consistent with the number of angle accidents and the high speed on US 20/26/87.

Based upon the reported information, the percentage of crashes at the study intersections and along the corridors compared to the countywide averages are low. Any changes or improvements made to these corridors will most likely not influence the crash rates and the tangible safety of the roadways and the intersections. As long as changes are implemented appropriately, improvements will most likely enhance other aspects of the corridor and/or intersection and may have benefits that provide more comfort to drivers and pedestrians alike.

Recommendations from Existing Plans

Several plans make recommendations for roadway improvements within the project study area, including the Long Range Transportation Plan, the Blackmore Marketplace Traffic Impact Study, the Community Health Center Traffic Study, and the East Loop Bypass Preliminary Study.

Long Range Transportation Plan, 2006

The Casper Area Metropolitan Planning Organization completed the *Connecting Casper; 2030 Long Range Transportation Plan* (LRTP) in June 2007. This document evaluates all transportation modes within the Casper Area and provides a recommended plan that will guide the future of transportation in Casper for years to come. The 2030 LRTP Goals and Policies were developed by the Technical Committee in January 2006. The goals of the LRTP are the following:

- Develop a safe and efficient transportation system that provides for the movement of persons and goods within and through the Casper Metropolitan Area
- Develop plans that meet present and future travel demands and maintain a cost-effective transportation system in the Casper Metropolitan Area
- Coordinate long range planning recommendations with efforts to promote alternative travel modes (ride-sharing, walking, public transit, rail, bicycles, air, etc.)
- Develop a transportation system which encourages coordination with land use planning
- Support the development of transportation systems by all levels of the government and the private sector to promote community and regional economic growth and diversification

L RTP Priority Roadway Improvements

The L RTP noted several “Priority Roadway Improvements” within the study area. These improvements were prioritized based on their potential to enhance safety and reduce congestion. Improvements within the study area address both existing and future year deficiencies.

Hat Six Road: According to the L RTP, “new development in the eastern portion of the Casper Metropolitan Planning Area (MPA) puts pressure on existing roadways- Plans are to widen Hat Six Road to five-lanes from I-25 south to a potential connection with an East Belt Loop improvement. This project provides an alternative access point to the eastern portion of the Casper MPA and could help reduce future year traffic levels.”

Wyoming Boulevard at 2nd Street: The L RTP noted a high number of crashes along Wyoming Boulevard, between I-25 and 2nd Street, and at the intersection of Wyoming Boulevard and 2nd Street. WYDOT completed intersection improvements in 2005 to address safety concerns and accommodate future traffic with additional capacity.

East Belt Loop: According to the L RTP, additional arterial connections are needed to accommodate new development in the east and southeast portion of the Casper MPA. This project is expected to relieve traffic levels along Wyoming Boulevard and could potentially serve as a truck route.

Casper East Belt Loop Corridor Study, 2000

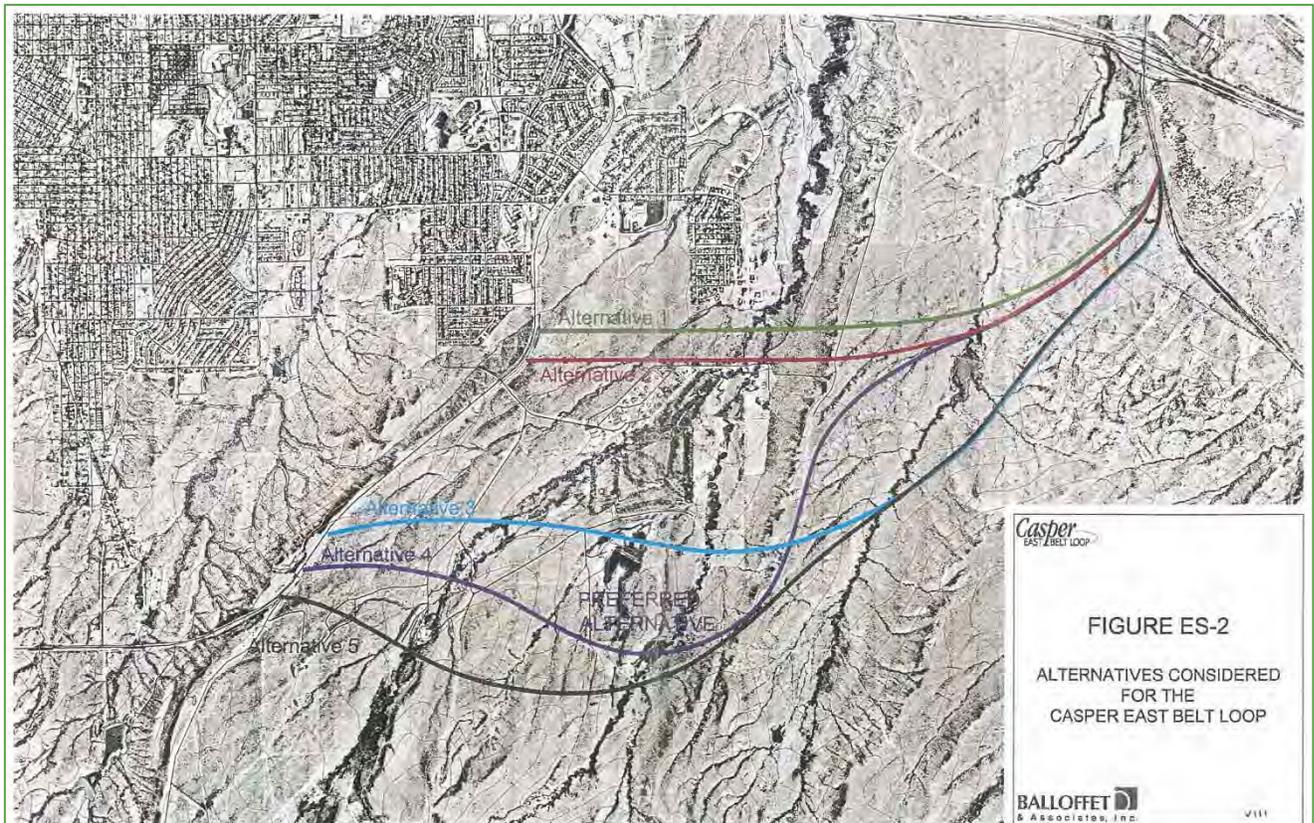
The East Belt Loop was identified in the L RTP as a long-term need to alleviate traffic congestion on north Wyoming Boulevard. The Casper East Belt Loop Corridor Study evaluated the need for the East Belt Loop based on current (2000) and projected traffic conditions on Wyoming Boulevard. The study confirmed the project will be necessary between 2020 and 2050, as driven by growth and development. The study developed a conceptual transportation system management (TSM) plan to address existing and near-term traffic problems. Key components include:

- Addition of a continuous third lane for acceleration and deceleration of southbound traffic on Wyoming Boulevard from I-25 to 2nd Street.
- Intersection improvements at Wyoming and 2nd Street.
- Modifications to Wyoming Boulevard intersections with Legion Lane and access points at commercial businesses on Wyoming Boulevard.
- Addition of a center median from I-25 to 2nd Street. WYDOT staff has suggested that this be a painted median initially.
- Access consolidations and parcel connection modifications for uses along Wyoming Boulevard between Legion Lane and 2nd Street.

According to the study’s twenty-year traffic forecasts, the above TSM improvements would provide adequate levels of service on Wyoming Boulevard between I-25 and 2nd Street for the year 2020. However, projected 2050 traffic volumes indicate unacceptable levels of service along Wyoming Boulevard between I-25 and 2nd Street, even with the recommended TSM improvements. The study found that construction of the East Belt Loop would reduce traffic by about 10 percent along Wyoming Boulevard and provide a significant benefit to east Casper.

Five alignments were identified in the study corridor and evaluated based on cost, environmental and social impacts, and performance as a bypass. Figure 12 shows the five alternatives. The preferred alternative is shown in purple. According to the study, the facility should be designed with few access points to provide optimum redistribution to traffic.

FIGURE 12: ALTERNATIVES CONSIDERED FOR THE EAST BELT LOOP



The Ridge at Blackmore Traffic Impact Study, 2009

The Ridge at Blackmore is a multi-family development located north of Blackmore Road, between Donegal Street and Newport Street. The Traffic Impact Study for the Ridge at Blackmore showed minimal impacts on traffic operations from the development. The following recommendations were suggested to accommodate the projected traffic volumes:

- Both new driveways should be stop controlled through the installation of a stop sign on the southbound approach.
- On-street parking should be restricted near the access driveways to provide adequate site distance triangles for drivers exiting the site to see approaching bicycles.
- The signal at Blackmore Road/Wyoming Boulevard should be evaluated to adjust timing and accomplish better levels of service, particularly for the westbound approach.

Blackmore Marketplace Traffic Impact Study, 2010

Blackmore Marketplace is a development comprised of primarily retail/shopping land uses located south of East 2nd Street at Blackmore Road. The traffic study analyzed access points along 2nd Street, Blackmore Road, and the extension of Newport Street. The study identified seven necessary improvements due to the increase in the traffic related to the project build out. The seven improvements are:

1. Traffic signal at East 2nd Street and Newport Street when warranted.
2. Westbound dual left turn lanes on East 2nd Street at Newport Street when warranted.
3. Westbound left turn lanes on East 2nd Street at Blackmore Road.
4. Eastbound right turn lane on East 2nd Street at Newport Street.
5. Traffic signal at Blackmore Road and Newport Street when warranted.
6. Traffic signal at Blackmore Road and Landmark Drive when warranted.
7. Dual Westbound left turn lanes on Blackmore Road at Wyoming Boulevard.

Currently, there is a traffic signal at the intersection of Blackmore Road and Landmark Drive. A traffic signal has also been installed at the intersection of Blackmore Road and Newport Street. Improvements to the intersection of Wyoming Boulevard and Blackmore Road have also been made.

Community Health Center Traffic Impact Study, 2011

The Community Health Center is located north of Blackmore Road and east of Donegal Street. The Traffic Impact Study for the Community Health Center examined the effects of the development on traffic in the vicinity. The study intersections along Blackmore Road were expected to experience added delay due to the proposed Community Health Center development, especially the Blackmore/Landmark intersection and the Blackmore/Newport intersection. These intersections should be monitored and if signal warrants are met, signals should be installed.

Evansville Business Park Traffic Impact Study, 2011

The proposed Evansville Business Park is located between US Highway 26 and East Lathrop Road, in the Town of Evansville, WY. The March 2011 Traffic Impact Study for the Business Park evaluated Lathrop Road/Craig Thomas Boulevard and US 26/Craig Thomas Boulevard. The study found that the traffic impacts from the Evansville Business Park to the existing Lathrop Road and US 26 were minor. The Level of Service for both intersections is A in all directions, representing a free-flow condition at both intersections. No improvements to the existing intersections were recommended.

Baker Hughes Joint Facility Traffic Impact Study, 2011

The Baker Hughes Joint Facility is located on Lot 14 in the Cole Creek Industrial Park in Evansville, WY. The July 2011 Traffic Impact Study for the Facility evaluated WY 256/Santa Fe Circle and WY 253/WY 256/US 20-26-87 for possible operational problems. While the delay at both intersections increased slightly, the overall operation was not degraded significantly. The need for left turn lanes at WY 256 and Santa Fe Circle fell into a gray area, but was not recommended in the study if the speed limit on WY 256 reduced to 40 MPH or 45 MPH through the intersection.



TRANSIT

Existing Conditions

The Casper Area is currently served by six transit routes, offering service to Casper, Mills, and Evansville. In 2010, the Transit Development and Coordination Plan Update reported that transit boardings have been steadily rising since service was introduced. Ridership increased by 39.4% between FY 2006/07 and 2007/08, indicating that transit is an increasingly important part of Casper’s transportation system. Figure 13 shows the two routes serving the study area – Routes #1 and #6. Both routes provide service to the Eastridge Mall, a destination and employment center located at 2nd Street and Wyoming Boulevard. Route #1 was the busiest route in 2008/09. Route #6 (Orange Route) was implemented as a new fixed-route service to Evansville in 2007 to serve a greater portion of the Casper MPA population. Below, Table 5 shows service days and frequency for both routes and Table 6 compares ridership for both routes.

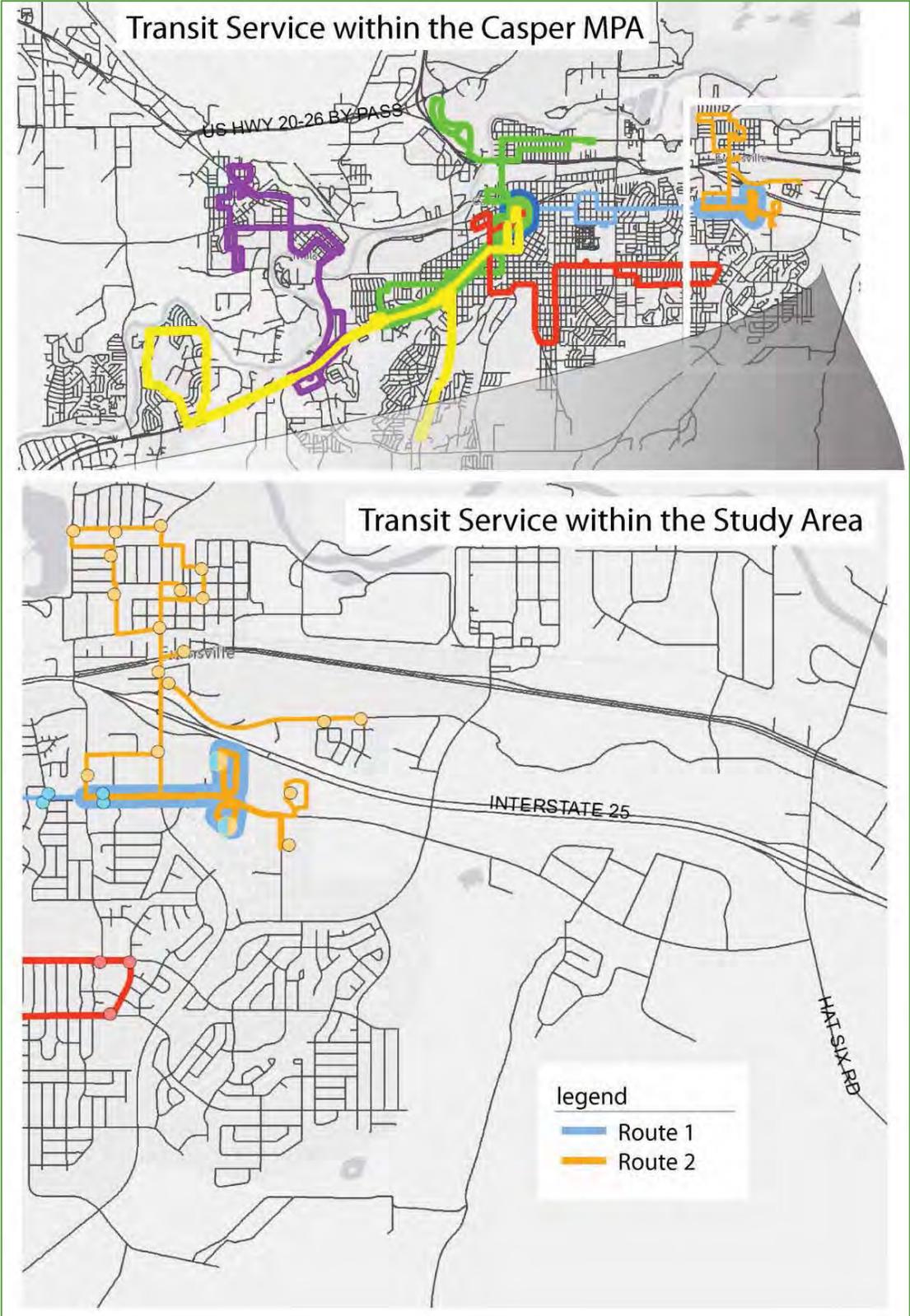
TABLE 5: BUS SERVICE HOURS AND FREQUENCY

Route	Service Days/Hours	Service Frequency
Route 1	Weekdays, 6:30 am - 6:30 pm	Hourly (30 minutes after the hour)
Route 6	Weekdays, 6:45 am - 6:45 pm	Hourly (50 minutes after the hour)

TABLE 6: AVERAGE MONTHLY BOARDINGS, FY 2008/09

Route	Average Monthly Boardings	Percent of Total Monthly Boardings
Route 1	3,538	35%
Route 6	475	5%

FIGURE 13: TRANSIT SERVICE



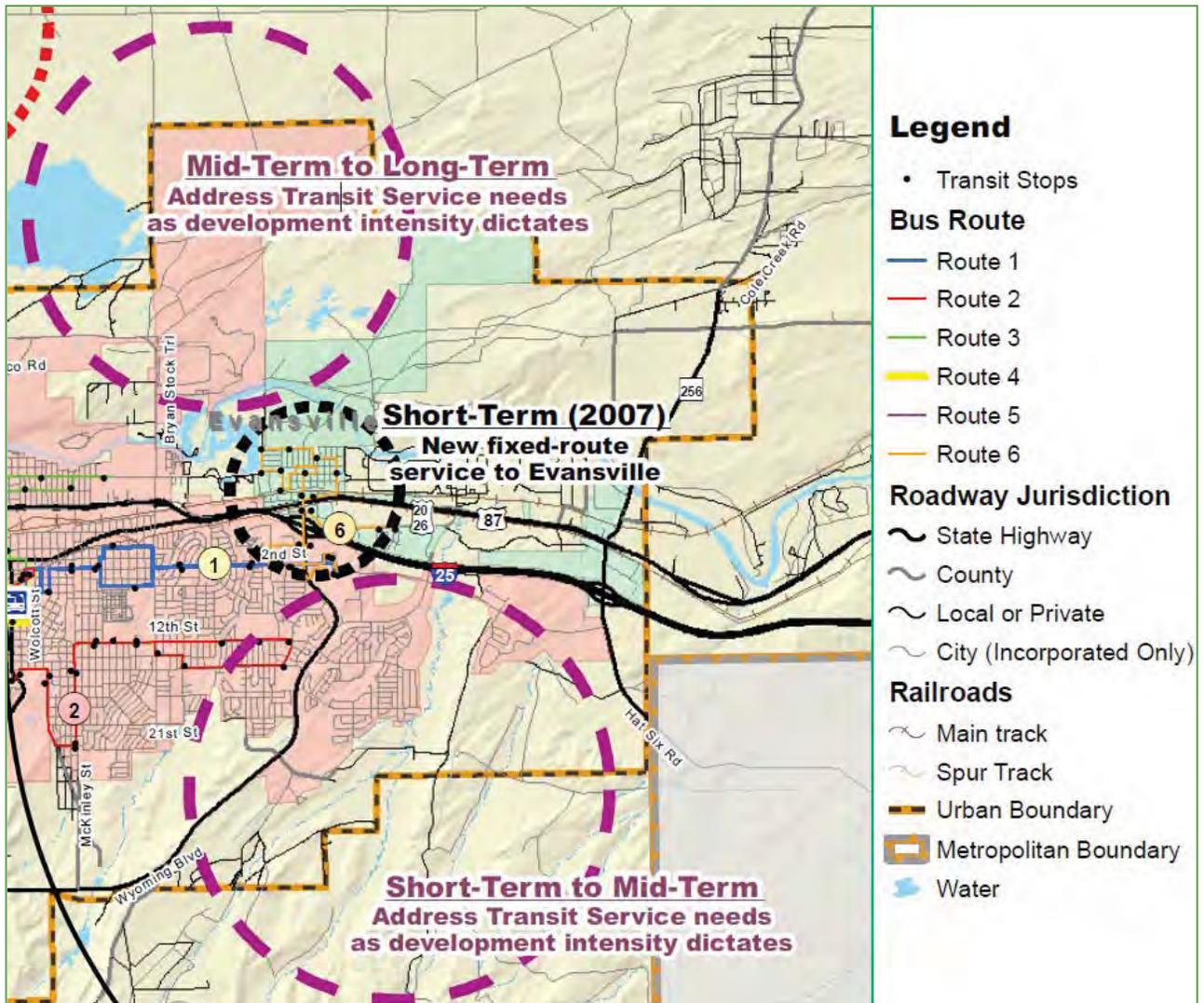
Recommendations from Existing Plans

Several plans make recommendations for transit improvements within the project study area, including the Long Range Transportation Plan and the Transit Development and Coordination Plan Update. They are summarized below.

L RTP Short-Term to Mid-Term Transit Service

The L RTP identified the eastern portion of MPA as an area for short to mid-term transit service needs. Fixed-route service does currently extend to the Mall but additional extensions of the service are needed to accommodate the residential and commercial development anticipated within the study area. Figure 14 below shows transit priorities from the L RTP. The fixed-route service to Evansville shown below as a short-term priority has been implemented.

FIGURE 14: 2007 L RTP CONCEPTUAL TRANSIT PRIORITIES



Transit Development and Coordination Plan Update, March 2010

The Casper Area Metropolitan Planning Organization completed the Transit Development and Coordination Plan (TDCP) Update in March 2010 to evaluate existing transit services in the Casper Area and provide recommendations to improve the system. The update found several unmet transportation needs related to the study area.

Expansion of service to the east and southwest: The need for expansion of fixed-route service east of the Eastridge Mall along East 2nd Street which was identified in the LRTP, was recommended again in the TDCP update. As development continues within the study area, transit will continue to be a desired service. Figure 15, on the following page, shows the TDCP recommendation for new Flex-Route service along 2nd Street. Riders would need to call to request a ride along the route extending from Wal-Mart to the Mt. View Regional Hospital.

Service beyond Casper: The TDCP Update recommended transit should provide more inter-city and regional service to communities outside Casper and service for people to come into Casper from adjoining or nearby communities. Medical services and shopping are present within the study area and are important destinations for communities beyond Casper.

Need to promote and implement multimodal transportation: The LRTP states, “non-motorized facilities are important components of an overall regional transportation system...safe, convenient bicycle and pedestrian facilities also support the use of public transportation.” The TDCP Update reinforced the importance of pedestrian access to The Bus to make transit safe and accessible for people in the Casper area who cannot or choose not to use automobiles. If transit service is extended further east into the study area, bicycle and pedestrian connections need to be implemented.

FIGURE 15: TDCP CONCEPTUAL DESIGN FOR NEW FLEX-ROUTE SERVICE ON 2ND STREET



What does this mean?

Transit service has been expanded as new development has taken place in the study area. As additional development takes place and travel patterns are observed to change, transit routes and investment in the study area can be reviewed and updated.



PEDESTRIAN AND BICYCLE INFRASTRUCTURE

Existing Conditions

Investment in non-motorized infrastructure has already been made within the study area. There is an existing on-street bike lane on Blackmore Road and multi-use trails have been identified. Many residential areas have sidewalks on both sides of the streets. Sidewalk segments have also been installed as new development has occurred. However, because development has occurred at different stages, many sidewalks are discontinuous in commercial areas.

Recommendations from Existing Plans

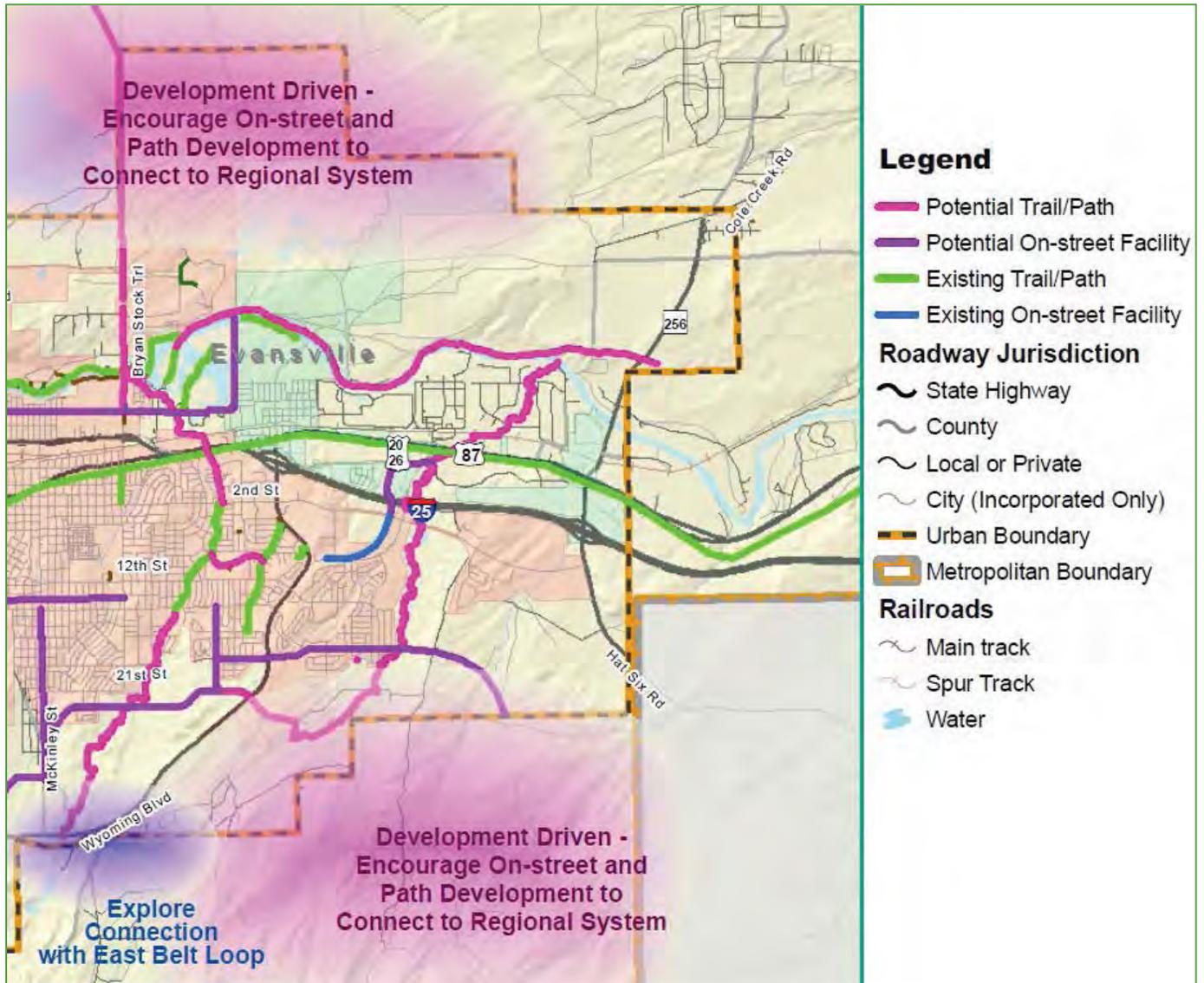
Several plans make recommendations for pedestrian and bicycle infrastructure improvements within the project study area, including the Long Range Transportation Plan, the Casper Walkability Study, the Elkhorn Valley/Eastside Master Trail Plan, and the Casper Wyoming Safe Routes to School.

Long Range Transportation Plan, 2006

A primary goal of the Casper Long Range Transportation Plan is to coordinate long range planning recommendations with efforts to promote active travel modes. According to the LRTP, improving connections to existing trails and paths is a top priority of the Casper MPO. The LRTP also recommends expanding the non-motorized system in developing areas and reviewing proposed site plans to ensure bicycles and pedestrians are accommodated.

The new development that is occurring within the study area provides an opportunity to implement pedestrian and bicycle improvements that complete the roadway system. Figure 16 shows priorities from the LRTP. Short-term priorities include improving connections to existing trails with on-street facilities, such as Blackmore Road. Mid-term actions focus on new development as opportunities to continue to build and expand the regional non-motorized system and prioritizing drainage ways to provide additional trails and pathways.

FIGURE 16: 2007 LRTP POTENTIAL 2030 NON-MOTORIZED SYSTEMS



Casper Walkability Study, January 2008

The Casper Walkability Study was completed in 2008 to determine the highest demand/priority areas to improve pedestrian facilities and provide additional facilities in the Casper area. Pedestrian demand areas were determined by comparing parks, transit routes, schools, shopping areas and hotel clusters, and employment areas within the Casper area. Safe street crossings were identified as the highest concern overall in the Casper Urban Area. The south Eastridge Mall area, which is located within the Blackmore Road study area, was identified as the 4th highest demand/priority area. Street crossings and visual interest and amenities scored the lowest within the area. Evaluation of the south Eastridge Mall area included the following:

- Directness: Layout of streets in the area results in fairly direct routes for various destinations (medium)
- Continuity: Streets in this area all have continuous sidewalks along both sides of the road (high)
- Street Crossings: Local residential streets easy to cross, but Southeast Wyoming Blvd presents major obstacle. Pedestrian crossing at Second Street, however, requires pedestrians to cross several lanes of traffic without any refuge in the middle. A pedestrian overpass crosses Wyoming Blvd, but pedestrians have been observed crossing at other nearby locations instead. (low)
- Visual Interest and Amenities: Little visual interest and limited amenities (low)
- Safety: Sight lines good within residential area, crossing major streets poses risk to pedestrians (medium)
- Presence of Sidewalks: General presence of ramps; single ramp at most intersections (medium)

Recommendations from the Casper Walkability Study include the following:

Development of Pedestrian Facilities: Build new pedestrian facilities that accommodate the needs of all types of pedestrians in new developments and retrofit existing areas to accommodate pedestrians

- Integrate appropriate pedestrian facilities into all levels of planning design, construction, and maintenance activities relative to transportation as defined by design performance guidelines in the plan
- Link primarily transportation-related pedestrian facilities to other pedestrian support facilities, such as urban trails, bicycle facilities, pathways, etc.
- Include pedestrian needs in regional and local trail and bicycle plans
- Use pedestrian linkages to transit to maximize connections between origins and destinations

Safety: Improve pedestrian crossings in areas of high pedestrian activity where safety is an issue. Include flashing pedestrian yield crossing at high demand unsignalized intersection crossings

- Add countdown pedestrian signals to improve pedestrian safety at dangerous intersections
- Strive to maintain a complete sidewalk network free of broken or missing sidewalks or curb ramps. Target high demand pedestrian areas
- Control speeds of motor vehicles to the appropriate level. Use traffic calming techniques on residential roadways to ensure compliance with speed limits
- Reduce the number and/or width of motor vehicle travel lanes on major roads to safely accommodate pedestrian crossing and enhance street appearance, etc. where possible
- Provide regular and routine enforcement of all bicycle, pedestrian, and motor vehicle laws

Elkhorn Valley/Eastside Master Trail Plan, 2010

The Elkhorn Valley/Eastside Master Trail Plan was completed in 2010 to guide the creation of a multi-use trail and greenway corridor following Elkhorn Creek through the Blackmore Road study area. The new trail link, noted by the LRTP as a “Potential Trail/Path” would provide a key step in Casper’s efforts to create a pedestrian/bicycle friendly community. The Plan includes design guidelines to accommodate walkers, bicyclists, people in wheelchairs, and other non-motorized users. Recommendations specific to the Blackmore Road study area include:

Core Planning Area Recommended Improvements

- At-grade street crossing of E. 2nd Street & Blackmore Road. Facilitated by a pedestrian activated traffic light
- A new roadside multi-use path running east/west along the south side of E. 2nd Street from Blackmore to Ranch Road and from Blackmore to Eastridge Mall. Minimally, this should be a 5’ wide continuous sidewalk connecting without gaps. In the near future, should be upgraded to a 10’ wide multi-use trail
- Neighborhood gateway/access points at E. 12th Street, Newport Street, E. 2nd Street, PR Road and at Yellowstone Highway
- A 1-to-4 acre “gateway park”/trailhead on Blackmore Road and Newport Street- Parking for up to 10 cars and 1 ADA space
- At grade trail crossings (at E. 2nd Street and Blackmore/Yellowstone Highway)
- Trail underpass along Blackmore at I-25 (modify I-25 underpass to accommodate trail on east side)
- Trail-related fixtures and furnishings including: signage, rest areas, shelters, restroom

Neighborhood Connectivity Plan

- Connecting multi-use pathways (pedestrian, bicycle, skates, wheelchair) feeding into the core area trail – network integrates and utilizes low-volume, low-speed streets with adequate cross sections to comfortably accommodate bicycles on the street along with pedestrians on adjacent sidewalks.
- Delineated on-street bicycle and sidewalk routes
- Neighborhood gateway/access points

- Trail-related fixtures and furnishings

Casper Wyoming Safe Routes to School, 2011

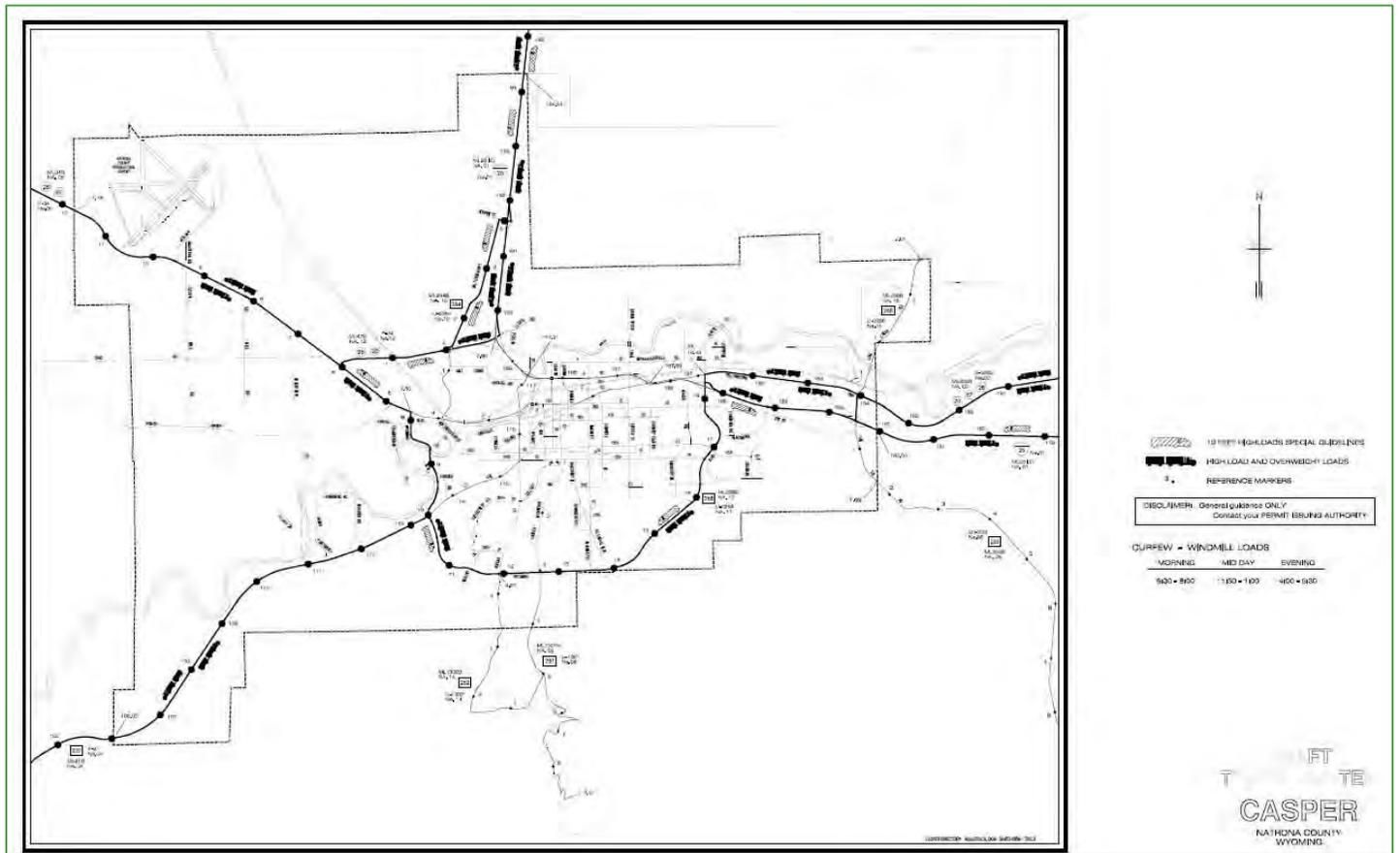
In 2011, the Casper area started a Safe Routes to School program to enhance the ability for Casper's children to walk and bike to school. While specific recommendations were not made for schools within the Blackmore Road study area, several key issues were identified throughout Casper including:

- Vehicle speeds- motorists traveling at speeds too fast for school areas
- Wide roads and intersections discourage active transportation
- Sidewalks have gaps, not connected, too narrow, and built against the curb with no buffer from street
- Traffic congestion near schools and on school grounds create conditions that are not safe for children to walk or bike through
- The Safe Routes to School Program also included several goals from Casper's Comprehensive Plan that support a safe, efficient, convenient, cost-effective, multi-modal transportation system. Goals include:
 - Goal 58 - Restrict the number of access points to new developments to limit curb cuts and the number of intersecting streets along major roadways.
 - Goal 60 - Design new streets and redesign existing streets to be pedestrian-friendly and compatible in scale and width, with design speeds appropriate for adjacent land uses.
 - Goal 62 - Promote traffic calming designs and solutions to reduce speeds through residential neighborhoods.
 - Goal 66 - Provide direct pedestrian and bicycle connections from residential neighborhoods to schools, parks, public facilities, shopping areas, and downtown.

FREIGHT

Casper is experiencing an expansion in the oil and gas industry. As a result, freight will continue to serve a critical role in the Casper area. I-25 is the primary truck route in the study area and land use patterns include truck stops/refueling locations, big box commercial, and light and heavy industrial uses. All of these uses generate heavy truck traffic. As a result, the Wyoming Boulevard and I-25 interchange currently experiences heavy truck traffic. Truck traffic remains heavy along Wyoming Boulevard, affecting the intersection of Wyoming Boulevard and 2nd Street. In order to enhance the movement of freight within and through the Casper MPA, the LRTP recommends improving I-25 operations and identifying alternative travel routes for freight movement. The following figure shows the Draft Casper truck route map that was developed by Natrona County.

FIGURE 17: DRAFT CASPER TRUCK ROUTE MAP



The Wyoming Trucking Association (WTA) indicates that the trucking industry has two main traffic related concerns:

1. **Roadway design:** This concern was specifically related to roundabouts along truck routes. WTA members have received feedback from their members about trucks' inability to safely and efficiently maneuver some roundabouts in Wyoming. WTA also expressed concerns about the impact of online retailing which has increased the need for trucks and delivery vehicles to use residential streets. This concern relates to the presence of traffic calming devices on residential streets which inhibits trucks' maneuverability.
2. **Parking:** The trucking industry is of the opinion that agencies in Wyoming should devise a comprehensive truck parking plan, including an adverse weather parking plan to accommodate trucks during roadway closures due to adverse weather. In the absence of a parking plan, trucks are forced to park along arterial streets causing inconvenience to both truck and personal automobile traffic.

It is recommended that concerns of the trucking industry be considered in roadway design projects and future transportation plans.

Needs Assessment

In addition to completing an inventory and understanding of existing conditions for each mode, the project team evaluated key intersections and roadway segments for existing and future capacity constraints. The analysis considered only the current roadway network, it did not include potential future east/west collectors or the possible construction of the East Belt Loop.

CAPACITY ANALYSIS

To understand the efficiency of the roadways within the study area now and in the future, a roadway capacity analysis was performed. AM and PM peak period intersection and roadway capacity analyses were performed at study area intersections and roadways to document existing levels of service (LOS) and identify future needs to maintain acceptable LOS (LOS D or better). The intersections analyzed as part of this study included:

- Blackmore Road and Landmark Drive
- Blackmore Road and Wyoming Boulevard
- 2nd Street and Landmark Drive
- 2nd Street and Blackmore Road
- Blackmore Road and Donegal Street

The roadways analyzed as part of this study included:

- Blackmore Road, from Wyoming Boulevard to 2nd Street
- Landmark Drive, from 2nd Street to Blackmore Road
- 2nd Street, from Landmark Drive to Blackmore Road
- US 20/26/87, from Curtis Street to Blackmore Road

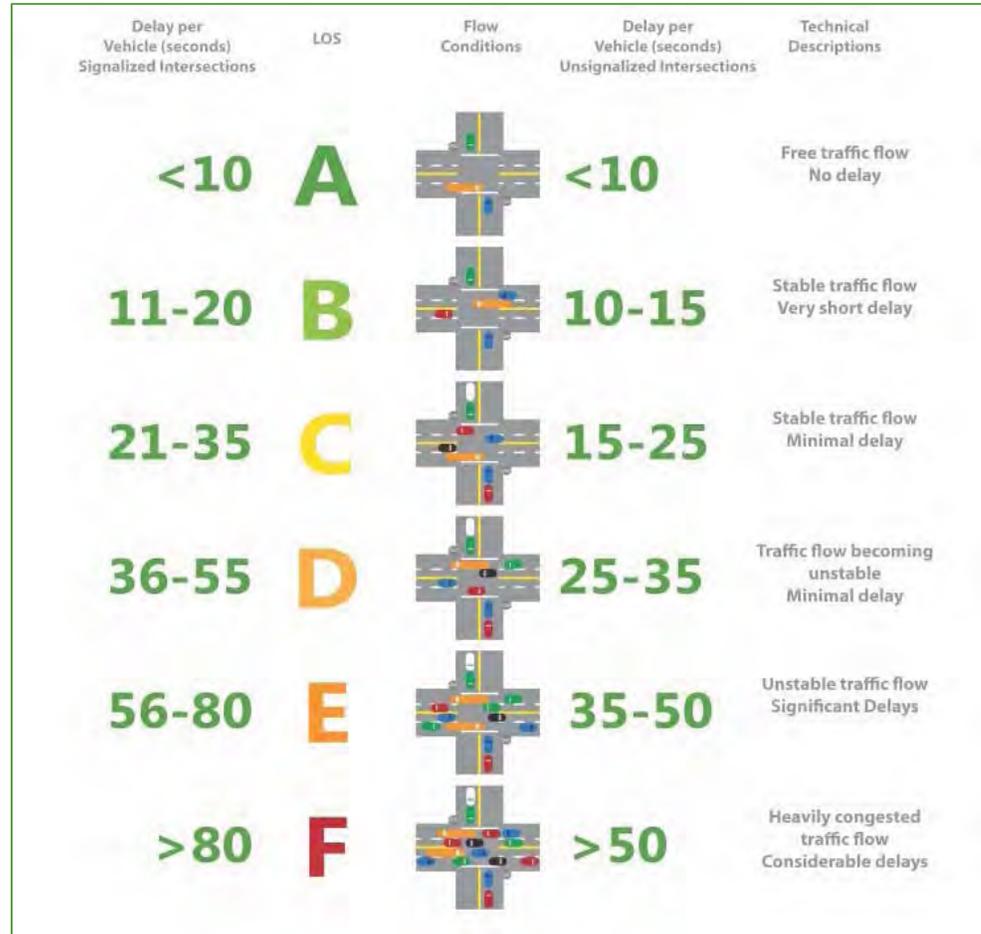
Traffic Volumes

Traffic volumes for intersections above were obtained from the traffic impact studies conducted in this vicinity. If necessary, a 1.5% annual growth rate was applied to the volumes to obtain Year 2012 and Year 2035 traffic volumes.

Intersection Capacity Analysis

Intersection Level of Service (LOS) is a measure of traffic flow conditions based on how long each vehicle is delayed at an intersection. Figure 18 shows that LOS is reported differently for signalized intersections and unsignalized intersections due to differences in driver expectations. Capacity analysis for signalized intersections is reported as LOS and delay for the overall intersection. Capacity analysis for unsignalized intersections is reported as LOS and delay for the worst movement.

FIGURE 18: LEVEL OF SERVICE DESCRIPTIONS



Traffic analysis software Synchro 7.0 was used to perform intersection capacity analysis. The results of the intersection capacity analyses are summarized in Table 7. For Year 2011 traffic volumes (increased by 3% for calculated Year 2012 volumes), all study area intersections currently operate at LOS D or better. For the 2035 AM and PM peak conditions, all intersections except Donegal Street at Blackmore Road are expected to operate at acceptable LOS. The northbound approach of Donegal Street is expected to experience excessive delays at its intersection with Blackmore Road. Alternative intersection treatments should be reviewed to mitigate congestion at this intersection.

TABLE 7: INTERSECTION CAPACITY ANALYSIS

Intersection	AM Peak				PM Peak			
	2012 Existing ³		2035 Forecasted		2012 Existing ³		2035 Forecasted	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Blackmore Road & Landmark Dr ¹	10.6	B	11.6	B	9.6	A	12.5	B
Blackmore Road & Wyoming Blvd ¹	20.6	C	18.4	B	17.5	B	21.6	C
2nd St & Landmark Dr ¹	25	C	25.6	C	18.9	B	22.2	C
2nd St & Blackmore Road ¹	31.2	C	35.1	D	22.3	C	26.2	C
Blackmore Road & Donegal St ²	14.6 (NB)	B	24.2 (NB)	C	19.2 (NB)	C	51.3 (NB)	F
US 20/26 & Hat 6 (Cole Creek) ²	14.6 (SB)	B	24.6 (SB)	D	15.7 (SB)	C	41.2 (SB)	E

Notes:

1. Capacity analysis for signalized intersections is reported as LOS and delay for the overall intersection.
2. Capacity analysis for unsignalized intersections is reported as LOS and delay for the worst movement (in parenthesis).
3. 2011 Traffic Volumes with annual growth rate applied.

Intersection Capacity

Intersection capacity analysis revealed that all intersections in the study area are currently functioning at an acceptable level with all intersection at level of service D or better. In the future, several intersections will see increased delay, with Blackmore Road & Donegal St operating at a level of service F due to the northbound movement and US 20/26 & Hat 6 operating at a level of service E due to the southbound movement.

Roadway Capacity Analysis

A planning level analysis was conducted to determine if any roadway segments within the study area are approaching capacity, at capacity or over capacity. Level of Service C is the desired threshold for the Casper area. Roadway Level of Service (LOS) for an automobile is characterized by through vehicle travel speed for a specific direction and volume to capacity ratio for the through movements at the downstream intersection. As shown in Figure 19, Exhibit 17-2 from HCM 2010 lists the thresholds established for the automobile on urban roadways.

FIGURE 19: HCM 2010 ROADWAY SEGMENT LOS

Travel Speed as a Percentage of Base Free-Flow Speed (%)	LOS by Volume-to-Capacity Ratio ^a	
	≤ 1.0	> 1.0
>85	A	F
>67-85	B	F
>50-67	C	F
>40-50	D	F
>30-40	E	F
≤30	F	F

Note: ^aVolume-to-capacity ratio of through movement at downstream boundary intersection.

Exhibit 17-2
LOS Criteria: Automobile Mode

The following characterize the automobile LOS:

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersection is minimal. The travel speed exceeds 85% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary intersection is not significant. The travel speed is between 67% and 85% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersection may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to capacity ratio is no greater than 1.0.

LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersection. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersection. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to capacity ratio is no greater than 1.0.

LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersection, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed or the volume-to-capacity ratio is greater than 1.0.

Blackmore Road, Landmark Drive, and 2nd Street are urban arterials and were analyzed using SimTraffic 7.0. The fifteen simulation runs of SimTraffic models were performed to obtain average travel speeds and volume to capacity ratios for the three arterials in the study area.

US 20/26/87 is a multi-lane highway and was analyzed using HCS 2010 Version 6.2. 2012. The results of the roadway capacity analyses are summarized in Table 8.

As is shown in the table, the study area roadways are currently operating at the desired threshold of LOS C or better with the exception of

- 1) Blackmore Road – AM Peak - westbound between Wyoming and Landmark and
- 2) Blackmore Road – PM Peak – westbound between Landmark and Donegal.

For Year 2035 conditions, the same roadway segments are projected to operate at LOS D with the addition of the segment of Blackmore Road from Landmark to Donegal during the AM Peak.

TABLE 8: ROADWAY CAPACITY ANALYSIS

Roadway	Segment	Type	2012 AM Peak		2012 PM Peak		2035 AM Peak		2035 PM Peak	
			E	W	E	W	E	W	E	W
Blackmore Rd	Wyoming to Landmark	Urban Arterial	B	D	B	C	B	D	B	C
	Landmark to Donegal		A	C	B	D	A	D	B	D
	Donegal to 2nd		B	A	B	A	B	A	B	A
Landmark Dr	2nd to Blackmore		B	B	B	B	B	B	B	B
E 2nd St	Landmark to Blackmore		B	B	B	B	B	B	B	B
US 20/26/87*	Curtis to Hat 6	Multi-Lane Highway	A	A	A	A	A	A	A	A

* The analysis was performed for the design hour volume estimated by applying an annual growth rate of 1.5% and a K-factor of 0.10 to the 2009 eastbound and westbound daily volumes collected by the City of Casper.

Roadway Capacity Analysis

The roadway capacity analysis showed that Blackmore, Landmark, 2nd, and US 20/26/87 currently function at an acceptable level of service. With projected traffic growth, all roadway segments are expected to continue to function at an acceptable level.

Traffic Calming Toolbox

As stated in the Committee Update section of this report, the project team presented various traffic calming techniques to address the citizen concerns raised at the public meeting. The MPO Policy Committee, MPO Technical Committee, and the Citizen Advisory Committee provided their preference as to which traffic calming techniques should be further analyzed to address the problem areas identified within the study area.

In addition, the project team created a Traffic Calming Toolbox, which can be found in Appendix E. The toolbox describes possible traffic calming devices that are available to communities to reduce vehicle speeds or traffic volumes. The first solutions to consider should be Non-Physical Measures, such as signs and markings, since these devices increase driver awareness and are relatively inexpensive.

This section provides guidance on selecting the most appropriate traffic calming measure for a specific problem. This involves narrowing the toolbox of measures to those that:

- will most closely target the key traffic issue;
- are appropriate for the type of location concerned; and
- are compatible with the traffic volumes, geometrics, and adjacent land uses near the given location.

When the list has been narrowed, devices should be considered that are likely supported by affected residents. Finally, the selected devices need to be placed in a manner that will produce the desired results.

GUIDELINES

Key Traffic Concern

The first task when selecting the most appropriate traffic calming device is to narrow the field of devices to those that address the primary traffic concern. The most common traffic related concerns are:

Speeding – motor vehicle speeds are too high

Traffic Volumes – motor vehicle usage levels (all trips or non-local trips only) are too high

Speed Control Measures

Speed control measures can address any of the key traffic concerns.

Narrowing Measures – Narrowing devices, such as neckdowns, center island narrowings, or chokers, are less obtrusive than other devices and can be more aesthetically pleasing.

Horizontal Measures – Horizontal deflection devices, such as chicanes and traffic circles, are more intrusive but also more effective than narrowings because they force vehicles to navigate horizontally around physical objects.

Vertical Measures – Vertical deflection devices provide the greatest speed reduction, and consequently have the greatest potential to slow emergency response vehicles, buses, and trucks. Therefore, the placement of these devices should be carefully considered, especially to limit any potential impact on emergency vehicles or transit access.

Volume Control Measures

If speed-control measures fail to produce desired results, then diversion measures, such as street closures or forced turns may be considered. These devices redirect traffic to an adjacent street, and, therefore, should be considered after all other measures fail to produce the desired results. Volume control measures limit through traffic or turning movements at specific locations for both residents and non-residents. The full effect of the traffic diversion should be investigated before device implementation.

TABLE 9: APPLICABILITY OF TREATMENTS BY TRAFFIC RELATED CONCERN

Types of Measures	Type of Traffic Related Concern				
	Speeding	Traffic Volume	Vehicle Collisions	Pedestrian Safety	Noise
<i>Speed Control – Narrowing Measures</i>					
Neckdown/Bulbout	●	◐	○	●	○
Center Island Narrowing/ Pedestrian Refuge	●	◐	◐	●	○
Choker	●	◐	○	○	○
<i>Speed Control - Horizontal Measures</i>					
Traffic Circle	●	◐	●	◐	○
Roundabout (Single-Lane)	◐	◐	●	○	●
Chicane	●	◐	○	○	○
<i>Speed Control – Vertical Measures</i>					
Speed Hump	●	●	◐	◐	×
Speed Table	●	◐	◐	◐	×
Raised Crosswalk	●	◐	◐	●	×
Raised Intersection	●	◐	◐	●	×
<i>Volume Control Measures</i>					
Full Closure	●	●	○	○	○
Partial Closure	●	●	○	○	○
Diagonal Diverter	●	●	○	○	○
Median Barrier	○	●	◐	○	○
Key:	● = Strongly Appropriate		×		
	◐ = Moderately Appropriate		○ = Indifferent		

Location Type

The appropriate device for a given problem is a function of the location (midblock or at an intersection). Special consideration should be given to streets used by the Fire Department as primary response routes when responding to emergencies.

Table 10 indicates the location(s) where each type of traffic calming measure is most applicable.

TABLE 10: APPLICABILITY OF TREATMENTS BY LOCATION

Type of Measure	Mid-Block	Intersection	Study Perimeter	Collectors*	Transit Routes
<i>Non-Physical Control Measures</i>					
Targeted Speed Enforcement	●	●	●	●	●
Speed Feedback Sign	●	●	●	●	●
Centerline/Edgeline Striping	●	×	×	●	●
Optical Speed Bars	●	×	×	●	●
Signage	●	●	●	●	●
Speed Legend	●	●	●	●	●
<i>Speed Control – Narrowing Measures</i>					
Neckdown/Bulbout	×	●	●	●	●
Center Island Narrowing/ Pedestrian Refuge	●	●	●	●	●
Choker	●	×	×	×	●
<i>Speed Control – Horizontal Measures</i>					
Traffic Circle	×	●	○	●	●
Roundabout (Single-Lane)	×	●	○	●	●
Chicane	●	×	×	●	●
<i>Speed Control – Vertical Measures</i>					
Speed Hump	●	×	×	×	×
Speed Lump	●	×	×	○	●
Speed Table	●	×	×	○	○
Raised Crosswalk	●	○	○	○	○

<i>Volume Control Measures</i>					
Full Closure	×	●	●	×	×
Partial Closure	×	●	●	●	●
Diagonal Diverter	×	●	×	×	×
Median Barrier	×	○	●	×	×

Key: * Due to Emergency Response Concerns

× = Not applicable. ○ = Limited applicability. ● = Generally applicable.

Street Classification, Location, and Other Constraints

The third step in determining the most appropriate device is to consider how each device is compatible with the street classification, traffic volumes, posted speeds, and special roadway users.

Non-Physical Control Measures

- Targeted Speed Enforcement
- Speed Feedback Sign
- Centerline/Edgeline Striping
- Optical Speed Bars
- Signage
- Speed Legend

Can be installed on local and collector roadways with no limitation with respect to ADT or speed.

Speed Control – Narrowing Measures

- Neckdowns/Bulbouts
- Center Island Narrowing/Pedestrian Refuge
- Chokers

Can be installed on local and collector roadways with less than 20,000 ADT and speed limits lower than 35 mph.

Speed Control – Horizontal Measures

- Traffic Circle

Can be installed on local or collector roadways with daily entering volume of less than 10,000 vehicles and speed limits of 35 mph or less.

- Roundabout (Single-Lane)

Can be installed on collector roadways with daily entering volume less than 16,000 vehicles and speed limit of 45 mph or less.

- Chicane

Can be installed on collector roadways with ADT less than 5,000 vehicles and speed limit 35 mph or less.

Speed Control – Vertical Measures

- Speed Hump

Can be installed on a local or collector roadway with ADT less than 300 vehicles and speed limit of 30 mph or less.

- Speed Table
- Raised Crosswalk
- Raised Intersection

Can be installed on local or collector roadways with ADT less than 7,500 vehicles and speed limit between 25 and 35 mph.

TYPICAL TRAFFIC CALMING PROCESS FOR AN EXISTING NEIGHBORHOOD

The following figure and table present the general approach for a traffic calming program within an existing neighborhood. Nationally, programs vary from routine traffic investigations to prioritized lists for treatments at specific locations to thorough neighborhood plan development by a volunteer committee. Regardless of the level of formality, all programs tend to consist of the same general eight steps. A process or “program” provides staff with a systematic way to approach transportation issues within an existing neighborhood, especially where a range of treatments, with varying levels of community acceptance, may be considered. A program provides community members with both a tangible process and a preference for how their neighborhood streets may be improved. Staff resources and available funding dictate how many locations can be addressed and how quickly. Having a prioritized list (e.g. first-come first-served) of locations or neighborhoods helps balance community expectations with available resources.

FIGURE 20: TYPICAL TRAFFIC CALMING PROCESS



TABLE 11: TYPICAL TRAFFIC CALMING PROCESS

TYPICAL TRAFFIC CALMING PROCESS FOR AN EXISTING NEIGHBORHOOD

Basic Program Elements	Enhancements / Other Considerations
1) Request for Treatment	
<p>A community member, Council member, or school requests staff assistance to address traffic concerns.</p>	<p>* In addition to the basic program elements, a formal petition is submitted with the minimum number of required signatures. A petition is typically required when the request is generated by a community member or neighborhood group.</p> <p>A petition helps validate the need for the project by recording the perception of the problem. A petition is also helpful to gauge the desire for assistance from staff.</p>
2) Project Eligibility	
<p>* The location is reviewed by staff for basic eligibility in the traffic calming program. Typical considerations include project boundaries, previous requests and resolution, street classifications, speed limits, and the proximity to schools.</p> <p>The project is added to the program list or denied. The most common prioritization is first-come first-served. Staff notifies the requesting community member of project eligibility results and the location's place on wait list. Depending on staffing and funding, the project may be deferred for months or years. Some issues may be resolved outside of the process through a routine traffic investigation.</p>	<p>An alternative approach is to conduct a preliminary investigation of existing speeds and volumes against program criteria (e.g., speed or volumes thresholds for certain traffic calming devices). Traffic collisions and pedestrian generators may also be considered.</p> <p>Data collection helps to validate perceived problem and is required if the location will be scored and ranked according to speed, volume or other factors. This method is more costly and time intensive than addressing project first-come first-served.</p>
3) Project Initiation	
<p>Staff initiates the project by contacting the requesting community member to review the problem and desired result.</p>	<p>* In addition to the basic program elements, staff holds a neighborhood meeting to review the problem and traffic calming process. If a committee will be used to develop the traffic calming plan, this meeting is used to solicit volunteers. Formal goals and objectives are typically developed by the committee through a facilitated discussion at a subsequent meeting.</p>

TYPICAL TRAFFIC CALMING PROCESS FOR AN EXISTING NEIGHBORHOOD

Basic Program Elements	Enhancements / Other Considerations
4) Data Collection	
<p>Staff collects speed, volume, collision, and traffic investigation history for the project area. Emergency (fire) response and transit route information is also typically reviewed at this time.</p> <p>This data helps confirm issues and guide solution development.</p>	<p>* In addition to the basic program elements, community members are surveyed to determine the perception of the problem, identify issues, and gauge preference for the types of treatment to consider.</p> <p>The survey results may conclude that the majority of community members do not want treatment.</p>
5) Project Development	
<p>Staff identifies preliminary traffic calming devices, checks feasibility and presents recommendations to stakeholders for consideration.</p>	<p>* A committee reviews the data collection effort and receives basic traffic calming education from staff. The committee develops initial recommendations with assistance (technical advice) from staff. The committee presents recommendations to the community at a public meeting.</p> <p>The committee will likely need to meet two or more times to review the data, develop the draft plan, and to revise the plan based on community input. It's important that the committee understand the available budget and makes appropriate trade-offs.</p>
6) Project Approval	
<p>The ultimate approval for the project is given by City Council. Technical approval is given by the City Traffic Engineer or designated authority. Other approvals from emergency response and transit providers may be required. Coordination with neighboring jurisdictions may be prudent or required depending on location.</p>	<p>* Understanding community support for the project is common practice. Community support is generally measured by administering a neighborhood survey on the traffic calming plan. Typically, jurisdictions adopt a minimum response rate and minimum support rate. This survey should not be referred to as a "ballot" or "vote".</p> <p>With a traffic calming plan that the majority of the community is in support of, staff and City Council may be more comfortable approving the project. Basic program elements also apply.</p>

TYPICAL TRAFFIC CALMING PROCESS FOR AN EXISTING NEIGHBORHOOD

Basic Program Elements	Enhancements / Other Considerations
7) Project Implementation	
<p>Staff initiates project design and implementation. Some measures may be accomplished in-house or with City staff through a work order. Others may require outside consultants or vendors.</p>	<p>Some devices can be installed with temporary construction materials in order to “test” operations and public reaction.</p>
8) Project Monitoring	
<p>Approximately six months after implementation, speed and volume data are collected to assess the project’s effectiveness.</p> <p>Some agencies will use project monitoring results and public sentiment to decide if more restrictive (volume control) measures should be considered or if a traffic calming device needs to be removed.</p>	<p>In addition to the basic program elements, a community survey may be given to understand the level of satisfaction with the project and process.</p> <p>Some jurisdictions adopt a policy that once a neighborhood/street goes through the public vetting process, it can’t be considered for additional treatment for a specified period of time.</p>

Source: Fehr & Peers, 2013.

Roadway Network Planning Guidelines

OVERVIEW

This chapter provides a discussion of proposed circulation concepts for the undeveloped portions of the Blackmore Road sub area. The circulation system, presented in Figure 21, includes a hierarchy of roadways, bikeways and pathways. Emphasis is placed on ensuring connectivity between uses and on creating a safe and efficient circulation system that allows for multiple transportation options. The circulation system has been designed to link with existing local and regional systems.

ROADWAY SYSTEM GUIDELINES

The following six themes for planning roadway systems are consistent with Institute of Transportation Engineers (ITE) recommendations. Additional information about the themes can be found in the Appendix F.

1. Multimodal – Urban roadway systems should consist of a multimodal network that serves pedestrians, bicyclists, transit, the automobile, and trucks.
2. Layered network – Urban roadway systems should be planned as layered networks service all modes of passenger travel, plus a freight/goods movement network.
3. Connectivity – Urban roadway systems should have a high degree of connectivity to help provide multiple routing options for all users.
4. Density – Urban roadway systems should have a network density appropriate to the land use patterns and urban form that are served.
5. Public spaces – Urban roadway systems should be planned with recognition of the role of roadways as public spaces that help shape urban environments.
6. Livability – Urban roadway systems should be planned with consideration of environmental, social, and economic issues. This theme includes the concept of context sensitive solutions. Roadways and places need to be coordinated to create livable places.

After careful consideration for the local context of Casper, recommendations are presented for the Blackmore Road subarea roadway network consistent with the intent of ITE and other national recommendations. Table 12 summarizes key features recommended as part of the network.

TABLE 12: PROJECT FEATURES

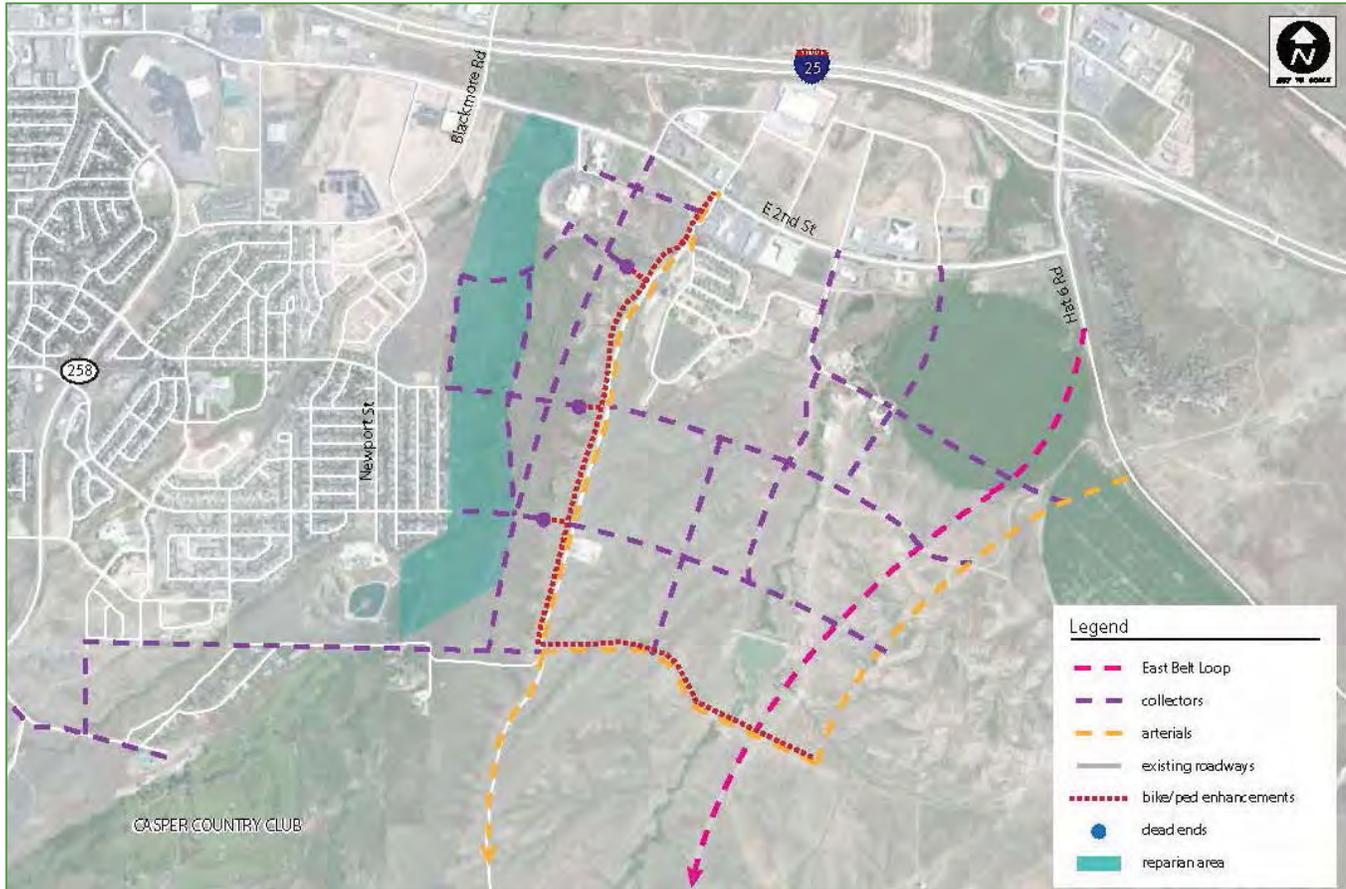
Key Project Features Consistent with Roadway System Guidelines

Multimodal	<ul style="list-style-type: none"> • Consistent treatment to all modes of travel • Attractive and convenient pedestrian and bicycle systems • Roadway cross section supports comfort of all users
Layered network	<ul style="list-style-type: none"> • Fully-connected grid-based circulation system • Comprehensive vehicle, bicycle and pedestrian networks • Convenient access to regional transportation corridors (Wyoming Boulevard, I-25, Hat Six Road)
Connectivity	<ul style="list-style-type: none"> • Many roadway options (redundancy) throughout the community • Continuous off-street trail system • Consistent and convenient grid-based circulation system
Density	<ul style="list-style-type: none"> • Roadway systems reflect a network density appropriate to the land use patterns that are served.
Livability	<ul style="list-style-type: none"> • Off-street trail system • Pedestrian design features and enhancement intersection treatments • Speed control through street design • Roundabouts favored over signalized intersections
Public spaces	<ul style="list-style-type: none"> • Pedestrian design features and enhancement intersection treatments • Recognition of the role of roadways as public spaces that help shape urban environments.

ROADWAY NETWORK

The proposed roadway network includes arterial, collector and local roadways for the vacant area south of 2nd Street between Blackmore Road and Hat Six Road.

FIGURE 21: POTENTIAL FUTURE ROADWAY NETWORK



ROADWAY CROSS SECTIONS

This section reflects different street cross sections, which were developed to best accommodate multi-modal use and compliment envisioned land use. Key features of the street network are described below.

Arterial Streets

Arterial roadways are the backbone circulation routes that provide critical linkages through the study area to the regional circulation system, including I-25. These roadways are typically four lanes with off-street bike lanes and landscape-separated sidewalks. The street section may have a landscaped center median. Parking is prohibited on primary roadways. Typical right-of-way requirements range from 80 feet to 130 feet.

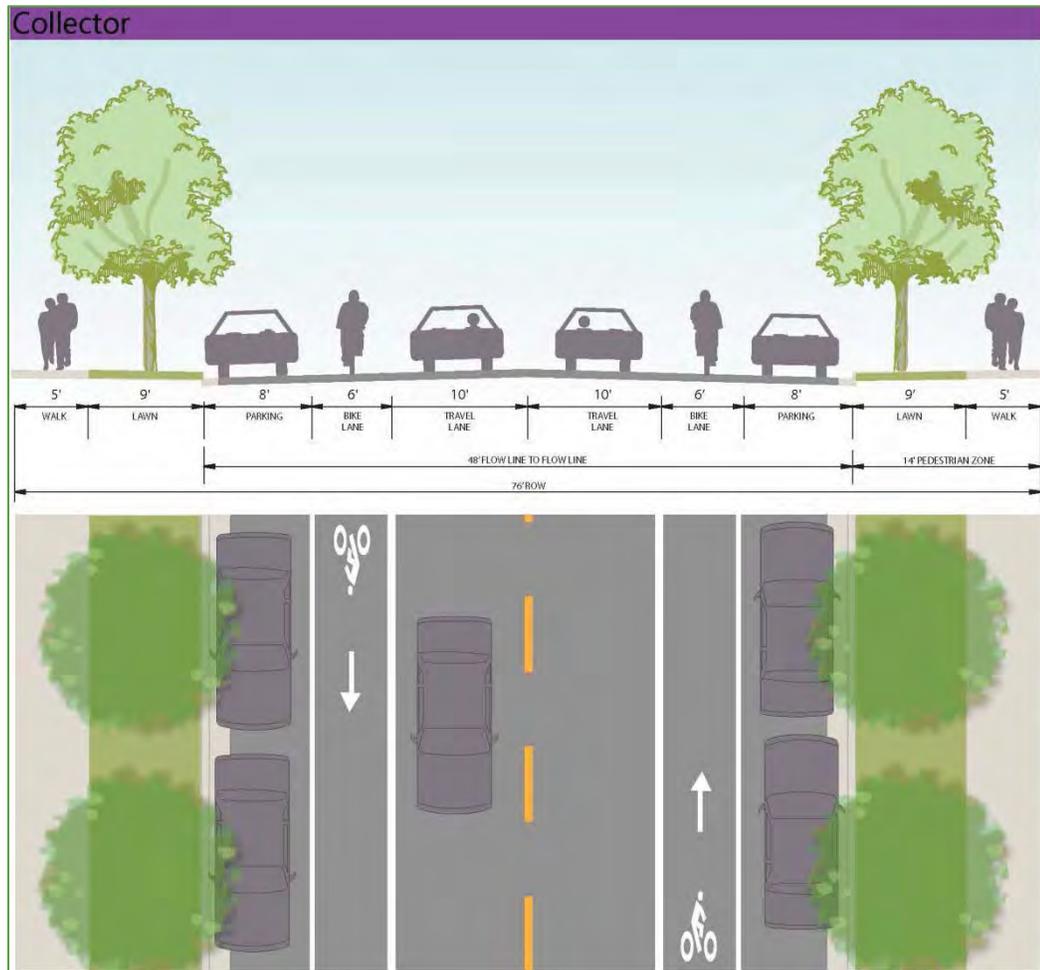
FIGURE 22: PROPOSED ARTERIAL CROSS SECTION



Collector Streets

Collector streets are secondary circulation routes that distribute trips from the arterial street system to the local street network. Collector streets are two-lane roadways with or without on-street parking and landscaping. They include 6 foot bike lanes and have sidewalks separated by a landscape buffer and vertical curbs.

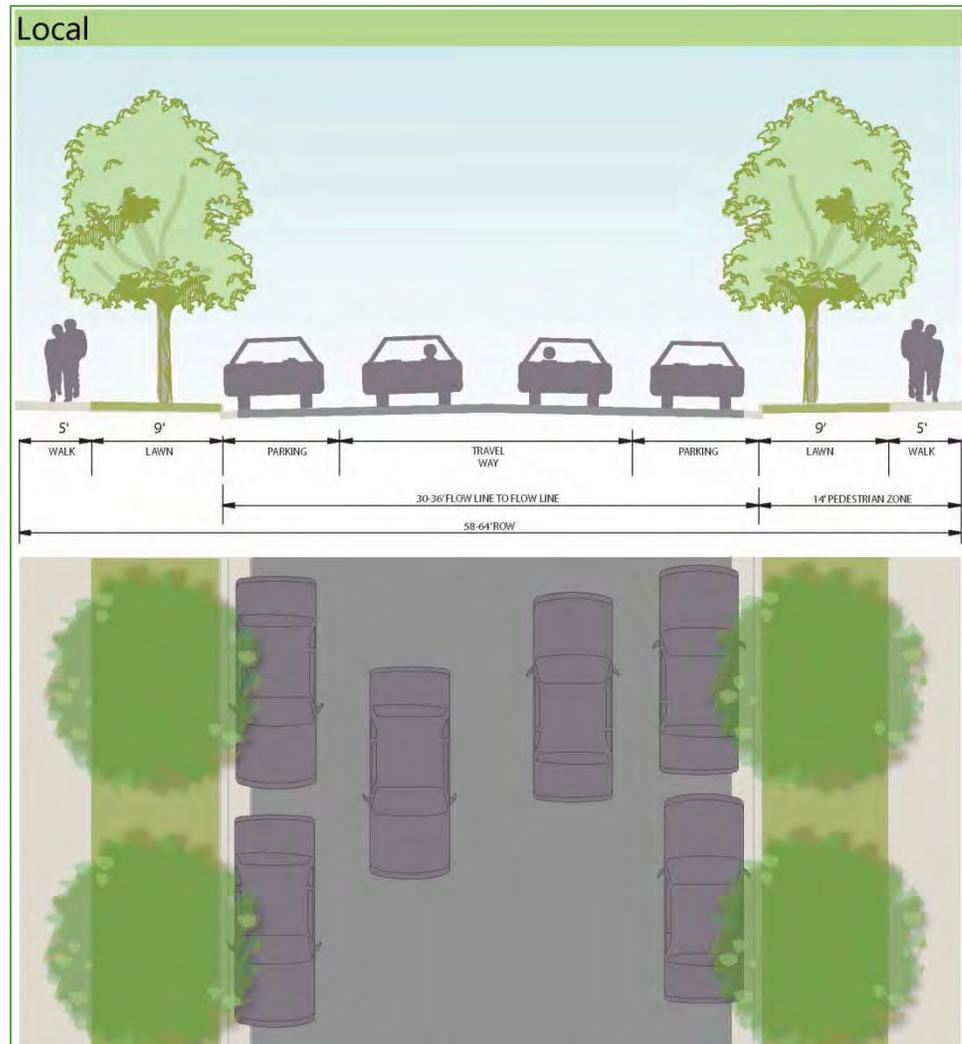
FIGURE 23: PROPOSED COLLECTOR CROSS SECTION



Local Streets

Local streets provide direct access to adjacent land uses and connections to collector streets. Local streets are two lanes and may include on-street parking and attached or detached sidewalks. Local streets do not contain bike lanes; however, they may be candidates for bike routes. Local roadways are not designated on the roadway network maps as their configuration will be dependent on adjacent land use.

FIGURE 24: PROPOSED LOCAL CROSS SECTION



The use of detached sidewalks is encouraged along with entry elements at intersections with collector or arterial roadways. The pattern of local streets and use of detached or attached sidewalks will be determined through the subdivision map for individual projects. The local street pattern should maximize connectivity and, to the extent feasible, eliminate barriers among residential uses and parks, schools, open space and service uses.

Potential Solutions & Recommendations

Using the information gathered through the community input, inventory and review; the project team developed a series of potential solutions and recommendations. These were developed with consideration of comments from the community, data collection and analysis, and MPO Policy and Technical Committee review and comments.

During the community outreach and data collection and evaluation, 10 locations emerged as key locations for further evaluation. They are:

- Blackmore/Donegal and Blackmore/Landmark Intersections
- Blackmore/Wyoming and Blackmore/Viking Ct Intersections
- Wyoming/2nd Intersection
- 21st/Waterford Roundabout
- Highway 20-26/WY 256 Intersection
- Blackmore Road Corridor
- Donegal Street Corridor
- 2nd Street Corridor
- 21st Street Corridor
- Country Club Road Corridor

For each of these ten locations, a variety of options were generated to respond to concerns. Those options were presented to the MPO Committees, the Citizens Advisory Committee, and the community. Input was used to create the final recommendations here.

The options were identified as Low, Medium and High Cost Solutions. For purposes of this study, a Low Cost Solution is estimated to be in the range of \$0 to \$50,000. A Medium Cost Solution is estimated to be in the range of \$50,000 to \$250,000. A High Cost Solution is estimated to be greater than \$250,000.

The Preliminary Cost Estimates outlined below are planning level cost estimates. Until a design is completed, some of the improvement costs are not known. The cost estimates identified do not include costs for design, right-of-way acquisition, water or sanitary sewer improvements, etc. More detailed planning level cost information can be found in Appendix G.

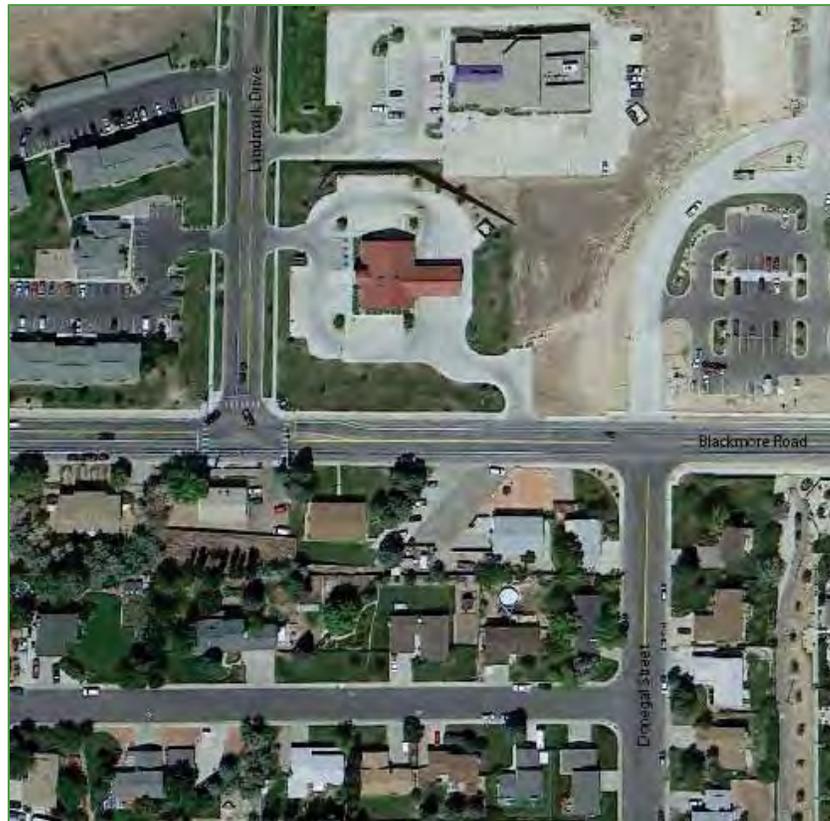
BLACKMORE/DONEGAL AND BLACKMORE/LANDMARK

The intersections of Blackmore and Donegal and Blackmore and Landmark are currently stop controlled and signalized, respectively.

We heard concerns from the community about left turns off of Donegal onto Blackmore at the stop controlled intersection as well as safety concerns crossing Blackmore Road due to the school bus stop to load and unload children. We also heard that motorists are willing to take risks to get through the intersection. Analysis showed that this intersection is currently functioning at an acceptable level of service C. However, 2035 analysis shows that the intersection will fail during the PM peak period. Crash data did not show any immediate safety concerns.

The community indicated that the signalized intersection has driver compliance concerns as well as pedestrian crossing concerns. We also heard concerns regarding increased traffic volumes and speeds due to drivers utilizing Blackmore Road as a cut through between Wyoming Boulevard and 2nd Street. The following options are presented to address the concerns that were raised by the citizens and to address potential future operational issues.

FIGURE 25: BLACKMORE/DONEGAL AND BLACKMORE/LANDMARK EXISTING CONDITION



Low Cost Solution: Continued Monitoring

The analyses conducted and detailed in the Existing Conditions section indicate that the intersection is currently operating with acceptable Levels of Service during the peak hours. However as more development occurs in the area and traffic volumes on Blackmore Road increase, this intersection may warrant some physical improvements. New turning movement counts should be collected and analyzed occasionally to determine when physical improvements become necessary.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost

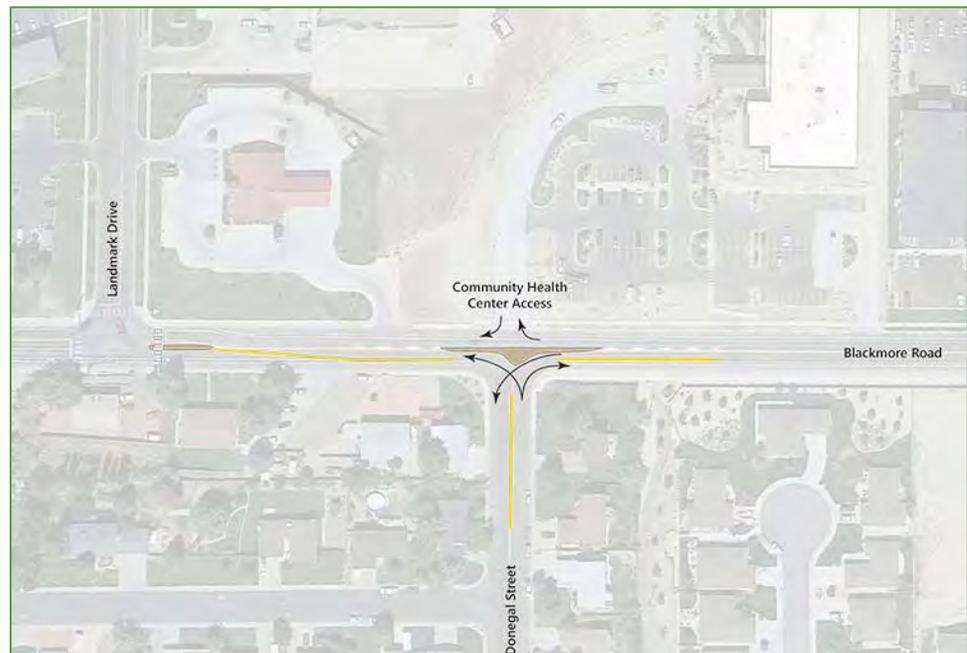
Cons

- Does not address citizen concerns

Low Cost Solution: Continuous Flow, T-Intersection

This low cost solution proposes a median to provide the opportunity for left turns from Donegal to Blackmore and from Blackmore onto Donegal. Left-turns into and out of the Community Health Center Drive would be prohibited. This intersection design allows northbound left turns to turn out across eastbound traffic and into a dedicated lane. From there, they can merge with westbound traffic when appropriate. Northbound traffic will still be stop controlled, eastbound traffic will not.

FIGURE 26: CONTINUOUS FLOW, T-INTERSECTION



Preliminary Cost Estimate

- Approximately \$45,000

Pros

- Makes left-turns from Donegal to Blackmore easier
- Provides a refuge for pedestrians crossing Blackmore Road
- Narrows the travel way within the road, creating a calming effect for Blackmore Road
- May detour truck traffic if median is wide enough
- Allows residents and visitors to access the neighborhood from Blackmore Road

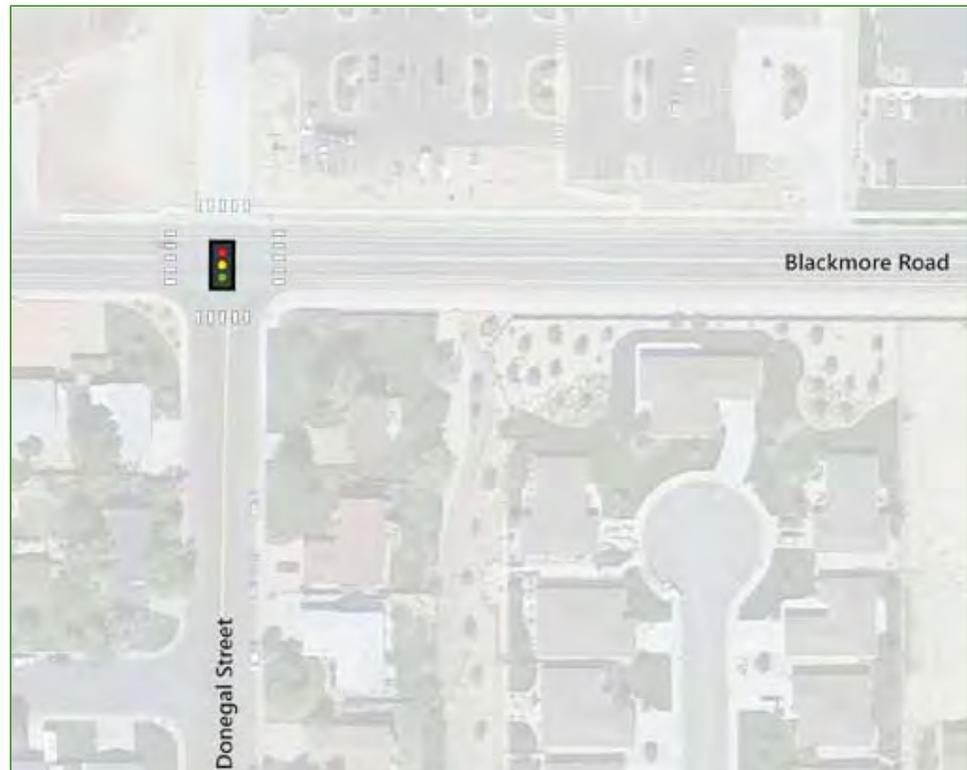
Cons

- Limits access in and out of the Community Health Center on Blackmore to right-turns only

High Cost Solution: Signalize Donegal

This high cost solution proposes signalizing Blackmore and Donegal when warranted. Coordination with the signal at Landmark would need to be part of this implementation. A signal warrant analysis would need to be completed before this option could be considered for implementation. While recent data indicates a significant traffic volume increase on Blackmore Road in this vicinity, a signal does not appear to be warranted.

FIGURE 27: DONEGAL SIGNAL



Preliminary Cost Estimate

- Approximately \$300,000

Pros

- Provide protected movement for left turns from Donegal to Blackmore
- Coordination would eliminate queue issues and prioritize through movement along Blackmore Road
- The signals would function as a singular intersection signal decreasing delay for both intersections

Cons

- It is unclear if the signal at Landmark meets warrants
- It is very unlikely the signal at Donegal will meet warrants
- Installing signals at intersections that are not warranted decreases the safety at the intersections as driver compliance tends to decrease

High Cost Solution: Roundabouts

This high cost solution proposes replacing the existing traffic control at Donegal, Landmark, and Newport intersections along Blackmore Road with roundabouts. All three intersections are considered for reconfiguration to meet driver expectations along the corridor.

FIGURE 28: ROUNDABOUTS



Preliminary Cost Estimate

- Approximately \$300,000 per intersection

Pros

- Even traffic flow through a corridor and limit the “platoon” effect that can result from traffic signals
- Promote lower overall travel speed along the corridor
- Trucks tend to avoid corridors with roundabouts
- Can minimize queuing on approaches
- Will reduce delay of left turning traffic from Donegal onto Blackmore Road
- Roundabouts are inherently safer intersections
- Eliminates driver noncompliance issues at intersections that do not warrant signals
- Reduces vehicle emissions and noise associated with idling vehicles
- Single lane roundabouts have excellent pedestrian safety records
- Idea was generated by the community
- Maintenance costs of roundabouts tend to be lower than signalized intersections
- A mini roundabout could potentially fit within existing footprints.

Cons

- Potentially a larger footprint than existing intersections if full roundabout
- Based on the development along the corridor, the roundabout at Donegal would likely have to be constructed to encroach on the north side of the existing intersections
- Significant cost to execute

Recommendation

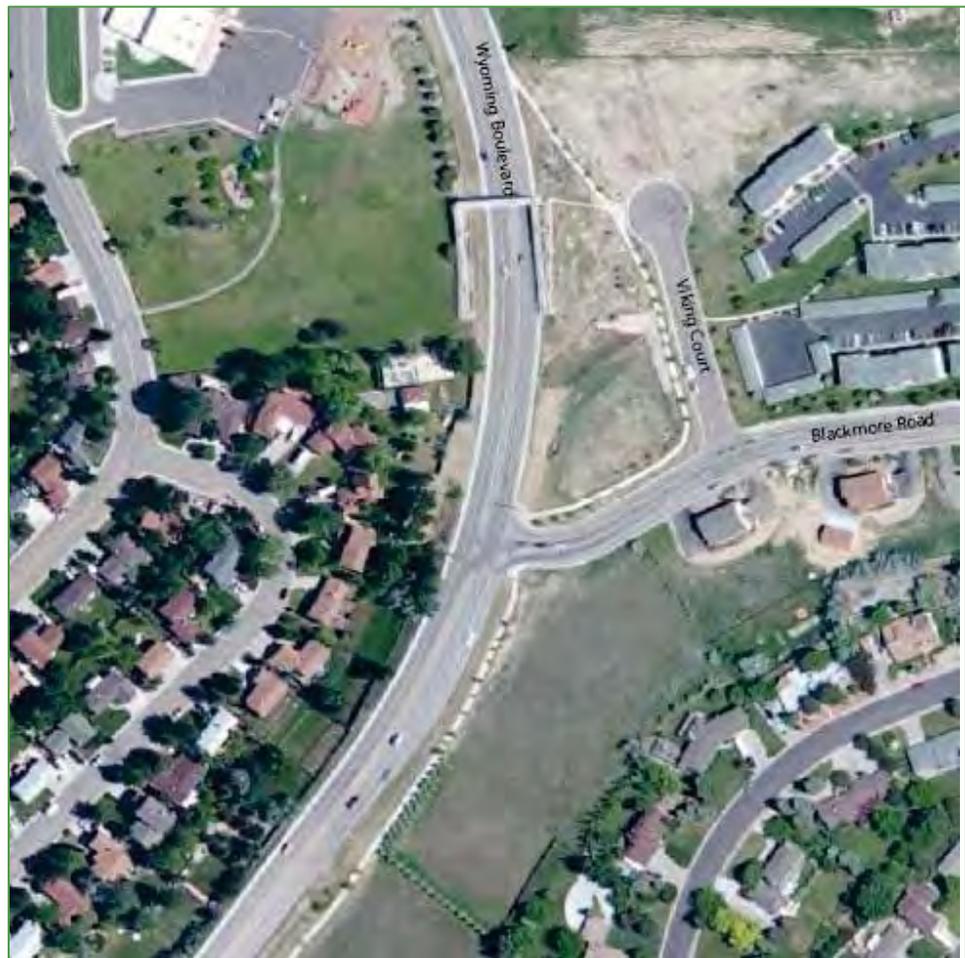
Continued Monitoring

The existing analyses indicate that the intersection is currently operating with acceptable Levels of Service during the peak hours. However, recent traffic volume data indicates a significant increase in traffic volumes on Blackmore Road in this vicinity. Continued monitoring and additional data collection is recommended to determine when/if physical improvements are warranted.

BLACKMORE/WYOMING AND BLACKMORE/VIKING CT

The intersection of Blackmore and Wyoming is currently a signalized intersection. We heard concerns regarding drop off and pick up traffic for parents utilizing Viking Court as a loading and unloading area creating congestion at the intersection of Viking Court and Blackmore which affects the intersection of Wyoming and Blackmore. We also heard concerns about the difficulty for pedestrians to cross Blackmore at Wyoming and the lack of a pedestrian crosswalk across Wyoming at the intersection.

FIGURE 29: BLACKMORE/WYOMING AND BLACKMORE/VIKING EXISTING CONDITION



Low Cost Solution: Continued Monitoring

The issues raised at this intersection have not been verified in the field by the consultant team. Additional analysis and monitoring of this intersection would determine the level of improvement warranted. Coordination with the school regarding pick-up and drop-off on-site could be integrated into the solution.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost
- Could address the school drop-off and pick-up on the school site, itself.

Cons

- Does not address citizen concerns raised at public meeting

Low Cost Solution: Stripe "DO NOT BLOCK INTERSECTION" at Blackmore and Viking Court

This option provides a low-cost solution to address an intersection being blocked by vehicles queued from an adjacent intersection. Striping and signing at the intersection of Blackmore Road and Viking Court with applicable DO NOT BLOCK INTERSECTION per the Manual on Uniform Traffic Control Devices.

FIGURE 30: STRIPE "DO NOT BLOCK INTERSECTION"



Preliminary Cost Estimate

- Approximately \$2,400

Pros

- Low cost solution
- Proven effective

Cons

- Additional analysis (in field observations) should be conducted prior to installation

High Cost Solution: Connect Viking Court to Landmark

This high cost option proposes extending Viking Court to Landmark Drive or to the Mall loop. This street could either be one-way or two-way depending on circulation benefits. This strategy also includes a raised crosswalk or intersection at the school drop-off and could also include a crossing guard during peak times at the raised crosswalk.

FIGURE 31: CONNECT VIKING COURT TO LANDMARK



Preliminary Cost Estimate

- Approximately \$600,000 for extension of approximately 1,050LF

Pros

- Provides an additional access point to school drop off.
- Mitigate traffic flow issues associated with the school drop-off currently taking place at the Viking Court cul-de-sac.
- Potential to reduce back-ups at Blackmore/Viking Court and Blackmore/Wyoming Boulevard during peak drop-off times
- Builds additional connectivity into the network
- Raised crosswalk will enhance pedestrian visibility and slow vehicles

Cons

- Likely expensive
- Will need to obtain ROW to complete

Recommendation

Continued Monitoring

The issues raised at this intersection have not been verified in the field by the consultant team. Additional analysis and monitoring of this intersection would determine the level of improvement warranted. Coordination with the school regarding pick-up and drop-off on-site could be integrated into the solution.

Stripe “Do Not Block Intersection”

If the conditions are verified and shown to be a recurring problem, the “Do Not Block Intersection” option should be implemented.

Connect Viking Court to Landmark.

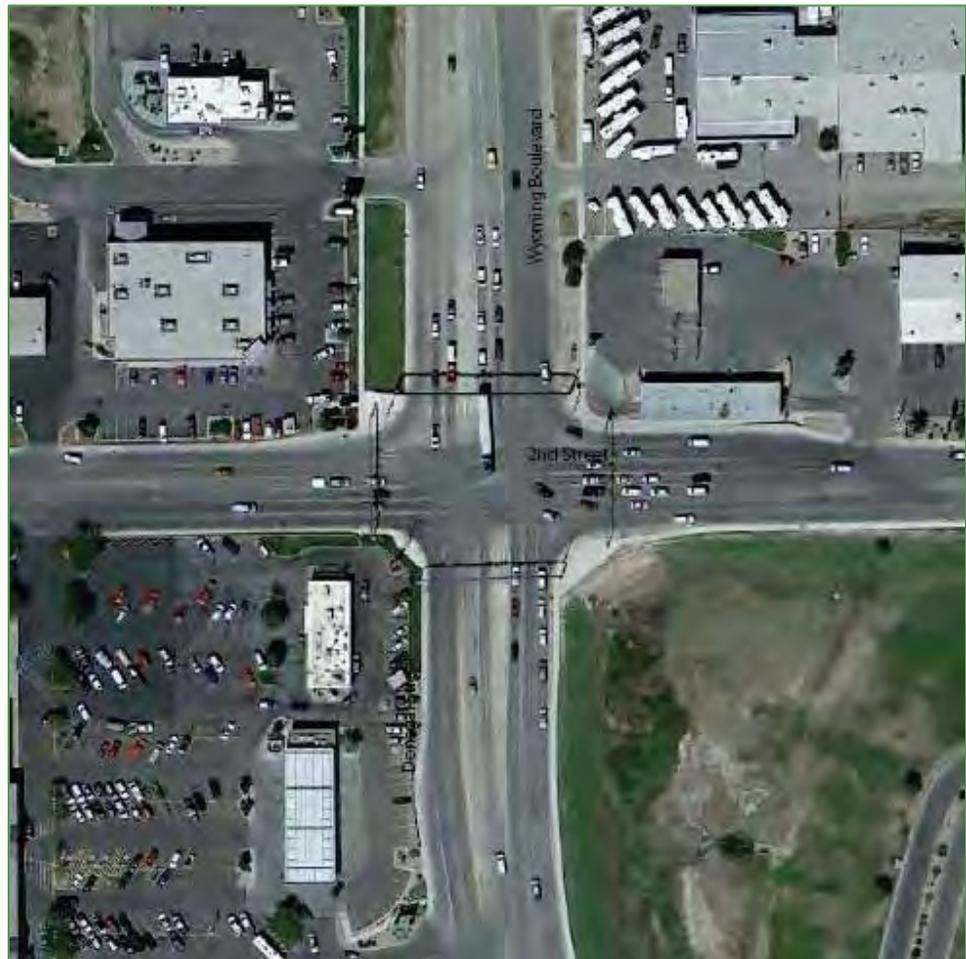
For long term conditions, the connection of Viking Court to Landmark would help in circulation within the study area.

WYOMING/2ND

The existing intersection is signalized and one of the busiest intersections in Casper. The intersection was originally designed to have a center median. The additional space is a painted median and provides off-set left turn lanes at the intersection for improved visibility of oncoming traffic.. We heard concerns regarding the congestion at the intersection, drivers utilizing Blackmore Road to avoid this intersection, and pedestrians feeling unsafe crossing any leg of the intersection.

Please note that this intersection is operated and maintained by WYDOT. Any recommendations will require coordination with and support from WYDOT.

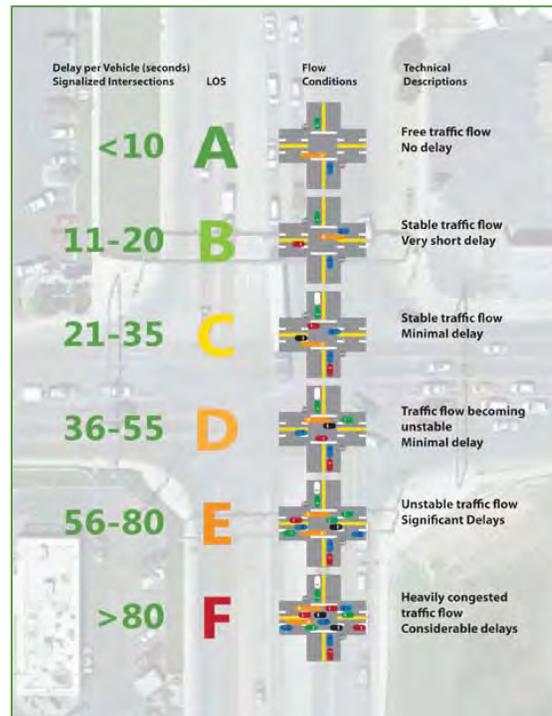
FIGURE 32: WYOMING/2ND EXISTING CONDITION



Low Cost Solution: Analyze Intersection for Operational Improvements

This solution proposes to analyze the intersection operations for potential operational and multimodal improvements. The additional analysis is essential and should be conducted prior to any improvements being implemented.

FIGURE 33: ANALYZE INTERSECTION FOR OPERATIONAL IMPROVEMENTS



Preliminary Cost Estimate

- Approximately \$10,000 to \$25,000 depending on data collection and study limits

Pros

- Provides opportunity for in-depth understanding of the intersection before investments/decisions are made
- Enhancing traffic operations may prevent drivers from using other routes to avoid this intersection.
- Inexpensive to implement signal changes

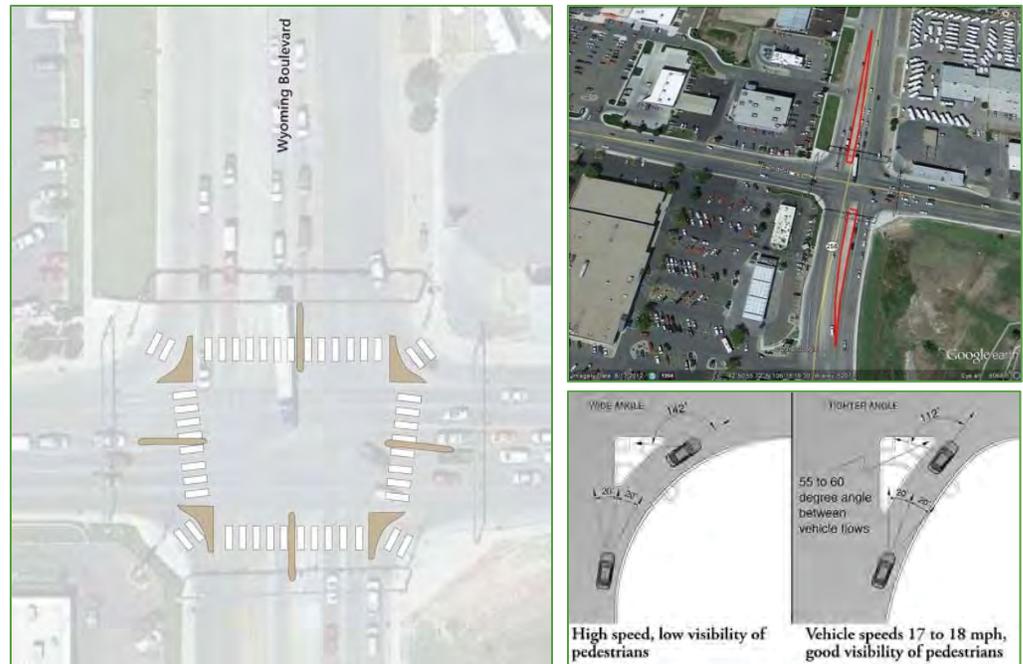
Cons

- Requires additional study
- Requires coordination with WYDOT as this is a WYDOT owned and operated signal

Medium Cost Solution: Pedestrian Enhancements

This solution proposes enhancing pedestrian crossings at the intersection by creating pedestrian refuge islands and “pork chop” islands at intersection approaches. The drawings below are conceptual in nature and would require engineering and design. Free right should be designed to encourage lower speeds and higher visibility of pedestrians.

FIGURE 34: PEDESTRIAN ENHANCEMENTS



Preliminary Cost Estimate

- Approximately \$90,000 for enhancements

Pros

- Allows pedestrians to cross only one direction of traffic at a time
- Creates a safe place for slower pedestrians to dwell who do not complete intersection crossing in one signal cycle
- Shortens pedestrian crossing distance
- May improve intersection efficiency
- Allows “free right”

Cons

- Poorly designed islands often get hit by vehicles
- May increase speeds in the area
- Right-turning vehicles may have possible conflict with pedestrians

Recommendation

Analyze Intersection for Operational Improvements Prior operational improvements to this intersection have proven beneficial regarding both operation and safety. Additional analysis at this intersection – to include adjacent intersections – is recommended. The additional analysis is essential and should be conducted prior to any improvements being implemented.

Pedestrian Enhancements

This intersection is very large and intimidating for pedestrians. This solution proposes enhancing pedestrian crossings at the intersection by creating pedestrian refuge islands and “pork chop” islands at intersection approaches.

21ST / WATERFORD ROUNDABOUT

The roundabout at 21st and Waterford is an existing, single lane roundabout with sidewalks on all sides and crosswalks. The concerns raised at this intersection are associated with speed and pedestrian safety.

FIGURE 35: 21ST/WATERFORD ROUNDABOUT EXISTING CONDITION



Low Cost Solution: Continued Monitoring

The issues raised at this intersection have not been verified in the field by the consultant team. Additional analysis and monitoring of this intersection would determine the level of improvement warranted. Additional analysis should include a speed study as well as a yield compliance study.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost

Cons

- Does not address citizen concerns raised at public meeting

Low Cost Solution: Reconfigure Signage

This solution proposes to move the existing state yield signs to the center medians on all approaches and replace pedestrian signs with neon school crossing signs due to proximity of elementary school. The configuration of the signage should be brought up to current MUTCD Guidelines.

FIGURE 36: RECONFIGURE SIGNAGE



Preliminary Cost Estimate

- Approximately \$3,000

Pros

- Enhances visibility of signs
- Alerts drivers of proximity to school

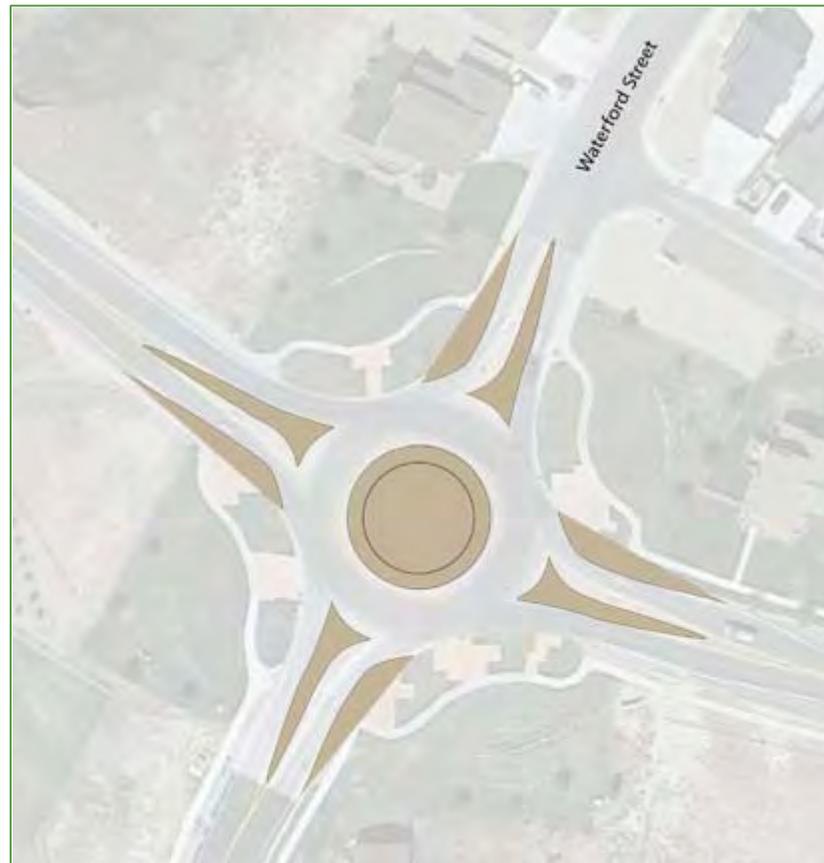
Cons

- Cost of sign relocation

Medium Cost Solution: Modifications to Existing Roundabout

This solution proposes physical modifications to the existing roundabout to address high speeds. The roundabout in its current configuration does not provide any deflection for entering vehicles. The deflection causes vehicles to slow down as they approach the roundabout. The diameter of the existing roundabout is large and the lanes too wide. A raised truck apron and a raised central island would force slower speeds.

FIGURE 37: RECONFIGURE ROUNDABOUT



Preliminary Cost Estimate

- Approximately \$100,000

Pros

- Slows vehicle speeds approaching and through the roundabout
- Increased pedestrian safety

Cons

- Significant costs to a relatively new intersection
- Needs to be designed and constructed to accommodate snow plow equipment

Medium Cost Solution: Raised Crosswalks

This solution proposes installing raised crosswalks on all approaches of the roundabout

FIGURE 38: RAISED CROSSWALKS



Preliminary Cost Estimate

- Approximately \$56,000

Pros

- Enhances pedestrian crossing visibility
- Slows vehicle speeds

Cons

- Impacts on drainage
- Needs to be designed and constructed to accommodate snow plow equipment

Recommendation

Reconfigure Signage

This solution proposes to move the existing state yield signs to the center medians on all approaches and replace pedestrian signs with neon school crossing signs due to the proximity of an elementary school. The configuration of the signage should be brought up to current MUTCD Guidelines.

Continued Monitoring

The issues raised at this intersection have not been verified in the field by the consultant team. Additional analysis and monitoring of this intersection would determine the level of improvement warranted. Additional analysis should include a speed study as well as a yield compliance study.

HIGHWAY 20-26/WY 256

Concern was expressed about increased delay at this intersection as a result of new development in the industrial park. A site visit revealed some difficulty seeing westbound traffic traveling on Hwy 20/26 due to grades. Speed limits at this intersection are 55 MPH on Hwy 20/26 and 65 MPH on WY 256.

FIGURE 39: HIGHWAY 20-26/WY 256 EXISTING CONDITION



Low Cost Solution: Continued Monitoring

The volumes on both of these roadways are consistent with or lower than expected roadway traffic volumes on arterial roadways. In addition, the accident analysis did not identify consistent accident patterns correctable by physical roadway or intersection improvements. The traffic volumes, accidents, and speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost
- Improvements could be funded by new development

Cons

- Does not address concerns raised

Low Cost Solution: Signal Warrant Analysis

Conduct a signal warrant analysis. Crash data, sight distance, and speeds at this location could warrant a signal. Installation of a signal at this location is on Evansville's TIP sheet for FY14 using Federal Hazard Elimination funds. A signal warrant analysis should confirm that this signal is warranted.

Preliminary Cost Estimate

- Approximately \$10,000

Pros

- Low cost
- If warranted, improvements could be funded by new development

Cons

- Does not address immediate concerns about traffic at the intersection

Low Cost Solution: Traffic Impact Study (TIS) Guidelines

Additional development is expected in the industrial park to the northwest of this intersection and throughout the study area. As new development proposals are considered, traffic impact studies should consider the impacts of truck traffic on the intersection and the corridor's level of service. Due to the industrial nature of the developments in this area and the higher volume of trucks accessing these developments, thorough traffic impact studies should be conducted that include not only the proposed access points but the adjacent intersections and corridors that will be impacted. The impacts should be analyzed for short term and long term time periods. In addition, in determining the need for auxiliary turn lanes, passenger vehicle equivalency factors should be applied to the volume of large trucks. If improvements are warranted due to the development, the development should be required to implement and/or pay for the improvements. Standard TIS guidelines could be developed by the MPO and adopted by each local unit of government. They should include provisions for coordination of development traffic impacts between jurisdictions and with WYDOT.

Preliminary Cost Estimate

- Person hours for TIS Guidelines and TIS review

Pros

- Low cost

Cons

- Does not address immediate concerns about traffic at the intersection

Recommendation

Continued Monitoring

The volumes on both of these roadways are consistent with or lower than expected roadway traffic volumes on arterial roadways. In addition the accident analysis did not identify consistent accident patterns correctable by physical roadway or intersection improvements. The traffic volumes, accidents, speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

Signal Warrant Analysis

Conduct a signal warrant analysis. Crash data, sight distance, and speeds at this location could warrant a signal.

TIS Guidelines

As more development is expected in this area, it is important to develop a set of TIS Guidelines to ensure that the impacts of future development are mitigated.

BLACKMORE ROAD CORRIDOR

Concerns that were heard regarding the corridor include high truck traffic, high speeds, and safety concerns for pedestrians. Traffic calming strategies along Blackmore Road may encourage alternate routes for vehicles. Thus, 2nd Street signal timings should be optimized to allow for efficient travel as this is the most likely alternative. All proposed options for Blackmore Road will include coordination with industry operators and freight operators in Evansville.

FIGURE 40: BLACKMORE ROAD EXISTING CONDITION



Low Cost Solution: Continued Monitoring

This section of Blackmore Road is classified as a collector roadway. The volumes identified in the existing conditions analysis are consistent with collector roadway traffic volumes. In addition, the accident analysis did not identify consistent accident patterns correctable by physical roadway or intersection improvements. The traffic volumes, accidents, speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost
- Improvements could be funded by new development

Cons

- Does not address citizen concerns raised at public meeting

Low Cost Solution: Buffered Bike Lane

This solution proposes to create a buffered bike lane by converting the existing parking lane to a bike lane and restriping the bike lane as a buffer. There is currently a bike lane on Blackmore Road.

FIGURE 41: BUFFERED BIKE LANE



Preliminary Cost Estimate

- Approximately \$45,000

Pros

- Visually narrows the roadway
- Creates more comfortable infrastructure for cyclists
- Creates a low-stress connection between trails

Cons

- Demand for bicycle infrastructure appears low

Medium Cost Solution: Intersection Narrowing

This solution proposes a strategy to calm the Blackmore Road Corridor by narrowing the travel way with curb extensions.

FIGURE 42: INTERSECTION NARROWING



Preliminary Cost Estimate

- Approximately \$180,000 (\$12,533/corner for 14 corners as shown in drawing above)

Pros

- Sends message to drivers that Blackmore is not a cut-through route
- Not accommodating to trucks
- Curb extensions shorten pedestrian crossing distances
- Truck traffic is encouraged to utilize the designated routes and stay on arterial roadways
- The traffic calming elements discourage cut-through traffic by increasing corridor travel time
- Trucks tend to avoid calmed roadways

Cons

- Traffic calming elements increase travel time for all roadway users
- May cause issues with drainage, plowing
- Poorly designed curb extensions may not accommodate cyclists

Recommendation

Continued Monitoring

This section of Blackmore Road is classified as a collector roadway. The volumes identified in the existing conditions analysis are consistent with collector roadway traffic volumes. In addition the accident analysis did not identify consistent accident patterns correctable by physical roadway or intersection improvements. The traffic volumes, accidents, and speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

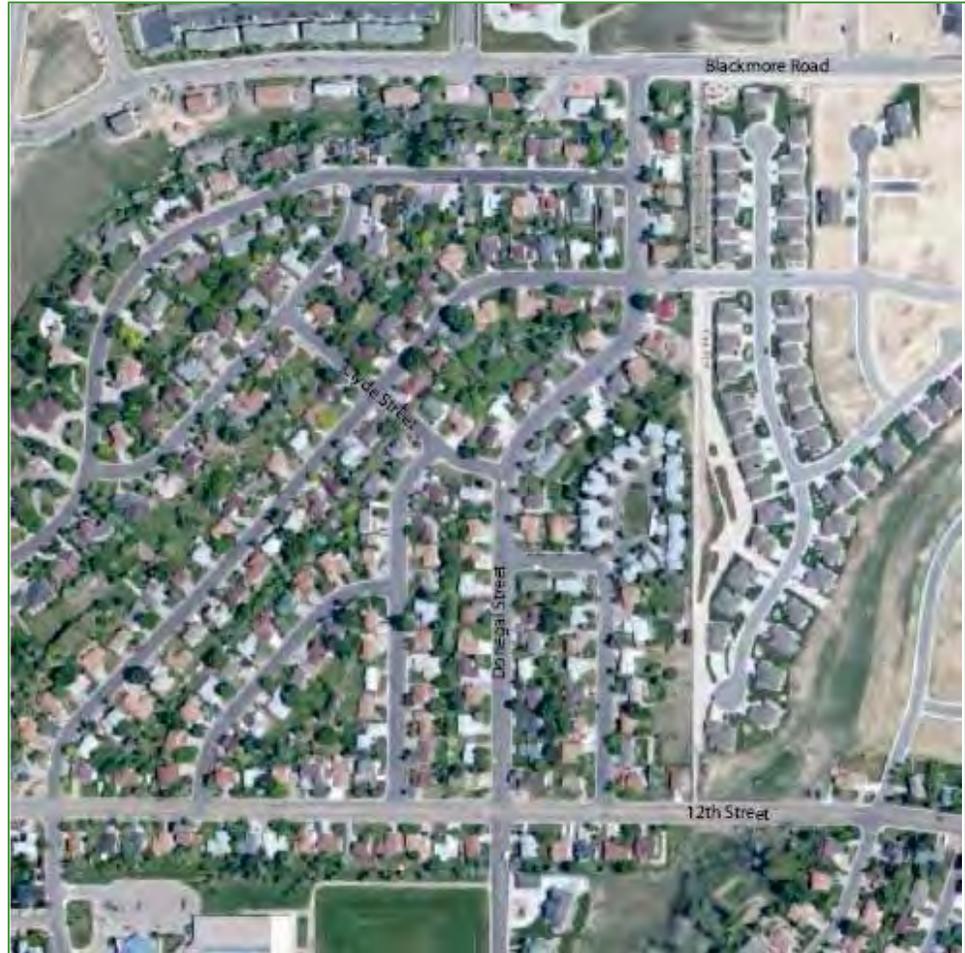
Buffered Bike Lane

This solution proposes to create a buffered bike lane by converting the existing parking lane to a bike lane and restriping the bike lane as a buffer. There is currently a bike lane on Blackmore Road.

DONEGAL STREET CORRIDOR

The information we heard regarding Donegal corridor is that the speeds are high, the traffic is noisy, intersection volumes block driveway access, and there is a lack of signage and a blind curve at Clyde Street.

FIGURE 43: DONEGAL STREET EXISTING CONDITION



Low Cost Solution: Continued Monitoring

This section of Donegal Street is classified as a local roadway. The volumes identified in the existing conditions analysis are consistent with local roadway traffic volumes. In addition the accident analysis did not identify consistent accident patterns correctable by physical roadway or intersection improvements. The traffic volumes, accidents, and speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost

Cons

- Does not address citizen concerns raised at public meeting

Low Cost Solution: Speed Feedback Signs

This solution proposes using permanent speed feedback signs on Donegal.

FIGURE 44: SPEED FEEDBACK SIGNS



Preliminary Cost Estimate

- Approximately \$30,000

Pros

- Provides immediate feedback about speed to travelers on the corridor

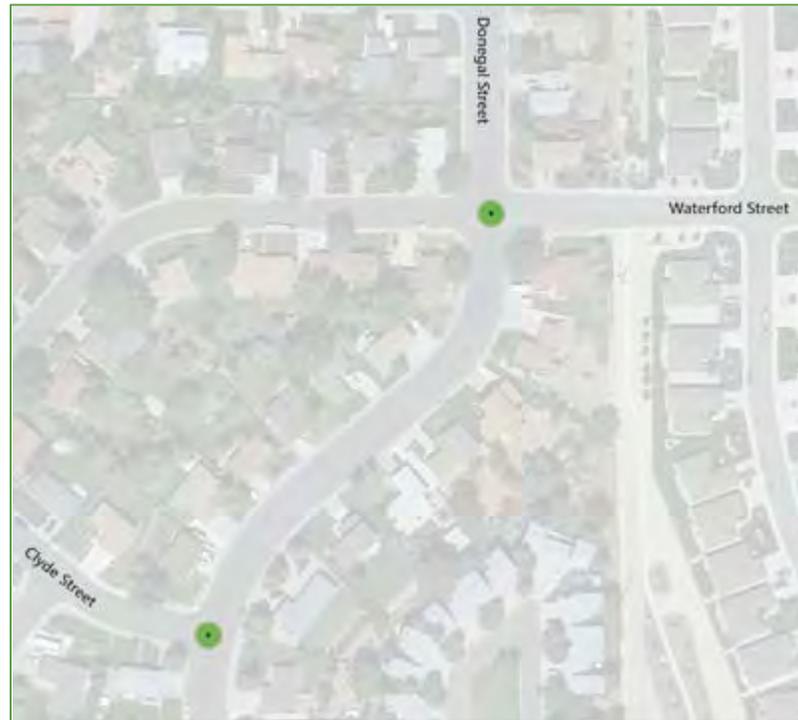
Cons

- Non-physical measures are not as effective as physical measures

Medium Cost Solution: Neighborhood Roundabouts

This solution proposes to install neighborhood roundabouts (traffic circles) at Donegal & Waterford and Donegal & 12th.

FIGURE 45: NEIGHBORHOOD ROUNDABOUTS



Preliminary Cost Estimate

- Approximately \$72,000

Pros

- Slows vehicles traveling through curve
- Opportunity for landscape enhancement
- Calms two streets at once

Cons

- Landscaping must be maintained
- May eliminate on-street parking
- Cost

Recommendation

Continued Monitoring and Temporary Speed Feedback Signs

This section of Donegal Street is classified as a local roadway. The volumes identified in the existing conditions analysis are consistent with local roadway traffic volumes. In addition the accident analysis did not identify consistent accident patterns correctable by physical roadway or intersection improvements. The traffic volumes, accidents, and speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

2ND STREET CORRIDOR

2nd Street is an arterial roadway that carries a high amount of traffic. It is a 5 lane (2 lanes each direction, center turn lane) roadway with shoulders. We heard that there are a lack of pedestrian facilities and limited vehicular progression. The options below are intended to increase the efficiency of the roadway in order to discourage cut-through traffic on Blackmore Road.

FIGURE 46: 2ND STREET EXISTING CONDITION



Medium Cost Solution: Improve Signal Timing

This option proposes analyzing signal timing operations through the corridor to make recommendations that improve signal timing.

FIGURE 47: 2ND STREET SIGNALS



Preliminary Cost Estimate

- Approximately \$50,000 to \$75,000 depending on required data collection and study area boundaries.

Pros

- Opportunity to enhance traffic flow through corridor
- More efficient travel on 2nd Street may prevent vehicles from cutting through on other roadways
- Potential to remove unwarranted signals

Cons

- Signals have already been installed
- Requires additional analysis

Medium Cost Solution: Access Control Study

This solution proposes reducing/restricting access points along 2nd Street. A corridor study should identify the access that is necessary as well as needed pedestrian facilities along the roadway.

FIGURE 48: ACCESS CONTROL



Preliminary Cost Estimate

- Approximately \$50,000 to \$75,000

Pros

- Fewer conflict points for pedestrians and for vehicles
- Improves traffic flow through corridor

Cons

- May cause longer routes for drivers
- Removing access is challenging
- Requires additional analysis

High Cost Solution: Continuous Sidewalks

This solution proposes continuous sidewalks to connect destinations along 2nd Street. Sidewalks are typically constructed as an area develops and the cost is undertaken by the adjacent property owners. Should the City want to construct sidewalks, a Local Assessment District (LAD) is one possible funding mechanism.

FIGURE 49: MISSING SIDEWALKS ALONG 2ND STREET



Preliminary Cost Estimate

- Approximately \$30/Linear Foot. Approximately \$471,000 to complete sidewalks from Wyoming Boulevard to Hat Six Road.

Pros

- Enhances pedestrian safety and comfort
- Supports transit use by providing pedestrian access to bus routes

Cons

- Potentially high implementation cost

Recommendation

Improve Signal Timing

This option proposes analyzing signal timing operations through the corridor to make recommendations that will reduce traffic congestion.

Access Control Study

This solution proposes reducing/restricting access points along 2nd Street. A corridor study should identify the access that is necessary as well as needed pedestrian facilities along the roadway.

Continuous Sidewalks

This solution proposes continuous sidewalks to connect destinations along 2nd Street.

21ST STREET CORRIDOR

We heard the concerns along 21st Street are motorist speed and that motorists tend to run the stop sign at Newport. The roadway is a two-lane facility (one lane in each direction) with bike lanes and parking. Additionally, should 21st Street be extended for new development, traffic calming strategies will be necessary to limit cut-through traffic. The traffic calming strategies described below will only be implemented if the roadway is extended. These recommendations can also be implemented on 12th Street if that corridor is extended as recommended in the roadway network plan.

FIGURE 50: 21ST STREET EXISTING CONDITION



Low Cost Solution: Continued Monitoring

There were no data available to determine whether speeding or non-compliance with Stop signs is occurring on 21st Street. The traffic volumes, accidents, and speed data on this corridor could be continually monitored to determine what level of improvements might be warranted.

Preliminary Cost Estimate

- Person hours for monitoring and evaluation

Pros

- Low cost

Cons

- Does not address citizen concerns raised at public meeting

Medium Cost Solution: Neighborhood Roundabouts

This solution proposes neighborhood roundabouts at key intersections along 21st Street. This option would only be implemented to minimize neighborhood impacts if 21st were extended to expand the roadway network.

FIGURE 51: NEIGHBORHOOD ROUNDABOUTS



Preliminary Cost Estimate

- Approximately \$180,000 (\$36,000 per neighborhood roundabout for 5 neighborhood roundabouts as shown in drawing above)

Pros

- Deflection slows vehicle speeds through the corridor
- Provides safer crossing for pedestrians

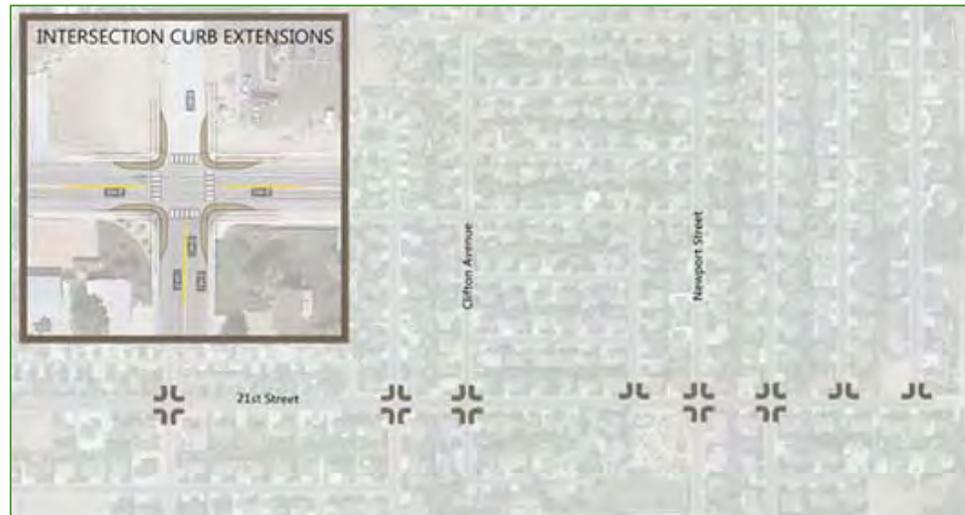
Cons

- May require land acquisition
- Expensive

High Cost Solution: Curb Extensions

This solution proposes implementing curb extensions at key intersections along 21st Street. This option would only be implemented to minimize neighborhood impacts if 21st were extended to expand the roadway network.

FIGURE 52: INTERSECTION NARROWING



Preliminary Cost Estimate

- Approximately \$326,000 (\$12,533/corner for 26 corners as shown in drawing above)

Pros

- Narrowing provides shorter pedestrian crossing distances
- Alerts drivers of potential pedestrian conflict
- Provides a traffic calming element

Cons

- Drainage/snow plowing considerations

High Cost Solution: Horizontal Deflection Combination

This solution proposes a combination of horizontal deflection traffic calming strategies, such as curb extensions and roundabouts. This option would only be implemented to minimize neighborhood impacts if 21st were extended to expand the roadway network.

FIGURE 53: HORIZONTAL DEFLECTION COMBINATION



Preliminary Cost Estimate

- Approximately \$298,000 (\$12,533/corner for 18 corners as shown in drawing above; \$36,000 per neighborhood roundabout for 2 neighborhood roundabouts as shown in drawing above)

Pros

- Deflection slows vehicle speeds
- Reduces “straight shot” perception for drivers

Cons

- May require land acquisition
- Drainage and snow plowing considerations
- Cost

Recommendation

Continued Monitoring

Continued monitoring is recommended until such time a problem is documented and/or when 21st Street is connected to the east. There were no data available to determine whether speeding or non-compliance with Stop signs is occurring on 21st Street. The traffic volumes, accidents, and speed data on this corridor could be continually monitored to determine what level of improvements might be warranted. Portable speed feedback signs can be implemented at a low cost.

COUNTRY CLUB ROAD CORRIDOR

The Country Club Corridor is a paved roadway with no curb and gutter or sidewalks. It provides access to the Country Club as well as homes located on Ardon Lane, which is a private road. Country Club Road is under county jurisdiction.

FIGURE 54: COUNTRY CLUB ROAD EXISTING CONDITION



Low Cost Solution: Maintain Status as Public Roadway

Preliminary Cost Estimate

- Current maintenance costs

Pros

- No additional cost
- If designated a Private Roadway, access to Wyoming Boulevard may be compromised
- Provides for connectivity

Cons

- Continued cost to County
- Does not bring roadway up to collector standards

Low Cost Solution: Continued Maintenance

Preliminary Cost Estimate

- Annual maintenance costs currently being spent by Natrona County

Pros

- No additional cost

Cons

- Does not bring roadway up to collector standards

High Cost Solution: Bring Roadway to Collector Standards

Preliminary Cost Estimate

- Estimated over \$250,000

Pros

- Roadway up to collector standards
- Maintains status as a public roadway
- Could be funded by development

Cons

- High Cost

Recommendation

It is recommended that Country Club Road remain a public roadway to maintain connectivity in this area and maintain connection to Wyoming Boulevard.

- Maintain Status as Public Roadway
- Continued Maintenance
- Eventually bring roadway to Collector Standards

Appendices

Appendix A: Committee Keypad Polling Results

Appendix B: Committee Survey Results

Appendix C: Community Recommendation Preferences

Appendix D: Community Survey Results

Appendix E: Traffic Calming Toolbox

Appendix F: Planning Urban Roadway Systems

Appendix G: Planning Cost Estimates for Proposed Solutions

Appendix A

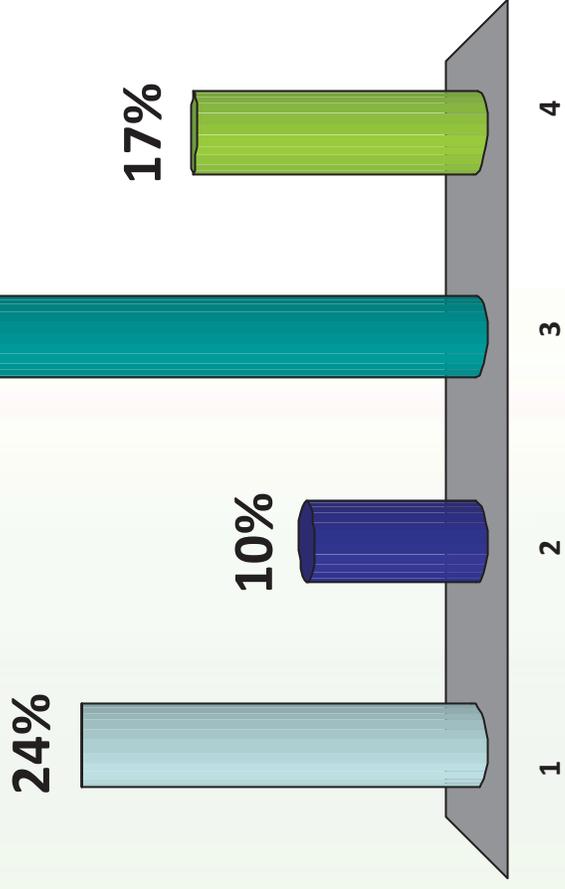
COMMITTEE KEYPAD POLLING RESULTS

DRAFT

Which is a higher concern for traffic in the Blackmore Road Sub Area?

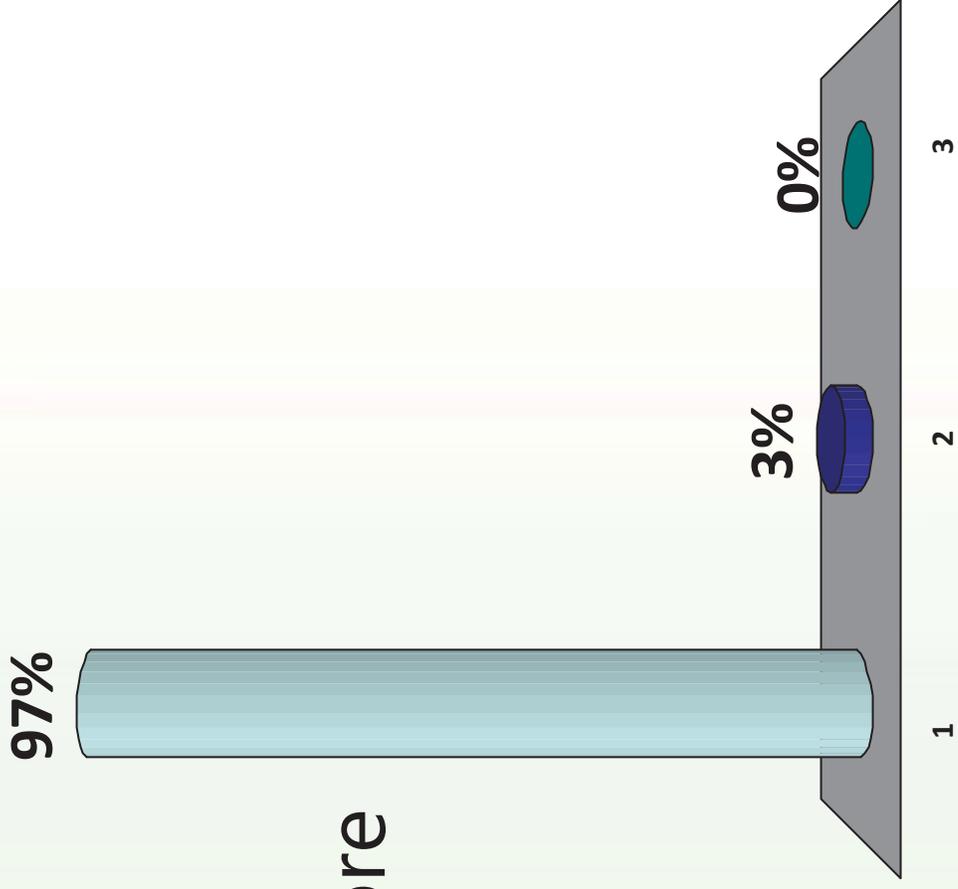


1. Traffic Volumes
2. Traffic Speeds
3. Both
4. Neither



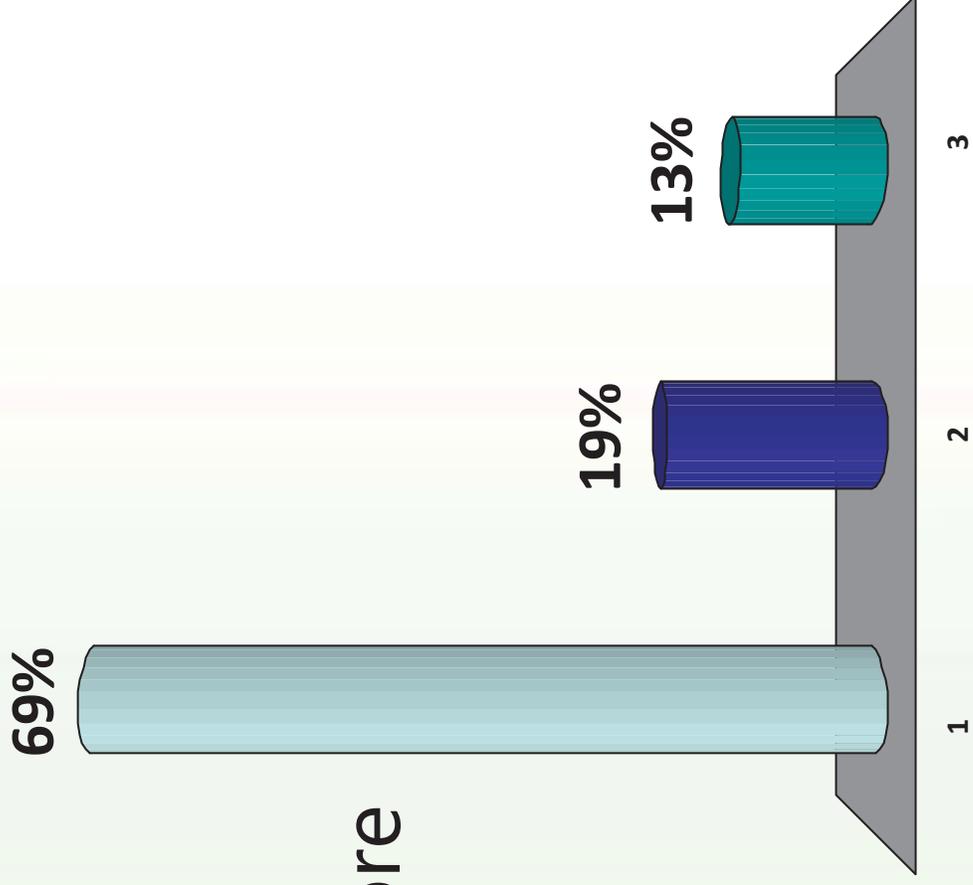
Should **Non Physical Measures** be included in the traffic calming toolbox?

1. Yes
2. No
3. Maybe, I need more information



Should Raised Crosswalks be included in the traffic calming toolbox?

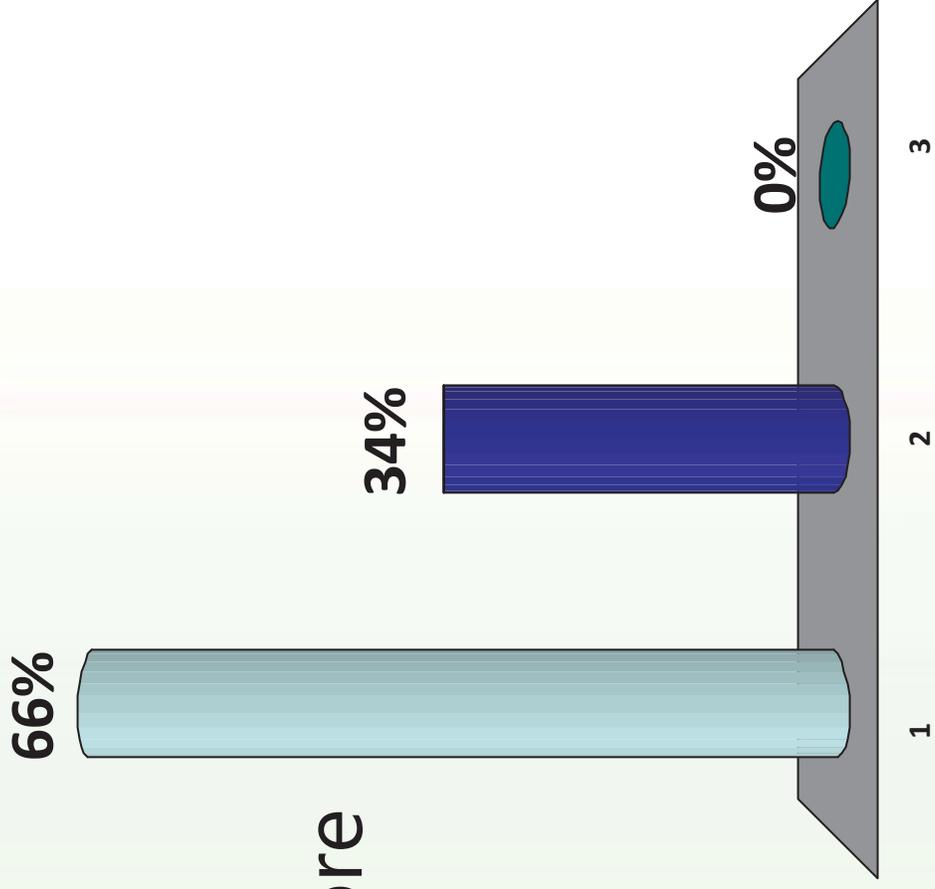
1. Yes
2. No
3. Maybe, I need more information



Should **Center Island Narrowings** be included in the traffic calming toolbox?

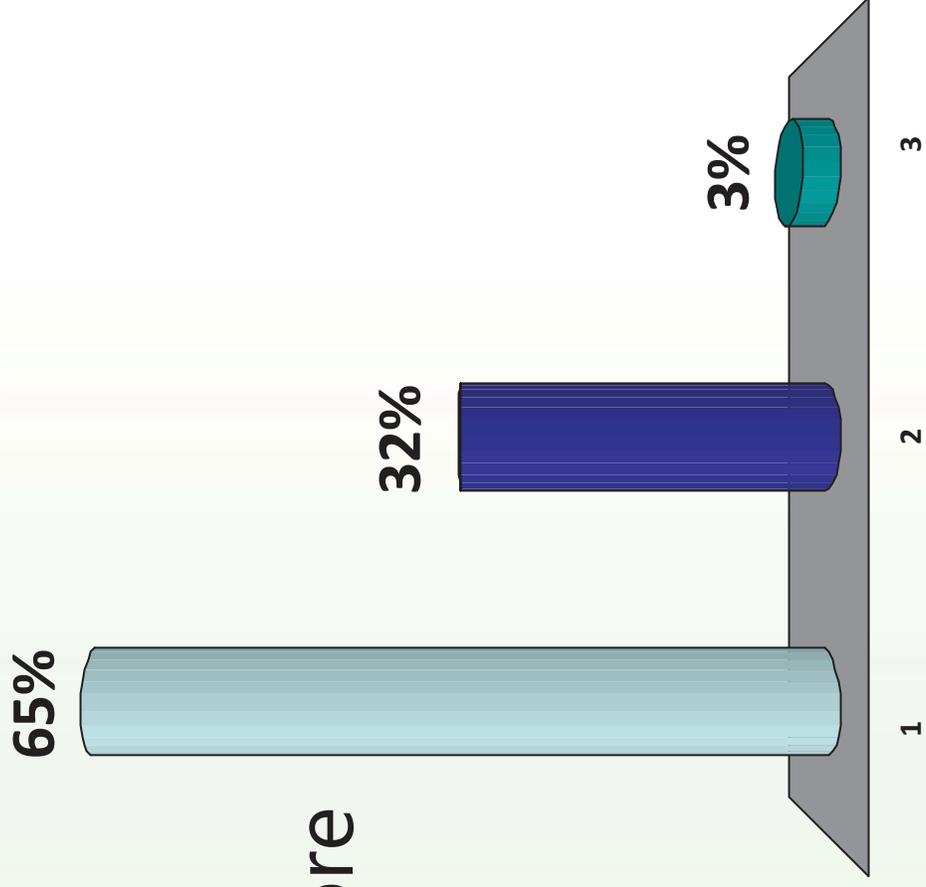


1. Yes
2. No
3. Maybe, I need more information



Should Roundabouts be included in the traffic calming toolbox?

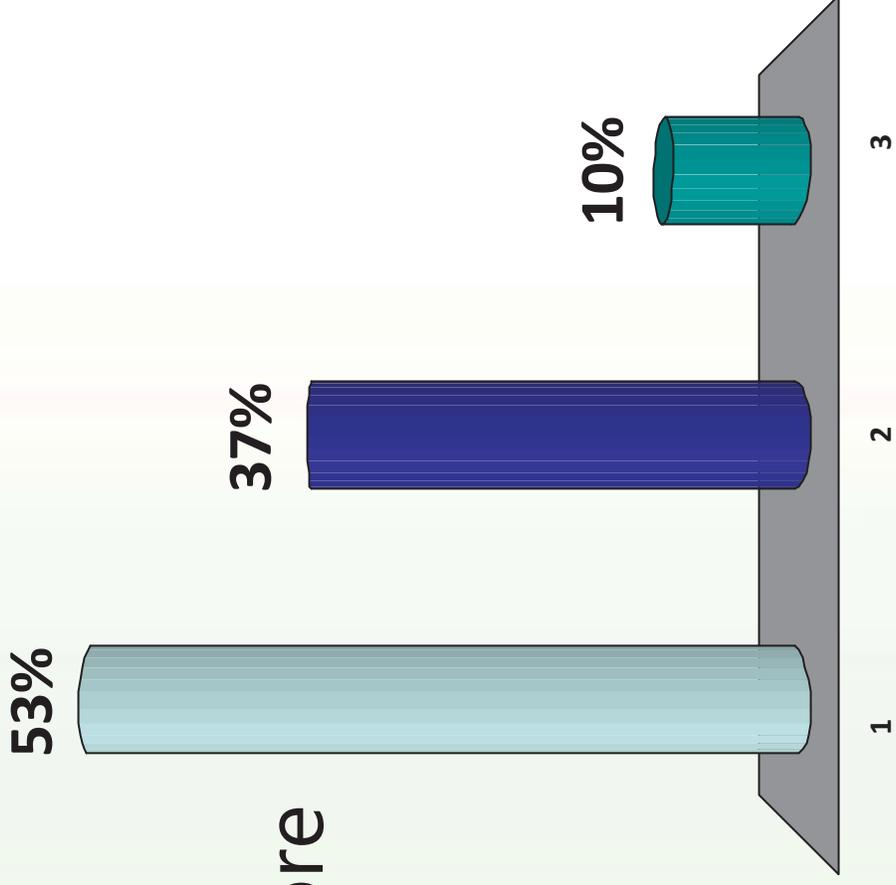
1. Yes
2. No
3. Maybe, I need more information



Should Median Barriers be included in the traffic calming toolbox?

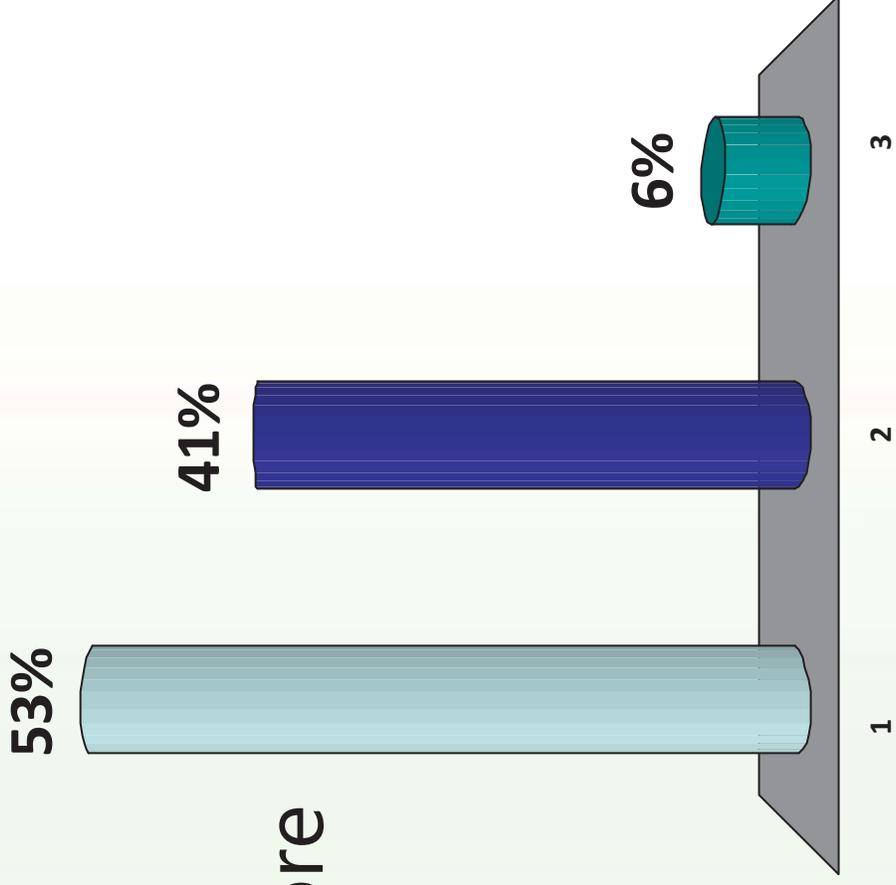


1. Yes
2. No
3. Maybe, I need more information



Should **Neckdowns** be included in the traffic calming toolbox?

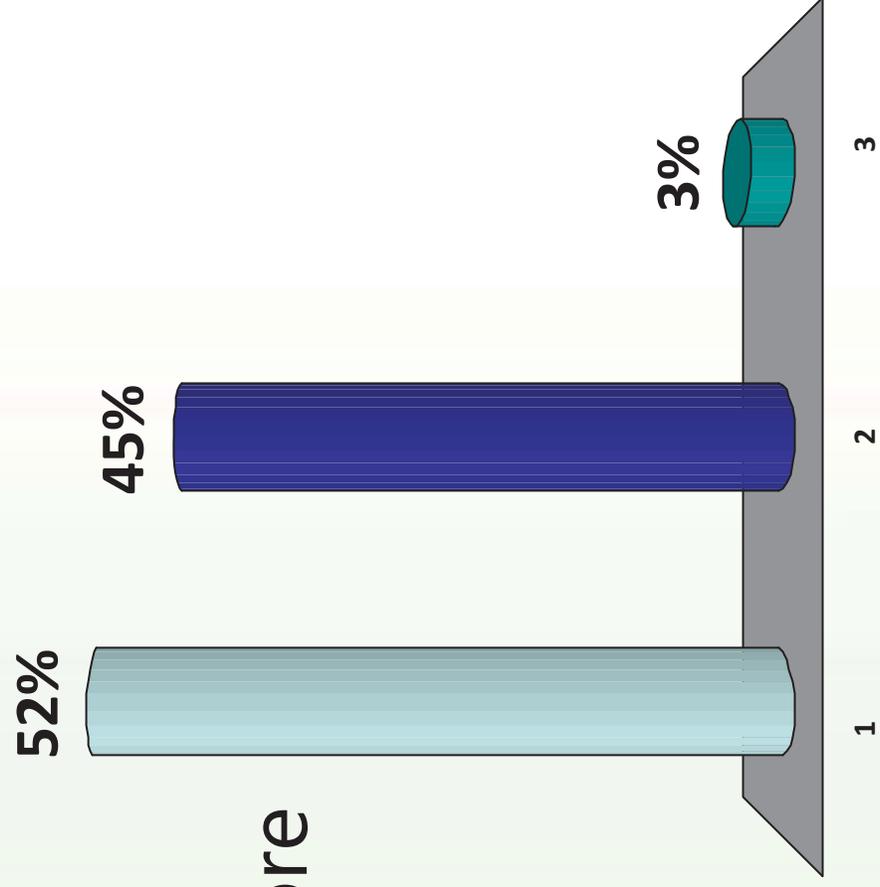
1. Yes
2. No
3. Maybe, I need more information



Should **Chokers** be included in the traffic calming toolbox?



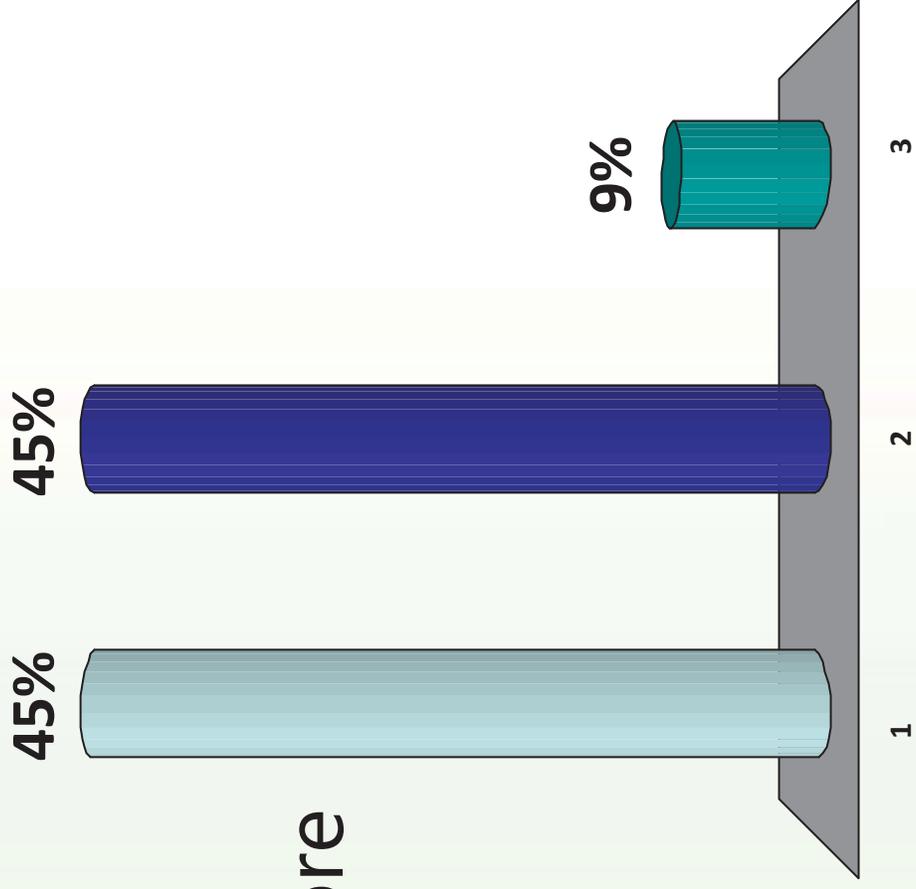
1. Yes
2. No
3. Maybe, I need more information



Should **Traffic Circles** be included in the traffic calming toolbox?



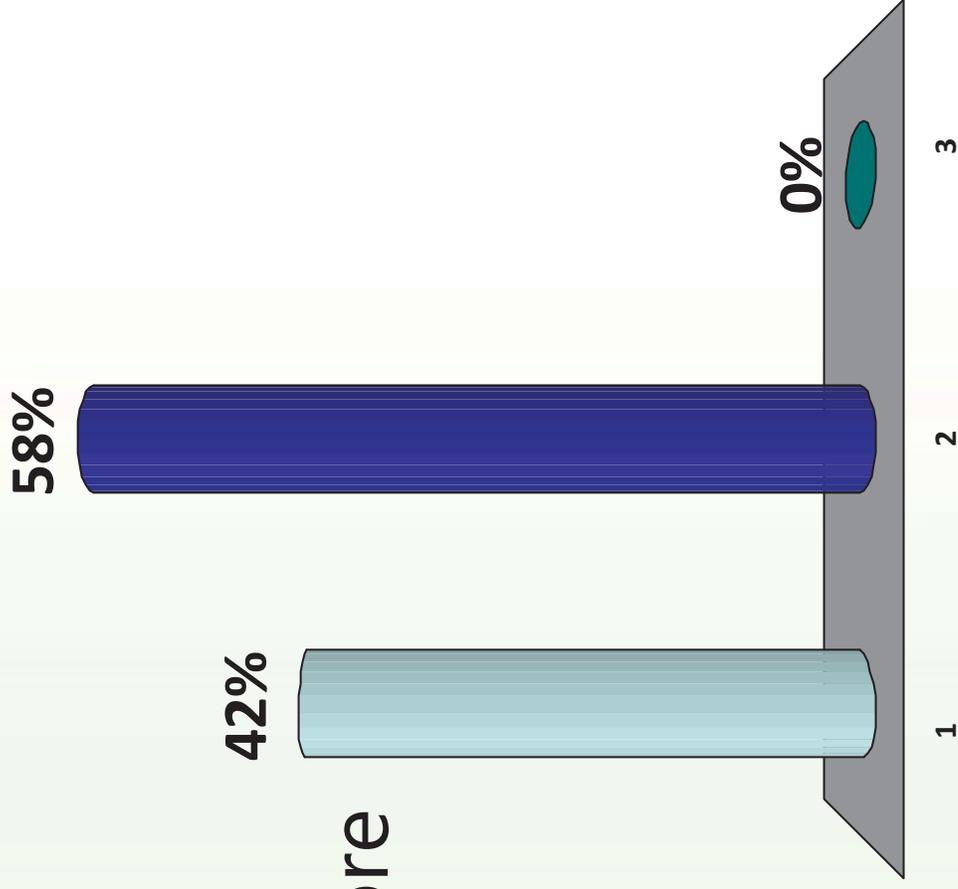
1. Yes
2. No
3. Maybe, I need more information



Should **Chicanes** be included in the traffic calming toolbox?



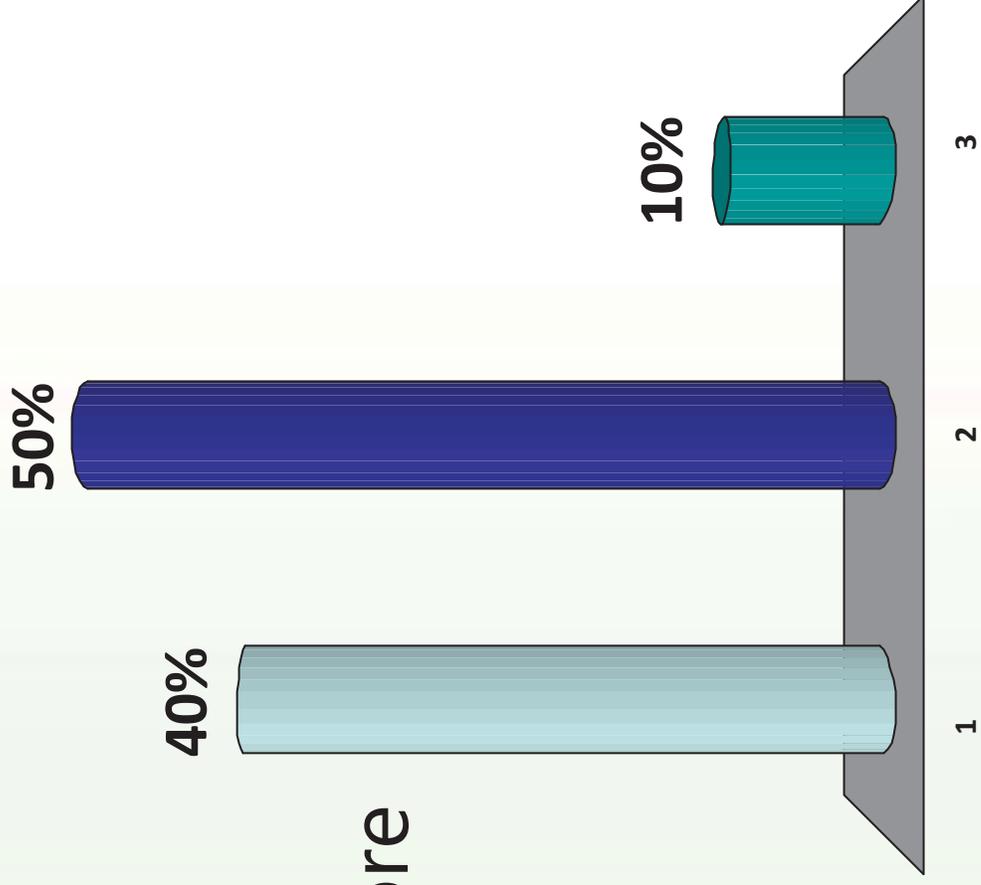
1. Yes
2. No
3. Maybe, I need more information



Should **Speed Tables** be included in the traffic calming toolbox?

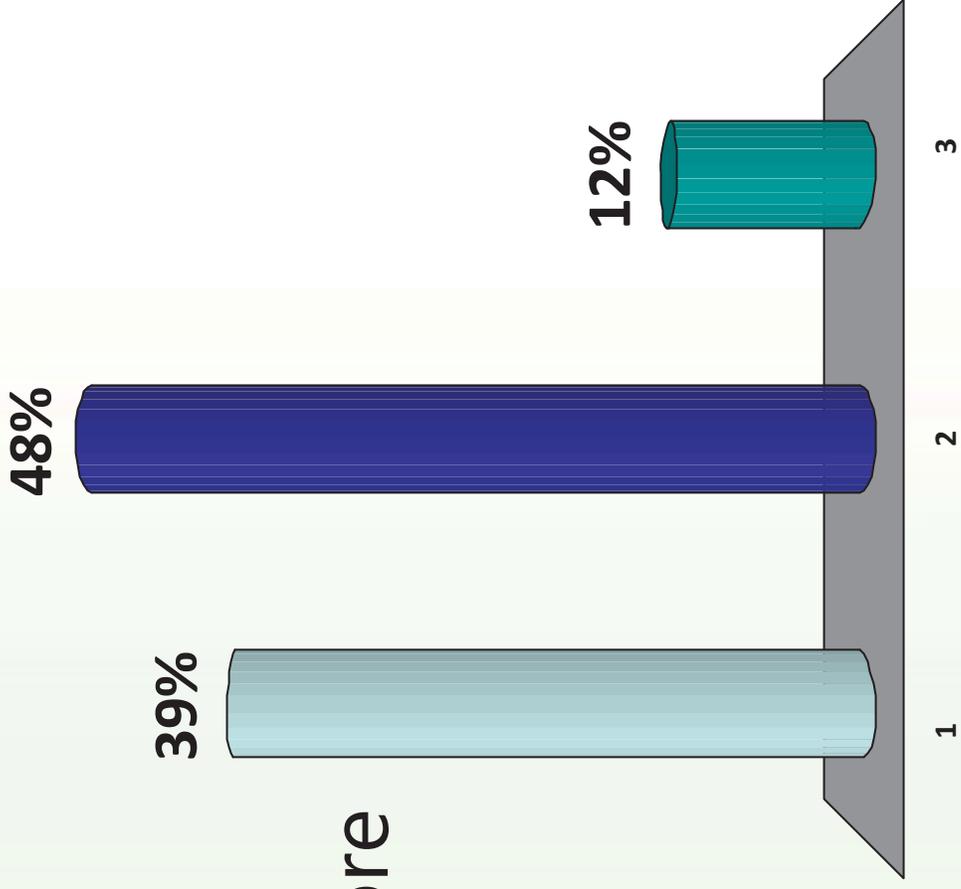


1. Yes
2. No
3. Maybe, I need more information



Should Raised Intersections be included in the traffic calming toolbox?

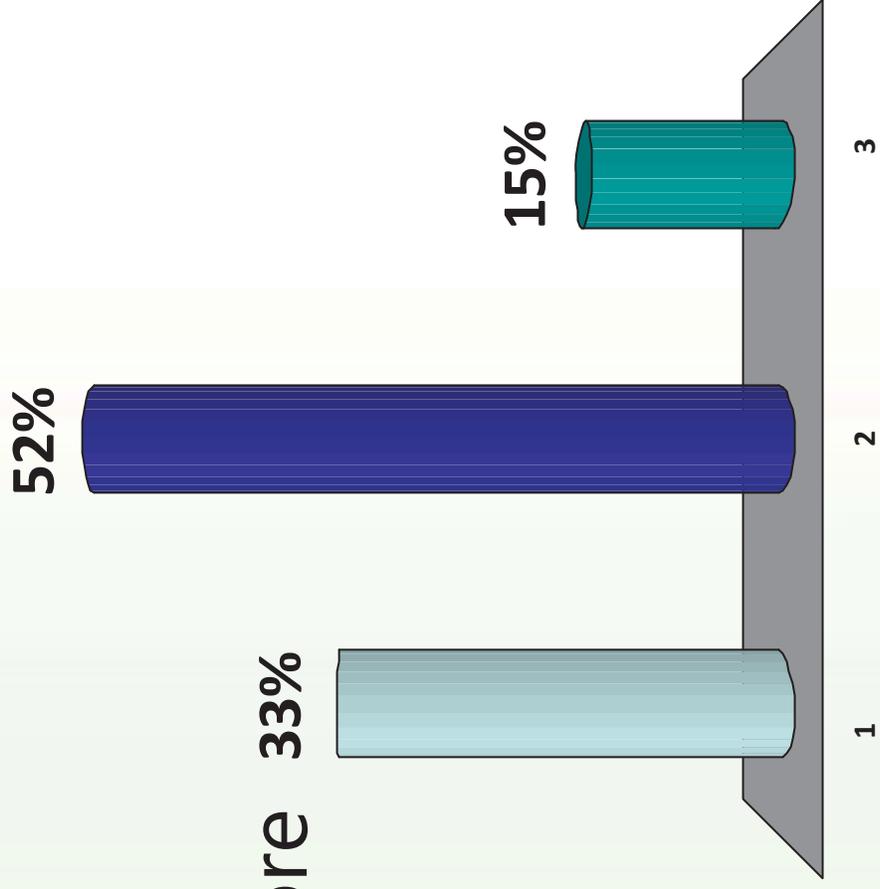
1. Yes
2. No
3. Maybe, I need more information



Should **Half Closures** be included in the traffic calming toolbox?



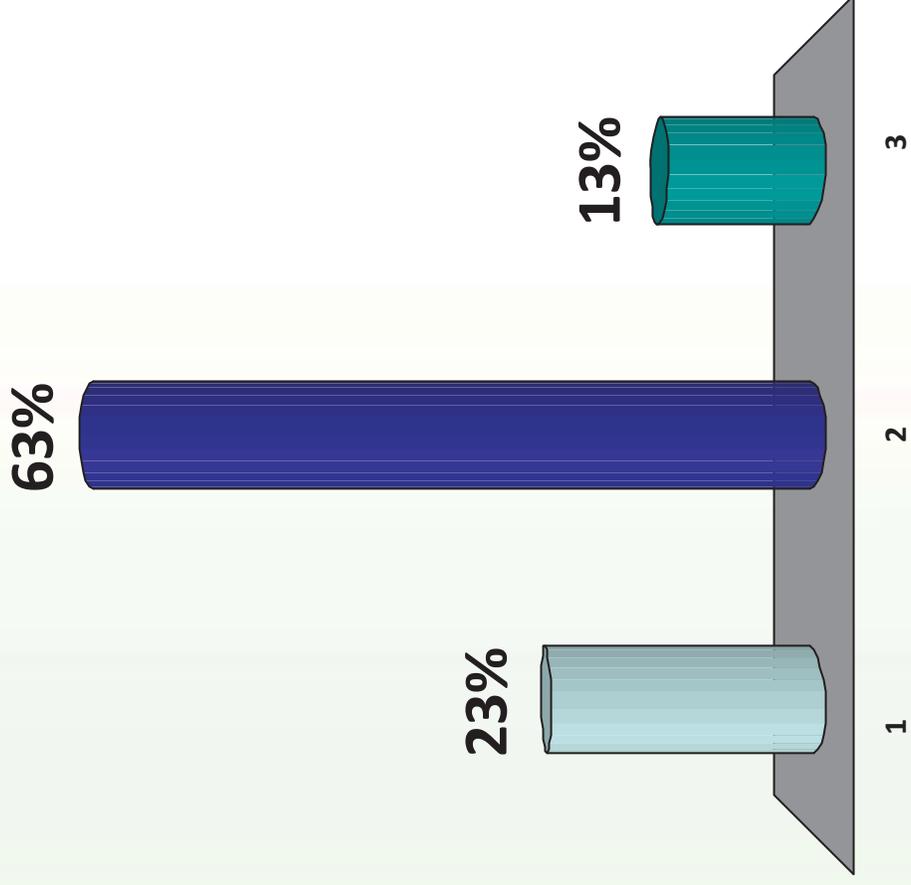
1. Yes
2. No
3. Maybe, I need more information



Should **Speed Humps** be included in the traffic calming toolbox?

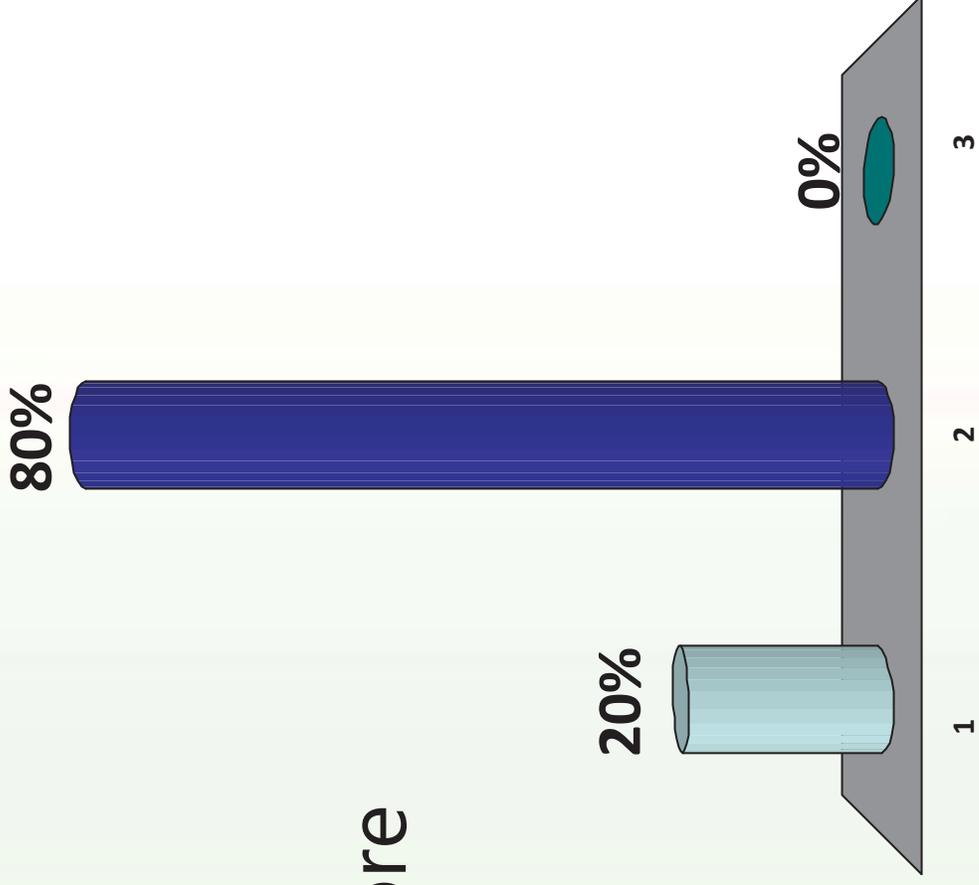


1. Yes
2. No
3. Maybe, I need more information



Should **Full Closures** be included in the traffic calming toolbox?

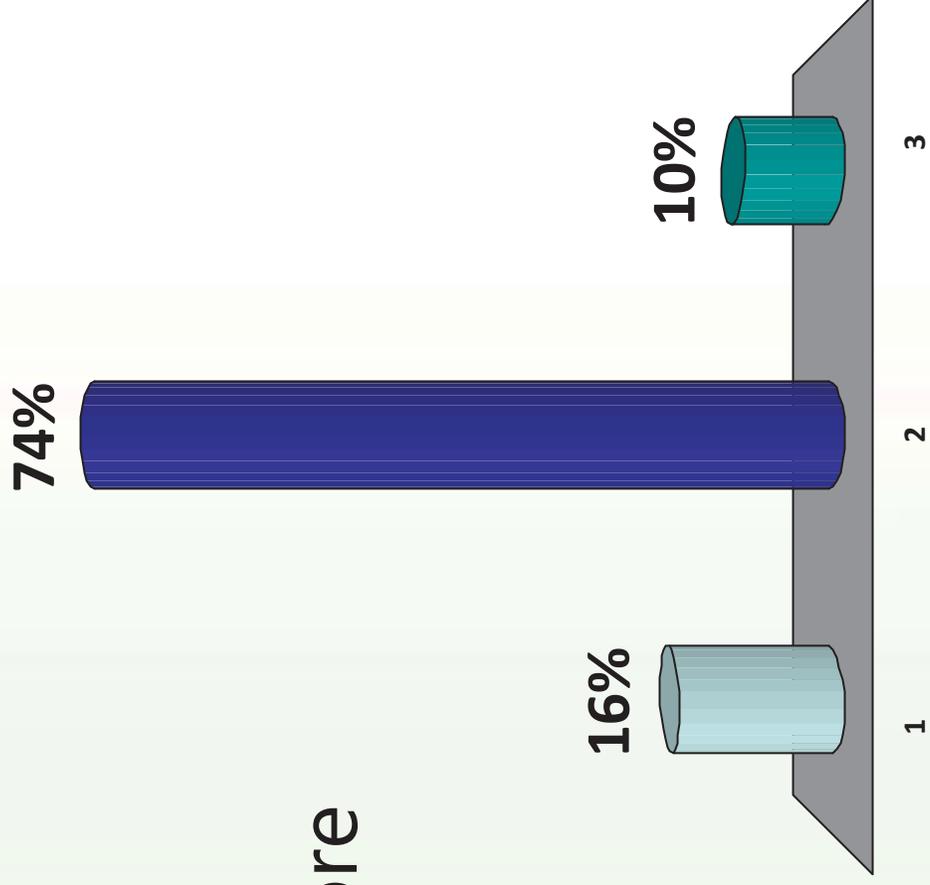
1. Yes
2. No
3. Maybe, I need more information



Should Diagonal Diverters be included in the traffic calming toolbox?



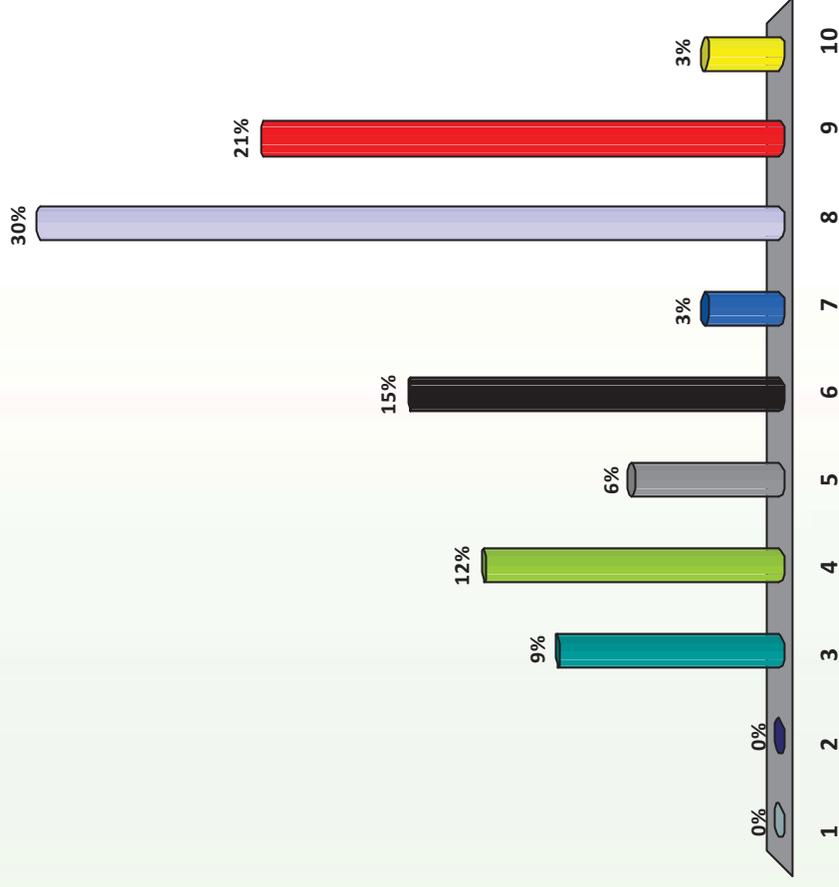
1. Yes
2. No
3. Maybe, I need more information



Select three **speed** control measures **most** appropriate for the study area



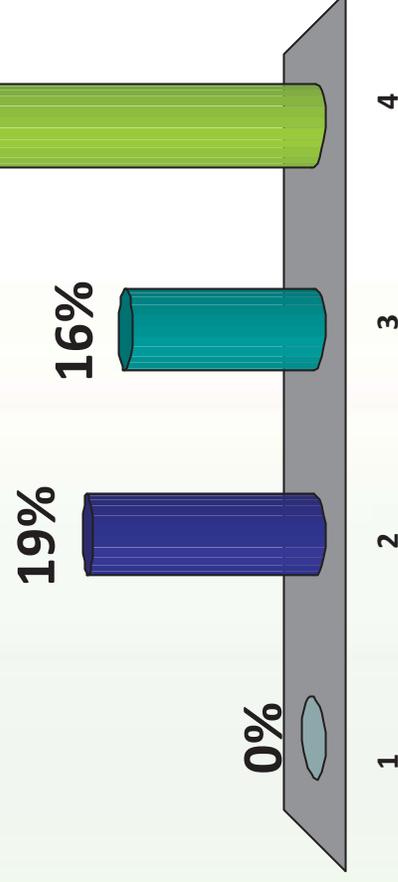
1. Speed Humps
2. Speed Tables
3. Raised Crosswalks
4. Raised Intersections
5. Traffic Circles
6. Roundabouts
7. Chicanes
8. Neckdowns
9. Center Island Narrowings
10. Chokers



Select three **volume** control measures **most** appropriate for the study area



1. Full Closures
2. Half Closures
3. Diagonal Diverters
4. Median Barriers



Appendix B

COMMUNITY SURVEY RESULTS

DRAFT

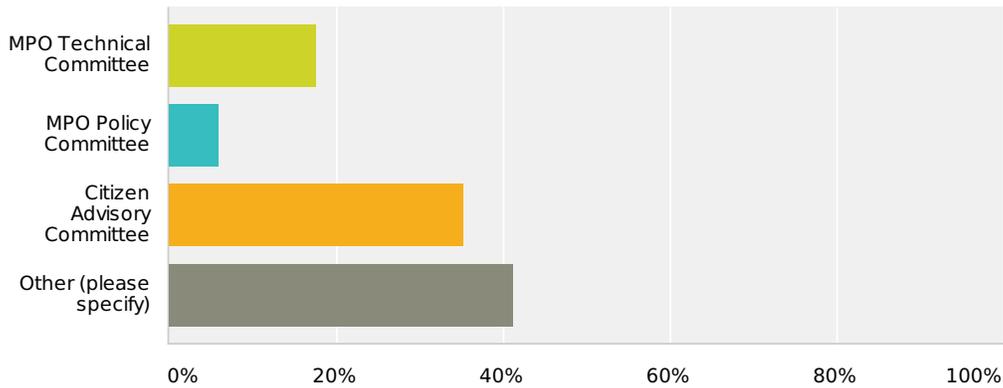
Q1 What is your name?

Answered: 34 Skipped: 0

#	Responses	Date
1	Andrew Beamer	2/21/2013 2:36 PM
2	Sally Kerpchar	2/11/2013 1:06 PM
3	T. Gene Smith	2/10/2013 6:32 AM
4	K	2/8/2013 3:24 PM
5	Todd Shugart	2/8/2013 3:14 PM
6	Dale Brown	2/8/2013 6:36 AM
7	Richard Bratton	2/8/2013 6:11 AM
8	LaWanda Cogdill	2/8/2013 5:22 AM
9	Bill Knickerbocker	2/7/2013 8:38 PM
10	Bill McDowell	2/7/2013 2:53 PM
11	Stephenson Dow Emery	2/7/2013 2:21 PM
12	Keith Tyler	2/7/2013 12:45 PM
13	David Hough	2/7/2013 12:02 PM
14	Liz Hepp	2/7/2013 9:52 AM
15	Paul Bertoglio	2/7/2013 9:50 AM
16	Mike Huston	2/5/2013 12:28 PM
17	Kristi Desch	2/5/2013 9:53 AM
18	Kale Prewitt	2/5/2013 8:04 AM
19	Kent	2/4/2013 6:58 PM
20	Andy McLanahan	2/4/2013 4:35 PM
21	Steve Loftin	2/4/2013 4:32 PM
22	Chad Aagard	2/4/2013 1:42 PM
23	Michael D. Haigler	2/4/2013 1:03 PM
24	Carol Crump	2/4/2013 12:29 PM
25	Marge Cole	2/4/2013 10:05 AM
26	Michael Reid	2/4/2013 9:43 AM
27	Jeff Purdy	2/4/2013 9:33 AM
28	Scott Radden	2/4/2013 8:51 AM
29	Mike Johnson	2/4/2013 8:51 AM
30	Randall Hall	2/4/2013 8:49 AM
31	Josh Brown	2/4/2013 8:42 AM
32	Deborah Shugart	2/4/2013 8:38 AM
33	Craig Collins	2/4/2013 8:31 AM
34	Molly Veldkamp	2/1/2013 3:21 PM

Q2 What organization are you a part of?

Answered: 34 Skipped: 0



Answer Choices	Responses
MPO Technical Committee	17.65% 6
MPO Policy Committee	5.88% 2
Citizen Advisory Committee	35.29% 12
Other (please specify)	41.18% 14
Total	34

#	Other (please specify)	Date
1	MPO	2/11/2013 1:06 PM
2	Developer	2/8/2013 6:11 AM
3	Developer	2/7/2013 12:45 PM
4	City Staff	2/7/2013 9:52 AM
5	City Council	2/7/2013 9:50 AM
6	City of Casper	2/5/2013 8:04 AM
7	None	2/4/2013 6:58 PM
8	Concerned Citizen	2/4/2013 4:35 PM
9	FHWA Representative	2/4/2013 9:33 AM
10	Town of Evansville	2/4/2013 8:51 AM
11	Neighborhood resident trying to get access on Blackmore from Donegal	2/4/2013 8:51 AM
12	Developer	2/4/2013 8:49 AM
13	City of Casper Staff	2/4/2013 8:31 AM
14	Fehr & Peers	2/1/2013 3:21 PM

Q3 What is your email address?

Answered: 34 Skipped: 0

#	Responses	Date
1	abeamer@cityofcasperwy.com	2/21/2013 2:36 PM
2	skerpchar@casperwy.gov	2/11/2013 1:06 PM
3	6113 coronado drive	2/10/2013 6:32 AM
4	as;ldkgh	2/8/2013 3:24 PM
5	todd.shugart@usdoj.gov	2/8/2013 3:14 PM
6	publicworks1@evansville.com	2/8/2013 6:36 AM
7	dbratton@mcmurry.net	2/8/2013 6:11 AM
8	slcogdill@yahoo.com	2/8/2013 5:22 AM
9	bill_knickerbocker@hotmail.com	2/7/2013 8:38 PM
10	Wlmcowell@bresnan.net	2/7/2013 2:53 PM
11	P.O. Box 10700	2/7/2013 2:21 PM
12	keithpt@earthlink.net	2/7/2013 12:45 PM
13	dhough@cityofcasperwy.com	2/7/2013 12:02 PM
14	lhepp@cityofcasperwy.com	2/7/2013 9:52 AM
15	paulb@tribcsp.com	2/7/2013 9:50 AM
16	rmh56@aol.com	2/5/2013 12:28 PM
17	Kristi.Desch@wyo.gov	2/5/2013 9:53 AM
18	kprewitt@cityofcasperwy.com	2/5/2013 8:04 AM
19	kdkatz@earthlink.com	2/4/2013 6:58 PM
20	andymhele@aol.com	2/4/2013 4:35 PM
21	steve@71construction.com	2/4/2013 4:32 PM
22	chad.aagard@wyo.gov	2/4/2013 1:42 PM
23	mikeh@bresnan.net	2/4/2013 1:03 PM
24	ccrump@tribcsp.com	2/4/2013 12:29 PM
25	marge@catcbus.com	2/4/2013 10:05 AM
26	mreid9463@msn.com	2/4/2013 9:43 AM
27	jeffrey.purdy@dot.gov	2/4/2013 9:33 AM
28	sradden@wlcwyo.com	2/4/2013 8:51 AM
29	mikejo@johnsonmapping.com	2/4/2013 8:51 AM
30	rshall@ccim.net	2/4/2013 8:49 AM
31	ralphierunner@yahoo.com	2/4/2013 8:42 AM
32	dshugart@bresnan.net	2/4/2013 8:38 AM
33	ccollins@cityofcasperwy.com	2/4/2013 8:31 AM
34	m.veldkamp@fehrandpeers.com	2/1/2013 3:21 PM

Q4 Are there locations that you feel are missing from this map? If so, please list locations and concerns below. Please note that the issues for each location are summarized on the following pages. You will have the opportunity to provide comments for each location identified here.

Answered: 8 Skipped: 26

#	Responses	Date
1	Venture Way Stop Light and the intersection of Murado and Colisium Way connecting to 21st street.	2/10/2013 6:35 AM
2	20/26	2/8/2013 6:37 AM
3	Extend 12th Street East across Elkhorn Creek to have additional access for the Highland Park Church area.	2/8/2013 6:13 AM
4	I heard comments at the open house on pedestrian access to the Eastridge Mall, particularly at the north side access from E. 2nd Street.	2/7/2013 12:05 PM
5	I'm not sure the #6 Donegal Street location is correct. I believe most concerns are near the Donegal & Blackmore intersection. Maybe that is what #1 is indicating.	2/5/2013 8:07 AM
6	This map is difficult to read. Please substitute one with better contrast and accurate labels, including WY Blvd	2/4/2013 7:02 PM
7	Intersection at Second St. and the entrance to Target or Sams Club. Pedestrian Safety!! No sidewalks.	2/4/2013 4:38 PM
8	The location circle #6 for Donegal Street is VERY WRONG, and that's my point of concern. I hope that misplacement is not an indication of your lack of interest in that corner.	2/4/2013 9:00 AM

Q5 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 3 Skipped: 31

#	Responses	Date
1	Activating the light at Newport and Blackmore would slow traffic and that is an additional option for neighborhood residents to use to avoid this intersection. They can also use 12th, Centennial Hills and 21st for access or vacating Eastgate.	2/8/2013 6:24 AM
2	Roundabouts are awesome on low traffic streets, I would not put a roundabout on a major street or a street that has any heavy truck traffic.	2/7/2013 8:46 PM
3	IF Blackmore and Donegal were signal controlled like Blackmore and Landmark, then I would get a "fair turn" opportunity, when the light was green for Dongal. But as it is, making a left turn from Donegal to go west on Blackmore at the high traffic periods of the day, is very furstrating with all of the straight thru traffic from both directions charging past that intersection. I would say that it is NOT just trucks that are using Blackmore to avoid 2nd and WY.Blvd, but everyone going south on WY.Blvd, that intends to go east on 2nd, to reach the shopping, hospital, medical offices, Highland Park Church or I-25 via Hat 6.	2/4/2013 9:41 AM

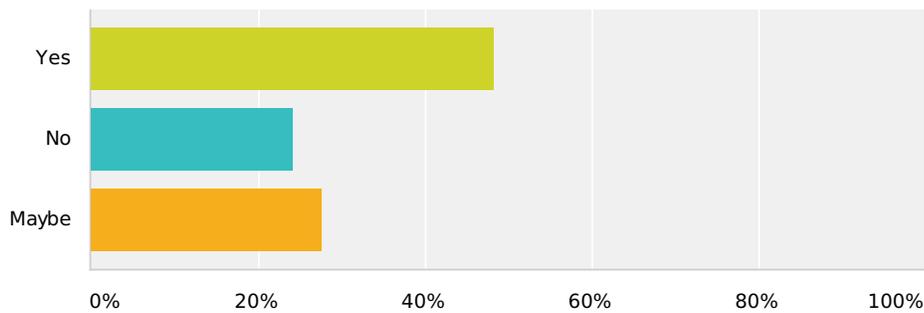
Q6 Option 1A - Roundabouts Option 1A proposes replacing the existing traffic control at Donegal, Landmark, and Newport intersections along Blackmore Road with roundabouts. We suggest for consideration that all three intersections be considered for reconfiguration to meet driver expectation along the corridor.

PROS Even out traffic flow through a corridor and limit the “platoon” effect that can result from traffic signals Promote lower overall travel speed along the corridor Trucks tend to avoid corridors with roundabouts Can minimize queuing on approaches Will reduce delay of left turning traffic from Donegal onto Blackmore Road Roundabouts are inherently safer intersections Eliminates driver noncompliance issues at intersections that do not warrant signals Reduces vehicle emissions and noise associated with idling vehicles Single lane roundabouts have excellent pedestrian safety records Idea was generated by the community Maintenance costs of roundabout intersections tend to be lower than signalized intersections A mini roundabout could potentially fit within existing footprint

CONS Potentially a larger footprint than existing intersections if full roundabout Based upon the development along the corridor, the roundabout at Donegal would likely have to be constructed to encroach on the property on the north side of the existing intersections Significant cost to execute Is this option acceptable to share with the community?

Answered: 29 Skipped: 5

Blackmore Road Proposed Options



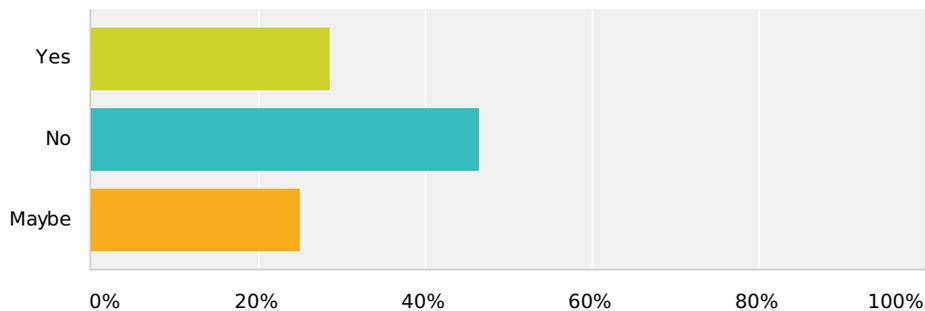
Answer Choices	Responses	
Yes	48.28%	14
No	24.14%	7
Maybe	27.59%	8
Total		29

Please elaborate (14)

#	Please elaborate	Date
1	Maybe at Donegal, but the signals at Landmark and Newport, if activated, would also slow traffic and discourage truck traffic and thru traffic.	2/8/2013 6:24 AM
2	Inside a subdivision roundabouts work great, they allow traffic to flow freely and keep speeds low while allowing traffic to continue to flow at a good rate.	2/7/2013 8:46 PM
3	roundabouts were noted as an acceptable option by many at the open house	2/7/2013 12:16 PM
4	Now that there are active signals at Landmark and Newport, I'm not convinced that there's a traffic problem at these two intersections. There are multiple ways in and out of these neighborhoods.	2/7/2013 11:01 AM
5	What data is available regarding traffic volume on the mentioned streets.	2/5/2013 12:59 PM
6	The property owner at the SW corner of the Donegal & Blackmore intersection expressed an interest to sell their property at a fair, appraised market value, if it meant it would assist the project. This occurred at the Open House at the Eastridge Mall. I could put you in touch with them if needed.	2/5/2013 8:27 AM
7	Mini roundabout won't fit and won't work (already too much traffic), Traffic Engineers like roundabouts, people in Casper don't, CATC drops people off on SE corner, and crossing Blackmore to get to CHC near the roundabout will be confusing (not knowing if car is exiting or continuing), two roundabouts within 190 feet of each other is very confusing and frustrating (aggravated more by Lt turns into Reliant Federal between the two). More than likely, will require two private residences to give up most of their front yard, destroying their property values.	2/4/2013 8:39 PM
8	I just don't think a roundabout would solve the problem at rush hour. Plus that intersection will just receive more traffic with the future development.	2/4/2013 4:56 PM
9	This is on the City system. Keeping truck traffic off of Blackmore is fine, but I would still consider this sturdy a failure if efforts to calm Blackmore push traffic to 2nd and Wyoming Blvd. Pushing more traffic to 2nd street between Wyoming Blvd and Blackmore would not be a good solution either.	2/4/2013 2:04 PM
10	The public needs to see the options available	2/4/2013 1:24 PM
11	Identify the potential costs and funding sources to fund roundabouts.	2/4/2013 1:06 PM
12	You would need to condemn the landowners on both sides of Donegal at the intersection, to have adequate room.	2/4/2013 9:41 AM
13	Roundabouts can work effectively. However, they are expensive and create a larger footprint. Also, they could potentially create dangerous situations for traffic coming out of parking lots near the roundabout locations.	2/4/2013 9:11 AM
14	Great idea, however, many drivers do not know how to properly navigate a Roundabout.	2/4/2013 8:45 AM

Q7 Option 1B - Continuous Flow, T-Intersection Option 1B proposes a median to provide the opportunity for left turns from Donegal to Blackmore and from Blackmore onto Donegal. Left-turns into and out of the Community Health Center Drive would be prohibited. PROS Makes left-turns from Donegal to Blackmore easier Provides a refuge for pedestrians crossing Blackmore Road Narrows the travel way within the road, creating a calming effect for Blackmore Road May detour truck traffic if median is wide enough Allows residents and visitor to access the neighborhood from Blackmore Road CONS Limits access in and out of the Community Health Center access on Blackmore to right-turns only Is this option acceptable to share with the community?

Answered: 28 Skipped: 6



Answer Choices	Responses
Yes	28.57% 8
No	46.43% 13
Maybe	25% 7
Total	28

Please Elaborate (14)

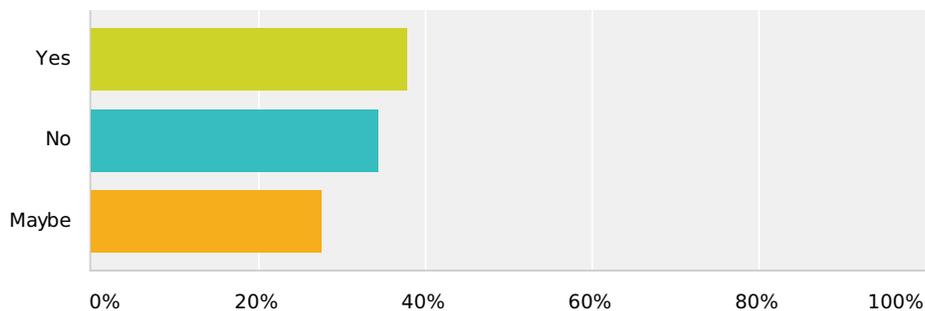
#	Please Elaborate	Date
1	Eastgate has many egress options. Community Health has very limited access and you would be taking one away.	2/8/2013 6:24 AM
2	My sense is that the space for turning is too tight and problems will arise when motorists don't stay in their lane.	2/7/2013 12:16 PM

Blackmore Road Proposed Options

#	Please Elaborate	Date
3	See my previous answer. It is unacceptable to impose restrictions on an existing business. Community Health was already required to extend its access to the north and Mick McMurry has, at his own expense, constructed access to CH from Landmark. Traffic from Donegal could be routed north to this new access avoiding Landmark and avoiding having to wait to make turns onto Blackmore Road.	2/7/2013 11:01 AM
4	Vast majority of traffic into CHC will be coming from the west and will have difficulty getting into the facility	2/7/2013 10:22 AM
5	How would traffic from Donegal access Blackmore safely?	2/5/2013 12:59 PM
6	Once again, the homeowner at the SW corner of Donegal & Blackmore would be interested in talking about selling their property. I like this option, but I'm not sure it will still be easy for traffic to turn left from Donegal with the amount of traffic flow heading east on Blackmore.	2/5/2013 8:27 AM
7	The devil is in the details, specifically how long are the Lt turn/merge lanes.	2/4/2013 8:39 PM
8	No change from what we have now except for traffic flow out of the Health Center. Plus another problem for snow removal.	2/4/2013 4:56 PM
9	How is snow removal around this structure and what kind of issues does it create for drainage? What kind of driver education does it take for the drivers? Particularly the drivers wishing to make a left onto Blackmore. What kind of lane width issues does this create and how much sight distance does this structure have. All of these were issues in my mind when the City tried to calm traffic on 12th and 13th by putting in bubble outs at a few intersections. They cut the lane width down to 8 feet, did not account for drainage and people were hitting them when they were hidden by the snow.	2/4/2013 2:04 PM
10	May cause problems with snow removal operations	2/4/2013 1:24 PM
11	I believe it slows traffic to a crawl and quite honestly hardly anyone pays attention to no left hand turn signage.	2/4/2013 9:52 AM
12	I don't see this reducing the steady stream of eastbound traffic so that I get into that west bound Blackmore left hand lane. This option would then imply that east of Landmark, that west bound Blackmore traffic would be two lanes. I think your CONS comments for limiting access both in and out of CHC to right hand turns is good and should be extended to be the same for the Credit Union just west. I have been stopped prior to Landmark going east, while the light was green, by a string of cars waiting for someone wanting to turn north into the credit union, but could not break through the west bound Blackmore traffic.	2/4/2013 9:41 AM
13	Traffic coming from the Eastgate neighborhood would "learn" to use Newport St. if they needed to go to the CHC.	2/4/2013 9:11 AM
14	There is another entry point to the Community Health Center just after the T-Int. shown.	2/4/2013 8:45 AM

Q8 Option 1C - Pork Chop Median at Community Health Center Drive
Option 1C proposes prohibiting the left-turn movements at the Community Health Center Drive access point to Blackmore Road by installing a raised pork-chop shape median in the driveway. Left-turns from the Community Health Center Drive would be prohibited. This could be installed after the second Community Health Center access to Landmark is constructed. PROS Makes left-turns from Donegal to Blackmore easier Allows residents and visitor to access the neighborhood from Blackmore Road Least expensive option after striping and signing CONS Limits access in and out of the community health center access on Blackmore to right-turns only Non-compliance higher than Option 1B Is this option acceptable to share with the community?

Answered: 29 Skipped: 5



Answer Choices	Responses
Yes	37.93% 11
No	34.48% 10
Maybe	27.59% 8
Total	29

Please Elaborate (14)

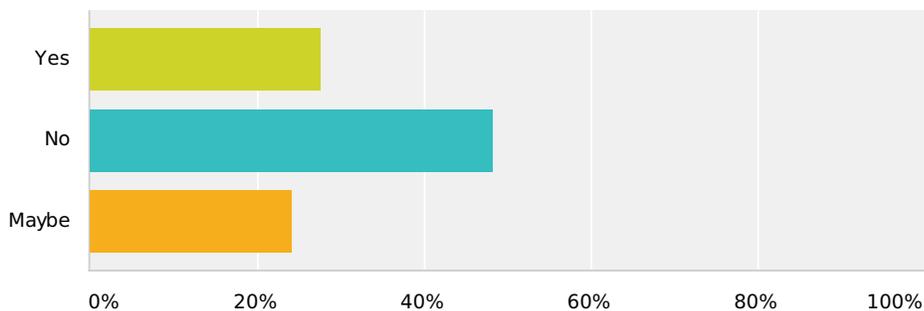
#	Please Elaborate	Date
1	Same as previous	2/8/2013 6:24 AM

Blackmore Road Proposed Options

#	Please Elaborate	Date
2	See my previous answer.	2/7/2013 11:01 AM
3	better than option 1b but still creates the problems for CHC	2/7/2013 10:22 AM
4	Not as good a solution as Option 1B	2/5/2013 12:59 PM
5	Cheap and easy, but I'm not sure it solves the greater issue of turning left from Donegal.	2/5/2013 8:27 AM
6	The real problem with Lt turns from Donegal to Blackmore is the traffic going straight on Blackmore, not the traffic turning into CHC. (However, as CHC grows, so does this traffic problem.) In addition, there is a hill on Blackmore, just East of Donegal. Speeding westward Blackmore traffic, as most of it seems to be, is a safety issue for Lt turns from Donegal onto Blackmore. This won't change this.	2/4/2013 8:39 PM
7	People at the Health Center need to be informed that there is an exit to the East of the parking lot if they want to use Donegal.	2/4/2013 4:56 PM
8	This seems to have very little impact. Are the traffic counts in and out of the Community Health Center such that they are a real driver in the issues on Blackmore?	2/4/2013 2:04 PM
9	Dont like limiting access in and out of the community health center.	2/4/2013 1:24 PM
10	Acceptable to present, but doesn't provide traffic calming benefits of other options.	2/4/2013 9:43 AM
11	I don't see the "porkchop" on Waterford and Donegal by the Centennial School working very well. People drive around it all the time.	2/4/2013 9:41 AM
12	This option would probably work better than Option 1B, but yes, there would be a higher rate of non-compliance. Most cost-effective.	2/4/2013 9:11 AM
13	Secondary access to the Health Center is/has been established. Connection is north of Community Health Center and connects to Landmark.	2/4/2013 8:51 AM
14	Compliance is important here. Need a higher compliance tool.	2/4/2013 8:45 AM

Q9 Option 1D Donegal Signal Option 1D proposes signaling Blackmore and Donegal and ensures coordination with the signal at Landmark. Signal warrant analysis would need to be completed before this option is implemented. PROS Provide designated time for left turns from Donegal to Blackmore Coordination would eliminate queue issues and prioritize through movement along Blackmore Road The signals would function as a singular intersection signal decreasing delay for both intersections CONS It is unclear if the signal at Landmark meets warrants It is not likely the signal at Donegal will meet warrants Installing signals at intersections that are not warranted decreases the safety at the intersections as driver compliance tends to decrease Is this option acceptable to share with the community?

Answered: 29 Skipped: 5



Answer Choices	Responses
Yes	27.59% 8
No	48.28% 14
Maybe	24.14% 7
Total	29

Please Elaborate (19)

#	Please Elaborate	Date
1	Not warranted and too close to signalized intersection at Landmark.	2/21/2013 2:40 PM

Blackmore Road Proposed Options

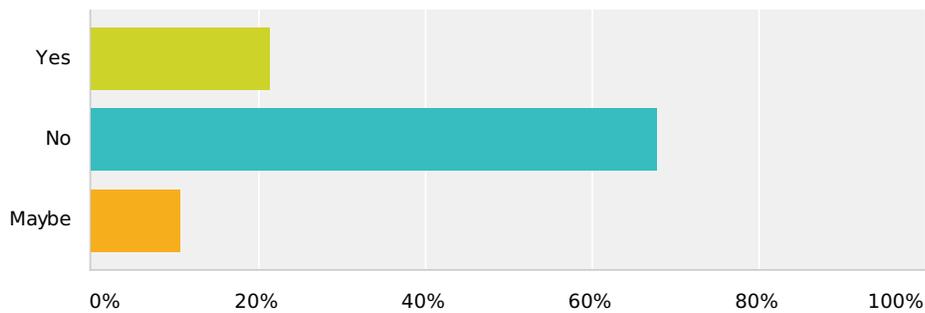
#	Please Elaborate	Date
2	I think residents will find out their impatient waits will be even longer and two lights are pretty close together. Could have Donegal be right turn only. This would encourage using the many intersections with lights.	2/8/2013 6:24 AM
3	Casper lights are poorly timed. Also this is to close to the Landmark intersection to have another light.	2/7/2013 8:46 PM
4	Would be viewed as a very expensive option	2/7/2013 12:16 PM
5	See my previous answers. How about restricting left turns from Donegal onto Blackmore forcing traffic to right-turn-only where they can then get to 2nd Street from Newport?	2/7/2013 11:01 AM
6	Too many lights	2/7/2013 10:22 AM
7	Someone needs to explain what "signal warrants" are and how they are determined or calculated.	2/5/2013 12:59 PM
8	Although this is much closer to the Landmark signal than preferred, the streets should have been better planned in the past. Even though this isn't ideal, I believe it is warranted and the simplest option available to cure the remedy.	2/5/2013 8:27 AM
9	I reject several of your premises. A light on Donegal will ONLY be acceptable if it is coordinated with the light on Landmark, as an offset intersection would be. Granted, 190 feet is a large offset, but the principle is the same. These lights must be coordinated and function as one light, otherwise drivers will try to race through them, before one turns red. A coordinated light, would have no greater impact on driver compliance or traffic flow than the single light at Landmark, but would enhance the safety of those turning left at Donegal and Blackmore and those pedestrians crossing Blackmore to go to CHC. I also reject the notion that a light can only be placed when "warranted." Obviously there already is a light at Landmark, indicated or not, and it serves a valuable function. Treating this as an offset intersection only makes sense (because for all practical purposes it is one) and the use of a coordinated signal at Donegal would then not require a warrant, but just tie into an existing signal that was incompletely reviewed and designed before instillation. The Planning Commission and the City Council approved these changes because of the short deadlines, created by Kohl's and by CHC. In both cases, their deadlines for approval was created by them, as they could have submitted their plans well in advance of their deadlines. These deadlines "forced" the Commission and Council to approve plans that were premature. They were approved based upon what was recognize then as poor traffic studies. ALL OF THESE ISSUES were addressed by citizens at several City Council meetings, and the Council voted to approve them anyway. In doing so, they created this traffic problem, but also the perception that all one needs to do is create an artificial deadline, and the project will be approved, even over the objections of taxpaying citizens. I see this as a decision of policy, not warranting. Does the Council want to ensure an unimpeded traffic flow to businesses at the inconvenience and safety of local residents, or are they willing to tell businesses that residents and their safety are their main concern, and their business traffic can flow along 2nd St, which has ample capacity, and is 100% commercial?	2/4/2013 8:39 PM
10	Best idea. Use the light fixtures that were installed may years ago on Second near the Holiday Inn.	2/4/2013 4:56 PM
11	This has been done in Casper many times before. Agree driver compliance may become an issue, but no worse than many other lights in Casper.	2/4/2013 2:04 PM
12	Not warranted	2/4/2013 1:24 PM
13	The stop light already creates too much congestion.	2/4/2013 1:06 PM
14	I think you will generate a lot of negative feedback from the community coordination of signaling has not worked before.	2/4/2013 9:52 AM
15	I would be concerned about presenting an option for adding a signal if warrants cannot be met.	2/4/2013 9:43 AM
16	THIS IS the BEST choice. And this light would need to be timed with the Landmark time, so that they were both North/South at the same time and both East/West at the same time. The E/W traffic should receive about 2/3 of the time for a cycle and the N/S option to get the other 1/3 of the time. Even 3/4 and 1/4, but at least, you'll get a chance to safely get onto Blackmore going west for Donegal. Some would say that this option would be too many light too close together. Well just look at the Poplar St., West F St. and the I-25 On-Off Ramps. There are several lights that nearly on top of each other, but the positive about it is, everyone does eventually get a turn to go.	2/4/2013 9:41 AM
17	Too close to Landmark and Blackmore traffic light intersection.	2/4/2013 9:11 AM
18	Will need to elaborate to the general public about warrants, and why putting up signals when warrants aren't met is a bad thing. I think most of the general public understands signals, but does not understand some of the other proposed approaches as well, so may gravitate toward the signal concept just out of familiarity.	2/4/2013 8:51 AM

Blackmore Road Proposed Options

#	Please Elaborate	Date
19	It is considerably close to the other stop light and would make travel on this road worse.	2/4/2013 8:45 AM

Q10 Option 1E: Turn Off Landmark Signal Option 1E proposes turning off the traffic signal at Blackmore and Landmark and observing changes in traffic operations. Landmark would be stop controlled. Follow recommended procedures for removing the signal. **PROS** Intersection and corridor operations may improve without further investments Removes a signal that does not meet warrants and eliminates the driver compliance problems associated with unwarranted signals. **CONS** This may be initially confusing for drivers This removes an investment that was most recently implemented creating a perception of wasting money. However, most of the equipment (poles, signal heads, controller, and cabinet) could be re-used. If the signal is warranted and re-installed in the future, the issues may return Requires follow-up study(s) Is this option acceptable to share with the community?

Answered: 28 Skipped: 6



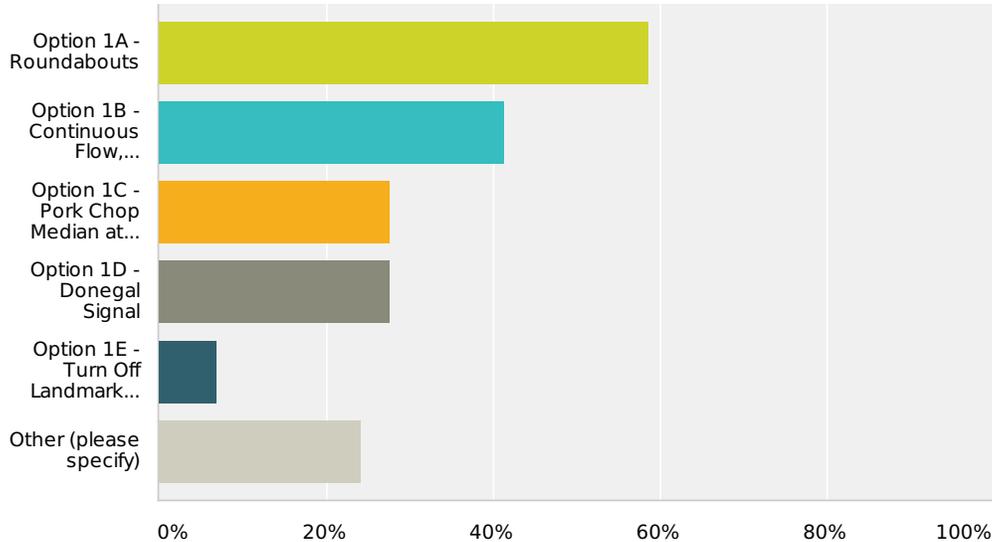
Answer Choices	Responses	
Yes	21.43%	6
No	67.86%	19
Maybe	10.71%	3
Total		28

Blackmore Road Proposed Options

Please Elaborate (16)		
Total		28
#	Please Elaborate	Date
1	Signal recently installed.	2/21/2013 2:40 PM
2	This has become a major intersections from Mall, 2nd Street and will continue as Blackmore area infills.	2/8/2013 6:24 AM
3	With the traffic off both streets I feel you must have a light there.	2/7/2013 8:46 PM
4	Consider in connection with a signal at Donegal. Should the Landmark light be moved to Donegal?	2/7/2013 12:16 PM
5	See my previous answers. This whole issue seems to revolve around access from Donegal onto Blackmore. As I pointed out previously, there are multiple points of ingress/egress from these neighborhoods.	2/7/2013 11:01 AM
6	The light is working to ease traffic issues at Donegal	2/7/2013 10:22 AM
7	Do not think removal of signal without data to support that action should be done until data is collected and studied. Perhaps turning it off while traffic study is completed would be best. This would be less costly than what is described above.	2/5/2013 12:59 PM
8	Although the sightlines are better for making left hand turns from Landmark, I think this would be a temporary fix that would need to be remedied again in the not so distant future. I believe the interesection warrants a signal or roundabout.	2/5/2013 8:27 AM
9	See policy discussions above.	2/4/2013 8:39 PM
10	Will cause people to use the parking lot in the Health Center when the road is completed off Landmrk.	2/4/2013 4:56 PM
11	If speeds are an issue on Blackmore this will most likely make the issue worse, not better.	2/4/2013 2:04 PM
12	I believe you will go back to traffic backing up on Landmark and frustration of drivers wanting to get onto Blackmore will lead to additional accidents.	2/4/2013 9:52 AM
13	NO, before the light, way TOO many drivers "ran the stop sign", from southbound Landmark to westbound Blackmore.	2/4/2013 9:41 AM
14	Cons outweigh Pros	2/4/2013 9:11 AM
15	Signal was paid for, in part, through developer fees. If the signal is taken down, does the City have to return funds to developers?	2/4/2013 8:51 AM
16	This light is actually very useful.	2/4/2013 8:45 AM

Q11 Which of the options presented here would you support for IMPLEMENTATION at Blackmore and Donegal/Landmark? Please select all that apply.

Answered: 29 Skipped: 5



Answer Choices	Responses
Option 1A - Roundabouts	58.62% 17
Option 1B - Continuous Flow, T-Intersection	41.38% 12
Option 1C - Pork Chop Median at Community Center Drive Access	27.59% 8
Option 1D - Donegal Signal	27.59% 8
Option 1E - Turn Off Landmark Signal	6.90% 2
Other (please specify)	24.14% 7
Total Respondents: 29	

#	Other (please specify)	Date
1	None of the above. Need to provide justification for modifications.	2/21/2013 2:40 PM
2	Maybe Roundabout at Donegal and turn on Newport and Blackmore light to slow traffic and make left turn on to Blackmore more controlled at Newport.	2/8/2013 6:24 AM
3	Pork chop after secondary access completed	2/7/2013 3:02 PM
4	None of the above. The best solution would be to restrict access from Donegal onto Blackmore to a right-out and right-in, forcing traffic to existing controlled intersections.	2/7/2013 11:01 AM
5	Modified Option D, as suggested above. Plan B would be 2nd best.	2/4/2013 8:39 PM
6	I could support any but the Pork Chop, which seems to be a very small change to a small part of the problem to me. I just raised issues that could come up.	2/4/2013 2:04 PM
7	Too many "porkchops" and other "island type" traffic controllers are sometimes a hazard especially with un-snow-plowed periods. Just go with the Donegal traffic lights that are timed with the Landmark lights and be done with it.	2/4/2013 9:41 AM

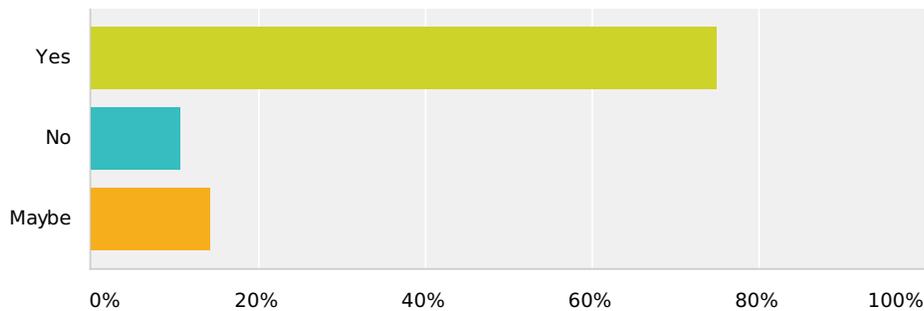
Q12 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 3 Skipped: 31

#	Responses	Date
1	I feel the intersection has good flow and works well.	2/7/2013 8:49 PM
2	There is a bridge just down the road to cross Wyoming. I walk alot in this area and there is no problem.	2/4/2013 5:13 PM
3	WYDOT has gone to the expense of having a overhead ped crossing very close this intersection, so why would Ped protection at the intersection be necessary. The Ped crossing only accesses the school on the West, but you can only access back yards along Wyoming Blvd between either of the intersections north or south of this intersection, so why would someone absolutely have to cross at this intersection.	2/4/2013 2:38 PM

Q13 Option 2A - Stripe "DO NOT BLOCK INTERSECTION" at Blackmore and Viking Court This option provides a low-cost solution to address an intersection being blocked by vehicles queued from an adjacent intersection. Striping and signing at the intersection of Blackmore Road and Viking Court with applicable DO NOT BLOCK INTERSECTION per the Manual On Uniform Traffic Control Devices. PROS Low cost solution Proven effective CONS Additional analysis (in field observations) should be conducted prior to installation Is this option acceptable to share with the community?

Answered: 28 Skipped: 6



Answer Choices	Responses	
Yes	75%	21
No	10.71%	3
Maybe	14.29%	4
Total		28

Please Elaborate (6)

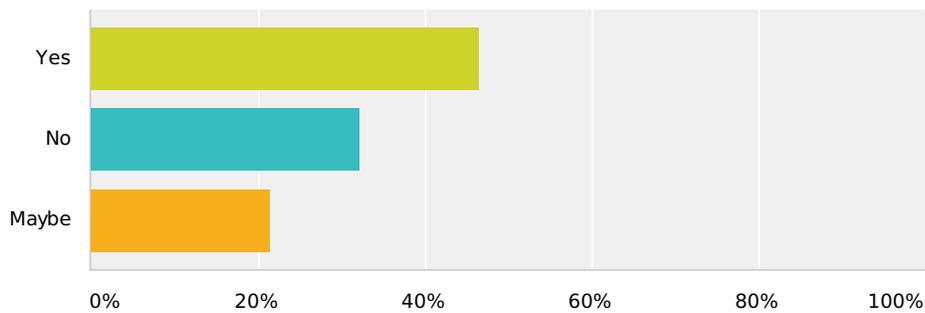
#	Please Elaborate	Date
1	Concerned with sign pollution.	2/21/2013 2:43 PM
2	Might cause some clutter, but if a need is there, it would be a reasonable solution.	2/5/2013 8:48 AM
3	Worried that some enforcement training may be required to educate the driver that they are not to wait for a green light in this area and keep this area clear. What is the traffic safety of pulling through a cue of cars into a live lane for those exiting Viking and wishing to make a left hand turn. Are there issues with people at Viking Court "cutting" in line of the cue on Blackmore.	2/4/2013 2:38 PM
4	In my experience as a business owner the general public does not pays very little to signage. It might be a low cost item that will attain low results.	2/4/2013 10:02 AM
5	Con - ongoing maintenance (restriping) -	2/4/2013 8:56 AM

Blackmore Road Proposed Options

#	Please Elaborate	Date
6	People will ignore the striping during drop off and pick-up of children which is the time period this is intended to target.	2/4/2013 8:50 AM

Q14 Option 2B - Connect Viking Court to Landmark Option 2B proposes extending Viking Court to Landmark Drive or to the Mall loop. This street could either be one-way or two-way depending on circulation benefits. This strategy also includes a raised crosswalk or intersection at the school drop-off and could also include a crossing guard during peak times at the raised crosswalk. PROS Provides an additional access point to school drop off. Mitigate traffic flow issues associated with the school drop-off currently taking place at the Viking Court cul-de-sac. Potential to reduce back-ups at Blackmore/Viking Court and Blackmore/Wyoming Boulevard during peak drop-off times Builds additional connectivity into the network Raised crosswalk will enhance pedestrian visibility and slow vehicles CONS Likely expensive Will need to obtain ROW to complete Is this option acceptable to share with the community?

Answered: 28 Skipped: 6



Answer Choices	Responses
Yes	46.43% 13
No	32.14% 9
Maybe	21.43% 6
Total	28

Blackmore Road Proposed Options

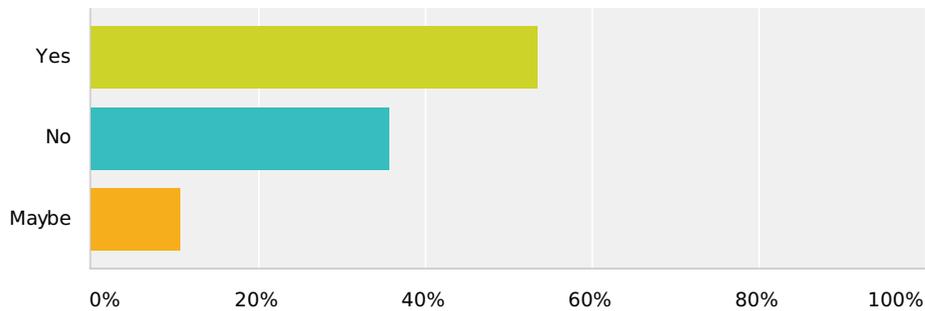
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Please Elaborate (10)

Total		28
#	Please Elaborate	Date
1	Too expensive given the limited time per day that there is a problem	2/7/2013 12:20 PM
2	More expensive, but would mitigate the impact at Viking and Blackmore.	2/7/2013 11:05 AM
3	I believe this would have the unintended consequence of causing a significant amount of traffic cutting thru to the mall. Viking Court is too close to the Wyo Blvd interesection and would then warrant the need for more solutions at it's intersection. I would be in favor of abandoning Viking Court altogether if possible and making the site available for development. This site might make funds available for reconstructing the Donegal intersection, indirectly.	2/5/2013 8:48 AM
4	ADA improvements should be part of any solution.	2/4/2013 1:09 PM
5	If school district can share in cost	2/4/2013 1:04 PM
6	My thought is it will be way to expensive and will make additional problems at Landmark.	2/4/2013 10:02 AM
7	Making another "outlet" out of a cul-de-sac is a good idea. The existing cul-de-sac is just a traffic trap, as all traffic has to use ONLY Blackmore to get there.	2/4/2013 9:53 AM
8	Too expensive. Would create problems for traffic coming off of Blackmore to go to Mall when Verda James let's school out for the day. Parents need to pick kids up at school (when necessary). Kids walking home (into Eastgate areas) need to use existing crosswalks.	2/4/2013 9:27 AM
9	Have grades been looked at for feasibility?	2/4/2013 8:56 AM
10	This will also relieve traffic on Blackmore and allow children and parents another way to this point which could steer children walking alone to take a safer route than on this road.	2/4/2013 8:50 AM

Q15 Option 2C - Intersection Pedestrian Improvements Option 2C proposes pedestrian enhancements at Blackmore & Wyoming including tighter curb radii and high visibility crosswalks on the north leg of the intersection. Intersection analyses would be required to determine the impact to the operations of the signal with the addition of pedestrian phasing. PROS Opportunity to bring intersection into ADA compliance Provides additional crossing opportunities besides pedestrian overpass Slows turning vehicles May eliminate some of the drop off activity on Viking Ct if the improvements are safe and comfortable CONS Demand for additional crossing may be low Pedestrian crossing timing may impact vehicle delay May not mitigate queues associated with Viking Ct Is this option acceptable to share with the community?

Answered: 28 Skipped: 6



Answer Choices	Responses
Yes	53.57% 15
No	35.71% 10
Maybe	10.71% 3
Total	28

Please Elaborate (11)

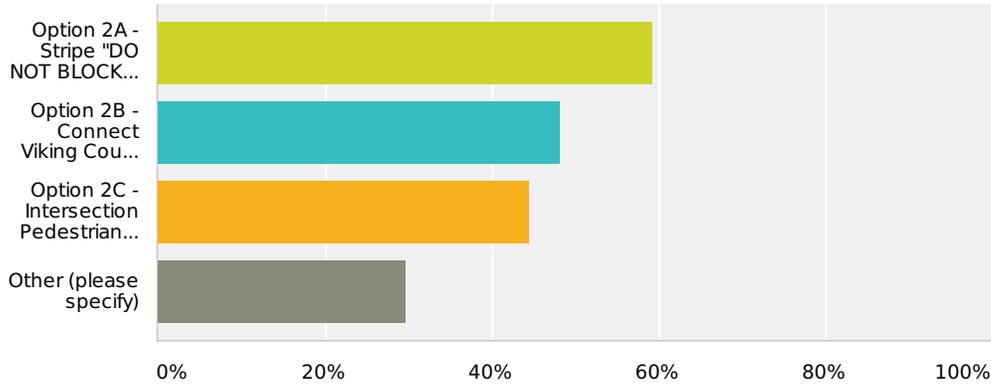
#	Please Elaborate	Date
1	WYDOT routinely dictates curb radii on state systems. Unlikely to be permitted by WYDOT.	2/21/2013 2:43 PM

Blackmore Road Proposed Options

#	Please Elaborate	Date
2	this may be a little much as this is not really a neighborhood high pedestrian area. I hardly see anyone at this intersection walking	2/8/2013 6:41 AM
3	would have multiple benefits not just at school drop-off and pick-up times	2/7/2013 12:20 PM
4	Would not support additional cross walk across Wyoming as it would cause more traffic delays and I have a safety concern about people crossing Wyoming. There is a sidewalk and walk over just north of the intersection.	2/5/2013 1:07 PM
5	However, I would be wary of installing the crosswalk across Wyo Blvd. The bridge is in place. I would not like to see small children taking chances crossing Wyo Blvd.	2/5/2013 8:48 AM
6	No, stupid! What is the bridge for. The bridge is safe. Put a opening in the fence if you do want to walk on Wyo. Blvd. after crossing the bridge.	2/4/2013 5:13 PM
7	Money was just spent making improvements to the Ped crossing here by providing the island refuge. I do not think it wise to turn around and redo what was just done. Also, even though this is not a truck route, Wyoming still see's plenty of large vehicals or trailers on these roads and the larger radii provide the room needed for these types of vehicles.	2/4/2013 2:38 PM
8	It would encourage additional pedestrian traffic at an intersection that is already overloaded and dangerous.	2/4/2013 10:02 AM
9	I don't think creating "tiger" turning radii is a good idea at all. I was Blackmore multiple time daily, and I've never seen a pedestrian wanting to cross Wy.Blvd. Occasionally, a few want to cross Blackmore, but even that is limited.	2/4/2013 9:53 AM
10	Pedestrian Bridge offers safe crossing... would be somewhat redundant.	2/4/2013 9:27 AM
11	There is already an over the road crossing section just steps away. this is not necessary and may encourage children to cross the road which is more dangerous than crossing over the road.	2/4/2013 8:50 AM

Q16 Which of the options presented here would you support for IMPLEMENTATION at Blackmore and Wyoming/Viking Court? Please select all that apply.

Answered: 27 Skipped: 7



Answer Choices	Responses	
Option 2A - Stripe "DO NOT BLOCK INTERSECTION" at Blackmore and Viking Court	59.26%	16
Option 2B - Connect Viking Court to Landmark	48.15%	13
Option 2C - Intersection Pedestrian Improvements	44.44%	12
Other (please specify)	29.63%	8

Total Respondents: 27

#	Other (please specify)	Date
1	Not aware of an issued at this intersection. Must justify need.	2/21/2013 2:43 PM
2	School district drop off elsewhere as they have unlimited bussing funds	2/7/2013 3:06 PM
3	Either 2A & C or 2B	2/4/2013 8:43 PM
4	If you are traveling south on Wyo Blvd., and you want to turn onto Blackmore. The sensor on the light will not pick up one car at the turn lane. This I believe is because the light is set up on a curve. Before the city went to the blinking yellow light system I would have to position my car way back on the turning lane so the sensor would pick up my vehicle. That problem has never been solved.	2/4/2013 5:13 PM
5	While this is the most expensive, the block intersection seems to introduce issues with safely turning left out of Viking through a cue of cars, and making the cue on Blackmore angry and less likely to observe when Viking cuts in the cue.	2/4/2013 2:38 PM
6	None of the above.	2/4/2013 10:02 AM
7	Put a walkway down into the mall parking lot where parents can pick their kids up their... more space too! Rarely anyone uses those far south parking spaces anyway.	2/4/2013 9:27 AM
8	Have you looked at mid-block pedestrian island/refuge?	2/4/2013 8:56 AM

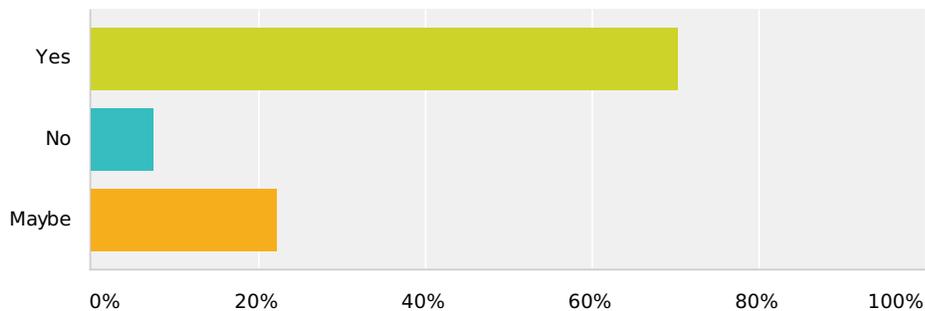
Q17 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 4 Skipped: 30

#	Responses	Date
1	This interstecion is not an issue. The issue is the bottle neck that occurs as you travel east towards Oak Express and the mall. It is such a bottle neck there that is why people take Blackmore Road instead of 2nd street. Also an interstate exit on Blackmore road. This would pull some traffic off second street and allow better access to the McMurry buisness centers farther east of the mall.	2/7/2013 8:56 PM
2	The space is not for additional left turn lanes, but a design by traffic to off set the dual lefts in order to provide better site and move turning lanes away from eachother. At one time this area would have been a raised island, however due to threats of law suit the raised island were postponed until required in order to maintain an acceptable level of service. In addition to these islands there is room for islands to run send street to I-25. The island's would cut off all left turns except at signalized intersections. This was not well recieved. When the dual left turn lanes were first put in the left turn was allowed with a yield on green ball. It seems all Casper forgot what this means when there are two lanes or they are bad at estimating the time it takes to get through this large intersection, but there were significant accidents at this intersection and left hand turns are now only allowed on a protected phase at this intersection. This has brought the accident rate down considerably. WYDOT will be very conservative to any changes made at this intersection, and is studing the issue in an ongoing fashion.	2/4/2013 2:53 PM
3	This intersection appears to be over-built given the traffic. Are dual left turn lanes on every approach warranted? Also, the striped area between the left turn lanes and the through lanes adds additional roadway width, creating a much longer crossing distance for pedestrians.	2/4/2013 10:20 AM
4	When WYDOT widened Wyoming Blvd to be able to land jet planes it just encouraged everyone to drive faster and try to make the light at 2nd. This intersection is a mess and doing anything to it before additional information and study would just add to the problem.	2/4/2013 10:10 AM

Q18 Option 3A - Analyze Intersection for Operational Improvements
Option 3A proposes to analyze the intersection operations for potential improvements. The additional analysis is essential and should be conducted prior to any improvements being implemented. PROS Provides opportunity for in-depth understanding of the intersection before investments/decisions are made Enhancing traffic operations may prevent drivers from using other routes to avoid this intersection. Inexpensive to implement signal changes CONS Requires additional study Requires coordination with WYDOT as this is a WYDOT owned and operated signal Is this option acceptable to share with the community?

Answered: 27 Skipped: 7



Answer Choices	Responses	
Yes	70.37%	19
No	7.41%	2
Maybe	22.22%	6
Total		27

Please Elaborate (9)

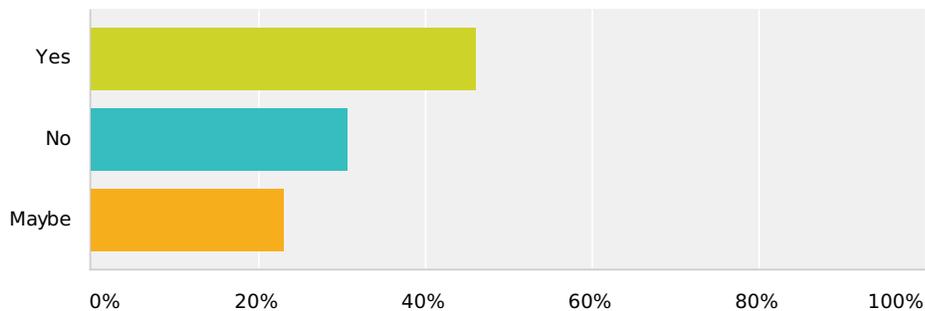
#	Please Elaborate	Date
1	this is just a very vital and busy intersection of two main streets in town. When the west loop road is done, truck traffic on Wyo Blvd should decrease dramatically and should help here. We are kind of lucky we have the economy to have the traffic. Poplar and First is just as busy with very limited lanes and pedestrian options with a lot more foot traffic.	2/8/2013 6:46 AM

Blackmore Road Proposed Options

#	Please Elaborate	Date
2	Congestion appears to be greater at. Most times on the east/west second street technology and common sense on pedestrian crossing times and signal coordination with traffic should ease problems	2/7/2013 3:12 PM
3	This entire stretch of Wyo Blvd from I-25 to Gannett St needs to be reconstructed. Medians are needed wherever possible. I know there is push back from business owners, but this stretch of road is way too dangerous currently. People constantly make left turns from Walgreen's/Hardees, as well as from Taco Bell. The left turn into Flying J is always backed up with tractor-trailers. As a primary gateway to our city, this stretch of road is woefully underperforming. I would look at the recent BHA Design reconstruction of Harmony Rd & College Dr in Fort Collins as a shining example of what could be done. Landscaped medians, not matter how slim and dedicated right hand turn lanes would greatly enhance this corridor. Also, I imagine the investment has been great already, but it would be nice if the traffic signals could be broken into smaller pieces, rather than these huge steel beams spanning the entire intersection, but that's more about aesthetics than anything.	2/5/2013 9:05 AM
4	Works fine don't fix it.	2/4/2013 5:14 PM
5	WYDOT will be conservative in any changes and is monitoring this intersection in an ongoing fashion. The only difference would be that WYDOT does not put as much emphasis on Ped and the City would like to see, but it is being looked at by WYDOT already.	2/4/2013 2:53 PM
6	I don't think traffic volumes warrant the number of lanes on Wyoming Blvd.	2/4/2013 10:20 AM
7	much additional study with WYDOT	2/4/2013 10:10 AM
8	Intersection is a problem... very difficult in poor weather	2/4/2013 9:41 AM
9	People will stop for light over the top of the crosswalks and never look for pedestrians. Not sure this will help any. However, a study would be helpful in convincing WYDOT to do something.	2/4/2013 8:54 AM

Q19 Option 3B - Pedestrian Enhancements Option 3B proposes enhancing pedestrian crossings at the intersection by creating pedestrian refuge islands and “pork chop” islands at intersection approaches. **PROS** Allows pedestrians to cross only one direction of traffic at a time Creates a safe place for slower pedestrians to dwell who do not complete intersection crossing in one signal cycle Shortens pedestrian crossing distance May improve intersection efficiency Allows “free right” **CONS** Poorly designed islands often get hit by vehicles May increase speeds in the area Right-turning vehicles may have possible conflict with pedestrians Is this option acceptable to share with the community?

Answered: 26 Skipped: 8



Answer Choices	Responses	
Yes	46.15%	12
No	30.77%	8
Maybe	23.08%	6
Total		26

Please Elaborate (10)

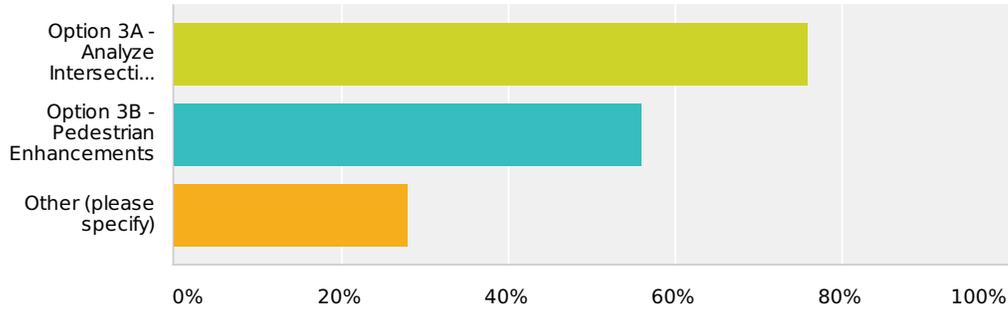
#	Please Elaborate	Date
1	I think islands would just slow all kinds of traffic and back up traffic even more than now.	2/8/2013 6:46 AM
2	Would make it tight when motorists are in each of the left turn lanes at the same time	2/7/2013 12:27 PM
3	Since there is no west bound traffic because Blackmore does not continue west I do not understand why this option is even being mentioned!	2/5/2013 1:13 PM

Blackmore Road Proposed Options

#	Please Elaborate	Date
4	I highly support this and hope that we incorporate landscaped medians as well.	2/5/2013 9:05 AM
5	Not a big pedestrian crossing	2/4/2013 8:46 PM
6	The area that is being shown as island is not the area that islands could be placed. The island area that some this is for future islands could become a ped refuge, and a good size one. I do not see the radii islands as this is the truck route for the retail in this area and I do not see impacting this.	2/4/2013 2:53 PM
7	The roadway is wide enough to add medians. If channelized right turns are used, the radii should be minimized to not encourage higher speed turning movements and acceleration lanes need to be provided to allow turns to merge into traffic.	2/4/2013 10:20 AM
8	If you enhance the pedestrian flow you will increase the number of pedestrian/vehicle accidents and vehicle/vehicle accidents.	2/4/2013 10:10 AM
9	Works well in high traffic intersections	2/4/2013 9:41 AM
10	Traffic "structures" will help people look for pedestrians more and will slow them down some.	2/4/2013 8:54 AM

Q20 Which of the options presented here would you support for IMPLEMENTATION at Wyoming and 2nd? Please select all that apply.

Answered: 25 Skipped: 9



Answer Choices	Responses	Count
Option 3A - Analyze Intersection for Operational Improvements	76%	19
Option 3B - Pedestrian Enhancements	56.00%	14
Other (please specify)	28.00%	7

Total Respondents: 25

#	Other (please specify)	Date
1	Put in pedestrian Tunnels	2/10/2013 6:44 AM
2	Work on widening 2nd street between Wyoming BLVD and past Home Depot.	2/7/2013 8:56 PM
3	Landscaped medians to prevent some left-hand turns onto Wyoming Blvd from Walgreen's/Hardee's and also Taco Bell.	2/5/2013 9:05 AM
4	We might as well start the study with WYDOT as it will be at least 10 years before do anything.	2/4/2013 8:46 PM
5	With the islands placed in the correct area. I can talk more if you want about this. There is also a 4 foot wide area between 2nd and Wyoming Blvd that cuts off left turns, but that comes with political issues.	2/4/2013 2:53 PM
6	Access management and medians: Place a median on Wyoming Blvd and possibly 2nd. This would provide a refuge for pedestrian crossings. This would also improve access management by eliminating all left turns except at major intersections. All commercial driveways should be right turn only near this intersection.	2/4/2013 10:20 AM
7	ADDITIONAL STUDY WITH WYDOT	2/4/2013 10:10 AM

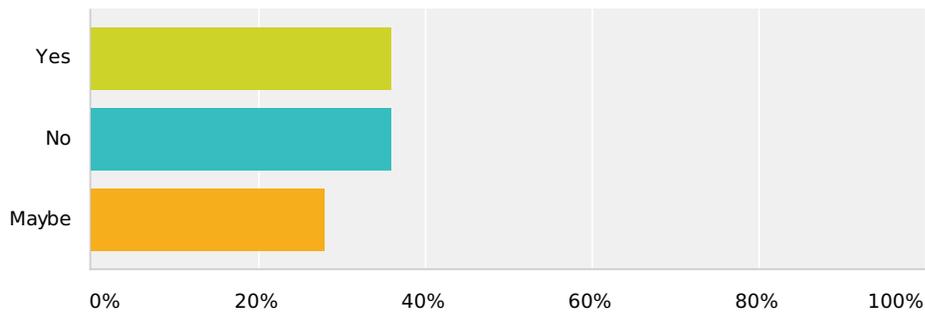
Q21 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 2 Skipped: 32

#	Responses	Date
1	No it works fine.	2/7/2013 8:58 PM
2	This is an example why roundabouts won't work on Blackmore.	2/4/2013 8:49 PM

Q22 Option 4A - Modifications to Existing Roundabout Option 4A proposes physical modifications to the existing roundabout to address high speeds. The roundabout in its current configuration does not provide any deflection for entering vehicles. The deflection causes vehicles to slow down as they approach the roundabout. The diameter of the existing roundabout is large and the lanes too wide. A raised truck apron and a raised central island would force slower speeds. PROS Slows vehicle speeds approaching and through the roundabout Increased pedestrian safety CONS Significant costs to a relatively new intersection Needs to be designed and constructed to accommodate snow plow equipment Is this option acceptable to share with the community?

Answered: 25 Skipped: 9



Answer Choices

Responses

Yes	36%	9
No	36%	9
Maybe	28.00%	7

Total 25

Please Elaborate (9)

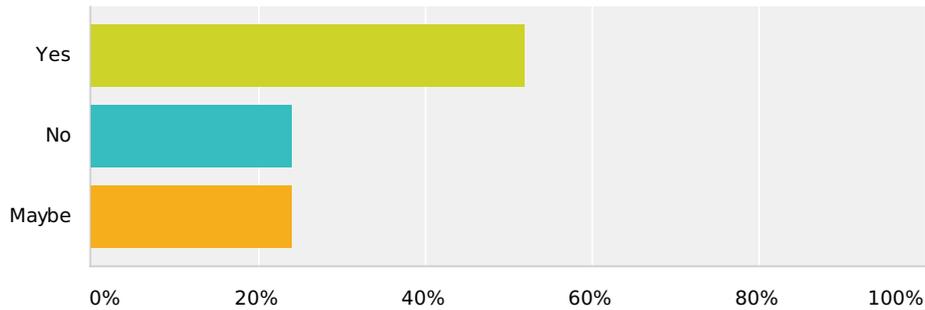
#	Please Elaborate	Date
1	Limited use of this so I don't have opinion	2/8/2013 6:48 AM
2	Put boulders in center	2/7/2013 3:16 PM

Blackmore Road Proposed Options

#	Please Elaborate	Date
3	It is already viewed as too restrictive by many. As traffic moving in all directions continues to increase the speeds should go down.	2/7/2013 12:30 PM
4	This seems to be more in line with making better roundabout design.	2/4/2013 2:56 PM
5	Expense too high	2/4/2013 1:05 PM
6	The modifications to this intersection will not address the speed issues, the only thing that will be increased enforcement of the speed limit	2/4/2013 10:14 AM
7	I don't travel through this intersection, and have no opinion.	2/4/2013 10:00 AM
8	Maybe down the road... Cons weigh in more.	2/4/2013 9:48 AM
9	This is a residential neighborhood with lots of children on bikes on this street and a large park. People really need to slow down here.	2/4/2013 8:57 AM

Q23 Option 4B - Raised Crosswalks
Option 4B proposes installing raised crosswalks on all approaches of the roundabout PROS Enhances pedestrian crossing visibility Slows vehicle speeds CONS Impacts on drainage Needs to be designed and constructed to accommodate snow plow equipment Is this option acceptable to share with the community?

Answered: 25 Skipped: 9



Answer Choices

Responses

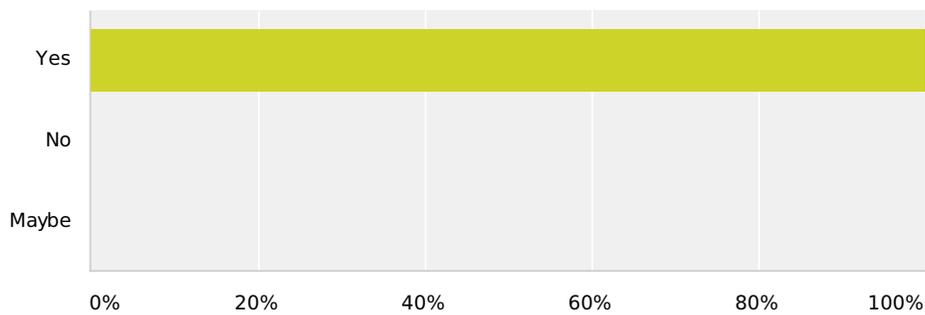
Yes	52%	13
No	24%	6
Maybe	24%	6
Total		25

Please Elaborate (7)

#	Please Elaborate	Date
1	No opinion	2/8/2013 6:48 AM
2	Are you basically describing "speed bumps"?	2/5/2013 1:26 PM
3	I think this would be a relatively low-cost solution that would help out.	2/5/2013 9:07 AM
4	ENFORCE THE SPEED LIMIT	2/4/2013 10:14 AM
5	I don't travel through this intersection, and have no opinion.	2/4/2013 10:00 AM
6	This would work more effectively, in my opinion, to help in pedestrian safety.	2/4/2013 9:48 AM
7	Will help force people to slow down and become more aware of pedestrians so close to a school for young children.	2/4/2013 8:57 AM

Q24 Option 4C - Reconfigure Signage
Option 4C proposes to move the existing state yield signs to the center medians on all approaches and replace pedestrian signs with neon school crossing signs due to proximity of elementary school.
PROS Enhances visibility of signs Alerts drivers of proximity to school
CONS Cost of sign relocation
Is this option acceptable to share with the community?

Answered: 25 Skipped: 9



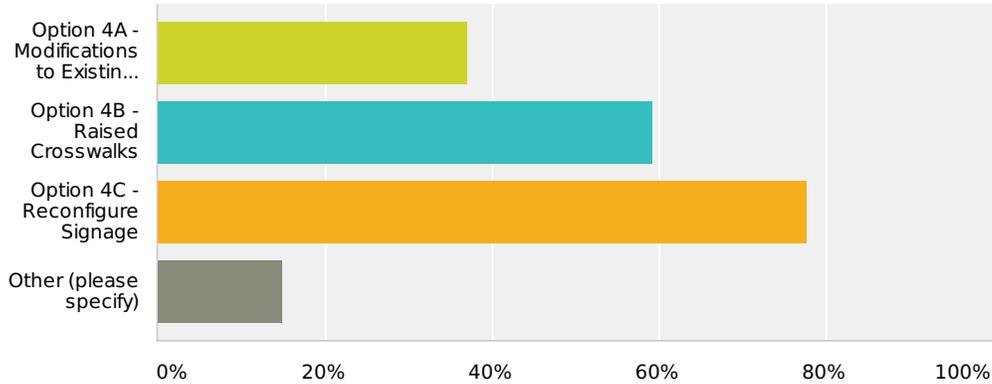
Answer Choices	Responses	
Yes	100%	25
No	0%	0
Maybe	0%	0
Total		25

Please Elaborate (5)

#	Please Elaborate	Date
1	Great, low-cost solution.	2/5/2013 9:07 AM
2	Again while signage is great very few pay attention to them as with the speed limit signs already posted. Enforce the speed limit to start with.	2/4/2013 10:14 AM
3	I don't travel through this intersection, and have no opinion.	2/4/2013 10:00 AM
4	Most cost-effective and quickest results	2/4/2013 9:48 AM
5	The more notice for children crossing, the better.	2/4/2013 8:57 AM

Q25 Which of the options presented here would you support for IMPLEMENTATION at the 21st & Waterford Roundabout? Please select all that apply.

Answered: 27 Skipped: 7



Answer Choices	Responses	
Option 4A - Modifications to Existing Roundabout	37.04%	10
Option 4B - Raised Crosswalks	59.26%	16
Option 4C - Reconfigure Signage	77.78%	21
Other (please specify)	14.81%	4

Total Respondents: 27

#	Other (please specify)	Date
1	Need to identify excessive speeds or pedestrian accidents to justify large expense.	2/21/2013 3:11 PM
2	Boulders	2/7/2013 3:16 PM
3	SPEED LIMIT ENFORCEMENT.	2/4/2013 10:14 AM
4	I don't travel through this intersection, and have no opinion.	2/4/2013 10:00 AM

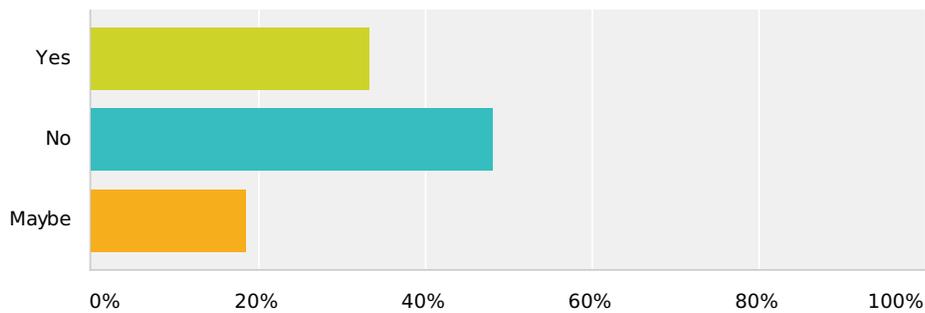
Q26 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 1 Skipped: 33

#	Responses	Date
1	Everytime a road starts to develop at anything more than a local street there seems to be an effort to push traffic to the heavy traffic street like 2nd. I will consider this study a failure if more traffic is pushed to the intersection of 2nd and Wyoming Blvd. This is already a concern and pushing all traffic to this area only makes the issue discussed on the that intersection worse.	2/4/2013 3:04 PM

Q27 Option 5A - Corridor Calming Strategy - Narrowing Option 5A proposes a strategy to calm the Blackmore Road Corridor by narrowing the travel way with curb extensions and restriping. **PROS** Sends message to drivers that Blackmore is not a “cut-thru” route Not accommodating to trucks Curb extensions shorten pedestrian crossing distances Provides areas for landscaping and aesthetic improvements Truck traffic is encouraged to utilize the designated routes and stay on arterial roadways The traffic calming elements discourage cut thru traffic by increasing corridor travel time Trucks tend to avoid calmed roadways **CONS** Traffic calming elements increase travel time for all roadway users May cause issues with drainage, plowing Poorly designed curb extensions may not accommodate cyclists Is this option acceptable to share with the community?

Answered: 27 Skipped: 7



Answer Choices

Responses

Yes	33.33%	9
No	48.15%	13
Maybe	18.52%	5
Total		27

Blackmore Road Proposed Options

Please Elaborate (12)

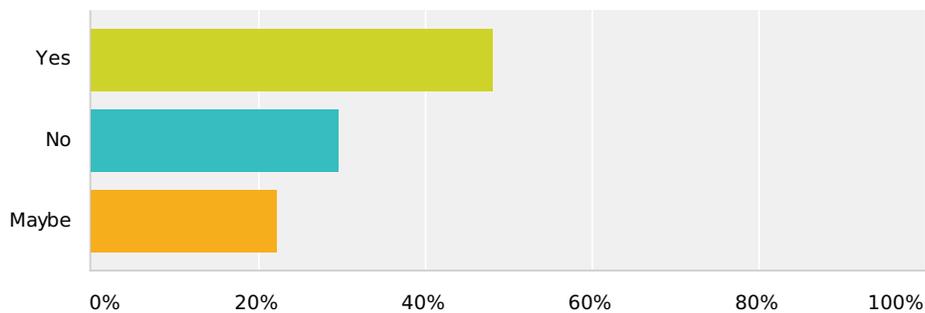
Total

27

#	Please Elaborate	Date
1	even with extensive calming measures this route will still be the faster and easier option	2/7/2013 12:33 PM
2	I simply do not see a traffic issue with Blackmore Road, other than the inconvenience to accessing Blackmore from Donegal. Blackmore should be a road that accommodates higher traffic and provides access to the commercial district along 2nd Street. Attempts to "calm" traffic are ridiculous and, in time, will be removed.	2/7/2013 11:19 AM
3	Major needs are prohibiting thru truck traffic--i.e. cut across to 2nd Street and Hat Six Intersection and more enforcement of speed limits on Blackmore!	2/5/2013 1:36 PM
4	Especially at intersections. Not sure mid-block extensions are warranted.	2/5/2013 9:13 AM
5	As shown on 12th street down town, doesn't work in Casper, furthermore limits safe Left turns at Donegal.	2/4/2013 8:54 PM
6	The city tried that on 12th St. downtown. Failed and took them out.	2/4/2013 5:23 PM
7	I agree with the cons and I do not agree with the idea that Blackmore cannot be a cut thru route. There is more development happening on it all the time which it taking this to a much more heavily traveled road. Slow traffic down is fine but pushing off this street is not a good idea in my mind.	2/4/2013 3:04 PM
8	May still need to allow for on-street parking at some locations.	2/4/2013 10:40 AM
9	I think you can share this with the community, I don't believe they will like it, curb extensions were placed on 12th Street a few years back and caused more problems than they fixed. Why not post this as a no large truck traffic area, slow the speed and enforce both of these.	2/4/2013 10:32 AM
10	If the narrowing would really send a "Not Cut Thru" message, then maybe. But overall, I think the narrowing is streets is a joke. Every chance I get, I try to avoid downtown 2nd Street, with the curvey street and choked up tight, narrow travel lanes, intersections.	2/4/2013 10:12 AM
11	Pros are very good... plowing would be issue.	2/4/2013 9:54 AM
12	Need those physical structures to keep people from weaving all over the road. There is no respect for bike lanes here anyway.	2/4/2013 9:01 AM

Q28 Option 5B - Buffered Bike Lane
Option 5B proposes to create a buffered bike lane by converting the existing parking lane to a bike lane and restriping the bike lane as a buffer. PROS Visually narrows the roadway Creates more comfortable infrastructure for cyclists Creates a low-stress connection between trails
CONS Demand for bicycle infrastructure appears low Is this option acceptable to share with the community?

Answered: 27 Skipped: 7



Answer Choices	Responses	
Yes	48.15%	13
No	29.63%	8
Maybe	22.22%	6
Total		27

Please Elaborate (13)

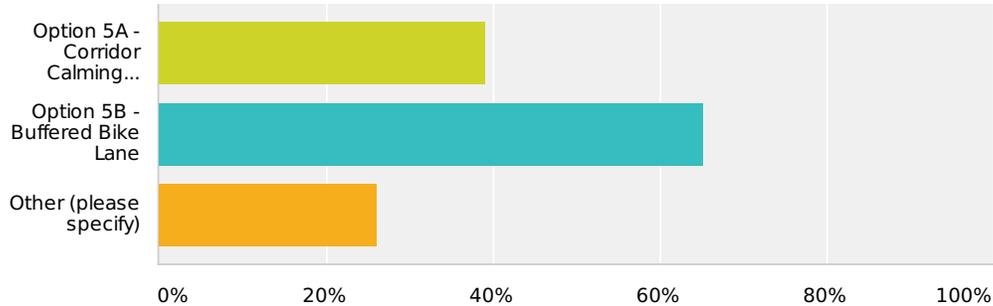
#	Please Elaborate	Date
1	Narrowing the road is a huge safety problem, while demand for biking is low we should keep them.	2/7/2013 9:02 PM
2	would demonstrate the multiple benefits of bikelanes	2/7/2013 12:33 PM
3	I don't think Blackmore is a safe nor acceptable location for bike lanes.	2/7/2013 11:19 AM
4	Blackmore should not have bike lanes as they are rarely used. Since they have been put in, I have only seen one person using the lane and then only for a short period before they went up on the sidewalk.	2/7/2013 10:29 AM
5	If there is not sufficient data to support bike lanes then what would the extra street space be used for? Do not favor more on street parking as that will create more congestion and safety issues.	2/5/2013 1:36 PM
6	I'm always in favor of bike lanes, but I'm not sure this is the most appropriate route for one. Frankly, I travel this route frequently, more as an extension of 12th Street, and have never seen a cyclist. Perhaps a 'Share the Road' set-up would be more appropriate. We need to save some political will for bike lanes in more appropriate locations.	2/5/2013 9:13 AM
7	Requires expanding streets, or else traffic in Casper will just continue to drive fast, but just on narrow streets. Makes it too easy to convert to a 4 lane road in the future.	2/4/2013 8:54 PM
8	Not sure how low stress this would be for a bicycle or how effective it would be at slowing traffic down.	2/4/2013 3:04 PM

Blackmore Road Proposed Options

#	Please Elaborate	Date
9	Graphic shows 12 foot lanes. 11 foot lanes would be acceptable.	2/4/2013 10:40 AM
10	You are crazy to ride a bike on this road, it is too fast and too congested with traffic, do not encourage additional bike traffic on this roadway.	2/4/2013 10:32 AM
11	I think that street parking on Blackmore is a hazzard to the health of those trying to do that and get in and out of cars. Also, occasionally there is a delivery truck or full truck/trailer parked on the south side of Blackmore just west of Donegal, which blocks the view to see eastbound Blackmore traffic coming from Landmank, until you're out into the insection a ways.	2/4/2013 10:12 AM
12	There are cyclists... not sure enough to call for dedicated lanes.	2/4/2013 9:54 AM
13	It is rare that I ever see a bike there and also people will just drive over the striping. A physical structure causing them to stay in their lane is much safer and creates a more "residential" feel than a cut-through-highway feel	2/4/2013 9:01 AM

Q29 Which of the options presented here would you support for IMPLEMENTATION at the Blackmore Road Corridor? Please select all that apply.

Answered: 23 Skipped: 11



Answer Choices	Responses	
Option 5A - Corridor Calming Strategy - Narrowing	39.13%	9
Option 5B - Buffered Bike Lane	65.22%	15
Other (please specify)	26.09%	6

Total Respondents: 23

#	Other (please specify)	Date
1	Other outer lanes that provide access to the area east of the mall. Possilby a 4 lane route that allows trucks and high volume streets on 1/2 mile or 1 mile spacings in this area.	2/7/2013 9:02 PM
2	None for previously mentioned reasons.	2/7/2013 11:19 AM
3	'Share the Road' signage and pavement markings instead of bike lanes.	2/5/2013 9:13 AM
4	Traffic signals at Landmark/Donegal, and a 2nd at Newport will slow traffic if timed so that 30 MPH optimizes chances of hitting both green.	2/4/2013 8:54 PM
5	none	2/4/2013 10:32 AM
6	Landscaped center median to narrow street an option?	2/4/2013 9:02 AM

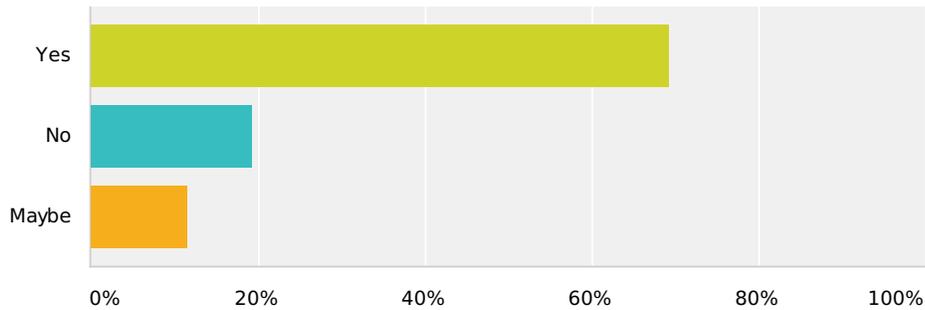
Q30 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 0 Skipped: 34

#	Responses	Date
	There are no responses.	

Q31 Option 6A - Speed Feedback Signs
Option 6A proposes using speed feedback signs on Donegal.
PROS Provides immediate feedback about speed to travelers on the corridor
CONS Non-physical measures are not as effective as physical measures
Is this option acceptable to share with the community?

Answered: 26 Skipped: 8



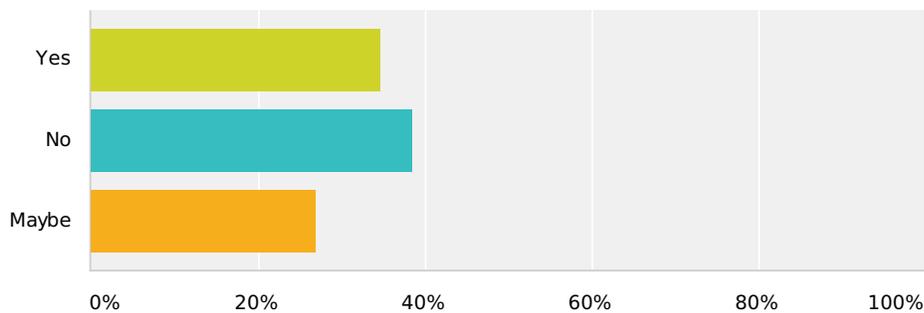
Answer Choices	Responses	
Yes	69.23%	18
No	19.23%	5
Maybe	11.54%	3
Total		26

Please Elaborate (9)

#	Please Elaborate	Date
1	Right turn only on Donegal would discourage traffic and direct to 12th to exit to Wyo Blvd or Newport with larger traffic capabilities	2/8/2013 6:51 AM
2	include a blind intersection message	2/7/2013 12:35 PM
3	I think two Speed Feedback Signs on eastbound Blackmore would be appropriate with the grade of the road.	2/5/2013 9:16 AM
4	People ignore them	2/4/2013 8:57 PM
5	I have not noticed excessive speed in the area. Needed on Blackmore.	2/4/2013 5:26 PM
6	enforce the speed limit.	2/4/2013 10:35 AM
7	This neighborhood is NOT immune to the idiots that speed down the street, some warning would NOT hurt, but are they heeded?, usually not.	2/4/2013 10:20 AM
8	Low cost - posting lower speeds in neighborhood would probably work better... especially with local law enforcement checking speeds in there for a couple of weeks.	2/4/2013 10:09 AM
9	People do not pay attention to those.	2/4/2013 9:08 AM

Q32 Option 6B - Neighborhood Roundabouts Option 6B proposes to install neighborhood roundabouts (traffic circles) at Donegal & Waterford and Donegal & 12th. PROS Slows vehicles traveling through curve Opportunity for landscape enhancement Calms two streets at once CONS Landscaping must be maintained May eliminate on-street parking Cost Is this option acceptable to share with the community?

Answered: 26 Skipped: 8



Answer Choices	Responses	
Yes	34.62%	9
No	38.46%	10
Maybe	26.92%	7
Total		26

Please Elaborate (11)

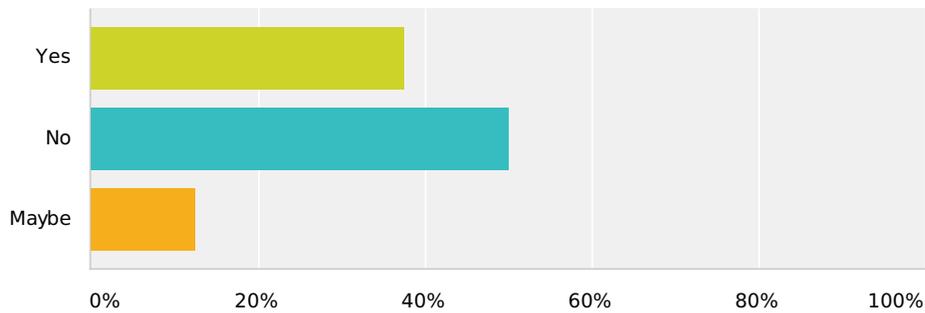
#	Please Elaborate	Date
1	would discourage traffic and slow it down	2/8/2013 6:51 AM
2	I feel roundabouts are a great option in residential areas.	2/7/2013 9:03 PM
3	Really "over-the-top" relative to the actual issues. Why don't we just install traffic signals at the end of everyone's driveways and maybe that will help "calm" traffic...or, perhaps people could just slow down!	2/7/2013 11:22 AM
4	Unnecessary at Waterford and 12th is a major route	2/7/2013 10:31 AM
5	Why? Is there data that indicates a need for this?	2/5/2013 1:50 PM
6	Not sure it's warranted, but seems like a low-cost solution.	2/5/2013 9:16 AM
7	Divers will just speed past them.	2/4/2013 8:57 PM
8	Neighborhood could be offered opportunity to contribute financially	2/4/2013 1:05 PM
9	Can these small traffic circles be done without condemning additional lands? Aren't you creating more snow plowing issues ?	2/4/2013 10:20 AM

Blackmore Road Proposed Options

#	Please Elaborate	Date
10	Cost... multiple neighborhoods could use these, but cost would be enormous and would not be fair for tax payers to fund safety measures for just a few intersections in an upper-middle class neighborhood.	2/4/2013 10:09 AM
11	People not really good with those here. Drivers do not understand how to use them.	2/4/2013 9:08 AM

Q33 Option 6C - Raised Intersections
Option 6C proposes installing a raised intersection at Donegal & Waterford and Donegal & 12th.
PROS Slows vehicles traveling through curve CONS Impacts on drainage need to be considered
These are more appropriate at designated locations with pedestrian crossing paths Is this option acceptable to share with the community?

Answered: 24 Skipped: 10



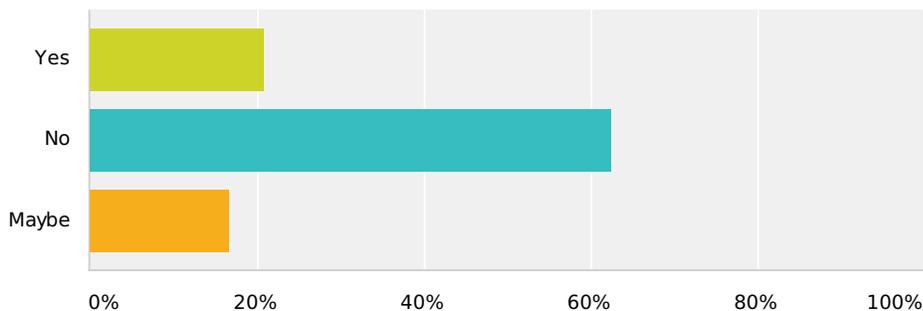
Answer Choices	Responses	
Yes	37.50%	9
No	50%	12
Maybe	12.50%	3
Total		24

Please Elaborate (7)

#	Please Elaborate	Date
1	overkill	2/7/2013 12:35 PM
2	As above	2/7/2013 10:31 AM
3	Is this just another way of describing "speed bumps"?	2/5/2013 1:50 PM
4	Don't believe it's warranted here.	2/5/2013 9:16 AM
5	Either that or speed bumps.	2/4/2013 8:57 PM
6	Can still be a little costly, but I like them, and seems to slow traffic down.	2/4/2013 10:09 AM
7	Forces people to slow down and creates more of a residential feel than a cut-through feel.	2/4/2013 9:08 AM

Q34 Option 6D - Curb Extensions
Option 6D proposes installing curb extensions at Donegal & Waterford and Donegal & 12th. PROS
“Pedestrianize” intersection by creating shorter crossing distance
Creates protected parking areas
Provides a calming effect along the roadway
Provides an area for landscaping enhancements
CONS
May require bicyclists to merge with vehicular traffic
Is this option acceptable to share with the community?

Answered: 24 Skipped: 10



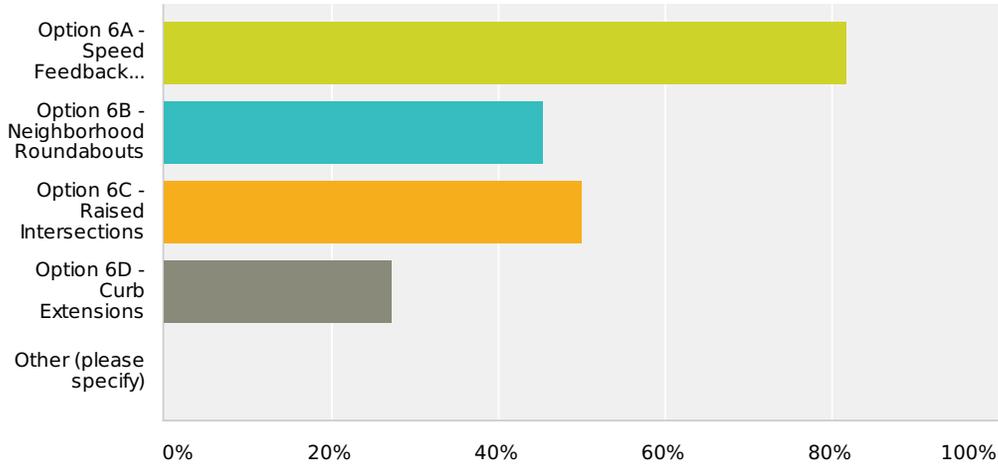
Answer Choices	Responses	
Yes	20.83%	5
No	62.50%	15
Maybe	16.67%	4
Total		24

Please Elaborate (8)

#	Please Elaborate	Date
1	would not slow the through traffic	2/7/2013 12:35 PM
2	As above	2/7/2013 10:31 AM
3	Don't believe it's warranted here.	2/5/2013 9:16 AM
4	Didn't work on 12th street, won't work here.	2/4/2013 8:57 PM
5	curb extensions do not work, enforce the speed limit.	2/4/2013 10:35 AM
6	Again, I'm never in favor of "choking down" turning radius's on comers. It would create problems for anyone pulling a camp or boat trailers.	2/4/2013 10:20 AM
7	Not a bad option... makes for tight turns for all the large pickups in Casper.	2/4/2013 10:09 AM
8	For the few bikers that come through here, it would put them in harm's way.	2/4/2013 9:08 AM

Q35 Which of the options presented here would you support for IMPLEMENTATION at the Blackmore Road Corridor? Please select all that apply.

Answered: 22 Skipped: 12



Answer Choices	Responses	
Option 6A - Speed Feedback Signs	81.82%	18
Option 6B - Neighborhood Roundabouts	45.45%	10
Option 6C - Raised Intersections	50%	11
Option 6D - Curb Extensions	27.27%	6
Other (please specify)	0%	0
Total Respondents: 22		

#	Other (please specify)	Date
	There are no responses.	

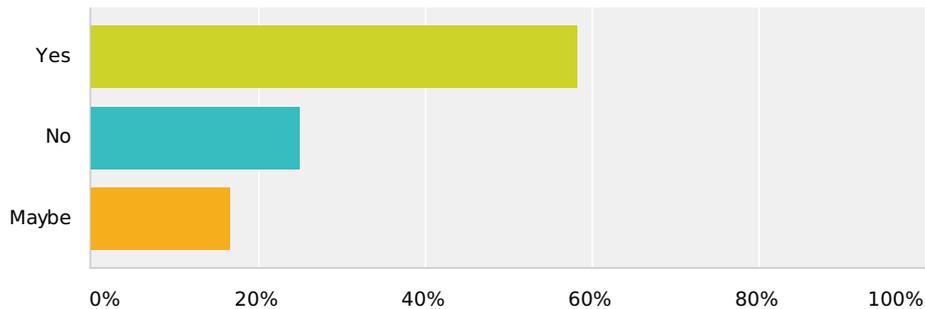
Q36 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 2 Skipped: 32

#	Responses	Date
1	Discouraging traffic on Blackmore Road is a gigantic waste of money, time and other resources. Blackmore should be a cut-thru street and, despite all efforts to the contrary, will be just that.	2/7/2013 11:25 AM
2	Thank you for "Pedestrian Facilities"	2/4/2013 5:32 PM

Q37 Option 7A - Access Control
Option 7A proposes
reducing/restricting access points
along 2nd Street. A corridor study
should identify the access that is
necessary as well as needed
pedestrian facilities along the
roadway. PROS Fewer conflict points
for pedestrians and for vehicles
Improves traffic flow through
corridor CONS May cause longer
routes for drivers Removing access
is challenging Requires additional
analysis Is this option acceptable to
share with the community?

Answered: 24 Skipped: 10



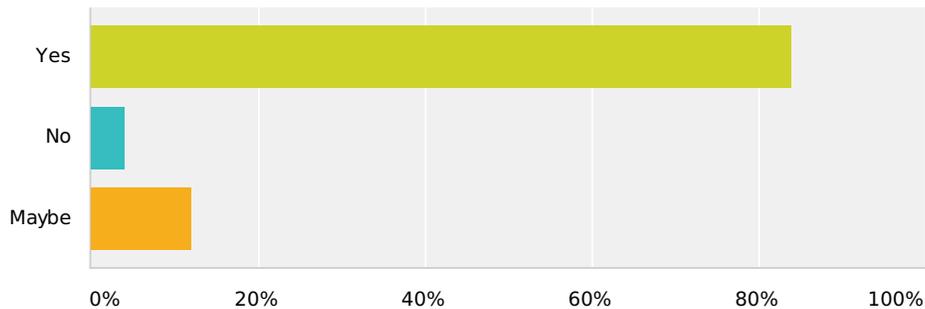
Answer Choices	Responses	
Yes	58.33%	14
No	25%	6
Maybe	16.67%	4
Total		24

Please Elaborate (7)

#	Please Elaborate	Date
1	raised islands would help peds crossing this wide street	2/7/2013 12:37 PM
2	Need more information as to how this would work.	2/5/2013 1:56 PM
3	Not sure which intersections this would apply towards. The only real problem in my eyes is the Wal-Mart turn in and more so the Sam's Club/Perkins intersection. The Mall's entrance/exit is very dangerous, being located so close to 2nd Street.	2/5/2013 9:28 AM
4	Increase traffic on Blackmore	2/4/2013 5:32 PM
5	No issues with access	2/4/2013 10:13 AM
6	It is ridiculous how many access points are on this road.	2/4/2013 9:11 AM
7	Political will to tell a new business that they can't have a second street access is non-existent. Access control should be a broad topic, for discussion on a community-wide scale, rather than a targeted approach on only one street.	2/4/2013 9:08 AM

Q38 Option 7B - Improve Signal Timing
Option 7B proposes analyzing signal timing operations through the corridor to make recommendations that improve signal timing. PROS Opportunity to enhance traffic flow through corridor More efficient travel on 2nd Street may prevent vehicles from cutting thru on other roadways Potential to remove unwarranted signals CONS Signals have already been installed Requires additional analysis Is this option acceptable to share with the community?

Answered: 25 Skipped: 9



Answer Choices	Responses	
Yes	84%	21
No	4%	1
Maybe	12%	3
Total		25

Please Elaborate (8)

#	Please Elaborate	Date
1	All the way through Wyoming Blvd.	2/10/2013 6:53 AM
2	Think it is certainly worth considering. Speeders and drivers running yellow/red lights needs to be addressed.	2/5/2013 1:56 PM
3	Not really an issue in my eyes. The Blackmore short-cut will likely always be an issue due to the directness of path. I wish it had been originally designed and built as a five-lane boulevard. But now, the ROW costs would be so significant that I doubt it is feasible for many years to come.	2/5/2013 9:28 AM
4	1st choice, and try to extend back to Beverly.	2/4/2013 9:00 PM
5	There are going to be issues when you get the 2nd and Wyoming Blvd due to the number of phases in the intersections timing. They do not match up with other intersections when the left turns are protected on every cycle and there is no permissive lefts.	2/4/2013 3:09 PM
6	signal timing if it works is great, it has not worked in the past.	2/4/2013 10:38 AM
7	Improved signal timing is always a good idea - study would not cost much.	2/4/2013 10:13 AM

#

Please Elaborate

Date

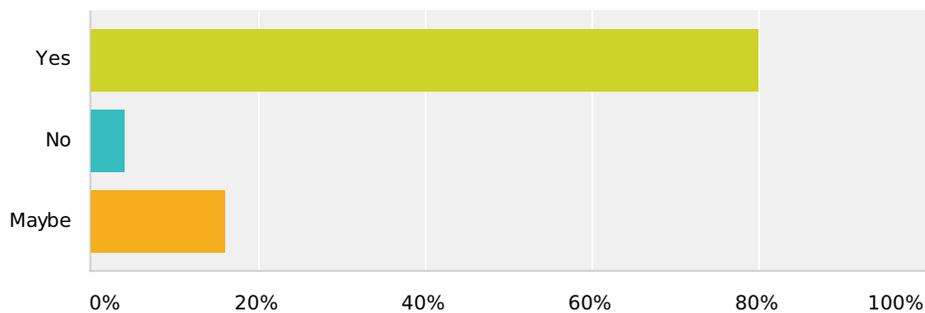
8

Signals really are not all that bad, but can always improve.

2/4/2013 9:11 AM

Q39 Option 7C - Continuous Sidewalks Option 7C proposes continuous sidewalks to connect destinations along 2nd Street. PROS Enhances pedestrian safety and comfort Supports transit use by providing pedestrian access to bus routes CONS Potentially high implementation cost Confirm Casper policy for sidewalk installation Is this option acceptable to share with the community?

Answered: 25 Skipped: 9



Answer Choices	Responses	
Yes	80%	20
No	4%	1
Maybe	16%	4
Total		25

Please Elaborate (8)

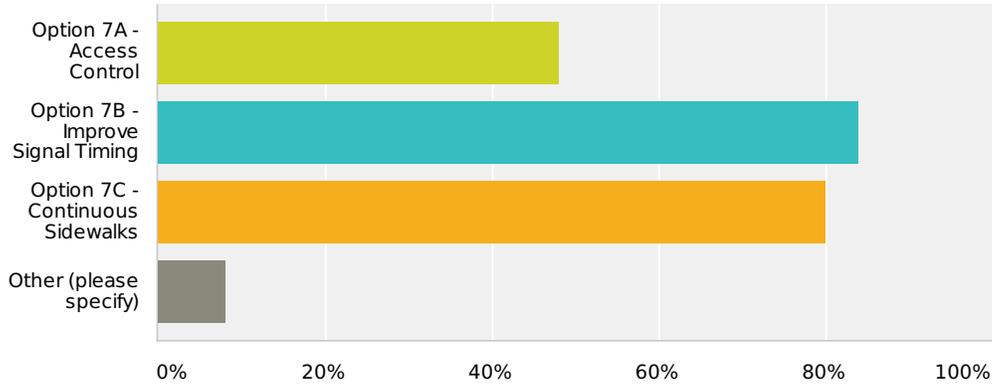
#	Please Elaborate	Date
1	essential	2/7/2013 12:37 PM
2	I highly recommend this proposal. The sidewalks would need to be detached. I believe we currently only require sidewalks on a development-by-development basis. I would like to see us change policy to incorporate street design guidelines whenever a road is built or upgraded. I can't imagine property owners would be supportive of being required to pay to install sidewalks well after the fact. Some best practices from other communities would be very valuable for us.	2/5/2013 9:28 AM
3	Is the cost worth it when you look at he stress just by the virtue that it is right next to a road with such high volumns.	2/4/2013 3:09 PM
4	The Bus is researching relocating the bus stops at Blackmore and Donegal. The new roadway will determine location of the stops.	2/4/2013 2:27 PM
5	do you really think adding additional pedestrian to an already unsafe roadway is smart?	2/4/2013 10:38 AM
6	Developer should have been required to do this in first place.	2/4/2013 10:13 AM
7	This is badly needed!!!	2/4/2013 9:11 AM

Blackmore Road Proposed Options

#	Please Elaborate	Date
8	Sidewalks are installed as development occurs, at developer cost. City has no standards in place to ensure that the correct type of sidewalks are constructed (detached vs. curbwalk). Context sensitive design standards are necessary because building curbwalks adjacent to 2nd Street doesn't help because pedestrians don't feel safe.	2/4/2013 9:08 AM

Q40 Which of the options presented here would you support for IMPLEMENTATION at the 2nd Street Corridor? Please select all that apply.

Answered: 25 Skipped: 9



Answer Choices

Responses

Option 7A - Access Control	48%	12
Option 7B - Improve Signal Timing	84%	21
Option 7C - Continuous Sidewalks	80%	20
Other (please specify)	8%	2

Total Respondents: 25

#	Other (please specify)	Date
1	Perhaps a new intersection could be created mid-block with much better access to Wal-Mart/Sam's Club/Perkins, and also for the Eastridge Mall.	2/5/2013 9:28 AM
2	Can you combine both of Options 7A and 7C, please?	2/4/2013 9:11 AM

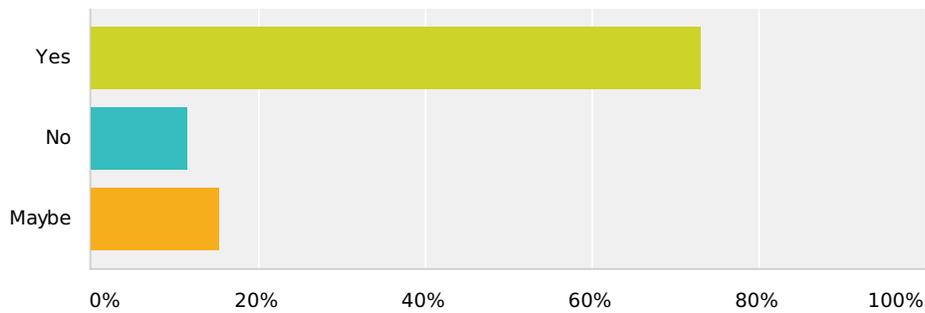
Q41 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 2 Skipped: 32

#	Responses	Date
1	I think you could analyze to death every neighborhood intersections in town. I only use this street when visiting occupants in the neighborhood. Maybe get rid of NS or EW signs if one direction is busier than the other.	2/8/2013 6:57 AM
2	There is not a 4-way stop at Newport & 21st, there is a 2-way stop, with Newport stopping for 21st Street. I'm not sure how big of a problem this is. I walk this area almost daily, and there is very little traffic. Not surprising since it is the near the end of two residential mini-arterials. I don't think 21st street will be extended as it ends on a green belt/wild life refuge.	2/4/2013 9:20 PM

Q42 Option 8A - Analyze Newport Intersection for All-Way Stop Warrants Option 8A proposes an analysis of the 21st Street/Newport intersection for compliance with All-Way Stop warrants. Oftentimes when traffic control is not warranted, there is a high percentage of non-compliance. . **PROS** If not warranted, removal of an unwarranted All-Way Stop will reduce non-compliance Reduced pedestrian false sense of security **CONS** Community reluctance to remove the All-Way Stop Initial driver confusion **Is this option acceptable to share with the community?**

Answered: 26 Skipped: 8



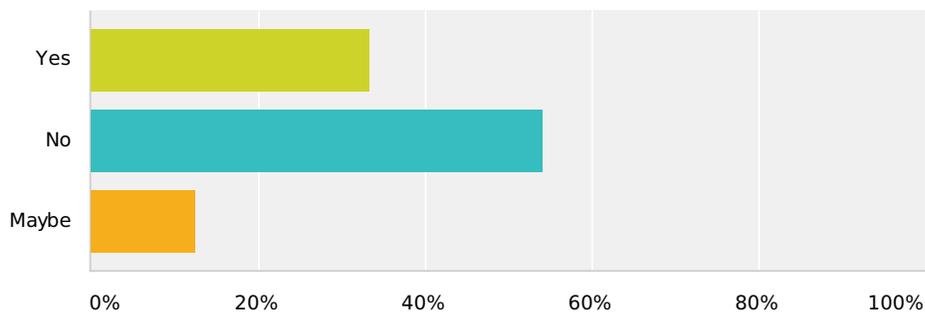
Answer Choices	Responses	
Yes	73.08%	19
No	11.54%	3
Maybe	15.38%	4
Total		26

Please Elaborate (2)

#	Please Elaborate	Date
1	I'm not sure the 2-way stop in indicated, let alone a 4 say stop.	2/4/2013 9:20 PM
2	We all know we need to do something, this analysis would just be a way of prolonging the inevitable with added cost.	2/4/2013 9:14 AM

Q43 Option 8B - Curb Extensions
Option 8B proposes implementing curb extensions at key intersections along 21st street. PROS Narrowing provides shorter pedestrian crossing distances Alerts drivers of potential pedestrian conflict Provides a traffic calming element CONS Drainage/snow plowing considerations Is this option acceptable to share with the community?

Answered: 24 Skipped: 10



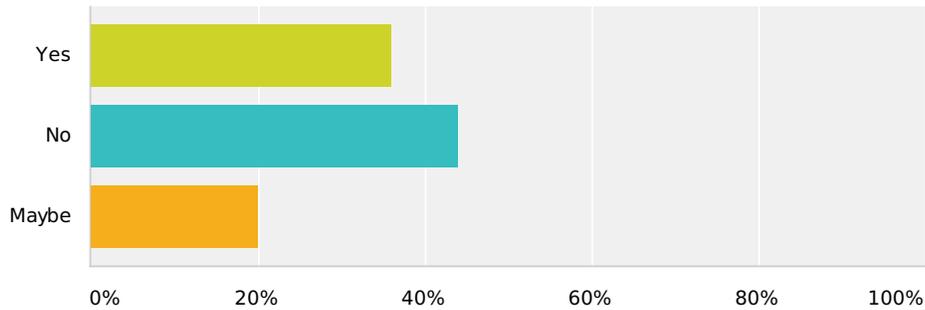
Answer Choices	Responses	
Yes	33.33%	8
No	54.17%	13
Maybe	12.50%	3
Total		24

Please Elaborate (7)

#	Please Elaborate	Date
1	Every neighborhood would want this consideration. Very costly.	2/8/2013 6:57 AM
2	not enough traffic to warrant	2/7/2013 12:38 PM
3	Have tried them - they don't work	2/7/2013 10:34 AM
4	Didn't work on 21st street downtown, won't work here.	2/4/2013 9:20 PM
5	I worry that every street can not be a local street. The city does not look at this as a local street from my understanding.	2/4/2013 3:13 PM
6	At Newport and 21st intersection	2/4/2013 10:19 AM
7	Is this road even plowed? The city of Casper website has a link showing the plow map. Plowing may not even be a consideration here.	2/4/2013 9:14 AM

Q44 Option 8C - Neighborhood Roundabouts Option 8C proposes neighborhood roundabouts at key intersections along 21st street. PROS Deflection slows vehicle speeds through the corridor Provides safer crossing for pedestrians CONS May require land acquisition Expensive Is this option acceptable to share with the community?

Answered: 25 Skipped: 9



Answer Choices

Responses

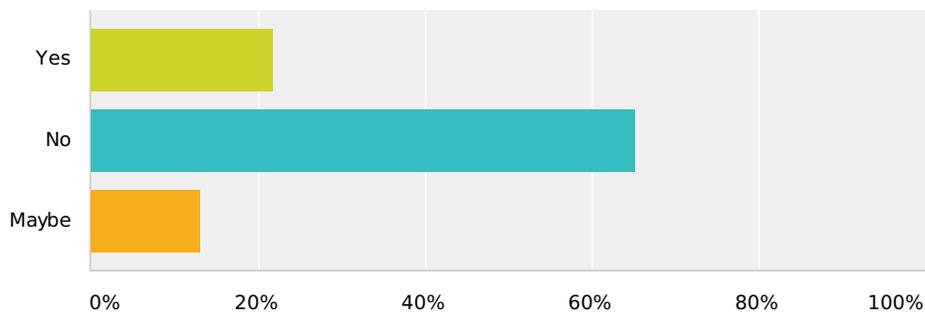
Yes	36%	9
No	44%	11
Maybe	20%	5
Total		25

Please Elaborate (6)

#	Please Elaborate	Date
1	not warranted	2/7/2013 12:38 PM
2	What is the traffic volume in the area and what is projected for the future. What development is being discussed in terms of residential housing.	2/5/2013 2:04 PM
3	Simple and has some symmetry with the large roundabout. However, I'm not sure this is warranted.	2/5/2013 9:30 AM
4	Drivers will just race around it.	2/4/2013 9:20 PM
5	Limit roundabouts at major intersections - too costly to implement most places.	2/4/2013 10:19 AM
6	People just do not know how to use one, but I guess they can learn.	2/4/2013 9:14 AM

Q45 Option 8D - Horizontal Deflection Combination Option 8D proposes a combination of horizontal deflection traffic calming strategies, such as curb extensions and roundabouts. PROS Deflection slows vehicle speeds Reduces "straight shot" perception for drivers CONS May require land acquisition Drainage and snow plowing considerations Cost Is this option acceptable to share with the community?

Answered: 23 Skipped: 11



Answer Choices

Responses

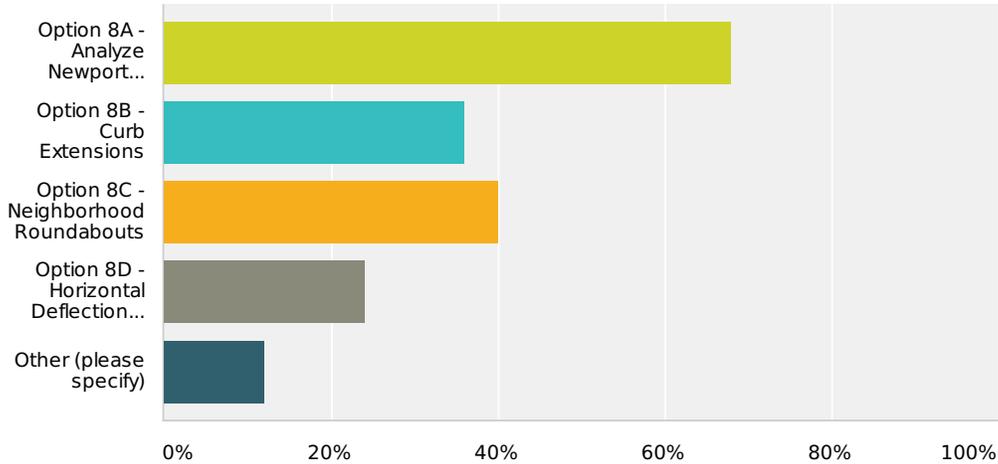
Yes	21.74%	5
No	65.22%	15
Maybe	13.04%	3
Total		23

Please Elaborate (6)

#	Please Elaborate	Date
1	not enough traffic	2/7/2013 12:38 PM
2	Once again, what data is there on this subject.	2/5/2013 2:04 PM
3	Only if truly warranted.	2/5/2013 9:30 AM
4	Didn't work on 21st street downtown, won't work here.	2/4/2013 9:20 PM
5	curb extensions do not work.	2/4/2013 10:41 AM
6	People speed like crazy on this road.	2/4/2013 9:14 AM

Q46 Which of the options presented here would you support for IMPLEMENTATION in the 21st Street Corridor? Please select all that apply.

Answered: 25 Skipped: 9



Answer Choices	Responses	
Option 8A - Analyze Newport Intersection for All-Way Stop Warrants	68%	17
Option 8B - Curb Extensions	36%	9
Option 8C - Neighborhood Roundabouts	40%	10
Option 8D - Horizontal Deflection Combinations	24%	6
Other (please specify)	12%	3

Total Respondents: 25

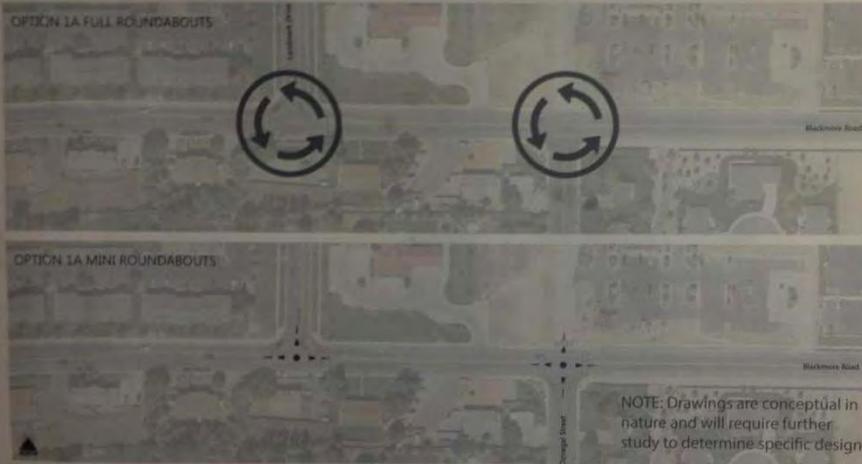
#	Other (please specify)	Date
1	Need to address 'Do Nothing' alternative.	2/21/2013 3:16 PM
2	Either roundabouts or eliminate 4 way stops.	2/7/2013 9:05 PM
3	My comment is that does every street have to be a local street. What kind off issues to these options cause with drainage and snow removal. How much more so is the snow removal and issue on smaller streets.	2/4/2013 3:13 PM

Appendix C

COMMUNITY RECOMMENDATION PREFERENCES

DRAFT

OPTION 1A: Roundabouts



Option 1A proposes replacing the existing traffic control at Donegal, Landmark, and Newport intersections along Blackmore Road with roundabouts. We suggest for consideration that all three intersections be considered for reconfiguration to meet driver expectation along the corridor.

I like this option

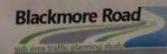


PROS

- ✓ Improved traffic flow through a corridor and limit the "chicken" effect that can result from traffic signals
- ✓ Higher driver overall travel speed along the corridor
- ✓ Lower energy consumption with roundabouts
- ✓ Can maintain existing air support fees
- ✓ Will reduce delay of left turning traffic from Donegal onto Blackmore Road
- ✓ Roundabouts are inherently safer intersections
- ✓ Roundabouts are more efficient at times of peak traffic than stop and go signals
- ✓ Higher vehicle capacities of all other approaches with added vehicles
- ✓ Lower noise levels than traffic signals and stop and go
- ✓ Higher gas mileage for the corridor
- ✓ Maintenance costs of roundabout intersections tend to be lower than signalized intersections
- ✓ A mini roundabout could potentially fit within existing footcurets

CONS

- ✓ Potentially a larger footprint than existing intersections if full roundabout
- ✓ Based upon the developments along the corridor, the roundabout at Donegal would likely have to be constructed to encroach on the property on the north side of the existing intersection
- ✓ Significant cost to reconfigure



OPTION 1B: Continuous Flow, T-Intersection



Option 1B proposes a median to provide the opportunity for left turns from Donegal to Blackmore and from Blackmore onto Donegal. Left-turns into and out of the Community Health Center Access would be prohibited. This option would not be implemented until access on Landmark Drive is completed.

I like this option



PROS

- ✓ Allows left-turns from Donegal to Blackmore easier
- ✓ Provides a refuge for pedestrians crossing Blackmore Road
- ✓ Narrowing travel way within the road, creating a calming effect for Blackmore Road
- ✓ May reduce truck traffic if median is wide enough
- ✓ Allows residents and users to access the neighborhood from Blackmore Road

CONS

- ✓ Limits access in and out of the Community Health Center access on Blackmore to right-turns only



OPTION 1C: Pork Chop Median at Community Health Center Access



Option 1C proposes prohibiting the left-turn movements at the Community Health Center Access to Blackmore Road by installing a raised pork-chop shape median in the driveway. Left-turns from the Community Health Center Access would be prohibited. This option would not be implemented until access on Landmark Drive is completed.

I like this option

place dots here

more back to private property so there is a free flow of traffic on Blackmore

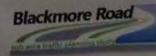
Note: Drawings are conceptual in nature and will require further study to determine specific design

PROS

- ✓ Eliminates left-turns from Denegal to Blackmore easier
- ✓ Improves access and visibility to access the neighborhood from Blackmore Road
- ✓ Cost effective option after striping and signing

CONS

- ✓ Limits access in and out of the community health center access on Blackmore to right-turns only
- ✓ Non-compliance higher than Option 1B



This option would not be implemented until access on Landmark Drive is completed.

I like this option

place dots here

more back to private property so there is a free flow of traffic on Blackmore

Blackmore Road

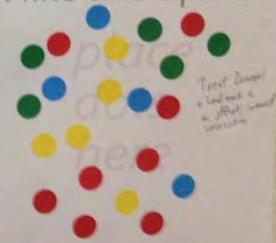
conceptual in nature and will require further study to determine specific design

OPTION 1D: Donegal Signal

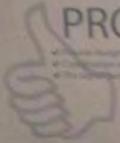


Option 1D proposes signaling Blackmore and Donegal. This signal would be placed on a single controller to ensure coordination with the signal at Landmark. PLEASE NOTE: This signal is not currently warranted.

I like this option



PROS

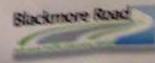


- The signal at Donegal Street for left turns from Donegal to Blackmore
- The signal at Donegal Street for left turns from Blackmore to Donegal
- The signal at Donegal Street for left turns from Donegal to Donegal

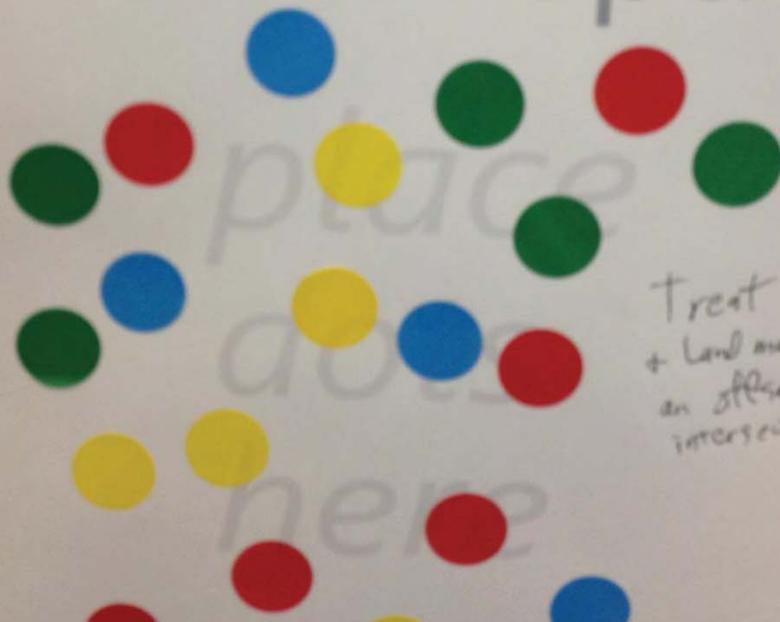
CONS



- The signal at Landmark
- The signal at Donegal Street for left turns from Donegal to Donegal
- The signal at Donegal Street for left turns from Donegal to Donegal



I like this option



Treat Donegal + Landmark as an offset intersection

OPTION 2A: Stripe "DO NOT BLOCK INTERSECTION"



Option 2A provides a low-cost solution to address an intersection being blocked by vehicles queued from an adjacent intersection. Striping and signing at the intersection of Blackmore Road and Viking Court with applicable DO NOT BLOCK INTERSECTION per the Manual On Uniform Traffic Control Devices.

I like this option

place
dots
here

PROS

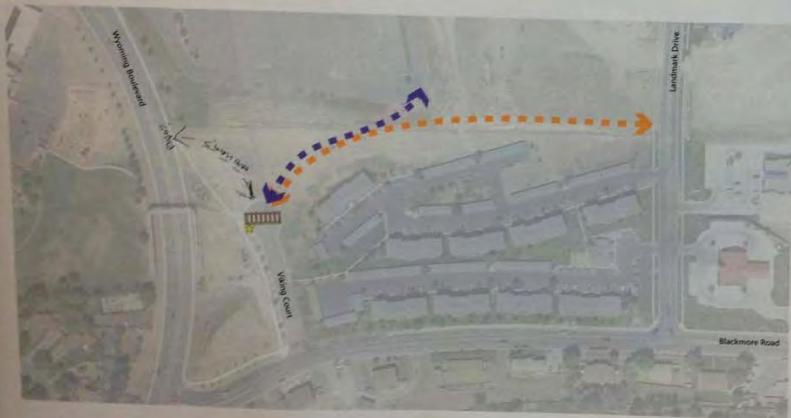
- ✓ Low cost solution
- ✓ Proven effective

CONS

- ✓ Additional analysis (in field observations) should be conducted prior to installation
- ✓ Ongoing maintenance (restriping)



OPTION 2B: Connect Viking Court to Landmark



Option 2B proposes extending Viking Court to Landmark Drive or to the Mall loop. This street could either be one-way or two-way depending on circulation benefits. This strategy also includes a raised crosswalk or intersection at the school drop-off and could also include a crossing guard during peak times at the raised crosswalk.

I like this option

place
dots
here

PROS

- ✓ Low cost solution
- ✓ Improved safety - increases separation with the school drop-off currently taking place at the Viking Court
- ✓ Improved circulation - provides a link up to Blackmore/Viking Court and Blackmore/Wyoming
- ✓ Improved signing - stop sign at junction
- ✓ Healthier and more vibrant street network
- ✓ Improved safety - all improved pedestrian visibility and clear vehicles

CONS

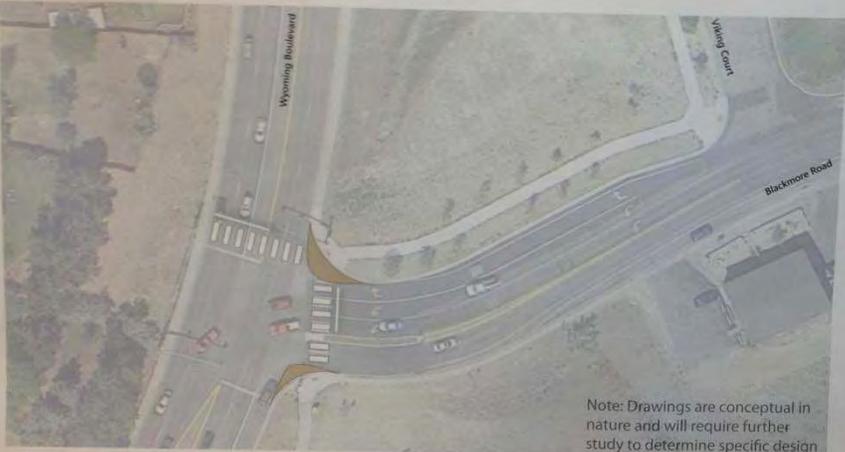
- ✓ Safety expense
- ✓ Will need to obtain ROW to complete
- ✓ Costs could increase cost of connection



I think there was some feedback on this one - but I'm not sure what it was.

I heard there was some instrument that can determine a person or Bicyclist at a Crosswalk
 ↘ Change Signal Instantly - Can we have

OPTION 2C: Pedestrian Improvements



Note: Drawings are conceptual in nature and will require further study to determine specific design

Option 2C proposes pedestrian enhancements at Blackmore & Wyoming including tighter curb radii and high visibility crosswalks on the north leg of the intersection. Intersection analyses would be required to determine the impact to the operations of the signal with the addition of pedestrian phasing.

I like this option

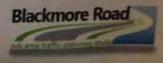
place dots here

PROS

- ✓ Opportunity to bring intersection into ADA compliance
- ✓ Provides additional crossing opportunities besides pedestrian overpass
- ✓ Shows turning vehicles
- ✓ May eliminate some of the drop off activity on Viking Ct if the improvements are safe and comfortable

CONS

- ✓ Demand for additional crossing will be low
- ✓ Pedestrian crossing timing may impact vehicle delay
- ✓ May not mitigate revenues associated with Viking Ct
- ✓ Redundant with pedestrian overpass



OPTION 3A: Analyze intersection for Operational Improvements



Option 3A proposes to analyze the intersection operations for potential improvements. The additional analysis is essential and should be conducted prior to any improvements being implemented.

I like this option

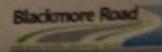
● place dots here

PROS

- Provides opportunity for in-depth analysis of the intersection before any improvements are made
- Identifies traffic operations that should be avoided when making other improvements or changes

CONS

- Requires additional study
- Requires coordination with WSPCC to the a JPRDCC permit and operation signal



OPTION 3B: Pedestrian Enhancements



Option 3B proposes enhancing pedestrian crossings at the intersection by creating pedestrian refuge islands and/or "pork chop" islands at intersection approaches.

I like this option

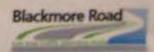
● place dots here

PROS

- Allows pedestrians to cross only one direction of traffic at a time
- Creates a safe place for slower pedestrians to stand when doing complete intersection crossing
- Reduces pedestrian crossing distance
- May improve intersection efficiency
- Increases "visibility"

CONS

- Heavily designed island often get hit by vehicles
- May increase speeds in the area
- Right turning vehicles may have possible conflict with pedestrians



OPTION 4A: Modification to Existing Roundabout



Option 4A proposes physical modifications to the existing roundabout to address high speeds. The roundabout in its current configuration does not provide any deflection for entering vehicles. The deflection causes vehicles to slow down as they approach the roundabout. The diameter of the existing roundabout is large and the lanes too wide. A raised truck apron and a raised central island would force slower speeds.

I like this option

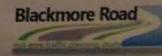


PROS

- ✓ Slows vehicle speeds approaching and through the roundabout
- ✓ Improved pedestrian safety

CONS

- ✓ Significant costs to a relatively new intersection
- ✓ Needs to be designed and constructed to accommodate snow plow equipment

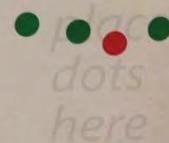


OPTION 4B: Raised Crosswalks



Option 4B proposes installing raised crosswalks on all approaches of the roundabout

I like this option

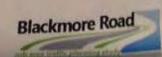


PROS

- ✓ Increases pedestrian crossing visibility
- ✓ Slows vehicle speeds

CONS

- ✓ Impacts on drainage
- ✓ Needs to be designed and constructed to accommodate snow plow equipment



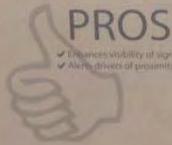
OPTION 4C: Reconfigure Signage



Option 4C proposes to move the existing state yield signs to the center medians on all approaches and replace pedestrian signs with neon school crossing signs due to proximity of elementary school.

I like this option

place dots here



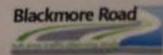
PROS

- ✓ Enhances visibility of signs
- ✓ Alerts drivers of proximity to school



CONS

- ✓ Cost of sign relocation



OPTION 5A: Corridor Calming Strategy - Intersection Narrowing



Option 5A proposes a strategy to calm the Blackmore Road Corridor by narrowing the travel way with curb extensions and restriping.

I like this option

place dots here



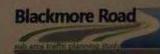
PROS

- ✓ Signage message to drivers that Blackmore is not a "fast thru" route
- ✓ Reduces speed of vehicles
- ✓ Curb extensions shorten pedestrian crossing distances
- ✓ Provides space for landscaping and aesthetic improvements
- ✓ Moves traffic to encourage use of the designated routes and stop at arterial crosswalk
- ✓ The curb calming elements discourage and slow traffic by increasing corridor travel time
- ✓ Not a barrier to avoid school crossings



CONS

- ✓ Traffic calming elements increase travel time for all roadway users
- ✓ May create issues with drainage, paving
- ✓ Poorly designed curb extensions may not accommodate cyclists



OPTION 5B: Buffered Bike Lane



Option 5B proposes to create a buffered bike lane by converting the existing parking lane to a bike lane and restriping the existing bike lane as a buffer.

I like this option

PROS

- ✓ Visually narrows the roadway
- ✓ Creates more comfortable infrastructure for cyclists
- ✓ Creates a clear stress connection between trails

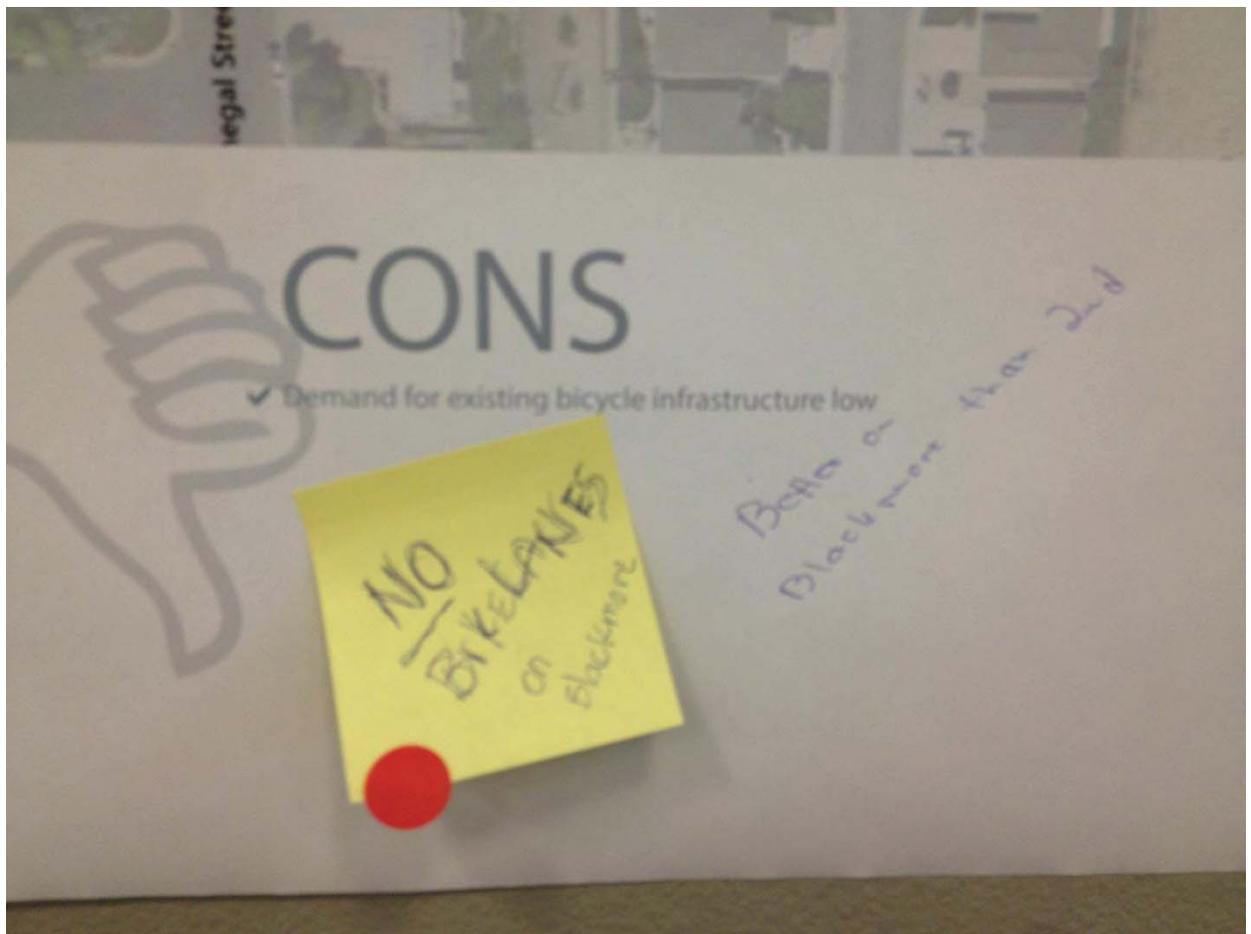
CONS

- ✓ Demand for existing bicycle infrastructure low

No BIKELANES on Blackmore

Better on Blackmore than 2nd

Blackmore Road



here

Bike Lanes
and More ~~Str~~ Str
Parking - To Slow
Traffic
Narrow the Lanes

OPTION 6A: Speed Feedback Signs



Option 6A proposes using speed feedback signs on Donegal.



image of a permanent speed feedback sign

I like this option



PROS

Provides immediate feedback about speed to travelers on the corridor

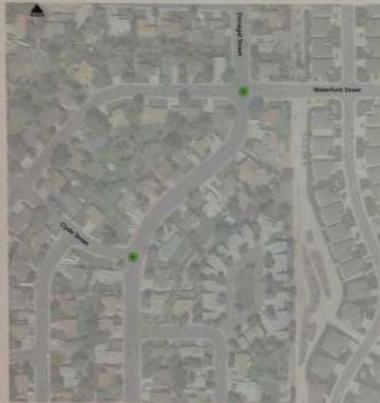


CONS

Non-physical measures are not as effective as physical measures



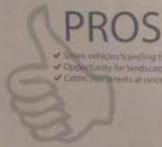
OPTION 6B: Neighborhood Roundabout



Option 6B proposes to install neighborhood roundabouts (traffic circles) at Donegal & Waterford and Donegal & Clyde.

I like this option

place
dots
here



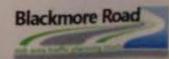
PROS

- ✓ Slows vehicles traveling through curve
- ✓ Opportunity for landscape enhancement
- ✓ Calms neighborhood streets at once

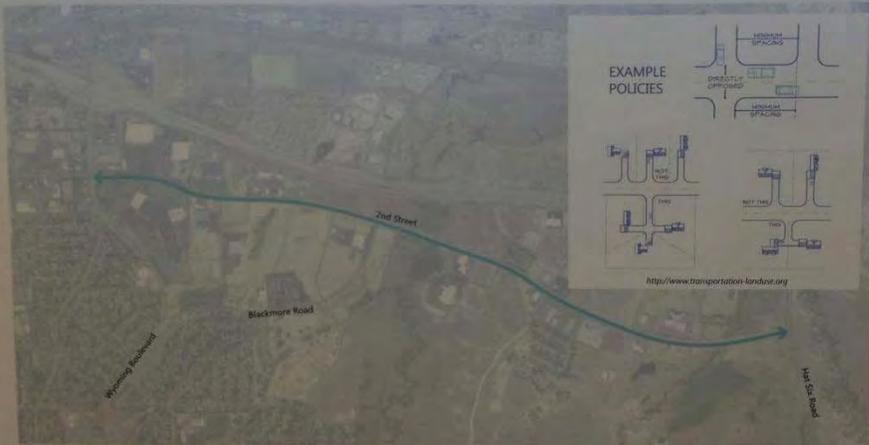


CONS

- ✓ Landscaping must be maintained
- ✓ May eliminate on-street parking
- ✓ Cost



OPTION 7A: Access Control



Option 7A proposes reducing/restricting access points along 2nd Street. A corridor study should identify the access that is necessary as well as needed pedestrian facilities along the roadway.

I like this option

place
dots
here



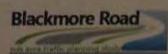
PROS

- ✓ Fewer conflict points for pedestrians and the vehicles
- ✓ Improves traffic flow through corridor

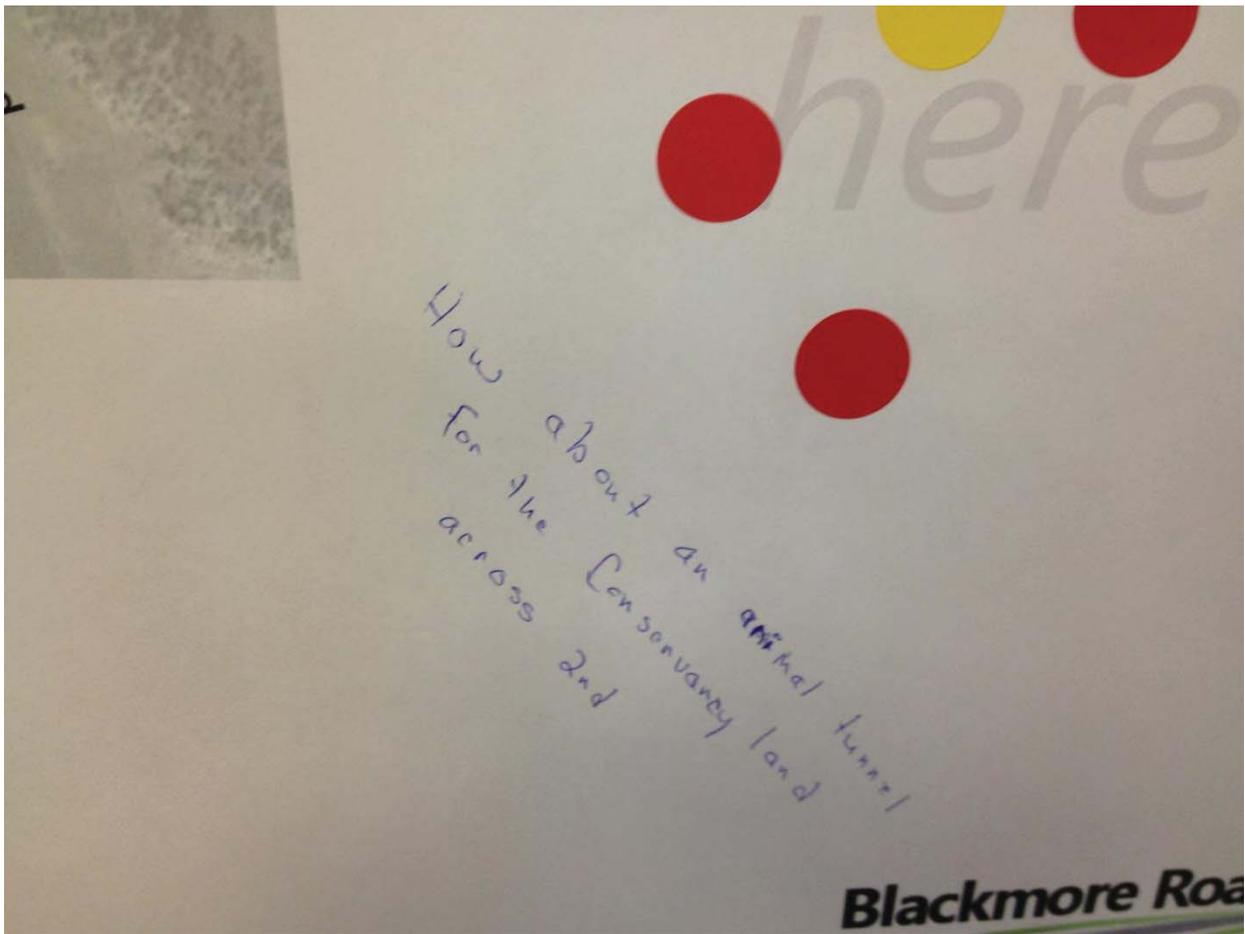


CONS

- ✓ May cause longer routes for drivers
- ✓ Removing access is challenging
- ✓ Requires additional analysis



OPTION 7B: Improve C...



Blackmore Road

OPTION 7B: Improve Signal Timing

Option 7B proposes analyzing signal timing operations through the corridor to make recommendations that improve signal timing.

I like this option

Blackmore Road

PROS

- Improvements to reduce traffic flow through corridor
- Signal timing based on 2nd Street may prevent vehicles from cutting thru on other roadways
- Redundant intersection signal

CONS

- Signals have already been installed
- Requires additional analysis

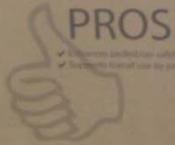
Blackmore Road

OPTION 7C: Continuous Sidewalks



Option 7C proposes continuous sidewalks to connect destinations along 2nd Street.

I like this option



PROS

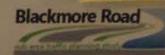
- ✓ Enhances pedestrian safety and comfort
- ✓ Encourages transit use by providing pedestrian access to bus stops



CONS

- ✓ Relatively high implementation cost
- ✓ Clarify Capital policy for sidewalk installation

Need more bus stops

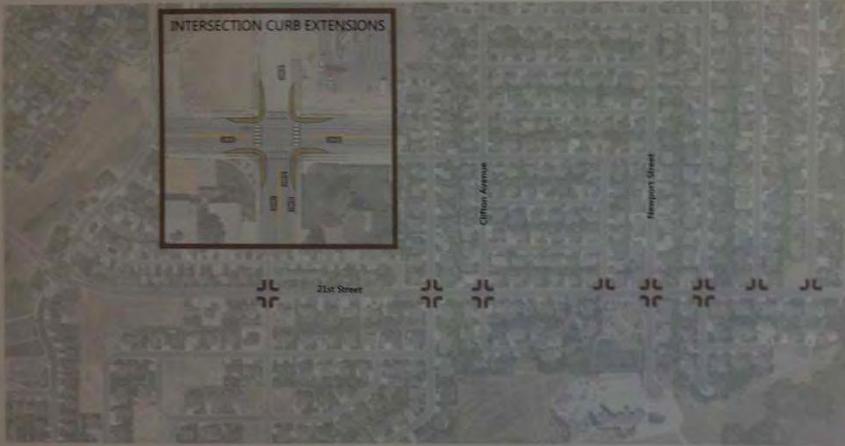


Need more Bus Stops

Blackmore Road

sub area traffic planning study

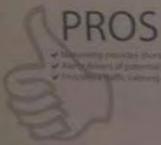
OPTION 8A: Curb Extensions



Option 8A proposes implementing curb extensions at key intersections along 21st street. This option would only be implemented to minimize neighborhood impacts if 21st were extended to expand the roadway network.

I like this option

place
● dots
here



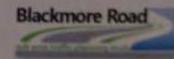
PROS

- ✓ Reducing crashes (shorter pedestrian crossing distances)
- ✓ Reduce severity of potential pedestrian conflicts
- ✓ Increase safety, walking distance



CONS

- ✓ Disrupts or may slow down construction



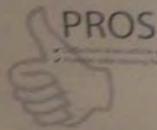
OPTION 8B: Neighborhood Roundabouts



Option 8B proposes neighborhood roundabouts at key intersections along 21st street. This option would only be implemented to minimize neighborhood impacts if 21st were extended to expand the roadway network.

I like this option

place
● dots
here



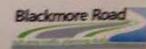
PROS

- ✓ Reduces vehicle speeds through the corridor
- ✓ Provides a more scenic, pedestrian friendly



CONS

- ✓ May require land acquisition
- ✓ May require land acquisition

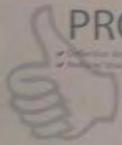


OPTION 8C: Horizontal Deflection Combination



Option 8D proposes a combination of horizontal deflection traffic calming strategies, such as curb extensions and roundabouts. This option would only be implemented to minimize neighborhood impacts if 21st were extended to expand the roadway network.

I like this option



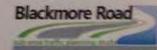
PROS

- Roundabouts allow vehicles to pass
- Roundabouts "straighten" pavement for drivers



CONS

- May require land acquisition
- May require drainage and snow plowing considerations
- Cost



Appendix D

COMMUNITY SURVEY RESULTS

DRAFT

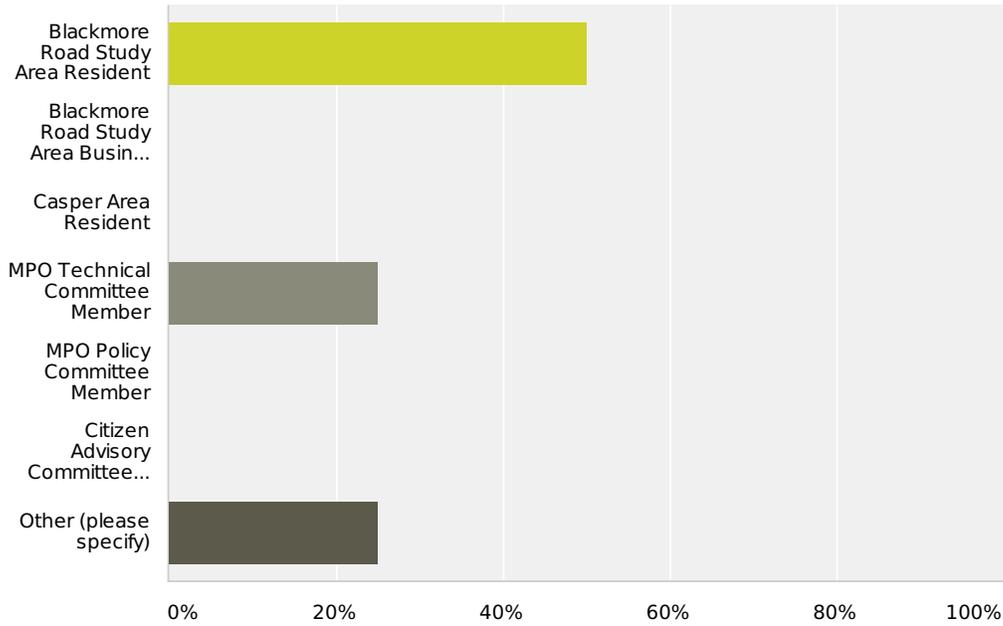
Q1 What is your name?

Answered: 4 Skipped: 0

#	Responses	Date
1	Steve Cathey	2/26/2013 12:48 PM
2	Mike Johnson	2/25/2013 10:38 AM
3	Mike Johnson	2/25/2013 7:49 AM
4	Mike Coleman	2/22/2013 1:58 PM

Q2 Which of the following most accurately describe you?

Answered: 4 Skipped: 0



Answer Choices	Responses	
Blackmore Road Study Area Resident	50%	2
Blackmore Road Study Area Business Owner	0%	0
Casper Area Resident	0%	0
MPO Technical Committee Member	25%	1
MPO Policy Committee Member	0%	0
Citizen Advisory Committee Member	0%	0
Other (please specify)	25%	1
Total		4

#	Other (please specify)	Date
1	Blackmore Resident/City Council member	2/26/2013 12:48 PM

Q3 What is your email address?

Answered: 4 Skipped: 0

#	Responses	Date
1	scathey@cityofcasperwy.com	2/26/2013 12:48 PM
2	mikejo@johnsonmapping.com	2/25/2013 10:38 AM
3	mikejo@johnsonmapping.com	2/25/2013 7:49 AM
4	tompwsup@msn.com	2/22/2013 1:58 PM

Q4 Are there locations that you feel are missing from this map? If so, please list locations and concerns below. Please note that the issues for each location are summarized on the following pages. You will have the opportunity to provide comments for each location identified here.

Answered: 1 Skipped: 3

#	Responses	Date
1	12th Street and Newport	2/26/2013 12:49 PM

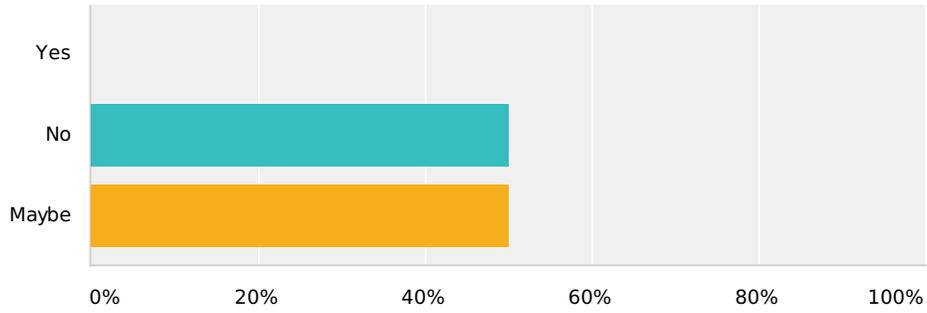
Q5 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 1 Skipped: 3

#	Responses	Date
1	Blackmore IS a connector!!! If you slow traffic on Blackmore, the "new" quicker way to 2nd street will be 12th to Newport to Blackmore.	2/26/2013 1:09 PM

Q6 Do you like Option 1A - Roundabouts?

Answered: 2 Skipped: 2



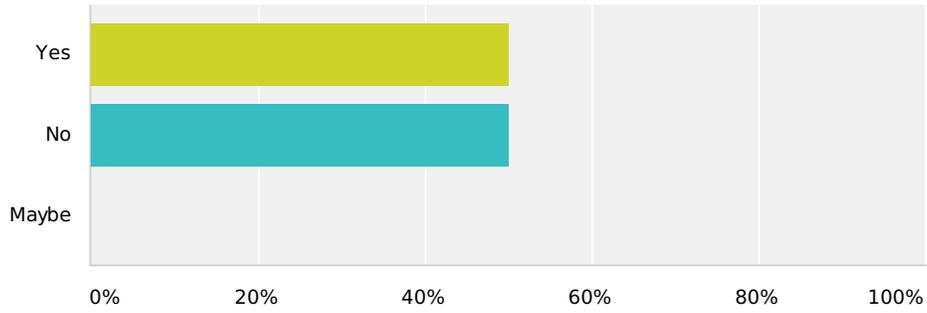
Answer Choices	Responses
Yes	0% 0
No	50% 1
Maybe	50% 1
Total	2

Please elaborate (1)

#	Please elaborate	Date
1	See comment above	2/26/2013 1:09 PM

Q7 Do you like Option 1B - Continuous Flow, T-Intersection?

Answered: 2 Skipped: 2



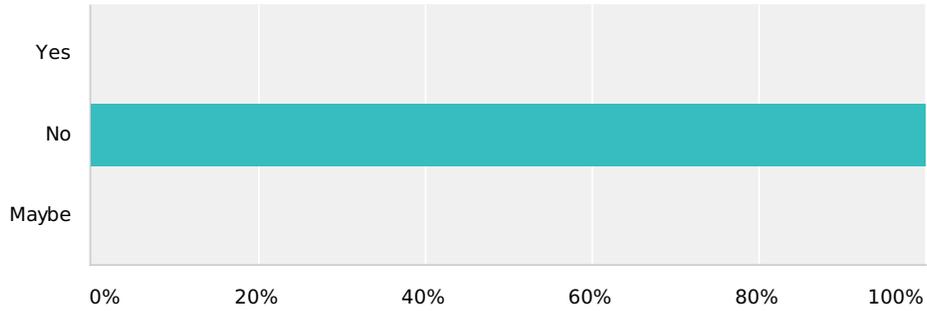
Answer Choices	Responses	
Yes	50%	1
No	50%	1
Maybe	0%	0
Total		2

Please Elaborate (1)

#	Please Elaborate	Date
1	See comment above	2/26/2013 1:09 PM

Q8 Do you like Option 1C - Pork Chop Median at Community Health Center Drive?

Answered: 2 Skipped: 2



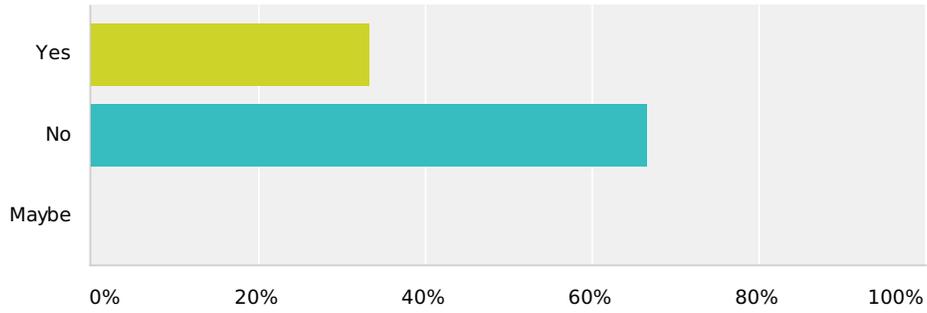
Answer Choices	Responses
Yes	0% 0
No	100% 2
Maybe	0% 0
Total	2

Please Elaborate (1)

#	Please Elaborate	Date
1	see comment above	2/26/2013 1:09 PM

Q9 Do you like Option 1D Donegal Signal?

Answered: 3 Skipped: 1



Answer Choices	Responses	
Yes	33.33%	1
No	66.67%	2
Maybe	0%	0
Total		3

Please Elaborate (2)

#	Please Elaborate	Date
1	see comment above	2/26/2013 1:09 PM

Blackmore Road Community Survey of Proposed Options

#	Please Elaborate	Date
2	<p>After attending the latest meeting in Evansville, I do have more thoughts. PROS - I agree with ALL three of your PROS comments, with coordination between them. 1). Provide designated time for left turns from Donegal to Blackmore. THIS point IS MY PRIMARY CONCERN. I see at the meeting, that this option for a Donegal light, received a large number of "dots" compared to some of the other options. This intersection needs a traffic light that should be coordinated with the Landmark light so that both are running East/West Green at the same time, North/South Green at the same time. A left turning lane going west from Landmark so that cars and sit in the lane waiting a chance to turn left into the Credit Union or into the Health center and NOT hold up other east bound traffic would be good. CONS - (I copied in your CONS here for futher discussion). 1). It is unclear if the signal at Landmark meets warrants. 2). It is very unlikely the signal at Donegal will meet warrants. 3). Installing signals at intersections that are not warranted decreases the safety at the intersections as driver compliance tends to decrease. NEEDS more police enforcement for speeds and obeying traffic signals. Yes, you guessed it, I'm the guy who commented at the meeting that you had "prejudiced" your CONS comments with the "Not Warranted" implications. 1). IF the Landmark did NOT meet warrants, then why was it built ? Sure, I know that there was some agreement between the apartment developer and the city that said they had to build it and also put one at Newport, which was just constantly blinking, the last time I went through it. So, IF you are questioning that past action with the light at Landmark, then certainly you'll reach the conclusion that Donegal doesn't deserve one. But in fact, myself (and many others in the neighborhood), think that the Landmark light should have built at Donegal in the first place and the Newport light should NOT have been installed. However, since that Landmark light is in place, so just leave it and built another at Donegal and be coordinated to flow together. At the Evansville meeting, I talked with a person who seems very knowledgeable about signal warrants. He said that absolutely neither end of the Newport lights (on Blackmore and E. 2nd St.) would meet "warrants standards". And, that the city of Casper has historically ignored warrants and put light in where ever they thought they needed them. Perhaps we need to back up a major step and come up with a different route for the traffic that wants to go east on 2nd St. is using Blackmore as a "short-cut" and congesting the local residential traffic. Look at it, Blackmore is 2 lane, residential street, that is connecting on the north to E. 2nd St., and on the west of Wyo. Blvd., and both are major 4 lanes. From 4 lanes on either end to a 2 lane connector in the middle is real "bottle neck", through a principally residential area. People are using Blackmore to avoid the hassles of using Wyo. Blvd and E. 2nd Street intersection by the Mall. A new road needs to be built from the Hat 6 Road area to the top of the hill where Wyo. Blvd. climbs out of Sage Creek, in the SW¼, Sec 23 T.33N., R.79W. Then, from that new road, north/south connector roads to E. 2nd St. could be built to service folks wanting to go the hospitals, doctors offices, Highland Park church, auto dealers, restaurants and home building stores in that area. I have sat and watched that MOST of the eastbound traffic flowing Blackmore now, turns and goes east on E. 2nd St.</p>	2/25/2013 10:38 AM

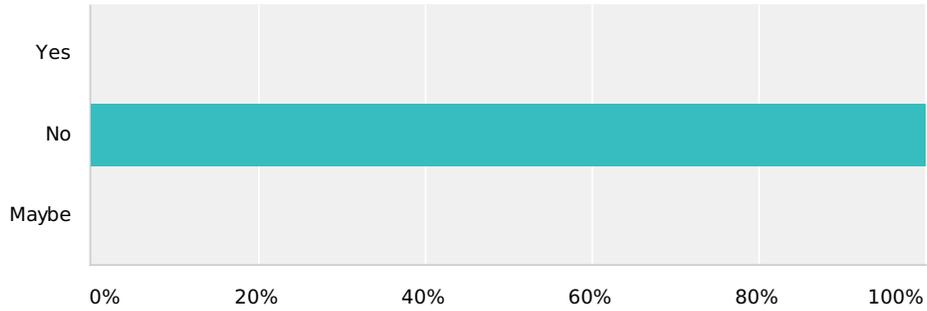
Q10 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 1 Skipped: 3

#	Responses	Date
1	You do not need to be crossing Wyoming Blvd at the Blackmore intersection. That is what the overpass 100 yds north is for.	2/26/2013 1:18 PM

Q11 Do you like Option 2A - Stripe "DO NOT BLOCK INTERSECTION" at Blackmore and Viking Court?

Answered: 2 Skipped: 2



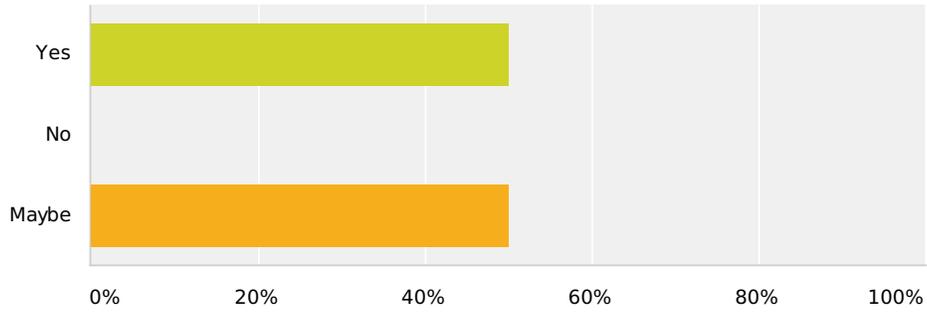
Answer Choices	Responses
Yes	0% 0
No	100% 2
Maybe	0% 0
Total	2

Please Elaborate (1)

#	Please Elaborate	Date
1	people do not read signs Currently people are too involved with cell phones, etc and do not think and all from of manners and politeness have vanished from the roadways.	2/26/2013 1:18 PM

Q12 Do you like Option 2B - Connect Viking Court to Landmark?

Answered: 2 Skipped: 2



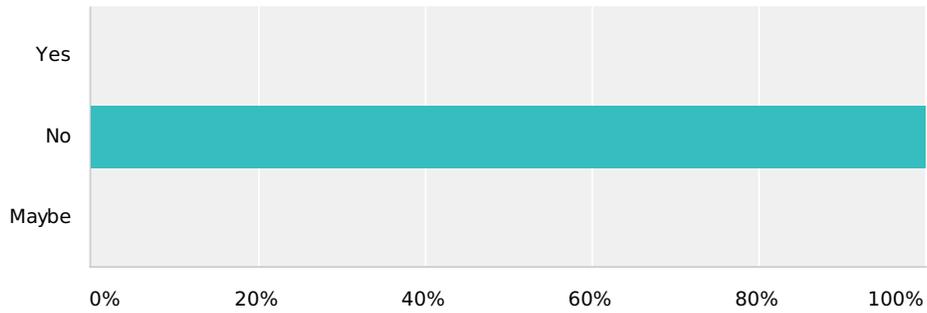
Answer Choices	Responses
Yes	50% 1
No	0% 0
Maybe	50% 1
Total	2

Please Elaborate (2)

#	Please Elaborate	Date
1	Close off the entrance to vicking court from Blackmore and make it only from Landmark or the mall parking lot.	2/26/2013 1:18 PM
2	COST	2/22/2013 2:09 PM

Q13 Do you like Option 2C - Intersection Pedestrian Improvements?

Answered: 2 Skipped: 2



Answer Choices	Responses
Yes	0% 0
No	100% 2
Maybe	0% 0
Total	2

Please Elaborate (2)

#	Please Elaborate	Date
1	leave turning radius as is and DO NOT put in crosswalk	2/26/2013 1:18 PM
2	will delay traffic even more...	2/22/2013 2:09 PM

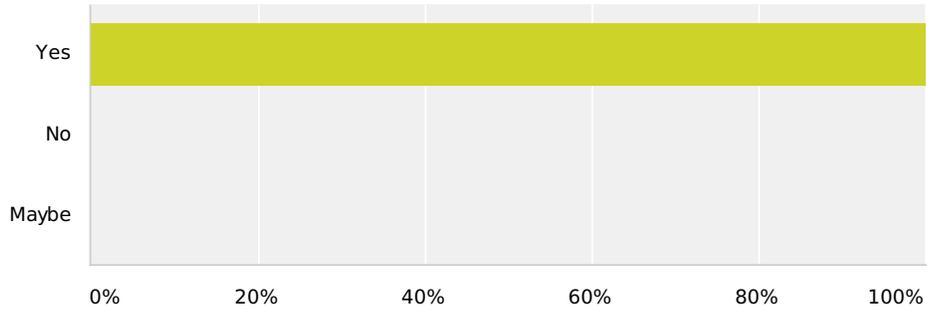
Q14 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 1 Skipped: 3

#	Responses	Date
1	People are using Blackmore not only due to this intersection but also the congestion at Wal-Mart/Mall light and at the Landmark light and the additional light at 2nd and Newport	2/26/2013 1:23 PM

Q15 Do you like Option 3A - Analyze Intersection for Operational Improvements?

Answered: 1 Skipped: 3



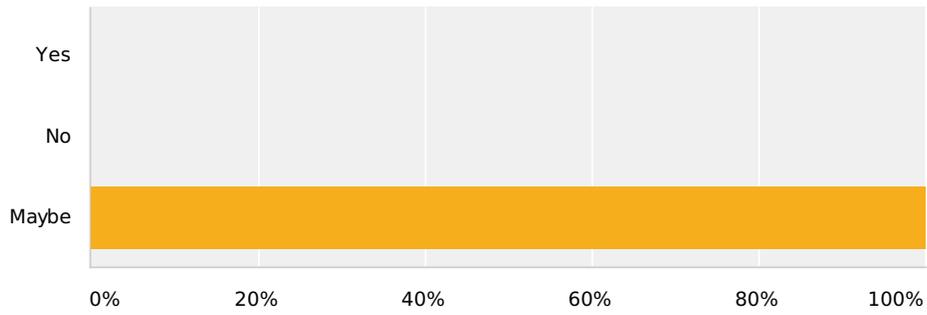
Answer Choices	Responses
Yes	100% 1
No	0% 0
Maybe	0% 0
Total	1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q16 Do you like Option 3B - Pedestrian Enhancements?

Answered: 1 Skipped: 3



Answer Choices	Responses
Yes	0% 0
No	0% 0
Maybe	100% 1
Total	1

Please Elaborate (1)

#	Please Elaborate	Date
1	makes snow removal more challenging	2/22/2013 2:15 PM

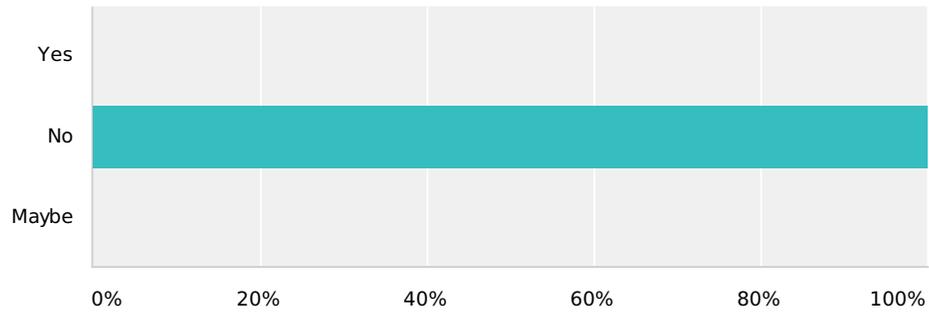
Q17 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 0 Skipped: 4

#	Responses	Date
	There are no responses.	

Q18 Do you like Option 4A - Modifications to Existing Roundabout?

Answered: 1 Skipped: 3



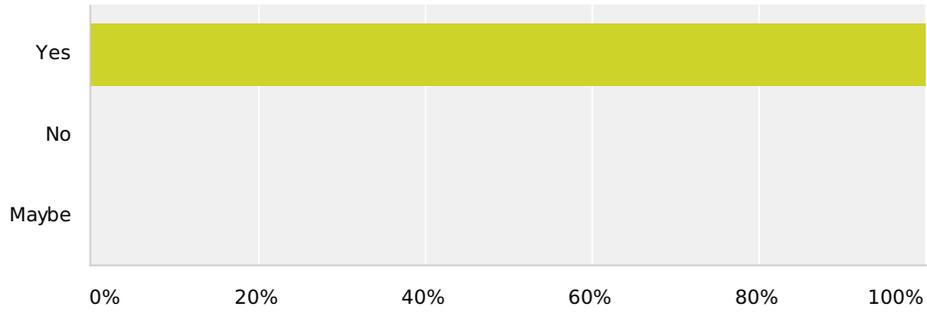
Answer Choices	Responses
Yes	0% 0
No	100% 1
Maybe	0% 0
Total	1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q19 Do you like Option 4B - Raised Crosswalks?

Answered: 1 Skipped: 3



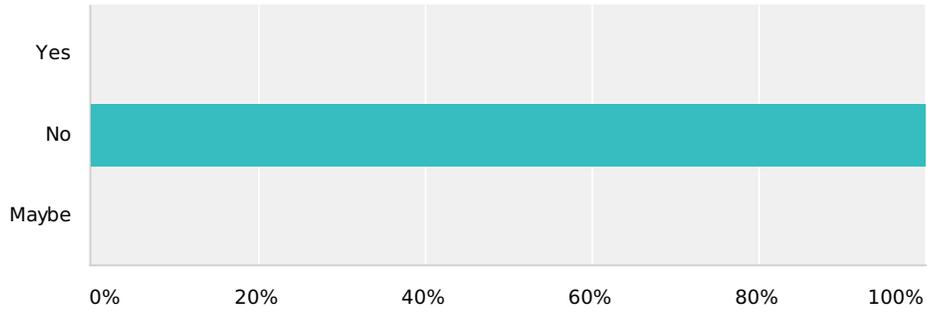
Answer Choices	Responses
Yes	100% 1
No	0% 0
Maybe	0% 0
Total	1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q20 Do you like Option 4C - Reconfigure Signage?

Answered: 1 Skipped: 3



Answer Choices	Responses
Yes	0% 0
No	100% 1
Maybe	0% 0
Total	1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

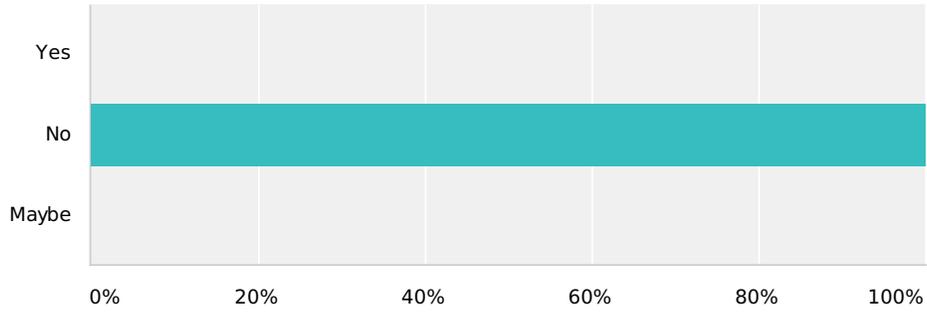
Q21 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 1 Skipped: 3

#	Responses	Date
1	2nd street IS NOT the next likely alternative. it is 12th sytreet and Newport	2/26/2013 1:27 PM

Q22 Do you like Option 5A - Corridor Calming Strategy - Intersection Narrowing?

Answered: 1 Skipped: 3



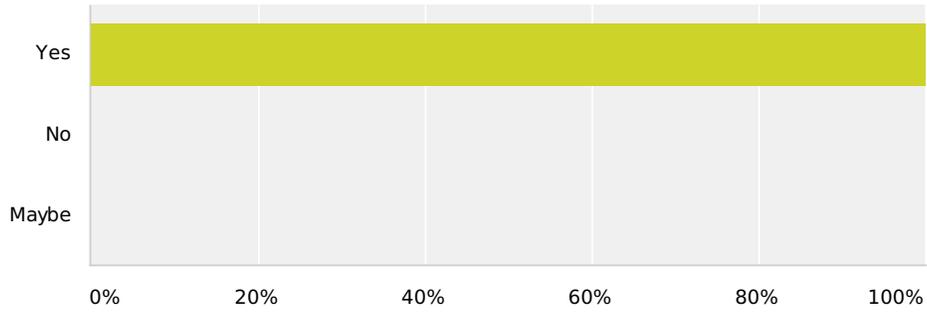
Answer Choices	Responses
Yes	0% 0
No	100% 1
Maybe	0% 0
Total	1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q23 Do you like Option 5B - Buffered Bike Lane?

Answered: 1 Skipped: 3



Answer Choices

Responses

Yes	100%	1
No	0%	0
Maybe	0%	0
Total		1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

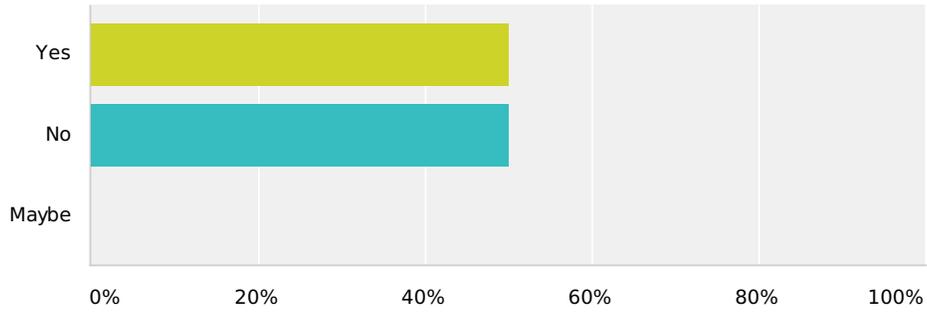
Q24 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 0 Skipped: 4

#	Responses	Date
	There are no responses.	

Q25 Do you like Option 6A - Speed Feedback Signs?

Answered: 2 Skipped: 2



Answer Choices

Responses

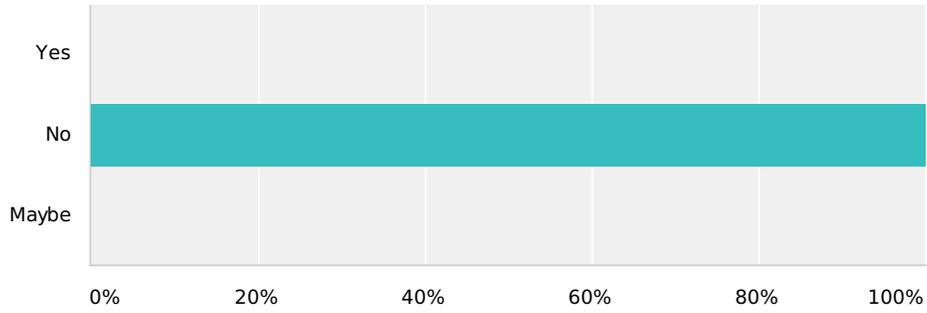
Yes	50%	1
No	50%	1
Maybe	0%	0
Total		2

Please Elaborate (1)

#	Please Elaborate	Date
1	make the city look bad. NEED TO MOVE VEHICLES	2/26/2013 1:28 PM

Q26 Do you like Option 6B - Neighborhood Roundabouts?

Answered: 2 Skipped: 2



Answer Choices

Responses

Yes	0%	0
No	100%	2
Maybe	0%	0

Total 2

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

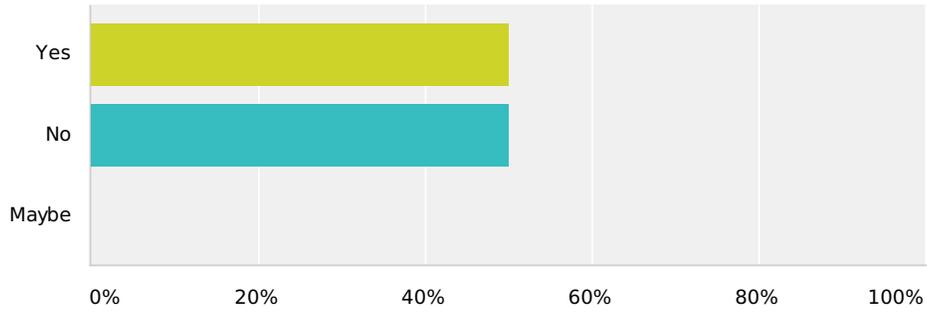
Q27 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 0 Skipped: 4

#	Responses	Date
	There are no responses.	

Q28 Do you like Option 7A - Access Control?

Answered: 2 Skipped: 2



Answer Choices

Responses

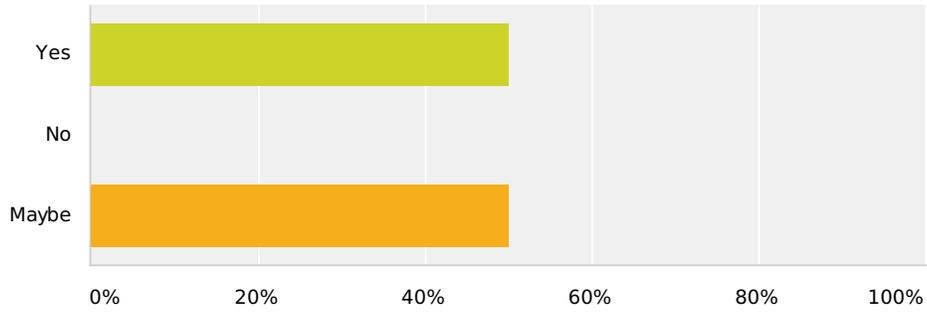
Yes	50%	1
No	50%	1
Maybe	0%	0
Total		2

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q29 Do you like Option 7B - Improve Signal Timing?

Answered: 2 Skipped: 2



Answer Choices

Responses

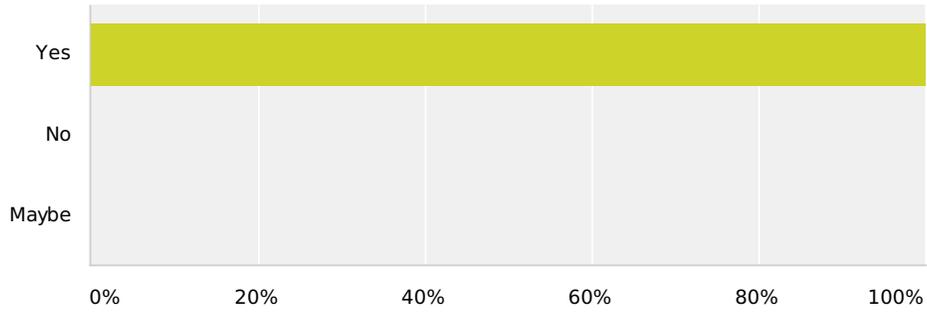
Yes	50%	1
No	0%	0
Maybe	50%	1
Total		2

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q30 Do you like Option 7C - Continuous Sidewalks?

Answered: 1 Skipped: 3



Answer Choices

Responses

Yes	100%	1
No	0%	0
Maybe	0%	0
Total		1

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

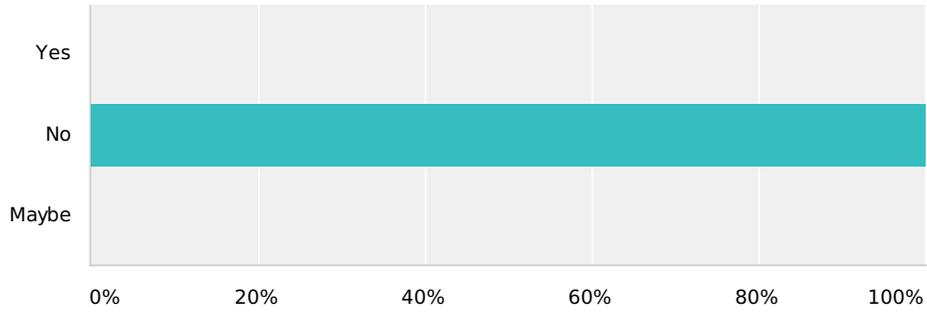
Q31 Are there additional concerns that are not described here? If so, please elaborate below.

Answered: 0 Skipped: 4

#	Responses	Date
	There are no responses.	

Q32 Do you like Option 8A - Curb Extensions?

Answered: 2 Skipped: 2



Answer Choices

Responses

Yes	0%	0
No	100%	2
Maybe	0%	0

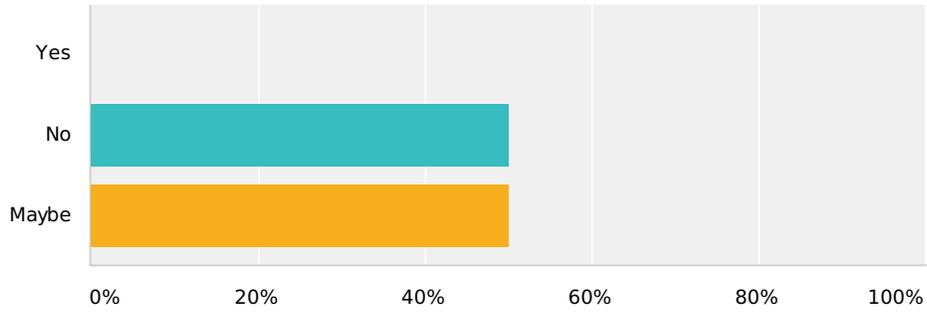
Total 2

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q33 Do you like Option 8B - Neighborhood Roundabouts?

Answered: 2 Skipped: 2



Answer Choices

Responses

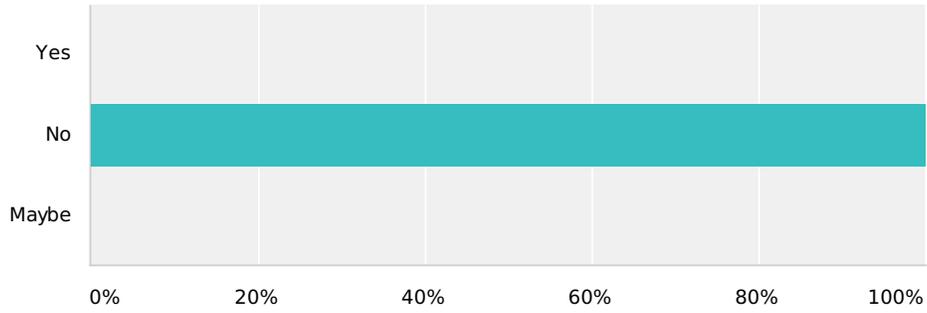
Yes	0%	0
No	50%	1
Maybe	50%	1
Total		2

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Q34 Do you like Option 8C - Horizontal Deflection Combination?

Answered: 2 Skipped: 2



Answer Choices

Responses

Yes	0%	0
No	100%	2
Maybe	0%	0

Total 2

Please Elaborate (0)

#	Please Elaborate	Date
	There are no responses.	

Appendix E

TRAFFIC CALMING TOOLBOX

DRAFT

TRAFFIC CALMING TOOLBOX



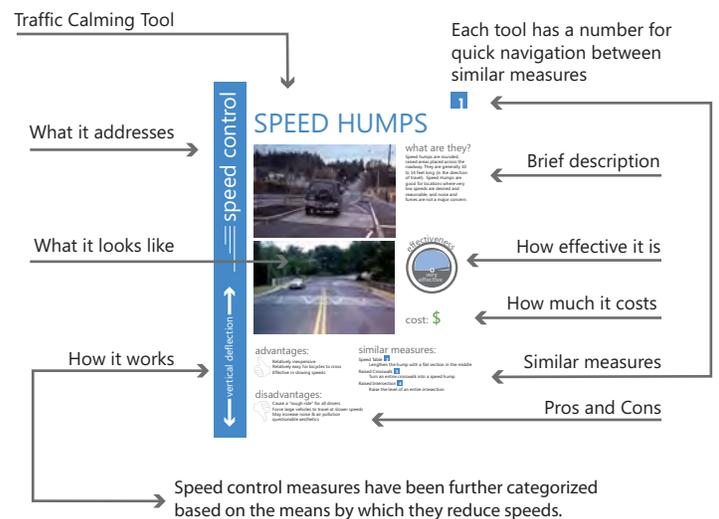
Traffic calming involves changes in street alignment, installations of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes, in the interest of street safety, livability, and other public purposes.

– ITE Traffic Calming: State of the Practice

TRAFFIC CALMING TOOLBOX

how to use this toolbox

This toolbox describes possible traffic calming devices that are available to communities to reduce vehicle speeds or traffic volumes. To effectively calm traffic, the nature of traffic problems in a specific location must first be identified. Thus, each measure is color-coded based on the issue it can solve most effectively. Blue projects are most appropriate in locations where vehicular speeds are a concern. Streets or areas where high traffic volumes are an issue should consider green projects. Nonphysical measures are included as well. They are color-coded grey, as they are most effective when combined with physical measures. This toolbox is a starting point for communities. Jurisdictions may develop warrants or guidelines for installation of traffic calming measures and specifying street eligibility.



Vertical Deflection

Refers to traffic calming measures that create a change in the height of the roadway. Vehicles must slow down to proceed smoothly over the device.

Horizontal Deflection

Refers to devices that hinder a driver's ability to drive in a straight line by creating a horizontal shift in the roadway. Drivers must slow their vehicles to safely navigate around the measure.

Narrowing

Refers to devices that narrow the width of the travel lane. By reducing the usable surface of the roadway, drivers slow down to maintain an acceptable level of comfort.

choosing the right tools

- 1 Identify the nature and extent of traffic-related problems on a given street or in a given area
- 2 Select and implement cost-effective measures for solving identified problems
- 3 Design the device appropriately



SPEED HUMPS



what are they?

Speed humps are rounded, raised areas placed across the roadway. They are generally as wide as the lane or roadway and are 10 to 14 feet long (in the direction of travel). Speed Humps are good for locations where very low speeds are desired and reasonable, and where noise and fumes are not a major concern. Speed humps are commonly applied in residential areas with low traffic volumes.



cost: \$

advantages:



- Relatively inexpensive
- Relatively easy for bicycles to cross
- Effective in slowing speeds

disadvantages:



- Cause a "rough ride" for all drivers
- Force large vehicles to travel at slower speeds
- May increase noise and air pollution
- Questionable aesthetics

similar measures:

- Speed Table **2**
Lengthen the hump with a flat section in the middle
- Raised Crosswalk **3**
Turn an entire crosswalk into a speed table
- Raised Intersection **4**
Raise the level of an entire intersection

SPEED TABLES

speed control

vertical deflection



what are they?

Speed tables are flat-topped speed humps often constructed with brick or other textured materials on the flat section. Their long flat designs allow higher speeds than Speed Humps. Textured materials improve the appearance of speed tables, and draw attention to them. Speed tables are good for locations where low speeds are desired but a somewhat smooth ride is needed for larger vehicles.



cost: \$

advantages:

 They are smoother for large vehicles

disadvantages:

 Questionable aesthetics
Textured materials, if used, can be expensive
May increase noise and air pollution

similar measures:

- Speed Hump **1**
Remove the flat section in the middle
- Raised Crosswalk **3**
Place a crosswalk in the flat section
- Raised Intersection **4**
Raise the level of an entire intersection



RAISED CROSSWALKS



what are they?

Raised crosswalks are Speed Tables outfitted with crosswalk markings and signage to facilitate pedestrian crossings, providing pedestrians with a level street crossing. Also, by raising the level of the crossing, pedestrians are more visible to approaching motorists. Raised crosswalks are good for locations where vehicle speeds are excessive and pedestrian volumes are high.



cost: \$

advantages:



- Provide safer crossing for pedestrians
- Channelize pedestrians to an attractive crossing

disadvantages:



- Textured materials, if used, can be expensive
- Impacts on drainage needs to be considered
- May increase noise and air pollution

similar measures:

- Speed Hump **1**
Remove the crosswalk and flat section in the middle
- Speed Table **2**
Remove the crosswalk markings and signage
- Raised Intersection **4**
Raise the level of an entire intersection



RAISED INTERSECTIONS



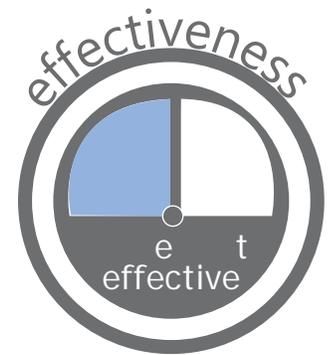
<http://transitutopia.blogspot.com>



<http://perryhall.patch.com>

what are they?

Raised intersections are flat raised areas covering an entire intersection, with ramps on all approaches and often textured materials. The raised intersection makes crosswalks more visible by motorists and perceived as "pedestrian territory". Raised intersections are good for intersections with substantial pedestrian activity.



cost: \$\$

advantages:



- Increases awareness of pedestrians
- May be used as a neighborhood gateway feature
- Calm two streets at once

disadvantages:



- Tend to be expensive, depending on materials used
- Impacts on drainage needs to be considered

similar measures:

- Speed Hump **1**
Raise a short section without a flat top
- Speed Table **2**
Raise a short section to a flat top (without crosswalk)
- Raised Crosswalk **3**
Raise only a single crosswalk

TRAFFIC CIRCLES



what are they?

Traffic circles are small roundabouts, with raised islands. Traffic circulates around the central island. They are good for calming residential or local intersections, where large vehicles are not a major concern but speeds, volumes, and safety are problems.



cost: \$\$

advantages:



- Can reduce crash frequency and severity
- Can have positive aesthetic value
- Placed at an intersection, they can calm two streets at once

disadvantages:



- Difficult for large vehicles to circumnavigate
- May require elimination of some on-street parking
- Island landscaping must be maintained

similar measures:

- Center Island Narrowing **10**
Place a raised island in a midblock location
- Roundabout **6**
Enlarge the intersection and the center island, insert splitter islands at each approach, and set back the crosswalks away from the circulating lane

ROUNDAABOUTS



what are they?

Roundabouts are circular intersections that require traffic to circulate counterclockwise around a center island. Roundabouts are larger than Traffic Circles, requiring a larger footprint and able to accommodate higher volumes. They are good for locations with a history of accidents; intersections where queues need to be minimized; and locations with abundant right-of-way



cost: \$\$-\$\$\$

advantages:



- Can minimize queuing on approaches
- Less expensive to operate than signals
- Safer crossing for pedestrians
- Reduction in conflict points which can lead to fewer crashes

similar measures:

Traffic Circle **5**

Construct a small island in a neighborhood intersection and leave existing curbs

disadvantages:



- Minor constraints for large vehicles
- May require land acquisition
- Island landscaping must be maintained

CHICANES



what are they?

Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves along the roadway. They interrupt straight stretches of roadway and force vehicles to shift laterally. Chicanes can be created by alternating on-street parking between each side of the street. Good for locations where speeds are a problem but noise associated with Speed Humps and related measures would be unacceptable.



cost: \$\$

advantages:



- Shorten pedestrian crossing distance
- Can be as restrictive as necessary
- Easily negotiable by large vehicles except under heavy traffic conditions

similar measures:

Choker [10](#)

Place edge islands opposite each other without staggering them

disadvantages:



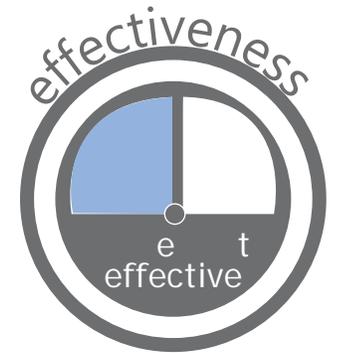
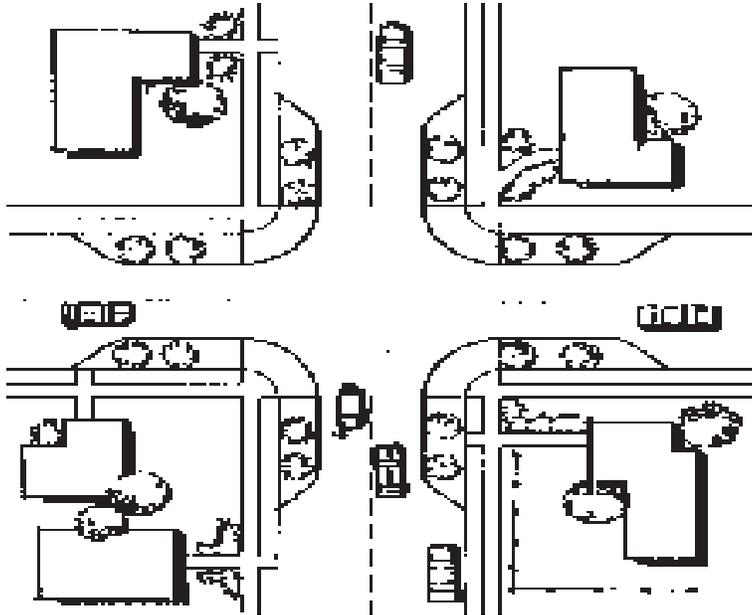
- Must be designed carefully to discourage drivers from deviating out of the appropriate lane
- Curb realignment and landscaping can be costly, especially if there are drainage issues
- May require the elimination of some on-street parking
- Can impact a bicyclists ride

NECKDOWNS



what are they?

Neckdowns are curb extensions at intersections that reduce the roadway width from curb to curb. They “pedestrianize” intersections by shortening crossing distances for pedestrians and drawing drivers’ attention to pedestrians. They also tighten the curb radii at the corners, reducing the speeds of turning vehicles. They are good for intersections with substantial pedestrian activity and areas where vertical traffic calming measures would be unacceptable.



cost: \$\$\$

advantages:



Shorter crossing distance for pedestrians
Through and left-turn movements are easily negotiable by large vehicles

similar measures:

Choker **10**

Narrow roadway at a midblock location

Raised Intersection **4**

Easily combined with neckdowns

disadvantages:



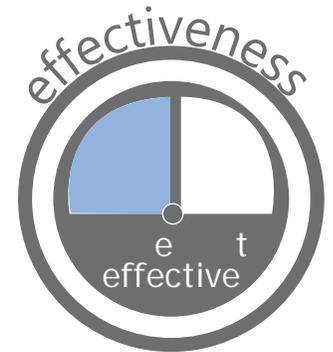
May require bicyclists to briefly merge with vehicular traffic

CENTER ISLAND NARROWINGS



what are they?

A center island narrowing is an island located along the centerline of a street that narrows the travel lanes. They are often landscaped to increase visibility and provide a visual amenity. If fitted with a gap to allow pedestrians to walk through at a crosswalk, they then called "pedestrian refuges." Center Island Narrowings are ideal for entrances to residential areas, and wide streets where pedestrians need to cross.



cost: \$\$

advantages:



- Increase pedestrian safety
- Can have positive aesthetic value

similar measures:

Neckdown **8**

Narrow roadway out from curbs at an intersection

disadvantages:



- May require elimination of some on-street parking

CHOKERS



what are they?

Chokers are curb extensions at midblock locations that narrow a street. Two-lane chokers keep the street cross section with two lanes but narrow the width of the lanes. One-lane chokers narrow the roadway to allow traffic to travel in only one direction at a time, operating similarly to one-lane bridges. They are good for areas with substantial speed problems and no on-street parking shortage.



cost: \$-\$\$

advantages:



- Easily negotiable by large vehicles
- Can have positive aesthetic value
- Shortens pedestrian crossing distance

similar measures:

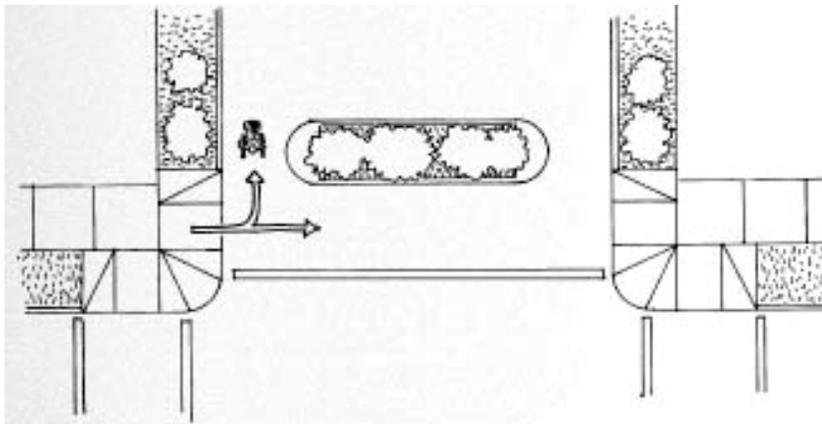
- Neckdown **8**
Narrow roadway out from curbs at an intersection
- Center Island Narrowing **9**
Narrow roadway from the centerline with an island

disadvantages:



- May have drainage issues
- May require bicyclists to briefly merge with vehicular traffic
- May require the elimination of some on-street parking

FULL CLOSURES



what are they?

Full street closures are barriers placed across a street to completely close the street to through-traffic, usually leaving only sidewalks open. They are good for locations with extreme cut-through traffic volume problems or access management issues.



cost: \$\$\$\$\$\$

advantages:



- Maintain pedestrian and bicycle access
- Barrier can be landscaped

similar measures:

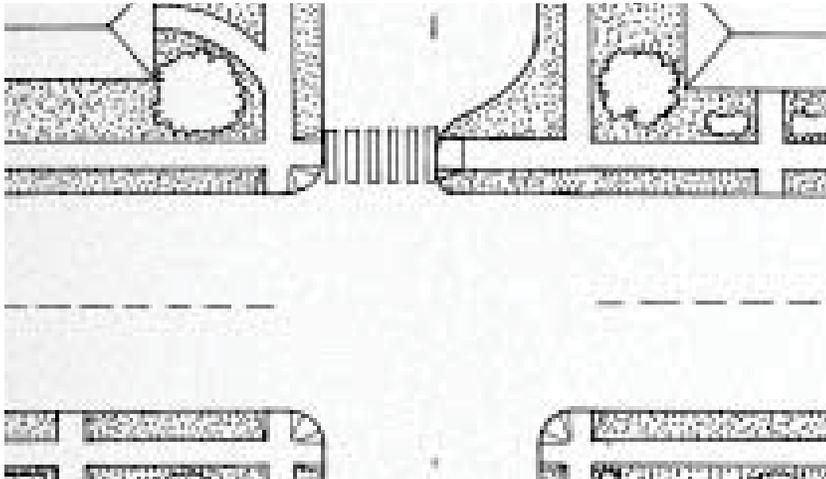
- Half Closure **12**
Open the street for incoming traffic only
- Median Barrier **14**
Place a barrier lengthwise along the center of a street
- Diagonal Diverter **13**
place a barrier diagonally through an intersection

disadvantages:



- Cause circuitous routes for local residents and emergency services
- May be expensive
- May limit access to businesses

HALF CLOSURES



what are they?

Half closures are barriers that block travel in one direction for a short distance on otherwise two-way streets. They are good for locations with extreme traffic volume problems and non-restrictive measures have been unsuccessful.



cost: \$\$\$\$

advantages:



- Maintain two-way bicycle access
- Effective in reducing traffic volumes

similar measures:

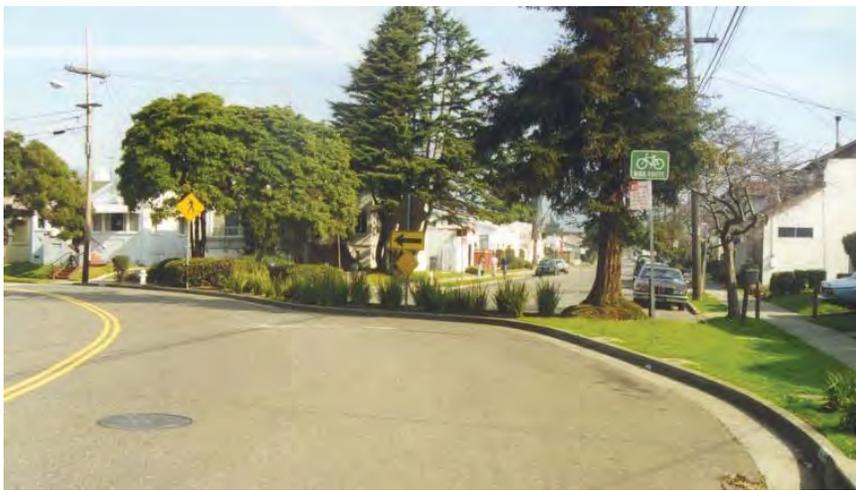
- Full Closure **11**
Close the street in both directions
- Median Barrier **14**
Place a barrier lengthwise along the center of a street
- Diagonal Diverter **13**
place a barrier diagonally through an intersection

disadvantages:



- Cause circuitous routes for local residents and emergency services
- May limit access to businesses
- Drivers may be able to circumvent the barrier

DIAGONAL DIVERTERS



what are they?

Diagonal diverters are barriers placed diagonally across an intersection, blocking through movements and creating two separate, L-shaped streets. Diagonal diverters are often staggered to create circuitous routes through the neighborhood as a whole, discouraging non-local traffic while maintaining access for local residents. They are good for locations with non-local traffic volume problems.



cost: \$\$\$\$\$\$

advantages:



- Do not require a closure per se, only a redirection of existing streets
- Able to maintain full pedestrian and bicycle access

similar measures:

- Full Closure **11**
Close the street in both directions
- Half Closure **12**
Place a barrier half-way across a street
- Median Barrier **14**
Place a barrier lengthwise along the center of a street

disadvantages:



- Cause circuitous routes for local residents and emergency services
- Can displace congestion to another location
- May require reconstruction of corner curbs

MEDIAN BARRIERS

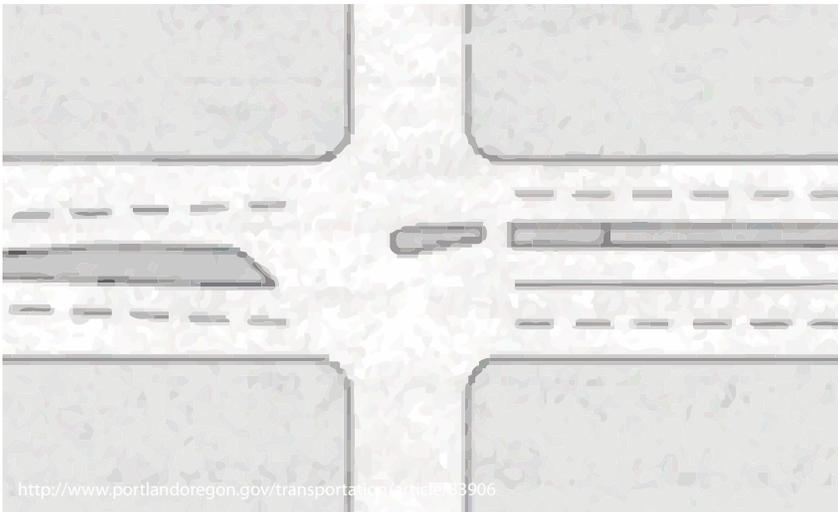


what are they?

Median barriers are islands located along the centerline of a street and continuing through an intersection so as to block through movement at a cross street. They are good for local street connections to main streets where through traffic along the continuing local street is a problem and main streets where left-turns to and/or from the side street are unsafe



cost: \$\$\$



advantages:



- Can improve safety by prohibiting dangerous turning movements
- Can reduce traffic volumes on a cut-through route that crosses a major street

disadvantages:



- They require available street width on the major street
- They limit turns to and from the side street for local residents and emergency services

similar measures:

- Full Closure **11**
Close the street in both directions
- Half Closure **12**
Place a barrier half-way across a street
- Diagonal Diverter **13**
Place a barrier diagonally through an intersection

STRIPING CHANGES



TARGETED SPEED ENFORCEMENT



DRIVER FEEDBACK INFORMATION



LONG-TERM IMPACTS

measure	impact
centerline striping	no change in speeds or possibly small increase
edgeline striping	no change in speeds except where bike lane is striped
optical speed bars	no change in speeds except possibly before curves
signage	no change in speeds
speed legends	driver may notice more than signage, but no evidence of speed reduction
continuous street trees	no effect, according to one study
small building setbacks	moderate effect, according to one study
stop signs	mixed impact on midblock speeds, some reduction in cut-through volumes
turn restrictiuons	significant reduction in peak-hour volumes, some reduction in cut-through volumes
restrictive one-way streets	no evidence available
conversion back to two-way operations	probable speed reduction
targeting speed enforcement	reduction in speeds only during enforcemnt period
radar speed-display trailers	short-lived, localized speed reduction
speed-feedback signs	short-lived, localized speed reduction
photo-radar speed enforcement	significant reduction in speeds in some cases but not supported by laws in most states
progressive signal timing	effective with the right spacing of signals and cycle length

Source: R. Ewing, *Traffic Calming: State of the Practice* (Washington D.C.: Institute of Transportation Engineers/Federal Highway Administration, 1999). chap. 5; Fehr & Peers Associates, *Traffic Calming Manual* (City of La Habra, Calif., 2006).

Appendix F

PLANNING URBAN ROADWAY SYSTEMS

DRAFT

PLANNING URBAN ROADWAY SYSTEMS



PLANNING URBAN ROADWAY SYSTEMS

At the core of Casper's transportation system are roadways. Roadways are the streets and highways that allow automobiles and trucks to travel within, to, and throughout the Blackmore Road Sub Area. Roadways also serve as transit routes, and may be delineated with bike lanes or routes. Pedestrians walk on sidewalks that are constructed in roadway rights-of-way. The roadway network is based on a range of different types of facilities with varying characteristics that, when combined, make up the roadway system. These facilities range from state highways, which serve high speed, longer-distance vehicular trips, to local streets that are designed for lower speeds and shorter trip lengths serving all modes of travel.

Transportation operates inherently as a system. A single street or highway in the Blackmore Road Sub Area has no function without the connection to, and support of, the rest of the system. Currently, the roadway network - particularly in the eastern area - is not yet completed, providing an opportunity to develop design guidelines for future roadways.

Roadway systems are highly complex, serving a variety of different modes, different user groups, different trip purposes, and different levels of facilities. These systems also provide the framework for adjacent land uses including residential, commercial or industrial. The variety of land uses in the Blackmore Road Sub Area has, and will continue to generate the need for transportation. At the same time, these land uses may change over time due to demographic or economic changes. Roadway systems planning must consider current conditions and also how land uses and travel demands will change in the future.

According to the Institute of Traffic Engineers (ITE) Recommended Practice for Planning Urban Roadway Systems, an effective roadway system should:

- Consist of a multimodal network that serves pedestrian, bicyclists, transit, the automobile, and trucks;
- Be planned as layered networks serving all modes of passenger travel, plus a freight/good movement network;
- Have a high degree of connectivity to help provide multiple routing options for all users;
- Have a network density appropriate to the land use patterns and urban form that are served;
- Be planned with recognition of the role of roadways as public spaces that help shape urban environments; and
- Be planned with consideration of environmental, social, and economic issues.

planning urban roadway systems

Focus on overall planning

Focus on urban and suburban

Focus on entire public right-of-way; multi-modal emphasis

Holistic view ; look at entire network



Additionally, the Congress for the New Urbanism (CNU) Project for Transportation Reform Sustainable Street Network Principles includes:

- Create a street network that supports communities and places.
- Create a street network that attracts and sustains economic activity.
- Maximize transportation choice.
- Integrate the street network with natural systems at all scales.
- Respect the existing natural and built environment.
- Emphasize walking as the fundamental unit of the street network.
- Create harmony with other transportation networks.

Additional key characteristics of a sustainable street network are:

- A web of streets and travel modes that maximize connectivity.
- Desirable places where multiple networks overlap.
- Inherently complex.
- Major streets designed and spaced properly.
- All streets are safe and walkable.
- Wide variety of street types, each with a role in the network.

Based on the principles of roadways system planning, guidelines for the Blackmore Road Sub Area will ensure that roadways are planned and designed in consideration of the entire system. The purpose of the guidelines is to ensure that each incremental improvement will contribute to a complete roadway network that provides safe and efficient circulation for all users.



MULTI-MODAL

Multimodal networks serve pedestrians, bicyclists, transit, the automobile, and trucks



KEY QUESTIONS



Personal mobility is enhanced when choices are increased. A critical choice for residents, employees, and travelers in the Blackmore Road Sub Area community is mode choice. The current and future roadway system should offer a variety of modal choices including pedestrian, bicycle, transit, automobile, and truck on the same roadway network. Prioritizing different modes for different locations is necessary as specific locations may not be suitable to accommodate all modes:

Increased automobile speeds reduce pedestrian safety

Expanded automobile capacity can result in wider and less pedestrian-friendly roadways

Creation of bicycle facilities may create conflicts with buses

Pedestrian-priority treatments can increase delays for vehicles

Roadway designs that accommodate trucks can result in large intersections that increase pedestrian crossing times and reduce automobile levels of service

Each mode's subsystem will have its own network that overlays the others and offers the potential user choices and tradeoffs in terms of user cost, travel time, reliability, availability, safety, and accessibility.

Which travel modes have the greatest demand? Where?

How should different modes be prioritized within the Blackmore Road Sub Area?

Which modes have the greatest infrastructure deficiencies? Where?

LAYERED NETWORKS



Layered networks serve all modes of passenger travel, plus freight/goods movement



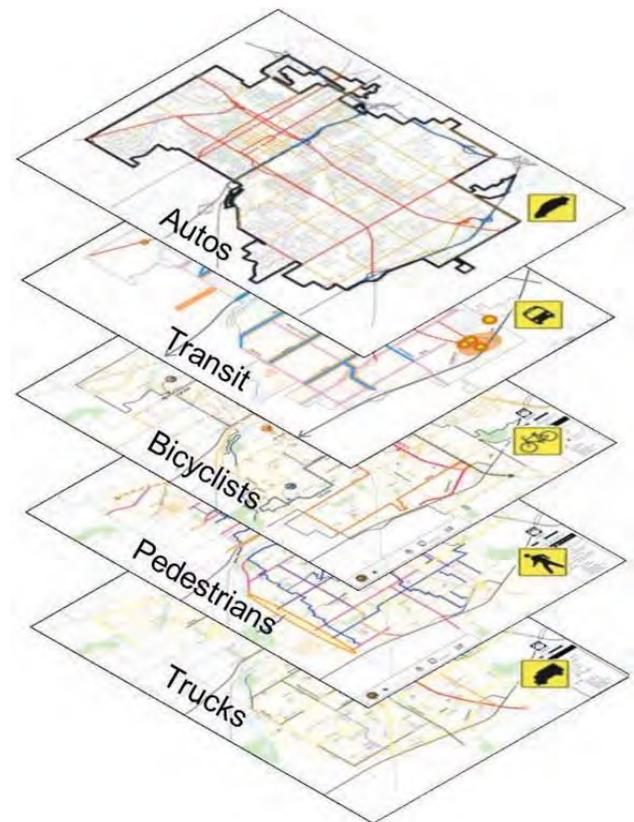
KEY QUESTIONS



It is often a challenge for a single roadway to meet all the demands and expectations of the different, diverse mode types. Layered networks are appropriate in situations where providing priority to a particular mode can improve the efficiency or safety on a roadway.

In a system of layered networks, the freight mobility routes, pedestrian network, and bicycle network may be assigned to different segments of the overall network, in order to reduce the potential conflict inherent in trying to design all roadways for all uses.

A layered network concept can allow for certain roadways to be continuous for a particular mode, while discouraging use by other modes. For example, a collector street may be planned to provide continuity for pedestrians, bicyclists or transit vehicles, while discouraging its use by 'cut-through' traffic and trucks.



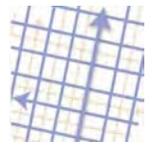
Source: LSL Planning, Inc., 2010

Which roadways should provide priority to a particular mode of travel?

Where should freight routes be prioritized?

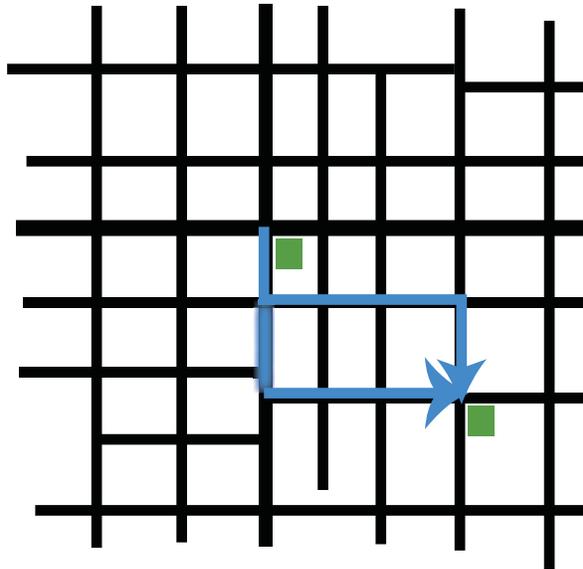
Are there any locations where certain modes should be discouraged?

CONNECTIVITY



A high degree of connectivity helps provide multiple routing options for all users

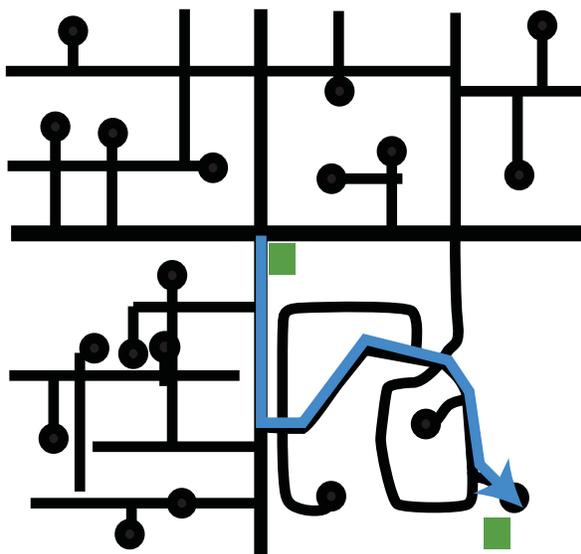
high degree of connectivity



- Easier navigation
- Variety of direct routes
- Traffic can be more distributed evenly throughout the system



low degree of connectivity



- Trips directed to collector or arterial streets
- Local streets carry fewer through trips



KEY QUESTIONS



Improving connectivity is important for each mode traveling within the roadway system. There is a need for a more complete roadway system within the Blackmore Road Sub Area with freeways, arterials, collectors and local streets forming more of an integrated system. As the area transitions and becomes more developed, existing roadways may need to be adjusted to increase connectivity based on new demands of the system. New development also provides an opportunity to plan connectivity through new roadways. It is important to consider which type of system will meet current and future needs within the community.

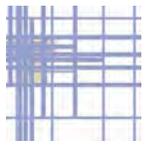
What about cut-through traffic?

Cut-through driving is using secondary roads or residential side streets instead of the intended main roads. Motorists may take different routes to avoid heavy traffic, long delays at traffic signals or other obstacles.

How can connectivity be improved for existing roadways?

Where are missing roadway connections?

What type of roadway system makes sense as the Blackmore Road Sub Area develops?



DENSITY

Network density should fit the land use patterns and urban form that are served

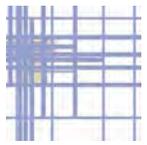


Low Network Density

High Network Density



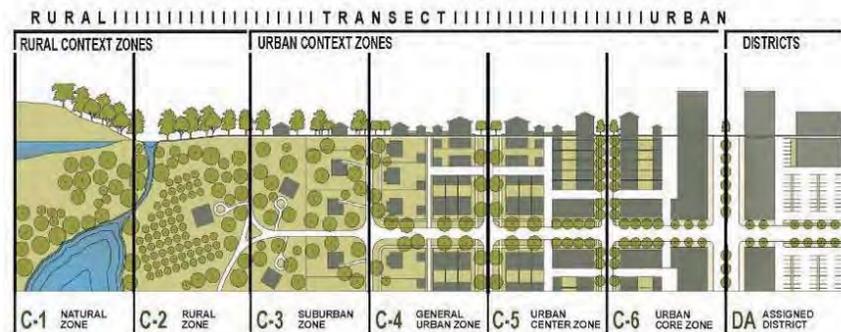
KEY QUESTIONS



What is “urban form”?

Different roadway networks can emerge within different contexts to meet the needs of specific land use patterns. The form and density of buildings and design of roadways both impact the urban form. Roadway spacing in the Blackmore Road Sub Area should directly reflect travel and population density.

Urban form refers to the spatial arrangement of physical elements of a community, as well as the character and function of those elements. Urban form provides the context for which transportation systems are designed. At the same time, roadways greatly impact how the urban form will develop over time.



Source: Duany 2000

Does the current roadway spacing fit the travel and population density?

What are the prevailing land uses and planned densities the roadway system must serve?

What type of urban form is envisioned for the Blackmore Road Sub Area?



LIVABILITY

Networks should be planned with consideration of environmental, social, and economic issues



KEY QUESTIONS



What are the environmental, social, and economic issues in the Blackmore Road Sub Area?

How can the roadway network enhance livability for the community?

What is the desired end-state for the roadway network?

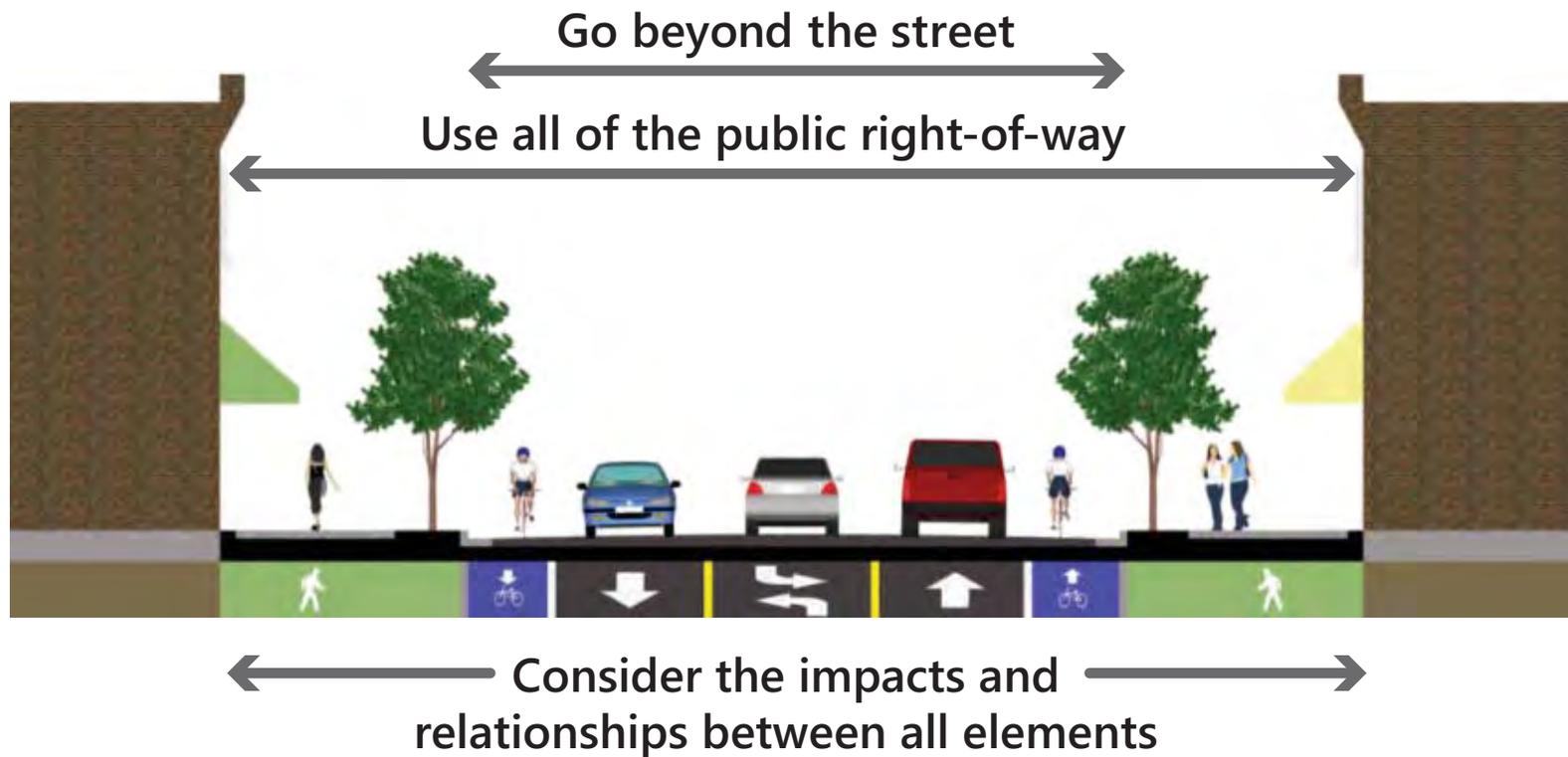


PUBLIC SPACE

Networks should be planned with the recognition of the role of roadways as public spaces that help shape urban environments



KEY QUESTIONS



What is the expected role of roadways within the Blackmore Road Sub Area?

What is the desired character within the Blackmore Road Sub Area?

How should roadways complement that character?

Appendix G

PLANNING LEVEL COST ESTIMATES

DRAFT

Viking Court 'do not block'	\$	\$ 2,400
Sign Modification at Roundabout	\$	\$ 3,000
Generic Curb Extension per Corner	\$	\$ 12,533
Permanent Speed Feedback Signs	\$	\$ 30,000
Neighborhood Roundabouts	\$	\$ 36,000
Continuous Flow T Intersection	\$	\$ 43,875
Buffer Bike Lanes	\$	\$ 44,250
Signal Coordination	\$	\$ 48,000
Raised Crosswalks at Roundabout	\$\$	\$ 55,300
Pedestrian Enhancements	\$\$	\$ 87,300
Modify existing Roundabout	\$\$	\$ 97,480
Access Control Plan	\$\$	\$ 100,100
Blackmore Curb Extensions	\$\$	\$ 164,640
Signal	\$\$\$	\$ 300,000
Sidewalks	\$\$\$	\$ 374,500
Roundabouts	\$\$\$	\$ 535,000
New Roadway Connection	\$\$\$	\$ 590,000

\$
<\$50k
\$\$
\$50k-\$250k
\$\$\$
>\$250k

Continuous Flow T Intersection

item	qty	unit \$	\$
curb n gutter	400	\$ 13	\$ 5,200
sy overlay	4000	\$ 3	\$ 10,000
median cover sf	200	\$ 6	\$ 1,200
4"striping epoxy	5000	\$ 0.25	\$ 1,250
4 signs	4	\$ 400	\$ 1,600
utility/manhole relocate	1	\$ 10,000	\$ 10,000
subtotal			\$ 29,250
contingency, engineering, mob, etc	1	50%	\$ 14,625
Total			\$ 43,875

Signal

item	qty	unit \$	\$
four leg signal	1	\$ 250,000	\$ 250,000
contingency, engineering, mob, etc	1	20%	\$ 50,000
Total			\$ 300,000

Viking Court 'do not block'

12"striping epoxy	300	\$ 0.25	\$ 75
4 signs	4	\$ 400	\$ 1,600
contingency, engineering, mob, etc	1	50%	\$ 800
Total			\$ 2,400

Pedestrian Enhancements

item	qty	unit \$	\$
curb n gutter	2400	\$ 13	\$ 31,200
sy overlay	0	\$ 3	-
median cover sf	2000	\$ 6	\$ 12,000
12"striping preformed thermo	300	\$ 10.00	\$ 3,000
ped ramp with domes	12	\$ 1,000	\$ 12,000
subtotal			\$ 58,200
contingency, engineering, mob, etc	1	50%	\$ 29,100
Total			\$ 87,300

Modify existing Roundabout

item	qty	unit \$	\$
curb n gutter	2000	\$ 13	\$ 26,000
remove curb n gutter	2000	\$ 4	\$ 7,000
median cover sf	3000	\$ 6	\$ 18,000
remove median cover sf	2000	\$ 2	\$ 4,000
truck apron sy	315	\$ 50	\$ 15,750
remove truck apron sy	315	\$ 6	\$ 1,890
4"striping epoxy	2000	\$ 0.25	\$ 500
4 signs	4	\$ 400	\$ 1,600
utility/manhole relocate	0	\$ 10,000	\$ -
subtotal			\$ 48,740
contingency, engineering, mob, etc	1	100%	\$ 48,740
Total			\$ 97,480

Raised Crosswalks at Roundabout

item	qty	unit \$	\$
Raised Crosswalk	4	\$ 7,500	\$ 30,000
remove ramps	8	\$ 500	\$ 4,000
reconstruct median	4	\$ 1,000	\$ 4,000
12"striping preformed thermo	150	\$ 10.00	\$ 1,500
subtotal			\$ 39,500
contingency, engineering, mob, etc	1	40%	\$ 15,800
Total			\$ 55,300

Sign Modification at Roundabout

12"striping epoxy	0	\$ 0.25	\$ -
signs	5	\$ 400	\$ 2,000
contingency, engineering, mob, etc	1	50%	\$ 1,000
Total			\$ 3,000

Generic Curb Extension per Corner

item	qty	unit \$	\$
curb n gutter	150	\$ 13	\$ 1,950
remove curb n gutter	130	\$ 4	\$ 455
median cover sf	800	\$ 6	\$ 4,800
12"striping preformed thermo	100	\$ 10.00	\$ 1,000
ped ramp with domes	2	\$ 1,000	\$ 2,000
4"striping epoxy	400	\$ 0.25	\$ 100
subtotal			\$ 8,355
contingency, engineering, mob, etc	1	50%	\$ 4,178
Total			\$ 12,533

Blackmore Curb Extensions

item	qty	unit \$	\$
Curb Extension	14	\$ 8,400	\$ 117,600
contingency, engineering, mob, etc	1	40%	\$ 47,040
Total			\$ 164,640

Buffer Bike Lanes

item	qty	unit \$	\$
12"striping epoxy lf	2000	\$ 0.75	\$ 1,500
bike symbols and arrow	50	\$ 400	\$ 20,000
signs	20	\$ 400	\$ 8,000
subtotal			\$ 29,500
contingency, engineering, mob, etc	1	50%	\$ 14,750
Total			\$ 44,250

Speed Feedback Signs

item	qty	unit \$	\$
permanent speed feedback signs	2	\$ 12,000	\$ 24,000
contingency, engineering, mob, etc	1	25%	\$ 6,000
Total			\$ 30,000

Neighborhood Roundabouts

item	qty	unit \$	\$
'traffic circle'	2	\$ 12,000	\$ 24,000
contingency, engineering, mob, etc	1	50%	\$ 12,000
Total			\$ 36,000

Access Control Plan

item	qty	unit \$	\$
Study per intersection	11	\$ 7,000	\$ 77,000
contingency, engineering, mob, etc	1	30%	\$ 23,100
Total			\$ 100,100

Signal Coordination

item	qty	unit \$	\$
Study per intersection	8	\$ 5,000	\$ 40,000
contingency, engineering, mob, etc	1	20%	\$ 8,000
Total			\$ 48,000

Sidewalks - Wyoming to Blackmore

item	qty	unit \$	\$
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concrete (per sq yd)	7490	\$	50	\$	374,500
Total				\$	374,500

Roundabouts

The installation of roundabouts at the intersections of Blackmore & Donegal and Blackmore & Landmark would consist of the removal of existing signals, demolition of the existing surfacing and construction of the new surfacing. It is assumed the roundabouts would be constructed entirely of concrete to maximize service life. Costs are based on a preliminary diameter of 150 feet. The cost provided doesn't include any cost associated with right-of-way acquisition and assumes that adequate right-of-way can be obtained.

Total				\$	535,000
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Roadway Connection

The connection of Viking court to Landmark Drive would consist of approximately 1,050 LF of roadway. It is assumed the cross section of the proposed roadway would match the existing Viking Court section, approximately 36 feet. It may also be the owners desire to extend the water and sanitary sewer at the time of construction. The estimated cost included here within do not account for any costs for the water or sanitary sewer systems. It is anticipated the storm sewer system would be connected to the system in Landmark Drive. The cost provided doesn't include any cost associated with right-of-way acquisition. Also it is assumed that adequate right-of-way can be obtained without requiring a retaining wall on the north side of roadway near the mall parking lot.

Total				\$	590,000
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NATRONA COUNTY SCHOOL DISTRICT NO. 1 SITE PLAN FOR THE PROPOSED KELLY WALSH HIGH SCHOOL

SITE PLAN CHECKLIST

- Legal description and common address(es) of the proposed site: KELLY WALSH SENIOR HIGH SCHOOL ADDITION TO THE CITY OF CASPER; 3500 EAST 12TH STREET, CASPER, WYOMING 82609
- Title block stating name of project, designer, and address and telephone number of designer:

RB+B ARCHITECTS, INC. 315 EAST MOUNTAIN AVE., SUITE 100 FORT COLLINS, CO 80524 970-484-1770	WLC ENGINEERING 200 PRONGHORN CASPER, WY 82601 307-266-2524
--	--
- Surrounding land uses and zoning on all abutting sides, including those lands separated from the land under consideration by a street, alley, or other roadway:
 AS SHOWN: ED - EDUCATIONAL DISTRICT, R1 - RESIDENTIAL ESTATE, R2 - ONE UNIT RESIDENTIAL, R3 - ONE TO FOUR UNIT RESIDENTIAL, R4 - HIGH DENSITY RESIDENTIAL, PUD - PLANNED UNIT DEVELOPMENT
- Current zoning of the land under consideration and proposed zoning, if applicable:
 CURRENT ZONING: ED - EDUCATIONAL DISTRICT
- North arrow, scale of site plan at a scale of 1"=10' or a multiple thereof, and date site plan was prepared: AS SHOWN
- Lot or parcel dimensions: AS SHOWN
- Dimensions of all setbacks and heights of all proposed buildings:
 SETBACKS: AS SHOWN
 HEIGHTS: SEE ARCHITECTURAL BUILDING ELEVATIONS
- Location and dimensions of all proposed off-street loading dock areas, including street access and traffic flow to these areas: AS SHOWN
- Location of all trash receptacles: AS SHOWN
- Dimensions and locations of all advertising signs and fences:
 SIGNS: NONE PROPOSED
 FENCES: NO NEW PROPOSED
- Any screening or screening devices used to minimize or eliminate areas which tend to be unsightly: AS SHOWN
- Location of existing and proposed exterior lighting, heights of poles, and size and number of fixture: AS SHOWN ON ELECTRICAL SITE PLAN
- Names and widths of all adjacent streets; dimensions and location of all public and private roadways, streets, or driveways, both paved and unpaved, including rights-of-way, pavement width, and proposed uses of rights-of-way: AS SHOWN
- Location and dimensions of existing and proposed curbcuts and sidewalks: AS SHOWN
- Off-street parking spaces, locations and dimensions, layout, traffic control, compact and handicap parking spaces, including all surface markings such as directional arrows: AS SHOWN
- Locations of all wheel stops, bumper guards, and curbing warranted by topography or traffic and pedestrian circulation: AS SHOWN
- Types of ground or yard surfacing throughout; grass, paving, gravel, etc.: AS SHOWN, SEE LANDSCAPING PLAN
- Existing and proposed easements: AS SHOWN
- Vicinity map at a scale of 1"=600' clearly indicating the location of the land in question with respect to a larger recognizable area: AS SHOWN
- General notes to include summary of:
 - Total land area in acres or square feet: 2,272,509 SF, 52.17 ACRES
 - Total building area in square feet: 190,638 SF
 - Percentage of land covered by building: 8.3%
 - Building height(s): SEE BUILDING ELEVATIONS
 - Number of stories and square footage per story of leaseable space: 3 STORIES
 - Total number of parking spaces: 693 PLUS 16 H.C = 695 TOTAL, TEMPORARY PARKING = 242
 - Square footage of parking areas: 389,232 SF, TEMPORARY PARKING = 81,930 SF
 - Percent of land covered by parking: 17.1%, TEMPORARY PARKING = 3.6%
 - Square footage of all landscaped areas: 1,610,709 SF
 - Percentage of site covered by landscaping: 70.8%, SEE LANDSCAPING SHEETS
- Numbering of items on the site plan to correspond to items on the checklist. AS SHOWN
- Existing and proposed contours. Contour information shall extend ten (25') feet into adjoining properties to represent drainage system continuity: AS SHOWN ON SHEET C102
- Surface drainage plan for sites at 10,000 square feet or more: DRAINAGE SHOWN BY CONTOURS, DRAINS TO EXISTING STORM SEWER ON SITE
- Pavement design report for parking areas: BUS LANES AND SERVICE AREAS - 6" PORTLAND CEMENT CONCRETE/6" GRADING "W" BASE WITH GEOTEXTILE FABRIC; LIGHT VEHICLE ACCESS DRIVES AND PARKING AREAS - 3" ASPHALT/6" GRADING "W" BASE WITH GEOTEXTILE FABRIC. GEOTECHNICAL REPORT PREPARED BY TETRA TECH, 2013.
- Include number of estimated trips per peak hour according to the ITE Manual. If the proposed use generates more than 75 trips per peak hour, a traffic study, is required as outlined in Section 16.20.080(B) of the Casper Municipal Code. Based on the results of the study, the applicant may be required to contribute to off site traffic improvements. PREPARED BY OTHERS

LEGEND	
-----	EXISTING MAJOR CONTOUR
-----	EXISTING MINOR CONTOUR
-----	PROPOSED MAJOR CONTOUR
-----	PROPOSED MINOR CONTOUR
-----	EXISTING WATERLINE W/ VALVE
-----	PROPOSED WATERLINE W/ VALVE
-----	EXISTING SANITARY SEWER
-----	PROPOSED SANITARY SEWER
-----	EXISTING STORM
-----	EXISTING OVERHEAD POWER LINE
-----	EXISTING FENCE
-----	EXISTING GAS LINE
-----	PROPOSED GAS LINE
-----	PROPERTY BOUNDARY LINE

	ALL SIGNS
	LANDSCAPING
	GAS METER
	POWER POLE
	GUY ANCHOR
	LIGHT POLE
	ELECTRICAL METER
	TELEPHONE PEDESTAL
	SPRINKLER VALVE BOX
	CURBSTOP
	EXISTING FIRE HYDRANT
	EXISTING SANITARY MANHOLE
	EXISTING STORM SEWER MANHOLE
	EXISTING STORM SEWER INLET
	PROPOSED HANDICAP RAMP

SURFACING LEGEND

	3" ASPHALTIC CONCRETE
	8" CRUSHED AGGREGATE BASE
	NON-WOVEN GEOTEXTILE FABRIC
	6" PORTLAND CEMENT CONCRETE
	6" CRUSHED AGGREGATE BASE
	NON-WOVEN GEOTEXTILE FABRIC
	4" PORTLAND CEMENT CONCRETE
	4" LEVELING COURSE



RBB
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Fort Collins, CO 80524-2913
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F - 970-484-0204
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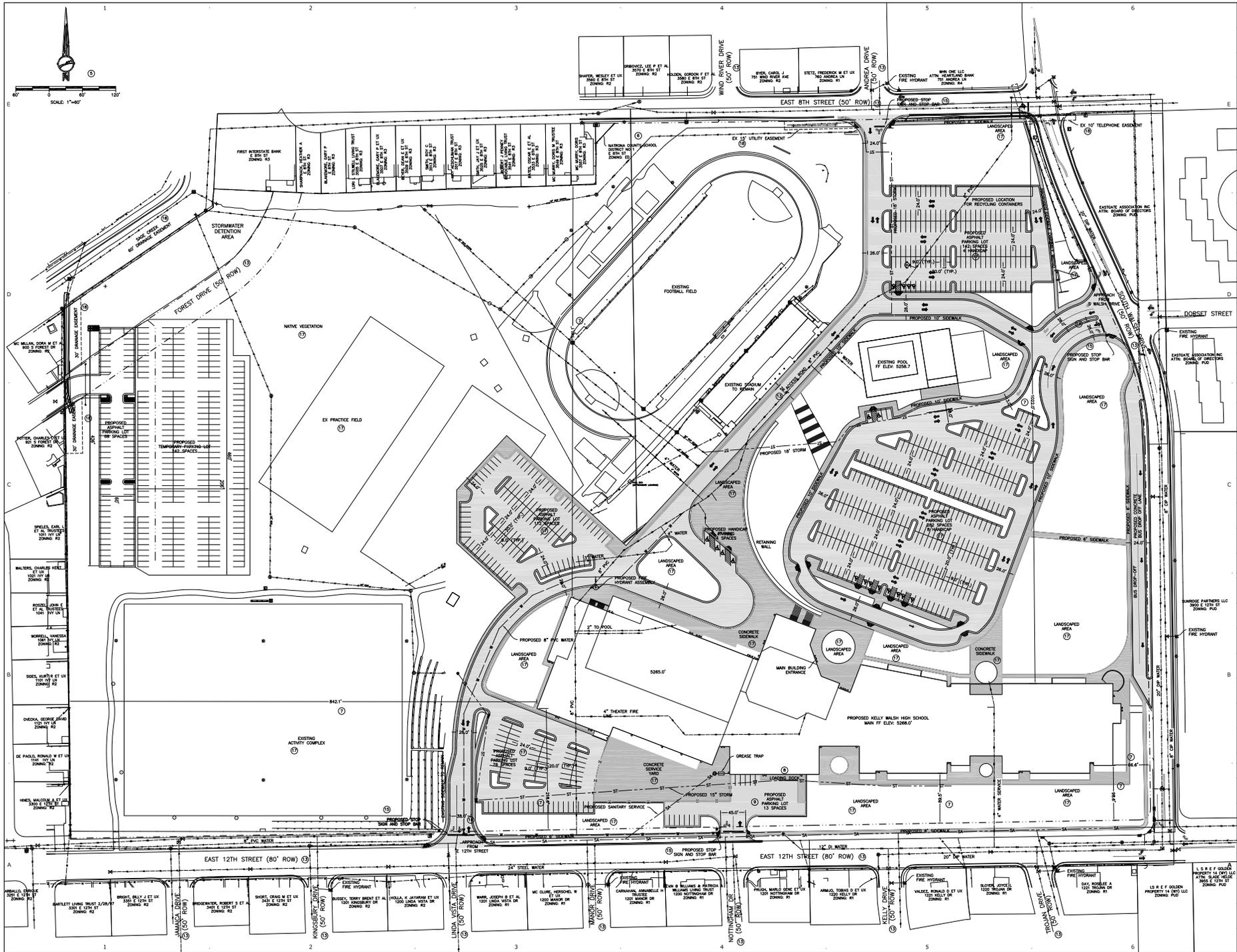
WLC
ENGINEERING
200 PRONGHORN
CASPER, WYOMING 82601
307-266-2524

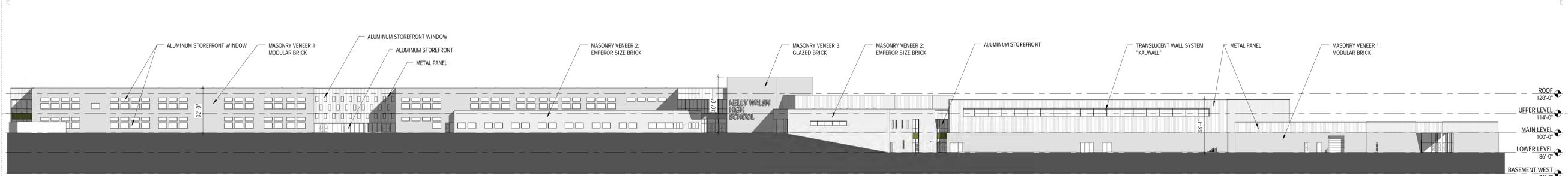
**CITY SITE PLAN
RESUBMITTAL
5/08/13**

**KELLY WALSH HIGH
SCHOOL**
NATRONA COUNTY SCHOOL DISTRICT
3500 EAST 12TH STREET
CASPER, WY 82609

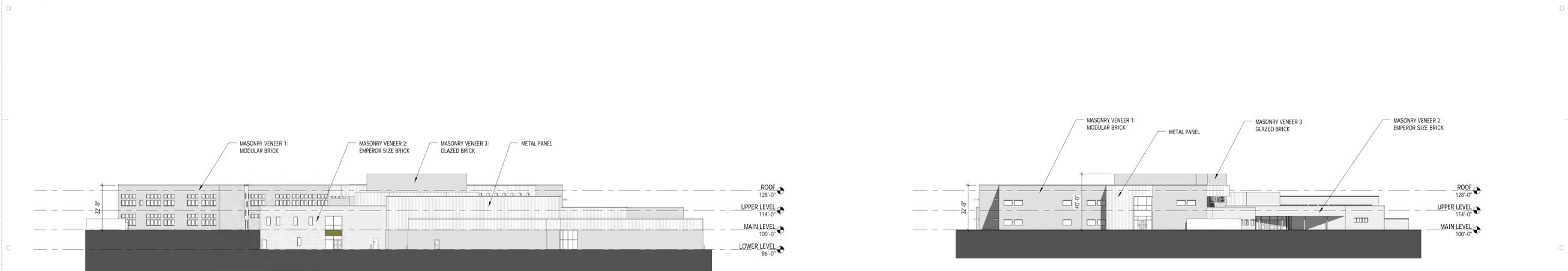
PROJECT #11-02
ISSUE DATE: 05/08/2013
REVISIONS
NO DESCRIPTION DATE

CIVIL SITE PLAN
C100



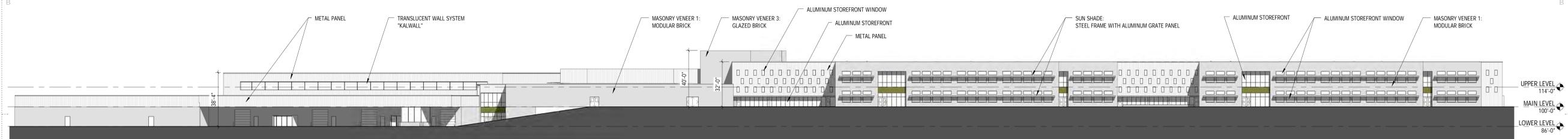


4 NORTH ELEVATION - b+w
1" = 30'-0"



3 WEST ELEVATION - b+w
1" = 30'-0"

2 EAST ELEVATION
1" = 30'-0"



1 SOUTH ELEVATION
1" = 30'-0"

ARCHITECT

SEAL

CONSULTANT

PROJECT PHASE

PROJECT INFORMATION

SHEET INFORMATION

35% DESIGN REVIEW

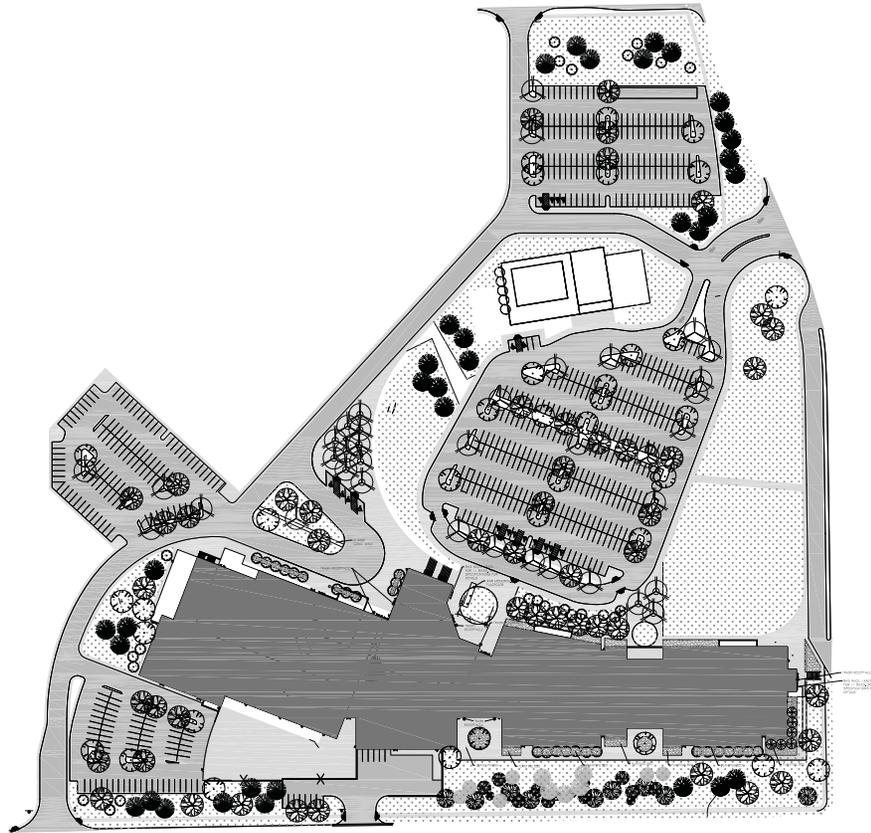
KELLY WALSH HIGH SCHOOL
NATRONA COUNTY SCHOOL DISTRICT No. 1
3500 EAST 12TH STREET
CASPER, WY 82609

PROJECT #: 11-02
ISSUE DATE: 4/25/2013
REVISIONS
NO. DESCRIPTION DATE

OVERALL ELEVATIONS
4-A200A

LANDSCAPE NOTES

- MINOR CHANGES IN THE SPECIES AND PLANT LOCATIONS MAY BE MADE DURING CONSTRUCTION AS REQUIRED BY SITE CONDITIONS. APPROVAL FROM THE LANDSCAPE ARCHITECT IS REQUIRED PRIOR TO MAKING ANY CHANGES IN THE SPECIES, SIZES OR LOCATION OF ANY PLANTS. OVERALL QUANTITY AND QUALITY SHALL BE CONSISTENT WITH THE APPROVED PLANS.
- PLANT LOCATIONS SHOWN ON THE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL LOCATE ALL PLANT MATERIAL UNDER THE DIRECTIONS OF THE LANDSCAPE ARCHITECT OR AUTHORIZED REPRESENTATIVE PRIOR TO PLANTING. EDUCATION, APPROVAL OF PLANT LOCATIONS DOES NOT RELEASE THE CONTRACTOR FROM LIABILITY OF DAMAGE OR INJURY TO UTILITIES, STRUCTURES OR PERSONS ON SITE. WORK SHOULD CONSTITUTE THE PLANT PLANTING REVIEW FOR THE SITE WHICH WILL TAKE PLACE AFTER ALL THE PLANTS ARE INSTALLED.
- ALL TREES SHALL MEET THE CITY OF CASPER LAND USE CODE STANDARDS FOR SIZE.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE ON NON-IMPACTED AREAS.
- CONTRACTOR SHALL INSTALL STONE MULCH TO A MINIMUM DEPTH OF THREE (3) INCHES OVER ALL PLANTING BED AREAS. CONTRACTOR SHALL INSTALL A WEED BARRIER (PHILLIPS 66 DURON OR EQUAL) ANCHORED WITH GROUND STAPLES UNDER ALL MULCH.
- SOIL OF SOB AREAS AND BED AREAS SHALL BE AMENDED WITH THREE (3) CUBIC YARDS OF COMPOST PER THOUSAND (1,000) SQUARE FEET. COMPOST SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF EIGHT (8) INCHES IN TURF SOB AREAS AND EIGHTEEN (18) INCHES IN BEDS.
- PRIOR TO SEEDING OR PLACING SOIL, THE CONTRACTOR SHALL PREPARE THE SURFACE AS INDICATED IN THE SPECIFICATIONS, REMOVING ALL STONES HAVING A DIMENSION GREATER THAN 1/2" INCH, AS WELL AS ALL EARTH CLODS, LUMPS, AND IMPRESSIONS. ANY STONES BROUGHT TO THE SURFACE DURING CULTIVATION SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR.
- NO SUB STANDARD DOLES SHALL BE USED IN ANY AREAS AS TOPSOIL. ALL AMENDMENTS MUST MEET THE STREET SPECIFICATIONS. NO SUBSOIL OR FILL SHALL BE PLACED IN AREAS TO BE PLANTED. ANY SUBSTANDARD SOILS PLACED IN PLANTING AREAS SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.
- ALL TREES PLANTED OUTSIDE OF PLANTING BEDS SHALL BE MULCHED FOR AN AREA OF FOUR (4) FEET IN DIAMETER AROUND THE TRUNK TO A DEPTH OF FOUR (4) INCHES WITH STONE MULCH. TREE LOCATIONS SHALL HAVE A MINIMUM SEPARATION OF 8" TO WATER & SPRINKLER SERVICE LINES. STREET TREES SHALL HAVE A MINIMUM SEPARATION OF 4' TO GAS LINES.
- ALL PLANT MATERIAL SHALL BE TRUE TO TYPE, SIZE, SPECIES, AND QUANTITY. FREE OF ALL DISEASE, BROWN ROOTDISEASE, PESTS AND DAMAGE AS WELL AS CONFORM TO THE MINIMUM REQUIREMENTS DESCRIBED IN THE "AMERICAN STANDARD FOR NURSERY STOCK #41-11".
- ALL LANDSCAPE CONSTRUCTION PRACTICES, WORKMANSHIP AND ETHICS SHALL BE, AT A MINIMUM, IN ACCORDANCE WITH INDUSTRY STANDARDS SET FORTH IN THE HANDBOOK FOR LANDSCAPE CONTRACTORS PUBLISHED BY THE WYOMING LANDSCAPE CONTRACTORS ASSOCIATION.
- ALL CONTRACTORS, WIRE AND ROPE SHALL BE REMOVED FROM THE ROOTBALL PRIOR TO PLANTING. BURLAP SHALL BE PULLED DOWN FROM THE TOP ONE THIRD OF THE ROOTBALL BEFORE PLANTING.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF AND PROTECT ALL UTILITIES AND STRUCTURE PRIOR TO ANY TIERING WORK. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
- TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL, MEETING THE DEFINITION SET FORTH IN THE SPECIFICATION, THAT IS REMOVED DURING CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED FOR LATER USE ON AREAS REQUIRING REVEGETATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF DIRT AND DEBRIS SPILLED ONTO ANY PAVED SURFACE.
- THE SOIL IN ALL LANDSCAPE AREAS, INCLUDING PARKWAYS AND MEDIANS, SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF NOT LESS THAN EIGHT (8) INCHES AND SOIL AMENDMENT SHALL BE THOROUGHLY INCORPORATED INTO THE SOIL OF ALL LANDSCAPE AREAS TO A DEPTH OF AT LEAST SIX (6) INCHES BY TILLING, SOILING OR OTHER SUITABLE METHOD, AT A RATE OF AT LEAST THREE (3) CUBIC YARDS OF SOIL AMENDMENT PER ONE THOUSAND (1,000) SQUARE FEET OF LANDSCAPE AREA.
- THE CONTRACTOR SHALL CONTACT THE CITY TO INSPECT ALL STREET TREE PLANTINGS AT THE COMPLETION OF CONSTRUCTION. ALL TREES ARE TO HAVE BEEN INSTALLED AS SHOWN ON THE LANDSCAPE PLAN. APPROVED STREET TREE PLANTING IS REQUIRED BEFORE FINAL APPROVAL. FAILURE TO OBTAIN APPROVAL BY THE CITY FOR STREET TREE PLANTING SHALL RESULT IN A HOLD ON THE CERTIFICATE OF OCCUPANCY.
- THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT ONE (1) WEEK PRIOR TO BEGINNING CONSTRUCTION.
- INSURE & APPROVAL BY THE CITY OF CASPER OF ANY REQUIRED LANDSCAPE IRRIGATION SYSTEM IS REQUIRED PRIOR TO OBTAINANCE OF A BUILDING PERMIT.
- ALL LANDSCAPING SHALL EITHER BE INSTALLED OR THE INSTALLATION SHALL BE SECURED WITH A LETTER OF CREDIT, CHECK OR PERFORMANCE BOND FOR 125% OF THE VALUE OF THE LANDSCAPE MATERIALS AND INSTALLATION PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE BUILDING.
- THE LANDSCAPE ARCHITECT AND R+B ARCHITECTS SHALL NOT BE RESPONSIBLE FOR DELAYS, PERSONAL INJURIES, PLANT MORTALITY, OR PROPERTY DAMAGE ASSOCIATED WITH THE IMPLEMENTATION OF THIS PLAN.

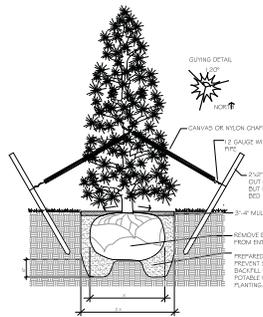


PLANT LIST

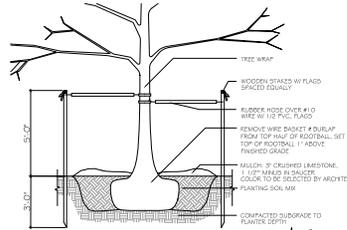
SYM.	ABBR.	QTY.	COMMON NAME	SIZES/REMARKS
SHADE TREES				
36	SHRIMPMASTER HONEY LOCUST	2	Gleditsia inaequalis 'Honey Sweet'	2" 1/2" CAL. (1 1/2" D.), WELL BRANCHED W/ STRAIGHT TRUNK # CENTRAL LEADER
49	AUTUMN BLAZE MAPLE	2	Acer * 'Fraser's Autumn Blaze'	2" 1/2" CAL. (1 1/2" D.), WELL BRANCHED W/ STRAIGHT TRUNK # CENTRAL LEADER
37	REDMOND LINDEN	2	Tilia americana 'Redmond'	2" 1/2" CAL. (1 1/2" D.), WELL BRANCHED W/ STRAIGHT TRUNK # CENTRAL LEADER
EVERGREENS				
35	AUSTRIAN PINE	8	Pinus nigra	8" - 10" HT., BAB FULL # WELL BRANCHED
7	ROCKY MOUNTAIN JUNIPER	3	Juniperus scopulorum 'Sarg.'	3" - 12" # GAL CONT. FULL # WELL BRANCHED
SMALL TREES				
51	INDIAN SUMMER CRABAPPLE	2	Malus 'Indian Summer'	2" 1/2" CAL. (1 1/2" D.), WELL BRANCHED W/ STRAIGHT TRUNK # CENTRAL LEADER
SHRUBS				
32B	BURGUNDY CAROLINE BARBERRY	3	Berberis thunbergii 'Darkholme'	3" - 12" # GAL CONT. FULL # WELL BRANCHED
31A	PANCHO MEXICANA	3	Arctostaphylos * coloradenensis 'Pancho'	3" - 12" # GAL CONT. FULL # WELL BRANCHED
PERENNIALS & GRASSES				
85G	KOREAN REED GRASS	4	Calamagrostis brachytricha	4" - 6" HT., 1" GAL CONT. FULL # WELL BRANCHED
78D	FEATHER REED GRASS - VARI. FODDERICE	4	Calamagrostis * canadensis 'Foli Fodderice'	4" - 6" HT., 1" GAL CONT. PLANT. 1/2" O.C.
83	ENGLEMANN WY (WAGNER) CREEPER	4	Parnassianus sylvaticus var. engelmannii	4" - 6" HT., 1" GAL CONT. FULL # WELL BRANCHED

HATCH LEGEND

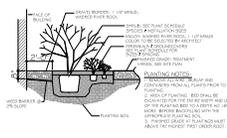
- BLUEGRASS TURFTUR BLEND, MODERATE IRRIGATION RATE. SEE SPECIFICATIONS FOR DRAINAGE DESCRIPTION AND INSTALLATION.
- PLANTING BEDS: DRIP IRRIGATION W/ WASHED RIVER ROCK BORDER AND MULCH. 1" 1/2" - 2" MINUS. SEE DETAILED SECTION FOR ADDITIONAL INFORMATION.



PLANTING NOTES
A. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED.
B. EVERGREEN TREES SHALL BE PLANTED TO THE TOP OF THE ROOT BALL RESTS 2" - 4" ABOVE FINISHED GRADE OF PLANTING BED.
C. GROUND COVER SHALL BE PLANTED TO THE TOP OF THE ROOT BALL RESTS 2" - 4" ABOVE FINISHED GRADE OF PLANTING BED.



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**DRAFT
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CONSTRUCTION**