Resolutions

- City of Cheyenne
- Laramie County
RESOLUTION NO. 5555

ENTITLED: “A RESOLUTION ADOPTING THE FOX FARM CORRIDOR PLAN”

WHEREAS, the limits of the Fox Farm Road Corridor Plan study area are bounded by Walterscheid on the west, I-80 to the north, Jefferson Road to the south, and east to College Drive and the unplanted lands further east; and

WHEREAS, Fox Farm Road is a vital east-west minor arterial in the Cheyenne urban area running south of and parallel to I-80; and

WHEREAS, Fox Farm Road is experiencing infill of commercial and residential development and will likely experience increased development pressures within the coming decades; and

WHEREAS, Fox Farm Road west of U.S. 85 is a paved urban section with curb, gutter and sidewalk, with no bicycle facilities which is maintained by the City and contains mostly commercial development; and

WHEREAS, Fox Farm Road east of U.S. 85 is a paved rural road maintained by Laramie County which is currently experiencing drainage issues, operational concerns for heavy trucks due to intersection design, and safety concerns for cyclists and pedestrians due to the lack of those facilities; and

WHEREAS, Burlington Trail currently is a rural unpaved road and requires initial planning in preparation for paving, improving drainage, and provision for non-motorized facilities from Campstool Road to S. Industrial Road; and

WHEREAS, future road network planning is needed as urban development continues east of College Drive; and

WHEREAS, the Cheyenne MPO retained A.V.I. p.c. on December 15, 2010 to produce the Fox Farm Road Corridor Plan and on January 1, 2012 to produce the Fox Farm Corridor Plan, Phase II; and

WHEREAS, the plan has been a collaborative effort involving the general public, the Laramie County Planning and Public Works Departments, Wyoming Department of Transportation, Federal Highway Administration, South Side Community Development Association, South Side Water and Sewer District, Cheyenne Light Fuel and Power, Holly Frontier Refinery and the City of Cheyenne; and

WHEREAS, public input was obtained through the MPO website Fox Farm Road Project Page, Public Open Houses held in March and November of 2011 and May of 2013, over a dozen one-on-one meetings with area stakeholders, and two web-based and one paper surveys conducted; and

WHEREAS, the Fox Farm Road Corridor Plan recommends a future land use plan that guides development in a publicly approved direction; and

WHEREAS, the Fox Farm Road Corridor Plan recommends infrastructure improvements that are intended to provide improved intersection designs with Fox Farm Road at Walterscheid, S. Greeley Highway, Avenue O/Oronio Avenue and College Drive; provide drainage improvement recommendations within the project boundaries; and enhance pedestrian and bicycle safety along the corridor; and

WHEREAS, the City of Cheyenne Planning Commission held a Public Hearing on October 21, 2013, accepted public comments, and recommended that the City of Cheyenne approve the Fox Farm Road Corridor Plan; and

WHEREAS, the Laramie County Planning Commission held a Public Hearing on October 24, 2013, accepted public comments, and recommended that the Laramie County Board of Commissioners approve the Fox Farm Road Corridor Plan; and

WHEREAS, the Cheyenne MPO Citizen’s Advisory and Technical Committees reviewed the Plan and recommended adoption; and

WHEREAS, the Fox Farm Road Corridor Plan provides guidance for redevelopment, drainage improvements, intersection improvements, multimodal road cross-sections along the Fox Farm Corridor, preliminary design for the Burlington Trail, and a conceptual roadway network for the unplanted lands east of College Drive.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF CHEYENNE, WYOMING, that the Fox Farm Road Corridor Plan dated October 2013, prepared by A.V.I. p.c., is hereby adopted as a guide for future improvements to the corridor with the following conditions:

1. That the intersection of Fox Farm and Avenue C be further reviewed and analyzed over time so as to determine a final design that improves the overall function of the intersection and corridor for all users, including trucks. The ability to continue to service large trucks in the area is important. The final intersection design should however balance the safety of truck drivers using the corridor, students using the existing Safe Routes to School pathway to Apé Elementary School, and residents of the Fox Farm neighborhood.

2. That the buffered bike lanes proposed on Fox Farm Road be re-analyzed prior to construction so that the safety of bicyclists is considered and adequate separation is provided to other modes from truck traffic on this corridor.

3. The Governing Body hereby reserves the right to deviate from the Fox Farm Road Corridor Plan.

PRESENTED, READ, AND ADOPTED THIS _5_ day of _October_ 2013.

Attest:

Carol Intereis, City Clerk
RESOLUTION NO. 131119-04

ENTITLED: A RESOLUTION ADOPTING THE FOX FARM CORRIDOR PLAN

WHEREAS, Wyoming State Statutes §18-5-201 to 18-5-208 authorize Laramie County, in the promotion of public health, safety, morals and general welfare of the county, to regulate the use of land in unincorporated Laramie County; and

WHEREAS, the limits of the Fox Farm Road Corridor Plan study area are Watererscheid on the west, I-80 to the north, Jefferson Road to the south, and east to College Drive and the unplatted lands further east, and;

WHEREAS, Fox Farm Road is a vital east-west collector and minor arterial in the Cheyenne urban area, running south of, and parallel to, I-80; and

WHEREAS, Fox Farm Road is experiencing infill of commercial and residential development and will likely experience increased development pressures within the coming decades; and

WHEREAS, Fox Farm Road west of U.S. 85 is a paved urban section with curb, gutter and sidewalk, with no bicycle facilities, which is maintained by the City and contains mostly commercial development; and

WHEREAS, Fox Farm Road east of U.S. 85 is a paved rural road maintained by Laramie County and is currently experiencing drainage issues, concerns for heavy trucks due to intersection design, and safety concerns for cyclists and pedestrians due to the lack of these facilities; and

WHEREAS, Burlington Trail currently is a rural unpaved road and requires initial planning in preparation for paving, improving drainage, and provision for non-motorized facilities from Campstone Road to S. Industrial Road; and

WHEREAS, future road network planning is needed as urban development continues east of College Drive; and

WHEREAS, the Cheyenne MPO retained A.V.I. P.C. on December 15, 2010 to produce the Fox Farm Road Corridor Plan, and on January 3, 2012 to produce the Fox Farm Corridor Plan, Phase II; and

WHEREAS, the plan has been a collaborative effort involving the general public, the Laramie County Planning and Public Works Departments, Wyoming Department of Transportation, Federal Highway Administration, South Side Community Development Association, South Side Water and Sewer District, Cheyenne Light, P&L and Power, Holly Frontier Refinery and the City of Cheyenne; and

WHEREAS, public input was obtained through the MPO website Fox Farm Road Project Page, Public Open Houses held in March and November of 2011 and May of 2013, numerous one-on-one meetings with area stakeholders, and two web-based and one paper surveys conducted; and

WHEREAS, residents who attended the public meetings had concerns regarding the Fox Farm Corridor, specifically the lack of lighting, the lack of adequate pedestrian facilities, the number of trucks in the area and the lack of a signal at College and Fox Farm Road; and

WHEREAS, the Fox Farm Road Corridor Plan recommends a future plan that provides guidance for development of the corridor with a respect for future land uses; and

WHEREAS, the Fox Farm Road Corridor Plan provides options for infrastructure improvements that are intended to improve intersection designs with Fox Farm Road at Watererscheid, S. Greesley Highway, Avenue C/Merrie Avenue and College Drive; provide

future drainage improvements within the project boundaries, and enhance pedestrian and bicycle safety along the corridor; and

WHEREAS, the Cheyenne MPO Citizen’s Advisory and Technical Committees reviewed the Plan and recommended adoption by the MPO Policy Committee; and

WHEREAS, the City of Cheyenne Planning Commission held a Public Hearing on October 21, 2013, accepted public comments, and recommended that the Governing Body of the City of Cheyenne approve the Fox Farm Road Corridor Plan; and

WHEREAS, the Laramie County Planning Commission held a Public Hearing on October 24, 2013, accepted public comments, and accepted the plan, recommending that the Laramie County Board of Commissioners approve the Fox Farm Road Corridor Plan with conditions; and

WHEREAS, the Fox Farm Road Corridor Plan provides guidance for redevelopment, drainage improvements, intersection improvements, multimodal road cross-sections along the Fox Farm Corridor, preliminary design for the Burlington Trail, and a conceptual roadway network for the unplatted lands east of College Drive.

NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF LARAMIE COUNTY, WYOMING, that the Governing Body adopts the Fox Farm Road Corridor Plan and agrees to use the Plan as guidance for the future development of the Fox Farm Road Corridor with the following conditions:

1. That the intersection of Fox Farm and Avenue C be further reviewed and analyzed over time so as to determine a final design that improves the overall function of the intersection and corridor for all users, including trucks. The ability to continue to service large trucks in the area is important. The final intersection design should however balance the safety of truck drivers using the corridor, students using the existing Safe Routes to School pathway to Ayp Elementary School, and residents of the Fox Farm neighborhood.

2. That the buffered bike lanes proposed on Fox Farm Road be re-analyzed prior to construction so that the safety of bicyclists is considered and adequate separation is provided to other modes from truck traffic on this corridor.

PRESENTED, READ AND ADOPTED this 19th day of November, 2013.

[Signature]
Troy Thompson, Chairperson

ATTEST:
Debra K. Lathrop, Laramie County Clerk

Approved as to form:
Mark T. Voss, Laramie County Attorney
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The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

Works Cited


CH2M Hill. (November 1988). Drainage Master Plan Allison Creek. Cheyenne, WY: City of Cheyenne.

CH2M Hill. (November 1988). Drainage Master Plan Crow Creek. Cheyenne, WY: City of Cheyenne.


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Numerous agencies, local associations and individuals devoted their time to the development of this document, including but not limited to:

City of Cheyenne Metropolitan Planning Organization  
Technical Advisory Committee  
Citizens Advisory Committee  
Fox Farm Road Steering Committee

City of Cheyenne  
City Council  
Engineering Services  
Long Range Planning Commission  
Public Works Department  
Urban Planning Office

Laramie County  
County Commissioners Planning Commission

South Cheyenne Community Development Association

U.S. Department of Transportation  
Federal Highway Administration
Introduction

Fox Farm Road between Walterscheid Blvd. and College Drive is classified as a collector. Over the past couple of decades, new businesses and developments in and around the area have resulted in an increase of traffic volumes along the Fox Farm corridor. The Fox Farm Road Corridor Study was initiated by Cheyenne Metropolitan Planning Organization (MPO) to develop transportation recommendations to assist the community in preparing for anticipated growth and redevelopment, as well as, to better serve the needs of the Fox Farm Road Corridors pedestrians, vehicle, bicycle, transit users, and redevelopment opportunities within the area.

The MPO tasked AVI, Professional Corporation to conduct the study. The key objectives included:

- The establishment of a conceptual multi-modal transportation and streetscape plan for the corridor with a greater detail study of up to 35% design for the major intersections of Walterscheid Blvd, South Greeley Highway, Montie Avenue C, and College Drive.
- Identify short and long term recommendations to provide increased safety for vehicles, freight traffic, transit users, bicyclists, and pedestrians with consideration of construction costs and facility maintenance.
- Develop a conceptual land use plan for the corridor area.

The boundaries of the Fox Farm Road project are from Derr Avenue to College Drive (east and west), and I-80 to E Jefferson Road (north to south). The plan also includes conceptual future alignments for the extension of Fox Farm Road, Allison Road, and College Drive into the unplatted land east of College. Additionally, the study included Burlington Trail Road, located between Campstool Road and South Industrial Road. Figure 1 depicts the study area and vicinity.

The primary purpose of this project is to create a planning document which promotes revitalization, safety, and complete streets, while being sensitive to current function, property owners, maintenance and construction costs. After discussion with the key members of the County, City, and MPO staff, the goals of the project were the following:

- Create a realistic guide document for the future development of the corridor and surrounding area.
- Develop a priority list of future roadway and infrastructure improvement projects.
- Develop intersection alternatives and improvements along Fox Farm Road at Avenue C, Walterscheid Blvd., College Drive, and the intersection of South Industrial Road at College Drive.
- Review options for bicycle, pedestrian, transit, industrial freight, and passenger vehicle use on Fox Farm Road.

The project was reviewed with oversight by a steering committee comprised of the following agencies or representative organizations:

- The Cheyenne Metropolitan Planning Organization
- Cheyenne Urban Planning
- City Engineering
- Laramie County Public Works
- South Cheyenne Community Development Association/ Holly Frontier
- South Cheyenne Water and Sewer District
- Cheyenne Light, Fuel, and Power
- Cheyenne Transit
- Cheyenne Trails and Bicycle Specialist
- Cheyenne Health Clinic
- WYDOTDistrict
- WYDOT Planning
- FHWA

![Figure 1 Fox Farm Road Corridor Study Vicinity Map](image-url)
The Snapshot section of the Fox Farm Corridor Plan provides a summary of the existing roadway and planning area.

History
Fox Farm Roads likely beginning was similar to many other roadways. A jurisdiction would establish roads along section lines, giving access to previously remote areas and creating firebreaks. According to records researched at the Wyoming Department of Transportation, the first formal construction project for Fox Farm Road was begun on December 1, 1971 and completed on September 8, 1972 under Wyoming Project No. SU-S-1109(2). This east section of Fox Farm was given route status as Wyoming Highway 221.

The constructed roadway was comprised of 2-12’ drive lanes, 2-8’ shoulders with roadway ditches approximately 12’ on the south and 26’ on the north. A short section of pavement located approximately 268’ west of the intersection of centerlines College Drive, Fox Farm was constructed with an additional 2’ of curb and gutter along with the 8’ shoulders, and the 12’ drive lanes.

This east section (i.e. east of South/ North Greeley Highway) of Fox Farm was decommissioned in 2009 by the State of Wyoming Commissioners and given to Laramie County, Wyoming. All state route marker signs have been removed, and the route no longer appears on the Wyoming Official State Highway Map.

No formal construction records were found for the west section (i.e. west of South/ North Greeley Highway) of Fox Farm Road - County Road 117. Today, this section is under the jurisdictional control of the City of Cheyenne.

Based on the Cheyenne - Laramie County Cooperative GIS Database Search / Interactive Mapping Site, the first recorded plat of the area was the Cheyenne Irrigated Gardens in October of 1923 (Figure 2). Other platting continued with the Prosser and Allison Tracts in 1930, Clear View Tracts in 1931, and Rose Ella Addition in 1955. For the most part, the early plats divided the land surrounding Fox Farm into approximately 330’ x 640’ (4 acres) tracts.

The Fox Farm Road Corridor plan area is not known to be a part of any historic districts at the present time. Additionally, the Wyoming State Historic Preservation Office (SHPO) website was reviewed for all the National Register listings in the area of the study and none were found.

Please note that if federal funds are used on any future projects or if a federal agency is part of the planning and implementation, a Section 106 Study will be required to determine potential impacts to any historic properties. Properties in the area of any construction impacts will be identified and evaluated based on the Secretary of Interior’s Standards and Guidelines for identification. Several determinations can be made in the evaluation including the following:

- No historic properties affected
- Historic property adversely affected
- Historic property not adversely affected

Existing Corridor
Today the Fox Farm corridor has a very unique character with a variety of adjacent property uses, form, function, and look. Land use varies along the corridor and is comprised of urban residential, urban commercial, urban residential, rural residential, and industrial.

Corridor is comprised of mainly two types of segments. The first is the west segment (Derr Avenue to South Greeley Highway) which is urban in character and the second is the east segment (South Greeley Highway to College Drive) rural. The urban segment contains curb and gutter with some sidewalk, while the rural section contains roadside ditches only. Fox Farm Road’s current roadway section is comprised mainly of asphalt surfacing with two driving lanes.
and paved shoulders. The only exceptions are areas east and west of the South Greeley corridor and Avenue C/Morrie Avenue where concrete pavement has been installed. Pedestrian facilities cover a range of conditions throughout the corridor from attached sidewalks of varying widths to no sidewalk.

The pavement width varies along the corridor. On the western section of Fox Farm Road from Derr Avenue to Walterscheid Blvd, the pavement width from top back of curb to top back of curb is typically 43' with a 3.5' and 4' attached sidewalk on the south and north side of the roadway, respectively. The one exception is the south side of Fox Farm between Derr Ave. and Walterscheid where there are no sidewalks (Figure 3).

To the east of Walterscheid Blvd., the pavement narrows to 36' and there are generally 6' attached sidewalks on the north and south side of the roadway with the exception of the property frontage at SpringHill Suites where the sidewalk is detached using a 8’ tree lawn (Figure 4). Pavement begins to widen on the south side of the road as you head east on the corridor at the main entrance to the Holiday Inn. The width transitions to approximately 58’ from top back of curb to back of curb with 6’ attached sidewalks on each side of the roadway (Figure 5).

The section of Fox Farm Road east of South Greeley Highway has been widened to approximately 63’ from top back of curb to top back of curb with 4.5’ and 5.5’ attached sidewalks extended approximately 250’ east of the intersection of North/South Greeley.

The remainder of the corridor extending east to College Drive has a pavement width of 40’ with no sidewalk or curb and gutter. A representative photo is shown in Figure 6.

Fox Farm Road does not extend beyond the intersection of College Drive. It currently zoned as Light Industrial and Agricultural. The western edge is used as rural industrial and the majority to the east is used as ranch and grazing land. Currently three primary landowners hold the majority of land east of College Drive.

**Transit**

The South Route for the Cheyenne Transit Program covers Fox Farm Road. The program runs from 6:00 am - 7:00 pm, Monday thru Friday and 10 am - 5 pm on Saturday. Based on the current route map and on-site observation there are six transit stops within the project study area. Five are located directly on Fox Farm. However, the route does not run the entire length of the corridor. It is broken into two segments; the eastern half runs south on Morrie Avenue with a stop at Teton and continues east on Fox Farm Road with stops on the south between Avenue C and College Drive at Avenue C-1, Avenue C-4, and Avenue D. The western side of the route runs westerly with stops on the north side of Fox Farm Road with stops between South/ North Greeley Highway and Walterscheid at 300 West Fox Farm between the Holliday Inn and Comfort Inn Suites and Derr Avenue. This leaves a section of Fox Farm between Morrie/ Avenue C to South/ North Greeley without transit service. The distance between the two stops is approximately one mile (Figure 7). The main constraint of the Transit System in this area is related to continuity of pedestrian access. First, the only sidewalks on the corridor are near the intersection of South/ North Greeley and the west segment of Fox Farm. The East segment of Fox Farm relegates pedestrians to use the ditches along the roadway or the paved shoulder with the exception of a new north south path at Avenue C and Morrie Avenue. Second, the furthest east bus stop at Avenue D is primarily used for the Cheyenne Health Clinic on the north side of street while the bus stop is located on the south.

**Figure 7 Transit Route and Transit Stops Fox Farm Road**
Bicycle Transportation

No formal bicycle facilities are delineated on Fox Farm Road. Bicycle traffic shares the roadway with motor vehicles. Based on observation, bicycles use the un-striped paved shoulders and travel lanes.

The August 2011 Cheyenne On-street Bicycle Plan and Greenway Plan Update identified Fox Farm Road to become a part of the proposed bikeway network. The recommendation was for bike lanes to be installed as a part of future roadway paving or construction projects.

Utilities

Based on observed surface and underground locates at (4) four intersections on Fox Farm Road the following utilities have been identified:

- Cheyenne Light, Fuel, and Power: Overhead electric, underground gas
- Bresnan Communications: Overhead cable/phone
- Century Link: Underground phone, fiber optic
- BOPU: Underground water, sewer, and storm sewer
- South Cheyenne Water and Sewer District: Underground water and sewer.

Given the proximity of utilities to the existing roadway, as well as, the limited right-of-way width of 80 feet, any modification to the intersections or roadway will affect the utilities within the corridor. Future coordination will be paramount to the success of any implementation of road projects.

One of the many unique characteristics of this corridor is the fact that the water and sewer infrastructure are under two jurisdictional entities, City of Cheyenne Board of Public Utilities and the South Cheyenne Water and Sewer District.

The majority of the corridor is served by the district and is comprised of water lines on the corridor ranging size from 6” to 12”. The sanitary sewer system is comprised of 8” lines throughout the area. The South Cheyenne Water and Sewer District is funded by Laramie County mill levies. In the last three years (2010 – 2012) the district received 5.28, 5.13, and 5.76 mills (Laramie County, Wyoming).

The City of Cheyenne Board of Public Utilities provides service to a limited number of areas within this corridor area. The water system has an 8” line extending and looping onto itself at Morrie Avenue and South House Avenue. Additionally a 12” line has been installed in Walterscheid Blvd and loops back to the north at Parsely Blvd. Sanitary sewer capacity appears to be limited to an 8” line east of Walterscheid Blvd. and on South House, and a 10” line on Morrie Avenue. The approximate boundary of the district and areas served by the BOPU are illustrated in Figure 8.

Freight/ Truck Routes

Based on interpretation of observed existing traffic volumes and assuming the definition of a truck is defined as a minimum of three axles, the percentage of trucks along the corridor is generally about 2% - 6%. The east segment of Fox Farm Road from South/ North Greeley Highway to College Drive is the primary truck route used for multiple industrial businesses and the Holly Frontier Refinery via Morrie Avenue. Based on conversations with representatives of Holly Frontier, drivers are encouraged to use two designation truck routes other than Fox Farm Road. The first utilizes Morrie Avenue, East 1st Street, Warren Avenue, 5th Street to the signalized intersection of North Greeley/ US85, then to off/ on ramp of I-80 east/ west. The second route...
utilizes Morrie Avenue, East 5th Street, Campstool Road, Campstool Way, College Drive, I-80 Westbound/ Eastbound on/ off ramp (Figure 9).

Drainage
The site is located north and south of two primary drainage conveyances (Crow Creek and Allison Draw) and one tributary drainage area (Henderson and East Lincolnway Basin). The entire Crow Creek contributory drainage area of approximately 336 square miles, Allison Draw has an area about 18 square miles, and the Henderson/ East Lincolnway Basin is about 4.7 square miles (CH2M Hill, November 1988). Although the current Fox Farm Corridor is outside the floodplain or floodway, future extensions of Fox Farm and Allison Road to the east will abut and cross portions of the designated floodplain. Furthermore, Burlington Trail Road is within the Special Flood Hazard Area of the City/ County 100 Year Floodplain. The applicable current Flood Insurance Rate Maps (FIRM) published by the Federal Emergency Management Agency (FEMA) are 56021C1357F, 56021C1376F, and 56021C1094F. Both Crow Creek and Allison Draw are essentially rural basins but are continuing the process of urbanization while the Henderson Basin is heavily urbanized with much of the basin fully developed. The topography in and around the study area generally slopes east to southeast. The drainage basin and floodplain are map Figure 10 ((CLCCGIS)) illustrates the corridor, basic basin drainage basins, floodplain, special flood hazard area, and points of discharge into the drainage way from the corridor.

Storm water tributaries to the roadway corridor are conveyed by two primary methods. The first on the west segment is by way of curb and gutter and storm sewer and the second on the east segment by way of swales, ditches, and corrugated metal culverts (CMP). The operational condition of these existing storm water conveyance elements vary dramatically along the corridor from good to poor. Observations taken during several site visits found the west segment in good operational condition while the east segment of the corridor appears to be operating in an average to poor condition. Observations along the east corridor include the following (Figure 11, Figure 12):

- Near to full blockage of culverts (> 50%)
- Minor blockage of culverts (< 50%)
- Culverts without flared end sections
- Smashed or bent culverts and flared end sections
- Shallow culverts
- Shallow, small, or nonexistent ditches
- Channel erosion
- Overgrown vegetation within ditches
- Steep side slopes within ditch sections
- Roadway storm water runoff entering private property
- Private property storm water runoff discharged into the Fox Farm Corridor

Drainage sub-basins have been delineated along the Fox Farm Road and are illustrated in the appendix A and Figure 8 and 9 of this report. Preliminary runoff values were calculated using AutoCAD 2013, Hydraflow Hydrographs software and intensity versus duration precipitation curves from the City of Cheyenne. The table below summarizes the runoff values for each of the drainage basins for the full range of storm events (5, 25, and 100 year storms).

**Table 1 Design Storm Flows**

<table>
<thead>
<tr>
<th>Basin Designation</th>
<th>Q (Cubic Feet/Second)</th>
<th>5 Year Storm Event</th>
<th>25 Year Storm Event</th>
<th>100 Year Storm Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td></td>
<td>74.3</td>
<td>119.1</td>
<td>157.7</td>
</tr>
<tr>
<td>F2</td>
<td></td>
<td>37.4</td>
<td>60.1</td>
<td>79.3</td>
</tr>
<tr>
<td>F3</td>
<td></td>
<td>96.1</td>
<td>154.4</td>
<td>204.4</td>
</tr>
<tr>
<td>Right-of-way (North)</td>
<td></td>
<td>5.0</td>
<td>8.0</td>
<td>10.6</td>
</tr>
<tr>
<td>Right-of-way (South)</td>
<td></td>
<td>3.6</td>
<td>5.8</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Typical culvert and ditch capacities were calculated to compare to the basin run-off values above. Culvert capacities were based on 18” CMP culverts using a slope of 0.5% and 0.5’ of upstream head with normal tail water conditions. Ditch capacities were calculated based on a “V” ditch section, 4:1 side slopes, 1’ of depth, grass lined conditions. The typical capacity of the culverts is 7.3 cfs while the ditches have a capacity of 8.0 cfs. Based on those conveyances, it is clear the culverts can carry the run-off generated from most of the existing roadway and right-of-way storm events but, will not convey the offsite run-off.
Figure 11 Fox Farm Existing Drainage Constraints (West)
Figure 12 Fox Farm Road Existing Drainage Constraints (East)
Environmental

Potential environmental considerations were reviewed for possible impacts to future improvement within the corridor. A cursory review and consultation with staff of the Wyoming Department of Environmental Quality (WYDEQ) and available documentation revealed one historic landfill and seven construction/demolition landfills in the area which could potentially impact future construction and redevelopment in the area (Inberg-Miller Engineers, 2005).

The historic landfill was known as the Wilson Pit Landfill and operated by the City of Cheyenne Public Works Department from October 1944 to May 1946. It is a mined out, 4 acre gravel pit, located at the southeast corner of the intersection of Fox Farm Road and Avenue C-1 (Prosser Tract 1, Tract 16 and 17).

The seven other construction/demolition landfills found in the area are all backfilled gravel pits which carry some degree of risk of contamination or impact to future redevelopment. They are listed below and shown in Figure 13 along with the Wilson Pit Landfill mentioned above:

1. Wilson Pit Landfill
2. Allison Pit also known as Read-Allison Pit and James E. Simon Pit (East of Avenue C: WYDEQ/SHWD #20.525)
4. Clearview Tract (1507 East Fox Farm Road: WYDEQ/SHWD #30.050)
5. Cheyenne South Pit (500' north of the intersection of Avenue C-2, and Fox Farm Road: WYDEQ/SHWD #30.010)
6. Will Krukenberg (212 Avenue C-4: WYDEQ/SHWD #na)
7. Louis A. Gehrig (Tract 30, Cheyenne Irrigated Gardens: WYDEQ/SHWD #30.025)
8. Cook-McCann Concrete (northwest corner of Avenue C-2 and Fox Farm Road: WYDEQ/SHWD #30.025)
1. Wilson Pit Landfill
2. Allison Pit also known as Read-Allison Pit and James E. Simon Pit (East of Avenue C: WYDEQ/SHWD #20.525)
4. Clearview Tract (1507 East Fox Farm Road: WYDEQ/SHWD #30.050)
5. Cheyenne South Pit (500' north of the intersection of Avenue C-2, and Fox Farm Road: WYDEQ/SHWD #30.010)
6. Will Krukenberg (212 Avenue C-4: WYDEQ/SHWD #na)
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8. Cook-McCann Concrete (northwest corner of Avenue C-2 and Fox Farm Road: WYDEQ/SHWD #30.025)
Current Traffic Conditions
Traffic volume, speed, and classification data were collected for this project on average weekdays at various times during 2011, 2012, and 2013. Peak hour counts were collected at the key intersections along Fox Farm Road and College Drive during the morning and evening peak hours. Noon peak hour counts were evaluated when they were available. Peak hour and daily traffic volumes, speeds, laneage, and traffic control are contained in Figure 14. Regarding vehicle classification, a truck was defined as a vehicle having three or more axles. The percentage of trucks varies along the corridors between 2% and 6%.

To evaluate the performance of the intersections within the study area, the Level of Service (LOS) was calculated using Synchro software. This software package utilizes criteria described in the Highway Capacity Manual (Board, 2010). LOS is a measure used to describe operational conditions at an intersection with categories ranging from A to F based on the predicted delay in seconds per vehicle for the intersection as a whole, as well as, for individual turning movements. LOS A indicates very good operations, and LOS F indicates poor, congested operations. Acceptable intersection operation based on the City standards (Cheyenne, Cheyenne Unified Development Code-Article3. Impact Studies, 2012) is a LOS C or better. All of the intersections are currently operating at LOS C or better during the weekday peak hours. Please see Figure 14 for additional information.

Traffic Safety
Crash data was obtained for key intersections along the corridor for the most recent three-year period. The data and crash rates are summarized in Table 2 (3) Three Year Crash Summary for Key Intersections. The highest number of crashes over the three-year period (25) occurred at Fox Farm Road / South Greeley Highway. Crash rates ranged from 0.1 at College Drive / Industrial Lane to 0.87 at Fox Farm Road / Avenue C. Based on the 2011 Annual Crash Report for the Cheyenne Urban Area (Organization, 2012), crash rates ranged from 1.78 to 1.17 for the top 10 highest signalized intersection crash locations in the Cheyenne Urban Area during the years 2002 through 2011. Crash rate is number of crashes per million entering vehicles. The South Greeley Highway and Fox Farm Road intersection ranked number ten in the ten highest signalized intersection crashes in 2011 at a total of thirteen (13) crashes. The highest intersection was Dell Range Blvd. and Converse with twenty-nine (29) total crashes in 2011.

The following observations were made about the crash data:

- Fox Farm Road / Walterscheid Boulevard. There are no significant crash patterns at this intersection.
- Fox Farm Road / South Greeley Highway. Based on the crash data from 2005 to 2010 a total of fifty-one (51) total crashes were reported at the intersection. Of the fifty-one (51), sixteen (16) were injury related and thirty-five (35) were property damage only (PDO) crashes.
- Fox Farm Road / Avenue C. A majority of the crashes at this intersection are a function of the narrow intersection geometric layout width. All four approaches have a single lane and the intersection is controlled by stop signs on each approach. The intersection geometry combined with the number of large trucks which causes confusion for motorists. Some motorists stop in unusual locations to accommodate the turning trucks which contribute to the crashes. (Board, 2010)
- Fox Farm Road / College Drive. The significant crashes were the angle type involving eastbound versus southbound vehicles. Based on the crash reports and discussions with citizens at the open houses, motorists on the eastbound approach have difficulty distinguishing between the southbound through and right turning vehicles when the right turning vehicle is a large truck. The right turning truck can hide the southbound through vehicle causing crashes and near misses. Another issue was discovered through discussions with citizens at the open houses involving eastbound and northbound vehicles that have caused near misses, but no crashes. Based on discussions with citizens at the open houses, the combination of the skewed eastbound approach causes motorists to look more than 90° to the right and the two northbound through lanes makes it difficult for the eastbound motorists to judge the gaps in the northbound traffic.
- College Drive / Industrial Road. There are no significant crash patterns at this intersection.
- College Drive / Campstool Way. All of the crashes at this intersection are rear end which is a function of the intersection being signalized.

A summary of the crash data is shown in Table 2.

<table>
<thead>
<tr>
<th>Type</th>
<th>Waltercheid Blvd.</th>
<th>South Greeley / North Greeley</th>
<th>Avenue C</th>
<th>College Drive</th>
<th>South Industrial Road</th>
<th>Campstool Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Crashes</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Rate</td>
<td>0.51</td>
<td>0.75</td>
<td>0.87</td>
<td>0.52</td>
<td>0.10</td>
<td>0.35</td>
</tr>
</tbody>
</table>
**Existing Land Use and Zoning**

The Fox Farm corridor has been in existence for many years and started as a WYDOT controlled roadway. As access to public infrastructure in the area has increased over time so has the ability to have denser commercial and residential developments to provide a mix of lot sizes and development types. This has led to many grandfathered uses and a variety of lot sizes and scattered zoning. The land use types found within the corridor are civic uses, residential uses, service business, retail businesses, child care, automobile service, moderate industrial recycling and agricultural.

The following zoning uses are currently within the corridor:

**City Zoning:**
- Public
- MR-2
- HR-2
- CB
- PUD

**County Zoning:**
- CB
- MR
- PUD
- MU
- LI
- A-2

See Figure 15 for the current zoning and land use configuration in the area.
Figure 15 Existing Land Use and Zoning
Structure

The structure is the process and planning context phase of the project. It provided an avenue for a collaborative effort to define the opportunities and constraints of the corridor, as well as, frame the key planning considerations which shaped the plan.

The Fox Farm Road Corridor Plan relied heavily upon extensive public and stakeholder participation. The process involved open house format meetings with residents, business owners, developers, land owners, as well as, project Steering Committee, Planning Commission, Cheyenne Metropolitan Planning Organization Technical Advisory Committee, Cheyenne Metropolitan Planning Organization Citizen Advisory Committee, Individual Landowner/ Business meetings, and a Holly Frontier Freight/ Truck Route Survey. Table 3 shows a matrix of all the avenues used and dates in the structure process of the project.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Cheyenne Community Showcase</td>
<td>February 26, 2011</td>
</tr>
<tr>
<td>Public Open House (3)</td>
<td>March 29, 2011; November 16, 2011; and May 28, 2013</td>
</tr>
<tr>
<td>Laramie County Planning Commission Work Session (Land Use)</td>
<td>August 25, 2011</td>
</tr>
<tr>
<td>Individual One-on-one Meetings w/ Land and Business Owners</td>
<td>June 21, 2012 (Ms. Read)</td>
</tr>
<tr>
<td></td>
<td>April 13, 2012, June 22, 2012 (Mr. Lummis)</td>
</tr>
<tr>
<td></td>
<td>October 24, 2012 (Mr. Hales)</td>
</tr>
<tr>
<td></td>
<td>May 22, 2012 (Diamond Shamrock)</td>
</tr>
<tr>
<td></td>
<td>June 25, 2013 (Taco John's International)</td>
</tr>
<tr>
<td>MPO Technical Advisory Committee (2)</td>
<td>August 15, 2012 and May 15, 2013</td>
</tr>
<tr>
<td>MPO Citizen Advisory Committee</td>
<td>May 16, 2013</td>
</tr>
<tr>
<td>Federal Highway Administration and WYDOT</td>
<td>June 26, 2013</td>
</tr>
<tr>
<td>Holly Frontier Freight/ Truck Route Survey</td>
<td>July 17-19, 2013</td>
</tr>
</tbody>
</table>
South Cheyenne Community Showcase
The project structure began at the South Cheyenne Community Showcase conducted at Laramie County Community College on February 26, 2011. The project was introduced to the public at a booth which displayed an overall aerial photograph with project limits and was manned by AVI and the MPO. Both paper and an electronic comment card were available for attendees.

Public Open Houses
The next structure component involved open house style forums for stakeholder and public comment and input. Three open house style public meetings were conducted during the project. AVI led the public involvement process with assistance and contributions from all the team members. The meetings were advertised through various media including newspaper, web, elementary school flyers, mail flyers, and variable message board signs placed on Fox Farm Road.

First Open House
The first public meeting was conducted on March 29, 2011 from 4:00 p.m. to 7:00 p.m. in the gymnasium at Arp Elementary School. The site was selected due to its proximity to the corridor study. Seventy-two (72) people were listed on the Sign-In-Sheet as attending the meeting. The objectives of the open house were as follows:

- Obtain and listen to initial feedback from the public on problems, concerns, and desires for the future development and transportation components of the area.
- Identify and begin involvement of interested stakeholders.
- Provide a platform to begin work with the Steering Committee.

Planning and Engineering consultants from AVI, Jovi Plans and Sustainable Traffic Solutions were present to receive public comment. The MPO and Laramie County Planning staff members were an asset in fielding questions, gathering comments, and directing citizens to the different areas within the open house.

The open house was organized into three different stations to prompt input for the corridor and planning components. Those stations were Traffic, Site Issues, and Zoning/Land Use. Information and input from the public at those stations was collected by way of three different avenues. Those were: direct communication with a team member (i.e. consultant, MPO staff member, and Laramie County Planning staff member), having the public write comments on Post-it® notes and placing them on large planning area maps, and filling out a written survey. The primary purpose of the three different communication avenues was to create the most comfortable environment for individuals to convey information to the team. “Something to think about” prompts were listed at each of the individual station tables to also prompt input. The questions from the Zoning and Land Use Table were as follows:

What are your thoughts in regard to Land Use and Zoning?

- What type of development or land uses would you like to see in the area and corridor?
- Do you prefer industrial, residential, retail, office, manufacturing, or other?
- Do the zoning areas surprise you?

The overview of the station results were as follows:

Traffic Station
The Fox Farm Traffic station received the following five primary areas of concerns:

- Inadequate width of the Fox Farm Road for turning movements on and off the corridor and at key intersections.
- Lack of pedestrian facilities and connections with surrounding neighborhoods and greenway paths.
- Speeding on the corridor.
- Lack of landscaping.
- Lack of lighting along the corridor.

Site Issues and Concerns
At the Site Issues station, there were many of the same comments about traffic along the corridor, but there was much more concern with the overall look of the corridor, as well as, lack of maintenance of the roadways within the area. There was also discussion about drainage concerns in the area.

Current Zoning and Land Use Station
The Current Zoning and Land Use station brought a lot of attention to the need for a location for people to gather in the area. The suggestions included a larger school site, parks, tennis courts, swimming pool, skating park, and connecting trails and greenways. Another interesting idea that resulted from the meeting was that there was a positive response overall to commercial activities and increased density if this helps bring in more commercial/office type uses. Respondents also made it clear that they would like to see industrial use stay south of Fox Farm Road. There are many large lot areas that are vacant or underutilized at this time for an area that has water and sewer.

Of the Seventy-two (72) persons signed in as attending the public open house Fifty-five (55) written comments were returned or approximately Seventy-six point four (76.4%) return. Of the
Results for the written survey information were entered into the computer system by the consultants after the open house or the public had the option of entering the survey electronically through the Survey Monkey® web link. The link was provided on the bottom of the comment card and the Cheyenne Metropolitan Planning Organization website. The overview of the station results were as follows:

**Land Use Station**
The Land Use station was primarily a review of the input the consultants received and applied to the land use component. Eighty-one point eight percent (81.8%) of them either owned or rented from the first public meeting, meetings with the steering committee and the Laramie County/ City of Cheyenne Planning Commissions. The Land Use Plan was very well received with only twenty-five point five percent (25.5%) classified themselves as route users. A complete summary of comments, exhibits, sign in sheets, and comment cards are enclosed in Appendix B.

In order to coordinate the Laramie County Land Use Regulations and City of Cheyenne UDC zones, an overlay district might make sense. This would synchronize the different regulations and help distinguish the mixed-use residential and mixed-use business land use types since Laramie County only has a single Mixed Use Zone. An example of the overlay ordinance is illustrated in the Shape portion of report (Foundation 2 Overlay District).

**Transportation and Roadway Station**
The Transportation and Roadway Station encompassed the introduction of roadway design components, intersection conceptual alternatives, and truck turning movements of standard intersection versus a roundabout.

Most of the discussion in this area entailed accommodating large trucks, which utilize the intersection of Avenue C / Morrie Avenue with Fox Farm Road. It was indicated that a majority of truck movement was from southbound Morrie Avenue to eastbound on Fox Farm Road and from westbound Fox Farm Road to northbound Morrie. It was indicated that the traffic was due to the interstate traffic accessing the Holly Frontier Corporation site formerly known as Frontier Refinery. The truck traffic discussion prompted the demonstration of the large width required to turn a semi-truck at a standard four-way intersection and that a properly sized roundabout can facilitate a safer and more convenient movement.

Particular comments were received regarding the importance of the placement of a signal at College Drive and Fox Farm Road. It was reiterated that the intersection was unsafe for vehicles entering College Drive from westbound to northbound. Although the traffic crash data shows this intersection to be the second lowest in crashes out of the four primary intersection on the corridor (i.e. South Greeley (24), Avenue C (10), College Drive (8), and Waltenscheid Blvd. (7)).

Reviewing the reported crash data from 1/2007 to 12/2009, it appears that only one crash was related to a movement from westbound Fox Farm to northbound College. The primary unsafe perception appears to stem from ghosting issues related to turning movements from Fox Farm to...
northbound College. Due the skew of the intersection and the transition from two travel lanes to a single lane on southbound College and one travel lane to two travel lanes on northbound College, cars are either hidden behind each other or imperceptible as to whether they are turning onto Fox Farm or proceeding on College through the intersection.

Some discussion was spent on the intersection at South Greeley Highway related to the possible incorporation of access control medians being placed on the west and east side of Fox Farm Road. Proponents expressed that it would make the turning movements more defined and safer. For instance, it was indicated that it is very common for traffic proceeding from northbound South Greeley to eastbound on Fox Farm Road to directly cross into the south approach of the Diamond Shamrock instead of using the west approach off South Greeley. Opponents to the use of the median expressed concern of preventing traffic exiting from the south approach of the Diamond Shamrock from entering eastbound Fox Farm Road. Additionally, a resident of South House Avenue expressed the concern that we should provide a left turn bay for the eastbound to northbound movement off Fox Farm Road.

Finally, general comments were received regarding the importance of street lighting, curb and gutter, and sidewalks to be incorporated into future roadway improvements on the corridor.

Drainage Station

In the first public meeting drainage was one of the topics of concern therefore, for the second public meeting AVI developed a Drainage Constraints map and Conceptual Potential Drainage Opportunities Map. The constraints map summarized existing drainage-related issues along the Fox Farm Road Corridor. Site photographs were provided of an approximate location within an overall aerial layout. This provided a visual referenced to the location and type of drainage constraint. Drainage areas, which contribute storm water runoff onto the Fox Farm Road Corridor, were also outlined on the exhibit for reference and scale of the amount of storm runoff contributing to the area. A summary table of the typical constraints and potential solution types were shown with relative costs (Figure 11 Fox Farm Existing Drainage Constraints (West), Figure 12 Fox Farm Road Existing Drainage Constraints (East)).

The second exhibit developed was the Conceptual Potential Drainage Opportunities. The layout outlined long-range broad type master planning opportunities for improving the drainage along the corridor. The exhibit summarized five (5) separate conceptual drainage conveyance paths to modify and improve conveyance runoff off of Fox Farm Road and into Allison Draw and/or Crow Creek drainages. The master plan level solutions looked at different routing of storm water and regional storm water detention areas (See Figure 14).

Public discussion and concerns were expressed regarding offsite discharge and conveyance problems, as a result of, the Deerhaven subdivision located off of Montalto Drive. Several attendees cited standing water, inadequate to poor drainage ditches, and a perception that runoff volume from the subdivision has increased on East Jefferson Road since the completion of the this stage of development. Other comments stated that some drainage from Fox Farm Road is being conveyed to private property. Specifically, it was noted that an existing culvert at the intersection of Avenue D and Fox Farm Road appears to convey storm water runoff from the north side of Fox Farm Road directly onto private property.

Figure 16 Conceptual Drainage Opportunities

Thirty-one (31) participants provided written survey comments or a 56.3% response rate. Of the survey respondents, eighty three point nine percent (83.9%) of them either owned or rented property within the area of the study while sixteen point one percent (16.1%) were route users. A complete summary of comments, exhibits, sign in sheets, and comment cards are enclosed in Appendix B.
Third Open House

The third public meeting was conducted on May 28, 2013 from 4:00 p.m. to 6:00 p.m. in the gymnasium at Arp Elementary School. Advertisement of the meeting was accomplished through various media including newspaper, City of Cheyenne Metropolitan Planning Organization (i.e. MPO)/ City of Cheyenne Website, post card mailings, and Variable Message Signs placed on Fox Farm Road. Fifty-two (52) people were listed on the Sign-In-Sheet as attending the meeting. The objectives of the open house were as follows:

- Have the public review and comment on the conceptual land use plan for the corridor. This included a revised conceptual land use map of portions east of College Drive.
- Review and comment on a proposed rural and urban cross section (i.e. with and without curb and gutter, respectively).
- Three key intersections with preferred designs and one intersection with two options were presented for public discussion and responses.
- A proposed conceptual plan, intersection modifications, and greenway extension were visually presented for public input and consideration.
- Three alternatives for modifications to the intersection of South Industrial Road at College Drive were presented for public comment.

Planning and Engineering consultants from AVI and Sustainable Traffic Solutions were present to receive public comment from the citizens that participated in the open house style meeting. MPO and Laramie County Planning staff members fielded questions, gathered comments, and directed citizens to the different areas of the open house.

The open house was organized into two duplicate stations with three different design components as follows: Land Use, Conceptual Typical Sections and Intersection Options, Burlington Trail Road, and South Industrial Road. A separate tabled area was also used for the public to write comments and to answer the written survey.

Results for the written survey information were entered into the computer system by the consultants after the open house or the public had the option of entering the survey electronically through the Survey Monkey® web link. The link was provided on the Cheyenne Metropolitan Planning Organization website.

Twenty-seven (27) participants of the fifty-two (52) listed on the sign-in sheet provided written survey comments or a 51.9% response rate. The written survey responses were entered and the results are included in the following charts by the category that they relate to. Of the survey respondents, fifty-five point five percent (55.5%) of them either owned or rented property within the area of the study and twenty-nine point six percent (29.6%) were route users. A complete summary of comments, exhibits, sign in sheets, and comment cards are enclosed in Appendix B.

Steering Committee

The second structure component of the project involved enlisting the use of the Steering Committee. The committee was comprised of the following staff and key stakeholders from the MPO/City/County/WYDOT and other agencies:

- Tom Mason, Cheyenne Metropolitan Planning Organization
- Nancy Olson, Cheyenne Metropolitan Planning Organization
- James Sims, Cheyenne Metropolitan Planning Organization
- Matt Ashby, City of Cheyenne
- Brandon Cammarata, City of Cheyenne
- Doug Vetter, City of Cheyenne
- Nathan Beaulieu, City of Cheyenne
- Mark Escobedo, City of Cheyenne
- Gary Krance, Laramie County Planning
- Abby Yenco, Laramie County Planning
- John Shepard, Laramie County Planning
- Barbara Kloth, Laramie County Planning
- Don Beard, Laramie County
- Dennis Auker, Laramie County School District #1
- Mel Wilkenfield, South Cheyenne Community Development Association/ Holly Frontier
- Jim Rish, South Cheyenne Water and Sewer District
- Jef McMann, Cheyenne Light, Fuel, and Power
- Joe Dougherty, Cheyenne Transit
- Jeff Wiggins, Cheyenne Trails and Bicycle Specialist
- Amanda Brinkman, Cheyenne Health Clinic
- Randy Griesbach, WYDOT District
- Kevin McCoy, WYDOT Planning
- Jeff Purdy, Federal Highway Administration

The Steering Committee met five (5) times throughout the course of the project to guide the work efforts of the consultant team, review project information, provide insight, discuss public and stakeholder involvement, and collaborate to make decisions about the plan direction and recommendations. Meeting minutes and agenda of the meetings can be found in Appendix B.

Planning Commission

The third structure component of the project involved utilizing a working session of the Laramie County Planning Commission and a joint public forum meeting of the City of Cheyenne and Laramie County Planning Commissions.
The primary purpose of the working session of the Laramie County Planning Commission was to convey the comments received from the first open house and collaborate on the development of the Conceptual Land Use plan for the corridor. The efforts of the group yielded the development of a commercial/industrial zoning overlay to be used on some of the frontage properties along Fox Farm Road.

The joint meeting of the commissions allowed both jurisdictional entities to work in partnership for the development of the vision of the corridor. The latest recommended intersections and typical cross sections were presented to the group with interaction in the formal framework of the meeting.

**One-on-one Meetings**

The fourth type of structure component involved one-on-one individual meetings. Two types of one-on-one meetings were required for the project. The first were the landowners east of College Drive. Their purpose was to discuss the future land use and alignment options east of College Drive. The meetings took place individually via phone or person to person with the following individuals: Mr. Del Lummis, Mr. Sloan Hales, and Ms. Christine Read. Those meetings’ discussions resulted in determining which roadways became the primary connections to the east (Fox Farm Road, Allison Road, or College) and where they should be aligned to best fit their future development requirements and desires. Several options were explored including: Fox Farm Road as the primary east west route and Allison Road teeing into Fox Farm (Figure 18), Allison Road as the primary east west route and Fox Farm road extending east and south teeing back to Allison Road (Figure 20), East College Drive as the primary east west route with Fox Farm Road teeing into Allison Road and then Allison teeing into College Drive (Figure 19).

The second type of one-on-one meetings was with some of the local businesses along the corridor. Big “D” Oil Company located at 100 North Greeley Highway; Diamond Shamrock located at 115 North Greeley Highway; Taco Johns at 101 South Greeley Highway; and Leighton Enterprises, LLC at 100 South Greeley Highway. There were specifically solicited for input on the project due to potential impacts related to altering access into their respective business.

AVI conveyed to them that one type of improvement being looked at was the use of access control or safety medians at key locations which are prone to weaving or unsafe turning movements. The local businesses expressed concerns over removing any existing access approaches, but were understanding as to the need of using some type of safety measures. The majority of these safety concerns are at the high turning volume intersection of Fox Farm Road at North and South Greeley Highway (U.S-85). This area’s geometric configuration and topography (i.e. sharp angle, steep vertical grades, and close access proximity to the roadway’s intersection point) is inherently more prone to crashes. The examples cited to business were as follows:

- Some of the traffic traveling on northbound South Greeley Highway which turns east onto Fox Farm Road cross over three lanes of traffic to access the Diamond Shamrock station entrance on Fox Farm.
- Vehicles exiting the businesses near the intersection make unsafe left turns onto Fox Farm Road and/or South Greeley Highway which require them to maneuver and avoid multiple conflicting traffic movements (Figure 17, looking east on Fox Farm Road toward South/ North Greeley). At the time this photo was taken three (3) consecutive cars exited within a few minutes of each other and narrowly avoided crashes with opposing traffic.

Besides concerns over removing accesses, the primary concern of Taco John’s International representatives at this location was not to eliminate the westbound Fox Farm Road left turn movement into the north approach of the Taco John’s location. Taco John’s estimates that approximately seventy-five percent (75%) of the peak lunch hour business traffic use at this location originates from westbound Fox Farm Road entering from the Fox Farm approach. The Taco John’s group fully understood and agreed to need to install a safety median on South Greeley south of Fox Farm Road intersection to control the conflicting left turn movements between vehicles turning left into Taco Johns and westbound Fox Farm Road.
Cheyenne Metropolitan Planning Organization (Committee Meetings)
The fifth type of structure component involved presenting developmental increments and soliciting input from the established Cheyenne Metropolitan Planning Organizations Technical Committee and Citizen’s Advisory Committee.

Holly Frontier Truck Route Survey
Once the public involvement process began for Fox Farm Road, it became very apparent that truck traffic/ freight traffic was a large part of the users of the corridor. The corridor’s location adjacent to the Holly Energy Partners refinery, industrial parcels along the corridor, and access to both I-80 and US-85 all contribute to increased freight use.

Due to its size and proximity to the corridor, Holly Energy Partners became a logical choice to obtain valuable data for the size of trucks, frequency of use, and verification of the truck routes used. AVI contacted Holly Energy Partners about the proposal to collect data for the truck routes and found the staff very helpful and without their support the collection would have not been possible. After contacting Holly Energy Partners early in the corridor study, it was conveyed by Stu Fishbeck that Holly Energy Partners do not directly hire drivers nor have control over ingress and egress routes. Mr. Fishbeck indicated that in fact drivers were encouraged not to use Fox Farm Road for freight/ truck routes. The refinery designates or encourages independent drivers to use the following truck routes:

- Morrie Avenue to East 1st to Warren Avenue or Central Avenue then North Greeley/ I-180 (North or South) via East 5th Avenue (R1)
- Campstool Road to Campstool Way to North College Drive to I-80 East or West (R3).

Truck Survey comment cards were collected and distributed at two locations at the refinery from July 17 to July 19, 2013. The first was at the unmanned loading docks off of Morrie Avenue and the second was the manned Gate 7 off of Campstool Road. Results for the written survey information were entered electronically through the Survey Monkey® web link for analysis.

The truck route survey provided valuable data from a primary users’ group which was lacking from the public outreach process. Three primary conclusions can be drawn from the data.

First, despite the existing roadway typical section and width constraints for trucks due to inadequate width for turning on and off the corridor, sixty-two percent (62.9%) of all the refinery freight traffic uses Fox Farm Road for access to or from the refinery. This is likely due to the fact drivers perceive the travel time and ease of access to either U.S. 85 or I-80 is less than the other routes available to the freight traffic. However, using GIS data generated from ©2013 Google Map, the East 1st Avenue route is actually less than or equal in distance to I-80 and U.S. 85 while the travel times are only 1 to 5 minutes more. See the following Table 4 Truck Route Distance and Travel Times Map:

Second, it can be inferred that the lack of width on Fox Farm (limited turning ability of freight truck turning) discourages larger freight traffic from using the corridor. Based on the survey results seventy-two point nine (72.9%) of all the freight trucks are conventional combination (i.e. 5 to 6 axle) semi-tractor trailer and twenty-seven point one (27.1%) of the freight trucks are
larger combination (i.e. 6-7 axles) w/ tractor and pup. Furthermore, sixty-two point nine percent (62.9%) of all the refinery freight traffic uses the Fox Farm Corridor for access. Increasing the width of the primary intersections and roadway will likely increase the truck freight traffic on the corridor which would include both conventional semi-truck trailer and larger tractor and pup combinations.

Third, based on the additional written comments, a significant number of freight truck users' (29/70) or forty one point four percent (41.4%) perceive the intersection of Fox Farm Road at Morrie Avenue/ Avenue C as unsafe, operationally impaired or generally inadequate for them to use.

Shape

The Shape section contains a set of foundations which help frame the boundary of the plan. The Four Foundations are listed below and detailed in the following chapter:

Foundation 1 Conceptual Land Use
Foundation 2 Overlay District
Foundation 3 Redevelopment Plan
Foundation 4 Market Analysis

Foundation 1 Conceptual Land Use

AVI and Orion Planning Group collaborated to develop a Proposed Conceptual Land Use Plan with the purpose to guide future development and provide a basis for generating trip generation rates and future volumes for traffic analysis of proposed intersection and lane configurations. The final version of the Conceptual Land Use Plan was developed through all the elements of the Structure process previously discussed. See Figure 22 Proposed Conceptual Land Use Plan.

Foundation 2 Overlay District

During the public open house process, there was a lot of interest in increasing densities in certain corridor areas to help bring additional commercial retail and office to the area. One idea that came out of the plan was to create an overlay district that would use the 2006 Plan Cheyenne document and would give developers incentives in the way of increased residential density or commercial square footage based upon the development pattern called out in Plan Cheyenne.

A version of a possible overlay district zone ordinance using the County MU zone below. If this is something the County wants to pursue it should be vetted out with current developers of projects to see if this would be a stimulant to additional growth along the corridor.

4-2-111   DISTRICT MU - MIXED USE

Mixed use developing areas are to be used for a mix of residential and commercial uses. This district is intended to encourage rehabilitation and reuse of existing buildings in the established areas of the community.

a. Uses by Right
   i. Medium density residential
   ii. Mixed use residential developments
   iii. Family child care homes
   iv. Home occupations
   v. Churches, temples or other places of worship
   vi. Offices
   vii. High density residential
   viii. The retail sale of goods when the use is proposed in a building and the sale and storage of equipment and supplies are conducted within the building.
   ix. Child care facilities
   x. Assisted living facilities

b. Uses Requiring Board Approval

   The following uses may be permitted by the Board:
   i. Food service facilities
   ii. Bars, cocktail lounges and liquor stores
   iii. Other uses similar to those permitted in this district
   iv. Entertainment facilities

c. Minimum Property Area

   i. Single-family: 7,000 square feet per unit Down to 5,000 if in Fox Farm Corridor Study as MUR
   ii. Townhouse/duplex: 3,500 square feet per unit Down to 2,500 if in Fox Farm Corridor Study as MUR
   iii. Multi-family: 1,860 square feet per unit Down to 1,500 if in Fox Farm Corridor Study as MUR

d. Maximum Building Coverage

   i. Single-family: 60 percent of property area
ii. Townhouse and duplexes: 50 percent of property area

iii. Multi-family: 50 percent of property area 75% for Fox Farm MUR

iv. Total building and parking areas shall not exceed 60 percent of the total property area for nonresidential uses. This should be adjusted to 90% for areas in the Fox Farm Corridor Study that are described as MUC.

Best Management Practices for storm water management and open space design are encouraged. Characteristics such as community open space, pocket parks and connectivity to regional trails, including the Greater Cheyenne Greenway, are encouraged.

e. Setbacks

i. The minimum setback from all front property lines shall be twenty-five (25) feet for all principal structures. (20' for residential for MUR and 10' for commercial for MUC)

ii. The minimum distance from a side property line shall be five (5) feet for all principal structures.

iii. The minimum rear yard setback shall be twenty (25) feet for all principal structures. (20' for residential for MUR and 10' for commercial for MUC)

iv. Accessory structures shall conform to section 2-2-118 of this regulation.

f. Height

i. The maximum building height shall be thirty-five (35) feet.

ii. Board approval is required for buildings over thirty-five (35) feet in height.

g. Site Design

All areas, including areas from right-of-way line to property line that are not covered by buildings, sidewalks, and parking area, shall be landscaped.

h. Parking

Parking requirements shall be in conformance with these regulations.

i. Site Plan

A County-approved site plan shall be required in accordance with section 2-2-133 of these regulations. Screening is required in conformance with site plan requirements for outdoor storage areas of items and equipment which are not for immediate use, sale or lease. Screening for outdoor storage areas shall be located behind the setback line.

**Foundation 3 Redevelopment Plan**

The boundary of the redevelopment area is South Greeley Highway, College Drive, Interstate 80, Jefferson Road, and College Drive. The focus of this foundation is the overall assessment of the study area based on the following parameters:

- Natural Hazards
- Environmental Contamination Properties
- Public Infrastructure
- Survey and Assessments of Properties, Buildings, and Structures

**Natural Hazards**

The survey showed discernible properties that would be susceptible to the effects of natural hazards within the study area and are listed in Appendix C.

**Environmental Contamination Properties**

A cursory review and consultation with staff of the Wyoming Department of Environmental Quality (WYDEQ) and available documentation revealed one historic landfill and seven construction/demolition landfills in the area which could potentially impact future construction and redevelopment in the area (Inberg-Miller Engineers, 2005). See Figure 13 Historic Landfill and Construction/Demolition Landfills in Fox Farm Road Corridor Study Area.

The highest probability of the need for a business or Laramie County to cleanup a property due to environmental contamination is the historic refuse dump site. This historic landfill was known as the Wilson Pit Landfill and operated by the City of Cheyenne Public Works Department from October 1944 to May 1946. It is a mined out, 4 acre gravel pit, located at the southeast and southwest corner of the intersection of Fox Farm Road and Avenue C-1 (Prosser Tract 1: Figure 21 Potential Property Contamination Area (Wilson Pit Landfill)).
Property Contamination Area (Wilson Pit Landfill).
Figure 22 Proposed Conceptual Land Use Plan
We recommend that any individual, business, or unit of the government wishing to develop in this area conduct an environmental investigation and apply for the Voluntary Remediation Program (i.e. VRP) at the State of Wyoming Department of Environmental Quality, Solid Waste Division. The VRP outlines a process that guides owners or potential developers of contaminated sites to decisions about required remedial activities and put contaminated sites back into productive uses. Developers with properties accepted under the VRP and follow the state requirements, can receive release from future environmental liability. Please consult the VRP website for further information: http://deq.state.wy.us/volremedi/index.asp.

Public Infrastructure Assessment
Roadway infrastructure in the redevelopment area was inventoried by on-site observation and evaluated based on the following rating scale:

- **Asphalt Roads**
  - A level for a new road;
  - B level for needing crack seal;
  - C level needing mill/overlay;
  - D level reconstruction.

- **Gravel Roads**
  - 3 good gravel roads with drainage;
  - 2 roads needing additional gravel with drainage;
  - 1 needed gravel and no drainage.

### Table 5 Roadway Intersection Assessment

<table>
<thead>
<tr>
<th>Street Name</th>
<th>Surfacing Type</th>
<th>Urban/Rural Section</th>
<th>City/County Jurisdiction</th>
<th>ROW Width</th>
<th>Roadway Width</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walterscheid Blvd N of Fox Farm Road</td>
<td>Asphalt</td>
<td>Urban</td>
<td>City</td>
<td>90'</td>
<td>34'</td>
<td>A</td>
</tr>
<tr>
<td>Walterscheid Blvd S of Fox Farm Road</td>
<td>Asphalt</td>
<td>Urban</td>
<td>City</td>
<td>75'</td>
<td>30'</td>
<td>A</td>
</tr>
<tr>
<td>N Greeley Highway</td>
<td>Asphalt</td>
<td>Urban</td>
<td>County</td>
<td>195'</td>
<td>90'</td>
<td>A</td>
</tr>
<tr>
<td>W Jefferson Road</td>
<td>Asphalt</td>
<td>Urban</td>
<td>City</td>
<td>80'</td>
<td>Avg. 44'</td>
<td>A</td>
</tr>
<tr>
<td>Fox Farm Road between Walterscheid Blvd and Greeley Highway</td>
<td>Asphalt</td>
<td>Urban</td>
<td>City</td>
<td>90'</td>
<td>75'</td>
<td>A</td>
</tr>
<tr>
<td>S Greeley Highway between Fox Farm Road and J Jefferson Road</td>
<td>Asphalt</td>
<td>Urban</td>
<td>County</td>
<td>90'</td>
<td>75'</td>
<td>A</td>
</tr>
<tr>
<td>S House Ave</td>
<td>Asphalt</td>
<td>Urban</td>
<td>City</td>
<td>90'</td>
<td>36'</td>
<td>B</td>
</tr>
<tr>
<td>Avenue B-3</td>
<td>Gravel</td>
<td>Rural</td>
<td>City</td>
<td>30'</td>
<td>16'</td>
<td>2</td>
</tr>
<tr>
<td>Vaughn Ct</td>
<td>Gravel</td>
<td>Rural</td>
<td>County</td>
<td>52'</td>
<td>Avg. 28'</td>
<td>1</td>
</tr>
</tbody>
</table>

| N Avenue B-4                 | Gravel         | Rural               | County                   | 30'       | 20'           | 2      |
| Persons Road                 | Asphalt/Gravel | Urban               | City/County              | 75'       | 36'           | A/2    |
| Borough St                   | Asphalt        | Urban               | City                     | 30'       | 28'           | A      |
| Queens Rd                    | Asphalt        | Urban               | City                     | 30'       | 28'           | A      |
| Southern View Dr             | Asphalt        | Urban               | City                     | 30'       | 28'           | A      |
| N Avenue B-6                 | Asphalt        | Urban               | City                     | 80'       | 36'           | A      |
| Montalto Drive               | Asphalt        | Urban               | County                   | 52'       | Avg. 29'      | A      |
| OK Trail                     | Gravel         | Rural               | County                   | 40'       | 12'           | 1      |
| S Avenue B-6                 | Gravel         | Rural               | County                   | 40'       | Avg. 25'      | 3      |
| David Ct                     | Gravel         | Rural               | County                   | 50'       | 30'           | 2      |
| Dunlap Lane                  | Gravel         | Rural               | County                   | 30'       | 16'           | 1      |
| Lake Place                   | Gravel         | Rural               | County                   | 60'       | 24'           | 2      |
| Tyler Place                  | Asphalt        | Urban               | County                   | 42'       | 30'           | B      |
| S Avenue C                   | Asphalt        | Urban               | County                   | 75'       | 36'           | A      |
| Sierra Madie St              | Asphalt        | Urban               | City                     | 60'       | 36'           | A      |
| Snake River Ave              | Asphalt        | Urban               | City                     | 65'       | 36'           | A      |
| Absaroka St                  | Asphalt        | Urban               | City                     | 60'       | 36'           | A      |
| Bear River Ave               | Asphalt        | Urban               | City                     | 60'       | 36'           | A      |
| Owl Creek Ave                | Asphalt        | Urban               | City                     | 60'       | 36'           | A      |
| Medicine Bow Ave             | Asphalt        | Urban               | City                     | 65'       | 36'           | A      |
| Teton St                     | Asphalt        | Urban               | City                     | 60'       | 36'           | A      |
| Taghee Ave                   | Asphalt        | Urban               | City                     | 50'       | 36'           | A      |
| Wash St                      | Asphalt        | Urban               | City                     | 60'       | 36'           | A      |
| Mome Ave                     | Asphalt        | Rural               | City                     | 95'       | 36'           | A      |
| Fox Farm Road from Greeley Hwy to Monte | Asphalt | Rural | County/City | 80' | 42' | A |
| S Avenue C-1                 | Asphalt        | Rural               | County                   | 50'       | 36'           | A      |
| Avenue C-2                   | Gravel         | Rural               | County                   | 30'       | 30'           | 3      |
| Energy Drive Under Construction | Asphalt | Rural | - | - | - |
| Turk Ave                     | Asphalt        | Rural               | County                   | 62'       | 40'           | B      |
| Turk Ct                      | Gravel         | Rural               | County                   | 30'       | 20'           | 2      |
| N Avenue C-4                 | Gravel         | Rural               | County                   | 30'       | 20'           | 3      |
| Persons Rd                   | Gravel         | Rural               | County                   | 60'       | 25'           | 3      |
| Avenue C-3                   | Gravel         | Rural               | County                   | 65'       | Avg. 22.5'    | 2      |
| Bennett Ct                   | Gravel         | Rural               | County                   | 60'       | 30'           | 2      |
| Gordon Rd                    | Gravel         | Rural               | County                   | 30'       | 20'           | 3      |
| Avenue D                     | Gravel         | Rural               | County                   | 60'       | 25'           | 3      |
| Fox Farm Rd from Monte to College Dr | Asphalt | Rural | County | 60' | 42' | B |
| S College Dr N of Fox Farm to S Industrial Rd | Asphalt | Rural | County | 190' | 90' | A |
| S College Dr S of Fox Farm to State Labs Building | Asphalt | Rural | County | 210' | 90' | A |
Survey of Condition Assessment for Properties, Buildings and Structures

Walterscheid Boulevard to South Greeley Highway

This section of Fox Farm Road is not a key area for redevelopment. Most of the property is developed with newer businesses or vacant property. There are a couple of parcels off of South Greeley Highway that could be easily developed due to the fact that the existing parcels are underutilized or to bring the property back to a vacant state would be fairly inexpensive. The area surrounding the vacant and underutilized parcels is primarily community business in nature or multifamily both of which could continue with redevelopment in the area.

South Greeley Highway to Montie/Avenue C

Development along this section of Fox Farm Road has been primarily in the area of Multi-Family Residential and Apartments. Additional redevelopment could occur along this stretch of Fox Farm Road with the land use of office, specialty retail, storage, and additional residential units. The large residential with a single family home north of Fox Farm Road between N Avenue B-4 and N Avenue B-6 lead themselves to redevelopment into neighborhood type office. They have enough space at about a half an acre to have standalone medical/dental/insurance offices that can meet the building, parking and landscaping requirements of the City or County. In general the lots to the south of Fox Farm that can be redeveloped are much larger in nature than those to the north, and would allow for more specialty and industrial retail than we see in other areas along the corridor. Their size also allows for the opportunity for multi-family residential units.

Montie/Avenue C to College Drive

The redevelopment of the south side of this section of the corridor is occurring simultaneously with this study. The extension of Energy Drive to Allison Road has opened up additional lands for Industrial/Commercial Lots. The lots are generally two and half plus (2.5+) acres which allow companies with large equipment of storage needs to site along the corridor. The area to the north of this section is primarily residential in nature and areas not adjacent to Fox Farm Road would be excellent opportunities for additional residential type uses. The size of most of the lots also will allow for redevelopment to be creative in its uses of infrastructure to create additional residential units. As additional residential units populate this area there will be more demand for neighborhood business and on the north side adjacent to Fox Farm Road would be an ideal place for parcel redevelopment to serve all the residents in the area.

Foundation 4 Market Analysis

Purpose of Market Analysis

- Provides a “reality check” for the planning process
- Ensures that land use programming is grounded in market and economic reality (thereby increasing the likelihood of success)
- Provides an accurate and independent “story” to tell potential private sector audiences

Trade Area Identification

- Based on influence of: physical barriers, location of possible competition, proximity to population and/or employment concentrations, zoning, market factors, drive times, spending and commuting patterns, etc.
- For purposes of market demand parameters, the trade area was estimated to be Laramie County.
- As the planning process moves forward, expanded trade areas may exist for certain land uses, e.g., regional retail, employment centers.

Potential Market Demand

Residential

- Demand for residential units in Laramie County is a function of projected household growth, estimated at approximately 1.5% annually over the next 20 years.
- Based on this level of growth, Laramie County could accommodate approximately 13,300 new housing units over the next 20 years – 9,000 ownership units and 4,300 rental units. This gross unit demand is further allocated into approximate income-qualified rent and home price groups. (Table 6).

Table 6

Residential Unit Demand by Income, Rent and Price Range

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Location</th>
<th>Demand</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to $15K</td>
<td>Laramie County</td>
<td>9,000</td>
<td>27%</td>
</tr>
<tr>
<td>$15K-$25K</td>
<td></td>
<td>4,300</td>
<td>13%</td>
</tr>
<tr>
<td>$25K-$35K</td>
<td></td>
<td>1,728</td>
<td>5%</td>
</tr>
<tr>
<td>$35K-$50K</td>
<td></td>
<td>1,196</td>
<td>4%</td>
</tr>
<tr>
<td>$50K-$75K</td>
<td></td>
<td>931</td>
<td>3%</td>
</tr>
<tr>
<td>$75K-$100K</td>
<td></td>
<td>47</td>
<td>1%</td>
</tr>
<tr>
<td>$100K and up</td>
<td></td>
<td>884</td>
<td>3%</td>
</tr>
</tbody>
</table>

Table 6 shows a reasonable attainable capture rate for single family detached units in the Fox Farm Corridor (the Corridor) for households earning at least $15,000 per year. This analysis assumes that detached homes will account for approximately 70 percent of all ownership demand, with the balance coming in the form of attached products (condominiums, townhomes, rowhouses, lofts, etc.). As shown, over the next 20 years, approximately 185 new single family detached units could be accommodated in the Corridor, assuming a relatively modest 3% capture rate.
While condominium-type construction has been adversely impacted nationally by the mortgage lending crisis and over-building, the low-maintenance and potentially pedestrian-friendly aspects of attached housing should grow in share as it finds appeal among an aging Baby Boomer population as well as young professionals. This absorption could take the form of loft condominiums within upper floor commercial buildings, as well as in new townhome or rowhouse construction on underutilized parcels scattered throughout the Corridor.

Table 7 shows a reasonable attainable capture rate for rental apartments in the Corridor for households earning at least $15,000 per year. As shown, over the next 20 years, approximately 499 new rental apartment units could be accommodated in the Corridor, assuming a 20% capture rate.

Table 8 shows a reasonable attainable capture rate for single family attached units (condominiums, townhomes, rowhouses, lofts, etc.) in the Corridor for households earning at least $15,000 per year. This analysis assumes that attached homes will account for approximately 30% of all ownership demand. As shown, over the next 20 years, approximately 528 new single family attached units could be accommodated in the Corridor, assuming a 20% capture rate.

As with single family attached ownership housing, new apartments could be created from rehabbing existing commercial space, built on smaller scattered-site underutilized lots, or developed on larger underutilized tracts as part of a residential mix.

Retail

Demand for new retail space is determined by future retail spending potential of projected new households, as well as by some recapturing of retail spending that is currently lost to nearby communities or areas (referred to as “leakage” or “retail void”).

Based on these factors, Laramie County could accommodate approximately 1.4 million square feet of new retail space over the next 20 years (See Table 9).
### Retail Demand

**Fox Farm Road Corridor Trade Area (Laramie County)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Units 2012</th>
<th>Employment Needed (s.f.)</th>
<th>Market Demand Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnishings</td>
<td>27,145,456</td>
<td>$28,542,248</td>
<td>$0</td>
</tr>
<tr>
<td>Table 12</td>
<td></td>
<td></td>
<td>1.5%</td>
</tr>
<tr>
<td>Electronics &amp; Appliances</td>
<td>30,928,601</td>
<td>$23,521,896</td>
<td>$7,406,705</td>
</tr>
<tr>
<td>Furniture &amp; Building Materials, Equipment</td>
<td>127,578,451</td>
<td>$155,183,857</td>
<td>$0</td>
</tr>
<tr>
<td>Food &amp; Beverage (Grocery)</td>
<td>181,751,159</td>
<td>$141,259,956</td>
<td>$40,491,203</td>
</tr>
<tr>
<td>Personal Care</td>
<td>74,533,509</td>
<td>$39,732,294</td>
<td>$34,801,215</td>
</tr>
<tr>
<td>Clothing and Sporting Goods, Hobby, Book</td>
<td>4,571,158</td>
<td>$6,002,193</td>
<td>$0</td>
</tr>
<tr>
<td>Foodservice &amp; Drinking Scale Service</td>
<td>4,429,150</td>
<td>$5,965,640</td>
<td>$1,536,500</td>
</tr>
<tr>
<td>Finance/Insurance/Real Estate</td>
<td>4,910,150</td>
<td>$6,613,783</td>
<td>$1,703,600</td>
</tr>
<tr>
<td>Utilities</td>
<td>831,150</td>
<td>$1,119,640</td>
<td>$288,500</td>
</tr>
<tr>
<td>Public Administration</td>
<td>17,633</td>
<td>$23,749,120</td>
<td>$6,116,000</td>
</tr>
<tr>
<td>Other</td>
<td>4,673</td>
<td>$6,294,373</td>
<td>$1,621,300</td>
</tr>
</tbody>
</table>

### Employment

- Assuming a market capture rate of 15%, the Corridor could accommodate approximately 210,000 square feet of new retail space over the next 20 years.

### Market Demand Summary

- Market Demand Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>1,405,500</td>
<td>13%</td>
<td>182,195</td>
</tr>
<tr>
<td>Non-Residential</td>
<td>1,188,800</td>
<td>10%</td>
<td>168,110</td>
</tr>
</tbody>
</table>

### Implications for Fox Farm Corridor Land Use Plan

- The current anticipated land use mix appears to have a good balance of residential and non-residential uses. It will be critical to maintain this balance over the long-term.
- A unified vision for the Corridor will help to encourage potential market niche opportunities that might arise in the short-term.
- Flexibility in land use categories will be necessary to accommodate unanticipated market opportunities. A greater emphasis on quality of development/redevelopment, rather than type and quantity of development/redevelopment, will ensure that the Corridor vision is protected and enhanced over time.
Foundation 5 Potential Funding Mechanisms

Keys to successful development/redevelopment in a revitalizing area such as the Fox Farm Corridor will be:

- A clear vision, tempered with market and economic reality
- A proactive strategy for reinvestment (public and private)
- Educated citizenry and implementers
- Calculated strategy to attract investment and remove barriers
- Quantifiable leveraged public investment
- Fiscally and economically responsible phasing plan
- Equalization of economic risk vs. reward
- On-going project support (political)

The public sector (City of Cheyenne, Laramie County, Cheyenne MPO, etc.) will primarily play an important role in “readying the area for private investment” through infrastructure improvements, public planning and policy initiatives. From these initiatives and/or investments, private sector development and redevelopment can be leveraged.

Funding mechanisms for public infrastructure could include loans and grants (e.g., Wyoming Business Council’s Business Readiness Community Program and Community Facilities Grant and Loan Program); Community Development Block Grant (CDBG) funds; revenue bonds; and general obligation bonds.

One of the “truths” in corridor revitalization is that private investment will typically follow public investment. The types of public infrastructure recommended in the Corridor Plan will not only encourage new development on vacant and/or underutilized parcels, but redevelopment of existing sites and buildings. This new private investment represents the “leveraged” return to the public sector from their initial investments.

Should the public sector decide to invest in upfront infrastructure to “ready the area for investment”, then the private sector should be expected to assist in maintaining that infrastructure over the long term. This revenue stream for funding maintenance can be generated through impact fees or special districts in which private property owners are proportionately assessed for maintenance costs associated with the overall district.

A public-private partnership for revitalization of the Fox Farm Corridor will likely take many forms and have many partners, responsibilities and funding alternatives. In the end, a successful partnership will ensure that both the public and private sectors will realize reasonable returns on their investments and the community will realize their long-term vision for this important transportation corridor.

Key Planning Considerations

The Snapshot, Structure, and Shape phase of the project provided a solid foundation for development of the complete corridor vision of the various stakeholders. The Fox Farm Corridor area has a mix of different land uses and potential growth areas overlaid with various industry types. This diversity makes this area unique and primed for growth over the next couple of decades. The following structure considerations shape the corridor:

Transit and Non-motorized Transportation

- Provide a safe, accessible and continuous pedestrian connection along the entire corridor of Fox Farm Road
- Provide street lighting at intersections and non-motorized crossings where appropriate
- Provide for expanding transit stops along the corridor
- Provide buffered or bike lanes as recommended by the Cheyenne Area On-Street Bicycle Plan and Greenway Plan Update by Alta Planning + Design in 2012.
- Review options to expand the Greenway along Crow Creek

Traffic Safety and Operation

- Build a roadway cross section that enhances travel efficiency and accommodates all modes of transportation
- Provide peak hour intersection operations a LOS C as minimum level of service through horizon year 2035
- Provide the ability to mix pedestrian traffic with a high number of larger vehicles
- Plan for the ability for industrial/retail type businesses to be adjacent to or near residential development
- Attempt to maintain commercial, industrial, and residential access approaches
- Where appropriate, provide for proper turning widths at intersection (i.e. Industrial Area accommodate conventional combination (i.e. 5 to 6 axle) tractor-trailer and or larger combination (i.e. 6-7 axles) w/ tractor and pup

Roadway Connectivity

- Review options to promote development in undeveloped open space
- Review existing roadways and provide additional or enhanced street connectivity

Dry and Wet Utilities

- Consult with wet and dry utility companies to provide enhanced or improved facilities to facilitate redevelopment
- Attempt to provide a dry utility corridor within the current road right-of-way

Cooperation

- Multiple public agencies or wet utilities that have areas of jurisdiction in the area: Laramie County Government, City of Cheyenne, WYDOT, Board of Public Utilities, South Cheyenne Water and Sewer District
Build

The Snapshot, Structure, and Shape phase of the project provided a solid foundation for development of the Build portion of the plan. The build section of the plan encompasses the culmination of the foundation components and rationale behind the particular recommendations set forth in the plan.

The overall recommendations are specifically designed to address the modes of transportation, landscaping, and safety needs of the Fox Farm Road Corridor. All recommendations have been examined carefully to ensure practicality, functionality, and aesthetic appeal, sustainability, and successful implementation. The physical layout of the improvements are detailed in the following pages and can be found on the corridor plan and profile sheet in Appendix A. Detailed cost estimates are shown in Appendix C.

General Corridor Recommendations

Short Term

- Pedestrian and sidewalk improvements
- When practical, improve/increase capacity of existing drainage conveyance,
- Explore opportunities, as area develops to provide roadway storm water detention/retention features/facilities
- Develop, implement, and fund a drainage master plan for corridor.
- Update/install strategic street lighting at key intersections (Walterscheid Blvd., Avenue C/Morrie Avenue, and College Drive)
- Replace or upsize undersized and old portions of the water transmission main (i.e. 6” ductile iron pipe) on fox farm road as funding resources become available.
- Implement priority projects as funding resources become available or development becomes the catalyst

Long Term

- Implement reconstruction phased strategies along corridor.
- Storm sewer installation
- Replace or rehabilitate existing wet utility infrastructure as development occurs along the corridor
- Implement typical section(s)
- Install uniform roadway and pedestrian street lighting throughout corridor
- Reduce regulatory speed from Avenue “C” west to 30 mph
- Encourage holly frontier drivers to use alternate routes (education, policy, etc.)
- Investigate and develop possible funding mechanisms for the county for reimbursement, “impact fees”, etc.

Roadway Concept Alternatives

The methodology employed to develop the conceptual roadway “typical” alternatives were evaluated using a multi-modal evaluation framework as a base. At intersections and other locations with unique design challenges (e.g. driveways, areas with limited sightline, etc), special designs and modifications may be needed to address issues of road geometry, adjacent land uses, traffic volumes and other characteristics. The Fox Farm Road Corridor Study evaluated conceptual improvement alternatives for the roadway segments and streetscape with the following governing parameters:

- What are the existing and future adjacent conditions and uses?
- How does the edge affect the streetscape?
- What variations can be made to create a more user-friendly corridor?
- What movements and interactions will take place on the corridor?
- What is the corridor vision of the stakeholders?
- What can we do to add low maintenance streetscape to “soften” the corridor for non-motorized modes of transportation?
- Provide bike lanes west of south Greeley and buffered bike lanes east of south Greeley to align with the recommendation of the Cheyenne on-street bicycle plan and greenway plan update (Group, 2012)
- Required minimum city of Cheyenne unified development code (UDC) typical section for roadway classification (Cheyenne, City of Cheyenne Unified Development Code, 2013)
- Required minimum Laramie county land use regulations (LCLUR) typical section for roadway classification.

Design Criteria

<table>
<thead>
<tr>
<th>Roadway Classification</th>
<th>Collector (West of South Greeley Highway), Minor Arterial (East of South Greeley Highway)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Design Speed</td>
<td>45 mph (Minor Arterial), 35 mph (Collector)</td>
</tr>
<tr>
<td>Lane Width</td>
<td>11’ - 12 ft</td>
</tr>
<tr>
<td>Stopping Sight Distance</td>
<td>305 ft</td>
</tr>
<tr>
<td>Crest Vertical Curve</td>
<td>K = 44 (Stopping Sight Distance)</td>
</tr>
<tr>
<td>Sag Vertical Curve</td>
<td>K = 64</td>
</tr>
</tbody>
</table>
### Table 13 Ultimate Typical Section Jurisdictional Comparison

<table>
<thead>
<tr>
<th>Description</th>
<th>Laramie County (Minor Arterial)</th>
<th>City of Cheyenne (Minor Arterial)</th>
<th>Laramie County (Collector)</th>
<th>City of Cheyenne (Collector)</th>
<th>2011 AASHTO (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel Lane**</td>
<td>2 - 12'</td>
<td>2 - 4, 12'</td>
<td>2 - 12'</td>
<td>2 - 12'</td>
<td>10’-12’</td>
</tr>
<tr>
<td>Turn Lanes</td>
<td>12'(2)</td>
<td>12’</td>
<td>12’ (3)</td>
<td></td>
<td>2-12’</td>
</tr>
<tr>
<td>Parking/Shoulder**</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>1 - 8’</td>
<td>6’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8’</td>
</tr>
<tr>
<td>Roadway Width</td>
<td>36’</td>
<td>48’ - 72’</td>
<td>36’</td>
<td>32’</td>
<td>-</td>
</tr>
<tr>
<td>Turn Lane</td>
<td>6’</td>
<td>6’</td>
<td>6’</td>
<td>6’</td>
<td>-</td>
</tr>
<tr>
<td>Parking/Shoulder**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Parkways/Tree Lawn</td>
<td>8’</td>
<td>8’</td>
<td>8’</td>
<td>8’</td>
<td>-</td>
</tr>
<tr>
<td>Bicycle Lane**</td>
<td>2-6’</td>
<td>2-6’</td>
<td>2 - 6’</td>
<td>n/a</td>
<td>-</td>
</tr>
<tr>
<td>Volume Capacity (ADT)</td>
<td>3,500 – 15,000</td>
<td>7,500-18,000</td>
<td>3,500 – 5,000</td>
<td>2,000 – 5,000</td>
<td>1,500-2,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Over 2,000</td>
</tr>
</tbody>
</table>

Footnotes:

* ** and # indicate total number of element within corridor cross section
* (1) (Officials, A Policy on Geometric Design of Highways and Streets, 2011)
* (2) Continuous as approved by the County
* (3) At intersections locations only
* (4) (Cheyenne, City of Cheyenne Unified Development Code, 2013)
* (5) (County, 2011)

**Cross Sectional Elements**

### Lane Widths

As shown in Table 13 lane width requirements vary between the jurisdictional entities from ten to twelve (10 to 12) feet. According to AASHTO (Officials, A Policy on Geometric Design of Highways and Streets, 2011) and our experience, smaller lane widths may be used in more constrained areas where truck and bus volumes are relatively low and where speeds are less than 45 mph. Lane widths of eleven (11) feet are extensively used in urban arterial street designs while twelve (12) foot lanes are desirable on high speed, free flowing principal arterials.

After extensive discussion between the design team and Steering Committee, we recommend the use of eleven (11) foot wide travel lanes on Fox Farm Road. This width still accommodates larger design vehicles and increases the available tree lawn width which can be used for snow storage, pedestrian separation, and drainage.

**Curb**

The type and location of curbs affect driver behavior and safety. Curbs serve many purposes including: drainage control, roadway edge delineation, delineation of pedestrian walkways, and access control. Although curbs are not considered fixed objects in the context of a clear zone obviously, they will have an effect on impacting or overriding car movements.

After discussion within the design team and Steering Committee, we recommend the use of curb and gutter on Fox Farm Road from Avenue C to Walterscheid Blvd., and no curb and gutter from Avenue C to College Drive. The adjacent land comprised of mainly residential and commercial, as well as, its urban character make Avenue C to Walterscheid Blvd. the logical choice to incorporate curb and gutter. Curb and gutter will provide better access control and pedestrian delineation in the more urbanized area of the corridor. The area east of Avenue C is more industrial and based on the conceptual land plan and character of the area will likely remain that style of development. The non-curb section will appear wider due to the removal of the vertical element of the curb and accommodate easier access construction. However, both section types will likely require storm sewer conveyance due to the shallow capacity and shallow longitudinal profile.

**Bicycle and Pedestrian Facilities**

Based on observation, bicycle usage has become a larger part of the culture in Cheyenne. Furthermore, as a part of providing a more continuous, safe, and efficient bicycle system, the Cheyenne Area On-Street Bicycle Plan and Greenway Plan Update (Group, 2012) has recommended bicycle lanes west of South Greeley Highway and buffered bike lanes east of South Greeley Highway.

The plan recommends that a bike lane width be a minimum of four (4) feet when no curb and gutter is present, five (5) feet when adjacent to curb and gutter, and six (6) feet where right-of-way allows. The buffered bike lane recommended design is illustrated in Figure 22 contains a 2-3’ buffered area adjacent to the traveled way with a 7’ bike lane.

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Fox Farm Road Corridor Study
AVI PROFESSIONAL CORPORATION  1103 Old Town Lane; Suite 101, Cheyenne, WY 82009 phone: 307.637.6017
However, due to the constrained right-of-width in the corridor, we recommend the use of 5’ bike lane and 2’ buffered area be incorporated into the typical section on Fox Farm Road.

Parking Lane
It should be noted for reference that parking is not permitted on roadways which are classified as Minor Arterials.

However, providing parking is very important to accommodate in adjacent land use areas where adequate off-street parking facilities are not available or practical. Stakeholders in the area did not provide input to the design team that parking was a concern on the corridor and current industrial businesses appear to have adequate parking at the present time. If specific future businesses require off-street parking, the jurisdiction having authority will likely need to request additional right-of-way to accommodate such a request or have the business request a parking variance with their development.

Medians
The primary function of medians is safety. They separate traffic streams, guide turning movements at intersections, and provide access control to/from minor access drives and intersections. It is very important that medians be delineated in a way that makes them visible and distinguishes them from the adjacent driving lanes. Curbed medians and traffic islands provide an added benefit by “softening” the urban roadway edge and subjectively enhance the aesthetic quality when utilizing a combination of the material types. Three types of medians are most common in the urban roadway environment: raised, flush, and two-way left-turn lanes.

Raised Medians
A raised median is used in urban streets where it is desirable to control or restrict mid-block left turns and crossing maneuvers. Installing a raised median can result in the following benefits:

- Improve traffic safety
- Restrict left-turn and crossing maneuvers to specific locations or certain movements
- Increase capacity and reduce delays
- Provide a pedestrian refuge area (minimum of six (6) feet wide).

AASHTO (Officials, A Policy on Geometric Design of Highways and Streets, 2011) recommends that intersection median turn lanes have a minimum medial separator of four (4) feet between turning lane and opposing traffic. Additionally, they recommend that with wider medians, consideration should be given to offsetting the left-turn lanes to provide maximum visibility between opposing traffic volumes.

Rush Medians
Rush medians are surface painted medians that can be traversed. Although they do not permit left-turn and crossing maneuvers by their striping configuration, they do not prevent left turns because the median can be easily crossed.

Two-way Left-turn Lanes
Two-way left-turn lanes (TWLTL) are flush medians that may be used for left turns by traffic from opposing directions on the street. AASHTO (Officials, A Policy on Geometric Design of Highways and Streets, 2011) recommends the use of a TWLTL on arterials with numerous cross streets, commercial, residential drives, or where it is impractical to limit left turn movements.

The Fox Farm Corridor plan recommends the use of all three types of medians however, the only cross sectional element shown on the typical section is a continuous two-way left-turn lane. Throughout the course of the project all attempts were made to minimize the cross sectional width of the roadway but, it became impractical due to the numerous cross streets, commercial and residential approaches adjacent to the corridor which forced the use of the continuous left-turn lane.

Auxiliary Lanes (Speed-change Lanes)

City of Cheyenne Criteria (Cheyenne, City of Cheyenne Unified Development Code, 2013)

Laramie County (County, 2011)

Left Turn Lane
A left-turn deceleration lane and taper are required for any access with a projected peak-hour ingress turning volume greater than 10 vehicles per hour (vph). The taper length shall be included with the required deceleration length.

Right Turn Lane
A right-turn deceleration lane and taper is required for any access with a projected peak hour ingress turning volume greater than 25 vph. The taper length should be included within the deceleration length.

<table>
<thead>
<tr>
<th>Table 14</th>
<th>Jurisdictional Deceleration Length Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Speed</strong></td>
<td><strong>Stop Condition</strong></td>
</tr>
<tr>
<td><strong>City of Cheyenne and Laramie County</strong></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>275</td>
</tr>
<tr>
<td>40</td>
<td>315</td>
</tr>
<tr>
<td><strong>City of Cheyenne</strong></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>435</td>
</tr>
<tr>
<td><strong>Laramie County</strong></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>235</td>
</tr>
<tr>
<td>50</td>
<td>435</td>
</tr>
<tr>
<td><strong>AASHTO</strong></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>160</td>
</tr>
<tr>
<td>40</td>
<td>275</td>
</tr>
<tr>
<td>50</td>
<td>435</td>
</tr>
</tbody>
</table>
Careful consideration was given to the proposed conceptual alternatives to use the safest and most practical deceleration length on the corridor. Therefore, due to the proximity of access approaches, expected relatively lower speeds approaching intersections, a one-hundred sixty (160) foot deceleration length was applied to the auxiliary lane development. If site-specific conditions did not allow development of full deceleration lane, it was omitted and so noted. Additionally, for the identical reasons as previously noted, a 100’ minimum taper was utilized for all the auxiliary lanes with the corridor. For a twelve (12) foot lane this equates to approximately an 8.33:1 and for an eleven (11) foot lane it equates to approximately a 9.11.

The deceleration and taper lengths directly on College Drive were derived based on the AASHTO (Officials, A Policy on Geometric Design of Highways and Streets, 2011) and WYDOT criteria using a 50 mph design speed. The deceleration length utilized was four hundred (400) foot with a 100’ taper length.

Storage Lengths
All intersection storage lengths in the study were calculated based on future signalization, traffic volume, signal cycle length, and signal phasing assumptions developed by Sustainable Traffic Solutions, Inc. The length in Table 15 Storage Lengths Summary below was used for the development of the intersection layouts.

Table 15 Storage Lengths Summary

### Walterscheid Boulevard Storage Lengths

<table>
<thead>
<tr>
<th>Movement</th>
<th>Minimum Turn Bay Length (ft)</th>
<th>Recommended Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastbound Left</td>
<td>72 AM 65 PM</td>
<td>70</td>
</tr>
<tr>
<td>Westbound Left</td>
<td>87 AM 75 PM</td>
<td>90</td>
</tr>
<tr>
<td>Northbound Left</td>
<td>15 AM 26 PM</td>
<td>60</td>
</tr>
<tr>
<td>Southbound Left</td>
<td>59 AM 67 PM</td>
<td>70</td>
</tr>
</tbody>
</table>

### South Greeley Storage Lengths

<table>
<thead>
<tr>
<th>Movement</th>
<th>Minimum Turn Bay Length (ft)</th>
<th>Recommended Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastbound Left</td>
<td>242 AM 171 PM</td>
<td>240</td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>129 AM 123 PM</td>
<td>130</td>
</tr>
<tr>
<td>Westbound Left</td>
<td>143 AM 136 PM</td>
<td>140</td>
</tr>
<tr>
<td>Westbound Right</td>
<td>111 AM 102 PM</td>
<td>110</td>
</tr>
<tr>
<td>Northbound Left</td>
<td>43 AM 45 PM</td>
<td>60</td>
</tr>
<tr>
<td>Northbound Right</td>
<td>217 AM 204 PM</td>
<td>220</td>
</tr>
<tr>
<td>Southbound Left</td>
<td>229 AM 246 PM</td>
<td>250</td>
</tr>
<tr>
<td>Southbound Right</td>
<td>89 AM 79 PM</td>
<td>90</td>
</tr>
</tbody>
</table>

### Avenue C Storage Lengths

<table>
<thead>
<tr>
<th>Movement</th>
<th>Minimum Turn Bay Length (ft)</th>
<th>Recommended Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastbound Left</td>
<td>76 AM 86 PM</td>
<td>90</td>
</tr>
<tr>
<td>Westbound Left</td>
<td>59 AM 65 PM</td>
<td>70</td>
</tr>
<tr>
<td>Northbound Left</td>
<td>56 AM 56 PM</td>
<td>60</td>
</tr>
<tr>
<td>Southbound Left</td>
<td>90 AM 94 PM</td>
<td>100</td>
</tr>
</tbody>
</table>

### College Drive - Storage Lengths

<table>
<thead>
<tr>
<th>Movement</th>
<th>Minimum Turn Bay Length (ft)</th>
<th>Recommended Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastbound Left</td>
<td>141 AM 214 PM</td>
<td>220</td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>62 AM 83 PM</td>
<td>90</td>
</tr>
<tr>
<td>Westbound Left</td>
<td>56 AM 69 PM</td>
<td>70</td>
</tr>
<tr>
<td>Westbound Right</td>
<td>79 AM 86 PM</td>
<td>90</td>
</tr>
<tr>
<td>Northbound Left</td>
<td>101 AM 113 PM</td>
<td>113</td>
</tr>
<tr>
<td>Northbound Right</td>
<td>72 AM 142 PM</td>
<td>142</td>
</tr>
<tr>
<td>Southbound Left</td>
<td>62 AM 111 PM</td>
<td>111</td>
</tr>
<tr>
<td>Southbound Right</td>
<td>168 AM 174 PM</td>
<td>174</td>
</tr>
</tbody>
</table>

Provision for Utilities
As previously described in the study, numerous utilities are interlaced in the corridor area and are both underground and overhead. Obviously, utilities should desirably be located underground or at the edge of the right-of-way, when practical.

Based on the limited right-of-way width of 80 feet, we would recommend that new developments have dry utility facilities relocate within a new 8’ utility easement adjacent to the corridor or be placed underground within the tree lawn area to be provided in the future typical section.

The following typical sections are recommended. Two types were developed for the Fox Farm Corridor, Proposed Urban without Parking and Proposed Rural without Parking (Figure 24 Recommended Typical Sections). Additionally, a proposed typical section was developed for Burlington Trails Road and is illustrated in Figure 24 Recommended Typical Sections.
Figure 24 Recommended Typical Sections
Future Traffic Volume Conditions
Traffic volume projections were developed for Year 2035 by Sustainable Traffic Solutions, Inc. to estimate the impacts of the traffic growth on the corridors. For the purposes of projecting volumes, the study area was divided into the Fox Farm Road corridor and the College Drive corridor.

Projected traffic volumes for the Fox Farm Road corridor were developed based on the land use plan prepared by AVI (Figure 22 Proposed Conceptual Land Use Plan) and refined by the 20 year buildout projection that was prepared by Ricker|Cunningham (Shape, Table 12 Summary of Market Demand). This build-out plan contains projections for residential and non-residential development for 20 years. Considering that the horizon year is 2035, the 20 year projected buildout was multiplied by 1.25 to represent a 25 year build-out. The following table summarizes the expected level of development on the corridor in 25 years.

Table 16 Expected Level of Development 25 Year Horizon

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Units/ SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (Units)</td>
<td></td>
</tr>
<tr>
<td>Single Family Detached</td>
<td>154</td>
</tr>
<tr>
<td>Single Family Attached</td>
<td>595</td>
</tr>
<tr>
<td>Multi-family (Rental)</td>
<td>561</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,310</strong></td>
</tr>
<tr>
<td>Non-residential (SF*1000)</td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td>228</td>
</tr>
<tr>
<td>Employment (Office/ Industrial)</td>
<td>886</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,114</strong></td>
</tr>
</tbody>
</table>

The land use plan contained in Figure 22 was divided into planning areas to estimate the trip generation (Figure 25 Trip Generation Planning Areas). The planning areas were aggregated into zones that are separated by major roadways along the corridor so that the projected traffic could be distributed and assigned to the network.

A trip generation estimate was developed for each of the planning areas using rates contained in the Institute of Transportation Engineers (ITE) manual ((ITE), 2008). The estimates, contained in Table 17 and Table 18, include morning and evening peak hour volumes as well as daily volumes. Land uses contained in the table included the following:

- **Residential**. The residential land use was assumed to be single family detached (4 units/acre), single family attached (6 units/acre), and multi-family (6 units/acre).
- **Restaurant**. A 5,000 square foot restaurant was assumed in Planning Area C.
- **Commercial/Retail**. The commercial areas were divided into office, specialty retail, and storage. A Floor to Area Ratio (i.e. FAR) of 0.2 was assumed for each commercial use.
- **Industrial**. A general light industrial land use was assumed.

Projected peak hour volumes were developed for the key intersections along the Fox Farm Road and College Drive corridors as well as daily volumes for the links along the corridors using the following process.

- **Background Traffic**. The existing peak hour and daily volumes were inflated by 1.25% annually to estimate the growth in background traffic along the corridor. This rate is used by the MPO to estimate traffic growth in the Cheyenne metro area. To represent the regional nature of South Greeley Highway, the existing volumes were inflated by 2% annually on this corridor.
- **Development Traffic**. The Year 2035 estimated trips that are expected to be generated by new development/redevelopment along the corridors were distributed and assigned to the intersections based on projected volumes contained in PlanCheyenne (Clarion, 2006). A separate distribution was prepared for groups of zones that are separated by major roadways. The distribution is contained in Figure 26, 2035 Traffic Projections and Level of Service Analysis.
- **Total Traffic**. The background traffic was combined with the development traffic to estimate the Year 2035 total traffic. The Year 2035 peak hour and daily volumes are summarized in Figure 26. Traffic control and laneage recommendations are also shown in the drawing.

Realignment of South Industrial Road
The impact of conceptual realigning of Industrial Road so that it intersects the I-80 eastbound on-ramp was explored and is shown in Figure 27. The ramp would become two-way between College Drive and Industrial Road, and Industrial Road would be stop controlled at the ramp intersection.
| Land Use       | Average Daily Trips | Morning Peak Hour Trips | Evening Peak Hour Trips | Total Acres | Unit Rate | Total In | Out | Rate | Total In | Out | Rate | Total In | Out | Rate | Total In | Out | Rate | Total In | Out | Rate | Total In | Out | Rate | Total In | Out | Rate |
|---------------|---------------------|-------------------------|-------------------------|-------------|-----------|----------|-----|------|----------|-----|------|----------|-----|------|----------|-----|------|----------|-----|------|----------|-----|------|----------|-----|------|----------|-----|------|----------|-----|------|
| Office 710    | 0.8 0.75            | 0.225 1.46             | 810 000 Ft2 11.01 68 34 | 34.155       | 1.49 9 2 8 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Specialty Retail 814 | 0.35 0.25          | 10.37 281 000 Ft24 2.94 416 208 208 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 4.55 35 DU       | 6.65 187 94 94 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 2.16 17 DU       | 6.65 89 44 44 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 3.97 31 DU       | 6.65 163 82 82 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 14.30 111 DU     | 6.65 514 257 257 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 3.49 23 DU       | 6.65 109 54 54 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 9.03 70 DU       | 6.65 372 186 186 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |
| Apartment - 6 220 | 4.46 34 DU       | 6.65 120 60 60 | 0.51 14 3 11 | 11.9 17 11 7 |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |          |     |      |

**Table 17 Planning Area Development Assumptions For Fox Farm Corridor**
### Table 18 Planning Area Development Assumptions for the Area East of College Drive

<table>
<thead>
<tr>
<th>Zone</th>
<th>Planning Area Size (Acres)</th>
<th>Land Use</th>
<th>Average Daily Trips</th>
<th>Morning Peak Hour Trips</th>
<th>Evening Peak Hour Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Description</td>
<td>ITE Code</td>
<td>% of Total Acres</td>
<td>Units</td>
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#### Land Use Densities
- **Specialty Retail**: Development covers 20% of the land (0.2 FAR)
- **Office**: Development covers 20% of the land (0.2 FAR)
- **Industrial**: Buildings cover 5% of the area
- **SFDH - 6**: Single family detached housing at 6 units/acre
- **Apartment 17**: Apartments at 17 units/acre

#### Trip Reductions
- **Office**: Development covers 20% of the land (0.2 FAR)
- **Industrial**: Buildings cover 5% of the area
- **SFDH - 6**: Single family detached housing at 6 units/acre
- **Apartment 17**: Apartments at 17 units/acre

1. 20% - internal trip making
Figure 26, 2035 Traffic Projections and Level of Service Analysis
Figure 27, Traffic Projections and Level of Service Analysis for Conceptual Realignment of South Industrial Road
Proposed Short and Long Term Intersection Improvements

The following conceptual intersection improvements are recommended for the corridor based on various input from all stakeholders and the design team. The four primary corridor intersections reviewed included Fox Farm Road at Walterscheid Blvd.; South/ North Greeley Highway; Avenue C/ Morrie Avenue; and College Drive.

Walterscheid Blvd.

Upon review of the existing intersection and proposed traffic volume projections the following observations were noted as significant:

- Sidewalk missing from Derr Avenue to Walterscheid
- Intersection offset north and south for east and west bound traffic.
- All-way stop controlled with dedicated westbound left turn lane and southbound right turn lane and channelizing island
- Dry utility conflicts at southwest corner of the intersection will be impacted by any improvement
- Width, lack of pedestrian facilities, and configuration make the intersection unfriendly to pedestrians
- Secondary access drive to the Fire Station at northwest corner is very close to the north leg of the intersection.

Conceptual Options and Recommended Alternative

Several different options were evaluated at this intersection including a single lane roundabout; standard intersection with channelizing island, standard intersection without channelizing island, and do nothing. Anticipated traffic volumes eliminated the do nothing alternative option. Challenges due to the proximity of the residential driveways and garage accesses to the south of the intersection made the roundabout option require either a significant shift to the east or a reduced circulatory radius. The shift would require significant realignment of the south and north intersection legs, as well as, right-of-way acquisition. The reduced circulatory radius would likely impact the functionality and level of service of the intersection. Finally, the southbound channelizing free right-turn island was eliminated for traffic and pedestrian safety, and was not required to accommodate future traffic volumes. The recommended intersection is illustrated in Figure 29/Appendix A and has the following added features not shown:

- Install signal when either warranted by level of service or crash history
- Install roadway lighting at intersection.
**South/ North Greeley Highway**

Upon review of the existing intersection the following observations were noted as significant:

- Complex Signalized Intersection
- Four channelized right-turn lanes
- Approach access are very close to the existing intersection on all four legs
- High commercial land use
- Under direct jurisdiction of the State of Wyoming Department of Transportation
- Steep vertical profiles
- Large intersection and difficult to traverse as a pedestrian due to its size and complexity of traffic movements
- Observed opposing left turn cross maneuvers at approaches near the intersection and
- Observed unsafe cross maneuvers from traffic exiting the channelizing free-right turn.

**Conceptual Options and Recommended Alternative**

The goal of any proposed modification to this intersection was to improve operation and safety. Current and anticipated traffic volumes present challenges with level of service and introduce added safety risk due to the proximity of commercial driveway accesses on all legs of the intersection. A multi-lane roundabout was considered at some point in the conceptual process but, would impose significant drainage, access, operational challenges. This option could possibly be reevaluated in the future when drivers in the area become more accustomed to traversing multi-lane roundabouts. The recommendations are as follows:

- Remove channelizing free right-turn islands to the northeast and southwest for traffic and pedestrian safety
- Add raised safety medians to prevent opposing traffic cross maneuvers on the east and west side of the intersection
- Install added deceleration/ business access auxiliary lane on northbound North Greeley Highway
- Install added acceleration/ deceleration access auxiliary lane on the eastbound lane

The recommended alternative is illustrated in Figure 31 and Appendix A.
Avenue C / Morrie Avenue

Upon review of the existing intersection and proposed traffic volume projections the following observations were noted as significant:

- All-way stop controlled
- Dry utility conflicts around intersection
- Lack of pedestrian facilities other than north south greenway connection
- Close proximity of Tyler Place to the southwest and business access on the northwest leg to the intersection
- Mobile home(s) off-street parking area
- Freight and large truck traffic is generated from Holly Energy Partners refinery directly north of the intersection.
- Existing concrete intersection with inadequate width and radii to accommodate large truck / freight vehicles.

Conceptual Options and Recommended Alternative

Several different options were evaluated at this intersection including a single lane roundabout, standard intersection with all way stop, standard intersection with a two-way stop (north and south), a standard intersection with signalization, and do nothing.

The current traffic use and anticipated future volume removed the do nothing alternative from consideration. Based on responses from the Holly Energy Partner truck route survey, increasing the width of the intersections legs and roadway will likely increase the truck freight traffic on the corridor which would include both conventional semi-tractor trailer and larger tractor and pup combinations.

A major objective of traffic signal design is to maintain the free flow of traffic. This design requires that important decisions be made regarding assigning green time to vehicle movements (e.g. signal phasing). Exclusive phases such as left-turn arrows generally increase cycle lengths and add delay. In this particular case, the recommended future linease has dedicated left turns on all intersection legs (Figure 26). Factors such as progression efficiency, pedestrian times, and clearance intervals also need to be incorporated into the design. These additional factors also lead to increased delays. Additionally, good design practice dictates that we minimize conflict points, reduce turning movements, eliminate or curtail driveway access near the intersection. A standard four way intersection conceptual layout is shown in Figure 33.

In a typical two lane roadway (i.e. two lanes in each direction) contains thirty-two vehicle conflict points (32). This is illustrated in Figure 34 where sixteen are crossing, eight (8) are diverging, and eight (8) are merging. The conceptual intersection proposed is a two-way left turn lane or three-lane roadway option. This theoretically eliminates the same direction to left turn rear-end (diverging) conflict which reduces the conflict thirty (30). See Figure 34.
This concept alternative illustrated in Figure 33 has the following added features not shown:

- Install roadway lighting at intersection.

The level of service (LOS) analysis shows a LOS B (am) and LOS A (pm) based on future traffic projections completed by Sustainable Traffic Solutions (See Figure 26). Cost estimates for this alternative including signalization in present value dollars is equal to approximately $330,000. See Appendix D for additional information.

**Roundabout Alternative**. There are several design challenges related to the development of a roundabout due to the proximity of the mobile home trailer park in the southwest corner of the intersection that will require either a significant shift to the east and/or right-of-way acquisition. During the public outreach process, stakeholders believed trucks and emergency vehicles would have trouble traversing a roundabout. The major concern related to the larger vehicles negotiating too small a central radius and too high an interior island curb height. Some of the surrounding area roundabouts have such large height curbs that the trailer portion is dragged around the roundabout and the tires of the truck rub due to the height of the curb. Through proper design, roundabouts can easily accommodate emergency and large sized vehicles.

Other special design considerations for roundabouts include: overall size; entry angles; entry widths; flare lengths; speed constraints; truck movements; pedestrian and bike accommodation; signing and striping issues. Because the only movement allowed from entry and exit of a roundabout is a right turn, the vehicle conflict points are reduced to eight (8). See Figure 35. Thus occurrences of crashes that result in injury and property damage are significantly reduced and are typically less severe than other types of collisions. Studies conducted by the U.S. Department of Transportation have shown that standard intersections converted to small/moderate roundabouts have reduced total crashes by fifty-one (-51) percent, injury crashes by seventy-three (-73) percent, and property damage crashes by thirty-two (-32) percent (Robinson, 2000).

Added benefits of the roundabout option include:

- No signal equipment to install and repair (i.e. savings on electrical and maintenance costs).
- Improved traffic flow and efficiency for intersections that handle left turns.
- Eliminate the need for auxiliary storage lanes.
- Slower traffic speeds.
The level of service (LOS) analysis shows a LOS C (am) and LOS B (pm) based on future traffic projections and analysis completed by Sustainable Traffic Solutions. See Figure 26. Cost estimates for this alternative in present value dollars is equal to approximately $333,000 excluding right-of-acquisition. See Appendix D for additional information. The alternative is shown in Figure 36.

Additional features recommended in the alternative not illustrated in Figure 37 include the following:

- Install a 5’ landscape buffer strip from the circulatory roadway to discourage pedestrians from crossing the central island
- Install roadway lighting at intersection.

Table 19 Conceptual Intersection Alternative Evaluation

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Construction Cost</th>
<th>Maintenance Cost</th>
<th>Reduced</th>
<th>Reduced</th>
<th>Level of Service</th>
<th>Slower Traffic Speeds</th>
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<td>B/A</td>
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<td>✔️</td>
<td>✔️</td>
<td>C/B</td>
<td>✔️</td>
</tr>
</tbody>
</table>

The right-of-way impacts as illustrated are as follows:

- Southwest: 269 Square Feet
- Southeast: 121 Square Feet
- Northwest: 154 Square Feet
- Northeast: 101 Square Feet.

The roundabout options provide the most benefit based on the categories above. Although the standard intersection appears to provide a better level of service LOS as analyzed by Sustainable Traffic Solutions, Inc., roundabout analysis is greatly affected by the percentage of trucks. The software utilized assumes the trucks will have a negative impact in level of service. However, with the added special truck features (i.e. lower curb and increased radius) incorporated into the roundabout, the negative impact of trucks to level of service would logically be reduced. Additionally, it is highly unlikely that the peak am and pm traffic will coincide with the peak larger truck/ freight movements on the corridor.

A strong case exists for utilizing a roundabout option at this intersection based on the following reasons:

- Improved Safety (e.g. Reduce injury crashes). It should be noted that property damage crashes will likely increase until users become accustomed to traversing the roundabout but, serious crashes will be virtually eliminated compared to the signalized option.
- Projected need for signalization within five (5) years
- Possible reduction of truck volume in commercial/residential area west of Avenue C (Other more industrial routes are better suited and available). Please reference Table 4 Truck Route Distance and Travel Times Map
- Reduced long term maintenance cost
- Improved traffic flow and efficiency
- Compatible with a recommended speed reduction west of Avenue C
- Accommodates multi-modal transportation

Please see Figure 36 and Appendix A for additional information and reference.

Since capital construction costs appear to be similar between the two options proposed, the final recommendation for this intersection is to leave both options open (i.e. Standard Intersection and Roundabout) and make a final determination when funding becomes available or redevelopment occurs. However, we would recommend that Laramie County request additional right-of-way (i.e. minimum of 20’ x 20’ Triangle) at the four right-of-way corners of the intersection when development or redevelopment occurs.
College Drive

Upon review of the existing intersection the following observations were noted as significant (Figure 37):

- Un-signalized Intersection Fox Farm Stop
- Posted Speed Limit on College Drive 50 mph
- Under direct jurisdiction of the State of Wyoming Department of Transportation
- Cheyenne Transit Stop near intersection encourages pedestrian movement at a mid-block cross due to lack of sidewalks and location of bus stop opposite to Cheyenne Health and Wellness facility
- Southbound and Northbound traffic hidden in “train” due to vertical and horizontal configuration and dual to single lane and single to double lane transitions, respectively
- Intersection skewed in excess of 10° (e.g. 25.24°)
- Eastbound to Southbound Acceleration lane would be required for peak hour volumes in excess of 50 (City of Cheyenne and Laramie County) and Posted Speed on adjacent street is greater than forty (40) mph.

Conceptual Options and Recommended Alternative

The goal of any proposed modification to this intersection was to improve operation and safety. An attempt was made early on in the study to reconfigure the alignment however, three factors overrode the practicality of the alternative:

- Property alignment East of College Drive
- Proposed alignment of Future Fox Farm is in alignment with adjacent property owners plan
- Intersection currently appears to meet warrants for signalization.

The reconfiguration alternatives can be seen in detail in Appendix C (MPO Technical Committee Meeting 05-15-2013). Current crash history and operation problems put this intersection into a two tiered improvement recommendation (e.g. Short Term and Long Term). The short term recommendations (Prior to signalization) are as follows and shown in Figure 39:

- Widen the existing right-turn lane on southbound College Drive to Fox Farm Road to eliminate or improve the ghosting effect
- Restripe College Drive to move the single lane to two lane transition for both northbound and southbound traffic north of the intersection of Fox Farm Road
- Add pedestrian sidewalk from the Cheyenne Transit bus stop to the intersection of College Drive and Fox Farm Road (i.e. south side of Fox Farm Road)
- Add pedestrian sidewalk from College Drive to the Cheyenne Health and Wellness Clinic (north side)
- Add raised safety median to serve as a pedestrian refuge
- Add acceleration lane to eastbound Fox Farm Road to southbound College Drive
- Add channelizing median as a pedestrian refuge for the acceleration lane on southbound College Drive

The recommended interim alternative is illustrated in Figure 38.
The long term recommendations (post signalization) are as follows and shown in Figure 40:

- Signalize Intersection
- Restripe College Drive to accommodate future demands
- Widen Fox Farm Road to include lane recommendations of eastbound dedicated thru lane, eastbound left turn lane, eastbound right turn lane, westbound lane, and buffered bike lanes
- Acquire right-of-way and construct East Fox Farm Extension and portion of roadway network
- Remove and relocate east business access to the east
- Add raised channelizing island on the East Fox Farm Road Extension as needed for pedestrian/traffic.
**Burlington Trail Road**

Upon review of the existing intersection the following observations were noted as significant (Figure 40):

- Close proximity of a business access on north east side of Burlington Trails on Campstool Road (i.e. Sierra Trading Post)
- Major drainage way west of roadway
- I-80 bridge piers and structure dictate angle of skew of Burlington Trails Road
- Campstool Road posted speed limit at 45 mph
- Intersection of north Burlington Trail Road with Campstool road should be realigned to divide the Sierra Trading Post access and Cleveland Place Roadway
- Skew angle of intersection of Burlington Trails Road and South Industrial Road exceeds ten (10°) at forty four point thirty seven (44.37°).
- Observed heavy industrial/ freight truck traffic.

**Conceptual Options and Recommended Alternative**

The goal of any proposed modification to this intersection was to improve operation, safety, and add Greenway connection. Current heavy industrial/ freight traffic guided the recommendation along with future development of the Greenway. The recommendations are as follows:

- Install added deceleration access auxiliary lane on the eastbound lane of Campstool Road
- Realign Burlington Trail Road to improve access on north and skew angle south
- Add drainage improvements to accommodate intersection realignment of Burlington Trail Road with South Industrial Road
- Add 10' concrete Greenway path on east side of Burlington Trail Road
- Add raised channelizing island and free right-turn onto South Industrial Road to accommodate WB-67 design vehicle.

The recommended alternative is illustrated in Figure 41 and Appendix A.
As a part of the scope of this study the design team was asked to investigate options to improve the operation of South Industrial Road on College Drive. Currently southbound traffic on College Drive turning left onto South Industrial Road stacks beyond the signalized off and on ramps of Eastbound I-80.

Several alternatives were evaluated including:

- Do nothing
- Realign South Industrial Road south to separate the intersection with the on and off ramps of I-80
- Add access control median to prevent southbound traffic from turning left onto South Industrial Road (See Figure 42)
- Realign South Industrial Road and I-80 Eastbound On Ramp to utilize South Industrial Road and the primary access to the on ramp (Standard Intersection: See Figure 43)
- Realign South Industrial Road and I-80 Eastbound On Ramp to utilize South Industrial Road and the primary access to a flyover or underpass ramp (See Figure 45).
After meeting directly with the local Federal Highway Administration representatives, WYDOT, and the MPO, and the surrounding property owner, no alternative satisfies the constraints of the group. Consequently, no recommendation can be given at this time. Further investigation will be required if operational issues or crashes occur at this location.
Landscape Concept

Using a simple, xeric palette of plants tolerant to the salts used in winter street maintenance, the landscape concept is designed for easy maintenance and an overall aesthetic that will enhance the Fox Farm Road corridor as a whole.

The pages herein describe two general landscape treatments, urban and rural, as well as outline a suggested plant palette.

Urban Street Section

Proposed improvements between Walterscheid Blvd. and Avenue C include an "urban" street section comprised of a detached concrete sidewalk with a manicured tree lawn varying in width from 5’ to 12’. Additional potential for planting exists in the enlarged portion of the median east of S. Greeley Hwy.
**Rural Street Section**

The area between Avenue C and S. College Drive is intended for the rural street section which will have a paved shoulder and vegetated swale adjacent to the roadway instead of curb and gutter. The swale will consist of a mix of grasses tolerant of drought and the salts typically used in snow removal.

**Suggested Dryland Seed Mix:**

- 40% Western Wheat Grass
- 20% Green Needle Grass
- 20% Blue Grama
- 10% Buffalo Grass
- 5% Little Bluestem
- 5% Sideoats Grama

**Proposed Future Intersection Improvements at Fox Farm Rd and S. College Drive**

**Proposed Improvements to Burlington Trail Road Between Campstool Road and S. Industrial Road**

**Suggested Plant Palette**

- **Ornamental Grasses and Perennials**
- **Trees**
- **Shrubs**
Avenue C with Optional Roundabout

Avenue C has been designed with a standard intersection containing planted tree lawns to match the concept images on the previous page with an alternate for a roundabout. The center of the roundabout could be treated one of several ways as illustrated in herein.
Summary of Corridor Recommendations

The overall recommendations are specifically designed to address all modes of transportation, landscaping, and safety needs of the Fox Farm Road Corridor. All recommendations have been examined carefully to ensure practicability, functionality, aesthetic appeal, sustainability, and successful implementation. The physical layout of the improvements are detailed on the following pages and can be found on the corridor plan and profile sheet in Appendix A. Detailed cost estimates are shown in Appendix C.

General Recommendations

Short Term

- Pedestrian and Sidewalk Improvements
- When Practical, Improve/ Increase Capacity of Existing Drainage Conveyance,
- Explore Opportunities as Area Develops to Provide Roadway Storm Water Detention/Retention Features/Facilities.
- Develop, Implement, and Fund a Drainage Master Plan for Corridor.
- Update/Install Strategic Street Lighting at Key Intersections (Walterscheid Blvd., South Greeley, Avenue C/ Morrie Avenue, and College Drive)
- Replace or upsize undersized and old portions of the water transmission main (i.e. 6" ductile iron pipe) on Fox Farm Road as funding resources become available.
- Implement Priority Projects as funding resources become available or development becomes the catalyst

Long Term

- Implement Reconstruction Phased Strategies along Corridor.
- Storm Sewer Installation
- Replace or rehabilitate existing wet utility infrastructure as development occurs along the corridor
- Implement Typical Section(s)
- Install Uniform Roadway and Pedestrian Street Lighting throughout corridor
- Reduce regulatory speed from Avenue "C" west to 30 mph
- Encourage Holly Frontier Drivers to use Alternate Routes (Education, Policy, etc.)
- Investigate and Develop Possible Funding Mechanisms for the County for Reimbursement, "Impact Fees", etc.
- Develop roadway network connection from Avenue B3 to South House Avenue to eliminate South House Avenue dead-end
- Reserve right-of-way as development occurs at the intersection of Avenue C/ Morrie Avenue at Fox Farm Road.

Priority Projects

Traffic Safety Improvement Projects

- Restripe College Drive to remove the single lane to double lane transitions north of Fox Farm Road.
- Widen College Drive Southbound dedicated right turn lane onto Fox Farm Road
- Install roadway lighting intersection improvements
- Install raised safety median on Fox Farm Road east of South Greeley Highway

Pedestrian Improvement Projects

- Install 6’ sidewalk and curb return radii on South side of Fox Farm Road from Derr Avenue to Walterscheid Blvd.
- Install sidewalk from East Cheyenne Transit Bus stop to College Drive on the south side and north side from College to the Cheyenne Health Clinic
- Install Pedestrian Refuge medians at College Drive and Mid-block at the Cheyenne Health Clinic

Freight/ Large Truck Improvements

- Widen intersection and enlarge turning radii on the north side and southeast comer of Avenue C/ Morrie Avenue on Fox Farm Road.
- Implement the reconstruction of Burlington Trail Road or phase as funding becomes available

Transit Improvements

- Relocate the College Drive/ Fox Farm Bus Stop to the east (i.e. Closer to the intersection of College Drive)
- As bus demand warrants, add additional westbound bus route onto Fox Farm Road

Drainage Improvements

- Fund a master drainage improvement plan
Appendix A – Corridor Plan and Profile Sheets
STA 25+50.00

STA 25+22.87

STA 25+06.69

STA 26+00.00