

LONGMONT DOWNTOWN ALLEY  
IMPROVEMENTS PROJECT

EXISTING CONDITIONS  
& OPPORTUNITIES  
REPORT

FOR THE  
CITY OF LONGMONT, CO

LORIS AND ASSOCIATES, INC.  
2585 TRAILRIDGE DRIVE EAST  
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**L O R I S**

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*Mastering the Art of  
Engineering Structures  
and Infrastructures*

July 12, 2010

**Mr. Chris Huffer**  
City of Longmont  
1100 S. Sherman Street  
Longmont, CO 80501

Reference: **Longmont Downtown Alley Improvements  
Existing Conditions & Opportunities Report**

Dear Chris:

Loris and Associates and our team of subconsultants have completed our existing Conditions and Opportunities Report. The purpose of the report was to take an in-depth look at the alleys and establish opportunities that are present within the site constraints and vision of what the alleys could become. We will use these observations and opportunities as the framework of our next phase of work, Conceptual Design that starts with a team Design Charrette.

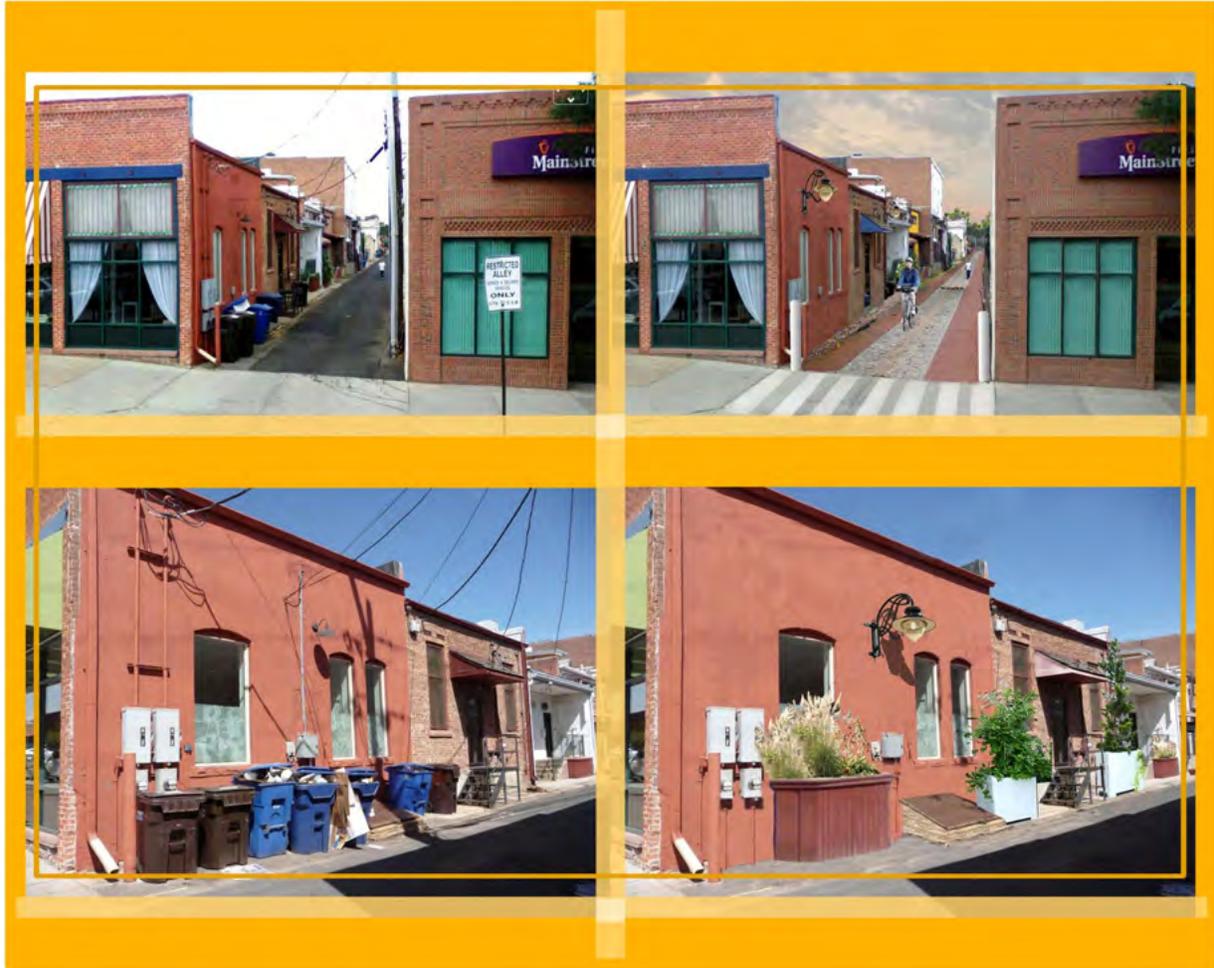
Please call if you have questions or comments regarding the contents of this report.

Respectfully submitted,

The Office of  
**Loris and Associates, Inc.**

Peter J. Loris, P.E.  
President

# LONGMONT DOWNTOWN ALLEY IMPROVEMENTS EXISTING CONDITIONS & OPPORTUNITIES REPORT



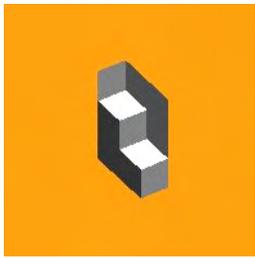
LORIS AND ASSOCIATES, INC.

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JULY 12, 2010



# L O R I S

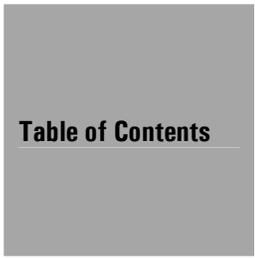


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## SECTION 1: CONNECTIVITY AND PARKING

### *CONNECTIVITY EXISTING CONDITIONS*

In principle, the downtown alleys currently provide service access to the rear of businesses along both sides of Main Street between 3rd Street and 6th Street, and they also provide opportunity for pedestrian, bicycle, and automobile circulation. In principle, they also provide an interface between the parking lots along Coffman and Kimbark and the businesses along Main Street. But the reality is that in their current condition, the downtown alleys do not serve any of these users particularly well and they may even be perceived as a barrier between the parking reservoirs and the Main Street businesses. Site drawings depicting existing connectivity and parking conditions and opportunities are included at the end of this section. Examples of current limitations include:

#### **Pedestrians and Bicycles**

- ❖ The unattractive environment and deteriorating pavement likely deter pedestrian and bicycle travel.
- ❖ Many adjacent parking lots have physical barriers to pedestrian travel between the parking lot and the alley, making connectivity to adjacent businesses difficult.
- ❖ The alley-ends of the breezeways are very important focal points for travel between parking lots and the business's front doors along Main Street. Unfortunately, these pedestrian portals are nearly invisible to pedestrians exiting parked cars or walking along the alleys until right at the breezeway end. If you don't know specifically where these portals are, you end up having to "stumble upon them".
- ❖ There are no east-west pedestrian connections to the alley breezeway ends from Coffman or Kimbark through the adjacent parking lots.





# L O R I S

- ❖ Alley intersections with cross-streets typically have “zero lot line” buildings with no setbacks on the corners. This creates poor sight distance between pedestrians on the cross-street sidewalk and motorists exiting the alley.
- ❖ There are no bicycle parking facilities that would encourage travel by bicycle.



## Vehicles

- ❖ A single stopped service vehicle effectively closes the alley for an entire block for all but those pedestrians willing to squeeze by the parked truck.
- ❖ There is no coordination, scheduling, or limitation on service vehicle access. It can, and does, happen all day long.
- ❖ Automobiles or trucks that do get stuck behind a parked service vehicle may need to back all the way out of the alley, as, in many blocks, there are few opportunities to exit the alley onto Kimbark or Coffman. Backing out of an alley and into the cross-street is a safety concern.
- ❖ In some blocks, there is little or no opportunity for an automobile to exit the alley except at either end. This can be problematic when the alley is blocked by a service vehicle.





# L O R I S

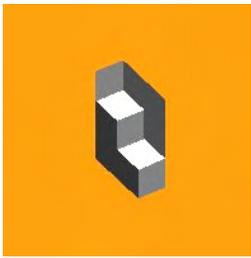
## ***Connectivity Opportunities***

### **Pedestrians and Bicycles**

- ❖ Clearly delineate the alley breezeway ends with signs, banners, and/or monumentation. Consider raised pedestrian crossings with specialty pavers across the alleys at the breezeway ends.
- ❖ Clearly delineate the places where pedestrians cross the alleys with specialty pavers and signage. Add street furniture (planter or bench say) in the cross-street sidewalk up against adjacent zero lot line buildings to force pedestrians to walk in the center of the sidewalk where they will be more visible to motorists exiting an alley.
- ❖ Create pedestrian connections from the breezeway ends directly east or west to Kimbark or Coffman through adjacent parking areas (see discussion of parking lot reconfiguration below). These connections should have specialty pavers and possibly landscaped edges to delineate them from the parking lots. In the 300 and 400 blocks there is the opportunity to have a continuous visual connection for pedestrians all the way between Kimbark and Coffman.
- ❖ Remove or relocate barriers to these east-west pedestrian connections (example: air quality monitoring station directly in line with breezeway).
- ❖ Remove or minimize barriers between parking lots and the alleys OR define appropriate connections between parking lots and alleys and focus pedestrian travel on these connections.
- ❖ Create a system of way finding signs to identify and call attention to these east-west pedestrian connections with signs at Coffman and Kimbark, the alley ends of the breezeways, and on Main Street at the ends of the breezeways.
- ❖ Consider installing curb extensions or “bulb outs” on 4th, 5th and 6th at the alley ends. These curb extensions will “shadow” the existing on-street parking and will shorten the crossing distance for pedestrians and also provide space for street furniture and way finding signs. If installed, they must be designed to accommodate the turning paths of trucks accessing the alleys.

### **Vehicles**

- ❖ Develop at least one service vehicle pullout along each alley block so that a service vehicle (at least the first one) does not block the alley for use by others. These pullouts will require space that may be created by reconfiguring adjacent parking lots.
- ❖ Consider creating one access per block between the alley and a public parking lot. This connection would not be intended to serve vehicles accessing the parking lot to park. Rather, this connection would allow an automobile that has become “trapped” behind a parked service vehicle to exit the alley without having to back out over a long distance.



## ***PARKING EXISTING CONDITIONS***

The off-street parking lots in downtown Longmont are located between the alleys and either Coffman or Kimbark Streets. Vehicular access to the parking is typically provided from either Coffman or Kimbark, but most of the pedestrian traffic accessing the parking must cross or traverse an alley. There are a number of existing issues related to these downtown lots as follow:

### **Layout**

- ❖ In many blocks, public parking lots abut private parking lots. Sometimes there are physical separations and sometimes there are none. In most cases, this “seam” results in unorganized and/or inefficient space layout and circulation patterns.
- ❖ There is no consistency in parking layout. Some lots have aisles running north and south. Some have aisles running east and west. Some aisles are wider than needed, and some are too narrow. Some spaces are angled when 90 degree spaces would fit better, and some aisles that have 90 degree spaces would be better served by angled spaces.
- ❖ In some cases there are physical barriers (such as a fence or air monitoring station) adjacent to the end of the breezeway that blocks pedestrian access.

### **Circulation**

- ❖ In some cases, particularly along the western alley, vehicles must use the alley to circulate between adjacent parking aisles. In some cases this alley circulation is forced to travel against the one-way flow direction posted in the alley.
- ❖ The disjointed parking lots in some blocks result in too many curb cuts along the adjacent street, resulting in safety concerns along those streets and sidewalks.
- ❖ Most parking lots along the alleys that line up with the ends of the breezeways do not facilitate pedestrian travel to/from the parking lot.
- ❖ There are no bicycle racks along the alleys.
- ❖ A number of Main Street businesses have a few employee parking spaces in the rear off of the alley. Depending on the location of the parking and service vehicle presence, these spaces are often accessed by wrong way travel along the alley.
- ❖ The pick-up / drop-off activity at the church school at 6th/Coffman circulates through the adjacent alley. In the mid-afternoon pick-up period the queue of parent vehicles blocks the alley for approx. 15 – 20 minutes. It is our understanding that there have been complaints about this blockage. Unfortunately, if this activity is moved out of the alley, the parent vehicle queue will likely shift to through lanes on 6th and/or Coffman and the problem would likely be worse.



# L O R I S

It is our understanding that with recent downtown parking supply improvements, there is general agreement that there is adequate parking serving downtown Longmont. In this context, there should be some flexibility to selectively sacrifice a few parking spaces adjacent to the alleys in the interest of overall alley improvements (as long as the total parking space reduction is not significant).

## **PARKING OPPORTUNITIES**

### **Consolidate Parking**

Many of the large public parking lots abut adjacent private lots. It may be possible to work with adjacent land owners to consolidate public and private parking in the interest of:

- ❖ Improving access and circulation
- ❖ Adding parking spaces or recouping parking spaces that may be lost for other improvements
- ❖ Making space for pedestrian connections to Coffman or Kimbark
- ❖ Making space for improved landscaping
- ❖ Minimizing redundant curb cuts along Coffman or Kimbark
- ❖ Eliminating the need to circulate “wrong way” in the alley between parking aisles
- ❖ Work with business owners to encourage employees to use alternate modes to reach downtown or park in more remote public parking lots.

These parking lot improvements should be considered in all public lots, even if there is no consolidation with adjacent private lots.

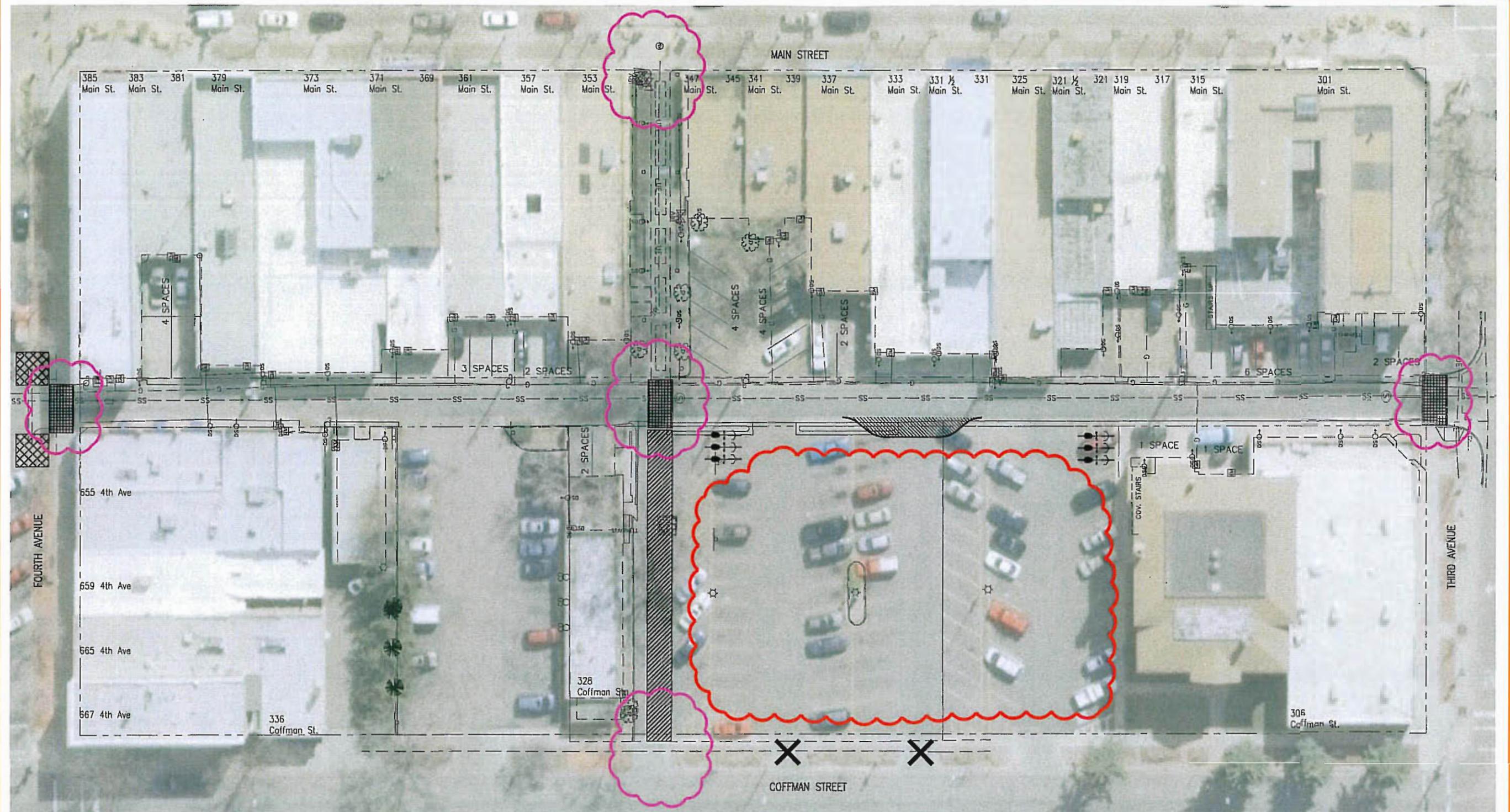
### **Circulation**

- ❖ Provide at least one group of bicycle racks adjacent to the alley in each block. Preferably these racks will be placed near the breezeway ends.
- ❖ Work with downtown businesses to remind employees of the importance of adhering to the one-way alley operation.
- ❖ Monitor the church school pick-up activity in the alley to ensure that the brief alley blockage does not create unworkable problems. No revisions recommended at this time.

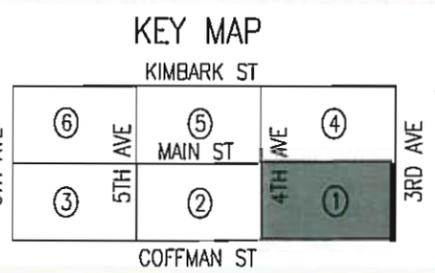
### **Layout**

- ❖ Many of the parking aisles in adjacent lots are wider than they need to be. Reducing these aisle widths may allow space to create the service vehicle pullouts referenced above.
- ❖ Ensure that private parking directly off of the alley does not encroach into the space.

10000 Feet to 0.10 Miles - Supplemental Aerial Imagery - 2010-09-10-10:44am



LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CURB EXTENSION TO "SHADOW" ON-STREET PARKING		RECONFIGURE PARKING LOT TO ADD FLEXIBILITY FOR OVERALL ENHANCEMENT
	BIKE RACKS		AUTOMOBILE "RELIEF" CONNECTION TO PARKING LOT
	SERVICE VEHICLE PULL-OUT		ENHANCED SIGNAGE TO IDENTIFY PEDESTRIAN CONNECTION AND/OR IMPROVE SAFETY
	SPECIALTY PAVING AT PEDESTRIAN CROSSING		REMOVE CURB CUTS WITH PARKING LOT RECONFIGURATION
	ENHANCED WALKWAY THROUGH PARKING LOT		



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
CONNECTIVITY & PARKING  
3RD AVE TO 4TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

**FDX HIGGINS**  
TRANSPORTATION DESIGN

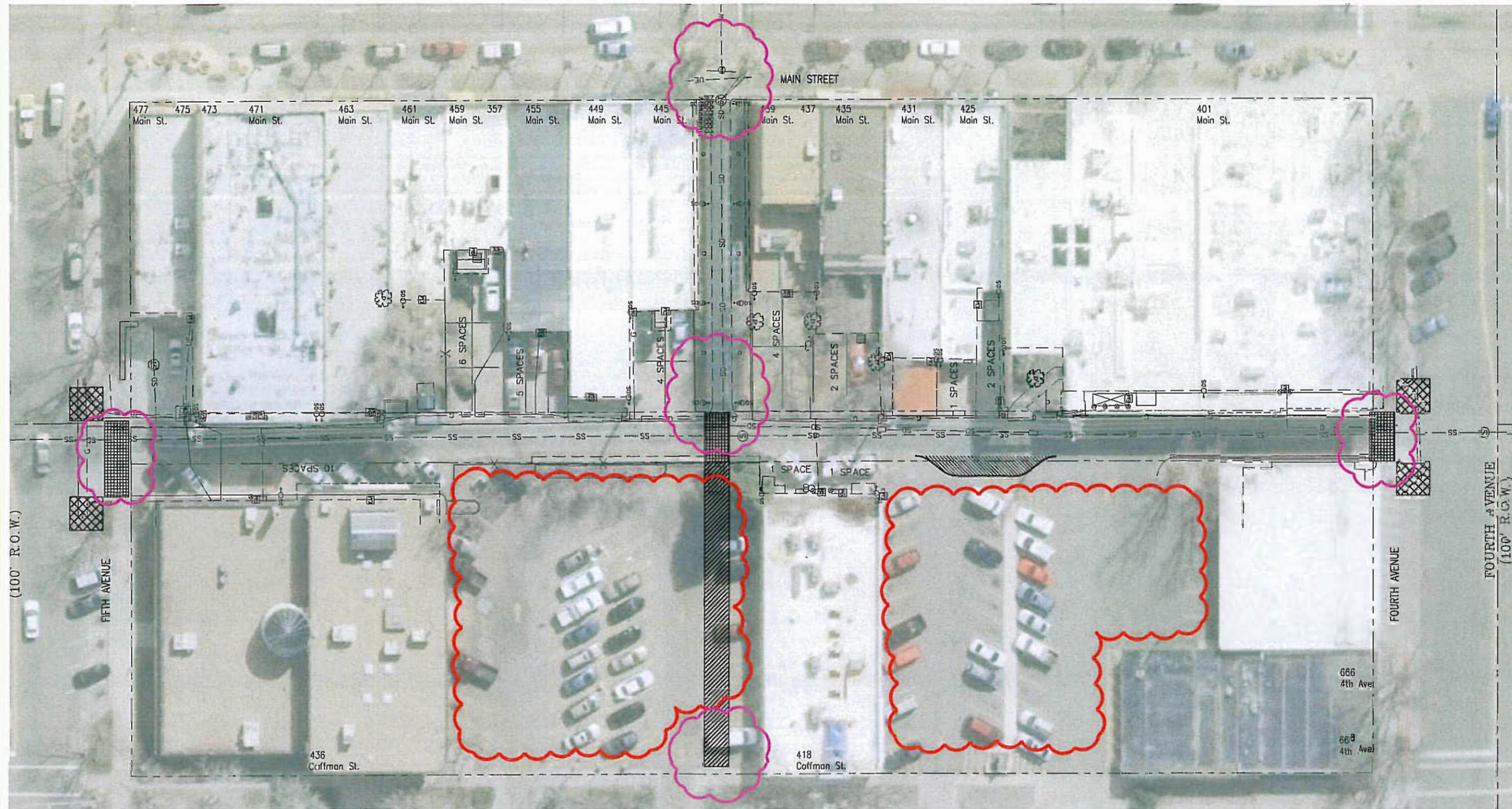
**LORIS**

**CITY OF LONGMONT**  
COLORADO

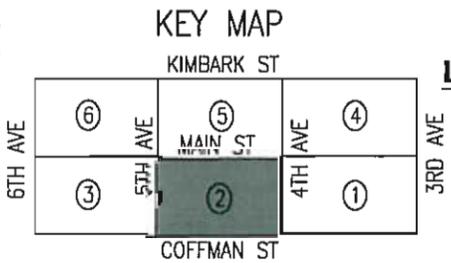
SCALE: 1" = 40'

**FIGURE 1-1**

City of Longmont, Colorado  
 Planning Department  
 2010-05-12-08

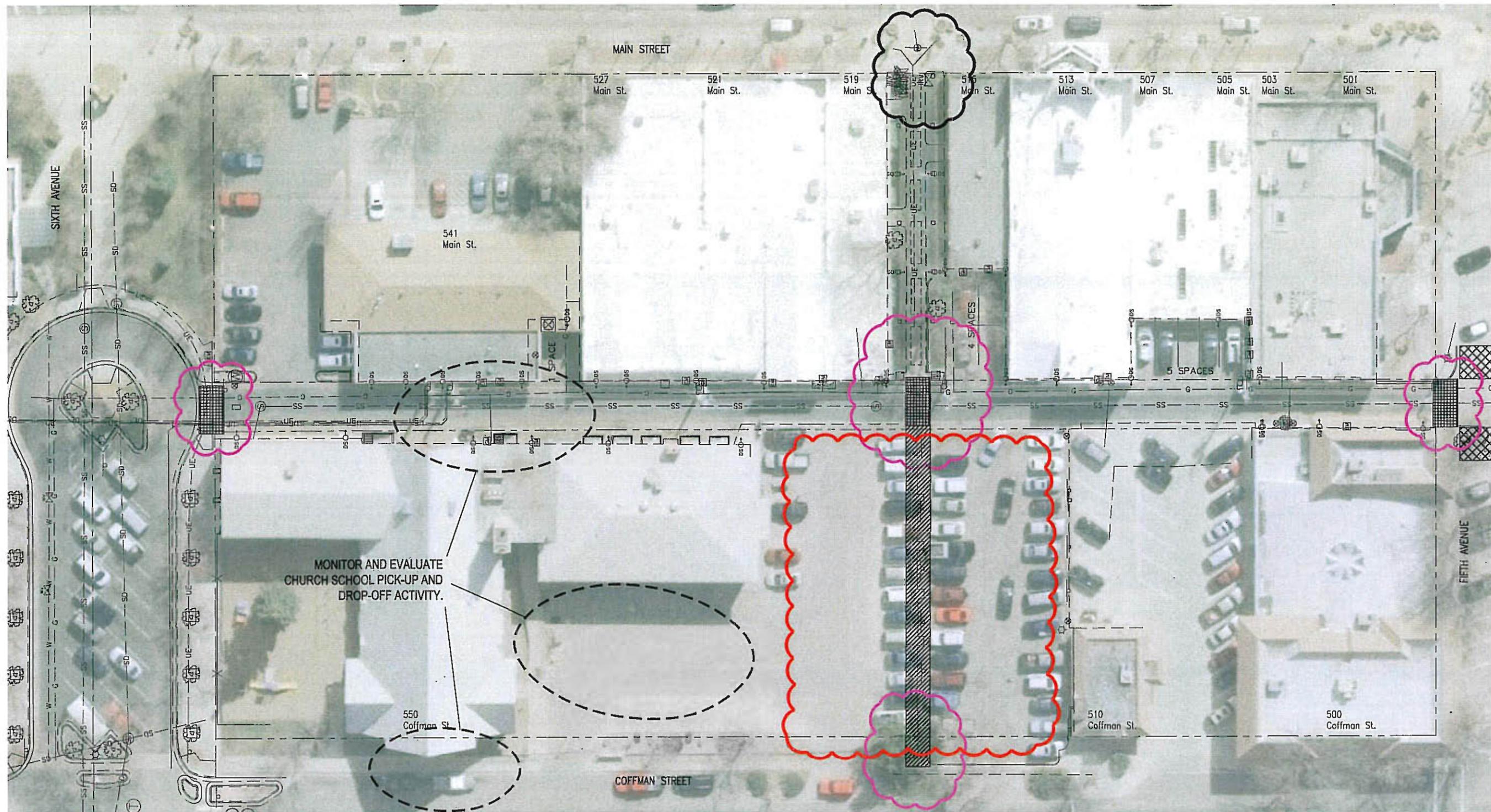


LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CURB EXTENSION TO "SHADOW" ON-STREET PARKING		RECONFIGURE PARKING LOT TO ADD FLEXIBILITY FOR OVERALL ENHANCEMENT
	BIKE RACKS		AUTOMOBILE "RELIEF" CONNECTION TO PARKING LOT
	SERVICE VEHICLE PULL-OUT		ENHANCED SIGNAGE TO IDENTIFY PEDESTRIAN CONNECTION AND/OR IMPROVE SAFETY
	SPECIALTY PAVING AT PEDESTRIAN CROSSING		REMOVE CURB CUTS WITH PARKING LOT RECONFIGURATION
	ENHANCED WALKWAY THROUGH PARKING LOT		

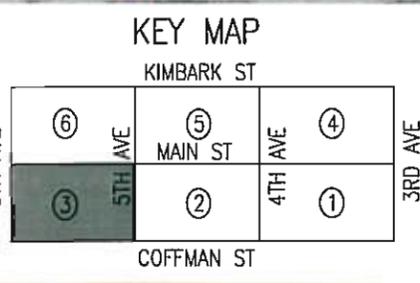


**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**CONNECTIVITY & PARKING**  
 4TH AVE TO 5TH AVE WEST OF MAIN ST  
 JUNE 30, 2010

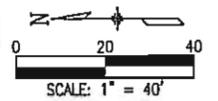
**FIGURE 1-2**



LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CURB EXTENSION TO "SHADOW" ON-STREET PARKING		RECONFIGURE PARKING LOT TO ADD FLEXIBILITY FOR OVERALL ENHANCEMENT
	BIKE RACKS		ENHANCED SIGNAGE TO IDENTIFY PEDESTRIAN CONNECTION AND/OR IMPROVE SAFETY
	SERVICE VEHICLE PULL-OUT		MONITOR AND EVALUATE CHURCH SCHOOL PICK-UP AND DROP-OFF ACTIVITY
	SPECIALTY PAVING AT PEDESTRIAN CROSSING		REMOVE CURB CUTS WITH PARKING LOT RECONFIGURATION
	ENHANCED WALKWAY THROUGH PARKING LOT		

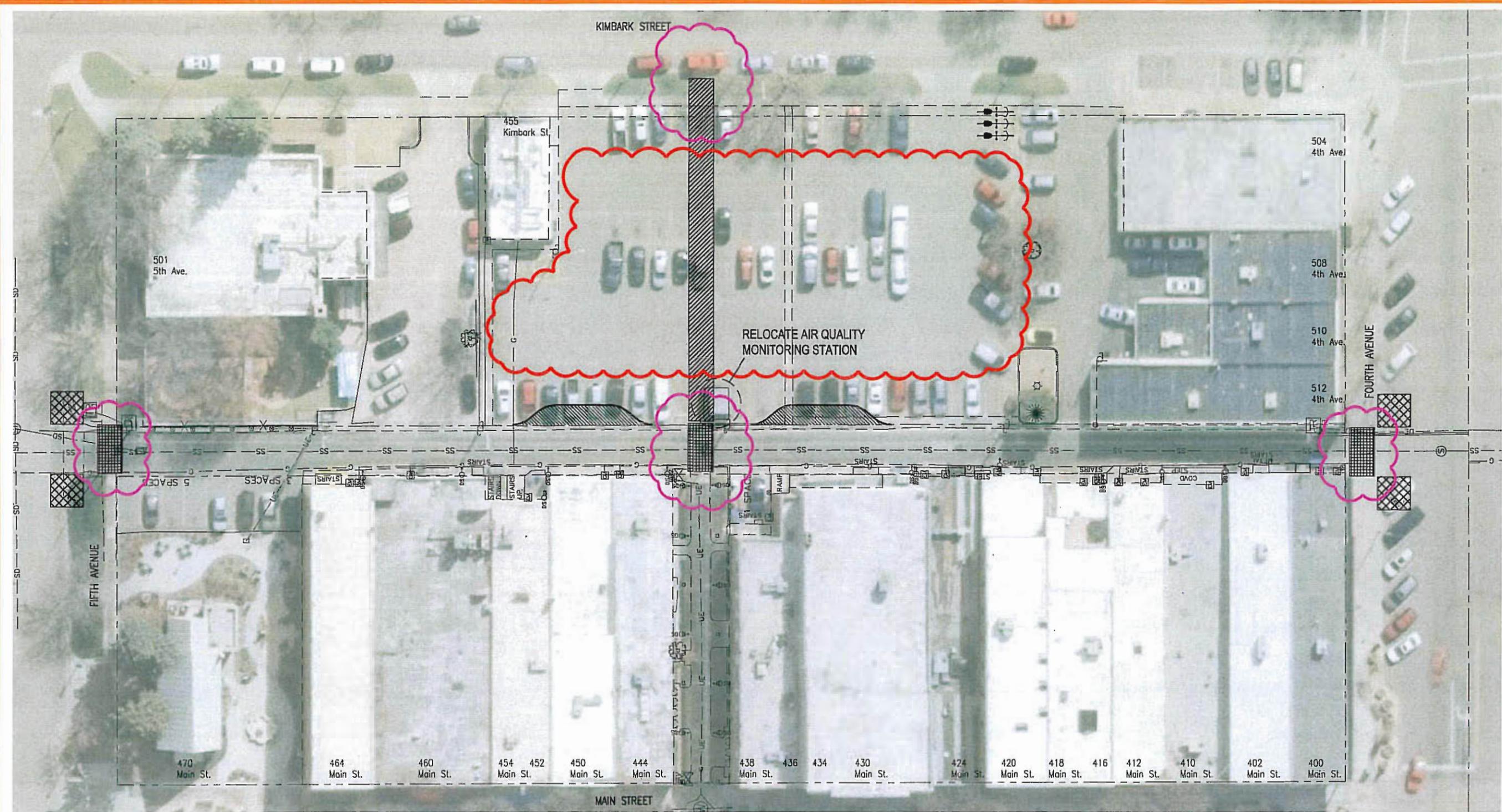


**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
CONNECTIVITY & PARKING  
5TH AVE TO 6TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

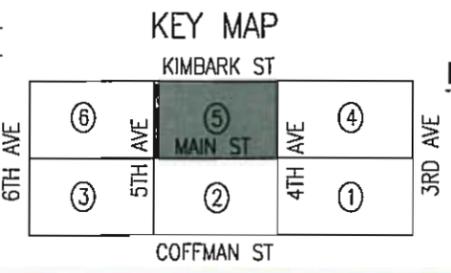


**FIGURE 1-3**





LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CURB EXTENSION TO "SHADOW" ON-STREET PARKING		RECONFIGURE PARKING LOT TO ADD FLEXIBILITY FOR OVERALL ENHANCEMENT
	BIKE RACKS		AUTOMOBILE "RELIEF" CONNECTION TO PARKING LOT
	SERVICE VEHICLE PULL-OUT		ENHANCED SIGNAGE TO IDENTIFY PEDESTRIAN CONNECTION AND/OR IMPROVE SAFETY
	SPECIALTY PAVING AT PEDESTRIAN CROSSING		REMOVE CURB CUTS WITH PARKING LOT RECONFIGURATION
	ENHANCED WALKWAY THROUGH PARKING LOT		



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**CONNECTIVITY & PARKING**  
 4TH AVE TO 5TH AVE EAST OF MAIN ST  
 JUNE 30, 2010

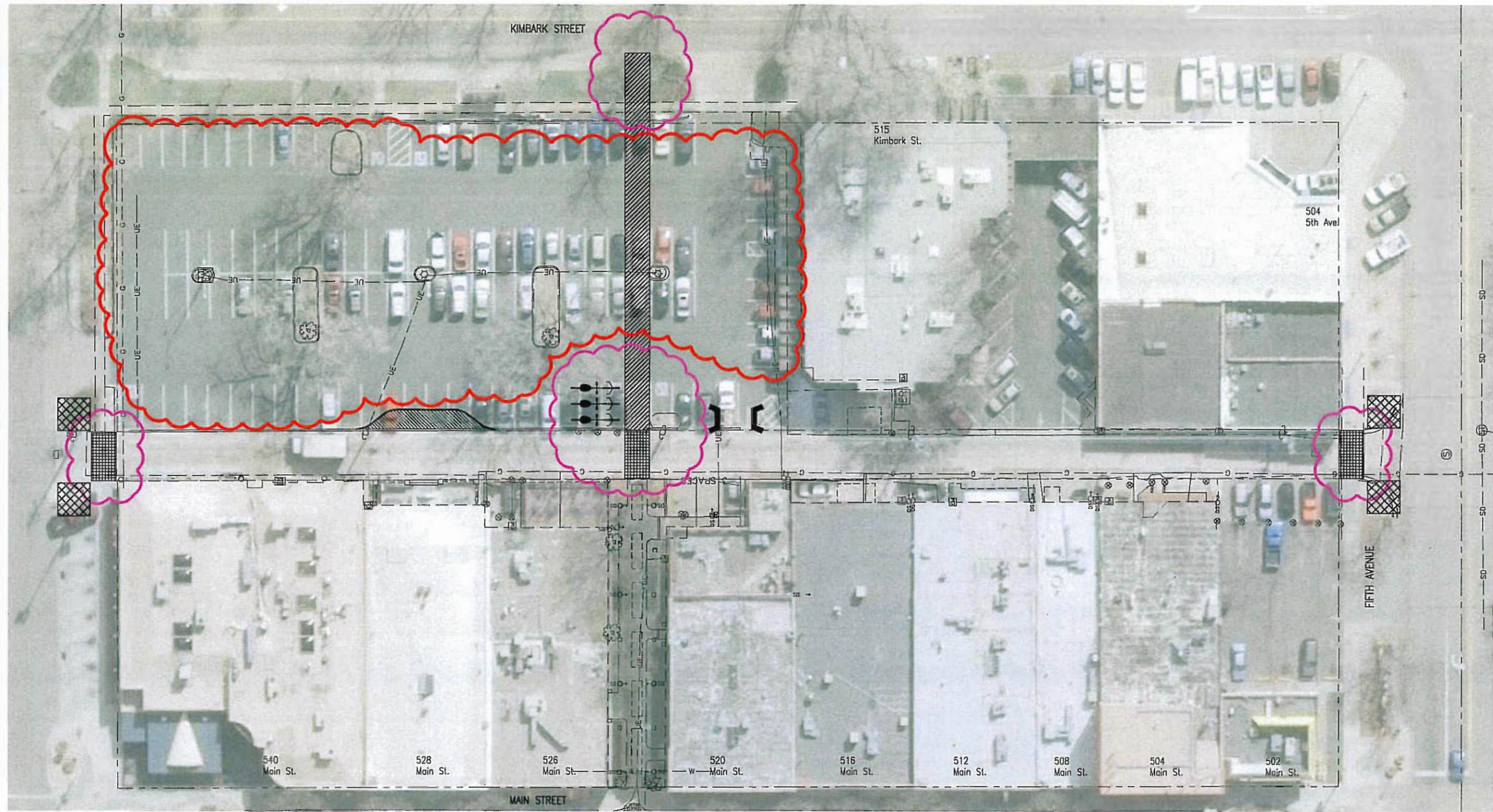
**FOX HIGGINS**  
 TRANSPORTATION GROUP

**LORIS**

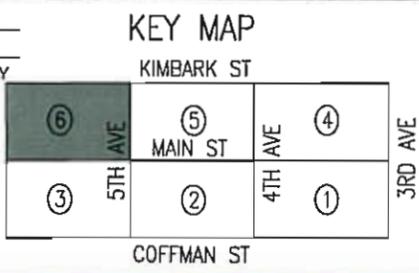
**CITY OF LONGMONT**  
 COLORADO

**FIGURE 1-5**

10075 (6/16/10) 1111-110 Longmont Alley Improvements - 2010 (Rev. 02/2010)

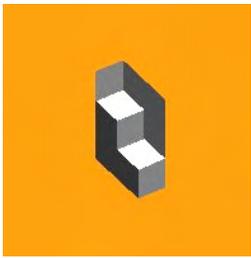


LEGEND		KEY MAP	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CURB EXTENSION TO "SHADOW" ON-STREET PARKING		RECONFIGURE PARKING LOT TO ADD FLEXIBILITY FOR OVERALL ENHANCEMENT
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**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
CONNECTIVITY & PARKING  
5TH AVE TO 6TH AVE EAST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 1-6**



## SECTION 2: LANDSCAPE, BREEZEWAYS & OUTDOOR SPACES

### LANDSCAPE EXISTING CONDITIONS

The extent of the existing landscape within the alleys is quite limited, as one would expect given their utilitarian function. Almost all the existing trees and shrubs can be found on the adjacent private properties. In addition, there are a number of mature shade trees and shrub beds in the City-owned parking lots that will need to be taken into consideration in any study looking at reconfiguring the lot's layout or function. Unless otherwise noted, it is recommended that existing trees and shrubs in the alley corridors should be preserved. Site drawings are included at the end of this section. Written descriptions of existing conditions and opportunities follow.

#### West of Main Street

##### West of Main Between 3rd and 4th

- ❖ 12" Ash trees are planted along the curb line west of the 4th Avenue alley entry. There is a vacant planter for a street tree immediately east of this entry.
- ❖ A landscape island with a 4' Juniper is adjacent to the west side of the alley at the City parking lot north of Gold Key Travel (below). The Juniper could create a sight-distant problem for cars exiting the parking lot into the alley and should be removed.
- ❖ Two 16" Honeylocust are located immediately adjacent to the alley ROW. They frame the Breezeway entry and should be preserved.
- ❖ A line of 18" to 24" Ash trees in raised concrete planters are adjacent to 3rd Avenue east of the 3rd Avenue alley entry. A line of 6" Ash street trees are north of the entry.

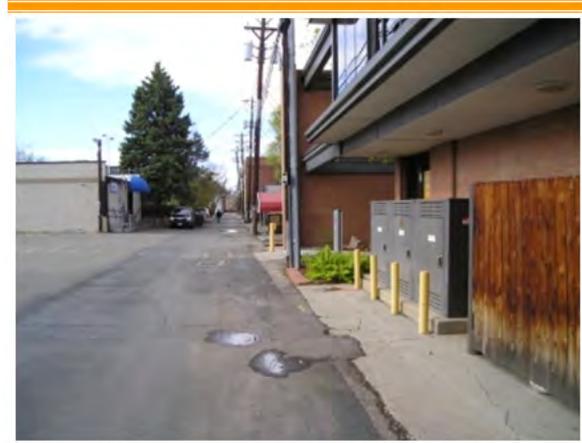




# L O R I S

## West of Main Between 4th and 5th

- ❖ Large 30" Honeylocust east of the 5th Avenue alley entry and a 14" Honeylocust on the west side of the entry.
- ❖ A line of 20' tall, multi-stemmed Ginalla Maples, low deciduous shrubs and 3' wood-framed chain link fence screens the US Bank parking lot west of the alley at about mid-block (below left). This screen planting should be preserved, although consideration should be given to replacing the fence with an ornamental metal fence.
- ❖ A 40' to 50' Spruce is immediately adjacent to the alley about mid-block on the west side and should be preserved (below right).
- ❖ There is planting bed with low deciduous shrubs immediately adjacent to the alley at the Guaranty Bank and 14" Ash tree just off the alley in a courtyard for the bank (below right).
- ❖ A line of large shade trees are adjacent to 4th Avenue about 50' east of the alley entry.





# L O R I S

## West of Main Between 5th and 6th

- ❖ 6th Avenue dead-ends as a cul-de-sac just east of the alley entry, leaving room for a small plaza adjacent to Main Street with art and seating opportunities. There is also a small gazebo in the center of the cul-de-sac. This area is heavily landscaped with shade trees and shrub beds and should be preserved in any alley improvement plan.
- ❖ 8" Maple trees along 6th Avenue west of the alley entry.
- ❖ 12" to 14" Honeylocust in a small plaza east of the 5th Street alley entry. West of this entry, an 18" Honeylocust is located immediately adjacent to the alley (below right).





# L O R I S

## East of Main Street

### East of Main Between 3rd and 4th

- ❖ Small shrub bed at the front of the store adjacent to the 4th Avenue alley entry (east side).
- ❖ Shrub bed with 6" concrete curbs adjacent to the Development Services Center on the east side of the alley. New construction which should be preserved.
- ❖ Long landscape island running north-south in the center of the City parking lot at the corner of 3rd and Kimbark with mature flowering ornamental trees and creeping junipers (below left). Should be preserved if the parking lot is reconfigured.
- ❖ Large 40' to 50' spruce tree just east of the 3rd Avenue alley entry (below right). The tree is in good condition and should be preserved.
- ❖ Maple trees along 3rd Avenue east of the alley entry and Honeylocust trees to the west. All trees 12" - 14" diameter.





# L O R I S

## East of Main Between 4th and 5th

- ❖ Landscape island with mature, 4' junipers just west of the 5th Street alley entry. Honeylocust street trees continue west of the alley.
- ❖ The junipers may need to be removed as they have overgrown the bed into the sidewalk (below left) and could create a sight- distance problem.
- ❖ 14" Bradford Pear trees along 5th Avenue east of the alley entry.
- ❖ Three shade trees in the day care facility play yard +/- 20 off alley. Should not be constraint.
- ❖ +/-25' multi-stemmed upright juniper tree on south side of alley is in good condition and should be preserved (below right).
- ❖ 14" Honeylocust shade trees along 4th Avenue east of the alley entry. No landscaping on 4th west of the alley entry.





# L O R I S

## East of Main Between 5th and 6th

- ❖ Landscape islands with mature creeping junipers at the 6th Avenue alley entry.
- ❖ Two mature trees (either Cottonwoods or Siberian Elms -- each around 3' in diameter) in the parking lot at the corner of Kimbark Street and 6th Avenue. These trees will need to be considered in any potential reconfiguration of the City parking lot (below left and center). They are in landscape islands that extend 8' to 9' into the travel lanes of the parking lot.
- ❖ 18" Crabapple tree at the southwest corner of the 515 Kimbark Offices Building on the east side of the alley.
- ❖ 14" Honeylocust trees extend west along the 5th Street curb line. No street trees on 5th Avenue east of the alley entry.





# L O R I S

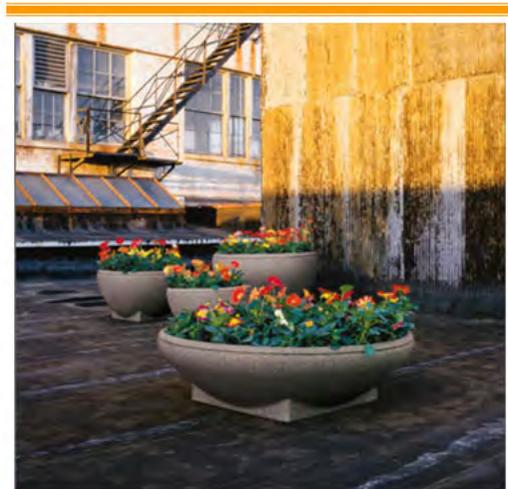
## *Landscape Opportunities*

### **Plant Materials**

- ❖ The existing framework of trees should be preserved where possible. Removing large existing trees (6" caliper and larger) should be done in consultation with the City Forester and only if it results in a significant benefit to the alley's function.
- ❖ Planting beds should be created by reconfiguring adjacent parking lots and carving out planting opportunities between existing buildings/steps and alley drive lanes.
- ❖ Durable, drought tolerant plant material will be essential. The harsh alley environment is difficult for plants, with hard surfaces reflecting heat and smaller areas of exposed soil to facilitate oxygen exchange.
- ❖ Trees, shrubs, ornamental grasses, and perennials that provide seasonal color should be used to brighten the alleys. The winter-time character of the landscape will also need to be carefully planned.
- ❖ Deciduous trees would provide shade, soften the alley character and accent important pedestrian routes. This may mean reconfiguring or deleting adjacent parking to create planting opportunities for trees. Tree varieties with narrow habits may be needed to avoid the crowns interfering with delivery trucks.
- ❖ Because many of the planting beds will be narrow, vines and shrubs with narrow habits will be critical elements in the plant palette. Vines have the added benefit of climbing narrow structures such as screens, fences and trellises to create a vertical landscape feature.

**Planters** There are several opportunities for placement of large prefabricated/cast planters similar to those used on Main Street.

- ❖ Prefabricated planters would be very effective in softening hard edges and providing green relief and add seasonal color.
- ❖ Planters could be used to demarcate special areas of interest like parking lot entrances, breezeways and store rear entrances.
- ❖ Planters could be used to redirect pedestrians and vehicles away from potentially hazardous areas, like at intersecting streets to provide more visibility.
- ❖ The planters need to be large enough that they can't be easily picked up and hauled away by vandals.





# L O R I S

## Screens

- ❖ Screens could be used to visually shield parking lots from the alley, while at the same time providing an identity that a parking lot exists at a particular location and organizing pedestrian circulation to central locations, like breezeways.
- ❖ Screens could be used to visually shield utilities such as gas meters and trash containers from view.
- ❖ Screens could be constructed with standard ornamental metal fences or more ornate panels designed by artists. Patterns and materials could vary from block-to-block to create a unique identity for each block.
- ❖ Linear screens between parking lots and the alley could help focus pedestrian traffic to the breezeways or create predictable crossing points.

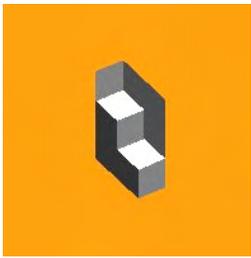


## BREEZEWAY EXISTING CONDITIONS

The typical landscape for Breezeways features shrub beds adjacent to the alley, taller shrubs along the length of the structure, and large Honeylocust trees closer to Main Street.

- ❖ Feedback from stakeholders and staff indicate that the large shrubs along the length of breezeways make pedestrians feel unsafe. Replacing the tall shrubs with lower growing varieties should be strongly considered.
- ❖ Shade trees along the Breezeways should be preserved.





# L O R I S

## ***BREEZEWAYS OPPORTUNITIES***

### **Structure**

- ❖ Remove breezeway roofs to improve daylighting.
- ❖ Remove the breezeway canopy altogether.
- ❖ Replace the breezeway roofs with a more translucent surface.
- ❖ Repaint the breezeways.
- ❖ Move the breezeways to one side of the gangway to allow more light to penetrate and to provide a wider space for landscape, benches, bike racks, etc.

### **Amenities**

- ❖ Public input identified a concern that the 4' to 5' tall shrubs in the breezeways make them less safe. Tall shrubs should be thinned and/or replaced with low-growing varieties.
- ❖ Highlight the breezeways with distinctive signage or banners.
- ❖ Improve lighting from the existing utilitarian hoods to a more interesting lighting system
- ❖ Encourage businesses to open store entries from the breezeway.
- ❖ Provide space for statue art or murals within the breezeways.



# L O R I S

## OUTDOOR SPACES EXISTING CONDITIONS

Given the lack of architectural character and pedestrian enhancements in the alleys today, it's not surprising that few of the businesses fronting on the alleys offer outdoor spaces for their patrons. The only outdoor space related to an entertainment use is found east of Main Street at the *7 West Sports Pub*. This deck is adjacent to a breezeway and faces the 6<sup>th</sup> and Kimbark City parking lot, which makes it a relatively pleasant space for outdoor dining.

The remaining outdoor spaces are more like porches than decks and probably not heavily utilized by patrons. Some of these spaces serve as access to stairs that lead to a second story use. Examples of this type of outdoor space are shown below:



### East of Main Street





# L O R I S

**West of Main Street:** The alleys west of Main Street offer only one or two outdoor spaces available for public use. There are two corner plaza spaces, both adjacent to 5th Street, that have the potential to be pleasant gathering spaces.



## **OUTDOOR SPACES OPPORTUNITIES**

### **East of Main Street**

The alleys east of Main Street currently have a more civic function with the library, City Hall, and Chamber of Commerce along that corridor. The Outdoor Spaces should be reflective of those uses.

- ❖ Spaces for alley performers or vendors at breezeways
- ❖ Art pockets
- ❖ Seating areas
- ❖ Outdoor seating areas for restaurants
- ❖ Plant material that provides seasonal color or interesting forms and textures
- ❖ Designating smoking areas for businesses.

### **West of Main Street**

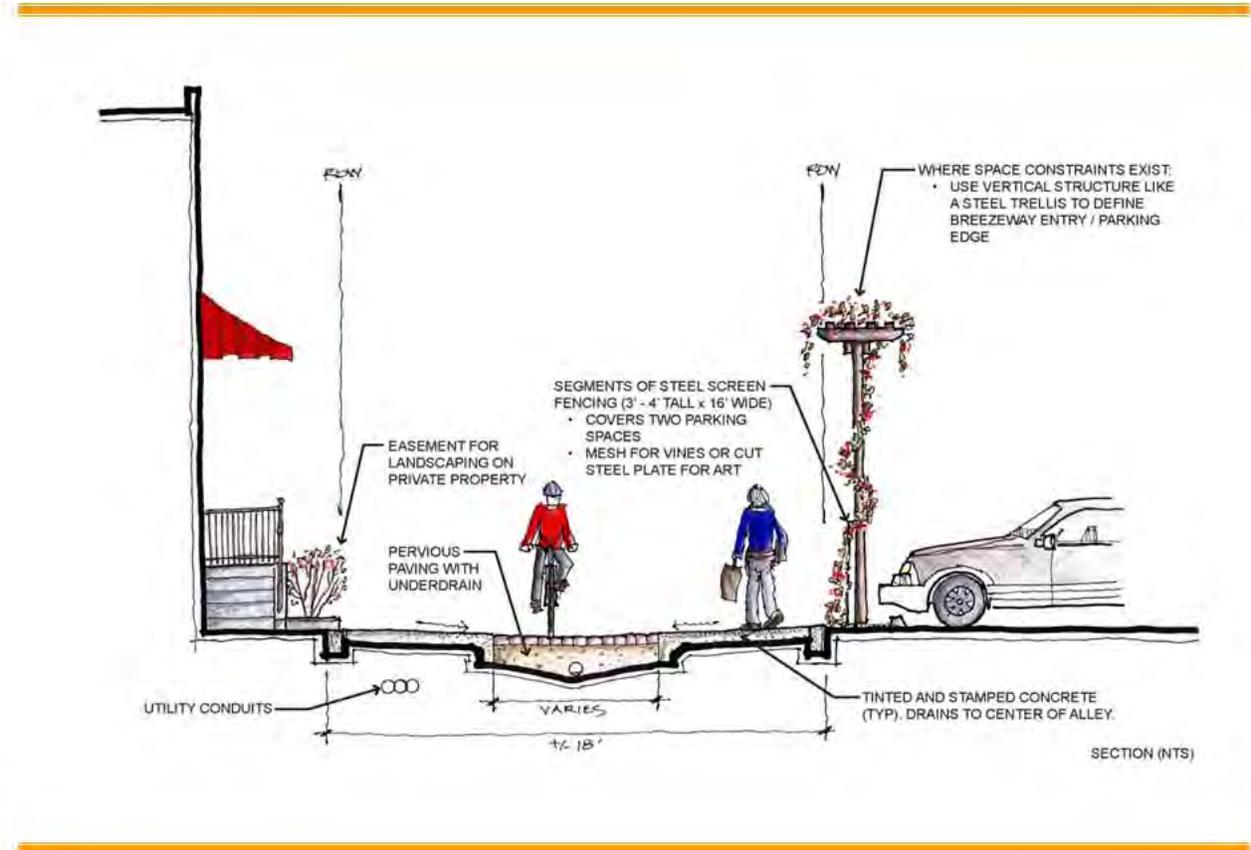
The alleys west of Main Street currently have a more private and business function, but with few existing restaurants. The Outdoor Spaces should be reflective of those uses.

- ❖ Spaces for performances or vendors at breezeways
- ❖ Art pockets
- ❖ Seating areas
- ❖ Neighborhood congregation areas
- ❖ Designating smoking areas for businesses



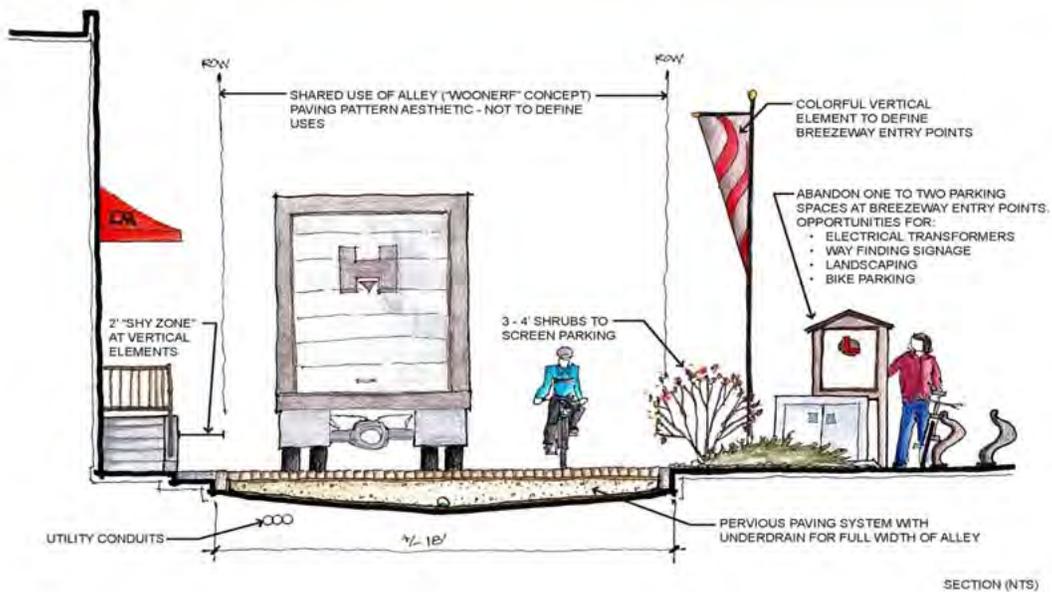
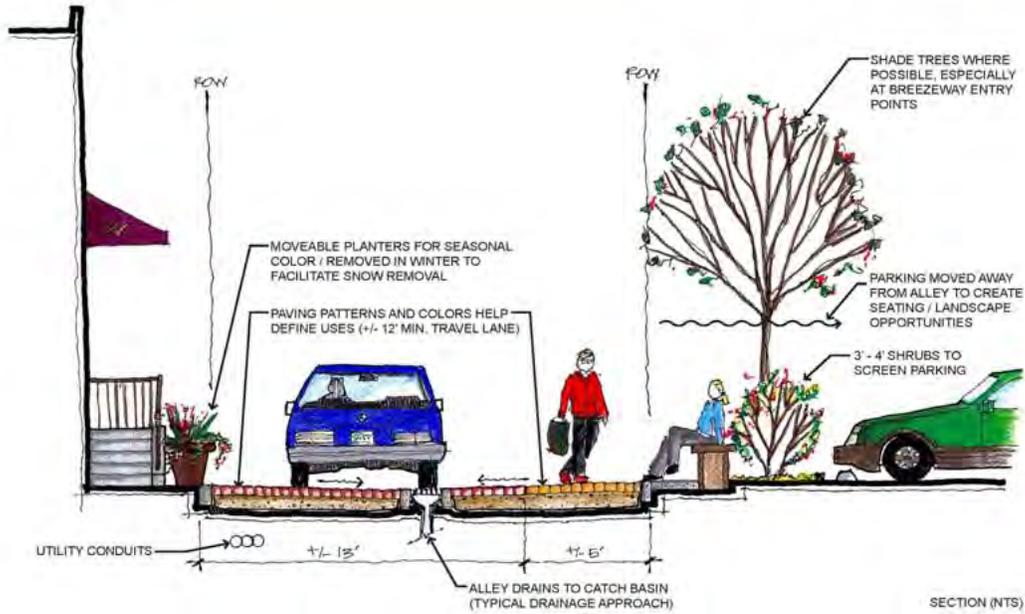
### ALLEY OPPORTUNITY CROSS SECTIONS

The following illustrations depict possibly configurations for the alleys. The graphics represent opportunities presented in this and other sections of the report.

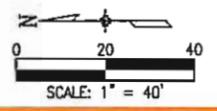




# L O R I S

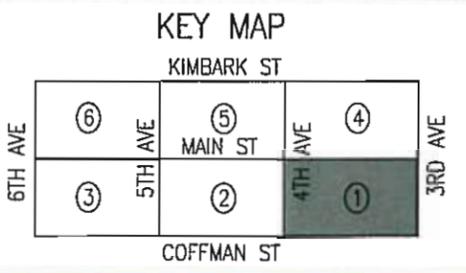


10/10/10 11:54 AM - 2010-09-29 11:00 AM - 2010-09-29 11:00 AM



**LEGEND**

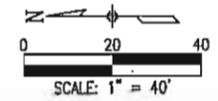
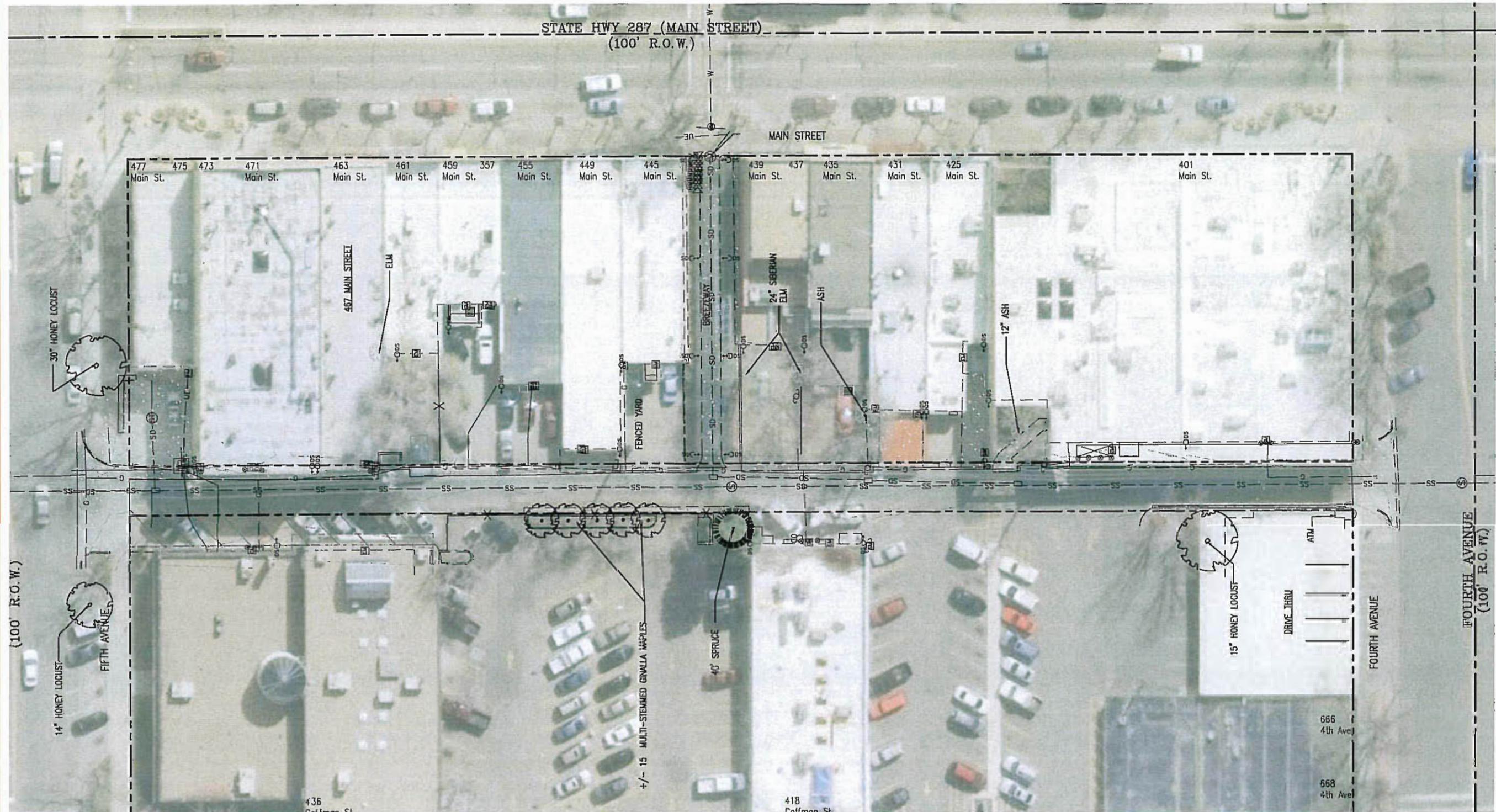
SYMBOL	DESCRIPTION
	DECIDUOUS TREE
	EVERGREEN TREE



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**LANDSCAPE, BREEZEWAYS, & OUTDOOR SPACES**  
 3RD AVE TO 4TH AVE WEST OF MAIN ST  
 JUNE 30, 2010

**FIGURE 2-1**

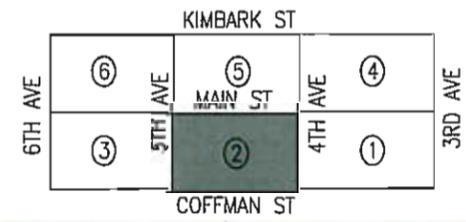
10110 (2010-06-02) - 2nd revision - landscape plan - map - 4/16/10 - 5/20/10



**LEGEND**

SYMBOL	DESCRIPTION
	DECIDUOUS TREE
	EVERGREEN TREE

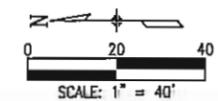
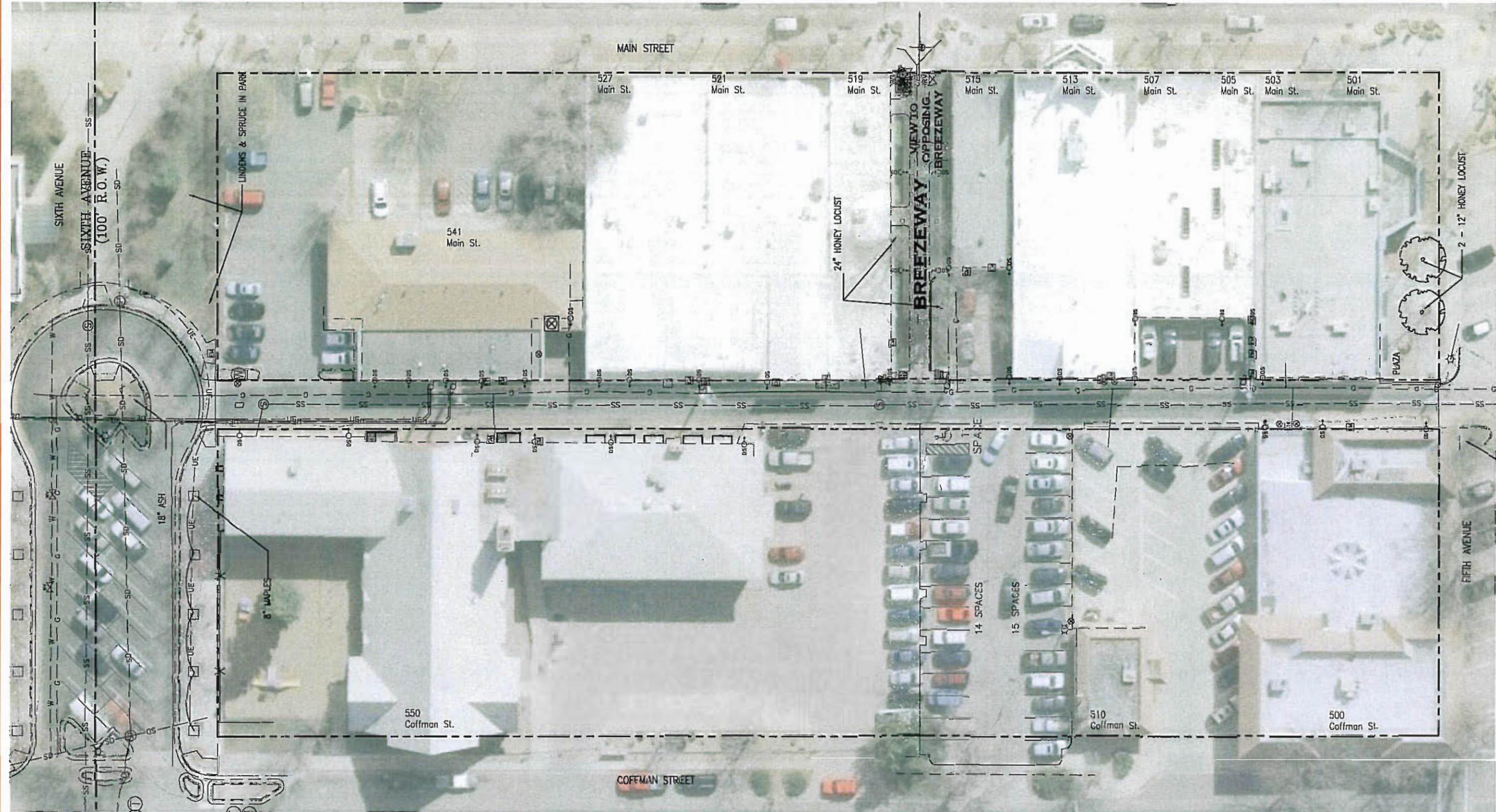
**KEY MAP**



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
LANDSCAPE, BREEZEWAYS, & OUTDOOR SPACES  
4TH AVE TO 5TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 2-2**

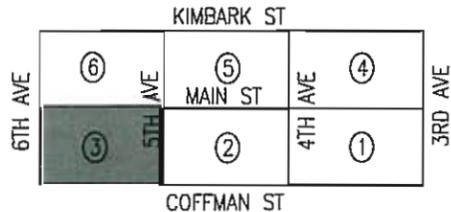
10140 10140-10 02- WINDSOR - LANSING ST 506 - 10140-10-02-041



**LEGEND**

SYMBOL	DESCRIPTION
	DECIDUOUS TREE
	EVERGREEN TREE

**KEY MAP**

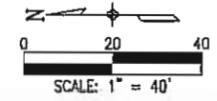


**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
LANDSCAPE, BREEZEWAYS, & OUTDOOR SPACES  
5TH AVE TO 6TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 2-3**

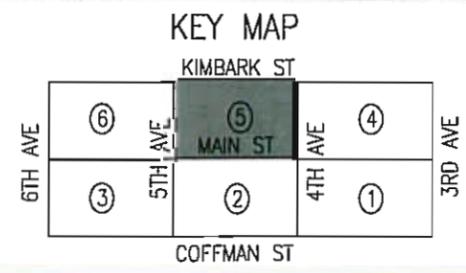


10112 (06/14/10) 2 - Longmont - Downtown Alley Improvements - 2010-06-14-10112.rvt



**LEGEND**

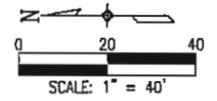
SYMBOL	DESCRIPTION
	DECIDUOUS TREE
	EVERGREEN TREE



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
LANDSCAPE, BREEZEWAYS, & OUTDOOR SPACES  
4TH AVE TO 5TH AVE EAST OF MAIN ST  
JUNE 30, 2010**

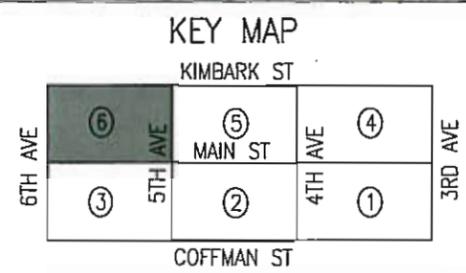
**FIGURE 2-5**

101.0 (REV. 01.10) - Landscape Improvement Plan - 2010-06-25.dwg



**LEGEND**

SYMBOL	DESCRIPTION
	DECIDUOUS TREE
	EVERGREEN TREE



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
LANDSCAPE, BREEZEWAYS, & OUTDOOR SPACES  
5TH AVE TO 6TH AVE EAST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 2-6**



## SECTION 3: POWER AND LIGHTING

### *POWER EXISTING CONDITIONS*

#### **Building Electrical Service**

An exterior meter inventory for all electrical service entries was completed for the six blocks of alleys. Interior meters and interior main services inventory has also been completed except for one interior service main. Field notes, details of each meter and service feed, interior meters and service ratings, and site plan meter locations are completed. There are 204 meters/service drops along the alleys, with 125 meter/service drops with mains located on the outside of buildings in the alleys, 51 meter/mains located inside buildings and 79 mains located inside the buildings. Conditions of the electrical service and equipment vary with the newer buildings having no visible code violations, while many of the older buildings do have visible code violations.

#### **Newer Buildings Service and Equipment**

##### **Potential Code Violations**

- ❖ Quality installations and no code violations

##### **Meters**

- ❖ Meters are cold sequenced (main disconnect switch is ahead of the meter, protecting the meter from power surges)
- ❖ All meters and main disconnect switches are located outside the building for easy access to utility and fire department
- ❖ Easy to run utility distribution since conduit is located in the alley and not in the building
- ❖ Most meters are labeled with address tags

#### **Older Buildings Service and Equipment**

##### **Potential Code Violations**

- ❖ Missing deadfronts on panels providing access to live parts by the public
- ❖ Missing covers and open wires providing a hazard to the public
- ❖ No interlock or padlock on exterior main disconnect covers providing access to live parts by the public.
- ❖ Open knockout holes that should be plugged
- ❖ Fuses are too large and are not protecting the conductors
- ❖ Broken conduit bodies

##### **Meters**

- ❖ Meters are not cold sequenced, thus providing no meter protection



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- ❖ Meters are not tagged or labeled with address
- ❖ Some meters are located too high to read easily
- ❖ Many meters are located inside of the buildings
  - Hard to access
  - Requires utility feed in concrete when running through buildings
  - Harder to feed from underground

## Service Main Disconnects

- ❖ Some equipment is located inside the buildings
- ❖ Hard to access for fire department
- ❖ Missing cover interlocks or padlocks so public could access live electrical parts.
- ❖ Some equipment have open knockouts, missing deadfronts, and open wires
- ❖ Replace fuses that are oversized
- ❖ Some equipment were missing labels or mislabeled
- ❖ Harder to feed from underground

## Overhead Service (Blocks 400E, 500E, 300W, 400W, 500W)

The overhead electrical service in these alleys is well distributed, minimizing voltage drops to the buildings. The primary power runs down the alley on the cross arms of the wooden poles with three secondary transformers combined to form 120/208V-3ph service in two or three locations strategically spaced in each block's alley. In only two locations there are 120/240V single-phase services that feed three buildings, with a total of (8) meters on 120/240V single-phase service. Some of the electrical poles are leaning. In another case, there is a transformer vault (located on the west side of a parking lot at approximately 520 Kimbark) that provides underground feed to approximately (11) meters inside buildings.

The majority of the buildings are serviced with overhead lines terminating in weather-head service drops either to outside meters or to meters located inside the buildings.

## Underground Service (Block 300E)

Utility lines are undergrounded very well in this alley block. There is a combination of pad mounted transformers, flush mounted splice boxes, underground conduit and feeds to existing service equipment. In order to most effectively serve meters on the interiors of buildings, this design utilized a hybrid approach with both overhead and underground cable runs. Steel support poles were placed on the building side of the alley and underground cable was extended to this pole. Overhead drops were then extended from the pole to the adjacent buildings. This minimized the overhead



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congestion across the alleyways but cost effectively maintained short overhead service drops.

## ***POWER OPPORTUNITIES***

Undergrounding of the main overhead lines running north and south will help improve the aesthetics of the alleys. It will eliminate the wooden poles reducing alley clutter but will require pad mounted electric facilities in the project area to replace the overhead facilities. Use of hybrid underground/overhead service systems (as in the 300E section) will minimize wire crossings above the alleyways.

### **Undergrounding Service Equipment to Interior Located Meters**

Because many of these meters are located inside of buildings, there are several options to provide service:

- ❖ Have building owner re-locate service equipment to exterior alley wall
  - Service more accessible for fire department
  - Opportunity to bring service up to code
  - Significant expense for building owner
  - Ownership and easement conflicts for conduit routes to the alley
- ❖ Underground service into building and provide concrete conduit duct to existing service locations
  - Significant expense for owner, DDA, and LPC ratepayers
  - Accessibility is not ideal for fire department
  - Ownership and easement conflicts for conduit routes to the alley
  - Duct installation is difficult
  - Requires spare conduits for potential future service upgrades
- ❖ Continue overhead service (hybrid system)
  - Hybrid system is a combination of underground and overhead service
  - Hybrid system eliminates alley crossing congestion
  - Does not mandate a service update
    - ✓ Owner can elect to update service at anytime
  - Least cost to owners, DDA, and LPC ratepayers
  - Hybrid system is flexible
    - ✓ Overhead portions can be undergrounded with future projects or area improvements



# L O R I S

## Future Design Considerations

As the final design progresses, there may be some electrical items that require maintenance for some property owners.

## LIGHTING EXISTING CONDITIONS

### General Alley Lighting

In the alleys with overhead utility lines, the general lighting is accomplished with dropped-lens cobra-head style luminaires with high pressure sodium (HPS) sources of various wattages mounted on wooden utility poles. In block 300E, the HPS cobra heads are mounted on steel poles. The lighting is more uniform in Blocks 300W and 500W where the utility poles are more prevalent. Elsewhere, the lighting is much less uniform and comprised of various lamps and luminaires with varying levels of success.

Overall, the quality of the general lighting is fair to poor. The orange light produced by the HPS luminaires has poor color rendering properties. Dropped-lens cobra heads produce more glare and light pollution than other fully shielded luminaires.

Since the lighting is non-continuous in some areas, some building owners light the alley entrances with their own floodlights and other various luminaires.





# L O R I S

## Breezeway Lighting

The Breezeways are lighted with high intensity discharge downlights. Although the sources are fully shielded, the quality of light is fair since it is primarily focused down, does not spread to the planted edges, and does not highlight any of the breezeway structure. Aesthetically, it does not tie into the Alleyway lighting or the lighting on Main Street.



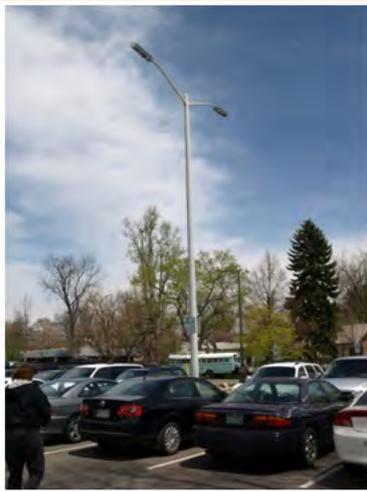


# L O R I S

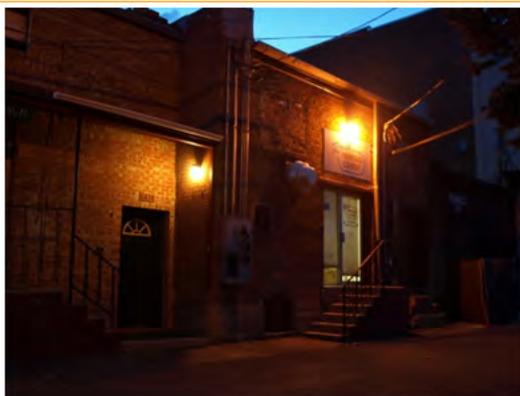
## Parking Lot Lighting

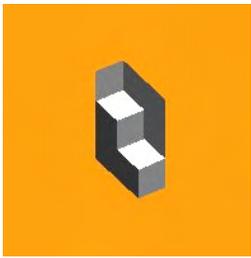
Some of the parking lot luminaires in the project area were recently converted from dropped-lens HPS cobra-head to LED luminaires. The LED lighting has a high color temperature (5700K) which produces a bluish-white light. The light distribution is narrow, producing uneven light across the parking lot.

## Private Building Mounted Lighting



**Entries** Private building mounted lighting is a mixture of luminaires and light sources selected at the building owner's discretion and, likely, without any guidance. Most of the lighting is either trying to light the alley, or providing light for an entrance. Only in a few instances, does the building mounted lighting enhance the alley façade. Overall, the lighting appears more like security lighting and is, in some cases, creating more shadows and glare thereby contributing to the very problem in which it is intended to solve.



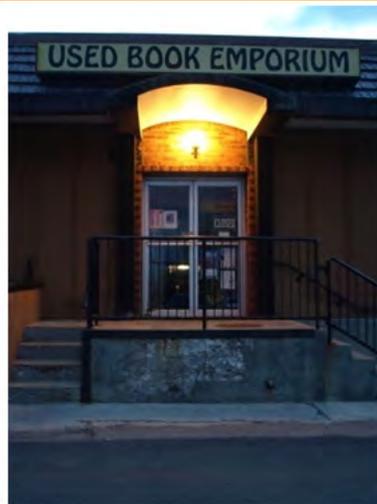


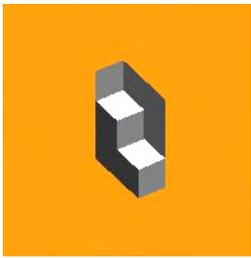
# L O R I S

The example shown below illustrates a more desirable approach to alley entrance lighting. A low-wattage luminaire using a “white light” source is concealed from view behind the awning. The result is a well lit entrance which is identifiable by a pedestrian from a short distance across the parking lot.



Here are some other examples of good to better entry lighting:





**Signage** Self-illuminated signage in the alleys is contributing to the alley environment. Since it is a diffuse source of light, it is beneficial. In some cases, though, the signs are too bright and have a negative impact on visibility in the alley.

The example below illustrates that while the sign can provide illumination, it is a poor substitute for a proper entry light.



## LIGHTING OPPORTUNITIES

### General Alley Lighting

The greatest opportunity is in improving the alley general lighting. If the utility lines are underground, then pedestrian scale lighting could be installed. New lighting can be installed at a lower mounting height which can provide helpful guidance for wayfinding and enhance the alley experience.

- ❖ Unify the lighting design of the alleys by limiting the selection of luminaires and lamps.
- ❖ Eliminate wasteful and/or out-of-date light source technologies.
- ❖ Add Pedestrian lighting appropriate for alley nighttime activity
- ❖ Install new luminaires and poles at an optimal spacing for better lighting distribution
- ❖ Select warm-white light sources with better color rendering properties. Color temperature of 3500K or less is recommended.
- ❖ Provide dimming capabilities for nighttime energy reduction
- ❖ Light source should be long lasting to minimize maintenance and increase reliability

### Breezeway Lighting

The breezeways are the link between Main Street and the alleys. Lighting the breezeway structures and signage will emphasize this link. Replacing the existing lighting with more appropriate distribution, brightness and color will also enhance this experience.

- ❖ Announce the location of the breezeway with lighting to improve guidance
- ❖ Provide accent lighting for the signs
- ❖ Develop schemes for breezeway structure lighting
- ❖ Replace existing downlights



## Parking Lot Lighting

Good parking lot lighting is often the result of the application of systems which rely on high color rendering sources and improved distribution of light. In some cases, parking lots which are over lighted intensify a pedestrian discomfort by creating dark shadows.

Ideally, the parking lot lighting could be replaced by equipment with more appropriate light distribution, higher lumen output, and warmer color temperature. Improving the uniformity would greatly enhance the evenness across the parking lot. LED or Induction lighting could still be used, preferably on a dimming system.

## Private Building Mounted Light

As the alleys transform, it is expected that existing building mounted alley lighting will be replaced by more aesthetically pleasing, less harsh “security” lighting. Once the general alley lighting is upgraded, there is less need for the building mounted lighting to provide alley lighting. Ideally, this glaring lighting will be replaced with options that will enhance building entries and facades. The first step will be to provide guidance to building owners:

- ❖ Provide luminaire replacement guide for building owners
  - Use downlights with shielded sources in place of floodlights
  - Use wall sconces whose lamps are shielded in place of wall packs with unshielded sources.
- ❖ Identify and prioritize key buildings that would benefit greatly from replacing existing lighting
- ❖ Encourage building owners to replace their lighting

## LIGHTING CONSTRAINTS

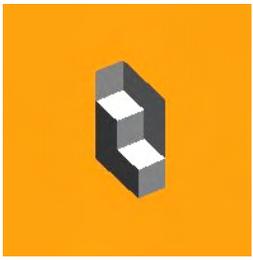
There are several constraints in relighting the alleys. The largest constraint is cost to the project, and added costs to the building owners. Other constraints include the limited space in the alleys and locating equipment to integrate with other alley elements to minimize potential damage from trucks.

## General Alley Lighting

If the overhead utilities are not undergrounded, the alley lighting will need to utilize the existing wooden poles. If undergrounding occurs, then the lighting could be replaced. New poles, new lighting will have a cost constraint.

## Breezeway Lighting

Breezeway lighting is facilitated in large part by the canopy structure to which it is mounted. New lighting at these locations may be relatively inexpensive. If the breezeway canopy is removed, location of new equipment will be more challenging.



# L O R I S

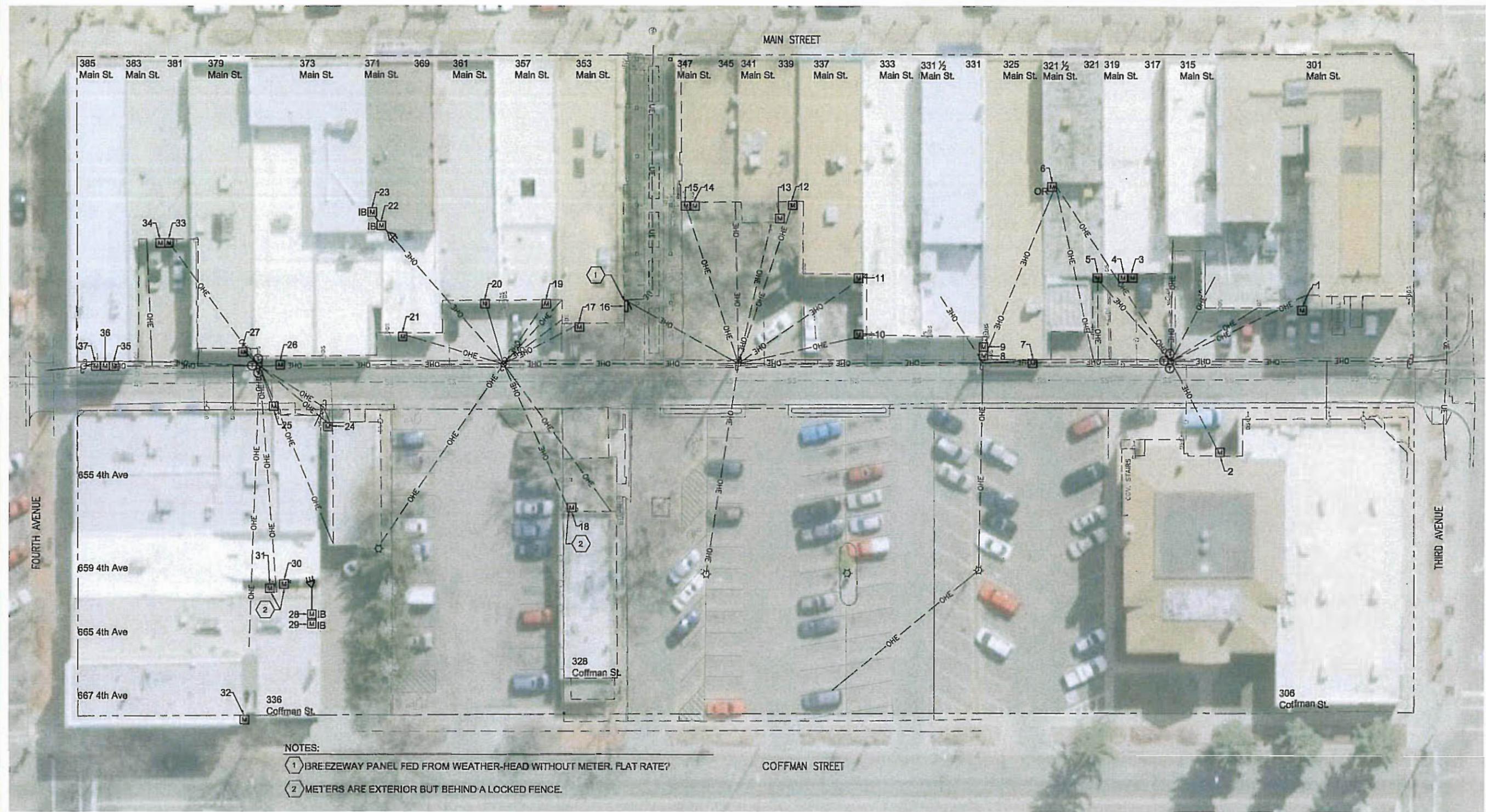
## **Parking Lot Lighting**

Since the parking lot lighting was just installed, replacing it may be difficult unless another location could be identified on where the lighting could be relocated.

## **Private Building Mounted Light**

- ❖ Develop replacement guide with some before and after illustrations
- ❖ Make a compelling case for alley lighting replacement
- ❖ Identify unit replacement costs so the alley owners understand the economic commitment

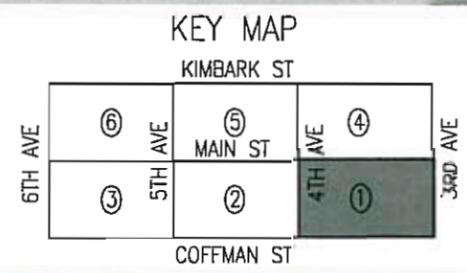
Another constraint may be owner resistance to additional lighting especially for the buildings that currently have little or no lighting in the alley.



NOTES:  
 ① BREZEWAY PANEL FED FROM WEATHER-HEAD WITHOUT METER. FLAT RATE?  
 ② METERS ARE EXTERIOR BUT BEHIND A LOCKED FENCE.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
M	ELECTRIC METER - EXTERIOR OF BUILDING GROUND LEVEL MOUNTED U.O.N. IB=INSIDE BUILDING, OR=ON ROOF METER REFERENCE NUMBER SEE SHEET E7 & E8
T	ROUND 'BARREL TYPE' UTILITY TRANSFORMER.
T	PAD MOUNTED RECTANGULAR UTILITY TRANSFORMER.
WB	WEATHER-HEAD SHOWN WHERE FEEDER ENTERS BUILDING FOR INSIDE BUILDING (IB) METERS.



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**ELECTRICAL SERVICE DROP/**  
**METER INVENTORY**  
 3RD AVE TO 4TH AVE WEST OF MAIN ST  
 JUNE 30, 2010

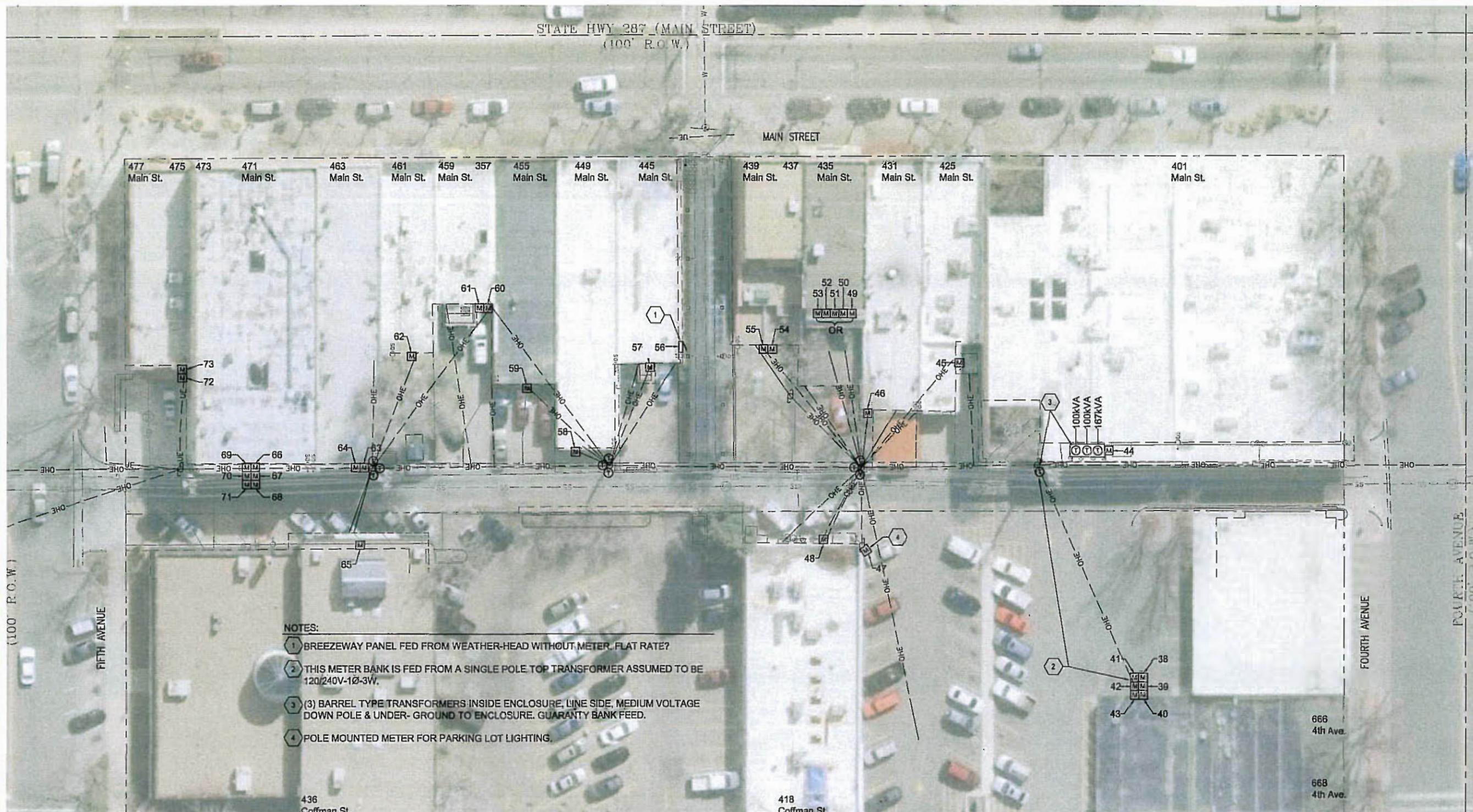
**FIGURE 3-1**

CLANTON & ASSOCIATES  
 LICENSING DESIGN AND ENGINEERING  
 10000 E. HIGHWAY 103, SUITE 100  
 LONGMONT, CO 80501

**LORIS**

CITY OF LONGMONT  
 COLORADO

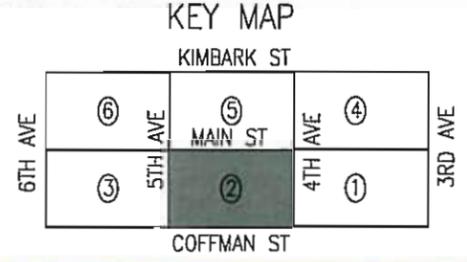
SCALE: 1" = 40'



- NOTES:**
- ① BREEZEWAY PANEL FED FROM WEATHER-HEAD WITHOUT METER. FLAT RATE?
  - ② THIS METER BANK IS FED FROM A SINGLE POLE TOP TRANSFORMER ASSUMED TO BE 120/240V-1Ø-3W.
  - ③ (3) BARREL TYPE TRANSFORMERS INSIDE ENCLOSURE, LINE SIDE, MEDIUM VOLTAGE DOWN POLE & UNDER- GROUND TO ENCLOSURE. GUARANTY BANK FEED.
  - ④ POLE MOUNTED METER FOR PARKING LOT LIGHTING.

**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
M	ELECTRIC METER - EXTERIOR OF BUILDING GROUND LEVEL MOUNTED U.O.N. IB=INSIDE BUILDING, OR=ON ROOF
53	METER REFERENCE NUMBER SEE SHEET E7 & E8
⊕	ROUND 'BARREL TYPE' UTILITY TRANSFORMER.
⊞	PAD MOUNTED RECTANGULAR UTILITY TRANSFORMER.
⤴	WEATHER-HEAD SHOWN WHERE FEEDER ENTERS BUILDING FOR INSIDE BUILDING (IB) METERS.

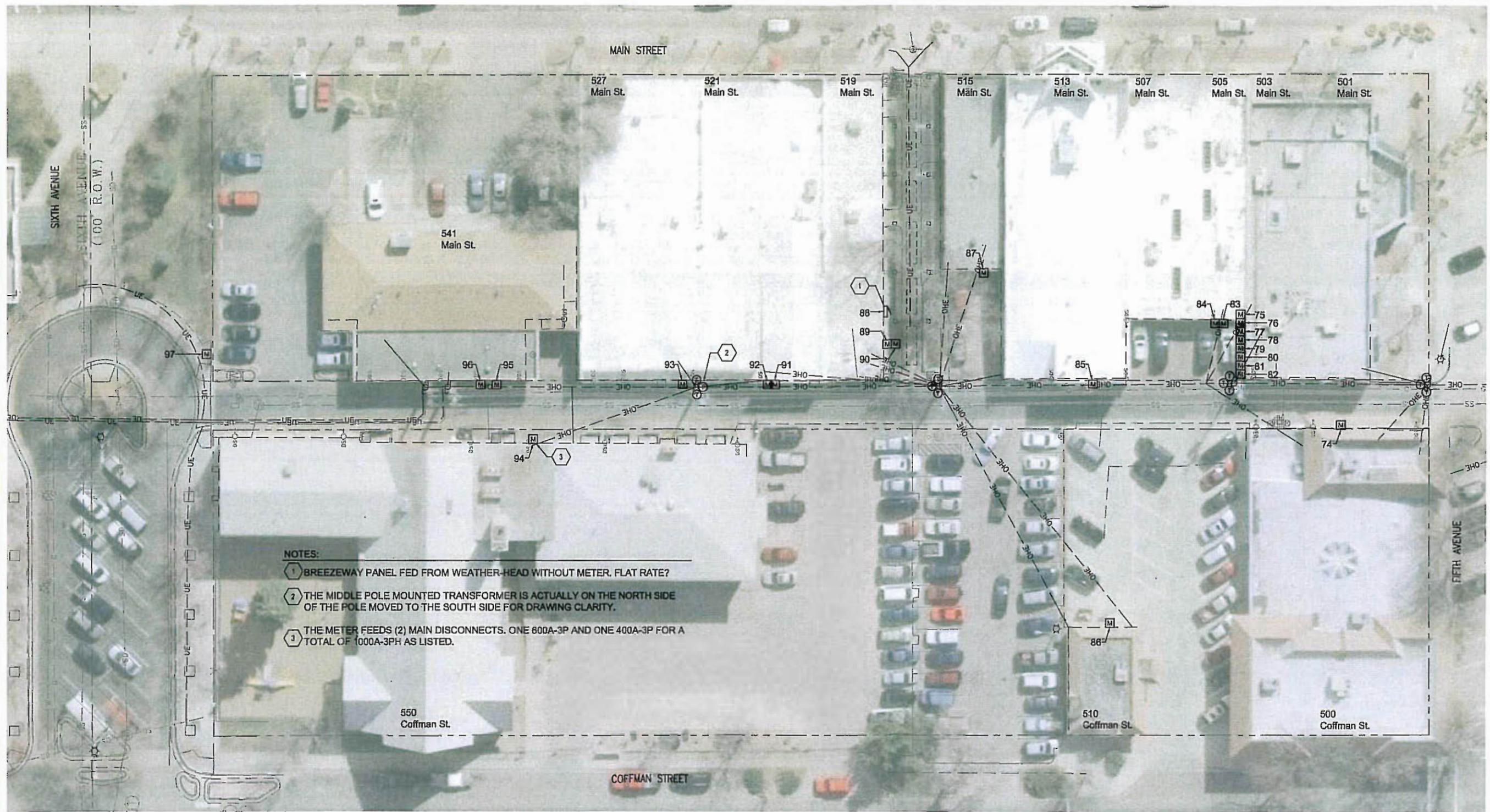


**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
ELECTRICAL SERVICE DROP/  
METER INVENTORY  
4TH AVE TO 5TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 3-2**

CLANTON & ASSOCIATES  
LIGHTING DESIGN AND ENGINEERING  
1000 W. COLLEGE AVE. SUITE 100  
LONGMONT, CO 80501

SCALE: 1" = 40'

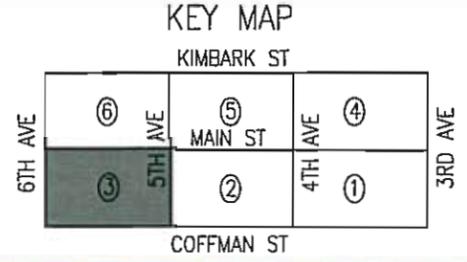


**NOTES:**

- ① BREEZEWAY PANEL FED FROM WEATHER-HEAD WITHOUT METER. FLAT RATE?
- ② THE MIDDLE POLE MOUNTED TRANSFORMER IS ACTUALLY ON THE NORTH SIDE OF THE POLE MOVED TO THE SOUTH SIDE FOR DRAWING CLARITY.
- ③ THE METER FEEDS (2) MAIN DISCONNECTS. ONE 800A-3P AND ONE 400A-3P FOR A TOTAL OF 1000A-3PH AS LISTED.

**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
[M]	ELECTRIC METER - EXTERIOR OF BUILDING GROUND LEVEL MOUNTED U.O.N. IB=INSIDE BUILDING, OR=ON ROOF
53	METER REFERENCE NUMBER SEE SHEET E7 & E8
⊙	ROUND 'BARREL TYPE' UTILITY TRANSFORMER.
⊠	PAD MOUNTED RECTANGULAR UTILITY TRANSFORMER.
⇨	WEATHER-HEAD SHOWN WHERE FEEDER ENTERS BUILDING FOR INSIDE BUILDING (IB) METERS.



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
ELECTRICAL SERVICE DROP/  
METER INVENTORY  
5TH AVE TO 6TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 3-3**

CLANTON & ASSOCIATES  
LIGHTING DESIGN AND ENGINEERING  
1000 W. MAIN ST. SUITE 100  
LONGMONT, CO 80501

SCALE: 1" = 40'



**NOTES:**

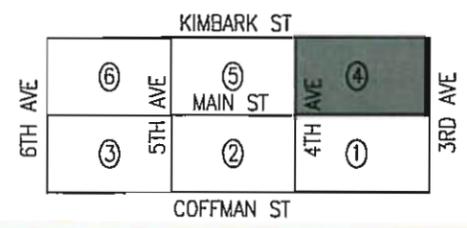
- ① BREEZEWAY PANEL FED FROM WEATHER-HEAD WITHOUT METER. FLAT RATE?
- ② POLE MOUNTED METER FEEDING THE BUILDING AT 314 MAIN ST. WITH A THREE PHASE DROP TO (2) SINGLE PHASE WEATHER HEADS FEEDING (2) MAINS IN BASEMENT. ONE 150A-2P, FUSED SWITCH AND ONE 150A-2P BREAKER FOR A TOTAL OF 300A-2P AS LISTED.

380 Main St. 372 Main St. 370 Main St. 364 Main St. 360 Main St. 356 1/2 Main St. 356 Main St. 350 Main St. 346 Main St. 344 Main St. 338 Main St. 336 Main St. 334 Main St. 332 Main St. 324 Main St. 320 Main St. 318 Main St. 316 Main St. 314 Main St. 312 Main St. 302 Main St. 300 Main St.

**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
M	ELECTRIC METER - EXTERIOR OF BUILDING GROUND LEVEL MOUNTED U.O.N. IB=INSIDE BUILDING, OR=ON ROOF
53	METER REFERENCE NUMBER SEE SHEET E7 & E8
⊙	ROUND 'BARREL TYPE' UTILITY TRANSFORMER.
T	PAD MOUNTED RECTANGULAR UTILITY TRANSFORMER.
⤴	WEATHER-HEAD SHOWN WHERE FEEDER ENTERS BUILDING FOR INSIDE BUILDING (IB) METERS.

**KEY MAP**



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
ELECTRICAL SERVICE DROP/  
METER INVENTORY  
3RD AVE TO 4TH AVE EAST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 3-4**

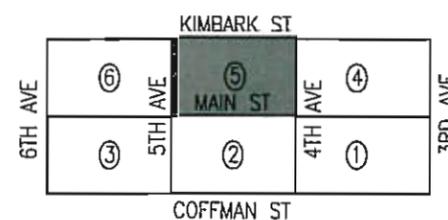
CLANTON & ASSOCIATES  
LIGHTING DESIGN AND ENGINEERING  
CITY OF LONGMONT COLORADO  
LORIS  
SCALE: 1" = 40'



**ELECTRICAL LEGEND**

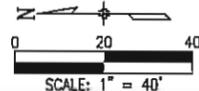
SYMBOL	DESCRIPTION
M	ELECTRIC METER - EXTERIOR OF BUILDING GROUND LEVEL MOUNTED U.O.N. IB=INSIDE BUILDING, OR=ON ROOF
53	METER REFERENCE NUMBER SEE SHEET E7 & E8
⊙	ROUND 'BARREL TYPE' UTILITY TRANSFORMER.
⊞	PAD MOUNTED RECTANGULAR UTILITY TRANSFORMER.
⤴	WEATHER-HEAD SHOWN WHERE FEEDER ENTERS BUILDING FOR INSIDE BUILDING (IB) METERS.

**KEY MAP**



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
ELECTRICAL SERVICE DROP/  
METER INVENTORY  
4TH AVE TO 5TH AVE EAST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 3-5**





ELECTRICAL SERVICE DROP/METER INVENTORY										
Meter ref. #	Meter Number	Sequence	Meter size FTM or CT	Multi-meter from 1 OH	Meter Loc I/E	Business/Owner Name	Business Address	Voltage-Phase-Wire	Service Amps	Overhead / Under-ground
1	24 965 546	H	800A CT		E			120/208V-3ph-4W	800A-3P	0
2	93 260 418	H	600A CT		E			120/208V-3ph-4W	600A-3P	0
3	96 280 653	H	125A FTM	Common	E			120/208V-1ph-3W	60A-2P	0
4	58 793 673	H	125A FTM	WeatherH	E			120/208V-1ph-3W	100A-2P	0
5	58 892 461	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
6	55 982 463	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
7	100 805 695	C	200A FTM		E			120/208V-1ph-3W	200A-3P	0
8	32 484 526	H	200A FTM		E			120/208V-3ph-4W	150A-3P	0
9	42 657 977	H	200A FTM		E			120/208V-3ph-4W	(2) 150A-3P	0
10	44 529 735	H	200A FTM		E			120/208V-3ph-4W	100A-3P	0
11	56 280 463	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
12	56 285 478	H	125A FTM		E			120/208V-1ph-3W	70A-2P	0
13	56 280 632	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
14	56 280 455	H	125A FTM	Common	E			120/208V-1ph-3W	100A-2P	0
15	56 280 504	H	125A FTM	Gutter	E			120/208V-1ph-3W	100A-2P	0
16	Flat rate?	H	no meter					120/208V-1ph-3W	100A-2P	0
17	68 096 771	H	200A FTM		E			120/208V-1ph-3W	150A-2P	0
18	83 725 973	H	200A FTM		E			120/208V-1ph-3W	200A-2P	0
19	60 091 473	H	200A FTM		E			120/208V-1ph-3W	150A-2P	0
20	46 063 187	H	200A FTM		E			120/208V-3ph-4W	100A-3P	0
21	96 763 238	H	200A FTM		E			120/208V-1ph-3W	200A-2P	0
22	47 539 180	H	200A FTM		I			120/208V-1ph-3W	60A-2P	0
23	47 539 181	H	200A FTM		I			120/208V-1ph-3W	40A-2P	0
24	56 280 707	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
25	49 235 676	H	200A FTM		E			120/208V-3ph-4W	150A-3P	0
26	87 577 627	C	200A FTM		E			120/208V-1ph-3W	200A-2P	0
27	87 577 587	C	200A FTM		E			120/208V-1ph-3W	200A-2P	0
28	68 100 090	C	200A FTM	Common	I			120/208V-1ph-3W	100A-2P	0
29	68 100 057	C	200A FTM	100A-2P	I			120/208V-1ph-3W	100A-2P	0
30	60 781 049	H	200A FTM		E			120/208V-1ph-3W	Inside Bld	0
31	95 189 417	H	200A FTM		E			120/208V-3ph-4W	150A-3P	0
32	55 444 190	H	200A FTM		E			120/208V-3ph-4W	200A-3P	0
33	56 680 817	H	125A FTM	Common	E			120/208V-1ph-3W	60A-2P	0
34	56 680 469	H	125A FTM	WeatherH	E			120/208V-1ph-3W	60A-2P	0
35	55 417 661	H	400A CT		E			120/208V-3ph-4W	200A-3P	0
36	88 926 250	H	200A FTM	Common	E			120/208V-3ph-4W	200A-3P	0
37	73 985 263	H	200A FTM	Gutter	E			120/208V-3ph-4W	200A-3P	0
38	43 216 698	H	125A FTM		E			120/240V-1ph-3W	100A-2P	0
39	42 462 739	H	125A FTM		E			120/240V-1ph-3W	100A-2P	0
40	42 441 471	H	125A FTM	6-Meter Bank 600A Max. Gear	E			120/240V-1ph-3W	60A-2P	0
41	44 223 705	H	125A FTM		E			120/240V-1ph-3W	60A-2P	0
42	44 182 078	H	125A FTM		E			120/240V-1ph-3W	60A-2P	0
43	Meter Space		no meter		E			120/240V-1ph-3W	N/A	0
44	32 191 008	H	CT In T'form		E			120/208V-3ph-4W	1800A-3PH	0
45	80 661 420	H	200A FTM		E			120/208V-3ph-4W	150A-3P	0
46	01 699 362	H	400A CT		E			120/208V-3ph-4W	(2) 200A-3P	0
47	77 935 299	H	125A FTM		E			120V-1ph-2W	20A-1P	0
48	92 719 546	H	800A CT		E			120/208V-3ph-4W	(2) 200A-3P	0
49	58 793 009	H	125A FTM	5-Meter fed from	E			120/208V-1ph-3W	100A-2P	0
50	58 891 846	H	125A FTM	common	E			120/208V-1ph-3W	100A-2P	0
51	58 793 654	H	125A FTM	Gutter on	E			120/208V-1ph-3W	100A-2P	0
52	58 891 904	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0

TABLE INFORMATION HAS BEEN REMOVED FROM THIS DOCUMENT DUE TO INDIVIDUAL BUSINESS/PROPERTY OWNER INFORMATION

Meter ref. #	Meter Number	Sequence	Meter size FTM or CT	Multi-meter from 1 OH	Meter Loc I/E	Business/Owner Name	Business Address	Voltage-Phase-Wire	Service Amps	Overhead / Under-ground
53	58 891 804	H	125A FTM	Roof	E			120/208V-1ph-3W	100A-2P	0
54	33 005 469	H	200A FTM	Common	E			120/208V-1ph-3W	200A-2P	0
55	24 339 738	H	200A FTM	Gutter	E			120/208V-3ph-4W	150A-3P	0
56	Flat rate?	H	no meter					120/208V-1ph-3W	100A-2P	0
57	64 687 324	H	200A FTM		E			120/208V-1ph-3W	150A-2P	0
58	100 805 661	H	200A FTM		E			120/208V-1ph-3W	200A-2P	0
59	56 280 668	H	125A FTM		E			120/208V-1ph-3W	125A-2P	0
60	28 343 993	H	200A FTM	Common	E			120/208V-3ph-4W	100A-3P	0
61	56 680 471	H	125A FTM	Gutter	E			120/208V-1ph-3W	100A-2P	0
62	92 644 601	H	200A FTM		E			120/208V-3ph-4W	200A-3P	0
63	64 381 264	H	200A FTM	Common	E			120/208V-1ph-3W	200A-2P	0
64	63 282 965	H	200A FTM	Gutter	E			120/208V-1ph-3W	200A-2P	0
65	33 455 402	H	CT inside B		E			120/208V-3ph-4W	1600A-3PH	0
66	39 885 286	H	200A FTM		E			120/208V-3ph-4W	125A-3P	0
67	49 240 195	H	200A FTM		E			120/208V-3ph-4W	125A-3P	0
68	81 127 219	H	200A FTM	6-Meter Bank 800A Max. Gear	E			120/208V-3ph-4W	125A-3P	0
69	81 127 212	H	200A FTM		E			120/208V-3ph-4W	200A-3P	0
70	80 661 424	H	200A FTM		E			120/208V-3ph-4W	125A-3P	0
71	81 127 235	H	200A FTM		E			120/208V-3ph-4W	125A-3P	0
72	39 885 288	H	200A FTM	2-meter	E			120/208V-3ph-4W	200A-3P	U
73	39 885 285	H	200A FTM	800A Max.	E			120/208V-3ph-4W	200A-3P	U
74	31 930 381	H	CT inside B		E			120/208V-3ph-4W	800A-3PH	0
75	Housing only	C	no meter		E			120/208V-3ph-4W	50A-3P	0
76	47 111 434	C	200A FTM	8-meter Bank 600A 3P Main disconnect switch FRN600 FUSES	E			120/208V-3ph-4W	175A-3P	0
77	42 450 000	C	200A FTM		E			120/208V-3ph-4W	60A-3P	0
78	44 529 733	C	200A FTM		E			120/208V-3ph-4W	60A-3P	0
79	48 845 788	C	200A FTM		E			120/208V-3ph-4W	100A-3P	0
80	47 111 421	C	200A FTM		E			120/208V-3ph-4W	100A-3P	0
81	50 915 773	C	200A FTM		E			120/208V-3ph-4W	100A-3P	0
82	80 661 408	C	200A FTM		E			120/208V-3ph-4W	100A-3P	0
83	64 001 352	C	200A FTM		E			120/208V-3ph-4W	200A-3P	0
84	42 679 069	C	200A FTM		E			120/208V-3ph-4W	200A-3P	0
85	90 282 175	H	600A CT?		E			120/208V-3ph-4W	(3) 200A-3P	0
86	87 577 570	H	200A FTM		E			120/208V-1ph-3W	100A-2P	0
87	60 484 638	H	200A FTM		E			120/208V-1ph-3W	150A-2P	0
88	87 577 682	H	125A FTM	2-meter	E			120/208V-1ph-3W	100A-2P	0
89	87 577 644	H	125A FTM	200A Max.	E			120/208V-1ph-3W	100A-2P	0
90	Flat rate?	H	no meter					120/208V-1ph-3W	100A-2P	0
91	46 944 830	H	200A FTM	Common	E			120/208V-3ph-4W	200A-3P	0
92	50 915 754	H	200A FTM	Gutter	E			120/208V-3ph-4W	100A-3P	0
93	97 787 447	H	300A CT		E			120/208V-3ph-4W	(3) 100A-3P	0
94	31 487 616	H	CT wall mtd		E			120/208V-3ph-4W	1000A-3P	0
95	01 274 139	H	300A CT	Common	E			120/208V-3ph-4W	250A-3P	0
96	63 332 891	H	200A FTM	Gutter	E			120/208V-3ph-4W	100A-3P	0
97	100 805 710	H	200A FTM		E			120/208V-1ph-3W	125A-2P	U
98	93 260 395	H	400A CT		E			120/208V-3ph-4W	400A-3P	U
99	93 260 397	H	400A CT		E			120/208V-3ph-4W	400A-3P	U
100	56 680 823	H	125A FTM		E			120/208V-1ph-3W	100A-2P	U
101	56 680 497	H	200A FTM		E			120/208V-1ph-3W	100A-2P	U
102	55 417 221	H	200A FTM		E			120/208V-3ph-4W	100A-3P	0
103	55 981 388	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
104	56 285 448	H	125A FTM		E			120/208V-1ph-3W	100A-2P	0
105	01 284 547	H	200A FTM		E			120/208V-3ph-4W	300A-2P	0

TABLE INFORMATION HAS BEEN REMOVED FROM THIS DOCUMENT DUE TO INDIVIDUAL BUSINESS/PROPERTY OWNER INFORMATION

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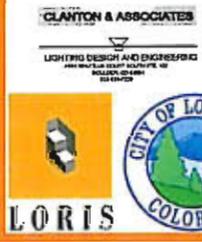
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6

LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
ELECTRICAL SERVICE DROP/  
METER INVENTORY  
JUNE 30, 2010

FIGURE 3-7



1 NOT USED.

2 SERVICE AMPERAGE OF THIS METER BANK IS DETERMINED BY THE MAXIMUM AMPERAGE OF THE METER BANK GEAR RATING.

3 THIS IS THE AMP RATING OF THE MAIN GEAR IN THE BASEMENT OF THE GUARANTY BANK & TRUST BUILDING. THERE ARE MANY FUSE/SWITCH BUCKETS ON THIS GEAR AND IT IS NOT EASILY IDENTIFIABLE WHICH ARE THE SERVICE DISCONNECTS AS THEY ARE NOT LABELED.

4 THIS IS THE AMP RATING OF THE MAIN GEAR IN THE BASEMENT OF THE US BANK BUILDING. THERE ARE (6) FUSE/ SWITCH BUCKETS (ALL LABELED "SERVICE DISCONNECT") ON THIS GEAR TOTALING 1500 AMPS.

5 THIS IS THE AMP RATING OF THE MAIN GEAR IN THE PAVILION BUILDING. THERE ARE MANY FUSE/SWITCH BUCKETS ON THIS GEAR AND IT IS NOT EASILY IDENTIFIABLE WHICH ARE THE SERVICE DISCONNECTS AS THEY ARE NOT LABELED.

6 POLE MOUNTED METER FEEDING THE BUILDING AT 314 MAIN ST. WITH A THREE PHASE DROP TO (2) SINGLE PHASE WEATHER HEADS FEEDING (2) MAINS IN BASEMENT. ONE 150A-2P, FUSED SWITCH AND ONE 150A-2P BREAKER FOR A TOTAL OF 300A-2P AS LISTED.

Meter ref. #	Meter Number	Sequence	Meter size FTM or CT	Multi-meter from 1 OH	Meter Loc I/E	Business/Owner Name	Business Address	Voltage-Phase-Wire	Service Amps	Overhead / Under-ground
106	87 577 636	H	200A FTM		E			120/208V-1ph-3W	150A-2P	O
107	86 880 690	H	125A FTM		E			120/208V-1ph-3W	100A-2P	O
108	64 383 664	H	125A FTM		E			120/208V-1ph-3W	100A-2P	U
109	64 387 347	H	125A FTM	3-meters 1-gutter	E			120/208V-1ph-3W	100A-2P	U
110	68 100 131	H	125A FTM		E			120/208V-1ph-3W	100A-2P	U
111	27 719 341	H	200A FTM		E			120/208V-1ph-3W	200A-2P	U
112	86 880 698	H	200A FTM		E			120/208V-1ph-3W	200A-2P	U
113	63 320 569	H	125A FTM		E			120/208V-1ph-3W	100A-2P	U
114	87 577 603	H	200A FTM		E			120/208V-1ph-3W	200A-2P	U
115	58 891 690	H	125A FTM		E			120/208V-1ph-3W	100A-2P	U
116	Flat rate?	H	no meter					120/208V-1ph-3W	100A-2P	U
117	68 100 071	H	125A FTM		E			120/208V-1ph-3W	200A-2P	O
118	Spare Housing	H	no meter		E			120/208V-1ph-3W	N/A	O
119	63 332 898	H	200A FTM	4-meters (1) 3ph Weather head	E			120/208V-3ph-4W (2)100A-2P	0	O
120	100 805 663	H	200A FTM		E			120/208V-1ph-3W	60A-2P	O
121	56 882 028	H	125A FTM		E			120/208V-1ph-3W	70A-2P	O
122	Spare Housing	H	no meter		E			120/208V-1ph-3W	100A-2P	O
123	87 577 692	H	200A FTM		E			120/208V-1ph-3W	60A-2P	U
124	68 096 777	H	125A FTM		E			120/208V-3ph-4W	150A-2P	U
125	47 539 231	H	200A FTM		I			120/208V-3ph-4W	200A-3P	U
126	87 577 635	H	200A FTM		E			120/208V-1ph-3W	200A-2P	U
127	84 111 366	H	CT Inside B		E			120/208V-3ph-4W	1600A-3PH	U
128	93 260 417	H	CT Inside B		E			120/208V-3ph-4W	600A-3P	U
129	63 320 560	H	200A FTM		E			120/208V-3ph-4W	200A-2P	U
130	46 096 735	C	200A FTM		E			120/208V-3ph-4W	200A-3P	O
131	26 022 352	C	200A FTM		E			120/208V-3ph-4W	200A-3P	O
132	49 240 204	H	200A FTM		E			120/208V-3ph-4W	225A-3P	O
133	60 187 835	H	200A FTM		E			120/208V-1ph-3W	200A-2P	O
134	47 111 428	H	200A FTM		E			120/208V-3ph-4W	100A-2P	O
135	92 644 565	H	200A FTM		E			120/208V-3ph-4W	260A-2P	O
136	58 793 275	H	125A FTM	4-meter cabinet 400A Max.	E			120/208V-1ph-3W	100A-2P	O
137	Spare Housing	H	no meter		E			120/208V-1ph-3W	N/A	O
138	Spare Housing	H	no meter		E			120/208V-1ph-3W	N/A	O
139	meter space	H	no meter		E			120/208V-1ph-3W	N/A	O
140	87 577 628	H	200A FTM	2-meter 400A Max.	E			120/208V-1ph-3W	200A-2P	O
141	68 100 068	H	200A FTM		E			120/208V-1ph-3W	200A-2P	O
142	68 100 134	H	200A FTM		E			120/208V-1ph-3W	200A-2P	O
143	55 417 229	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
144	46 096 738	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
145	33 455 414	H	400A CT		E			120/208V-3ph-4W	400A-3P	O
146	80 661 439	H	200A FTM		E			120/208V-3ph-4W	150A-3P	O
147	97 787 449	H	CT Inside B		E			120/208V-3ph-4W	400A-2P	O
148	58 891 511	C	125A FTM	8-meter stack 400A-2P Main disconnect switch	E			120/208V-1ph-3W	Inside Bld	O
149	58 793 655	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O
150	58 891 822	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O
151	Spare Housing	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O
152	58 793 611	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O
153	58 793 179	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O
154	100 805 666	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O
155	58 892 401	C	125A FTM		E			120/208V-1ph-3W	Inside Bld	O

TABLE INFORMATION HAS BEEN REMOVED FROM THIS DOCUMENT DUE TO INDIVIDUAL BUSINESS/PROPERTY OWNER INFORMATION

Meter ref. #	Meter Number	Sequence	Meter size FTM or CT	Multi-meter from 1 OH	Meter Loc I/E	Business/Owner Name	Business Address	Voltage-Phase-Wire	Service Amps	Overhead / Under-ground
156	58 793 003	H	125A FTM		E			120/208V-1ph-3W	60A-2P IB	O
157	Flat rate?	H	no meter					120/208V-1ph-3W	100A-2P	O
158	56 881 996	H	125A FTM		I			120/208V-1ph-3W	100A-2P	O
159	56 680 854	H	125A FTM		I			120/208V-1ph-3W	100A-2P	O
160	68 096 775	H	200A FTM		I			120/208V-1ph-3W	200A-2P	O
161	58 793 174	H	125A FTM	2-meter 1-gutter	E			120/208V-1ph-3W	100A-2P	O
162	60 187 862	H	200A FTM		E			120/208V-1ph-3W	200A-2P	O
163	58 92 202	H	125A FTM		E			120/208V-1ph-3W	100A-2P	O
164	01 017 135	H	CT wall mtd		E			120/208V-3ph-4W	400A-3P	O
165	96 763 232	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
166	68 100 085	H	200A FTM	2-meter 1-gutter	E			120/208V-3ph-4W	200A-3P	U
167	87 577 599	H	125A FTM		E			120/208V-3ph-4W	100A-2P	U
168	64 664 609	H	CT wall mtd		E			120/208V-3ph-4W	400A-3P	O
169	34 318 967	H	200A FTM		E			120/208V-3ph-4W	200A-2P	O
170	63 284 382	H	125A FTM	3-meter 1-gutter	I			120/208V-1ph-3W	60A-2P	O
171	68 100 075	H	125A FTM		I			120/208V-1ph-3W	60A-2P	O
172	61 191 050	H	125A FTM		I			120/208V-1ph-3W	60A-2P	O
173	42 495 773	H	200A FTM	3-meter 1-gutter	E			120/208V-3ph-4W	100A-3P	O
174	68 100 117	H	125A FTM		E			120/208V-1ph-3W	100A-2P	O
175	42 679 071	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
176	29 013 184	H	200A FTM		E			120/240V-1ph-3W	200A-2P	O
177	48 445 334	H	200A FTM		E			120/240V-1ph-3W	200A-2P	O
178	96 763 237	H	200A FTM		E			120/208V-1ph-3W	200A-2P	O
179	88 926 247	H	200A FTM	3-meter 1-gutter	E			120/208V-3ph-4W	200A-3P	O
180	91 556 950	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
181	38 511 036	H	200A FTM		E			120/208V-3ph-4W	100A-3P	O
182	76 261 807	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
183	33 001 209	H	400A CT	6-meter fed from pad	E			120/208V-3ph-4W	400A-3P	U
184	29 094 042	H	200A FTM		E			120/208V-3ph-4W	125A-3P	U
185	64 051 956	H	125A FTM	mounted transformer	E			120/208V-3ph-4W	100A-3P	U
186	50 959 587	H	125A FTM		E			120/208V-3ph-4W	100A-3P	U
187	37 038 783	H	200A FTM		E			120/208V-3ph-4W	100A-3P	U
188	63 332 888	H	200A FTM		E			120/208V-3ph-4W	125A-3P	U
189	28 344 170	H	200A FTM		I			120/208V-3ph-4W	70A-3P	U
190	75 799 889	H	200A FTM		I			120/208V-3ph-4W	200A-3P	U
191	60 781 074	C	200A FTM	400A-3P	I			120/208V-3ph-4W	90A-2P	U
192	68 100 158	H	200A FTM	8-meter stack 600A-3ph Main	I			120/208V-1ph-3W	100A-2P	U
193	68 100 083	H	200A FTM		I			120/208V-1ph-3W	100A-2P	U
194	64 381 118	H	200A FTM		I			120/208V-1ph-3W	100A-2P	U
195	68 096 784	H	200A FTM	Gear fed from 400A-3P Breaker	I			120/208V-1ph-3W	100A-2P	U
196	68 100 113	H	200A FTM		I			120/208V-1ph-3W	100A-2P	U
197	64 381 266	H	200A FTM		I			120/208V-1ph-3W	100A-2P	U
198	64 387 341	H	200A FTM	next to mtr#191?	I			120/208V-1ph-3W	100A-2P	U
199	64 289 700	H	200A FTM		I			120/208V-1ph-3W	100A-2P	U
200	Flat rate?	H						120/208V-1ph-3W	100A-2P	O
201	90 282 205	H	CT Inside B		E			120/208V-3ph-4W	400A-3P	O
202	42 450 002	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O
203	83 335 438	H	600A CT		E			120/208V-3ph-4W	600A-3P	O
204	82 131 399	H	200A FTM		E			120/208V-3ph-4W	200A-3P	O

TABLE INFORMATION HAS BEEN REMOVED FROM THIS DOCUMENT DUE TO INDIVIDUAL BUSINESS/PROPERTY OWNER INFORMATION

- 1 EVERY EFFORT TO GET INTO THIS STRUCTURE TO VERIFY SERVICE AMPERAGE FAILED. THIS IS AN ESTIMATED SERVICE AMPERAGE BASED ON SERVICE CONDUCTORS AND AMPERAGE OF METER ONLY. IB = INSIDE BUILDING.
- 2 SERVICE AMPERAGE OF THIS METER BANK IS DETERMINED BY THE MAXIMUM AMPERAGE OF THE METER BANK GEAR RATING.
- 3 THIRD LEG OF THIS 3-PHASE DROP IS SPARED OFF INSIDE THE SPLICE BOX BELOW THIS METER. THAT MEANS THIS METER COULD BE A SINGLE PHASE METER INSTEAD OF 3-PHASE METER THAT EXISTS. FEEDS (2) 100A-2P MCB PANELS.
- 4 THIS METER HOUSING IS JUMPERED TO FEED A 100A-2P MCB PANEL, BUT ONLY (1) 20A-1P BREAKER IS "ON" IN THE PANEL. (1) 30A-2P AND (1) 15A-1P EXIST BUT ARE "OFF". FLAT RATE?
- 5 THIS METER IS FED FROM THE 400A-3P BREAKER JUST EAST OF THIS METER.
- 6 THIS (8) METER BANK IN THE BASEMENT OF THE 520 MAIN ST. IS ASSUMED TO BE FED FROM THE 400A-3P BREAKER EAST OF METER #191.

CLANTON & ASSOCIATES

LIGHTING DESIGN AND ELECTRICAL CONSULTING



LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
ELECTRICAL SERVICE DROP/  
METER INVENTORY  
JUNE 30, 2010

FIGURE 3-8



## SECTION 4: DRAINAGE, UTILITIES AND TRASH COLLECTION

### *DRAINAGE EXISTING CONDITIONS*

The drainage within the alleys has been observed both during a rainfall event and in the days following to evaluate its effectiveness. In nearly all locations the drainage is nonfunctional. Positive slopes away from buildings and toward inlet structures are not present, resulting in ponding and ‘bird baths’ that remain for several days until they evaporate.

The alleys appear to be originally constructed as a continuous concrete pan and transverse slope which collected water in the center of the alley and then dispersed surface water to either end of the block. Subsequent asphalt overlays have filled the pan to a level surface eliminating the cross slope and positive drainage away from buildings. The asphalt overlays have also disrupted the longitudinal flow of water to the block ends resulting in significant ponding throughout the alleys.

### **Storm Drainage**

Existing storm drains and inlets are generally present at either end of the alleys to collect water prior to entering the street and to mitigate the grade change where the alley pan dissipates to meet the level sidewalk crossing. Inlets grates are typically not adjusted to match recent overlays and are minimally effective in collecting surface drainage. Existing Inlets and drainage structures are connected to the City of Longmont storm drainage system.





# L O R I S

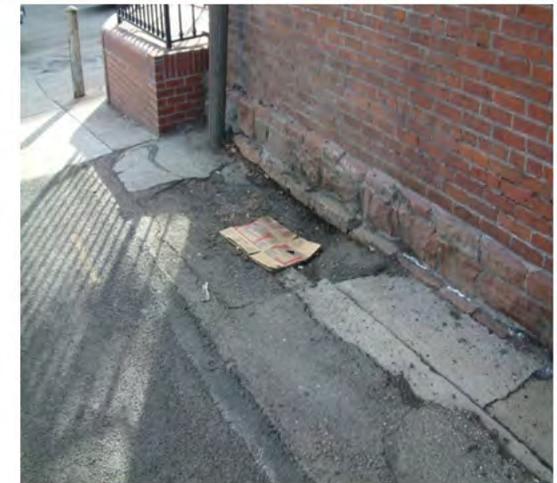
## Downspouts

Nearly all buildings have downspouts that collect water from roof drains and gutters and ‘splash’ at grade at the rear of buildings. The roof drains add additional surface runoff to the alley drainage. In several locations during larger rainfall, surface runoff will accumulate in the alleys and will likely pond at depths deep enough to reach the exterior face of buildings, thereby relying on the building foundations to channel surface drainage through the alleys instead of an effective cross pan.



## Pavement

The condition of the pavement varies from fair condition for some portions of recent asphalt overlays to poor condition for exposed areas of the original concrete pavement and some portions of deteriorated asphalt overlay. It is assumed that the asphalt overlay was necessitated by an overall deterioration of the concrete pavement underneath. Although this should be confirmed during Preliminary Design.



The lack of a functional drainage system within the alleys is likely to deter pedestrian and bicycle activity when standing water is present. Ineffective drainage and cross slopes increases the potential for flooding and property damage to existing buildings and foundations. Additionally, the deteriorating pavement does not present an aesthetic which is generally expected for a pedestrian facility.

## ***DRAINAGE OPPORTUNITIES***

### Storm Drainage

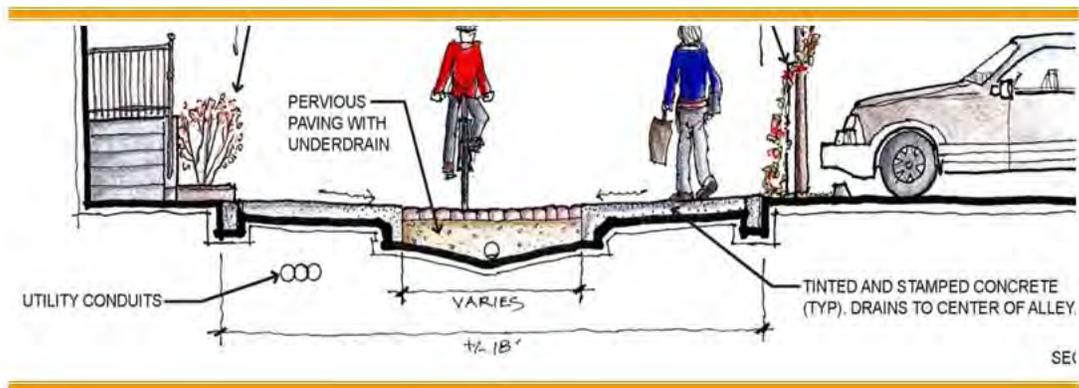
Provide effective drainage throughout alleys, remove existing pavement and reconstruct alleys with:

- ❖ Cross pan and slot drain at the center extending the length of alleys.
- ❖ Construct a continuous storm sewer with multiple inlets so positive drainage can be achieved throughout.
- ❖ Construct full width alley or center portion of alley with pervious pavers blocks or pervious asphalt pavement and underdrain system.



# L O R I S

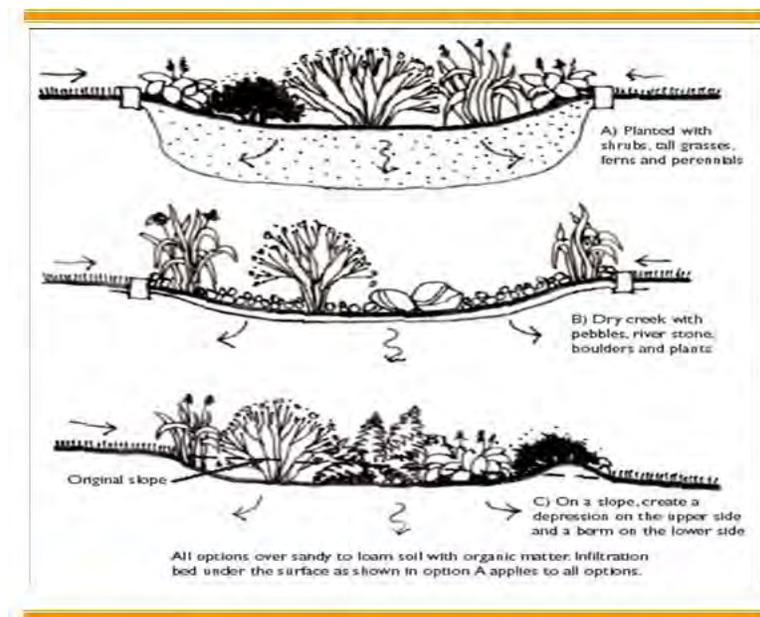
- ❖ Protect buildings and foundations by providing effective positive drainage, see above. Extend pavement replacement from right-of-way to face of building when within 24 inches by agreement with property owner.
- ❖ Tie drainage improvements to existing inlets and storm sewer system, adjust rim elevations, use bicycle friendly grates, replace as conditions warrant.
- ❖ Possibly completely reconstruct existing alley sewer system to make it more functional with the new alley configuration.





## Downspouts

- ❖ Provide downspout connections to the underground drainage system. It may be desirable to eliminate nuisance flows and snowmelt, not necessary if surface drainage is effective conveyed, see above.
- ❖ Consider diverting downspout drainage to irrigate landscaping in a “rain garden.”



## Paving

- ❖ Improve alley aesthetic with choice of paving materials, stamped/color concrete or asphalt paving, decorative paving blocks, or stone pavers to create variation in color, texture and patterns.
- ❖ Construct the new alleys with porous pavers allow drainage to infiltrate into the material and collect in a subgrade conduit. This will help to eliminate ponding, especially in areas where adequate slope drainage will be difficult to achieve, Utilizing porous pavers will also provide a consistent image throughout the corridor.
- ❖ Utilize paving to delineate spaces for vehicles and pedestrians, pedestrian crossings, or public areas.



## UTILITY EXISTING CONDITIONS

Utilities present within the alleys include sanitary sewer, storm sewer, overhead electric, telephone and cable TV, and gas. Refer to Power and Lighting section of this report for electric utilities and the Drainage section storm sewer.

**Sanitary Sewer** Sanitary sewer is present in all alleys, a sewer main runs north south with services to rear of buildings.

**Telephone and Cable TV** Telephone and Cable TV are currently on overhead poles with service to the rear of buildings.

**Gas** A natural gas is present in all alleys. A gas main line runs north south with meter locations at the rear of each buildings.



The condition of underground utilities is not currently known. Utility providers should be contacted to determine if utility mains and/or services should be replaced during construction of the alleys.



# L O R I S

## *UTILITY OPPORTUNITIES*

**Sanitary Sewer** Replace underground sanitary sewer and gas during alley construction as warranted.

**Telephone and Cable TV** Relocate Telephone and Cable TV to underground. Locate in common trench with electric.

**Gas** If possible, relocate gas meters to eliminate meter obstructions in alley and improve the visual aesthetic. If relocating services into each building is not practical, organize them visually in a line, screen them, or incorporate them into mural art.





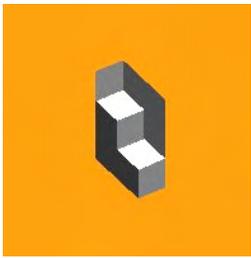
# L O R I S

## ***TRASH COLLECTION EXISTING CONDITIONS***

Trash collection is currently provided by various private service providers. A number of dumpsters, trash cans, recycling and cooking oil storage containers are present throughout the alleys. Several dumpsters are located in fenced enclosures or are tucked under building overhangs. The remainder of trash containers is visible. Dumpsters at the rear of buildings with little or no setback are located within the alley right-of-way.

Recycling containers were present at less than one quarter of the businesses within the project limits and were generally for 'co-mingle' (plastic, glass and can) collection. A compost recycling container was present at two locations, and cardboard recycling at one location. Cooking oil containers were generally present at the rear of restaurants.





# L O R I S

## **TRASH COLLECTION OPPORTUNITIES**

**Trash Collection** Consolidate trash collection via a Trash District to a midblock location outside of the alley Right-of-Way.

**Compactor** Use a compactor to minimize space requirements for trash collection.

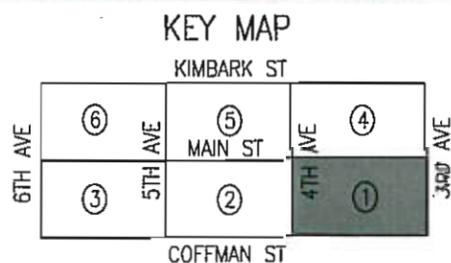
**Recycling** Provide recycling for comingled, paper, cardboard, and compost to encourage broader use of recycling for businesses and residents.

**Special Containers/Sorting** Require cooking oil containers and any trash that would be temporarily stored or staged at businesses to be fully screened and located outside of the alley Right-of-Way.





LEGEND		SYMBOL DESCRIPTION	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
TD	TRASH DUMPSTER	-ss-	SANITARY SEWER MAIN & MANHOLE
TC	TRASH CAN	-g-	NATURAL GAS MAIN
Δ R	RECYCLE	GM	GAS METER
Δ RCM	RECYCLE (CO-MINGLE)	PP	POWER POLE
Δ C	COMPOST		
DS	ROOF DRAIN/ DOWNSPOUT		

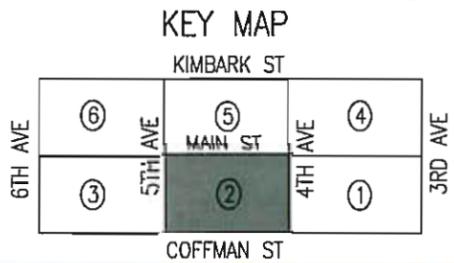


**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**DRAINAGE, UTILITIES & TRASH**  
**3RD AVE TO 4TH AVE WEST OF MAIN ST**  
**JUNE 30, 2010**

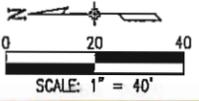
**FIGURE 4-1**



LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
TD	TRASH DUMPSTER	SS	SANITARY SEWER MAIN & MANHOLE
TC	TRASH CAN	G	NATURAL GAS MAIN
Δ R	RECYCLE	GM	GAS METER
Δ RCM	RECYCLE (CO-MINGLE)	PP	POWER POLE
Δ C	COMPOST		
DS	ROOF DRAIN/ DOWNSPOUT		

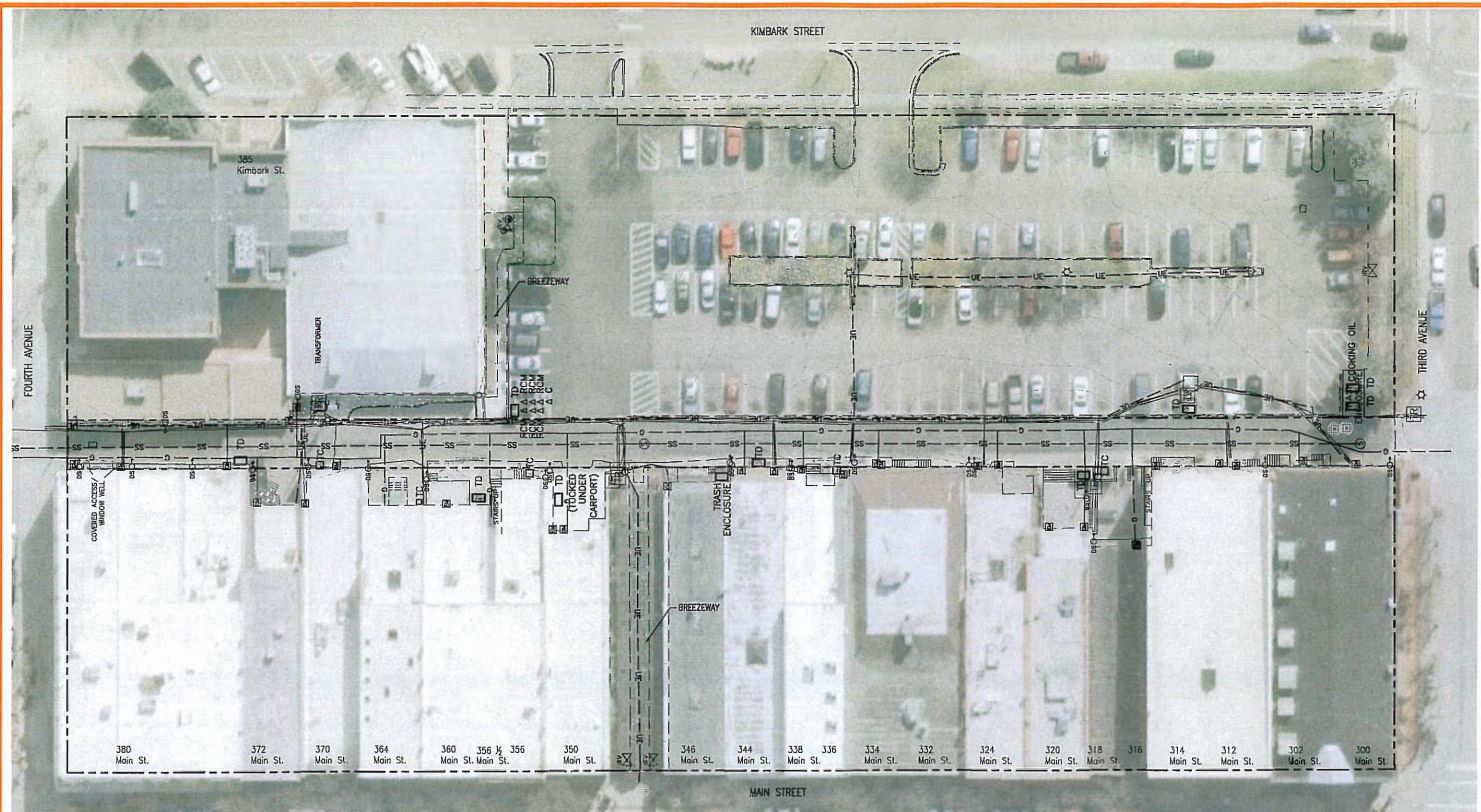


**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**DRAINAGE, UTILITIES & TRASH**  
 4TH AVE TO 5TH AVE WEST OF MAIN ST  
 JUNE 30, 2010



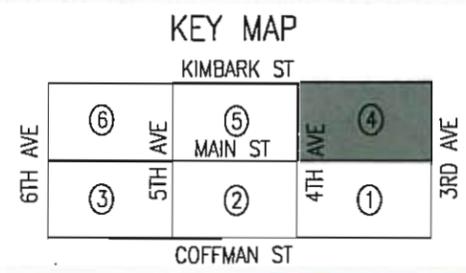
**FIGURE 4-2**





**LEGEND**

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
TD	TRASH DUMPSTER	SS	SANITARY SEWER MAIN & MANHOLE
TC	TRASH CAN	G	NATURAL GAS MAIN
Δ R	RECYCLE	GM	GAS METER
Δ RCM	RECYCLE (CO-MINGLE)	PP	POWER POLE
Δ C	COMPOST		
DS →	ROOF DRAIN/ DOWNSPOUT		



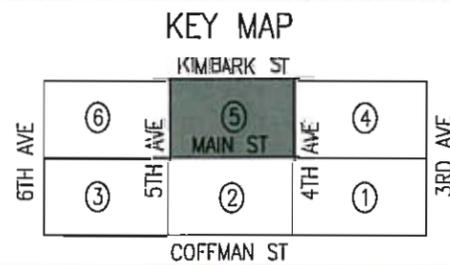
**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
DRAINAGE, UTILITIES & TRASH  
3RD AVE TO 4TH AVE EAST OF MAIN ST  
JUNE 30, 2010**



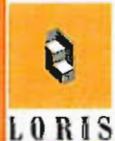
**FIGURE 4-4**



LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
TD	TRASH DUMPSTER	SS	SANITARY SEWER MAIN & MANHOLE
TC	TRASH CAN	---	NATURAL GAS MAIN
Δ R	RECYCLE	GM	GAS METER
Δ RCM	RECYCLE (CO-MINGLE)	PP	POWER POLE
Δ C	COMPOST		
DS	ROOF DRAIN/ DOWNSPOUT		



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
DRAINAGE, UTILITIES & TRASH  
4TH AVE TO 5TH AVE EAST OF MAIN ST  
JUNE 30, 2010**



**FIGURE 4-5**

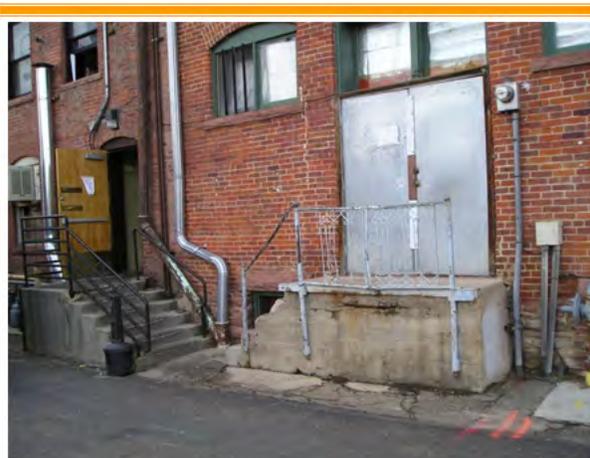




## SECTION 5: BUILDING ACCESS & REAR FACADES

### *BUILDING ACCESS EXISTING CONDITIONS*

Each block of the six alleys in the study area provides pedestrian and service / delivery access to the buildings adjacent to the alley. Some of these entries are at or near the alley level while a number can only be reached via steps or a ramp. The condition and appearance of the building entries varies considerably. A number of buildings also have garage-like roll-up doors. Several buildings have basements or basement accesses from the alley. Rather than providing a written summary of each of these entries, they are shown graphically at the end of this section.





# L O R I S

## ***BUILDING ACCESS OPPORTUNITIES***

- ❖ Encourage businesses to use their alley entrances for customer entrance (if the alley becomes a building's main point of egress, it will need to meet International Building Code and ADA requirements.)
- ❖ Visually screen trash and/or other business waste and storage
- ❖ Covenants should be defined to suggest a certain level of finish
- ❖ Create an alley sign code to coordinate and unify the signs along the alleys
- ❖ Install planters to highlight the location of rear entrance
- ❖ Provide awnings at the rear doorway to highlight business location.



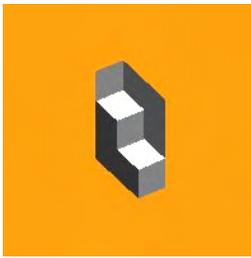
## ***BASEMENT EXISTING CONDITIONS***

A visual observation for the presence of basements was made from the alleys. Basements were identified through exposed windows or access hatches. The results of this inventory are included in Figures 5-1 through 5-6. A full inventory of basements should be made during Preliminary Design when the extent of impacts is known.

## ***BASEMENT OPPORTUNITIES***

Basement windows and access hatches must be considered as a part of the alleyscape. Care should be taken to not block light from windows where basements rely on natural daylighting. In addition, construction should not cover windows from a maintenance and waterproofing standpoint. Active access hatches should not be blocked and they may need to be replaced. Inactive access hatched could be abandoned.

The presence of basements will be considered when designing drainage and excavations adjacent to buildings. Levels of subgrade water content should not be



# L O R I S

increased to avoid water damage inside basements. Limits of excavation for underground utilities should be shored or limited in length to avoid undercutting and structural damage to basement walls.

## ***BUILDING FAÇADE EXISTING CONDITIONS***

The building alleyfronts consist of an eclectic mixture of style and function. Some businesses use the alley access only for deliveries and trash and recycling while others have taken advantage of the proximity to convenient public parking and created well defined alley entrances. The eastern alleys are at a lower elevation than Main Street requiring steps to make the transition from alley level to the first floor while the western alleys are slightly higher than Main Street and present a different set of problems. The alley facades reflect these differences as well as the variety in the types of businesses. The facades tend to be utilitarian in nature and sometimes lack any signs of efforts to make them more presentable.

## ***BUILDING FAÇADE OPPORTUNITIES***

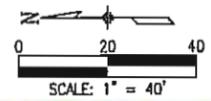
Since most of the improvements will be in the Right of Way, the screens, trash enclosures, paving, and infrastructure improvements are likely to be paid for by public funds. Individual properties each have a different set of problems. Therefore, a One-size-fits-all design guideline approach is not likely to work.

Because some buildings are actually at the rear property line, there is no room for owners to make improvements without encroaching into the public right of way. A 3' to 4' zone could be created that would allow certain improvements such as stairs, planters, awnings and the like. Care must be taken to insure that sufficient clearances exist for delivery vehicles. In many cases this 4' zone is already being used for storage of garbage cans and the like.

One of the goals of this process should be to give property owners encouragement, incentives and suggestions for making individual improvements to their properties. Since each property poses an entirely different set of problems, the guideline approach may not be appropriate. Rather, specific before/after examples and successful examples from other cities might be more effective to stimulate an owner to make changes. Perhaps LDDA improvement funds could be made accessible for proposals that met certain criteria.

Possible design guidelines for alleyfronts include:

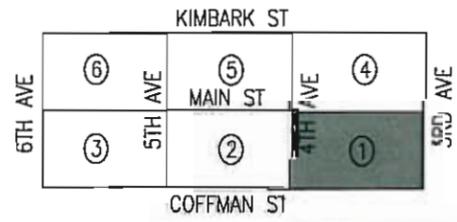
- ❖ Defining a level of maintenance, upkeep and general cleanliness for alleys behind businesses.
- ❖ Suggestions for finishes, painting, signs of alleyfronts.
- ❖ Opportunities for funding improvements to alleyfronts.
- ❖ Opportunities to provide public art murals on building alley facades.



**LEGEND**

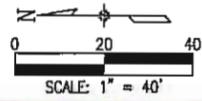
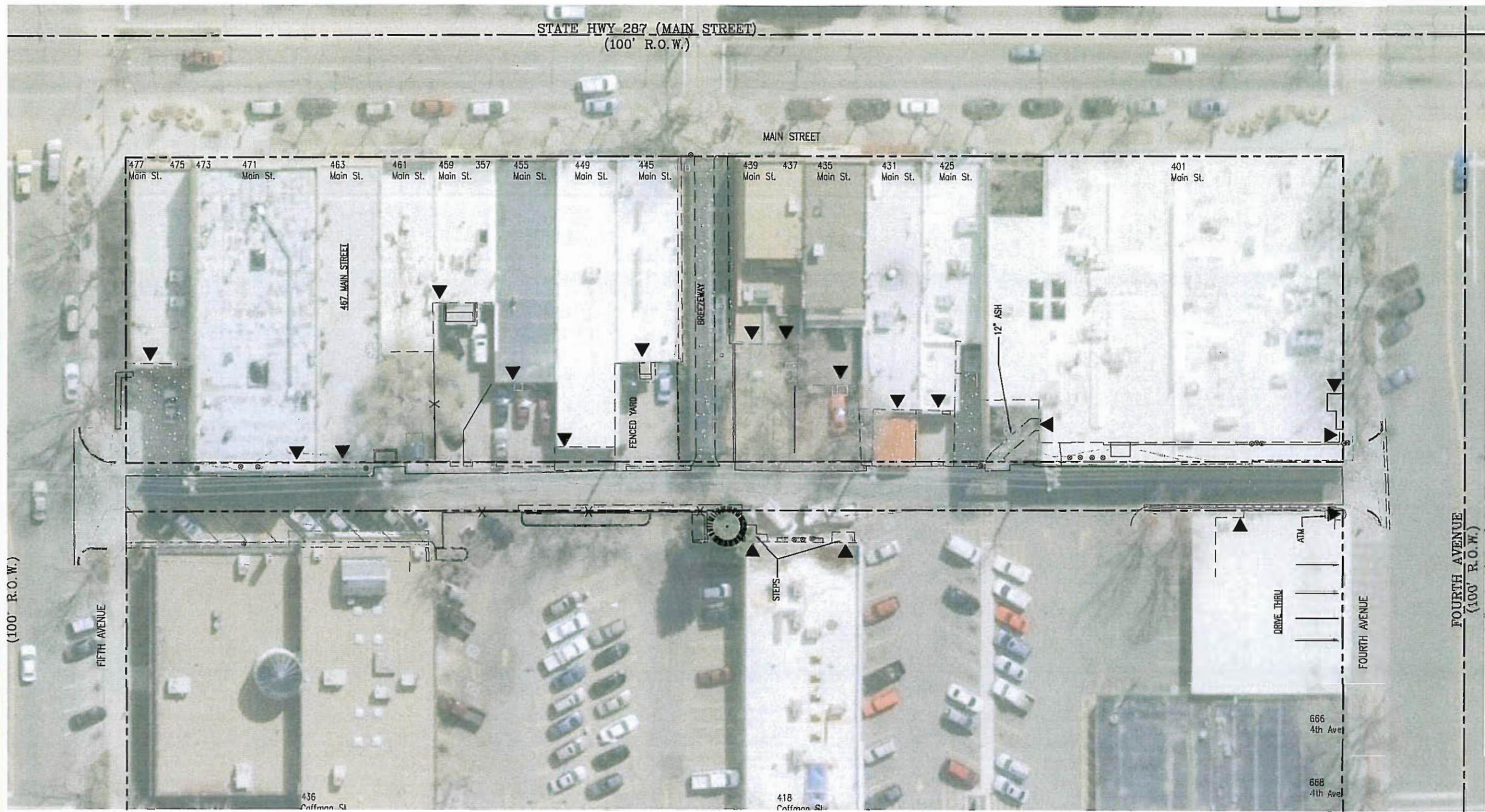
SYMBOL	DESCRIPTION
▼	DOOR
L	OVERHEAD DOOR
Ⓟ	BUILDING W/ BASEMENT

**KEY MAP**



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
BUILDING ACCESS  
3RD AVE TO 4TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

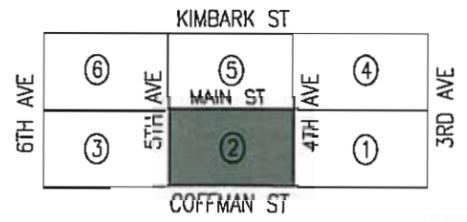
**FIGURE 5-1**



**LEGEND**

SYMBOL	DESCRIPTION
▼	DOOR
L	OVERHEAD DOOR
Ⓟ	BUILDING W/ BASEMENT

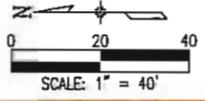
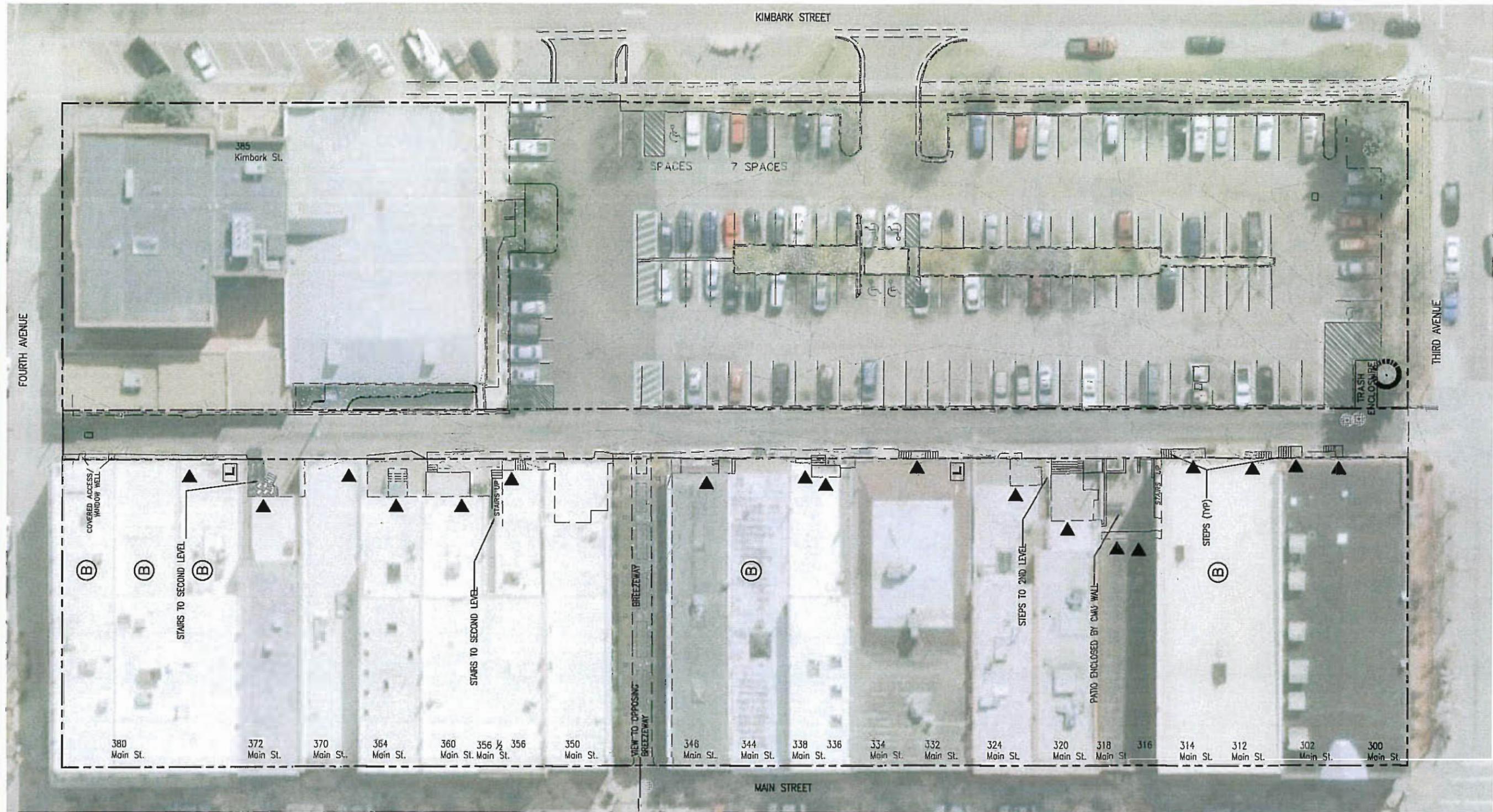
**KEY MAP**



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
BUILDING ACCESS  
4TH AVE TO 5TH AVE WEST OF MAIN ST  
JUNE 30, 2010**

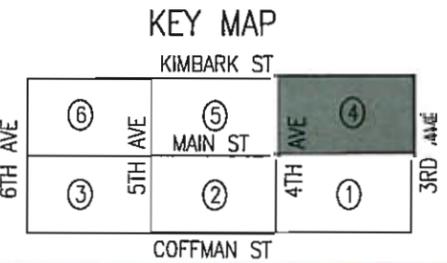
**FIGURE 5-2**





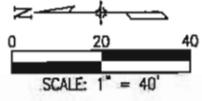
LEGEND

SYMBOL	DESCRIPTION
▼	DOOR
L	OVERHEAD DOOR
Ⓟ	BUILDING W/ BASEMENT



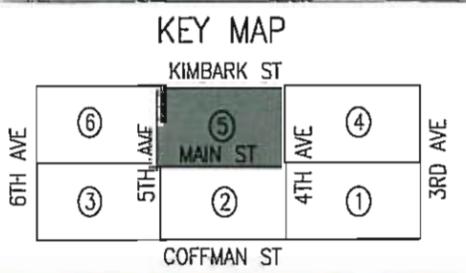
**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**BUILDING ACCESS**  
 3RD AVE TO 4TH AVE EAST OF MAIN ST  
 JUNE 30, 2010

**FIGURE 5-4**



**LEGEND**

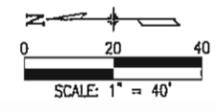
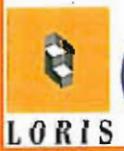
SYMBOL	DESCRIPTION
▼	DOOR
L	OVERHEAD DOOR
B	BUILDING W/ BASEMENT



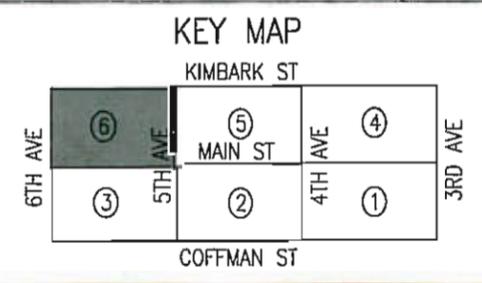
**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS  
BUILDING ACCESS  
4TH AVE TO 5TH AVE EAST OF MAIN ST  
JUNE 30, 2010**

**FIGURE 5-5**

10/11/11 10:41:06 AM - 2011-11-11 10:41:06 AM - 2011-11-11 10:41:06 AM

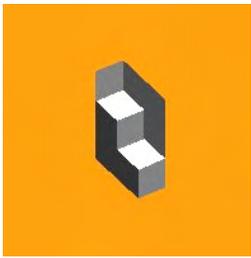


LEGEND	
SYMBOL	DESCRIPTION
▼	DOOR
L	OVERHEAD DOOR
Ⓚ	BUILDING W/ BASEMENT



**LONGMONT DOWNTOWN ALLEY IMPROVEMENTS**  
**BUILDING ACCESS**  
 5TH AVE TO 6TH AVE EAST OF MAIN ST  
 JUNE 30, 2010

**FIGURE 5-6**



## SECTION 6: ART IN PUBLIC PLACES

### *Art Existing Conditions*

#### **Murals & Signs**

Upon a cursory review of the alleys, the alleys appear to be devoid of existing art. However, closer observation reveals one location with a wall mural.

The mural is located above an upper level set back from the west alley between 3<sup>rd</sup> and 4<sup>th</sup> Street and is nearly unnoticeable from the alleyway.

Signage is sporadic, generally homemade and in need of upgrading.

#### **Sculpture**

The breezeways to Main Street reflect some sculptural forms at the alley entries with incorporated tile work accents.

In addition, the sign to the old Trojan Theater is another form of art located in the alleyways.





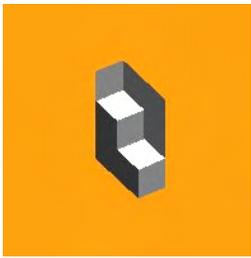
# L O R I S

## *Art Opportunities*

### **Murals & Signs**

Murals (tile mosaic, painted murals, brick relief murals, photo murals) either applied to an entire wall face or to only a portion of a wall to mask utilities such as gas meters provide an excellent opportunity for alley art. These opportunities could be sanctioned by the City or by the store owners. A mural design competition would be an exciting method of eliciting many ideas at various locations, or eventually along the entire alley. Murals could also be incorporated into the Breezeways. Murals developed by community groups would foster pride in the work while decreasing the likelihood of vandalism. Dramatic lighting could be incorporated to highlight murals at night.



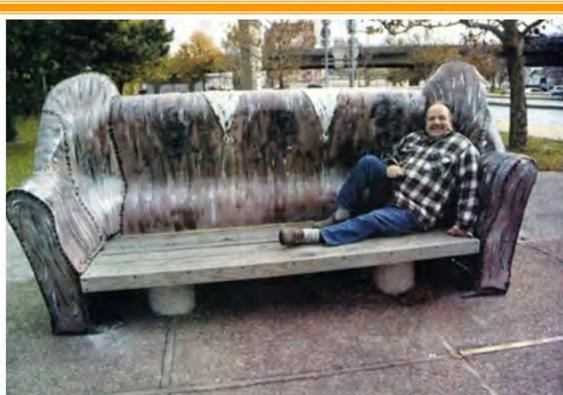


# L O R I S



## Alley Furniture

Benches, tables and other amenities that allow for pedestrians to stop, rest, and talk would also add to the friendly atmosphere of the alleys. Below are two examples of benches. Alley furniture could be sponsored by individuals or businesses.





# L O R I S

## Banners and Signs

Tall banners could be incorporated for aesthetic and functional purposes by being a part of the wayfinding system to highlight key circulation points such as breezeways or identify block businesses.





# L O R I S

## Sculpture

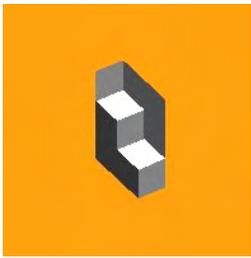
Pockets and pedestals for sculpture, temporary exhibits, bike racks, and kinetic sculptures could be provided at various locations to provide a sense of surprise as pedestrians circulate through the alleys.



“Alley Cats” by Christine Smock of Boulder, Colorado



Bike rack sculpture by John King of Lyons Colorado

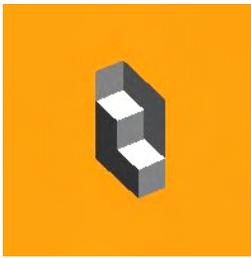


# L O R I S

## Trash Containers & Utility Covers

Trash containers, electric boxes, and utility meters could be painted or decorated to disguise their utilitarian function.





# L O R I S

## Experiential Art

Spaces for sound works, discovery works, poetic works, pavement art and written word could be provided at various locations.



## Historic Interpretation

Plaques, photo tiles or signage could be provided to highlight historically significant events or businesses that occupied the district.





# L O R I S

## Performing Art

Select alley locations, such as in the space between parking lots and the breezeways could be designed large enough to support a small group of musicians or performers. These performances could take place any time, but high downtown visitation times such as weekends or downtown festivals would provide the best opportunities. These performance areas could be also be used for merchants to sell their goods during high activity times.

