



# WELCOME TO THE SNAPSHOT

## Welcome to the Snapshot Report

The snapshot report is designed to provide an overview of the current conditions within the neighborhood. The snapshot is not exhaustive, but rather a foundation to engage in conversation about the existing and future plans to be developed.

The snapshots are divided and organized by the for major plan sections: Roads, Land Use, Utilities, and Drainage. Each report can be used as a stand-alone reference for understanding current conditions and challenges in the neighborhood. The Snapshots were developed through research of current data, previous planning actions, input from staff and technical advisors, and public input from the neighborhood.

## Commerce City History

As the 1990's progressed and Commerce City began to grow more rapidly toward Denver International Airport (DIA) and E-470, the older neighborhoods of Commerce City were no longer the only focus for the City. Today the City is looking at historic neighborhoods like Irondale to address long standing concerns.

## The Irondale Neighborhood History

The Irondale Neighborhood is an older part of the larger Commerce City community. The initial development being an the Kibler Stove Works plant. According to the 2015 Historic Preservation Plan, the neighborhood was originally "planned as a factory town."

Over time residences were built in the neighborhood as additional industrial uses cropped up. The mixture of uses and timing of development has created a unique environment. Infrastructure is a major challenge as accommodating these uses with distinct interests is needed.



The Irondale Neighborhood + Infrastructure Plan is made up of three major sections (below), with the Snapshot reports making up the Discover section in the written plan.



### DISCOVER

*A look at existing conditions and challenges.*



### EXPLORE + ASSESS

*Working with the community and stakeholders, review and weigh the options to determine the best fit for Irondale.*



### IMPLEMENTATION

*Putting together the steps to bring the vision forward through district action items.*





Transportation within Irontdale consists of a network of roadways; sidewalks and bicycle facilities are nearly non-existent. The main traffic flow is between 88th accessing the interstate to the west, along Rosemary St through the neighborhood, and continuing beyond to the southeast on Quebec Parkway. There are several school bus routes that pass through the neighborhood, but no public transit stops. Many roadways have issues with construction standards, width, and maintenance. Much of this can be attributed to the varying ages of construction, going back further than other neighborhoods in the City, as well as jurisdictional complications. In addition, there are four at-grade rail crossings at the four points of the neighborhood. These further cut the neighborhood off from other areas and can become a safety concern with the additional traffic loads traveling through Irontdale.

### Planned Improvements & Connections

- As part of the Instel development Ulster St. and 83rd Ave. will no longer connect. Both of these roadways will terminate in a cul-de-sac to accommodate a railroad spur.
- County staff has indicated that there are no short-term plans for improvement to the road network inside Irondale.
- County staff has indicated there are long term plans to widen both Rosemary St. and 88th Ave., but no funding source has been identified.
- Maintenance on potholes is an ongoing task.

### Special Considerations

- The roadways inside Irondale do not meet either the Commerce City Department of Public Works Engineering Construction Standards – Typical Street Sections, nor the Adams County Development Standards and Regulations – Typical Cross Sections, - for width nor amenities such as curb, gutter and sidewalk.
- There are no existing public transit stops inside Irondale.
- Rosemary St. is heavily used by north-bound vehicles at the evening peak-hour as a route to 88th Ave. to access Interstate-76.
- Rosemary St. is the only continuous north-south street through Irondale with access to the east-west roadway network.

### Roadway Jurisdictions & Responsibilities

(Details & map pending additional data)

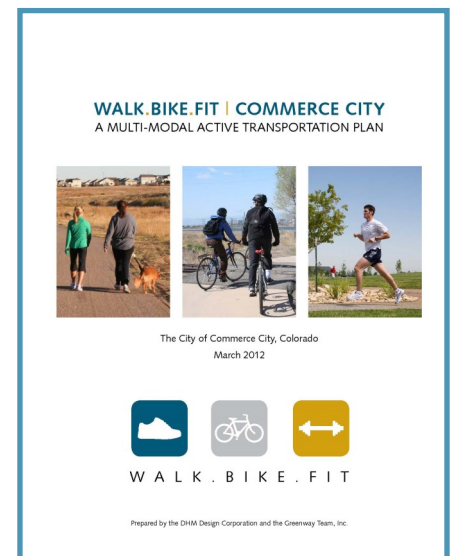


See  
Roads Jurisdiction Map  
on Page #

### Previous & Related Plans

#### WALK BIKE FIT MULTIMODAL TRANSPORTATION PLAN (2012)

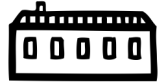
This city-wide plan looked to address the increasing traffic with swelling population and prepare and implement active transportation. The Irondale neighborhood appears in many of the maps in the document, but does not contain major destinations for active transportation, and is cut off from existing networks. The planned improvement according to this plan would be to create a multi-use path along Rosemary Street to provide access through the neighborhood for alternative transportation.



### Perspectives

The comments heard from public meetings reflect differing concerns and opinions about the future of the neighborhood. These comments are illustrative of the four main perspectives and comments regarding Irondale.

#### Business



Due to heavy northbound traffic on Rosemary St. during the evening peak hour, making a left turn onto Rosemary St. is nearly impossible for customers and employees.

#### Resident



Roads are in bad condition, even the repairs don't last.

There are trees, mailboxes and utility poles in the roads.

Width of Ulster St. near 88th Ave. is narrow. Cars are forced off the road and into the ditch to allow trucks to turn here. Residents are concerned that an increase in truck traffic on Ulster St. due to the Instel business will accentuate this problem.

Transition from two lane to one lane on Rosemary St. from Quebec Pkwy. Is too short.

Vehicles drive too fast on Rosemary St.

Quebec St. is too narrow.

#### Official



School District 14 – Lack of sidewalks and poor street lighting impacts safety of bus stops for children.

South Adams County Fire Protection District –

- Fire Station #4 is on the southeast corner of Rosemary St. and E. 86th Avenue. During heavy traffic it is hard to get an engine out of the Fire Station and onto Rosemary St.
- Between Pontiac St. and the railroad tracks there is very little road access for fire engines to access a potential fire in that area.

#### Visitor

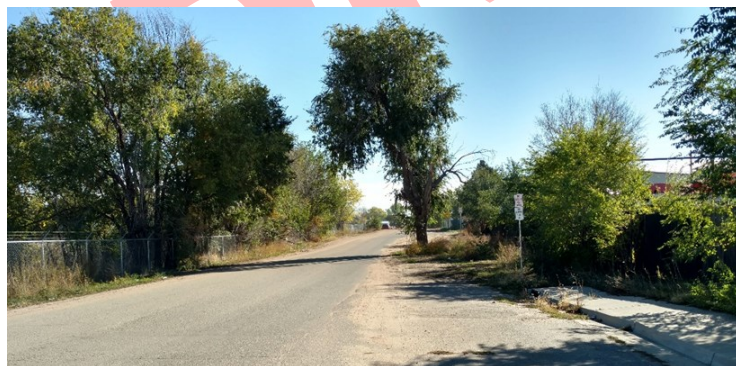


Not enough parking at businesses on east side of Rosemary St., between 81st Ave. and 82nd Ave.





## ROADS: CHARACTER IMAGES





# SNAPSHOT REPORT: LAND USE

## The Snapshot Report

The snapshot report is designed to provide an overview of the current conditions within the neighborhood. The snapshot is not exhaustive, but rather a foundation to engage in conversation about the existing and future plans to be developed.

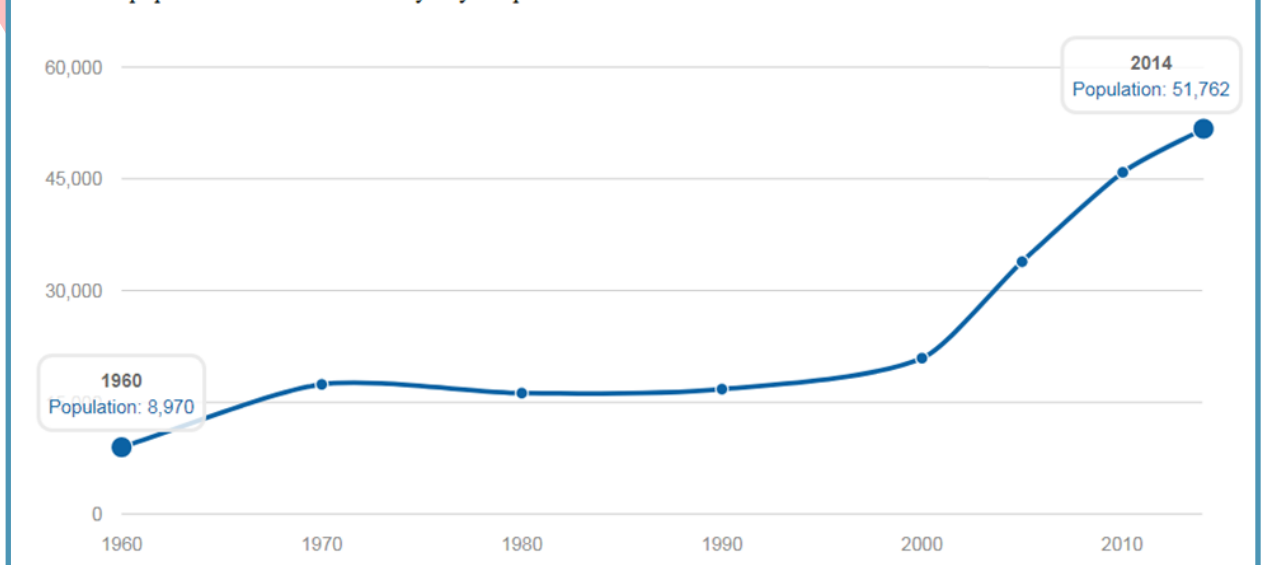
## Demographic Snapshot

As shown in the table below left, Irondale has a unique set of characteristics when compared to Commerce City as a whole. The neighborhood has experienced a slight decline in population in the past 15 or so years, while the City has over doubled. Income is lower and poverty rate higher in the neighborhood. However, the rate of unemployment is low; this could be indicative of underemployment or represent unreported incomes. The Hispanic Latino population makes up the majority of neighborhood residents, nearly double the population percentage of the City. Another interesting item to note is that nearly half of all homeowners in the neighborhood own the property outright.

	Irondale	Commerce City
Population (2015)	816	50,346
Population (2000)	821	20,991
Median Household Income	\$23,472	\$66,053
Poverty Rate	48.5%	15.6%
Unemployment	5.83%	6.82%
Median Year Home Built	1963	2001
Median Gross Rent	\$635	\$973
Homes with Debt (mortgage, equity loan, etc.)	54.5%	85%
Percent Hispanic / Latino	84.3%	45.6%

Source: US Census & US Census American Community Survey

Historical population of Commerce City city for period 1960-2014:



Data Source: <http://population.us/co/commerce-city/#1>



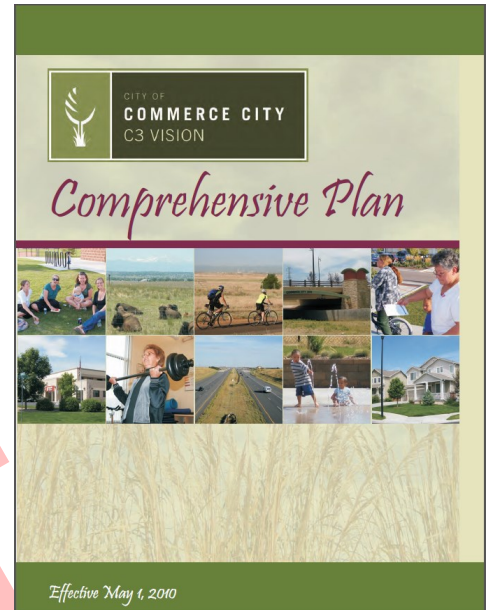


## Previous & Related Plans

### THE COMMERCE CITY COMPREHENSIVE PLAN (2010)

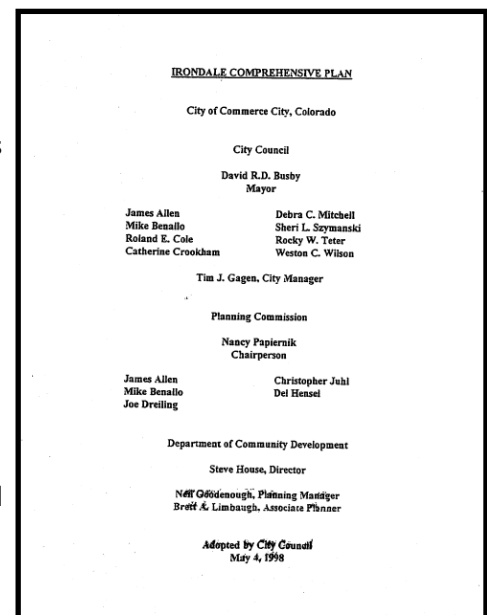
An update to the 1998 plan, the 2010 document featured a visioning component, as well as chapters on: future land use, economic development, fiscal sustainability, housing and neighborhoods, redevelopment and reinvestment, transportation, safety and wellness, parks, open space and recreation, public facilities and infrastructure, appearance and design, cultural facilities and tourism, environmental conservation and stewardship, and implementation. This massive document aligned the many silos of the community into one major plan and set of goals to move toward. It also calls out the Irondale Neighborhood as one of the five original City neighborhoods with goals for better connectivity of public infrastructure of all types, improving the image of the area through new policies and enforcement, and encouraging lighter industrial and commercial uses while preserving the existing residential pockets. Future land uses for the area include: Low density residential, Industrial / Distribution, General Industrial, embedded commercial, and more. Goals for Irondale include strengthening industrial areas, new employment opportunities, rezoning and annexation, encourage infill development, maintaining effective emergency services, creating clinics and programs, improving the overall appearance, and increasing connectivity within and outside the neighborhood. The focus of Irondale planning efforts should be on job creation through redevelopment of the district as a whole.

Full Plan available online at: <http://www.c3gov.com/home/showdocument?id=798>



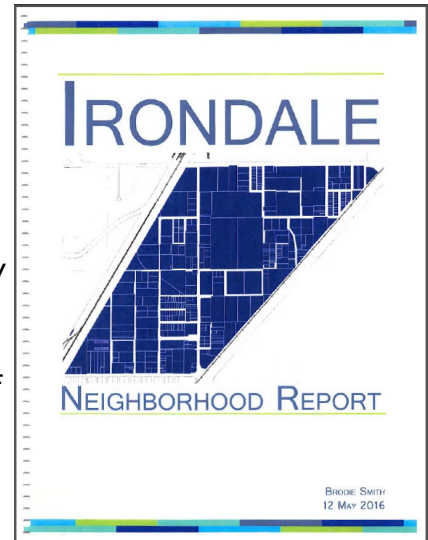
### THE IRONDALE COMPREHENSIVE PLAN ADDENDUM (1998)

This nearly 20 year old plan addresses land use, transportation, and utilities for the Irondale neighborhood. The plan was developed to address concerns from the Commerce City Comprehensive Plan of 1995 where the neighborhood was identified as industrial but little else was discussed in terms of mitigation of impacts or intensity of uses. Three residential areas within Irondale were identified and can be protected through regulating the commercial and industrial development impacts in the plan. The transportation section of the plan discusses the creation of the full street grid system in the neighborhood; certain roadway improvements were also called out. Conveyance systems for water, sewer and storm water and missing links highlight the need for better connections in the neighborhood. Finally, maps of the different land uses, roadway networks, drainage, and utilities are found in this plan. These goals and future improvement maps are referenced in this new document and can be used as a starting point for discussion of current plans and goals for the Irondale neighborhood.



## THE IRONDALE NEIGHBORHOOD REPORT (2016)

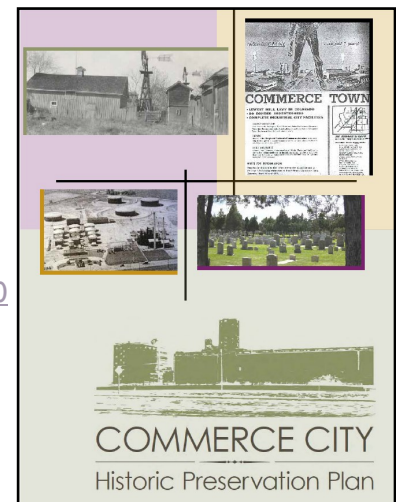
Developed as a CU-Denver planning graduate student capstone project, the Report recounts the Irondale neighborhood area development relative to the rest of Commerce City, inventories infrastructure, land use, and zoning, and provides recommendations to assist with future redevelopment efforts. Major recommendations included, generally, improving the infrastructure, creating priorities and guidelines for development, and incentivizing the development the City wants to see. The report compares a snapshot of land uses to zoning, as well as City versus County jurisdictions. A significant correlation appears to lie in the pockets of County parcels and non-conforming uses. Further, a statistical analysis of the population and economic indicators highlight the disparity between Irondale and the larger City. This report provides a snapshot into current conditions and a basis for understanding the neighborhood.



## THE COMMERCE CITY HISTORIC PRESERVATION PLAN (2015)

This document is the first major historic preservation plan for the City. It outlines the history of the area and original neighborhoods, including Irondale. Additionally, a SWOT analysis and implementation strategies make up the remaining portion of this plan.

Full document available online at: <http://www.c3gov.com/home/showdocument?id=2000>



## CITY COUNCIL GOALS (2016)

Commerce City Council uses an annual workplan that details individual steps to reach their major goals. To stay on track with the plans for the community, each step is broken down further into actionable items.

Full document available online at: <http://c3gov.com/index.aspx?NID=924>

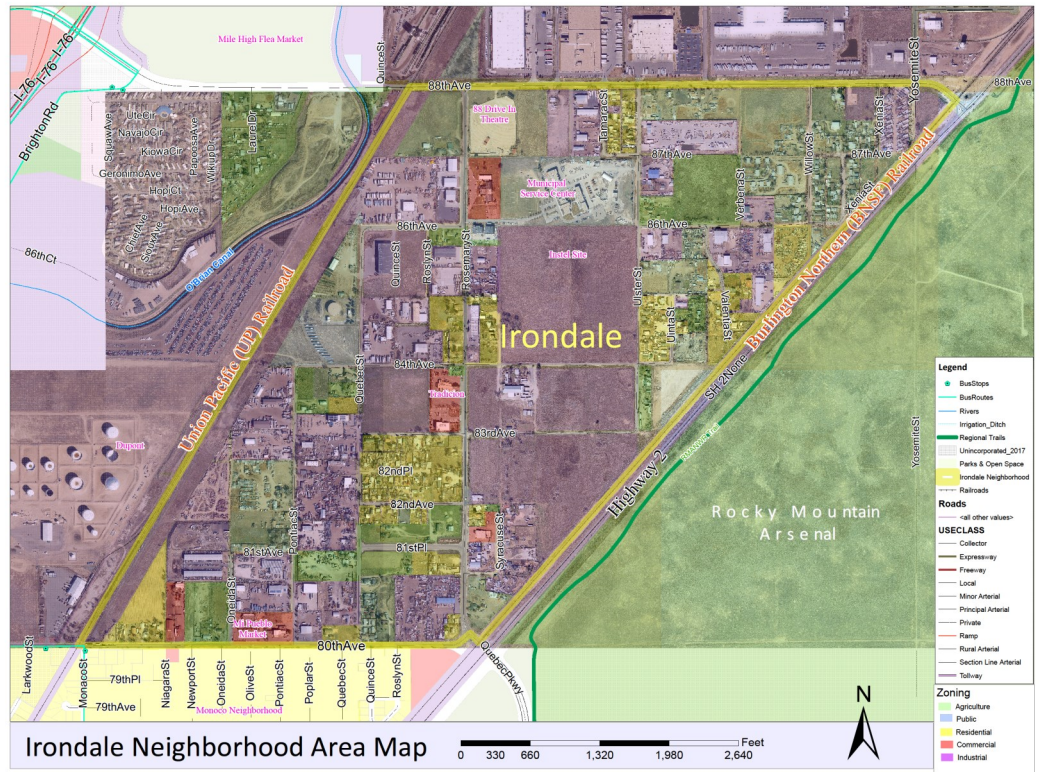
CITY COUNCIL GOAL #1			
Develop a balanced and vibrant economy to improve socioeconomic status			
Goal	Objective	Strategy	Action Plan
1.1	Related risks of land uses	<p>Adopt 30 new Senior Housing Units by January 31, 2018.</p> <p>Adopt the Irondale Neighborhood Plan by December 31, 2017.</p> <p>Increase the number of income restricted units by 200 in 2017.</p> <p>Increase in the available commercial and industrial flex space options by 4% in 2018.</p> <p>Increase amount of water available for increased growth and development.</p>	<p>Current LHFC markets have dropped dramatically over the past 6-12 months, which makes the Center Project financially difficult. Owners Rep advised waiting until LHFC pricing stabilizes to maximize funding gap.</p> <p>SPR for consultant assistance to assist city with creating a neighborhood and infrastructure plan for the Irondale Neighborhood advertised in February and responses received in March. Next steps are to interview the finalist and make a selection over the next month.</p> <p>Funding secured for Commons affordable housing project at 104th and Sable, breaking ground summer 2017.</p> <p>January 2017 Economic Activity Report shows 5,390 square feet of commercial real estate added in the city. Marketing and outreach efforts included: sponsoring CHC Development/Construction Seminar, six meetings with developers.</p> <p>Working with SACWED on buying 4A water, enhancing availability of developers and interested parties to directly buy water from the water district, and searching for additional water sources.</p>
1.2	Location of choice for primary residences	<p>Increase in the total number of businesses by 5% by 2018.</p> <p>Increase in the total number of primary jobs by 5% by 2018.</p>	<p>January 2017 Economic Activity Report shows business growth up 5.8% from previous year. Announcements: Salsar expansion, Rock River Ranches and Metal Street locations to the city, BREX activity: 39 new prospects and retention visits. Held Business Appreciation Awards Breakfast honoring seven companies. About 150 attendees, paid members after hours with over 100 attendees, assist with CC Chamber start-up.</p> <p>January 2017 Economic Activity Report shows job growth up 5% from previous year. This is a longer term objective and hasn't captured future job growth from Intel Steel and McLane projects yet. Held employer focus group to discuss worker training and workforce needs.</p>
1.3	Diverse mix of businesses	<p>Increase the overall percentage of companies within targeted industries by 2% over the next three years.</p> <p>Attract at least one new sit down restaurant in 2017.</p> <p>Attract at least one new hotel in 2017.</p>	<p>Performing market research and identifying diversification strategies.</p> <p>New restaurant openings in GL: Don's Pizzeria, Royal Nepal Restaurant, Pappas Louisiana, 4th Street, Los Tamaritos.</p> <p>Three active hotel prospects. Hotel study research.</p>



## Current Zoning

Irondale zoning is primarily a mixture of industrial and residential districts. Agricultural, Commercial, and Public zones are also present within the neighborhood. The map to the right shows the mixture of uses. A full size map is available in Maps Index. While a mixture of land uses within an area can be a positive attribute in creating live-work neighborhoods, the blend seen in Irondale is causing conflict with the major disparities of intensity. Grouping the zones together to step down intensities would allow for more natural buffers between conflicting uses.

Blending and stepping down intensities could address major impacts in viewsheds, noise, roads and utilities. Current zoning regulations require buffering between incompatible uses, with exact requirements determined by the abutting districts. For example, the industrial and residential uses together would require the highest buffer distance, number of trees and shrubs. Within the district, the buffering is not consistently implemented, largely due to the pre-existence of incompatible uses in the district and their establishment prior to buffering requirements. Few areas in Irondale meet the current set of city requirements.



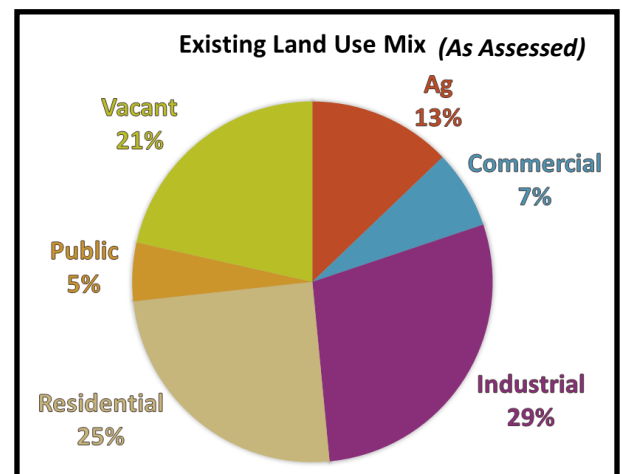
### DID YOU KNOW?

All but two Commerce City zone districts are represented in Irondale.

## Current Land Uses

Current land uses are predominantly residential and industrial. The map also indicates a large amount of agricultural land; however, this generally indicates undeveloped property rather than actual farm uses. It should be noted that a number of the residential properties have associated uses of either agricultural, with a number of farm animals, or industrial, with outdoor storage.

Locations of these uses are not well defined pockets within the neighborhood, but rather mixed throughout. Residential uses include a mobile home park as well as single family and multifamily units. Some of the units are at the end of dead end roads where less heavy traffic is present; however, a fair amount of these uses also lie along higher use corridors. Industrial uses are visually separated between the newer uses with a higher level of site design than established uses, permitted or not.





## Jurisdictions

Providing an additional layer of confusion are the different jurisdictions within the neighborhood. A majority of the properties are within Commerce City; however, a number of Adams County enclaves exist. The mixture of the two jurisdictions causes confusion regarding different standards and enforcement, responses to incidents, and providing continuity of service. Addressing these pockets through strategic discussions and working with both jurisdictions to provide guidance on standards of development for these parcels to create a better understanding for residents and smooth transition in the neighborhood.

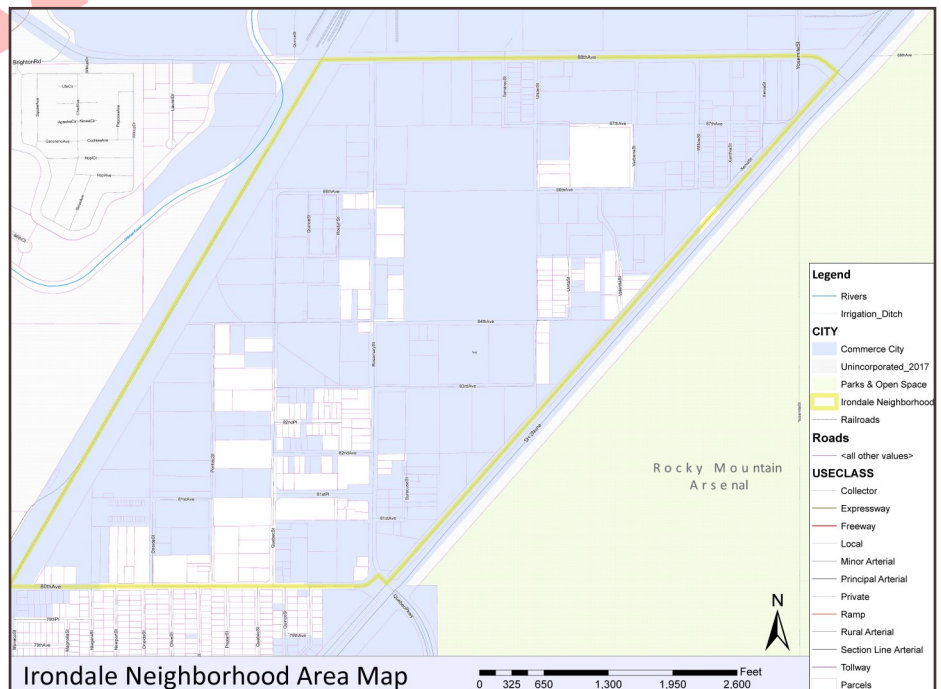
The land area and percent of residential properties in the City versus the County in the table to the right are particularly interesting. They indicate the preference of prior governmental bodies to annex commercial property. However, certain items will necessitate annexation into the City. For example, water tap when higher than a low use threshold will require annexation for services. Residential properties are provided with trash service by the city. From the property owner's perspective, the City has more regulations and higher taxes.

The map depicts areas in blue as Commerce City jurisdiction with areas in white as Adams County jurisdiction. The pocket to the lower center of the neighborhood includes a large number of residential units.

In 2007 a portion of the area was annexed. There were concerns from the residents at the time which have led to a decision not to forcibly annex. The 9 State or Exempted parcels would be a good target for annexation since property taxes wouldn't be affected by the change.

	Adams County	Commerce City	Total
<b>Parcels</b>	130	287	417
<b>% Parcels</b>	31.2%	68.8%	-
<b>Acres</b>	88.89	355.82	444.71
<b>% Land Area</b>	20%	80%	-
<b>Assessed Residential</b>	103	141	244
<b>Residential Acres</b>	53.65	94.31	147.96
<b>% Residential Area</b>	60.4%	25.5%	33.3%
<b>Assessed Commercial or Industrial</b>	18	63	81
<b>Commercial—Industrial Acres</b>	33.73	136.33	170.06
<b>% Commercial—Industrial Area</b>	37.9%	38.3%	38.2%
<b>Assessed Ag</b>	0	2	2
<b>Exempt or State</b>	9	38	57
<b>Not Available</b>	-	43	43

Source: Commerce City Planning & Adams County Assessor GIS Data



## Valuation Comparison

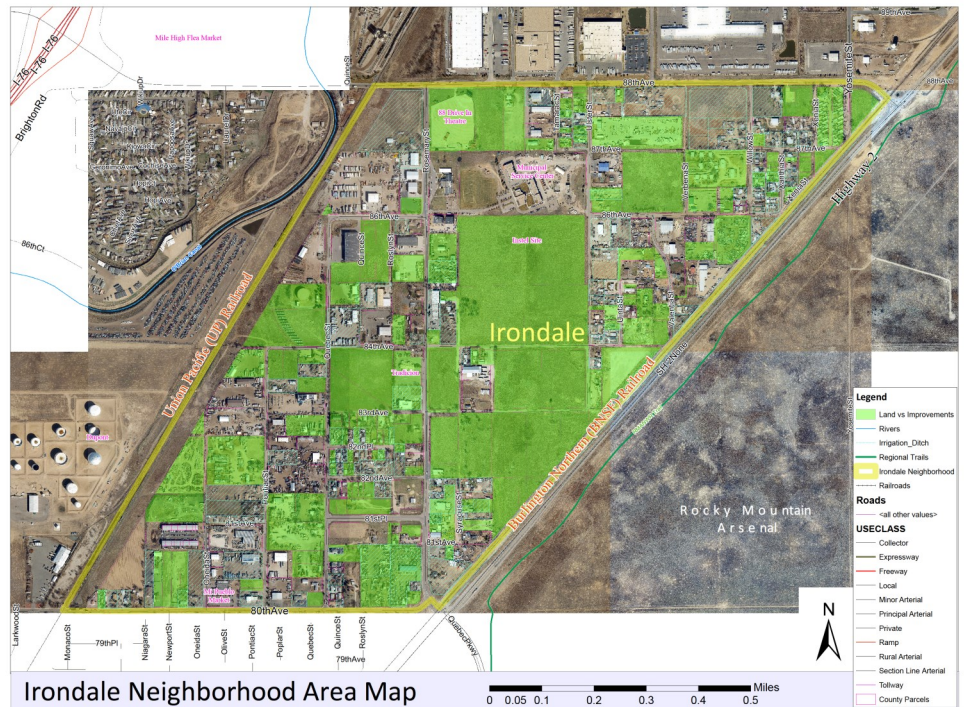
A good indicator of properties that are more likely to sell for redevelopment are those on which the underlying land value is greater than the improvements. In many cases this is vacant property, or a larger parcel with limited use. Looking at Irondale, a significant portion of properties fall into this category. This condition indicates areas where possible change might occur in the future through reinvestment.

## Ownership Patterns

According to the 2010 Census, 148 of the 237 housing units in the neighborhood were owner occupied, or roughly 62%. The 2016 American Community Survey estimated a higher percentage, based on growth trends in the area, at 70% of units being owner-occupied. These properties add a unique component to the future discussions because owner occupied units tend to be well-maintained and have been well cared for, and oftentimes owners have invested significant time and finances into their properties. Field mapping the owner occupied versus rental units in the neighborhood may be beneficial to moving forward with specific policy decisions.

## Special considerations

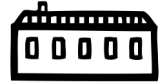
The importance of the brownfields within the Irondale neighborhood cannot be overstated. As redevelopment pressures mount, these properties may become more apt to change. However, the lack of infrastructure within the area creates an added layer of difficulty to improving the area by creating major financial hurdles. Looking at the future of the district, redevelopment of industrial uses into other industrial uses will be difficult without coordinated efforts and priorities for public infrastructure.



## Perspectives

The comments heard from public meetings reflect differing concerns and opinions about the future of the neighborhood. These comments are illustrative of the four main perspectives and comments regarding Irondale.

### Business



Business owners expressed concerns with cost of development and requirements in the neighborhood for business uses. They would like to see additional industrial uses permitted in the neighborhood. One meeting attendee discussed requirements like setbacks and shielding from Rights of Way for a new industrial storage type use. He believed it wasn't fiscally possible to move forward with a new site given these concerns.

Another meeting attendee shared that Irondale was a "Great location for Industrial with transportation proximity."

### Resident



Resident comments varied from impacts of trucks to roads and associated noise, animal impacts, and questions of future uses—should the area remain mixed, increase in residential or turn to commercial and industrial over time? A major theme during the first public meeting was a desire to know the future plan for the area so investment decisions could be made.

One person asked "Which is more valuable as a future use - Industrial or Residential?"

Another cited the "poor image of the area."

### Official



The public officials include elected representatives and the City and County staff. From an elected perspective, there is little political will to forcibly annex property with concerns from previous actions still high in residents' minds. From a City perspective, the mixture of uses and jurisdiction creates additional challenges for enforcement and can be a concern with residents as the different regulations and requirements come in to play.

### Visitor



A significant amount of visitor traffic to the neighborhood was pass-through along Rosemary. Exceptions include business patrons and employees. For example, someone may come to Irondale from the neighborhood to the south to visit the restaurant or market. The visitor is only seeing a quick view of the neighborhood. To improve the Irondale image the main corridors for visitor traffic could be looked at for improvements as funds are available and development occurs.





## LAND USE: CHARACTER IMAGES







# SNAPSHOT REPORT: DRAINAGE

## Waterways and waterbodies

The Irondale neighborhood is located near the downstream end of the Irondale Gulch Watershed. This watershed encompasses 23.4 square miles (14,979 acres) in total, compared to 556 acres for the Irondale neighborhood. The watershed begins upstream in the City of Aurora, near I-70, where it drains northwesterly through the City of Denver, Rocky Mountain Arsenal National Wildlife Refuge (RMA), and Commerce City before ultimately discharging into the South Platte River near 88th Avenue.

## The Snapshot Report

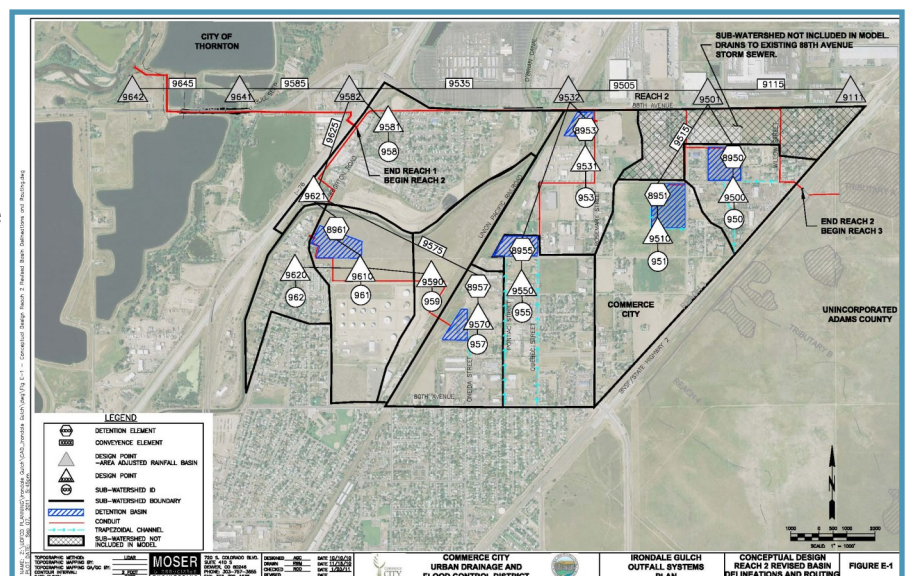
The snapshot report is designed to provide an overview of the current conditions within the neighborhood. The snapshot is not exhaustive, but rather a foundation to engage in conversation about the existing and future plans to be developed.

Drainage from the upper watershed comes from three different tributaries – named Irondale Gulch, Tributary A, and Tributary B. These flows cross northwesterly into Irondale by crossing over State Highway 2 and ponding behind the BNSF Railroad embankment. If the storm event is large enough, these flows could overtop the railroad tracks and flood into the Irondale neighborhood.

Between Irondale and the South Platte River, the overall flow pattern is northwest towards 88th Avenue and the Union Pacific Railroad crossing, then directly west towards the river. In general, there are no defined flow paths here; flows from upstream and runoff generated in the Irondale area move towards the river as shallow flooding and sheet flow. In the current condition, these flows are prevented from reaching the South Platte by the UPRR embankment, the O'Brian Canal, and Interstate Highway 76.

## Existing Network

The 2011 Irondale Gulch Outfall Systems Plan by Moser & Associates Engineering (Irondale OSP) explained that “the main flood hazard in the study area is the absence of conveyance in Commerce City west of SH 2.” There are no culverts under major roadways or railroads with significant embankments and there are no storm water detention or retention facilities within Commerce City. Last, the upper watershed and Irondale neighborhood area do not have a formal or informal outfall to the South Platte River.



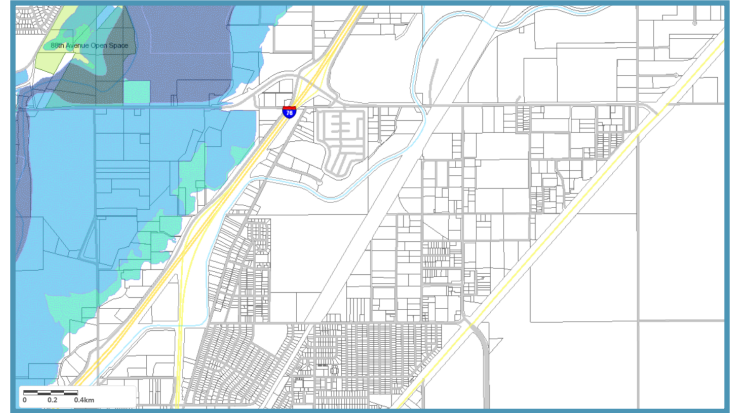


## Floodplains

The Irondale neighborhood is not located inside of a FEMA designated regulatory Special Flood Hazard Area (SFHA) or a Flood Hazard Area Delineation (FHAD) by Denver UDFCD. The Irondale area can be found on four (4) FEMA Flood Insurance Rate Map (FIRM) panels 08001C 0606H - 0609H.

## Planned Upgrades & Extensions

The 2011 Irondale OSP and Conceptual Design Report evaluated existing and proposed drainage conditions throughout the Irondale Gulch watershed – of which the Irondale neighborhood is a smaller portion closer to the outlet of the watershed, through which the upstream flows would naturally pass to reach the South Platte River.



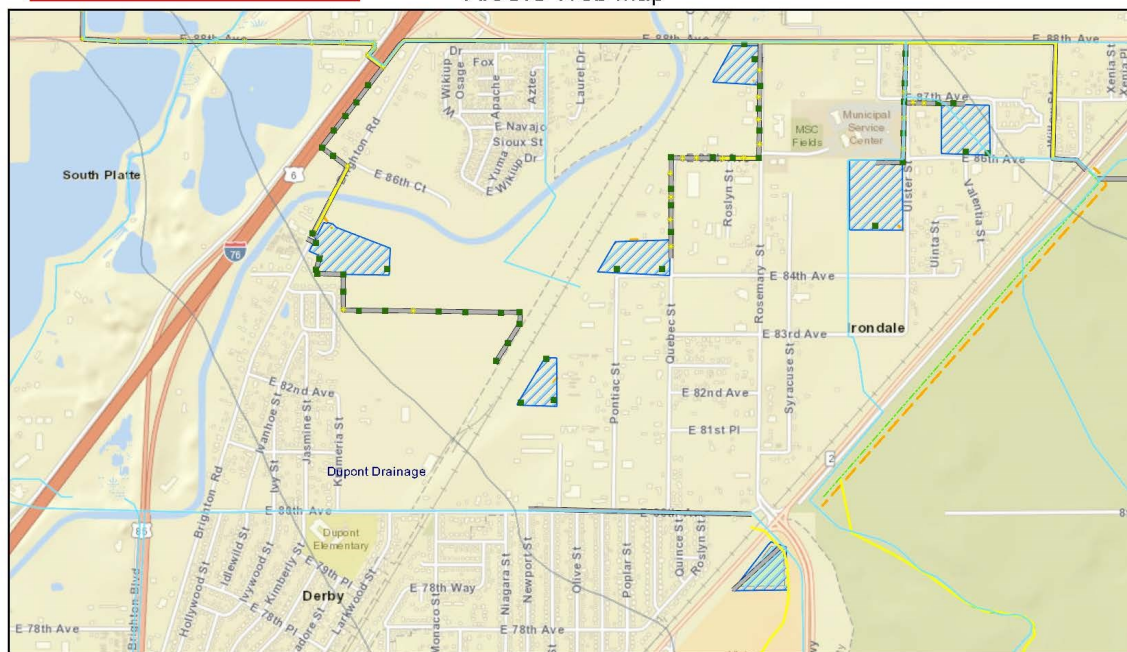
Above map image from Adams County GIS interactive flood-plain viewer available at: <https://gisapp.adco.gov.org/Html5Viewer/index.html?viewer=FEMA.FEMA>

The OSP divided the watershed into three geographic groups of similar nature:

- 1) The area from I-76 to the South Platte River (Reach 1);
- 2) The area from SH 2 to I-76, including the Irondale neighborhood (Reach 2); and
- 3) The upper portions of the watershed east of SH 2, including the Rocky Mountain Arsenal National Wildlife Refuge (RMA).

UDFCD Master Plan Facilities Map

ArcGIS Web Map



October 9, 2017

### Watershed Delineation

Override 1

Grade Control Structure

Pipe Appurtenances

Special Item Point

Special Item Linear

Special Item Area

Channel Improvements Linear

Channel Improvements Area

Removal Line

Removal Area

Storm Drain

1:18,056  
0 0.15 0.3 0.6 mi  
0 0.175 0.35 0.7 km

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NCCO, OpenStreetMap contributors, and the GIS User Community

Web App Builder for ArcGIS

City and County of Denver, Esri, HERE | City of Commerce City, County and City of Denver, Esri, HERE, Garmin, INCREMENT P, NGA, USGS |



For each of the three geographic areas, the OSP evaluated 8 categories of alternatives – or different combinations of detention and conveyance. This resulted in a selected plan, with conceptual design, for a 100-year conveyance system to reconnect the watershed with the South Platte River. Since there is no existing outfall path to the South Platte River, and since the lower areas of the watershed are mostly developed, the OSP selected plan relied heavily on detention/ retention in the RMA to lower peak flow rates and the size of the needed downstream conveyance system. However, even with significant amounts of detention, the selected plan proposed a large diameter concrete pipe/ concrete box culvert outfall system for approximately 1,200-feet along 88th Avenue, beginning just west of SH2 and proceeding west to the South Platte River.

Details of the OSP Selected and Conceptual Improvement Plans are summarized in the following list:

**Reach 1 – South Platte River to I-76 at 88th Avenue:**

Three (3) 48-inch reinforced concrete pipes (RCP) jacked under I-76;  
 One (1) 10'x3' reinforced concrete box culvert (approximately 4,600 feet);  
 Grading required along 88th Avenue, near the Bull Seep, to raise the roadway;  
 OSP Conceptual Design Improvement Cost of \$9.1 million (2011).  
 (Commerce City, City of Thornton and Unincorporated Adams County)

**Reach 2 – 88th Avenue between I-76 and State Highway 2 (Including Irondale neighborhood):**

76- x 48-inch HERCP jacked under the O'Brian Canal  
 60-inch RCP jacked under the UPRR  
 60-inch RCP along Willow Street, 88th Avenue, Brighton Road and I-76 ROW;  
 60-inch RCP jacked under SH 2 and the BNSF to convey flows from the RMA;  
 Six (6) Regional Detention/ Retention Basins (5 inside of Irondale neighborhood);  
 Engineered channels and smaller drainage pipes along minor roadways to convey runoff to the detention basins;  
 OSP Conceptual Design Improvement Cost of \$31.9 million (2011).  
 (Commerce City and Unincorporated Adams County)

**Reach 3 – State Highway 2 between 88th Avenue and 80th Avenue:**

An engineered channel along the east side of SH2 to convey 100-year storm runoff to a proposed crossing under SH 2 and the BNSF Railroad.  
 OSP Conceptual Design Improvement Cost of \$620,000 (2011).  
 (Rocky Mountain Arsenal and Unincorporated Adams County)

**Reach 4/ Tributary A/ Tributary B:**

Irondale Gulch – Reach 4: Construct Detention Basin 209 (“Railroad Detention”);  
 Tributary A - formally recognizing the five (5) natural depressions as regional retention basins for flood control and constructing Detention Basin 8911;  
 Tributary B - formally recognizing the two (2) natural depressions as regional retention basins for flood control and constructing one spillway from a natural depression;  
 OSP Conceptual Design Improvement Cost of \$5.1 million (2011).  
 (Rocky Mountain Arsenal and Unincorporated Adams County)

To reduce flows in major and minor storm events, the OSP report says that all future detention basins should incorporate “full spectrum detention” as requested by the UDFCD.

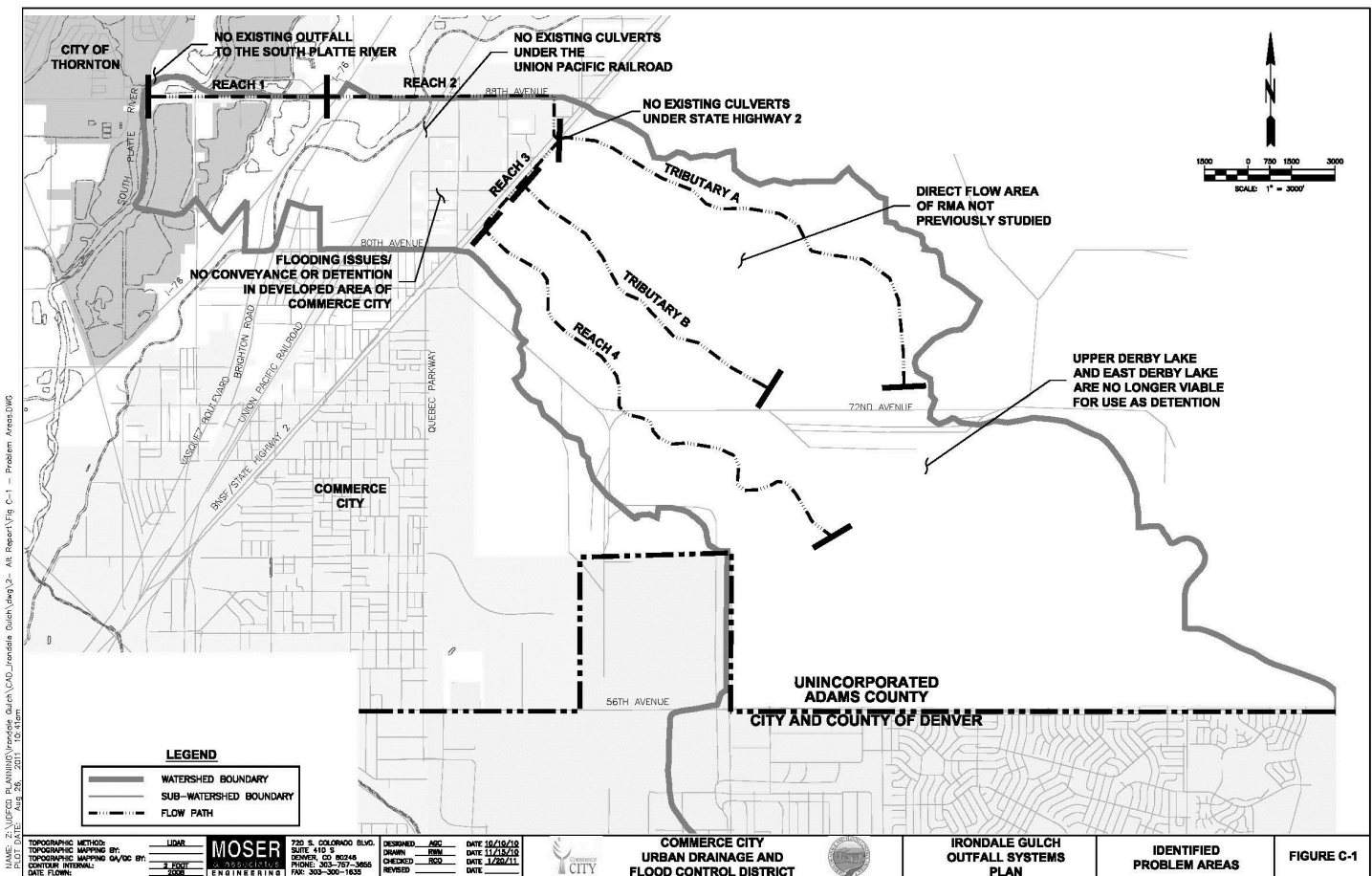


## Previous & Related Plans

In 2011 the Denver Urban Drainage and Flood Control District (UDFCD) finished a hydrology and master plan study for the Irondale watershed. This study was entitled Irondale Gulch Outfall Systems Plan (OSP) and was performed by Moser & Associates Engineering. This study reviewed the hydrology and drainage patterns of the watershed and proposed solutions to improve existing drainage problems.

## Special Considerations

The OSP report recommends that the selected plan improvements may be constructed in two phases, Phase 1: Detention and Phase 2: Outfall System. These phases may overlap with each other, but the biggest impact to minimizing flooding would be to construct the detention and retention basins in Reach 4, Tributary A, and Tributary B first. Then followed by the six (6) full spectrum detention ponds in Reach 2, of which five (5) are within the Irondale neighborhood. The OSP report also explains that the Reach 2 ponds (Irondale) may be constructed as retention ponds as areas redevelop and later converted to detention ponds when the 88th Avenue outfall system is built.



[The information presented and summarized here was obtained from the 2011 Irondale Gulch Outfall Systems Plan Conceptual Design Report by Moser & Associates Engineering. Referred to as the 2011 Irondale OSP]



## DRAINAGE: CHARACTER IMAGES







# SNAPSHOT REPORT: UTILITIES

## The Snapshot Report

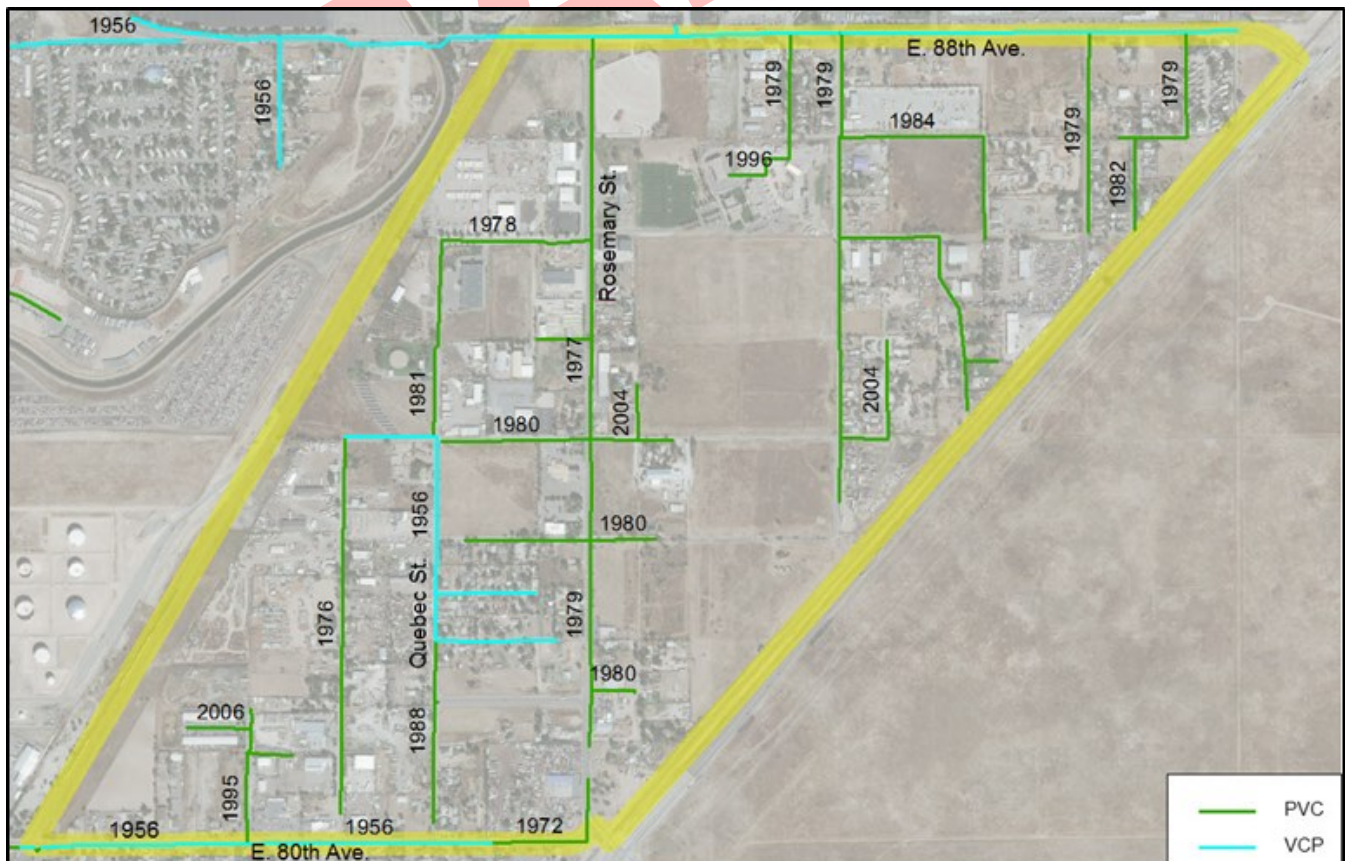
The snapshot report is designed to provide an overview of the current conditions within the neighborhood. The snapshot is not exhaustive, but rather a foundation to engage in conversation about the existing and future plans to be developed.

### Existing Network: Sanitary Sewer

The Irondale neighborhood receives sanitary sewer service from South Adams County Water and Sanitation District (District). The majority of the Irondale neighborhood's wastewater system flows north to the interceptor below East 88<sup>th</sup> Avenue. The remaining small area, including the pipe in Oneida Street and the south half block of Rosemary Street, flows south to the sewer line in East 80<sup>th</sup> Street

There is over 40,600 linear feet (7.7 miles) of sewer lines in Irondale ranging from 8 – 21 inches in diameter. Approximately 75% of the system is PVC pipe. The remaining 25% is VCP. VCP interceptors are present underneath 80<sup>th</sup> and 88<sup>th</sup> Avenues. The interceptor in 80<sup>th</sup> Avenue was installed in 1956 while the interceptor in 88<sup>th</sup> Avenue was installed in 1977. A patch of the system near middle of Quebec Street also consists of VCP which was installed in 1956.

Wherever a parcel is not adjacent to a public sewer main, an extension, per District standards, will be required.



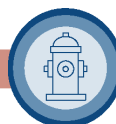
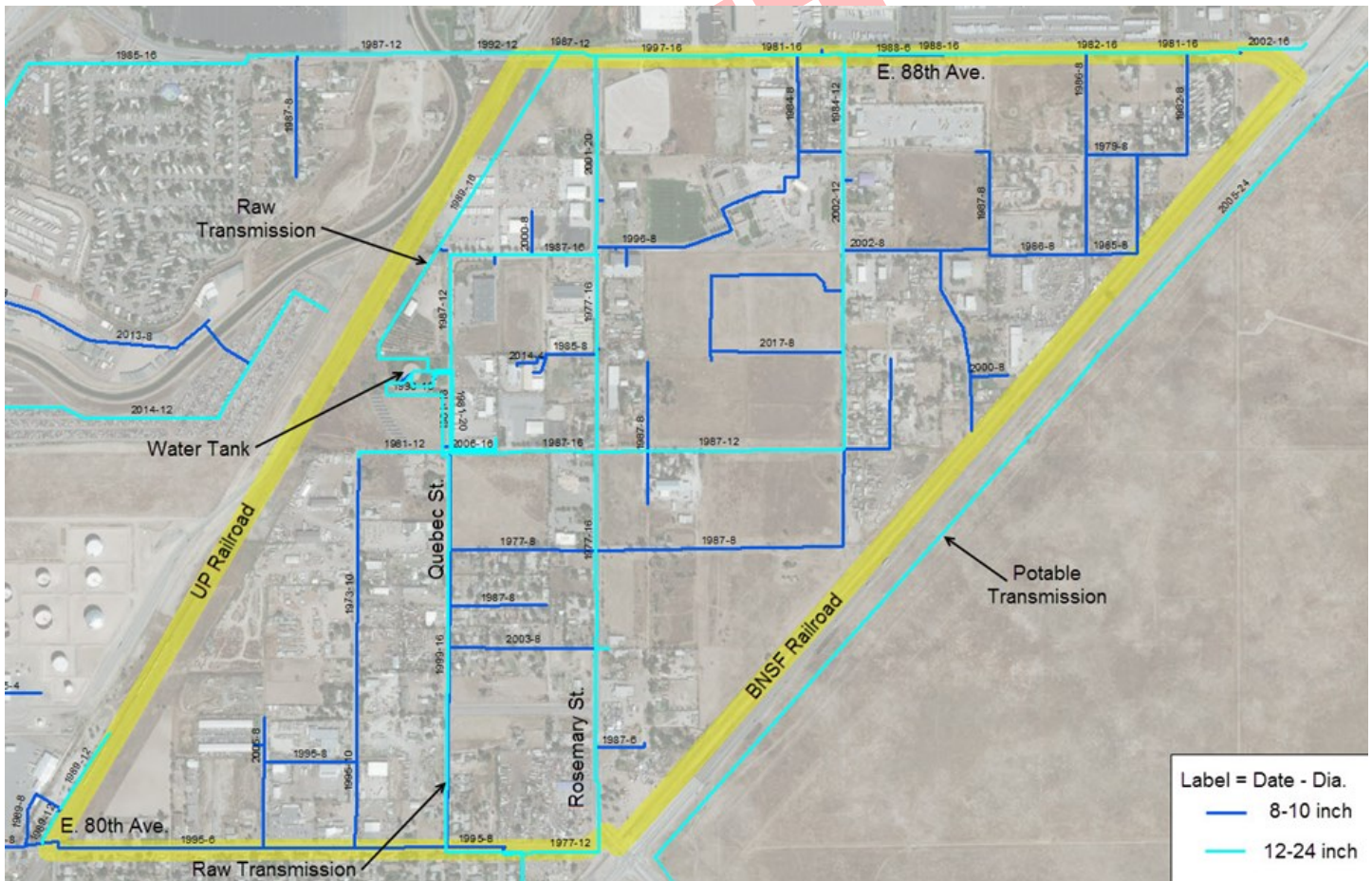


## Existing Network: Water System

Irondale's water is provided by South Adams County Water and Sanitation District (District). Most of the water lines in Irondale meet current standards regarding size and material type. However, the District is currently updating their water and sewer master plan to identify priority improvements to enhance the water system.

A 16-inch raw water transmission line runs through Irondale. It runs parallel to the UP Railroad from East 88<sup>th</sup> Avenue to the water tank. From the tank, the raw transmission line runs south under Quebec Street. A potable transmission line parallels the BNSF Railroad tracks east of Irondale. There is a connection to this line at 88<sup>th</sup> Avenue but not at 80<sup>th</sup> Avenue.

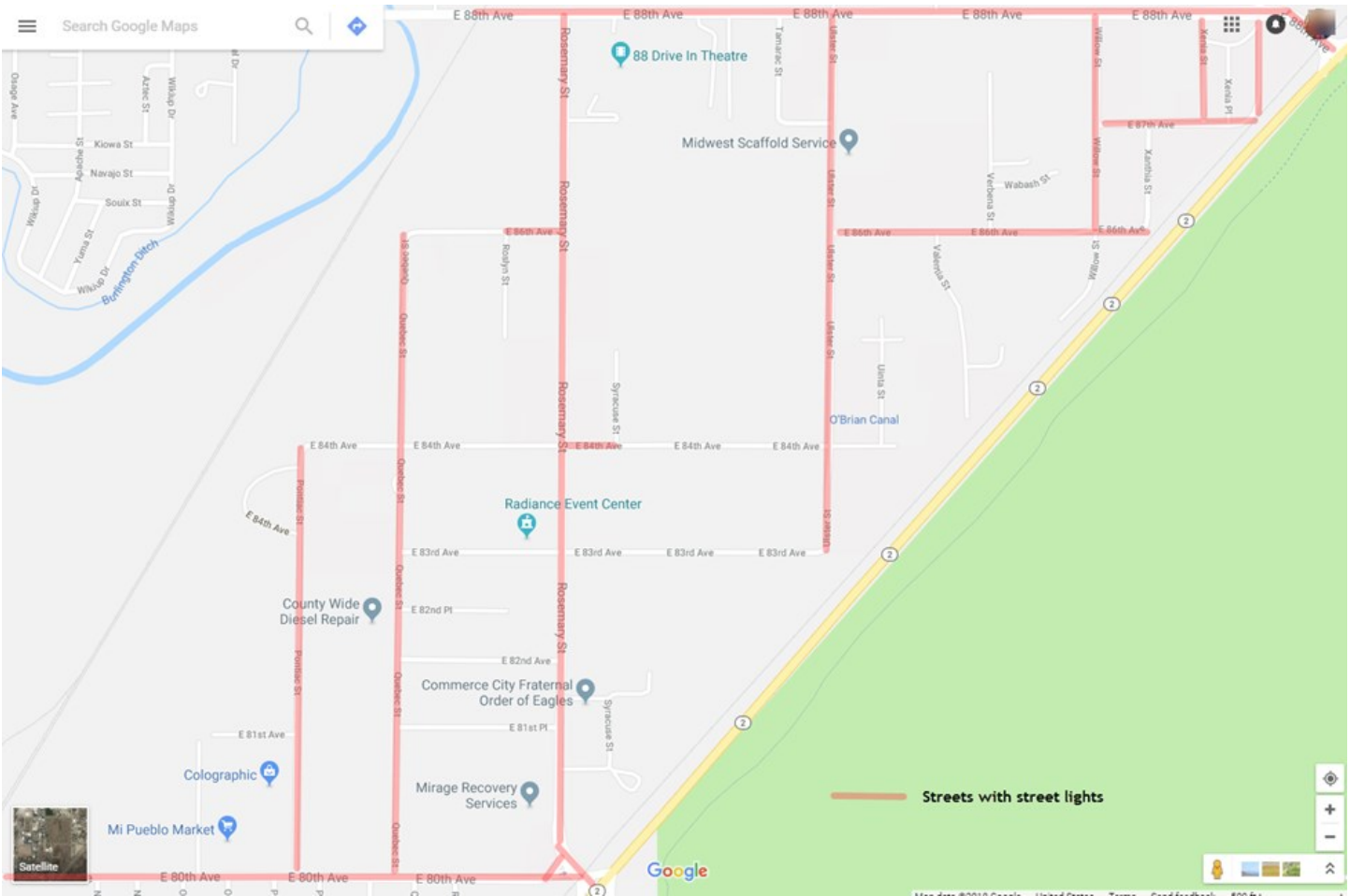
Water lines feeding Irondale from the west consist of a 12-inch line in 88<sup>th</sup> Avenue but only a 6-inch line in 80<sup>th</sup> Avenue. A 12-inch line is stubbed towards the water tank on the west side of the UP tracks. Water lines currently run beneath most of the streets in Irondale. Potable distribution lines run through most of Irondale.



## Existing Network: Gas & Electric

Xcel Energy provides natural gas and electric service to Irondale. Street lighting is limited in the neighborhood, with facilities on sections of the following streets: 88<sup>th</sup> Ave, 87<sup>th</sup> Ave, 86<sup>th</sup> Ave, 84<sup>th</sup> Ave, 80<sup>th</sup> Ave, Pontiac St, Quebec St, Rosemary Street, Ulster St, Willow St, Xenia St, and Yosemite St.

Xcel has existing gas facilities in Irondale, including a 16-inch high pressure main running along East 88<sup>th</sup> Avenue and a 24-inch high pressure pipe running along the E. 84<sup>th</sup> Avenue alignment. Xcel is prepared to serve gas customers in this neighborhood. Depending on the loading requested, extra cost and system upgrades may be required.

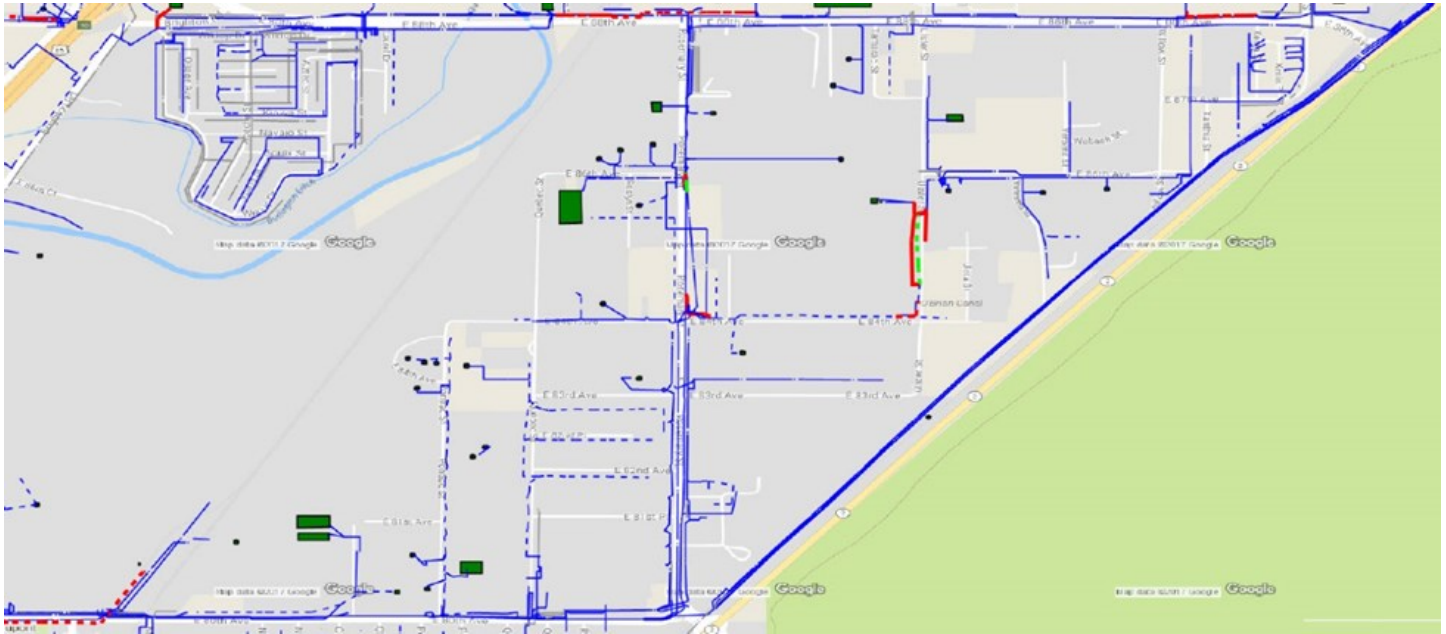


## Existing Network: Telecommunications

The following utility companies provide some form of telecommunications (telephone, internet, television) in Irondale: CenturyLink, Comcast, DirecTV, Dish/Dish Latino, and HughesNet.

CenturyLink has provided information on their system. They have both aerial and buried infrastructure adjacent to and within the Irondale neighborhood, providing service to existing and future development. A schematic map on the following page shows the existing (blue) and proposed/under construction (red) facilities.





the sanitary sewer, water systems update to their water and sewer systems. In general water is providing a water connection communications, Gas and Electric ex

spur construction is identified, replaced, relocated or in

demands. Depending on the type of development, the agency should evaluate to determine if any water use in industrial development uses water to meet their potable water demands.

## COUNTY WATER & SANITATION

### APPENDIX 1: WATER QUALITY