City of Loveland
HIP Streets
Infrastructure Condition Assessment

Technical Memorandum

August 2019
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ditesco
Project & Construction Services

I. Acknowledgements

This Infrastructure Assessment for the City of Loveland for the Heart Improvement Plan (HIP) Streets area of Downtown Loveland was developed over a 10-month period through meetings, field investigations, and collaboration from the following project participants:

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Background

In 2009, the City of Loveland (City) commissioned Nuszer Kopatz Urban Design Associates to complete a master-plan level investigation into revitalizing Downtown Loveland. The purpose of the project was to develop a plan for a safer, vibrant, people-centered Downtown. Through a collaborative approach including input from property owners, the general public, City staff, and City Council, a plan was created to modernize and revitalize the HIP Streets area. At the completion of this study, a final Heart Improvement Plan (HIP) Streets Master Plan was developed for the streetscape in Downtown Loveland.

Through a City Council driven Initiative, the HIP Streets Master Plan underwent a modernization effort in 2017 by Stanley Consultants. The HIP Streets Modernization Plan was also completed through a collaborative approach including input from all facets of the community, City staff, City Council, and the Loveland Downtown Partnership (DDA). After input was received through multiple open houses, community events and meetings, the HIP Streets Modernization Plan was completed in December of 2017. The HIP Streets Area map is included in Figure 1 below, with each block identified by tag number.

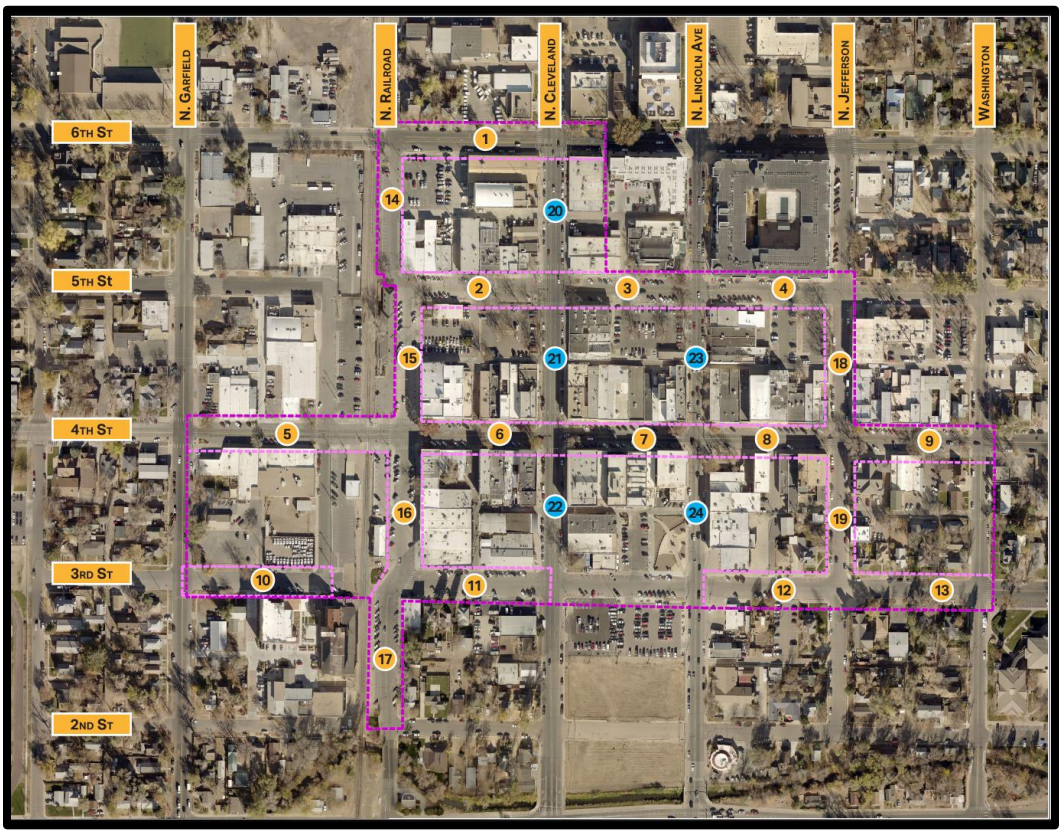


Figure 1 - HIP Streets Area Map

After reviewing the Modernization Plan, the City recognized that implementation of the Plan would require relocation and/or improvement of existing City infrastructure within the Plan area. Since the 2009 Plan only had a single line item for assumed infrastructure costs, and the Modernization Plan cost estimates only accounted for the cost to modify the sidewalks and urban landscape, more work was needed to finalize the overall program costs. The HIP Streets Modernization Plan Infrastructure Assessment was developed to inform all other costs associated with implementation of the

Modernization Plan. The assessment included 24 blocks and 12 alleys in the heart of Loveland. A map of the HIP Streets Area included in this study is included in ***Exhibit A***.

Purpose of Infrastructure Assessment

While the City regularly performs maintenance and repairs on all City-owned infrastructure, the purpose of the Infrastructure Assessment Plan was to provide the City with an up-to-date detailed inventory and condition assessment of all City-owned infrastructure within the HIP Streets core area (19 blocks in downtown Loveland). The City-owned infrastructure includes sanitary sewer and stormwater collection systems, potable water distribution, power, street and pedestrian lighting, traffic control signals and signage, sidewalks and roads.

This infrastructure condition assessment originally included the 19 blocks, shown below in Table 1, designated in the 2017 HIP Streets Modernization Plan. As the project progressed, it was noted that key infrastructure was located in the alleys, within the HIP Streets area, and along Cleveland Avenue and Lincoln Avenue. In order to provide a complete and thorough assessment for the HIP Streets area, blocks 20-24 along Cleveland and Lincoln Avenue and the 12 alleys within the HIP Streets area were added to the project. Table 2 below provides a listing of the additional blocks and alleys. The location of the Alleys can also be seen in ***Exhibit B***.

Table 1 - HIP Streets Core Blocks

HIP Streets Core Blocks
Block 1 - 6th Street (Railroad Ave to Cleveland Ave)
Block 2 - 5th Street (Railroad Ave to Cleveland Ave)
Block 3 - 5th Street (Cleveland Ave to Lincoln Ave)
Block 4 - 5th Street (Lincoln Ave to Jefferson Ave)
Block 5 - 4th Street (Garfield Ave to Railroad Ave)
Block 6 - 4th Street (Railroad Ave to Cleveland Ave)
Block 7 - 4th Street (Cleveland Ave to Lincoln Ave)
Block 8 - 4th Street (Lincoln Ave to Jefferson Ave)
Block 9 - 4th Street (Jefferson Ave to Washington Ave)
Block 10 - 3rd Street (Garfield Ave to Railroad Ave)
Block 11 - 3rd Street (Railroad Ave to Cleveland Ave)
Block 12 - 3rd Street (Lincoln Ave to Jefferson Ave)
Block 13 - 3rd Street (Jefferson Ave to Washington Ave)
Block 14 - Railroad Ave (6th Street to 5th Street)
Block 15 - Railroad Ave (5th Street to 4th Street)
Block 16 - Railroad Ave (4th Street to 3rd Street)
Block 17 - Railroad Ave (3rd Street to 2nd Street)
Block 18 - Jefferson Ave (5th Street to 4th Street)
Block 19 - Jefferson Ave (4th Street to 3rd Street)

Table 2 - Additional HIP Streets Blocks and Alleys

Additional HIP Streets Blocks and Alleys
Block 20 - Cleveland Ave (Sixth Street to Fifth Street)
Block 21 - Cleveland Ave (Fifth Street to Fourth Street)
Block 22 - Cleveland Ave (Fourth Street to Third Street)
Block 23 - Lincoln Ave (Fifth Street to Fourth Street)
Block 24 - Lincoln Ave (Fourth Street to Third Street)
Alley 1 - Between Railroad Ave and Cleveland Ave (Sixth Street to Artist Alley)
Alley 2 - Artist Alley (Railroad Ave to Cleveland Ave)
Alley 3 - Artist Alley (Cleveland Ave to Lincoln Ave)
Alley 4 - Sweetheart Alley (Railroad Ave to Cleveland Ave)
Alley 5 - Sweetheart Alley (Cleveland Ave to Lincoln Ave)
Alley 6 - Sweetheart Alley (Lincoln Ave to Jefferson Ave)
Alley 7 - Painter's Alley (Third Street to Fourth Street)
Alley 8 - Between Fourth Street and Third Street (Painter's Alley to Cleveland)
Alley 9 - Backstage Alley (Cleveland Ave to Lincoln Ave)
Alley 10 - Between Fourth Street and Third Street (Lincoln Ave to Jefferson Ave)
Alley 11 - Fiction Alley (Jefferson Ave to Washington Ave)
Alley 12 - Between Fourth Street and Third Street (Mid-Block to Garfield Ave)

The HIP Streets Modernization plan did not analyze the Lincoln and Cleveland corridors or the alleys to improve the streetscape surface. For the purposes of this investigation, Ditesco applied a surface restoration, per LCUASS standards, to the surfaces impacted by utility improvements.

Once inventory and assessment activities were completed, a 30% conceptual design for infrastructure replacement and relocation was created. The conceptual design will act as a planning document to create utility corridors and align the infrastructure with the HIP Streets Modernization Plan. Following the conceptual design creation, detailed cost estimates were applied to each block within the HIP Streets area. These cost estimates were based upon needed replacement and/or relocation of City-owned infrastructure. The final step in developing the Infrastructure Assessment was the creation and implementation of a Multi-Criteria Decision Analysis (MCDA) tool. This tool uses many criteria to evaluate infrastructure on a block-by-block basis and ultimately provides the City with a prioritized list of projects.

Project Goals

Specific goals of the Infrastructure Condition Assessment include the following:

- Gain an understanding of the current condition of all City-owned infrastructure
- Develop 30% concept-level infrastructure design based on HIP Streets surface improvements and infrastructure replacement needs
- Develop capital improvement-level budgets to be used in future funding requests
- Assist in implementation prioritization of the HIP Streets Masterplan, based upon infrastructure condition and block utilization.

Existing Conditions and Constraints

Aging Infrastructure

The first underground utilities were installed in the HIP Streets area in the late 1870s. Materials and installation methods used at that time were not designed to last over 100 years, and all utilities of this age are past their useful life.

Sanitary Sewer

Throughout the last 20 years, the City implemented a lining program for the sanitary sewer system that includes installation of cementitious lining in brick manholes, epoxy lining in concrete manholes, and cured-in-place pipe for the sewer mains. This program has significantly extended the useful life of the sanitary sewer system. While the lining provided a system that is structurally sound, 63% of the sewer mains are still considered to be in poor condition. Table 3 provides a summary of the conditions of the sanitary sewer mains in the HIP Streets area.

Table 3 - Sanitary Sewer Main Condition

Sanitary Sewer Main Condition Summary		
Condition	Length of Pipe (ft)	Percentage of Mains
Excellent	54	1%
Good	159	4%
Fair	1455	32%
Poor	2869	63%
Total	4537	

Water

From meeting with the project team, it has been determined water mains, more than any other utility in the HIP Streets Area, show the greatest signs of aging. The vast majority of water mains are cast-iron, suffer from tuberculation, and most are undersized compared to current City standards. While a portion of the water mains in the HIP Streets area have been replaced with PVC, the majority of pipelines remain the original cast iron or galvanized steel mains. For the watermain investigation during this project, samples of existing water mains were not available nor pursued as part of this work, thus the condition rating was developed based on historical data, staff anecdotal findings, pipe material, and water meter data. Table 4 provides a summary of the water main material types. All water mains in the HIP Streets area that are not PVC have been recommended for replacement.

Table 4 - Water Main Material Summary

Water Main Material Summary		
Material	Length of Pipe (ft)	% of Mains
PVC	2846	28%
Cast-Iron	7067	69%
Galvanized Steel	344	3%
Total	10,257	

Stormwater

The Washington Avenue Outfall project was constructed in 2004 and replaced a portion of the stormwater system in the HIP Streets area. Due to its age and City-provided feedback, the Washington Avenue Outfall lines were not inspected and assumed to be in excellent condition. Outside of that portion of the system, the stormwater system shows noteworthy failures and deterioration. There are many inlets and main lines that have significant structural failures or do not meet minimum City standards. These portions of infrastructure have been recommended for replacement. Table 5 provides a summary of the stormwater main condition ratings. Table 5 does not include the Washington Avenue Outfall mains, as it was not inspected as part of this assessment.

Table 5 - Stormwater Main Condition Summary

Stormwater Main Condition Summary		
Condition	Length of Pipe (ft)	% of Mains
Excellent	-	-
Good	693	15%
Fair	1946	44%
Poor	1831	41%
Total	4471	

ADA Access

ADA access in downtown areas is always a challenge. Design parameters for ADA compliance had not been developed when most of the buildings in the HIP Streets Area were constructed. ADA access has been improved in some areas where new development has occurred, but overall the HIP Streets Area still has 40% of pedestrian ramps and crosswalks that are not ADA compliant. Table 6 provides a summary of ADA compliance for the crosswalks and street corners. Crosswalks and Ramps must have a longitudinal slope less than 8.33% and a cross slope of less than 2.00% to be considered compliant. Bringing non-compliant ADA ramps and crosswalks into compliance will require a fairly large footprint to allow a transition of grades at each location. It is important to focus on ADA compliance as a first step to any further design development of road infrastructure in the downtown area.

Table 6 - ADA Compliance Summary

ADA Compliance Summary				
	Crosswalks		Corner Ramps	
	Qty	% of Crosswalks	Qty	% of Ramps
Meet ADA Standards	113	84%	13	17%
Do Not Meet ADA Standards	22	16%	63	83%
Total	135		76	

Electrical

The primary electrical system within the HIP Streets area is in good condition, and approximately half of the primary electrical service within the area has already been converted from overhead to underground infrastructure. The only exception to this is the street lights, the majority of which are still

supplied via overhead power. This condition assessment evaluated the opportunity for undergrounding the remaining primary power feeds and relocating the overhead transformers to at-grade transformers.

Traffic

Traffic signals in HIP Streets are owned by the Colorado Department of Transportation (CDOT), in coordination with the City who operates and maintains them. The City Traffic department also maintains pedestrian light poles and traffic signage, the majority of which were in fair to good condition. The recommended replacement of traffic utilities included pavement markings, signage, and lighting replacements on a per-block basis.

Recommended Infrastructure Program

Prior to any recommendations being developed, a set of standards was created for the project. These designated standards would serve as the baseline for determining utility repair and replacement recommendations, within the borders of HIP Streets. The designated project standards were developed through meetings with City staff, review of existing City standards, and engineering best practice. In summary, the standards generally include:

- Storm pipelines (Blocks 1-24) would be replaced with in-kind pipe size if larger than 18-inch, or brought to 18-inch minimum pipe size if smaller than 18-inch
- Storm pipelines (Alleys 1-12) would be replaced with a minimum 18-inch pipe. If a pipe was undersized in the alley, but in acceptable condition, it would not be noted for replacement
- Waterlines would be replaced to a minimum of 8-inch diameter pipeline, or replaced with in-kind pipe size, if greater than 8-inch
- Sanitary Sewer would be replaced with in-kind pipe size, if needed
- Overhead power would be moved to underground conduits with matching capacity, and overhead transformers would be relocated to at-grade locations
- Lighting would be evaluated to identify current light levels and compare them to Larimer County Urban Area Street Standards (LCUASS)
- Traffic would be evaluated with a signage replacement as a percentage for every block

After all field data was collected, it was analyzed and compared to the designated standards developed by the project team, and recommendations for repair or replacement were made. Given the overall age and condition of the HIP Streets infrastructure, if available budget prohibits the implementation of recommended replacements, annual inspection and maintenance programs should be reviewed and adjusted to provide more frequent maintenance of the HIP Streets area. Increased maintenance efforts will extend the useful life of the aging infrastructure.

Project Priorities

A Multi-Criterion Decision Analysis (MCDA) tool was used to analyze the HIP Streets area. The completed output of the MCDA tool can be found in ***Appendix V***. The tool uses objective data analysis to develop a priority list for how the 2017 HIP Streets Modernization Plan should be implemented based on infrastructure condition and needs. The MCDA tool evaluated each piece of City owned infrastructure within each block, based on the following major criterion:

- Safety
- Reliability
- Cost
- Funding Challenges
- Design/Constructability Issues

For each criterion, a score of one to five was applied to each infrastructure element. A score of one provides the least risk, lowest cost, or would require the least effort to correct. A score of five poses the greatest risk, highest cost, or would require a significant effort to correct. The priorities for the HIP Streets blocks (Blocks 1-24) are shown in alphabetical order in Figure 2 below.

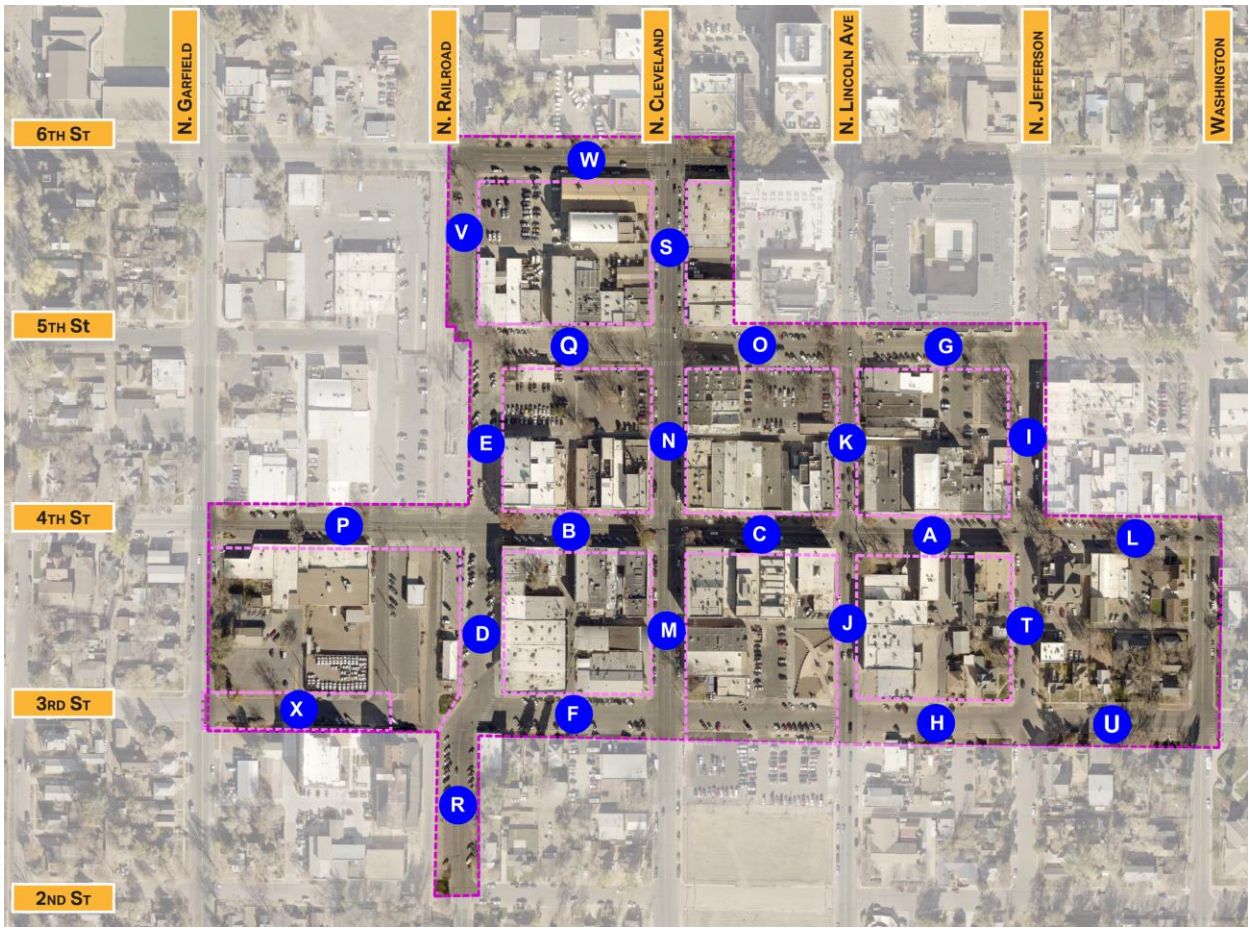


Figure 2 - HIP Streets Block Priority Rankings

Funding

Funding for the HIP Streets Modernization Plan has not yet been realized, but would be intended to come from a variety of sources. These sources include funding from each utility department, the General Improvement Fund, coordination with the Loveland Downtown Partnership, and potential grants. Table 7 provides a summary of all costs associated with implementing the HIP Streets Modernization plan in the HIP Streets core blocks. Tables 8 and 9 provide summaries of costs associated with implementing recommended infrastructure improvements. The costs associated with these three tables are further developed in ***Appendix IV***. Each block has costs divided into three components:

- Infrastructure – Costs include repair or replacement of water mains, sewer mains, storm drains, traffic lights, street lights, and conversion of electrical services from overhead to underground.
- Street Replacement – Costs include replacement of asphalt paving, which was not accounted for in the 2017 HIP Streets Modernization Plan costs.
- Modernization Plan – Cost to upgrade the streetscape to meet urban design intent developed in the 2017 HIP Streets Modernization Plan.

Table 7 - HIP Streets Cost Estimates for HIP Streets Core Blocks

HIP Streets Core Block Cost Estimates				
Block	Infrastructure Replacement ($)	Street Replacement ($)	Modernization Plan ($)	Total Cost ($)
1	$920,000	$462,000	$1,386,000	$2,768,000
2	$618,000	$311,000	$940,000	$1,869,000
3	$304,000	$272,000	$919,000	$1,495,000
4	$342,000	$341,000	$1,043,000	$1,726,000
5	$803,000	$370,000	$1,260,000	$2,433,000
6	$1,530,000	$301,000	$1,392,000	$3,223,000
7	$786,000	$234,000	$1,201,000	$2,221,000
8	$860,000	$274,000	$895,000	$2,029,000
9	$748,000	$297,000	$988,000	$2,033,000
10	$641,000	$280,000	$722,000	$1,643,000
11	$549,000	$409,000	$961,000	$1,919,000
12	$499,000	$331,000	$785,000	$1,615,000
13	$476,000	$306,000	$857,000	$1,639,000
14	$323,000	$177,000	$502,000	$1,002,000
15	$388,000	$195,000	$486,000	$1,069,000
16	$391,000	$191,000	$877,000	$1,459,000
17	$387,000	$249,000	$499,000	$1,135,000
18	$149,000	$180,000	$354,000	$683,000
19	$240,000	$185,000	$335,000	$760,000
Totals	**$10,954,000**	**$5,365,000**	**$16,402,000**	**$32,721,000**

Table 8 – HIP Streets Additional Blocks Infrastructure Cost Estimates

HIP Streets Additional Block Cost Estimates	
Block	Infrastructure Replacement ($)
20	$619,000
21	$329,000
22	$302,000
23	$455,000
24	$262,000
Totals	**$1,967,000**

Table 9 - HIP Streets Alley Infrastructure Cost Estimates

HIP Streets Alley Cost Estimates	
Alley	Infrastructure Replacement ($)
1	$134,000
2	$267,000
3	$34,000
4	$170,000
5	$31,000
6	$65,000
7	$197,000
8	$104,000
9	$31,000
10	$202,000
11	$295,000
12	$173,000
Totals	**$1,703,000**

III. Data Collection

Introduction

Data collection was the foundation for the infrastructure assessment. The team's first step was to review all information provided by the City of Loveland including the 2009 HIP Streets Master Plan, the 2017 HIP Streets Modernization Plan, and GIS data provided by the City. The goal of the data collection review phase was to gain a complete understanding of the data the City already had and to evaluate what additional information would be required to complete the assessment.

A very important aspect of the data collection effort was assuring that the assessment met the goals of each individual utility. Meetings were held with each utility to collect the following information:

- Existing Condition Issues (watermain breaks, collection system backups, storm sewer collapses)
- Desired improvements of infrastructure (utility material, size, location, etc.)
- Coordination with any external entity (property owners, CDOT, non-profits)
- Variations, if any, from City of Loveland standards

After each of these meetings, the team developed attribute tables for the GIS-based Collector Application that would be utilized for all field data collection. A roadmap of the data collection process can be seen in Figure 3.

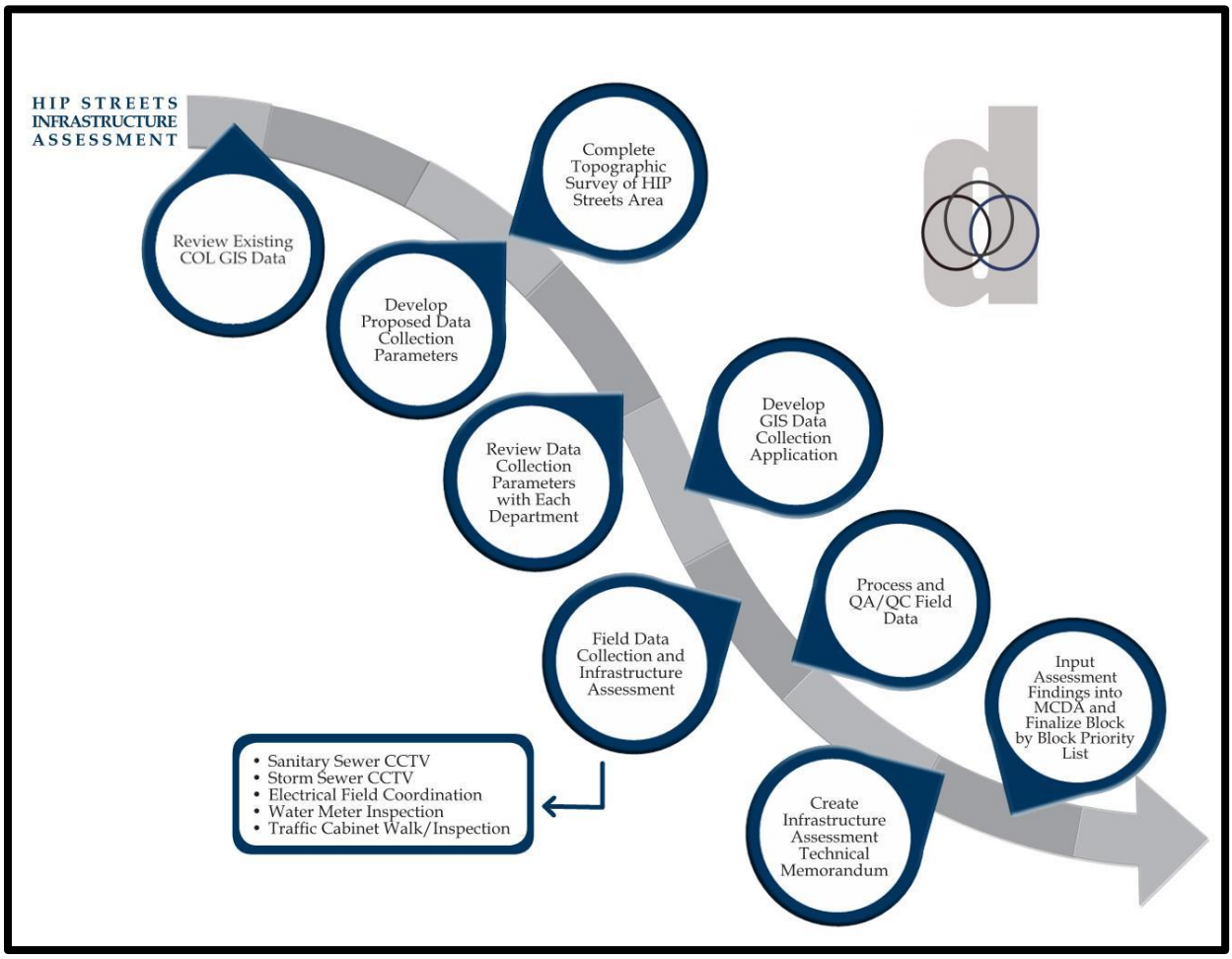


Figure 3 – Data Collection Roadmap

All assessment data was collected between November of 2018 and April 2019. If areas of concern were encountered, the team notified each City utility throughout field investigation. If deemed necessary, City crews responded to several of these locations and made corrections to the needed areas immediately. As such, some of the assessment findings in this report may have been addressed prior to the report being published.

Data Collection Tools

Many data collection tools are available for this type of assessment work. The tools below were chosen for their efficiency in collecting the required data with the desired accuracy. Each tool and how it was used is described in detail below.

Topographic Survey & GIS Data Review

Prior to any field-investigation and data collection, a topographic survey of the HIP Streets area was completed. The topographic survey captured all surface features and topography with 0.5-foot contour intervals. The survey was completed on the State Plane coordinate system for horizontal location and the National Geodetic Vertical Datum (NGVD) 1929 for elevations. This allowed a seamless blending of the survey and GIS data. The survey data, along with the City's existing GIS data, was the starting point

for the infrastructure assessment work. After comparing the infrastructure features collected during the survey with the City's existing GIS data, an assessment inventory for each utility was created.

Collector Application

An ArcGIS Collector Application (Collector APP) was developed for field data collection and inspection progress tracking. Data input fields were developed based on project specific needs, requests from various City departments, and utility and infrastructure industry standards. After reviewing the City's existing GIS data, attribute tables were created for each feature that required field assessment and data collection. Features included manholes, stormwater inlets, transformers, power poles, street lights, water valves, water meters, fire hydrants and many others. Figure 4 below shows a sample of the Collector App mapping tool.

Figure 4 – ArcGIS Collector App Screenshot

Closed Circuit Television Inspection

In order to fully understand the current condition of the sanitary sewer and storm drain systems, a Closed-Circuit Television (CCTV) inspection system was performed. Prior to any CCTV inspections taking place, all existing City CCTV footage was gathered and reviewed. When existing CCTV footage was too old or showed areas of concern for a pipe segment, that segment was added to the field inspection list for CCTV assessment. While reviewing the new and existing CCTV footage, pipe condition was assessed and areas of concern noted. Some noted concerns included pipe offsets, sags, structural cracking and failures, fats, oils, and grease build-ups, poor service line connections, and root and dirt intrusion. Service line sizes and locations were also documented in the data collected.

Assessment Standards

Industry standard guidelines such as the National Association of Sewer service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program

(MACP) were used as the basis for the condition assessment. The guidelines set forth by these programs were blended with project specific needs to develop project-specific assessment criteria. These criteria were applied to the sanitary sewer and storm sewer utilities when establishing rankings for each assessed component.

IV. Sanitary Sewer

Existing Conditions

In 1893, the Loveland Town Council first heard concerns over the need for a sanitary sewer system. In 1900 the first bond issue for a public sewerage system was placed on the ballot alongside a bond issue to build an electric power plant. The citizens of Loveland opted for the electricity and not the sewer system. Proponents of the system continued to push the issue and in 1902, with the passing of Ordinance 82, the public sewer system was established. Two separate sanitary sewer mains were installed on the east and west side of town and connected at First Street and Railroad before emptying directly into the Big Thompson River. The original mains were constructed of vitrified clay pipe (VCP) with manholes constructed of vitrified clay brick and cement mortar. The system was completed in February of 1903, and some of the original system is still in use today. Reference ***Exhibit C*** for a map of the existing sanitary sewer system in the HIP Streets area.

According to historical information, VCP sewer mains and brick manholes were installed in Loveland until the late 1960s. The vast majority of sewer mains and manholes inspected in the HIP Streets area were constructed of VCP and brick, respectively. While the exact installation dates could not be confirmed, it is likely that portions within the HIP Streets area were installed in the early 1900s. Given this information, the sewer collection systems within the HIP Streets area, with a few exceptions, are at least 50 years old and potentially as old as 116 years. Figure 5 shows a sample of the existing conditions of VCP pipe under Garfield Avenue.

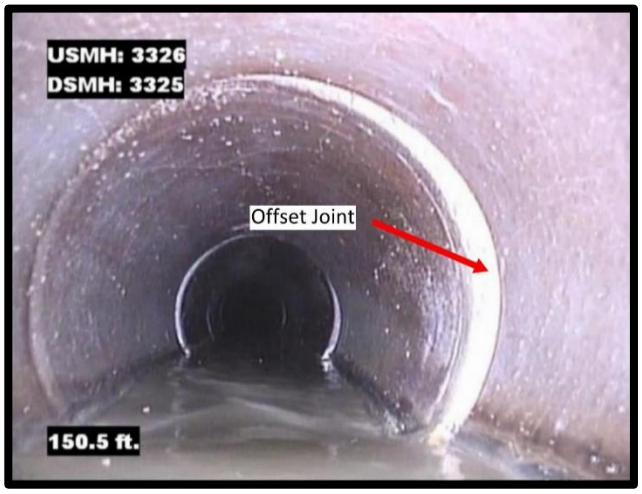


Figure 5- Offset Joint in 10-inch Sanitary Sewer Under Garfield Avenue

Access to Sanitary Sewer Mains and Manholes

All of the manholes accessed and inspected within the HIP Streets area were easily accessible. While some required traffic control measures for safety, there were no sanitary sewer manholes located in

private property or buried under road improvements. The majority of the sewer mains in the HIP Streets area run through alleys, presenting challenges for maintenance or replacement. The alley widths vary between 10-feet and 20-feet and have other underground and aboveground utilities installed. Access for traditional open cut construction methods is extremely limited. The most difficult access for sewer main maintenance or replacement is a section of sewer main between Third Street and Fourth Street from Lincoln Avenue to Jefferson Avenue. As seen in Figure 6, this sewer main is located beneath existing buildings for approximately 160-feet with the remaining 200-feet installed at the rear property line of residential and business properties with no alley access. There are also overhead utilities and private fences located along the same alignment as the sewer main.

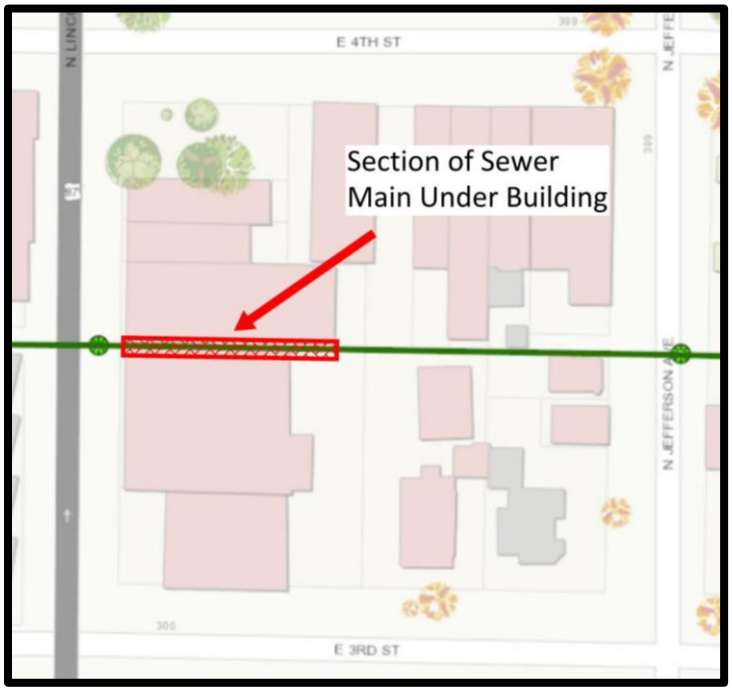


Figure 6 - Sanitary Sewer Pipe 3497 Location Map

Field Assessment and Data Collection

The data input fields, in the GIS Collector App, for the sanitary sewer and storm water collection system inspection, include the following information:

- Pipe invert elevations
- Ring and cover condition
- Barrel condition
- Cone condition
- Chimney condition
- Channel condition
- Overall pipe condition
- Miscellaneous other attributes

When all manhole field data collection was complete, a weighted score was applied to the individual ranking criteria based on importance. This information was utilized to generate a score for the overall manhole condition.

Pipe segments were given a single overall condition rating. Pipe segment condition ratings and notes were based on CCTV footage from two sources. The City provided a significant database of CCTV footage for the pipe segments. This database was the main source of CCTV footage for the project. Where existing CCTV footage was not available, CCTV inspections were completed as part of this assessment. It is important to note that some CCTV footage provided by the City was prior to some pipe segments being lined with cured-in-place pipe (CIPP) liner. Re-inspection of these pipelines was not completed as part of this study.

Grease traps and Interceptors

The City of Loveland has an active grease management program that was adopted by the City and approved by the EPA in 2014. Currently over half of the food-related business in the HIP Streets area have grease traps or grease interceptors installed. See ***Exhibit C*** for a map of existing grease trap and interceptor locations. While grease interceptors are preferred over grease traps, the same issue affecting potential sewer main replacement affects grease interceptor installation. In many cases there is not adequate space available below grade for a grease interceptor to be installed. Based on the CCTV inspections of the sanitary sewer systems, there are some areas of the system that have significant fats, oil, and grease (FOG) buildup inside the sewer mains. As the downtown area continues to redevelop and densify, the impact of FOG on the collection system will become ever greater. A proactive program to identify grease interceptor installation, including the potential for joint or shared interceptors, should be implemented to address these concerns. Due to the ever-changing types of businesses in the downtown area, this project did not map installation locations for future traps or interceptors.

Sewer Main and Manhole Condition

Exhibit D provides a map view of the overall condition of the HIP Streets area sanitary sewer system. Table 10 provides a summary of the overall condition ratings for the sanitary sewer mains and manholes within the HIP Streets area.

Table 10 – Sanitary Sewer Overall Condition Summary

Sanitary Sewer Overall Condition Summary					
	Needs Immediate Attention	Poor	Fair	Good	Excellent
Manholes	0	1	14	13	0
Sewer Pipe Segments	0	4	16	4	1
Sewer Length of Pipe (ft)	0	2869	1455	159	54
Percentage of Sewer Mains	0	63%	32%	4%	1%

In general, the sanitary sewer pipes and manholes are structurally sound. The VCP is predominantly in 4-foot long segments. As the ground around the pipes has moved over time, these short pipe segments have allowed for vertical and horizontal offsets to occur. While some are more drastic than others,

approximately 16% of the pipes in HIP Streets area have vertical and/or horizontal offset issues. The offsets have caused joint separation, allowed soil and root intrusion in some locations and have created flat spots and bellies that can collect solids (deposition).

Overall, service connections to the mains are in fair condition. While most connections were well constructed and are adequately sealed, there are many that were not installed correctly to the main. Many of the problem services were installed short of the main and sealed with concrete or flowfill, as shown in Figure 7 (as opposed to protruding taps).

Figure 7 - Offset Sewer Tap Connection Sealed with Concrete

As the pipeline and taps have settled and moved, many of the connections are now offset with exposed soil around the tap connection. In other areas, it appears that VCP wyes were installed for future service connections, but never utilized. These areas of intrusion are also sources of groundwater infiltration that was evident in some of the CCTV inspection. If intrusion was noted during the CCTV investigation, this was documented in the GIS Collector App and impacted the overall condition rating for that pipe segment.

Nearly all of the manholes in the HIP Streets area are constructed of brick and mortar. Through the City's maintenance program, some have received a cementitious lining or polyurethane lining, and others remain as originally constructed. The City's current lining program is estimated to have all brick manholes in the HIP Streets area lined before the end of 2019. Structurally, all of the manholes inspected were in good condition with no apparent cracking or brick or mortar failure. The majority of issues with the manholes are in the formed base, formed channels, and benches or ring and cover assemblies. All of the issues with the channels, benches, and ring and cover assemblies are age and corrosion related. An example of an existing brick manhole is shown below in Figure 8.

Figure 8 - Existing Brick Sanitary Sewer Manhole 3420

Recommended Improvements

After completing the infrastructure assessment, all data gathered for the sanitary sewer system was consolidated so that repair or replacement recommendations could be made. In order to develop recommendations for sanitary sewer rehabilitation and replacement, alternative installation methodologies were considered and each proposed alternative is outlined below. Sewer pipelines and manholes that have been recommended for repair or replacement are shown in ***Appendix I*** in the 30% conceptual design drawings.

Pipe Bursting

In areas where minimal offsets and sags exist in the existing pipeline, trenchless pipe replacement is often a feasible pipe improvement strategy. The VCP pipe segments would benefit from a pipe bursting technology. This would allow replacement of a same size or next larger size pipe with excavations only required at manholes and at each service connection.

Cured in Place Pipe Lining

Many of the existing pipelines in downtown Loveland have previously been improved with Cured in Place Pipe (CIPP) liner. CIPP lining is a cost-effective structural repair that can be utilized in sections of pipe that do not have significant structural failures; bellies or offsets. Utilizing CIPP lining is minimally disruptive as it does not require open-cut excavations, utilizes existing manholes for access and each segment can usually be completed within a much shorter time frame than open-cut construction.

Open Cut Installation

In areas where significant surface improvements or upsizing greater than the next largest pipe size is desired, traditional open cut excavation methods should be considered as an installation method. Open cut installation in the HIP Streets alleys will be cumbersome due to the narrow alleys. Construction feasibility should be considered prior to finalizing plans and specifications. While open cut work in the alleys is difficult, in areas like Sweetheart Alley where stormwater mains have been recommended for replacement, open cut replacement of the sanitary sewer system is highly recommended.

Manholes

As seen in Table 11, nearly all of the manholes within the HIP Streets core area are original brick manholes that have been lined with a cementitious coating. This cementitious coating adds structural support and protects the brick from corrosion. This method of repair is highly recommended for the three brick manholes that remain unlined. The work can typically be completed without taking the manhole out of service, only impacting traffic for access to the manhole.

Table 11 - Sanitary Sewer Manhole Material Types

Sanitary Sewer Manhole Material Types			
	Brick	Cement or Polyurethane Lined Brick	Concrete
Manhole Quantity	3	17	8

All 17 of the cement lined brick manholes are in good or fair condition and should provide many years of remaining service. While lining of manholes provides structural stability, it is recommended that manholes be replaced with new concrete manholes, if any adjacent sanitary sewer lines are replaced in the future. It is important to note that one polyurethane lined manhole, manhole 3348, was located within the HIP Streets boundary. The polyurethane coating is in poor condition and should be removed and replaced with a cementitious coating.

Maintenance Recommendations

As CCTV footage was reviewed and sewer manholes inspected and surveyed, the assessment consistently found pipe segments with sags and or little to no slope. Table 12 provides a list of pipe segments that should be added to the City's frequent jetting/cleaning list. Frequent jetting minimizes potential backups by flushing built up solids and fats, oils and greases out of lines with low flow, sags, or insufficient slope issues.

Table 12 - Sanitary Pipe Segments Recommended for Monthly Jetting

Sanitary Pipe Segments Recommended for Monthly Jetting				
Pipe Segment IDs	3374	3377	3392	3403
	3404	3418	3496	3497
	3499	8041	8966	

The sanitary sewer segments are included in ***Exhibit C*** for further reference.

V. Water

Existing Conditions

As a part of the HIP Streets Masterplan, the water utility infrastructure was analyzed within the HIP Streets boundary. The City's water main size and location data were evaluated for condition. Water service meters (interior or exterior) were inspected as detailed below. No physical inspections of the water mains took place. Physical inspection of the mains would have required coupons to be removed

from various pipe segments, requiring water outages and road closures. The detailed data provided by the City for the waterlines negated the need for an invasive physical inspection.

Access to Waterlines

The existing water mains in the HIP Streets area are located within the right-of-way with services that connect to each building. Sixty eight percent of the waterlines in the HIP Streets area do not meet the City of Loveland's designated Water and Wastewater Development Standards, either due to pipe material or pipe size, or in some cases both pipe material and size. Waterlines were not inspected as part of this infrastructure assessment. All data on waterlines was collected from the City of Loveland database. See ***Exhibit E*** for a map of waterlines in the HIP Streets area.

According to City data, 39% of the water mains in the HIP Streets area are cast iron, installed in the early 1900s. The remaining water mains range in size from 4-inch to 10-inch diameter, and are either cast iron or PVC, depending on installation date. There is one exception of a water main that is shown to be 6-inch galvanized steel. This section of water main is in the intersection of Railroad Ave and Second Street. The majority of the water services are ¾-inch copper pipe, and few are 1-inch to 2-inch copper. Nineteen water meters are located inside of buildings or homes. Those located inside buildings are recommended to be moved to a new exterior meter pit. As all services are copper, a new service line will not be required and the existing lines can be utilized when relocating the meter pits with minimal plumbing upgrades.

Available Flow (tuberculation)

The existing waterlines in the HIP Streets area have tuberculation. This is a typical condition of aged cast-iron water mains which are unlined. Over time, tuberculation can restrict the interior of a water pipeline from its original interior diameter (ID) to a smaller ID. Tuberculation and manganese build-up can cause the water to turn to a red-brown color. Waterline flushing frequently breaks these deposits loose, flushing through a nearby fire hydrant. During flushing, nearby customers can witness red or dirty water at their taps. Because of this discoloration issue during flushing, the City flushes the downtown area water mains during non-business hours to minimize potential impacts to customers. By replacing the aged cast-iron water mains with PVC, per the designated design standard, current tuberculation issues will be resolved and future tuberculation will be eliminated.

Water Meter Locations

All water meters in the HIP Streets area were inspected as part of this infrastructure assessment. This inspection included evaluation of the location and condition of the meter pit and bonnet. Currently, water meters on service lines to customers vary in type and location based on their installation date. There are 129 exterior water meters installed in meter pits, and 19 water meters installed inside of buildings. It is the City's desire to move all interior water meters into exterior meter pits as a part of the future HIP Streets Improvement project. Water meters that need to be relocated to an exterior meter pit are shown in ***Exhibit H***.

The City desires to have all ¾-inch water meters installed in a HDPE meter pit. Of the existing meter pit installations, 87% of the total water meter pits either do not meet the designated standards or are in poor condition and are recommended to be replaced. The water meter pits that are in poor condition have varying degrees of rusted or corroded cover assemblies. Some water meter pits in poor condition

have cracked frames, deteriorating pits or dirt intrusion into the pit. Although more than half of water meter pits are in either fair, good, or excellent condition, most of these still do not meet the designated standard and are recommended to be replaced. Water meter pits that were rated as fair condition have some rust on the cover assemblies or other minor issues. Water meter pits that were rated as good condition have very minor rust. Water meter pits that were rated as excellent condition were in like-new conditions. A heat map of all water meter pits can be seen in ***Exhibit I***.

Table 13 below shows the number of water meter assemblies and pits that were inspected, by condition. There are 23 water meters that are not included in Table 13; 19 of these were interior water meters that are not installed in a water meter pit, and four water meter pits were not inspected due to access restrictions and are recommended to be replaced. The water meter pits identified as needing immediate attention have since been addressed by the Water and Power Department.

Table 13 - Water Meter Pit Conditions

Exterior Water Meter Pit Condition		
Water Meter Pit Condition	Quantity	Percentage
Excellent	8	6%
Good	37	29%
Fair	37	29%
Poor	38	29%
Immediate Attention Needed	5	4%
Water Meter Pit Standard Conformance	Quantity	Percentage
Meets Standard	17	13%
Does Not Meet Standard	112	87%
Total Water Meter Pits: 129		

Recommended Improvements

The overall water utility improvements were evaluated based upon conforming to the water main minimum size (8 inches) and relocating all interior water meter sets to external pits, meeting the designated City of Loveland Water and Wastewater Development Standards.

Replacement of Waterlines

There are many water mains and water laterals in the HIP Streets area that should be replaced and upgraded as they do not currently meet the designated City of Loveland Water and Wastewater Development Standard minimum size or have reached their useful life. According to City data, 60% of the water mains are between 70 to 142 years old. The typical useful life for cast iron pipe is between 50 to 75 years. Sixty-eight percent of the water mains are either undersized or not in compliance with the designated standards. See ***Exhibit F*** for a heat map of the existing waterlines, highlighting replacements by material type.

The ideal time to replace any aged or problematic waterlines will be prior to any surface improvements in the HIP Streets area. All new waterlines are recommended to be replaced with minimum 8-inch diameter C900 PVC pipe to conform to the City of Loveland Water and Wastewater Development

Standards. A priority list of waterlines to replace is summarized in Table 14 below. This waterline priority list was developed based on the age and material of each water main. It is important to note that the City is currently in the planning stages for replacing the waterline in 4th Street with a new 12" line. The priorities were ranked with one being the lowest priority of replacement, and five being the highest priority of replacement. Conceptual design plans of water main replacements are included in ***Appendix I***.

Table 14 - Waterline Replacements

Waterline Replacement Priorities by Block			
Waterline Location	Length (feet)	Age (years)	Replacement Priority
Block 2 - Fifth Street (Railroad to Cleveland)	306	142	5
Block 5 - Fourth Street (Garfield to Railroad)	571	142	5
Block 6 - Fourth Street (Railroad to Cleveland)	353	142	5
Block 7 - Fourth Street (Cleveland to Lincoln)	375	142	5
Block 8 - Fourth Street (Lincoln to Jefferson)	339	139	5
Block 9 - Fourth Street (Jefferson to Washington)	245	139	5
Block 10 - Third Street (Garfield to Railroad)	348	142	5
Block 11 - Third Street (Railroad to Cleveland)	382	142	5
Block 15 - Railroad Ave (Fifth Street to Fourth Street)	380	142	5
Block 20 - Cleveland Ave (Sixth Street to Fifth Street)	337	142	5
Block 21 - Cleveland Ave (Fifth Street to Fourth Street)	136	142	5
Block 23 - Lincoln Ave (Fifth Street to Fourth Street)	143	142	5
Block 24 - Lincoln Ave (Fourth Street to Third Street)	364	142	5
Block 1 - Sixth Street (Railroad to Cleveland)	419	70	3
Block 12 - Third Street (Lincoln to Jefferson)	329	70	3
Block 13 - Third Street (Jefferson to Washington)	277	70	3
Block 14 - Railroad Ave (Sixth Street to Fifth Street)	340	70	3
Block 16 - Railroad Ave (Fourth Street to Third Street)	440	34	3
Block 17 - Railroad Ave (Third Street to Second Street)	440	34 - 142	3
Block 22 - Cleveland Ave (Fourth Street to Third Street)	414	Unknown	3

Fire Flow Availability for Future Build-out

According to current City water modeling, sufficient fire flow (1,500 gallon per minute at 20 pounds per square inch) is available in the HIP Streets area. While minimum fire flow requirements are met with the current system, it is recommended that any water main under 8-inch diameter or pipe segments that have exceeded their useful design life be replaced with minimum 8-inch diameter C900 PVC pipe.

The Loveland Fire Rescue Authority (LRFA) has confirmed that fire hydrant spacing is adequate in the HIP Streets area. Loveland Fire Rescue Authority standard for hydrant spacing for multi-family and commercial buildings is a minimum of 400-feet length from a fire hydrant to any location on the

building. Fire hydrants would then be spaced at 350-foot. See ***Exhibit G*** for existing fire hydrant locations.

VI. Stormwater

Existing Conditions & Condition Assessment

The City of Loveland's original combined sewer system, installed in 1903, carried sanitary waste, groundwater, and storm runoff to the Big Thompson River. A manual detailing stormwater criterion for developers was completed in 1979, and in 1982, three nearby ditch companies agreed to allow the City to use their ditches for stormwater discharge, provided the City develop a masterplan and funding for improvements first. In 1986, this plan was approved by City Council and management of storm water was moved to the Water/Wastewater Department from the Streets Department. The Stormwater Utility, developed in 1987, began the task of long-term management of storm drainage and flood control improvements. Currently, the stormwater utility is managed by the Public Works Department.

Washington Avenue Outfall

In 2004, the Washington Avenue Outfall Project (WAOP) involved the installation of a new 78-inch reinforced concrete pipe (RCP) running from the east into the HIP Streets area at Fifth Street & Jefferson Avenue. The project was designed to provide a stormwater system that could convey flows from a 10-year storm event (2" of water over a 2-hour period). Two Baysaver manholes were installed at the intersection of Fifth Street & Jefferson as a low impact development (LID) feature to protect water quality. This project also included the installation of a 78-inch pipeline in Jefferson Avenue from Fifth Street to First Street, and a replacement of the stormwater pipes and manholes in Fifth Street from Railroad to Jefferson, including the pipes and manholes south of Fifth on Cleveland and Lincoln. The segment of the WAOP within the HIP Streets Area did not include the upsizing of any laterals, nor did it replace any storm inlets.

The City provided record drawings from the WAOP as reference materials for the HIP Streets Infrastructure Project. Ditesco completed a full inspection of four of the manholes in the WAOP in order to verify the as-built invert elevations and tie the coordinate system into the HIP Streets Infrastructure model. These inspections verified the accuracy of the as-built drawings from the WAOP but further Washington Avenue Outfall investigation/inspection was not completed. Of the remaining WAOP manholes, Ditesco inspected only those that lacked invert data in order to ensure the vertical locations of the pipes were accurate for the 30% conceptual design layout.

CCTV Pipe Inspection

As the replacement of stormwater pipes through the WAOP happened so recently, the City requested new CCTV inspection only for those mains that were not included in the WAOP. Stormwater pipes that were not associated with the Washington Avenue Outfall project were CCTV videoed and documented in the Collector App.

Stormwater Inlet and Manhole Inspections

Inlet inspections consisted of the use of the Collector App to document details about each inlet and manhole. Material and condition of each manhole and inlet were documented and recorded. Other pertinent attributes or issues dealing with dimensions, infiltration, mislabeled covers, etc. were also noted. For any issues encountered with a manhole or inlet, a comment describing the issue was

recorded and a picture was taken of the individual problem. These data and photographs were recorded in the Collector App.

Invert Measurements

Inspections of both manholes and inlets included measurements down to the invert of each main or lateral pipe entering or leaving the feature. A number was assigned to each of the pipes connected to a manhole or inlet, with the outgoing pipe labelled number one (1). The remaining pipes were numbered going clockwise from the outgoing pipe. These invert measurements, along with the surveyed elevations of the manhole or inlet rim, provided a clear picture of the physical layout of the stormwater system throughout the HIP Streets area. Figure 9 is a diagram showing this pipe naming convention, with arrows noting flow direction.

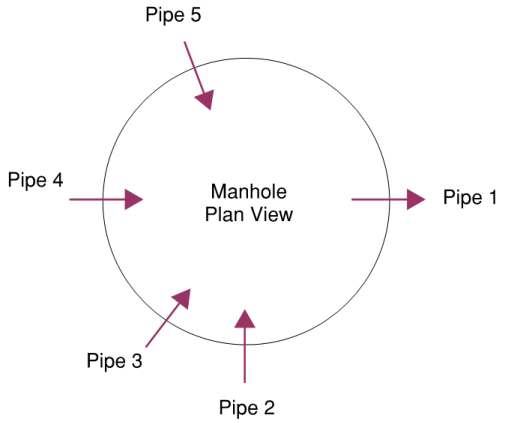


Figure 9 - Pipe Numbering Convention

Stormwater Main, Manhole, and Inlet Conditions

The stormwater system in the HIP Streets area may be divided into two parts based on its general condition. The manholes and laterals replaced in the Washington Avenue Outfall Project in 2004 are in good condition. The remainder of the system varies in its condition, but generally shows the effect of age, with certain components that would benefit from replacement. See ***Exhibit J*** for an overall picture of the condition of the stormwater system in the area.

Some of the stormwater pipes have serious issues. Structural failures such as large horizontal displacements, pipe collapses in certain areas, and broken pipe sections provide opportunities for soil erosion and flooding. The pipe sections suffering from severe structural damage were brought to the attention of the Stormwater Utility as they were encountered during the assessment process. See Figure 10 below for an example of a structurally deficient pipe located at Sixth Street & Cleveland Avenue.

Figure 10 – Structurally Deficient Stormwater Pipe at Sixth & Cleveland

In Figure 11, pipe segment P3897 is shown as an example of pipe that has multiple large fractures, a section of broken pipe around a poorly placed tap that was covered by a paint-bucket lid and then back-filled, a large offset and sag under a dip in the road, and a section of badly broken pipe.

Figure 11 – Fractured and Partially Collapsed Stormwater Pipe West of Sixth & Cleveland

Most of the stormwater pipes in HIP Streets area are not so badly damaged, but a key general issue was observed in the course of the assessment. The buildup of sediment and debris in pipes is a common problem in the HIP Streets area storm system. This buildup varies in amount, but in certain sections it takes up to 30% of the diameter of the pipe. Not only does this inhibit the assessment of the pipe

conditions, it limits the amount of flow these pipes can transport and increases the odds of pipes backing up during storm events.

The inspection of inlets and manholes found several consistent issues as well. Many of the assessed inlets and manholes had enough sediment and debris covering the bench that inspection of the bench condition was not performed. In some cases, this debris was layered higher than the top of the incoming or outgoing lateral pipes and completely filled a portion of those pipes. Additionally, numerous inlets had structural deterioration related to the walls. This damage included large amounts of exposed aggregate, pieces of concrete that have fallen away, fractures, and holes in the walls. The quantities for each of these items is summarized in Table 15.

Table 15 - Stormwater Deficiencies at Manholes and Inlets

Stormwater Deficiencies at Manholes and Inlets	
Stormwater Inspection Issue	Percent Affected
Debris/Sediment Build-up (Inlets)	71%
Debris/Sediment Build-up (Manholes)	31%
Structural wall deterioration (Inlets)	33%

See Figure 12 for an example of the encountered issues with the inlet walls. Finally, a number of the grates and frames had settled below the gutter flow line and were bent or loose. These inlets typically also had structural issues in their walls.

Figure 12 – Wall Damage at Inlet by Fourth & Railroad

The stormwater manholes In the HIP Streets area form two generally cohesive groups. The first group includes those that were replaced with the WAOP along Jefferson and along Fifth Street. These are concrete manholes in good and excellent condition. While they have occasional issues, including some structural cracking in the chimneys and tops of the cones, they are generally sound.

The second group includes the remainder of the stormwater manholes in the HIP Streets area. Many of these manholes are brick and, although some are in decent condition, many suffer from structural issues. A majority of these issues are cracks and displaced bricks in the chimneys and cones, along with rims and covers that are bent and cracked to the point that access is difficult. Figure 13 shows an example of a brick stormwater manhole with minor deficiencies in the chimney.

Figure 13 – Cracked Chimney Bricks in Stormwater Manhole

Many of these manholes have no bench or channels, only flat bottoms that are filled with water and sediment. See ***Exhibit K*** for a visual depiction of stormwater manhole condition, with recommended replacements as part of the HIP Streets project.

Stormwater Layout

Other than condition issues, a common problem in the stormwater system, in several places along Fourth Street, has to do with layout. CCTV of laterals at Fourth Street and West Railroad Avenue revealed what appears to be old inlets that were covered by newer streetscape bulb-outs. It appears that when new bulb-outs were placed at the west corners of the intersection, the inlets that were previously in those corners were not removed with their laterals, but rather were covered by the bulb out. Figure 14 shows an example of this apparent layout and problem.

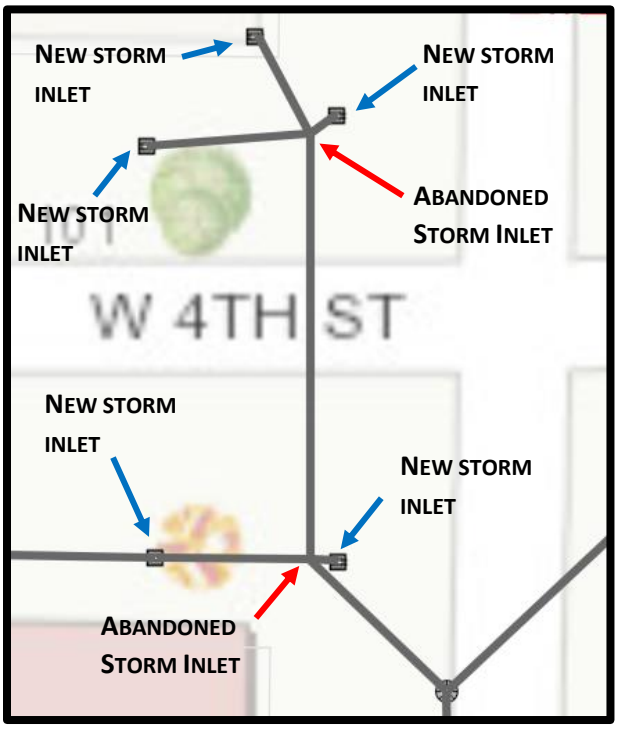


Figure 14 – Non-Standard Stormwater Layout Along Fourth Street

Two new inlets, one on either side of the new bulb-out, were added and routed to the old, buried inlet for connection to the system. This makes the stormwater pipe that connects the old inlets in this area difficult to maintain as there is no access to either side of the pipe. Although the CCTV inspections did not include the laterals near the Lincoln or Cleveland intersections on Fourth Street, the directions of pipes leaving inlets in those areas strongly suggest the same issue.

These four locations along Fourth Street are at the following locations:

- West of Railroad Avenue - both sides of the intersection
- North of Cleveland Avenue - both sides of the intersection
- Lincoln Avenue on the northwest corner of the intersection
- West of Washington Avenue - both sides of the intersection

Recommended Improvements

Replacement Recommendations

The proposed layout of new and replaced stormwater lines is shown in ***Appendix I***. This includes the addition of new manholes and inlets for several reasons: replacement of existing features that were found to be in poor condition upon field inspection, the provision of a standardized layout in areas along Fourth Street that have non-standard existing layouts, and the accommodation of the proposed streetscape plans that place curbs or bulb-outs in conflict with the existing inlet locations.

Appendix I also shows the locations of new stormwater pipelines. New stormwater pipelines are recommended either due to a change in layout or due to an issue with the existing condition. These issues include replacement of pipelines in poor condition, or pipelines that are sized below the HIP

Streets designated standard of an 18-inch diameter, regardless of their current condition. See ***Exhibit L*** for a map of the causes for replacement of each recommended new pipe.

Based on the typically shallow grade of stormwater pipelines and the City's preference, open cut installation has been assumed for the method of replacement for all stormwater piping.

During the assessment phase of the project, City staff noted the planned implementation of a new stormwater asset management program in 2020. The program will include a complete inventory and inspection of all pipes, inlets, and manholes in the City, including the HIP Streets Area. Once complete, areas of concern will be prioritized and money appropriated to repair or replace deficient stormwater infrastructure.

VII. Street Condition & Pedestrian ADA Access Assessment

The 2017 HIP Streets Modernization plan evaluated the streetscape from building face to building face and provided a conceptual layout for each block in the HIP Streets Core area. Each of these proposed layouts assumed a full replacement of the streetscape surface across the right of way width and included installation of ADA compliant ramps. Detailed grading analysis and design was not completed as part of the 2017 HIP Streets Modernization Plan and will need to be advanced during final design. An excerpt of Block 6 in the 2017 HIP Streets Modernization Plan is shown in Figure 15.

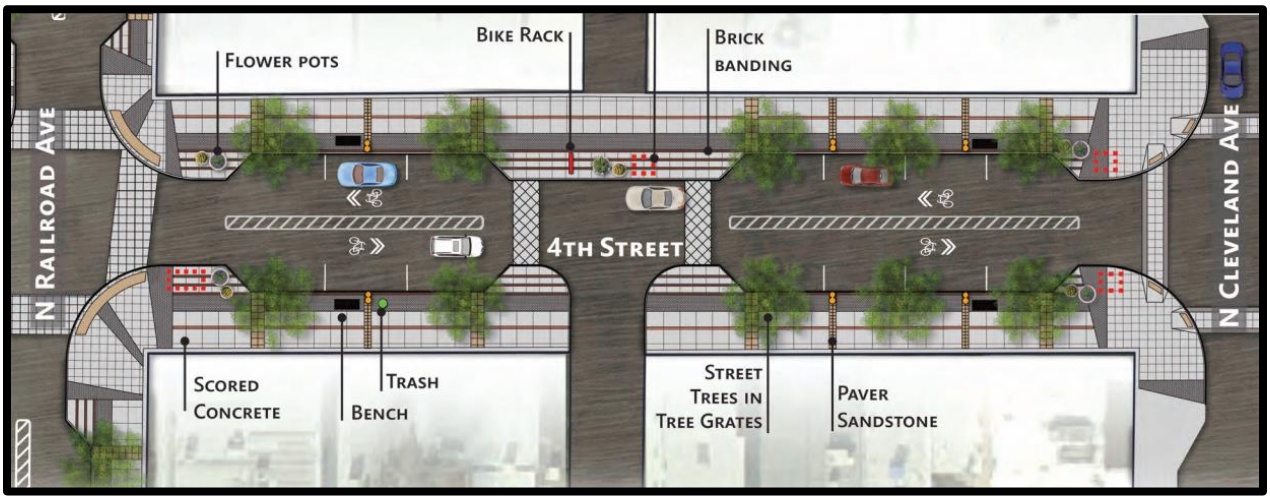


Figure 15 - HIP Streets Modernization Plan, Block 6 Proposed Streetscape

To further the study of surface infrastructure, focused specifically at intersection ramps and crosswalks, this infrastructure assessment reviewed the condition/accessibility of the ramps and crosswalks. The City is required to bring all HIP Streets ramps and crosswalks into compliance with the Americans with Disabilities Act (ADA) guidelines for accessibility. Each intersection within the HIP Streets Core Area was reviewed to confirm compliance with these standards; street conditions were not evaluated during the course of this study, however, costs were applied to remove and replace the existing asphalt roadways with new asphalt.

ADA Assessment

This infrastructure assessment included an inspection of all ramps and crosswalks within the HIP Streets area for compatibility with ADA standards. It did not include ADA assessment of the streets, ADA parking spaces, sidewalks, or storefronts. A complete review of ADA compliance and any required improvements would be completed when the project progresses to the design level.

Ramps

To evaluate ramps for compliance with ADA standards, a 4-foot digital level was used to measure slopes on the ramp itself and, where applicable, on the approach to the ramp. If a grade break occurred other than between the ramp and the approach, additional measurements showed the slope on either side of the grade break. Other ramp measurements included sidewalk widths and other key distances such as curb transition lengths, ramp widths, distances between key corner features such as traffic cabinets and traffic poles, and the size of those key features. In all cases, the most extreme slope controlled the ADA acceptability of a ramp. Corners that contain more than one ramp would need to be replaced if any of their ramps do not meet the ADA standards. To reflect this reality, results are displayed by corner rather than by ramp. Full results of ramp slopes can be found in ***Appendix II***.

Crosswalks

For crosswalks, cross- and longitudinal-slopes were measured with a 4-foot digital level in at least two locations along the walk. When the crosswalk had more than two sections of constant slopes, sloped area along the walk were measured consistently. Because HIP Street blocks are divided at the center line of the downtown streets and in order to show the ADA acceptability of the crosswalks on a block-by-block basis, crosswalks were divided into "half walks" for classification purposes. Each half-walk extends from the flow line at the curb to the centerline of the road.

The City requires all ramps and crosswalks have the following minimum criteria to comply with ADA standards:

- Longitudinal slopes not to exceed 8.33%.
- Cross slopes not to exceed 2.00%.

See ***Appendix II*** for the complete dataset concerning the ADA ramps and crosswalks in the HIP Streets area, and ***Exhibit M*** for a map showing the ADA acceptability of each feature.

Comparing the current corners and crosswalks in the HIP Streets area to the maximum allowable slopes, Ditesco found the results shown in Table 16:

Table 16 – Ramps and Crosswalks ADA Compatibility

ADA Compatibility for Ramps and Crosswalks			
Feature	Meet ADA Standards	Do Not Meet ADA Standards	Total
Corners	13	63	76
Crosswalks	113	22	135
Total	126	85	

When separated by block, the number of corners and cross walks, divided at the centerline, that do not meet ADA standards, are listed in Table 17 below.

Table 17 – Locations of Non-Compliant ADA Features

Locations of Non-Compliant ADA Features		
HIP Street Block	Ramps	Cross Walks (Divided at Road Centerline)
Block 1 Sixth Street (Railroad Ave to Cleveland Ave)	8	6
Block 2 Fifth Street (Railroad Ave to Cleveland Ave)	4	0
Block 3 Fifth Street (Cleveland Ave to Lincoln Ave)	4	0
Block 4 Fifth Street (Lincoln Ave to Jefferson Ave)	5	4
Block 5 Fourth Street (Garfield Ave to Railroad Ave)	5	1
Block 6 Fourth Street (Railroad Ave to Cleveland Ave)	4	0
Block 7 Fourth Street (Cleveland Ave to Lincoln Ave)	3	1
Block 8 Fourth Street (Lincoln Ave to Jefferson Ave)	3	0
Block 9 Fourth Street (Jefferson Ave to Washington Ave)	6	0
Block 10 Third Street (Garfield Ave to Railroad Ave)	4	2
Block 11 Third Street (Railroad Ave to Cleveland Ave)	4	2
Block 12 Third Street (Lincoln Ave to Jefferson Ave)	3	1
Block 13 Third Street (Jefferson Ave to Washington Ave)	5	3
Block 14 Railroad Ave (Sixth Street to Fifth Street)	1	0
Block 17 Railroad Ave (Third Street to Second Street)	3	2
Totals	62	22

Recommended Improvements

To bring the HIP Streets area into ADA compliance, Ditesco recommends replacing the ramps and crosswalks that do not meet ADA standards in each block as infrastructure and surface improvement work is completed. All ramp and crosswalk improvements at the intersections should be completed with an adjacent block or project to minimize re-work and cost expenditures.

VIII. Electrical & Lighting

Existing Conditions (Electric)

Ditesco assessed each electric pole and light, evaluated the condition of each, and walked with the City Power Division to assess existing at-grade and overhead transformer locations and potential at-grade locations for new transformers. Currently, access to transformers in the HIP Streets area is somewhat limited, with 14 of the 35 transformers mounted at the tops of electrical poles. All transformers that are currently at-grade were found to be in good condition through a joint inspection by Ditesco and the City of Loveland Power Division.

The City indicated that they had confidence in the GIS inventory of the electrical conductors in the HIP Streets area. Based on this data, there are currently 130 primary and 152 secondary conductors

underground, while 30 primary and 239 secondary conductors are overhead. The condition of these conductors is not a primary factor in electrical condition rating.

Existing Conditions (Lighting)

The lights in the HIP Streets area are maintained by two different city departments. The Power Division maintains street lighting, and the Traffic and Facilities Management groups maintain the pedestrian lights and lighting in the parking lots, respectively.

Types of Light Fixtures

Table 18 shows the number of lights of different types in the HIP Streets area, and Table 19 shows the number of lights by condition. The lights in excellent condition were along Highway 287 near the Foundry and were recently replaced with the City's standard pendant head and LEDs. Those in fair condition were rated as such because of minor issues such as dirty lenses and small cracks in the cover. The lights in poor condition had severe discoloration and missing covers.

Table 18 – Types of Light Designs and Luminaires

Light Design and Luminaire Types					
Light Design			Luminaire Type		
Cobra Head	Pendant	Total	LED	Incandescent	Total
95	37	132	74	58	132

Table 19 – Electrical Light Conditions

Electrical Light Conditions				
Excellent	Good	Fair	Poor	Total
9	116	5	2	132

Types of Electric Poles

Table 20 shows the quantity of poles currently in use in the HIP Streets area by material.

Table 20 – Electric Pole Material Types

Pole Materials			
Wood	Fiberglass	Steel	Total
57	27	64	148

The electrical poles were inspected for their general condition, their straightness and whether or not they were in plumb. Table 21 shows the number of poles that fell into each condition rating. The excellent poles matched the City's standard and were mainly found near the Foundry project with two near Fourth Street and Garfield Avenue. Fair poles show some cracking or aesthetic issues such as paint chipping or minor dents. Poles that were rated poor had large cracks, dents, missing parts, or major aesthetic issues. The pole at Railroad Avenue, halfway between Sixth and Fifth Streets, was rated as needing Immediate Attention because it was not securely fastened to its base. Ditesco informed the City of this issue, and City crews immediately addressed this issue to secure the pole to its base. The pole has

been left with its rating as Immediate Attention, because although repairs were made, a permanent replacement is recommended in this location.

Table 21 – Electric Pole Conditions

Pole Conditions					
Excellent	Good	Fair	Poor	Immediate Attention	Total
7	68	47	25	1	148

Ditesco also conducted a light study, which showed that much of the downtown area lacks the lighting necessary to have the minimum specified illuminance value, in all of the pedestrian walking areas, as defined in the LCUASS Standards, Table 15-1. Table 22 provides the information listed in LCUASS Table 15-1, defining lighting requirements in Commercial Areas along Arterial, Collector, and Local Streets

Table 22 – LCUASS Standards Recommended Street Illumination Levels (Table 15-1)

LCUASS Recommended Illumination Levels		
Street Classification	Area Classification	Average Maintained Illuminance Values (foot-candles)
Arterial	Commercial	1.7
Collector	Commercial	1.2
Local	Commercial	0.9

The light study, with existing light levels, is documented in ***Exhibit N*** as a heat map. This exhibit clearly shows the areas that out of conformance with the LCUASS Standard, as defined by street classification.

Recommended Improvements (Electric)

To improve the aesthetic of the downtown area and to facilitate maintenance, Ditesco recommends the replacement of pole-mounted transformers with transformers at grade, per the HIP Street designated standards. The City has also expressed a desire to bring all electrical conductors underground in the downtown area. See ***Appendix I*** for proposed future locations of transformers and underground conduit. The proposed at-grade transformer locations have been selected based on maximum distances from a transformer to a secondary service. These parameters were established following the field walk with the City Power Department and selecting potential transformer locations.

During installation of a new underground duct bank, Telephone, CATV, and power conductors are assumed to be trenched in parallel with the power utility. This is a standard City installation, as shown in the City of Loveland Water and Power Drawing, SM-114 – Joint Trench Detail.

Recommended Improvements (Lighting)

Additional lighting features

The City has expressed a desire to standardize the light poles in the area with fiberglass poles and LED lights on a pendant style head.

In order to accommodate the many festival uses of the downtown area, the City would like to provide public power options as a part of the new light poles on certain blocks. The City would like to have this

availability on the blocks of Fourth Street from Railroad Avenue to Washington Avenue. The 2017 HIP Streets Masterplan addresses the types of poles that have been considered as a part of the HIP Streets Improvements project. These power attachments would serve only vendors by having the connection at a regularly inaccessible height. Vendors would have full use of the connections, while the general public would not. The infrastructure to provide lighting, and secondary power has been included in the cost estimate for the specified blocks. Light pole procurement and installation costs are carried in the 2017 HIP Streets Modernization cost.

IX. Traffic Signals

Existing Conditions

State Highway 287 runs through the heart of the HIP Streets area and is the only right-of-way in the area with traffic signals. Through a partnership with the Colorado Department of Transportation (CDOT), CDOT owns and pays for capital costs and maintenance on all signals, but they are physically maintained and operated by the City of Loveland. There is a total of five signal-controlled intersections in the HIP Streets area.

Traffic Signal Poles

The traffic signal poles and lights on Fourth Street at Cleveland and Lincoln Avenues were replaced in recent years with new decorative signal poles that are the designated standard for the HIP Streets area and are in good condition. The remaining three intersections, Cleveland Avenue and Sixth Street, Cleveland Avenue and Fifth Street and Lincoln Avenue and Fifth Street, consist of older galvanized steel poles that do not meet the designated facade design standards and are due for replacement. According to City staff all signal lights and pedestrian crossing signals are LED while only a portion of the signal pole mounted luminaires have been replaced with LED fixtures.

Traffic Control Cabinets and Pull Boxes

The traffic control cabinets house all controllers and battery backup for the signals. The traffic control cabinets all meet the designated City of Loveland standard and are in good to excellent condition. Several cabinets of aluminum construction with a clear anodizing have begun to show wear; the anodizing has started to crack and chip. While they are not an immediate concern, these should be monitored for further deterioration of the coating and corrosion of the cabinet. Most of the traffic control pull boxes show signs of wear and should be replaced with surface improvements.

Recommended Improvements

Relocated Signals & Traffic Control Cabinets

The City of Loveland and CDOT are currently coordinating on installation and relocation of the traffic signals in the three intersections needing replacement:

- Cleveland Avenue and Sixth Street
- Cleveland Avenue and Fifth Street
- Lincoln Avenue and Fifth Street

See ***Appendix III*** for CDOT traffic signal plans, overlaid with the HIP Street improvements in these intersections. New traffic poles will be located in mutually conducive locations that will accommodate the existing configuration and proposed modifications.

X. Cost Estimates

A complete understanding of all associated project costs is needed to better understand the budgetary needs to implement the HIP Streets Modernization Plan and ultimately repair, replace, or upgrade infrastructure. When reviewing the 2017 Modernization Plan Update, it was noted that the only costs included were new construction costs from curb to building face. The 2017 Modernization Plan costs did not include any demolition costs or improvement to the existing streets from lip of gutter to lip of gutter.

In order to provide an overall view of the financial needs of the HIP Streets Modernization Plan and Infrastructure Assessment, a comprehensive cost estimate was provided as part of this assessment. The costs provided include:

- Infrastructure – Costs include repair or replacement of water mains, sewer mains, storm drains, traffic lights, street lights and conversion of electrical services from overhead to underground.
- Street Replacement – Costs include replacement of asphalt paving, which was not accounted for in the 2017 HIP Streets Modernization Plan costs.
- Modernization Plan – Cost to upgrade the streetscape to meet urban design intent developed in the 2017 HIP Streets Modernization Plan.

Due to the conceptual level of design, some costs that would need to be further reviewed if the project moves forward in design and are not included in this assessment are:

- Interior, secondary building electrical system upgrades for services where overhead electrical is converted to underground
- Potential replacement costs for customer water services after the City's meter
- Potential replacement costs for customer sewer service to the City's main

It is important to note that while the water and sewer services are the property owners' responsibility, a project like this provides a prime opportunity to partner with property owners to bring their services up to current standards. If the HIP Streets Modernization Plan moves into an implementation stage, it is highly recommended that the City work with property owners to accomplish water and sewer service upgrades.

The cost estimates provided are developed to an *Association for the Advancement of Cost Engineering (AACE International)* classification system; Class 5 level estimate. A Class 5 level estimate provides a high-level cost estimate for budgeting purposes when the project parameters are not yet critically defined; this cost estimate is not a construction-level cost. It is important to note that all costs are provided as 2019 costs. Inflation factors will have to be considered based on actual implementation timeframes. The detailed block-by-block cost estimates are included in ***Appendix IV***.

XI. Project Planning

In order to evaluate all project parameters analytically and objectively, a Multi-Criterion Decision Analysis (MCDA) tool was developed. This tool objectively applies a ranking to seven categories. Those categories include:

- ADA accessibility

- Water
- Sanitary Sewer
- Stormwater
- Electrical
- Traffic
- Lighting

By analyzing these categories per block or alley, an objective score could be created, ranking each block by its infrastructure need. Each of these categories were then subjected to analysis by five criteria, further defined below.

Categorical Analysis

Each of the seven categories were analyzed for their impact on or to the following criteria:

- Safety
- Reliability
- Cost
- Funding Challenges
- Design/Constructability Issues

For each category, a ranking matrix was created to apply a value of one to five. A score of one provides the least risk, lowest cost, or would require the least effort to correct. A score of five poses the greatest risk, highest cost, or would require a significant effort to correct. The full ranking matrix is shown in ***Exhibit O***. This analysis was completed on a per-block basis to understand the relative utility impact on any given block in the HIP Streets area. With some of the infrastructure located in the alleys within the HIP Streets area, a separate MCDA was created to evaluate and prioritize the alleys.

Multi-Criterion Decision Analysis

Two key components to the MCDA are the group and criteria weights. The group weight establishes a score for each block based on the importance of that block to the overall HIP Streets area. The group weight was developed using two components, the Level of Detail, Appendix A-3, supplied in the 2017 HIP Streets Modernization Plan Update, shown in ***Exhibit P***, and parking usage densities from the 2018 Downtown Parking Study and Strategic Plan: Phase 1, Parking Occupancy Heat Maps, in ***Exhibit Q***. During the 2017 HIP Streets Modernization Plan, the following detail levels were established based upon pedestrian count and urban activity:

- High Detail: Urban Activity
- Medium Detail: Urban Connections
- Minimum Detail: Urban Residential

During the 2018 Downtown Parking Study and Strategic Plan, Phase 1, completed by Walker Consultants, parking densities were analyzed to identify the most-utilized corridors. Combining these two components created group weights for each block based on actual usage. The worksheet used to develop the group weights can be found in ***Appendix V***.

Individual criteria weights were established as a percentage of the block group weight. The criteria weights were then applied to each of the seven MCDA evaluation categories. The criteria weight percentages applied to the MCDA are provided in Table 23.

Table 23 - Criteria Weight Percentage per Infrastructure Component

MCDA Criteria Weight Per Infrastructure Component	
Infrastructure Component	Criteria Weight %
ADA	23%
Water	18%
Sanitary Sewer	20%
Storm Sewer	12%
Electrical	14%
Traffic	5%
Lighting	8%

With each of these tools, rankings were applied to each category, per block, based upon observed condition. The full results of this analysis are provided in ***Appendix V***.

It is important to note that, at the City's request, analysis of the MCDA was performed three different ways for the HIP Streets and HIP Alleys. The first analysis was completed with no cost criteria included so that the tool could be analyzed based on infrastructure condition only. The second was with costs ranked low to high where lower replacement costs received a lower score and higher replacement costs received a higher score. The third analysis ranked costs from high to low with higher replacement costs receiving a lower score and lower costs receiving a higher score.

After running all three analysis, only a few blocks shifted in the priority list. Based on the analysis, meetings with City Staff, and best application to this project, the second analysis, cost ranked low to high, was chosen as the final result of this assessment. From an infrastructure assessment and project budgeting standpoint, the blocks with the highest cost have the largest need for infrastructure improvement and should be addressed first. Tables 24 and 25 below show the HIP Streets Block and HIP Streets Alley Prioritization based on this analysis. A map of the HIP Streets core block rankings is also provided in ***Exhibit R***.

Table 24 - HIP Streets Block Priorities

HIP Streets Block Priorities		
Priority	Block No.	Location
A	8	Fourth Street (Lincoln Ave to Jefferson Ave)
B	6	Fourth Street (Railroad Ave to Cleveland Ave)
C	7	Fourth Street (Cleveland Ave to Lincoln Ave)
D	16	Railroad Ave (Fourth Street to Third Street)
E	15	Railroad Ave (Fifth Street to Fourth Street)
F	11	Third Street (Railroad Ave to Cleveland Ave)
G	4	Fifth Street (Lincoln Ave to Jefferson Ave)
H	12	Third Street (Lincoln Ave to Jefferson Ave)
I	18	Jefferson Ave (Fifth Street to Fourth Street)

HIP Streets Block Priorities		
Priority	Block No.	Location
J	24	Lincoln Ave (Fourth Street to Third Street)
K	23	Lincoln Ave (Fifth Street to Fourth Street)
L	9	Fourth Street (Jefferson Ave to Washington Ave)
M	22	Cleveland Ave (Fourth Street to Third Street)
N	21	Cleveland Ave (Fifth Street to Fourth Street)
O	3	Fifth Street (Cleveland Ave to Lincoln Ave)
P	5	Fourth Street (Garfield Ave to Railroad Ave)
Q	2	Fifth Street (Railroad Ave to Cleveland Ave)
R	17	Railroad Ave (Third Street to Second Street)
S	20	Cleveland Ave (Sixth Street to Fifth Street)
T	19	Jefferson Ave (Fourth Street to Third Street)
U	13	Third Street (Jefferson Ave to Washington Ave)
V	14	Railroad Ave (Sixth Street to Fifth Street)
W	1	Sixth Street (Railroad Ave to Cleveland Ave)
X	10	Third Street (Garfield Ave to Railroad Ave)

Table 25 - HIP Streets Alley Priorities

HIP Streets Alley Priorities		
Priority	Alley No.	Location
AA	9	Backstage Alley (Cleveland to Lincoln Avenue)
AB	8	Between Third and Fourth Street (Painters Alley to Cleveland Avenue)
AC	7	Painters Alley (Third to Fourth Street)
AD	6	Sweetheart Alley (Lincoln Avenue to Jefferson Avenue)
AE	5	Sweetheart Alley (Cleveland to Lincoln Avenue)
AF	4	Sweetheart Alley (Railroad to Cleveland Avenue)
AG	10	Between Third and Fourth Street (Lincoln to Jefferson Avenue)
AH	3	Artist Alley (Cleveland to Lincoln Avenue)
AI	11	Fiction Alley (Jefferson to Washington Avenue)
AJ	2	Artist Alley (Railroad Avenue to Cleveland Avenue)
AK	1	Between Railroad and Cleveland Avenue (Sixty Street to Artist Alley)
AL	12	Between Third and Fourth Street (Mid-Block to Garfield Avenue)

Additionally, the City recommended a pilot project to kick-off the HIP Streets Modernization Plan implementation. The intent of the pilot project is to provide a block that is highly visible, is utilized for events, has relatively lower utility replacement costs, and has slightly fewer business and residential storefronts. With these parameters, Fifth Street between Cleveland Avenue and Lincoln Avenue has been identified as a potential pilot project. All remaining improvements have been prioritized according to their location and relative infrastructure improvement needs. All 24 HIP Streets Blocks projects have been grouped into seven (7) prioritized projects, as shown in Figure 16 below and Exhibit S.

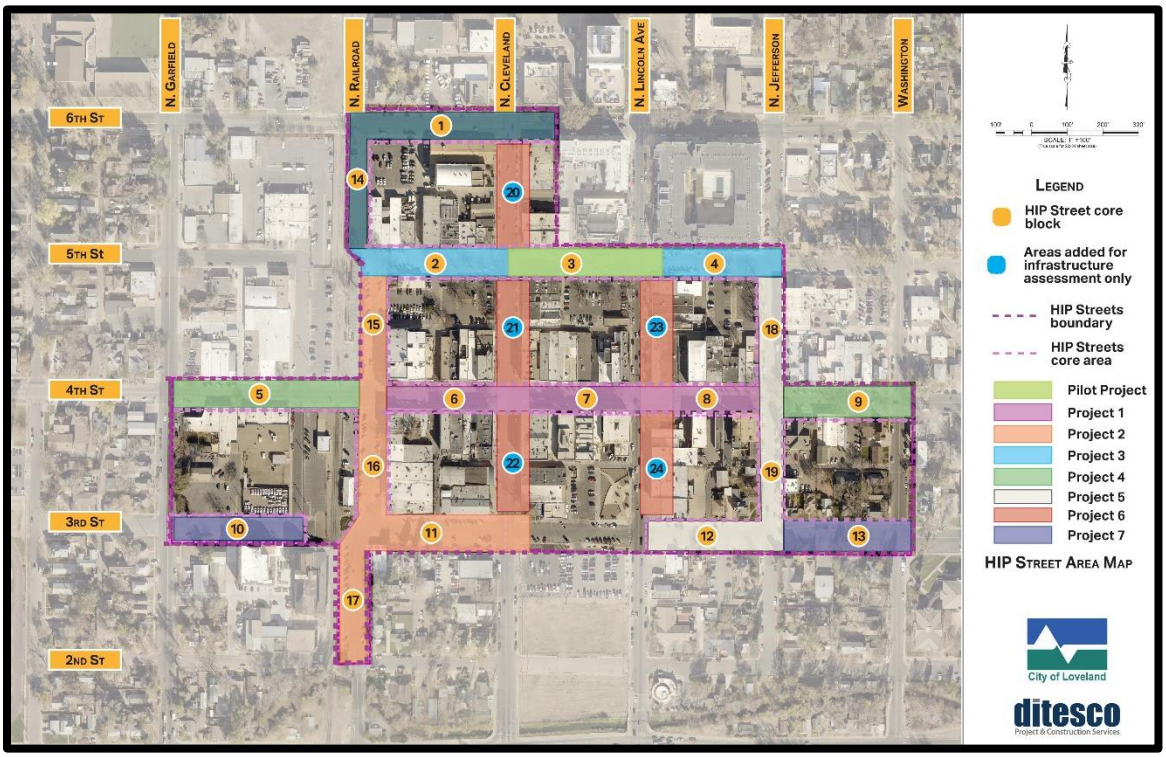
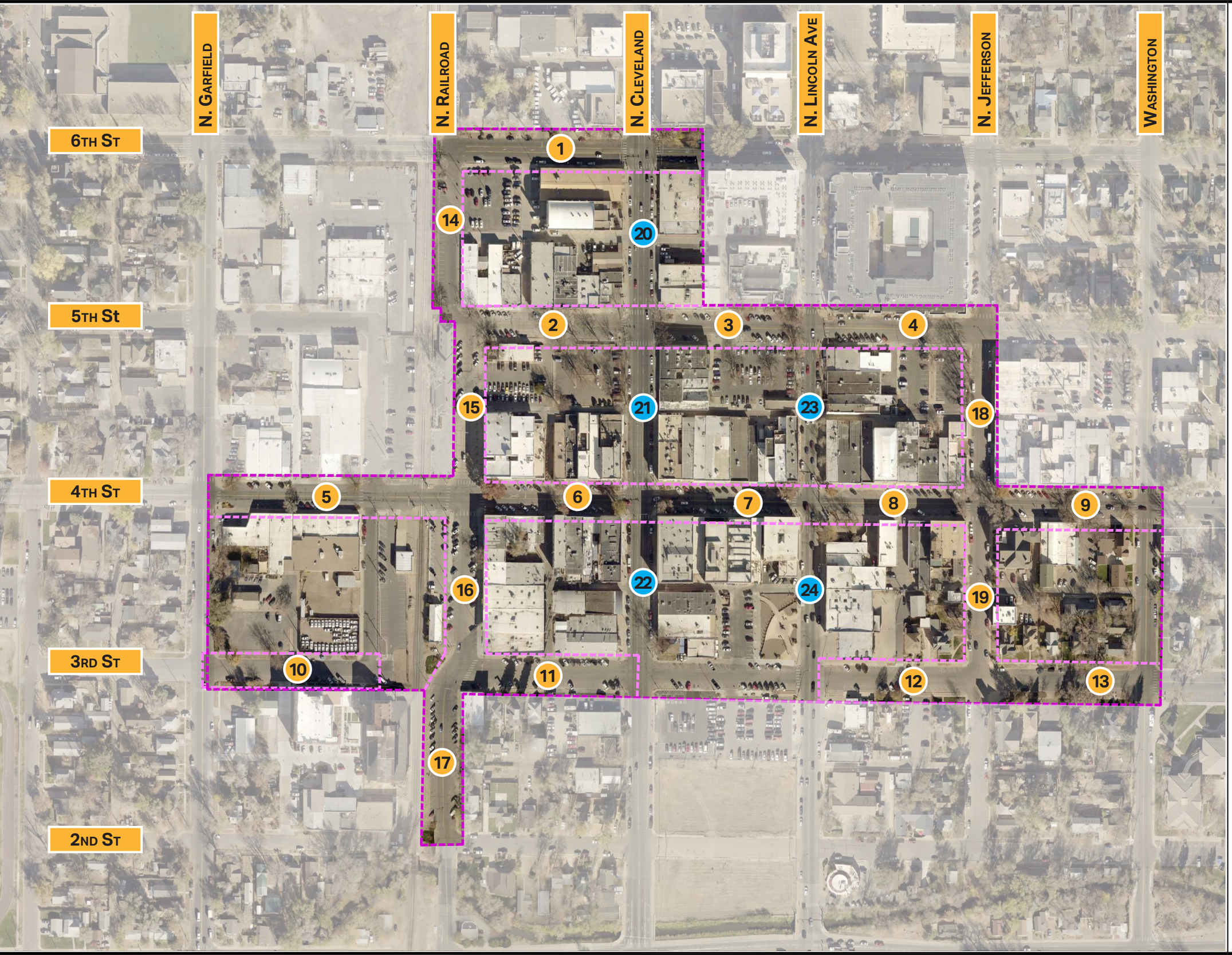


Figure 16 - HIP Streets Project Grouping

Exhibit A

HIP Streets Area Map



100' 0 100' 200' 300'

SCALE: 1" =100'
(True scale for 22x34 sheet size)

Legend

- HIP Street core block
- Infrastructure assessment only
- HIP Streets boundary
- HIP Streets core area

HIP Street Area Map

City of Loveland

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Exhibit A - 2

Exhibit B

HIP Streets Alley Map

N. Garfield
N. Railroad
N. Cleveland
N. Lincoln Ave
N. Jefferson
Washington
6th St
5th St
4th St
3rd St
2nd St
1
2
3
4
5
6
7
8
9
10
11
12

100' 0 100' 200' 300'

SCALE: 1" =100'
(True scale for 22x34 sheet size)

Legend

- Alley Number
- HIP Area Alley
- HIP Streets boundary
- HIP Streets core area

HIP Streets Alley Map

City of Loveland

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Exhibit B - 2

Exhibit C

Existing Sanitary Sewer Utility Infrastructure

Existing Sanitary Sewer Utility Infrastructure

City of Loveland

0 100 200 Feet

- Sewer Manhole
- Sewer Gravity Main
- Sewer Lateral Line
- Grease Interceptor
- Grease Trap
- Ex Sewer Manhole
- Ex Sewer Gravity Main
- Ex Sewer Lateral Line
- Ex Grease Interceptor/Trap
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit D

Existing Sanitary Sewer System Condition

Existing Sanitary Sewer System Condition

City of Loveland

0 100 200 Feet

Sewer Manhole Condition

- Excellent; Good
- Fair
- Poor; Immediate Attention

Sewer Gravity Main Condition

- Excellent; Good
- Fair
- Poor; Immediate Attention
- Ex Sewer Manhole
- Ex Sewer Gravity Main
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit E

Existing Water Utility Infrastructure

Existing Water Utility Infrastructure

City of Loveland

0 100 200 Feet

- Water Meter
- Isolation Valve
- Fire Line Valve
- Hydrant Valve
- Unknown Valve Function
- Service Lateral
- Fire Lateral
- Hydrant Lateral
- Water Main
- Ex Water Meter
- Ex Water Valve
- Ex Water Lateral
- Ex Water Main
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit F

Existing Water Utility Heat Map

Existing Water Utility Heat Map

City of Loveland

0 100 200 Feet

- PVC WATERMAIN
- CI OR GALVANIZED STEEL WATERMAIN
- HIP STREETS AREA

6th St
5th St
4th St
3rd St
N Railroad Ave W
N Railroad Ave
Railroad Ave
Cleveland Ave
N Lincoln Ave
N Jefferson Ave
Washington Ave

August 2019

Exhibit F - 2

Exhibit G

Existing Fire Hydrant Locations

Existing Fire Hydrant Locations

City of Loveland

0 100 200 Feet

- Fire Hydrant
- Ex Fire Hydrant
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit G - 2

Exhibit H

Existing Water Meters Located Inside Buildings

Existing Water Meters Located Inside Buildings

City of Loveland

0 100 200 Feet

- Water Meter In Building
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit H - 2

Exhibit I

Existing Water Meters

Existing Water Meters

City of Loveland

0 100 200 Feet

- Water Meter - PVC Standard
- Water Meter - Other
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit J

Existing Stormwater Utility Infrastructure

Existing Stormwater Utility Infrastructure

City of Loveland

0 100 200 Feet

- Storm Inlet
- Storm Manhole

Storm Sewer Main Material

- CI
- CMP
- HDPE
- PVC
- RCP
- VCP
- Unknown
- LID
- Ex Storm Inlet
- Ex Storm Manhole
- Ex Storm Outfall
- Ex Storm Sewer Main
- Ex LID
- HIP Streets Area
- Railroad
- Parcels

August 2019

Exhibit K

Existing Stormwater System Condition

Existing Stormwater System Condition

City of Loveland

0 100 200 Feet

Storm Inlet Condition

- Excellent; Good
- Fair
- Poor; Immediate Attention

Storm Manhole Condition

- Excellent; Good
- Fair
- Poor; Immediate Attention

Storm Sewer Main Condition

- Excellent; Good
- Fair
- Poor; Immediate Attention
- HIP Streets Area
- Railroad
- Parcels

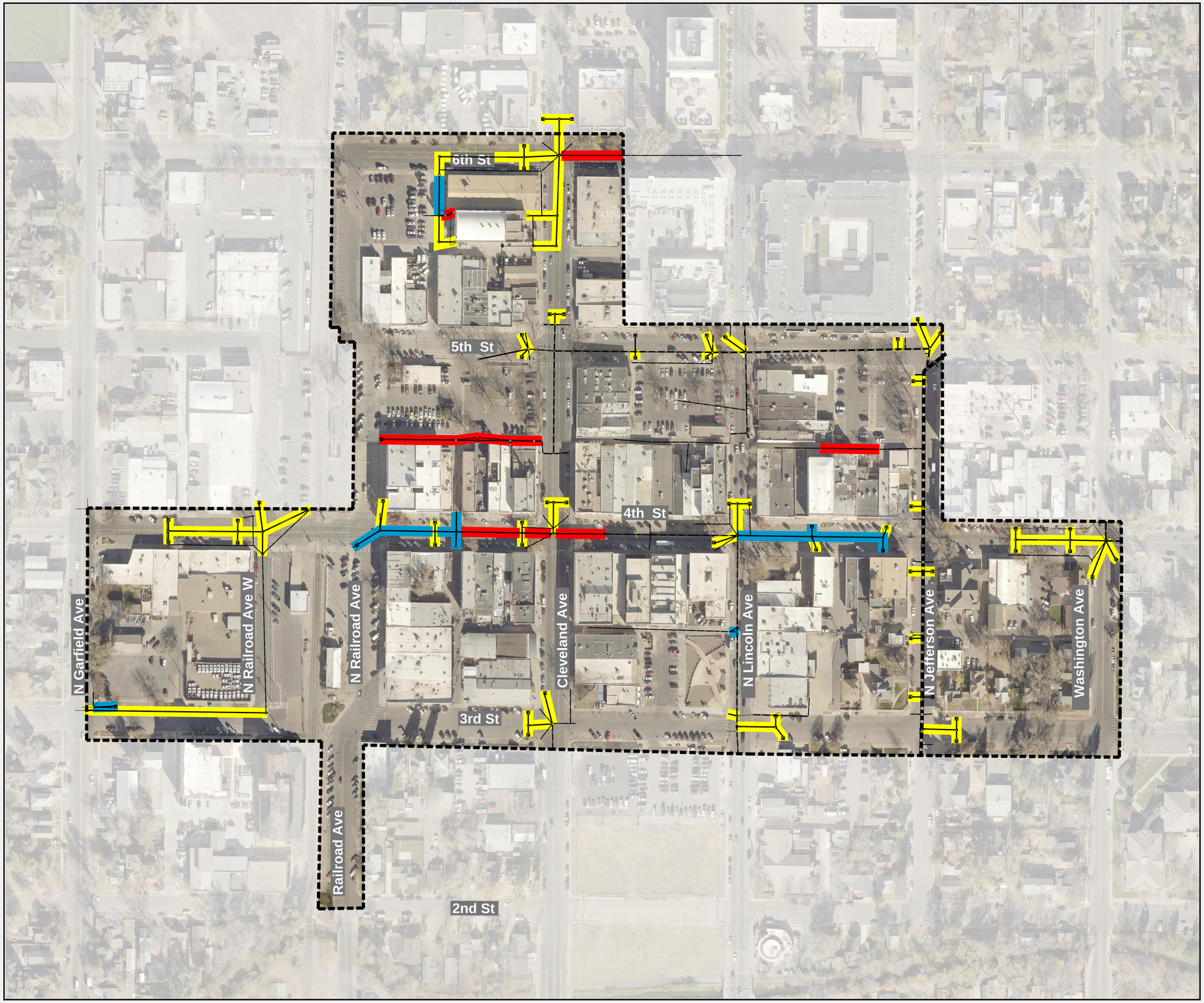
Note: Main lines that were replaced as a part of the Washington Outfall Project and lateral lines were not assessed as a part of this project and do not appear on this condition map.

August 2019

Exhibit L

Stormwater Causes for Replacement

Stormwater Cause For Replacement



City of Loveland

0 100 200 Feet

- EXISTING STORM DRAIN IN POOR CONDITION
- EXISTING STORM DRAIN IS UNDERSIZED
- NEW STORM DRAIN LAYOUT REQUIRED
- HIP STREETS AREA

August 2019

Exhibit M

HIP Streets Pedestrian Ramps and Crosswalks ADA Compliance

HIP Streets Pedestrian Ramps and Crosswalks ADA Compliance

City of Loveland

0 100 200 Feet

MEETS ADA

SOME RAMPS MEET ADA

DOES NOT MEET ADA

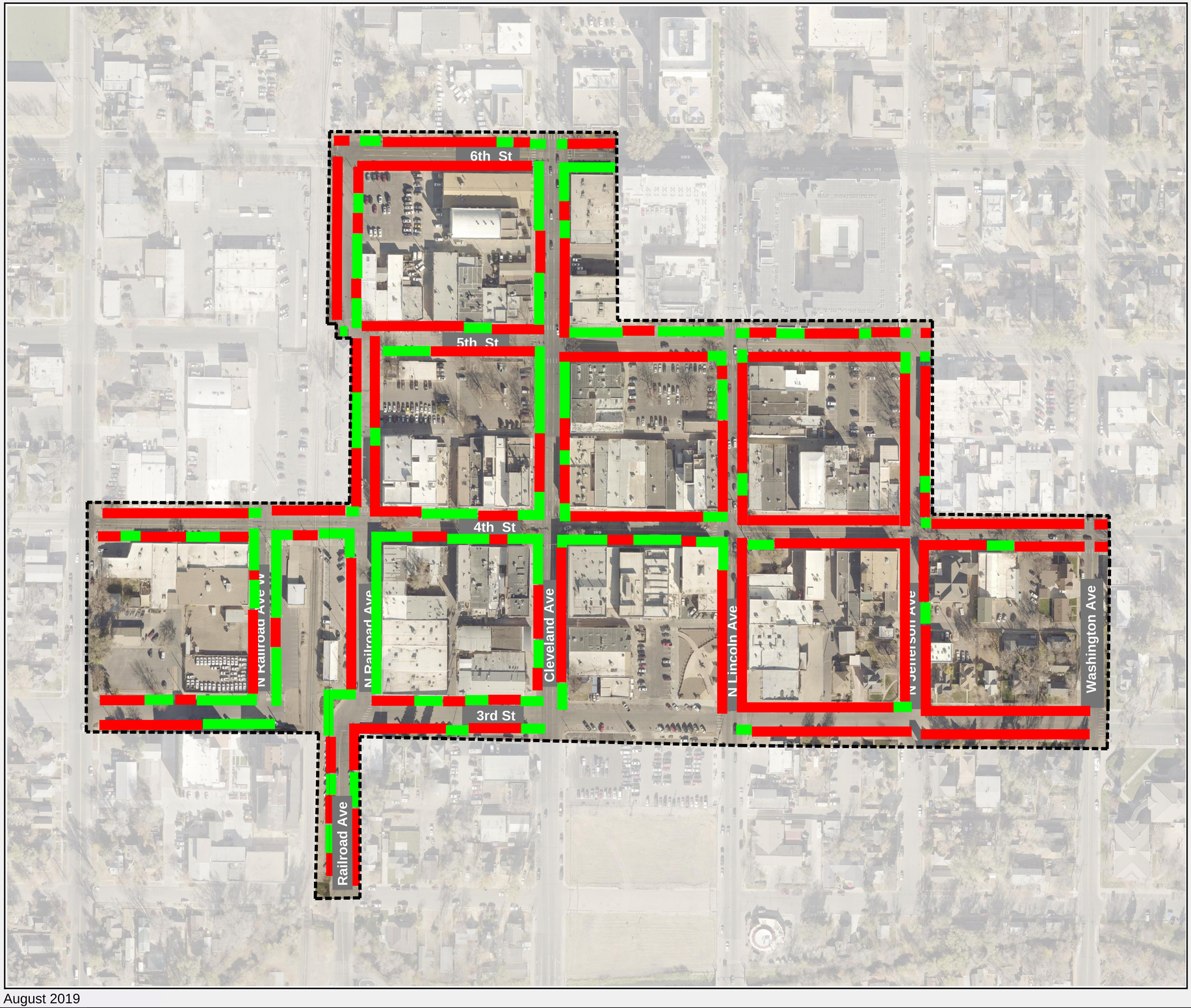
HIP STREETS AREA

August 2019

Exhibit N

Existing Lighting Levels Exhibit

Existing Lighting Levels Exhibit



City of Loveland

0 100 200 Feet

LIGHTING LEVELS MEET OR EXCEED LCUASS STANDARDS

LIGHTING LEVELS DO NOT MEET LCUASS STANDARDS

HIP STREETS AREA

LCUASS STANDARDS
RECOMMENDED STREET
ILLUMINATION LEVELS (TABLE 15-1)

Street Classification	Area Classification	Average Maintained Illuminance Values (foot-candles)
Arterial	Commercial	1.7
Collector	Commercial	1.2
Local	Commercial	0.9

Exhibit O

MCDA Criteria Ranking Definitions

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City of Loveland
HIP Streets Infrastructure Assessment
July 2019

MCDA Criteria Ranking Definitions

Public Health and Safety

Rank	ADA	Water	Sanitary Sewer	Storm Water	Electric	Traffic	Lighting
1	80-100% meet ADA	No issues from below	Overall good	Overall good	80-100% underground	N/A	Average >= 1 ft cd.
2	60-79% meet ADA	Issues including adequate fire flow, material types, or minimum size	Overall good and fair	Overall good and fair	60-79% underground		Average 0.8 ft cd.
3	40-59% meet ADA		Overall fair	Overall fair	40-59% undeground		Average 0.6 ft cd.
4	20-39% meet ADA		Overall fair and poor	Overall fair and poor	20-39% underground		Average 0.4 ft cd.
5	0-19% meet ADA	All above issues	Overall poor	Overall poor	0-19% underground		Average 0.2 ft cd.

Reliability

Rank	ADA	Water	Sanitary Sewer	Storm Water	Electric	Traffic	Lighting
1	80-100% meet ADA	Water valves all open	Meets min. slope	System is easy to maintain	80-100% underground	N/A	Block lighting is consistent
2	60-79% meet ADA	Can isolate, many open	Rank is averaged if there are multiple segments in one block.	Small pipes, can maintain	60-79% underground		40% gaps exist
3	40-59% meet ADA	Can isolate, some open		Some layout and pipe issues	40-59% undeground		60% gaps exist
4	20-39% meet ADA	Can isolate, few open		Many layout and pipe issues	20-39% underground		80% gaps exist
5	0-19% meet ADA	Cannot isolate line	Doesn't meet min. slope	Layout prevents maint.	0-19% underground		No block lighting

Cost

Rank	ADA	Water	Sanitary Sewer	Storm Water	Electric	Traffic	Lighting
1	N/A	$0 - $60,000	$0 - $60,001	$0 - $44,000	$0 - $20,000	$0 - $3,000	$0 - $20,000
2		$60,001 - $120,000	$60,001 - $120,001	$44,001 - $88,000	$20,001 - $40,000	$3,001 - $6,000	$20,001 - $40,000
3		$120,001 - $180,000	$120,001 - $180,001	$88,001 - $132,000	$40,001 - $60,000	$6,001 - $9,000	$40,001 - $60,000
4		$180,001 - $240,000	$180,001 - $240,001	$132,001 - $176,000	$60,001 - $80,000	$9,001 - $12,000	$60,001 - $80,000
5		$240,001 +	$240,001 +	$176,001 +	$80,001 +	$12,001 +	$80,001 +

Funding Challenges

Rank	ADA	Water	Sanitary Sewer	Storm Water	Electric	Traffic	Lighting
1	No funds available	No funds available	No funds available	No funds available	No funds available	No funds available	No funds available
2	Some internal funding	Some internal funding	Some internal funding	Some internal funding	Some internal funding	Some internal funding	Some internal funding
3	Good internal funding	Good internal funding	Good internal funding	Good internal funding	Good internal funding	Good internal funding	Good internal funding
4	Good int. some ext. funds	Good int. some ext. funds	Good int. some ext. funds	Good int. some ext. funds	Good int. some ext. funds	Good int. some ext. funds	Good int. some ext. funds
5	Good int. and ext. funds	Good int. and ext. funds	Good int. and ext. funds	Good int. and ext. funds	Good int. and ext. funds	Good int. and ext. funds	Good int. and ext. funds

Design & Constructability Challenges

Rank	ADA	Water	Sanitary Sewer	Storm Water	Electric	Traffic	Lighting
1	<2% cross, <8.33% long. Avg.	0 - 3 services	Alley open, 0 - 3 services	0-2 Inlets	UG conduct. At grade trans.		No obstructions
2	2-3% cross, 8.33-9% long. Avg.	4 - 7 services	Most alley open, 4-7 serv.	3-4 Inlets	Some OH conduct, AG trans.	Signals good in current loc.	Small trees or awnings
3	3-4% cross, 9-10% long. Avg.	8 - 11 services	Part of alley open, 8-11 serv.	5-6 Inlets	Some OH conduct and trans.	Either sig, cabinet relocate	Large trees or awnings
4	4-5% cross, 10-11% long. Avg.	12 - 15 services	No alley open, 12 - 15 serv.	7-8 Inlets	Many OH conduct, trans.	No bulbouts, move either	Small trees and awnings
5	>5% cross, >11% long. Avg.	16 - 19 services	No alley. 16-19 services	9 or more Inlets	Difficult system to UG, move	No bulbouts, move both	Many obstructions

Exhibit P

2017 HIP Streets Modernization Plan, Appendix A-3

LEVELS OF DETAIL

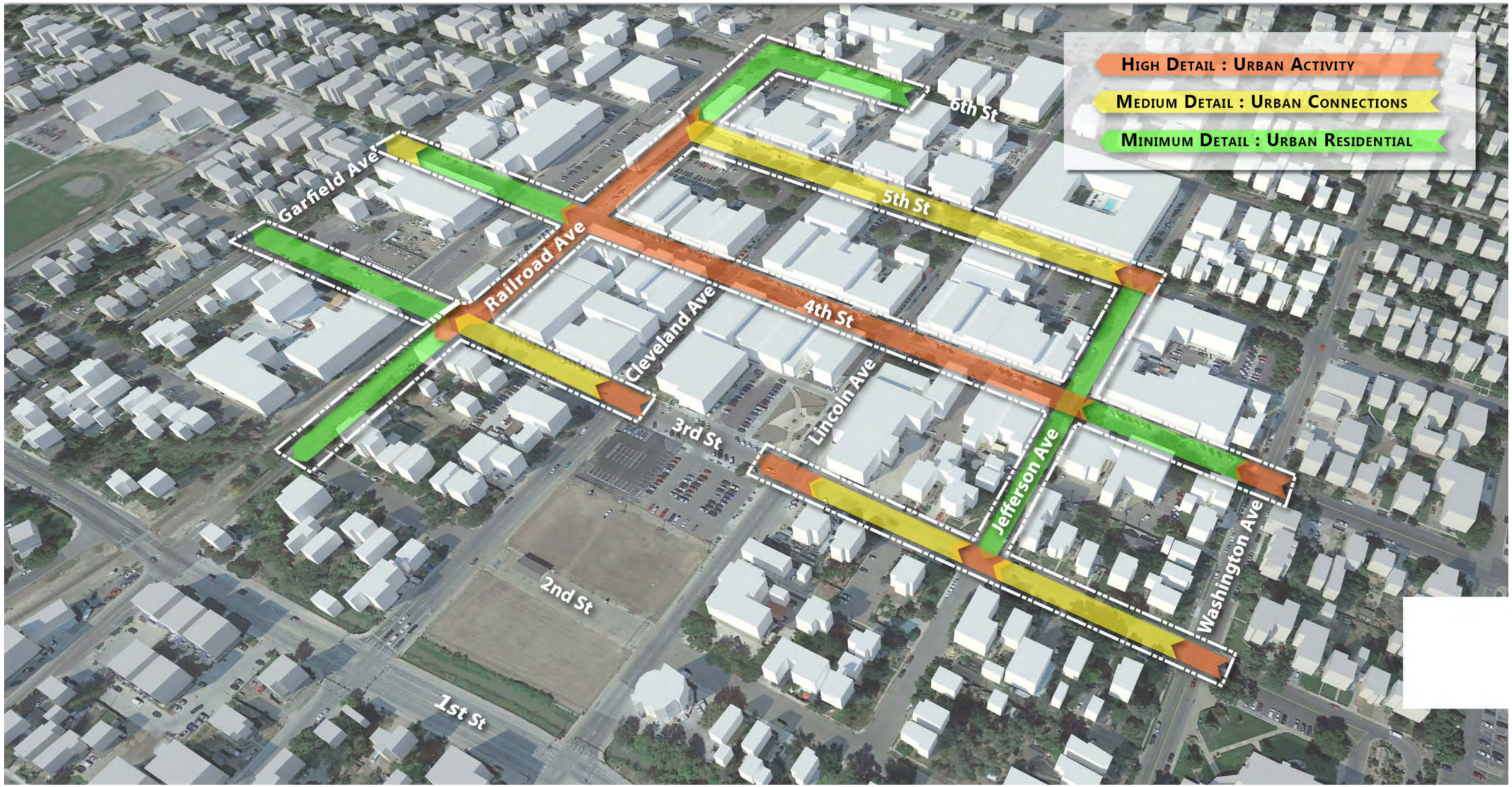


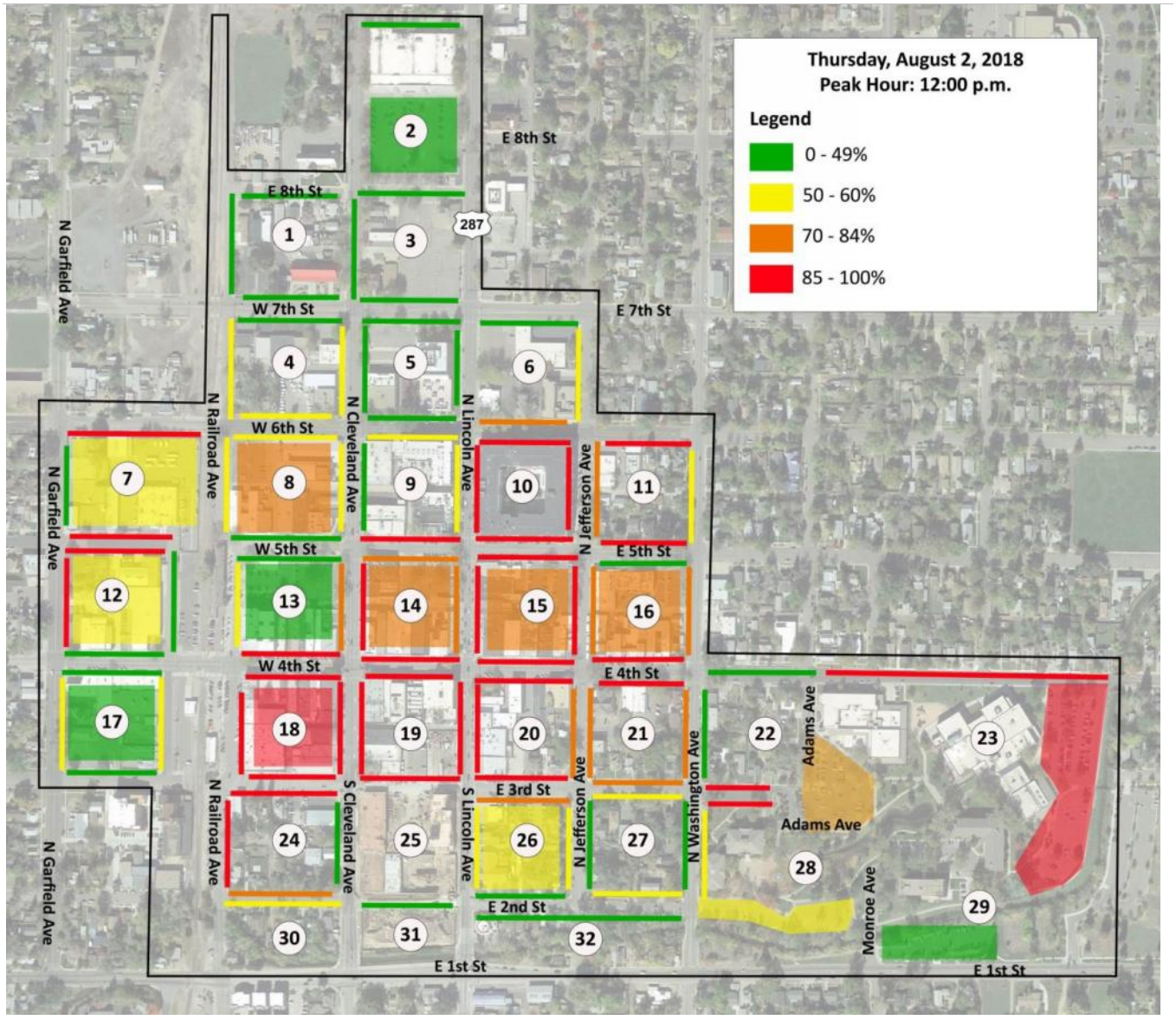
Exhibit Q

2018 Parking in Downtown Loveland, Phase 1 Report

THURSDAY, AUGUST 02, 2018 OCCUPANCY

Figure 1-8 displays the peak occupancy observed for Thursday, August 02nd. At noon, peak hour total utilization reached 58 percent with "hot-spots" observed across several block faces.

Figure 1-7: Peak Occupancy Heat Map – Thursday, August 02, 2018



Source: Walker Consultants, 2018

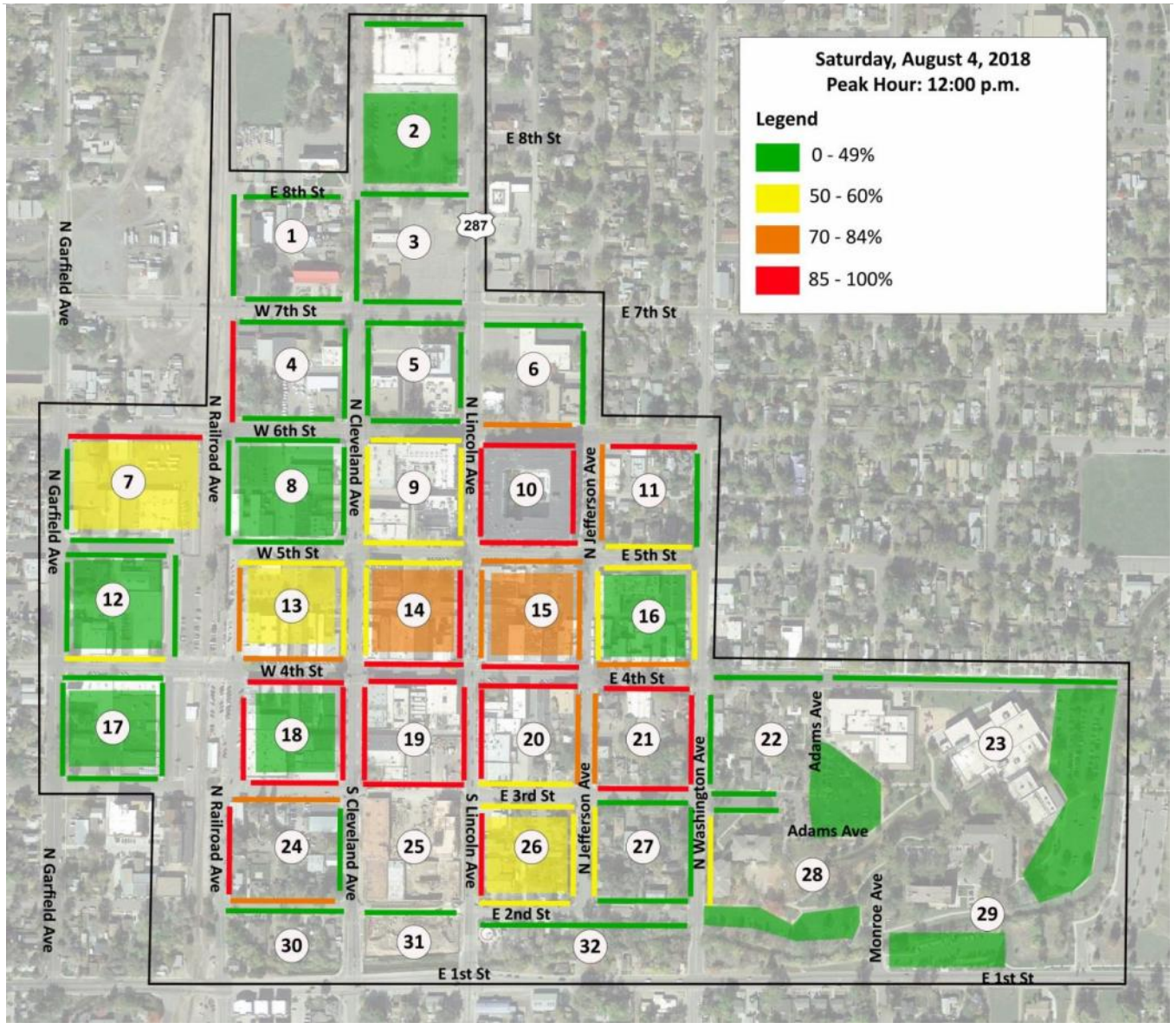
At the peak hour on-street "hot-spots" were observed along W. 4th Street with all angled 2-hour spaces occupied at a rate of 85 percent and higher, possible due to lunch hour demand from restaurant businesses along 4th street. Other "hot-spots" noted include the angled spaces along N. Railroad Avenue on the west face of block 18 (85 percent and higher) including the public surface lot, as well as the north face of block 12 and all of block 10 (apartment block).

SATURDAY, AUGUST 04, 2018 OCCUPANCY

Figure 1-9 displays the peak occupancy for Saturday, August 04nd where total utilization reached 41 percent with "hot-spots" observed across several block faces. Walker noted lower demand compared to the weekday utilization patterns observed on August 02nd and August 10th.

The angled 2-hour on street spaces on W. 4th Street (see blocks 14 south face, 15 south face, 19 north face, 20 north face) yielded occupancies exceeding 85 percent. In addition, all block faces on block 10 had occupancies exceeding 85 percent. Other surface lots and on street block faces saw lighter occupancies at the peak hour.

Figure 1-8: Peak Occupancy Heat Map – Saturday, August 04, 2018

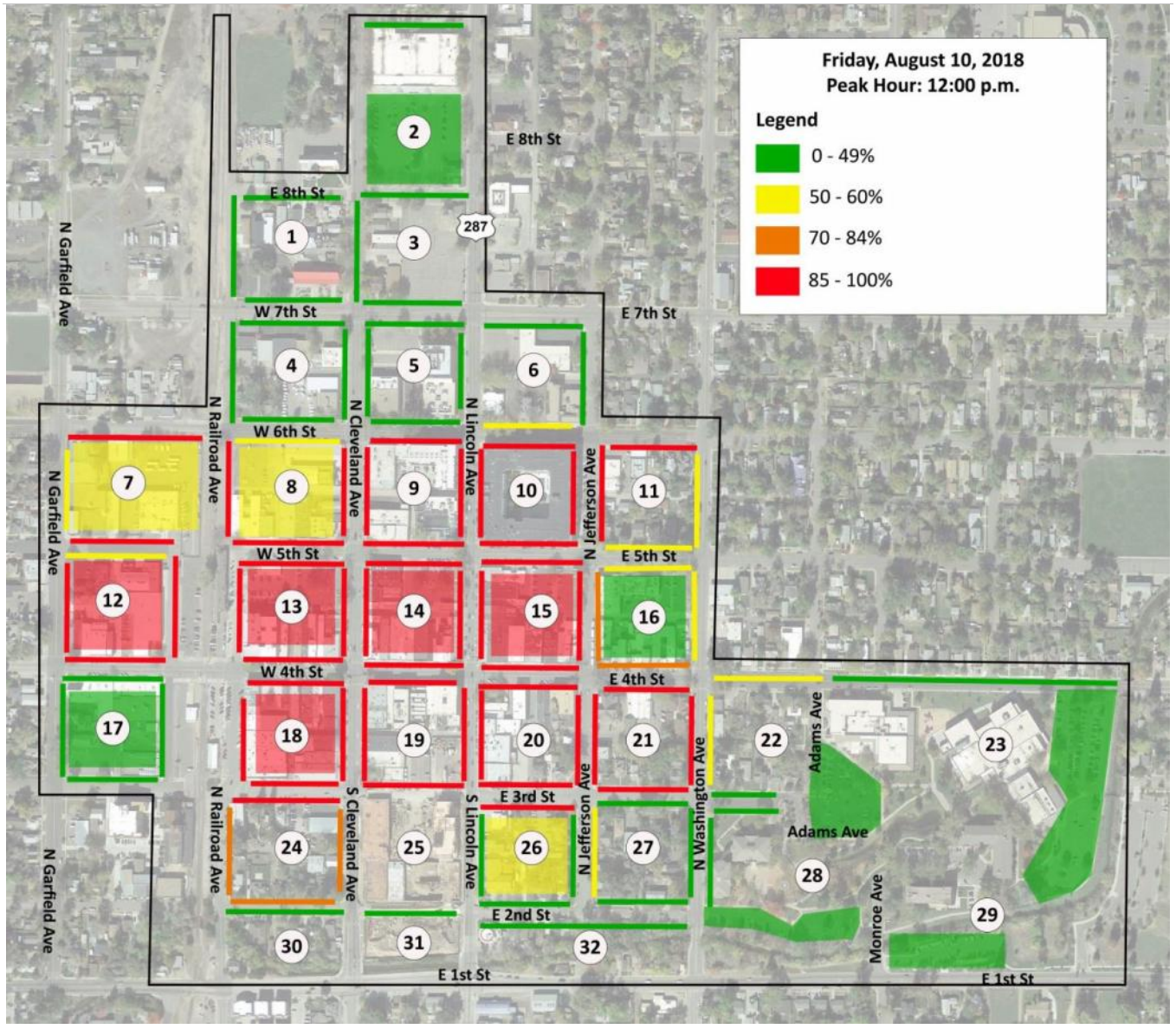


Source: Walker Consultants, 2018

FRIDAY, AUGUST 10, 2018 OCCUPANCY

Figures 1-10 and 1-11 display daytime and evening peak hour occupancy for the special event day observed. At the noon hour occupancy reached a peak of 56 percent, or 1,315 spaces. Across the evening hours, the peak observed was 51 percent, or 1,194 spaces which occurred at the 6 pm hour.

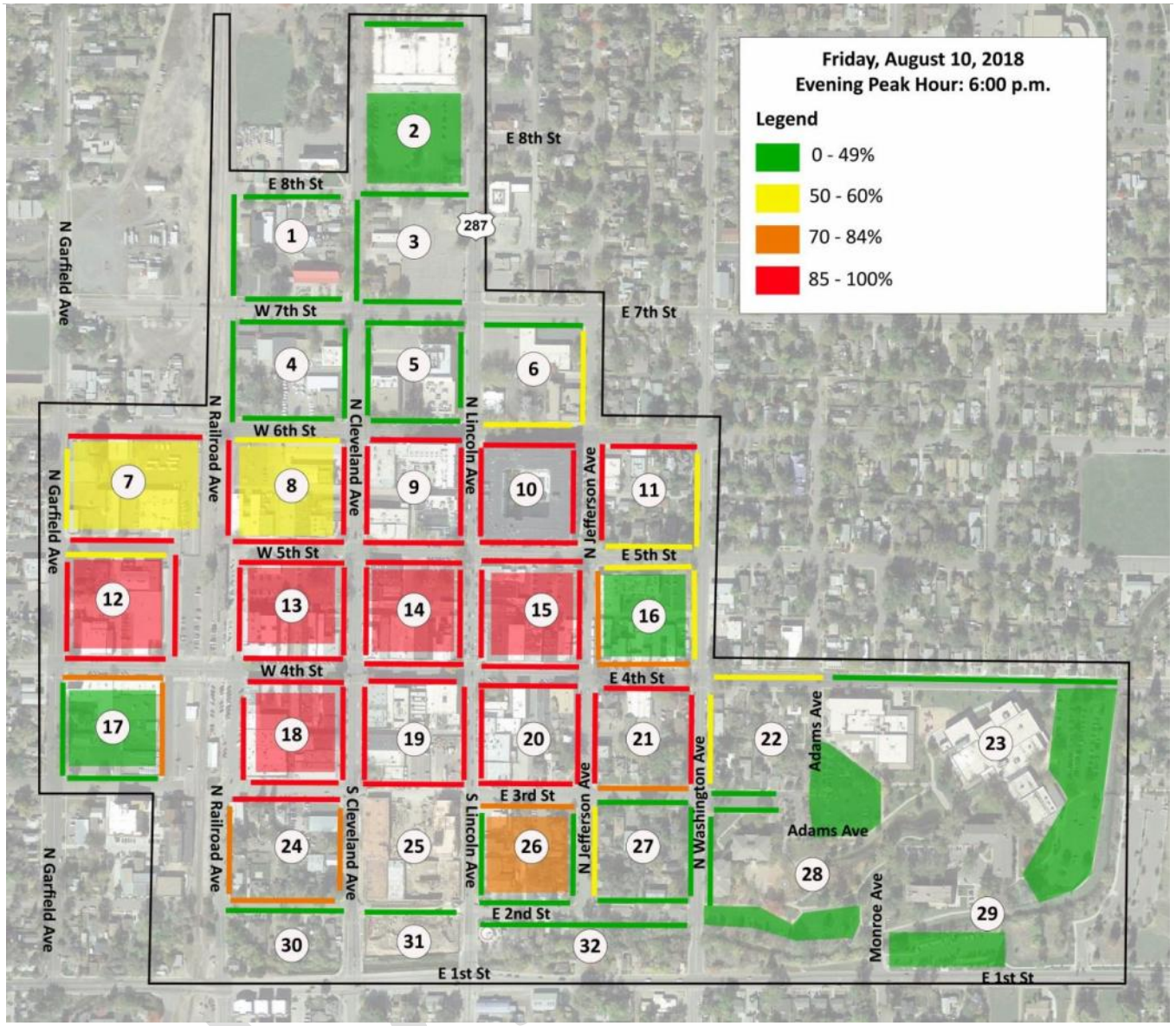
Figure 1-9: Peak Occupancy Heat Map – Friday, August 10, 2018 (Daytime Peak)



Source: Walker Consultants, 2018

Blocks 14, 15, and 18 all saw occupancies of 85 percent or higher at the peak noon hour. Similarly, the on-street angled spaces along W. 4th Street were occupied at the 85 percent and above rate (block faces 13, 14, 15, 18, 19 and 20 with 4th Street access). High on-street utilization was also observed for blocks 10 and 20.

Figure 1-10: Peak Occupancy Heat Map – Friday, August 10, 2018 Event Evening

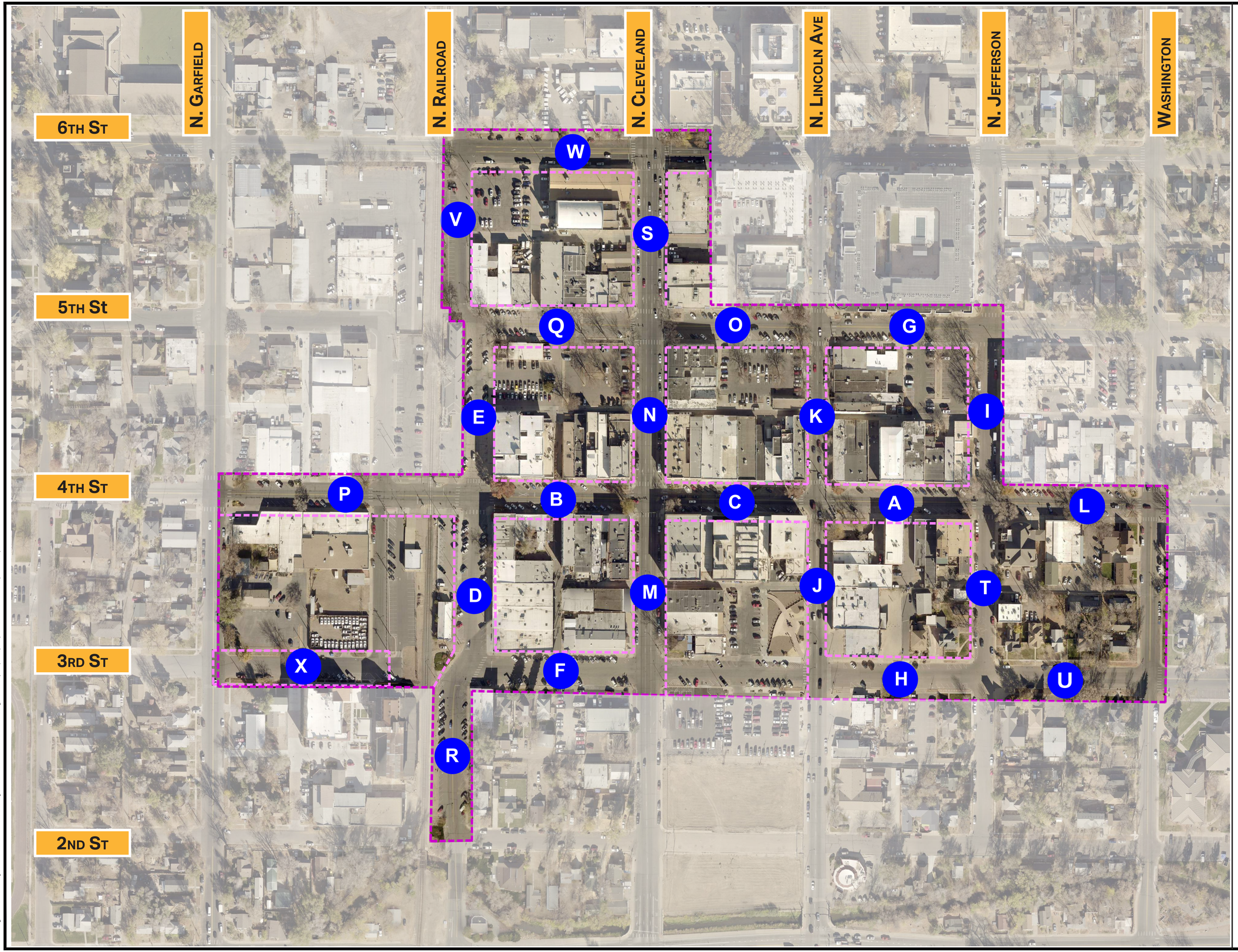


Source: Walker Consultants, 2018

Blocks 9, 10, 13, 14, and 15 yielded occupancies of 85 percent or greater at 6 pm for the special event evening Friday August, 10th. Likewise, all of the on-street angled spaces along W. 4th Street between Garfield Avenue to Jefferson Avenue saw utilization of 85 percent or greater. Block 18 also saw high-demand with the on-street spaces and surface lot near N. Railroad Avenue near capacity. Similarly, Block 12 surface parking was near full capacity.

Exhibit R

HIP Streets Multi-Criterion Decision Analysis (MCDA) Rankings



100' 0 100' 200' 300'

SCALE: 1" =100'
(True scale for 22x34 sheet size)

MCDA Rank

MCDA Scoring Criteria

All infrastructure categories were provided a score of 1 to 5 for the following criteria:

- **Public Health and Safety**
- **Reliability**
- **Cost**
- **Funding Challenges**
- **Design & Constructability Challenges**

A score of 1 provides the least risk, lowest cost, or would require the least effort to correct. A score of 5 poses the greatest risk, highest cost, or would require a significnat effort to correct.

HIP Streets MCDA Rankings

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Exhibit R - 2

Exhibit S

HIP Streets Proposed Project Groupings

N. Garfield
N. Railroad
N. Cleveland
N. Lincoln Ave
N. Jefferson
Washington
6th St
5th St
4th St
3rd St
2nd St
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

100' 0 100' 200' 300'

SCALE: 1" =100'
(True scale for 22x34 sheet size)

Legend

- HIP Street core block
- Areas added for infrastructure assessment only
- HIP Streets boundary
- HIP Streets core area
- Pilot Project
- Project 1
- Project 2
- Project 3
- Project 4
- Project 5
- Project 6
- Project 7

HIP Street Area Map

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Appendix I

30% Conceptual Design Drawings

Included as separate attachment

Appendix II

ADA Ramp Inventory and Inspection Log

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COL HIP Street Infrastructure Assessment

ADA Ramp Inventory and Inspection Dataset

Max Slope	Long.	8.33%
	Cross	2.00%
Ramps	ADA	36
	Not ADA	80
Corners	ADA	13
	Not ADA	63

Ramp	HIP Block	Inspection Date	Ramp				Approach			Ramp ADA	Corner ADA
			Direction	Lslope	Xslope	ADA	Lslope	XSLope	ADA		
6th & Railroad NE	1	11/27/2018	W	10.15%	1.90%	N				N	N
6th & Railroad SE	1	11/27/2018	NW	2.95%	0.60%	Y		2.70%	N	N	N
6th & Railroad SW	1	11/27/2018	NE	5.65%	3.65%	N		5.15%	N	N	N
6th & Railroad NW	1	11/27/2018	SE	6.95%	3.65%	N	8.30%	4.85%	N	N	N
6th & Cleveland NE	1	11/27/2018	S	8.65%	1.90%	N	2.40%	2.15%	N	N	N
6th & Cleveland NE	1	11/27/2018	W	5.15%	3.45%	N	2.15%	2.40%	N	N	
6th & Cleveland SE	1	11/27/2018	NW	7.60%	0.95%	Y	3.40%	2.40%	N	N	N
6th & Cleveland SW	1	11/27/2018	N	9.45%	1.80%	N	3.05%	1.20%	Y	N	N
6th & Cleveland SW	1	11/27/2018	E	5.20%	2.70%	N	1.20%	3.05%	N	N	
6th & Cleveland NW	1	11/27/2018	S	9.10%	0.95%	N	1.45%	3.20%	N	N	N
6th & Cleveland NW	1	11/27/2018	E	11.65%	0.65%	N	3.20%	1.45%	Y	N	
Artist Alley & Railroad SE	14	11/27/2018	N	10.20%	6.25%	N				N	N
5th & Railroad SE	2	11/27/2018	NW	6.25%	0.00%	Y	0.00%	3.05%	N	N	N
5th & Railroad NW	2	11/27/2018	NE	12.00%	0.75%	N	5.65%	3.20%	N	N	N
5th & Railroad NW	2	11/27/2018	SW	12.85%	0.30%	N	8.70%	8.45%	N	N	
5th & Cleveland NE	3	11/27/2018	S	3.45%	7.05%	N				N	N
5th & Cleveland NE	3	11/27/2018	W	4.10%	0.40%	Y	3.80%	2.75%	N	N	
5th & Cleveland SE	3	11/27/2018	N	3.55%	2.00%	Y				Y	N
5th & Cleveland SE	3	11/27/2018	W	8.65%	0.40%	N				N	
5th & Cleveland SW	2	11/27/2018	N	5.85%	2.70%	N				N	N
5th & Cleveland SW	2	11/27/2018	E	10.00%	0.00%	N				N	
5th & Cleveland NW	2	11/27/2018	S	4.80%	3.30%	N				N	N
5th & Cleveland NW	2	11/27/2018	E	7.30%	1.35%	Y				Y	
5th & Lincoln NE	4	12/4/2018	S	4.80%	1.40%	Y	0.30%	0.75%	Y	Y	N
5th & Lincoln NE	4	12/4/2018	W	4.85%	2.25%	N	0.75%	0.30%	Y	N	
5th & Lincoln SE	4	12/4/2018	N	4.50%	1.45%	Y	0.60%	0.60%	Y	Y	Y
5th & Lincoln SE	4	12/4/2018	W	2.05%	0.50%	Y	0.60%	0.60%	Y	Y	
5th & Lincoln SW	3	12/4/2018	N	5.85%	3.05%	N				N	N
5th & Lincoln SW	3	12/4/2018	E	5.90%	2.00%	Y				Y	
5th & Lincoln NW	3	12/4/2018	S	6.45%	3.40%	N	0.00%	1.65%	Y	N	N
5th & Lincoln NW	3	12/4/2018	S	6.35%	0.60%	Y				Y	
5th & Lincoln NW	3	12/4/2018	E	5.30%	2.15%	N	1.65%	0.00%	Y	N	
5th btw Lincoln and Jefferson	4	12/7/2018	S	4.95%	0.40%	Y	7.75%	3.55%	N	N	N
5th & Jefferson NE	4	12/4/2018	S	4.85%	1.10%	Y	5.05%	1.35%	Y	Y	Y
5th & Jefferson NE	4	12/4/2018	W	4.10%	1.55%	Y	5.05%	1.35%	Y	Y	
5th & Jefferson SE	4	12/4/2018	N	14.10%	0.25%	N	0.95%	4.25%	N	N	N
5th & Jefferson SE	4	12/4/2018	W	15.65%	4.85%	N	4.25%	0.95%	Y	N	
5th & Jefferson SW	4	12/4/2018	NE	10.15%	0.95%	N	0.85%	1.10%	Y	N	N
5th & Jefferson NW	4	12/4/2018	SE	5.30%	2.05%	N	2.95%	0.00%	Y	N	N
4th & Garfield NE	5	12/7/2018	S	2.25%	0.00%	Y	2.35%	0.30%	Y	Y	N
4th & Garfield NE	5	12/7/2018	W	11.00%	2.95%	N	0.30%	2.35%	N	N	
4th & Garfield SE	5	12/7/2018	N	2.35%	0.65%	Y	0.85%	0.50%	Y	Y	Y
4th & Garfield SE	5	12/7/2018	W	0.50%	0.85%	Y				Y	
4th & W Railroad NE	5	12/7/2018	SW	4.95%	1.45%	Y				Y	Y
4th & W Railroad SE	5	12/7/2018	W	0.75%	2.00%	Y				Y	Y
4th & W Railroad SW	5	12/7/2018	N	2.60%	5.50%	N	3.90%	5.55%	N	N	N
4th & W Railroad SW	5	12/7/2018	E	5.55%	3.90%	N				N	
4th & W Railroad NW	5	12/7/2018	S	3.75%	0.40%	Y	6.60%	3.20%	N	N	N
4th & W Railroad NW	5	12/7/2018	E	0.40%	3.75%	N				N	
4th & E Railroad NE	6	12/7/2018	S	1.55%	0.85%	Y	4.35%	3.45%	N	N	N
4th & E Railroad NE	6	12/7/2018	W	3.45%	2.40%	N	3.45%	1.55%	Y	N	
4th & E Railroad SE	6	12/13/2018	N	3.40%	1.10%	Y	1.35%	4.00%	N	N	N
4th & E Railroad SE	6	12/13/2018	W	5.65%	2.05%	N	4.95%	1.35%	Y	N	
4th & E Railroad SW	5	12/7/2018	N	3.10%	2.00%	Y	3.10%		Y	Y	N
4th & E Railroad SW	5	12/7/2018	E	5.05%	3.10%	N	2.00%	3.10%	N	N	
4th & E Railroad NW	5	12/7/2018	S	1.35%	2.70%	N				N	N
4th & E Railroad NW	5	12/7/2018	E	2.70%	1.35%	Y				Y	
4th & Cleveland NE	7	12/13/2018	S	2.75%	0.60%	Y	7.50%	2.50%	N	N	N
4th & Cleveland NE	7	12/13/2018	W	3.40%	0.40%	Y	7.50%	2.50%	N	N	
4th & Cleveland SE	7	12/7/2018	N	1.20%	1.55%	Y				Y	N
4th & Cleveland SE	7	12/7/2018	W	9.45%	1.55%	N				N	
4th & Cleveland SW	6	12/7/2018	N	0.60%	1.45%	Y				Y	N
4th & Cleveland SW	6	12/7/2018	E	11.45%	1.35%	N	3.80%	1.65%	Y	N	
4th & Cleveland NW	6	12/7/2018	S	2.60%	0.40%	Y	5.75%	0.60%	Y	Y	N
4th & Cleveland NW	6	12/7/2018	E	12.60%	1.55%	N	0.60%	5.75%	N	N	

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COL HIP Street Infrastructure Assessment

ADA Ramp Inventory and Inspection Dataset

Max Slope	Long.	8.33%
	Cross	2.00%
Ramps	ADA	36
	Not ADA	80
Corners	ADA	13
	Not ADA	63

Ramp	HIP Block	Inspection Date	Ramp				Approach			Ramp ADA	Corner ADA
			Direction	Lslope	Xslope	ADA	Lslope	XSLope	ADA		
4th & Lincoln NE	8	12/7/2018	S	3.75%	1.90%	Y	2.05%	0.65%	Y	Y	Y
4th & Lincoln NE	8	12/7/2018	W	5.90%	0.30%	Y	4.15%	0.75%	Y	Y	
4th & Lincoln SE	8	12/7/2018	N	2.60%	2.40%	N				N	N
4th & Lincoln SE	8	12/7/2018	W	6.80%	3.65%	N				N	
4th & Lincoln SW	7	12/7/2018	N	7.30%	2.60%	N				N	N
4th & Lincoln SW	7	12/7/2018	E	1.55%	0.40%	Y				Y	
4th & Lincoln NW	7	12/7/2018	S	1.90%	0.25%	Y				Y	Y
4th & Lincoln NW	7	12/7/2018	E	0.40%	0.50%	Y				Y	
4th & Jefferson NE	9	12/7/2018	S	3.80%	4.60%	N	3.55%	1.70%	Y	N	N
4th & Jefferson NE	9	12/7/2018	W	4.60%	3.80%	N				N	
4th & Jefferson SE	9	12/7/2018	N	2.05%	1.10%	Y				Y	N
4th & Jefferson SE	9	12/7/2018	W	7.00%	5.15%	N				N	
4th & Jefferson SW	8	12/7/2018	N	0.40%	3.90%	N	5.05%	8.30%	N	N	N
4th & Jefferson SW	8	12/7/2018	E	7.30%	0.00%	Y				Y	
4th & Jefferson NW	8	12/7/2018	S	0.25%	3.75%	N	0.75%	13.50%	N	N	N
4th & Jefferson NW	8	12/7/2018	E	7.95%	0.25%	Y				Y	
4th & Washington NE	9	12/13/2018	SW	7.75%	0.75%	Y	0.25%	2.40%	N	N	N
4th & Washington SE	9	12/13/2018	N	11.30%	0.40%	N				N	N
4th & Washington SE	9	12/13/2018	W	8.70%	2.35%	N				N	
4th & Washington SW	9	12/7/2018	N	0.95%	0.30%	Y				Y	Y
4th & Washington SW	9	12/7/2018	E	4.60%	0.85%	Y				Y	
4th & Washington NW	9	12/7/2018	S	3.45%	2.50%	N	0.50%	2.40%	N	N	N
4th & Washington NW	9	12/7/2018	E	2.40%	0.50%	Y				Y	
3rd & Garfield NE	10	12/7/2018	SW	6.00%	0.85%	Y	3.90%	0.40%	Y	Y	Y
3rd & Garfield SE	10	12/7/2018	N	8.55%	1.65%	N	1.10%	1.00%	Y	N	N
3rd & Garfield SE	10	12/7/2018	W	9.35%	0.40%	N	1.00%	1.10%	Y	N	
3rd btw Garfield and Railroad N	10	12/7/2018	E	4.80%	3.20%	N				N	N
3rd btw Garfield and Railroad S	10	12/7/2018	W	3.20%	3.55%	N				N	N
3rd btw Garfield and Railroad S	10	12/7/2018	E	4.80%	0.00%	Y				Y	
3rd & W Railroad NE	10	12/7/2018	W	1.80%	0.85%	Y	0.65%	1.10%	Y	Y	Y
3rd & W Railroad SW	10	12/7/2018	N	5.65%	1.00%	Y				Y	Y
3rd & W Railroad NW	10	12/7/2018	SE	6.55%	4.25%	N	1.20%	5.85%	N	N	N
3rd & E Railroad NE	11	12/13/2018	SW	6.55%	0.60%	Y	3.75%	3.65%	N	N	N
3rd & E Railroad SE	11	12/13/2018	N	0.50%	5.15%	N	0.95%	4.25%	N	N	N
3rd & E Railroad NW	11	12/13/2018	S	8.90%	0.25%	N	1.65%	6.00%	N	N	N
3rd & E Railroad NW	11	12/13/2018	E	9.10%	0.95%	N	3.10%	5.50%	N	N	
3rd & Cleveland SW	11	12/13/2018	E	8.10%	2.95%	N	5.85%	3.55%	N	N	N
3rd & Cleveland NW	11	12/13/2018	SE	9.35%	1.00%	N	2.25%	3.45%	N	N	N
3rd & Lincoln NE	12	12/7/2018	SW	8.45%	0.30%	N				N	N
3rd & Lincoln SE	12	12/7/2018	NW	5.85%	0.95%	Y				Y	Y
3rd & Jefferson NE	13	12/7/2018	S	11.10%	0.60%	N	4.35%	3.10%	N	N	N
3rd & Jefferson SE	13	12/7/2018	NW	11.20%	3.45%	N	7.40%	6.35%	N	N	N
3rd & Jefferson SW	12	12/7/2018	E	5.50%	0.50%	Y	2.40%	2.15%	N	N	N
3rd & Jefferson NW	12	12/7/2018	S	11.20%	0.75%	N	1.65%	1.70%	Y	N	N
3rd & Washington NE	13	12/7/2018	SW	8.55%	1.10%	N	7.40%	3.45%	N	N	N
3rd & Washington SE	13	12/7/2018	NW	6.00%	3.40%	N				N	N
3rd & Washington SW	13	12/7/2018	N	4.25%	2.00%	Y	0.65%	1.65%	Y	Y	Y
3rd & Washington NW	13	12/7/2018	E	13.05%	1.00%	N	4.80%	6.90%	N	N	N
2nd & Railroad NE	17	12/13/2018	SW	10.50%	3.10%	N	10.15%	4.85%	N	N	N
2nd & Railroad SE	17	12/13/2018	NW	10.65%	1.20%	N	5.30%	2.95%	N	N	N
2nd & Railroad NW	17	12/13/2018	E	10.20%	0.95%	N	0.65%	8.70%	N	N	N

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Max Slope	Long.	8.33%
	Cross	2.00%
Crosswalks	ADA	49
	Not ADA	19

City of Loveland

COL HIP Street Infrastructure Assessment

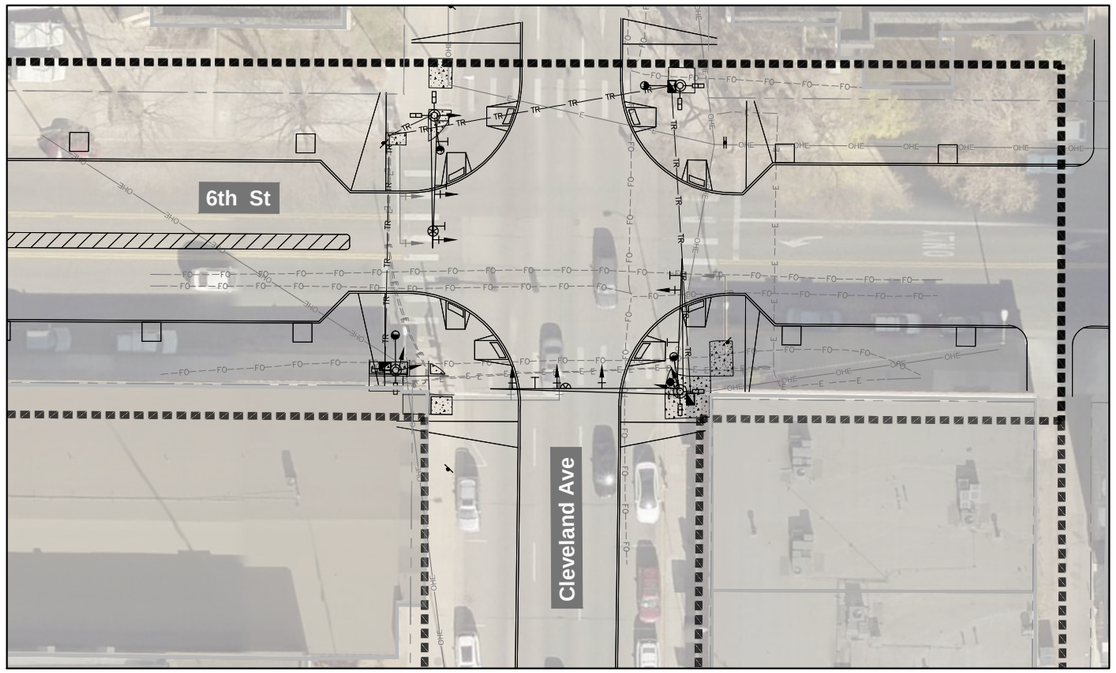
Crosswalk Inventory and Inspection Dataset

Intersection	Inspection Date	Crosswalk	West Half or North Half			East Half or South Half			Entire Crosswalk
			Lslope	Xslope	ADA	Lslope	Xslope	ADA	ADA
6th & Railroad	11/27/2018	N	7.05%	0.85%	Y	12.15%	2.00%	N	N
		E	4.50%	7.25%	N	3.40%	2.95%	N	N
		S	5.40%	2.15%	N	8.30%	0.30%	Y	N
		W	2.40%	2.95%	N	2.25%	4.15%	N	N
6th & Cleveland	11/27/2018	N	4.60%	0.00%	Y	5.15%	0.40%	Y	Y
		E	3.90%	0.30%	Y	1.00%	0.25%	Y	Y
		S	4.85%	0.65%	Y	4.25%	0.00%	Y	Y
		W	3.05%	0.60%	Y	2.95%	0.65%	Y	Y
5th & Railroad	11/27/2018	NW	3.40%	0.00%	Y				Y
5th & Cleveland	12/4/2018	N	4.10%	0.30%	Y	2.95%	0.65%	Y	Y
		E	0.40%	0.85%	Y	0.30%	1.35%	Y	Y
		S	4.85%	0.75%	Y	3.40%	0.60%	Y	Y
		W	1.10%	0.30%	Y	1.00%	1.00%	Y	Y
5th & Lincoln	12/4/2018	N	5.85%	0.30%	Y	1.30%	0.30%	Y	Y
		E	1.80%	0.00%	Y	1.35%	0.25%	Y	Y
		S	3.20%	0.00%	Y	0.85%	1.30%	Y	Y
		W	1.65%	0.50%	Y	2.50%	0.40%	Y	Y
5th & Jefferson	12/4/2018	N	2.60%	1.00%	Y	2.25%	3.40%	N	N
		E	1.35%	0.15%	Y	0.90%	2.25%	N	N
		S	2.60%	1.45%	Y	6.80%	5.00%	N	N
		W	6.70%	2.25%	N	1.55%	0.40%	Y	N
4th & Garfield	12/7/2018	E	2.00%	1.00%	Y	1.70%	1.20%	Y	Y
4th & W Railroad	12/7/2018	N	4.25%	0.00%	Y	3.05%	2.05%	N	N
		E	1.30%	0.50%	Y	2.25%	0.00%	Y	Y
		S	0.65%	1.55%	Y	1.30%	0.00%	Y	Y
		W	0.00%	0.00%	Y	4.50%	0.60%	Y	Y
4th & E Railroad	12/7/2018	N	1.00%	0.30%	Y	1.65%	0.15%	Y	Y
		E	2.05%	0.75%	Y	0.25%	0.00%	Y	Y
		S	0.50%	0.75%	Y	1.10%	0.30%	Y	Y
		W	0.30%	0.50%	Y	0.85%	0.75%	Y	Y
4th & Cleveland	12/7/2018	N	4.95%	0.25%	Y	4.00%	0.00%	Y	Y
		E	0.50%	4.65%	N	0.15%	0.95%	Y	N
		S	4.85%	1.65%	Y	4.25%	1.45%	Y	Y
		W	1.55%	0.25%	Y	0.65%	0.60%	Y	Y
4th & Lincoln	12/7/2018	N	4.00%	0.60%	Y	4.00%	0.30%	Y	Y
		E	1.20%	0.60%	Y	1.00%	0.65%	Y	Y
		S	3.45%	0.95%	Y	2.05%	1.45%	Y	Y
		W	0.60%	0.15%	Y	0.00%	0.15%	Y	Y
4th & Jefferson	12/7/2018	N	1.45%	1.70%	Y	3.05%	0.00%	Y	Y
		E	3.45%	0.75%	Y	1.45%	0.25%	Y	Y
		S	1.10%	0.15%	Y	0.90%	0.75%	Y	Y
		W	2.05%	0.65%	Y	0.65%	0.15%	Y	Y
4th & Washington	12/13/2018	N	2.95%	1.70%	Y	2.15%	0.75%	Y	Y
		E	3.75%	0.65%	Y	6.25%	1.35%	Y	Y
		S	2.05%	1.20%	Y	5.75%	1.70%	Y	Y
		W	1.55%	0.60%	Y	3.10%	0.60%	Y	Y
3rd & Garfield	12/7/2018	E	3.45%	3.05%	N	9.35%	0.00%	N	N
3rd & W Railroad	12/7/2018	N	6.20%	1.20%	Y	0.30%	0.75%	Y	Y
		W	4.80%	0.00%	Y	5.05%	1.20%	Y	Y
3rd & E Railroad	12/13/2018	N	4.80%	2.50%	N	3.00%	0.50%	Y	N
		E	4.35%	0.95%	Y	2.60%	0.65%	Y	Y
		S	2.25%	0.40%	Y	2.05%	2.00%	Y	Y
3rd & Cleveland	12/13/2018	N	4.00%	0.00%	Y	2.25%	0.75%	Y	Y
		S	4.45%	2.50%	N	2.25%	1.10%	Y	N
		W	5.50%	1.45%	Y	4.15%	0.60%	Y	Y
3rd & Lincoln	12/7/2018	N	2.40%	0.50%	Y	2.40%	0.95%	Y	Y
		E	1.45%	0.15%	Y	1.70%	0.95%	Y	Y
		S	2.40%	1.55%	Y	2.40%	1.35%	Y	Y
3rd & Jefferson	12/7/2018	N	4.25%	0.60%	Y	5.55%	1.30%	Y	Y
		E	1.90%	0.40%	Y	6.35%	2.15%	N	N
		S	3.80%	2.60%	N	0.25%	1.80%	Y	N
		W	4.35%	1.30%	Y	4.35%	0.85%	Y	Y
3rd & Washington	12/7/2018	N	2.95%	2.50%	N	2.95%	0.65%	Y	N
		E	3.55%	1.35%	Y	1.55%	1.45%	Y	Y
		S	2.15%	0.60%	Y	1.80%	2.35%	N	N
		W	6.25%	0.60%	Y	2.15%	0.15%	Y	Y
2nd & Railroad	12/13/2018	N	4.25%	1.65%	Y	16.00%	2.15%	N	N
		E	3.45%	2.40%	N	6.95%	0.15%	Y	N

Appendix III

Proposed CDOT Signal Pole Replacement

Proposed CDOT Signal Pole Replacement



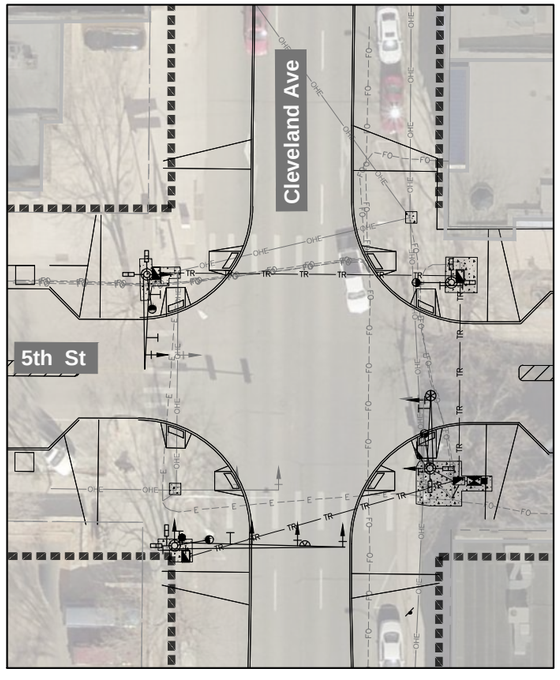
City of Loveland

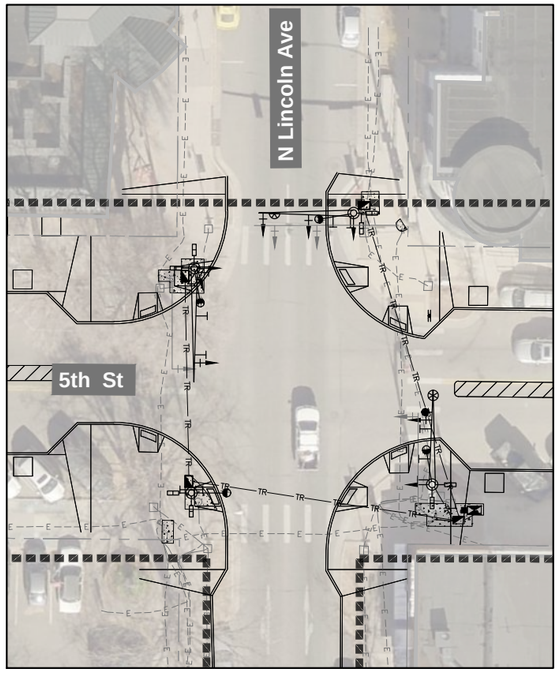
0 10 20 Feet

PROPOSED ARM MAST

EXISTING ARM MAST

HIP STREET BOUNDARY





Appendix IV

HIP Streets Cost Estimates Summary

COL HIP Street Infrastructure Assessment

HIP Streets Modernization Plan Core Block Implementation Cost Estimate Summary

Block Name	Block/Alley Priority	Infrastructure Cost	Street Replacement Cost	Modernization Plan Cost	Total Cost	Estimate Range	
						-20%	+50%
Block 1 - 6th Street (Railroad Ave to Cleveland Ave)	W	$ 920,000	$ 462,000	$ 1,386,000	$ 2,768,000	$ 2,214,000	$ 4,152,000
Block 2 - 5th Street (Railroad Ave to Cleveland Ave)	Q	$ 618,000	$ 311,000	$ 940,000	$ 1,869,000	$ 1,495,000	$ 2,804,000
Block 3 - 5th Street (Cleveland Ave to Lincoln Ave)	O	$ 304,000	$ 272,000	$ 919,000	$ 1,495,000	$ 1,196,000	$ 2,243,000
Block 4 - 5th Street (Lincoln Ave to Jefferson Ave)	G	$ 342,000	$ 341,000	$ 1,043,000	$ 1,726,000	$ 1,381,000	$ 2,589,000
Block 5 - 4th Street (Garfield Ave to Railroad Ave)	P	$ 803,000	$ 370,000	$ 1,260,000	$ 2,433,000	$ 1,946,000	$ 3,650,000
Block 6 - 4th Street (Railroad Ave to Cleveland Ave)	B	$ 1,530,000	$ 301,000	$ 1,392,000	$ 3,223,000	$ 2,578,000	$ 4,835,000
Block 7 - 4th Street (Cleveland Ave to Lincoln Ave)	C	$ 786,000	$ 234,000	$ 1,201,000	$ 2,221,000	$ 1,777,000	$ 3,332,000
Block 8 - 4th Street (Lincoln Ave to Jefferson Ave)	A	$ 860,000	$ 274,000	$ 895,000	$ 2,029,000	$ 1,623,000	$ 3,044,000
Block 9 - 4th Street (Jefferson Ave to Washington Ave)	L	$ 748,000	$ 297,000	$ 988,000	$ 2,033,000	$ 1,626,000	$ 3,050,000
Block 10 - 3rd Street (Garfield Ave to Railroad Ave)	X	$ 641,000	$ 280,000	$ 722,000	$ 1,643,000	$ 1,314,000	$ 2,465,000
Block 11 - 3rd Street (Railroad Ave to Cleveland Ave)	F	$ 549,000	$ 409,000	$ 961,000	$ 1,919,000	$ 1,535,000	$ 2,879,000
Block 12 - 3rd Street (Lincoln Ave to Jefferson Ave)	H	$ 499,000	$ 331,000	$ 785,000	$ 1,615,000	$ 1,292,000	$ 2,423,000
Block 13 - 3rd Street (Jefferson Ave to Washington Ave)	U	$ 476,000	$ 306,000	$ 857,000	$ 1,639,000	$ 1,311,000	$ 2,459,000
Block 14 - Railroad Ave (6th Street to 5th Street)	V	$ 323,000	$ 177,000	$ 502,000	$ 1,002,000	$ 802,000	$ 1,503,000
Block 15 - Railroad Ave (5th Street to 4th Street)	E	$ 388,000	$ 195,000	$ 486,000	$ 1,069,000	$ 855,000	$ 1,604,000
Block 16 - Railroad Ave (4th Street to 3rd Street)	D	$ 391,000	$ 191,000	$ 877,000	$ 1,459,000	$ 1,167,000	$ 2,189,000
Block 17 - Railroad Ave (3rd Street to 2nd Street)	R	$ 387,000	$ 249,000	$ 499,000	$ 1,135,000	$ 908,000	$ 1,703,000
Block 18 - Jefferson Ave (5th Street to 4th Street)	I	$ 149,000	$ 180,000	$ 354,000	$ 683,000	$ 546,000	$ 1,025,000
Block 19 - Jefferson Ave (4th Street to 3rd Street)	T	$ 240,000	$ 185,000	$ 335,000	$ 760,000	$ 608,000	$ 1,140,000
	Project Totals	$ 10,954,000	$ 5,365,000	$ 16,402,000	$ 32,721,000	$ 26,174,000	$ 49,089,000

COL HIP Street Infrastructure Assessment

Additional HIP Area Block Infrastructure Improvement Cost Estimate Summary

Block Name	Block/Alley Priority	Infrastructure Cost	Estimate Range	
			-20%	+50%
Block 20 - Cleveland Ave (6th Street to 5th Street)	S	$ 619,000	$ 495,000	$ 929,000
Block 21 - Cleveland Ave (5th Street to 4th Street)	N	$ 329,000	$ 263,000	$ 494,000
Block 22 - Cleveland Ave (4th Street to 3rd Street)	M	$ 302,000	$ 242,000	$ 453,000
Block 23 - Lincoln Ave (5th Street to 4th Street)	K	$ 455,000	$ 364,000	$ 683,000
Block 24 - Lincoln Ave (4th Street to 3rd Street)	J	$ 262,000	$ 210,000	$ 393,000
	Project Totals	$ 1,967,000	$ 1,574,000	$ 2,952,000

COL HIP Street Infrastructure Assessment

Alley Infrastructure Improvements Cost Estimate Summary

Alley Name	Block/Alley Priority	Infrastructure Cost	Estimate Range	
			-20%	+50%
Alley 1 - Between Railroad Ave and Cleveland Ave (6th St to Artist Alley)	AK	$ 134,000	$ 107,000	$ 201,000
Alley 2 - Artist Alley (Railroad Ave to Cleveland Ave)	AJ	$ 267,000	$ 214,000	$ 401,000
Alley 3 - Artist Alley (Cleveland Ave to Lincoln Ave)	AH	$ 34,000	$ 27,000	$ 51,000
Alley 4 - Sweetheart Alley (Railroad Ave to Cleveland Ave)	AF	$ 170,000	$ 136,000	$ 255,000
Alley 5 - Sweetheart Alley (Cleveland Ave to Lincoln Ave)	AE	$ 31,000	$ 25,000	$ 47,000
Alley 6 - Sweetheart Alley (Lincoln Ave to Jefferson Ave)	AD	$ 65,000	$ 52,000	$ 98,000
Alley 7 - Painter's Alley (3rd St to 4th St)	AC	$ 197,000	$ 158,000	$ 296,000
Alley 8 - Between 4th St and 3rd St (Painter's Alley to Cleveland)	AB	$ 104,000	$ 83,000	$ 156,000
Alley 9 - Backstage Alley (Cleveland Ave to Lincoln Ave)	AA	$ 31,000	$ 25,000	$ 47,000
Alley 10 - Between 4th St and 3rd St (Lincoln Ave to Jefferson Ave)	AG	$ 202,000	$ 162,000	$ 303,000
Alley 11 - Fiction Alley (Jefferson Ave to Washington Ave)	AI	$ 295,000	$ 236,000	$ 443,000
Alley 12 - Between 4th St and 3rd St (Mid-Block to Garfield Ave)	AL	$ 173,000	$ 138,000	$ 260,000
	Project Totals	$ 1,703,000	$ 1,363,000	$ 2,558,000

COL HIP Street Infrastructure Assessment

Total Hip Streets Implementation Cost Summary

HIP Streets Area	Total Project Cost	Estimate Range	
		-20%	50%
Core Blocks	$ 32,721,000	$ 26,174,000	$ 49,089,000
Additional Blocks	$ 1,967,000	$ 1,574,000	$ 2,952,000
Alleys	$ 1,703,000	$ 1,363,000	$ 2,558,000
Total:	$ 36,391,000	$ 29,111,000	$ 54,599,000

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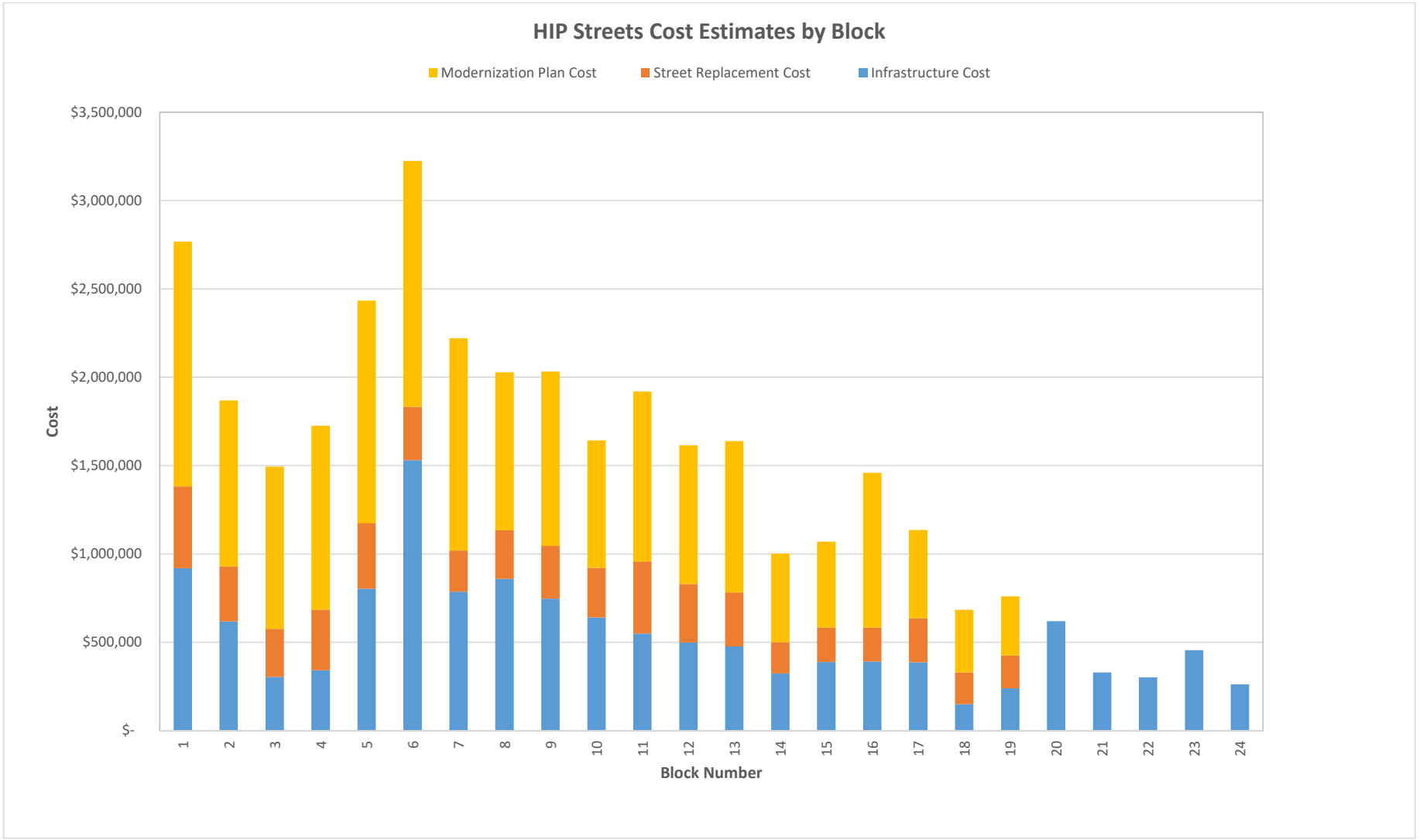
HIP Streets Cost Estimates by Block
Modernization Plan Cost
Street Replacement Cost
Infrastructure Cost
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$-
Cost
1
2
3
4
5
6
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9
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11
12
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14
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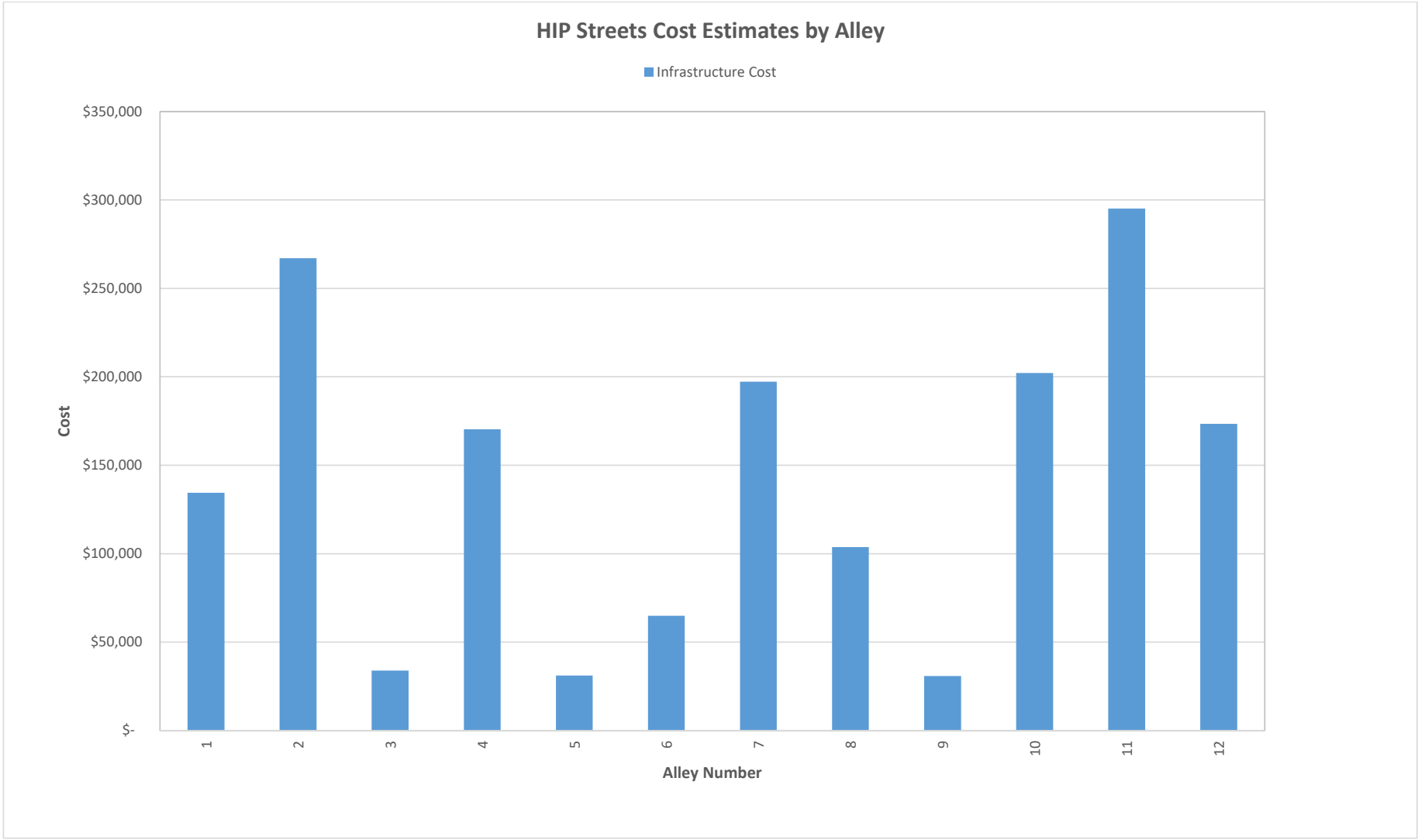
21
22
23
24
Block Number


HIP Streets Cost Estimates by Alley
Infrastructure Cost
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$-
Cost
1
2
3
4
5
6
7
8
9
10
11
12
Alley Number

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City of Loveland
HIP Streets Block Estimate
Block 1 - 6th Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$24,024.31	1	$24,024.31	5% of subtotals
Traffic Control	ALLOW	$9,609.72	1	$9,609.72	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$4,804.86	1	$4,804.86	1% of subtotals
Construction Surveying	ALLOW	$12,012.16	1	$12,012.16	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$65,451.05**	
Water					
Length of Installation	LF		551		
Size of Installation	IN		8		
Number of Services	EA		6		
Number of Thrust Blocks/Fittings/Valves	EA		7		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		2		
Number of Exterior Water Meters to be Replaced	EA		4		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	802	$48,142.22	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	551	$19,285.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	7	$24,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	6	$1,500.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	6	$7,500.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	7	$3,500.00	
Pipe Bedding Material	CY	$35.00	102		
Flow Fill/Backfill	CY	$145.00	701	$101,594.88	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	4	$8,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	2	$30,000.00	
Water Subtotal				**$255,522.09**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		311		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		3		
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		5		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	311	$23,325.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	3	$37,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 1 - 6th Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	214	$12,816.90	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	118	$4,125.36	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	96	$13,883.41	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$99,500.67**	
Power					
Total Joint Trench Length	LF		**538**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	8	$6,000.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	8	$60,000.00	
Pendant LED Street Lamps	EA	$750.00	6	$4,500.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	2,000	$20,000.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	538	$6,452.64	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	159	$9,559.47	
Backfill Joint Trench	CY	$35.00	159	$5,576.36	
Power Subtotal				**$116,588.46**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	15	$5,250.00	
Traffic Signs Remove/Replace	EA	$125.00	29	$3,625.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$8,875.00**	
Sub Total				**$545,937.28**	
General Conditions	12%			$65,512.47	
Bonds & Insurance	1.5%			$8,189.06	
Estimating Contingency	20%			$109,187.46	
Engineering Design Services	15%			$81,890.59	
Owner's Contingency	15%			$81,890.59	
Owner's Project Management	5%			$27,296.86	
GRAND TOTAL				**$919,904.32**	

Budget Range	
-20%	$735,923.46
+50%	$1,379,856.48

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City of Loveland
HIP Streets Block Estimate
Block 2 - 5th Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$15,911.65	1	$15,911.65	5% of subtotals
Traffic Control	ALLOW	$6,364.66	1	$6,364.66	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$3,182.33	1	$3,182.33	1% of subtotals
Construction Surveying	ALLOW	$7,955.83	1	$7,955.83	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$48,414.47**	
Water					
Length of Installation	LF		387		
Size of Installation	IN		8		
Number of Services	EA		7		
Number of Thrust Blocks/Fittings/Valves	EA		3		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		7		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	564	$33,813.14	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	387	$13,545.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	3	$10,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	7	$1,750.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	7	$8,750.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	3	$1,500.00	
Pipe Bedding Material	CY	$35.00	71	$2,500.44	
Flow Fill/Backfill	CY	$145.00	492	$71,356.11	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	7	$14,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$169,214.69**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		144		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA				
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		8		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	144	$10,800.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	0	$0.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 2 - 5th Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	335	$20,074.51	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	55	$1,910.13	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	280	$40,600.00	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$81,234.65**	
Power					
Total Joint Trench Length	LF		**376**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00	7	$5,250.00	
Existing Electrical Pole Removal	EA	$1,500.00	1	$1,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,570	$15,700.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	111	$6,684.44	
Backfill Joint Trench	CY	$35.00	111	$3,899.26	
Power Subtotal				**$62,283.70**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	10	$3,500.00	
Traffic Signs Remove/Replace	EA	$125.00	16	$2,000.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$5,500.00**	
Sub Total				**$366,647.51**	
General Conditions	12%			$43,997.70	
Bonds & Insurance	1.5%			$5,499.71	
Estimating Contingency	20%			$73,329.50	
Engineering Design Services	15%			$54,997.13	
Owner's Contingency	15%			$54,997.13	
Owner's Project Management	5%			$18,332.38	
GRAND TOTAL				**$617,801.05**	

Budget Range	
-20%	$494,240.84
+50%	$926,701.58

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City of Loveland
HIP Streets Block Estimate
Block 3 - 5th Street (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$7,483.63	1	$7,483.63	5% of subtotals
Traffic Control	ALLOW	$2,993.45	1	$2,993.45	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,496.73	1	$1,496.73	1% of subtotals
Construction Surveying	ALLOW	$3,741.81	1	$3,741.81	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$30,715.62**	
Water					
Length of Installation	LF		0		
Size of Installation	IN		0		
Number of Services	EA		0		
Number of Thrust Blocks/Fittings/Valves	EA		0		
Number of Hydrants	EA		0		
Average Depth TOP	FT		0		
Lines Affected/Needing Dechlorination	EA		0		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	0	$0.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	0	$0.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	0	$0.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	0	$0.00	
Cap and Abandon Existing Valves	EA	$500.00	0	$0.00	
Pipe Bedding Material	CY	$35.00	0	$0.00	
Flow Fill/Backfill	CY	$145.00	0	$0.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	0	$0.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$0.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		96		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		4		
Average Depth to Invert	FT		9		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	96	$7,200.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	4	$15,700.00	

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City of Loveland
HIP Streets Block Estimate
Block 3 - 5th Street (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	256	$15,369.68	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	36	$1,273.42	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	220	$31,867.78	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$83,910.88**	
Power					
Total Joint Trench Length	LF		**369**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	4	$3,000.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	4	$30,000.00	
Pendant LED Street Lamps	EA	$750.00	3	$2,250.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	700	$7,000.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	109	$6,560.00	
Backfill Joint Trench	CY	$35.00	109	$3,826.67	
Power Subtotal				**$57,136.67**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	15	$5,250.00	
Traffic Signs Remove/Replace	EA	$125.00	27	$3,375.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$8,625.00**	
Sub Total				**$180,388.16**	
General Conditions	12%			$21,646.58	
Bonds & Insurance	1.5%			$2,705.82	
Estimating Contingency	20%			$36,077.63	
Engineering Design Services	15%			$27,058.22	
Owner's Contingency	15%			$27,058.22	
Owner's Project Management	5%			$9,019.41	
GRAND TOTAL				**$303,954.05**	

Budget Range	
-20%	$243,163.24
+50%	$455,931.07

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City of Loveland
HIP Streets Block Estimate
Block 4 - 5th Street (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$8,496.53	1	$8,496.53	5% of subtotals
Traffic Control	ALLOW	$3,398.61	1	$3,398.61	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,699.31	1	$1,699.31	1% of subtotals
Construction Surveying	ALLOW	$4,248.27	1	$4,248.27	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1		
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$32,842.72**	
Water					
Length of Installation	LF		0		
Size of Installation	IN		0		
Number of Services	EA		0		
Number of Thrust Blocks/Fittings/Valves	EA		0		
Number of Hydrants	EA		0		
Average Depth TOP	FT		0		
Lines Affected/Needing Dechlorination	EA		0		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	0	$0.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	0	$0.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	0	$0.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	0	$0.00	
Cap and Abandon Existing Valves	EA	$500.00	0	$0.00	
Pipe Bedding Material	CY	$35.00	0	$0.00	
Flow Fill/Backfill	CY	$145.00	0	$0.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	0	$0.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$0.00**	
		Pipe Bedding Material			
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		112		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		9		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	112	$8,400.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 4 - 5th Street (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	341	$20,435.73	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	42	$1,485.66	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	298	$43,231.48	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$93,902.87**	
Power					
Total Joint Trench Length	LF		**390**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	4	$3,000.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	4	$30,000.00	
Pendant LED Street Lamps	EA	$750.00	7	$5,250.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,200	$12,000.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	116	$6,933.33	
Backfill Joint Trench	CY	$35.00	116	$4,044.44	
Power Subtotal				**$65,727.78**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	18	$6,300.00	
Traffic Signs Remove/Replace	EA	$125.00	32	$4,000.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$10,300.00**	
Sub Total				**$202,773.37**	
General Conditions	12%			$24,332.80	
Bonds & Insurance	1.5%			$3,041.60	
Estimating Contingency	20%			$40,554.67	
Engineering Design Services	15%			$30,416.01	
Owner's Contingency	15%			$30,416.01	
Owner's Project Management	5%			$10,138.67	
GRAND TOTAL				**$341,673.13**	

Budget Range	
-20%	$273,338.50
+50%	$512,509.69

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City of Loveland
HIP Streets Block Estimate
Block 5 - 4th Street (Garfield Ave to Railroad Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$21,028.28	1	$21,028.28	5% of subtotals
Traffic Control	ALLOW	$8,411.31	1	$8,411.31	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$4,205.66	1	$4,205.66	1% of subtotals
Construction Surveying	ALLOW	$10,514.14	1	$10,514.14	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$59,159.40**	
Water					
Length of Installation	LF		396		
Size of Installation	IN		10		
Number of Services	EA		8		
Number of Thrust Blocks/Fittings/Valves	EA		2		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		8		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	605	$36,308.92	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00	396	$17,820.00	
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	2	$7,000.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	8	$2,000.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	8	$10,000.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	2	$1,000.00	
Pipe Bedding Material	CY	$35.00	82	$2,871.32	
Flow Fill/Backfill	CY	$145.00	523	$75,851.11	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	8	$16,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$180,351.35**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		449		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		4		
Number of Inlets to be Replaced	EA		5		
Average Depth to Invert	FT		4		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	449	$33,675.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	4	$50,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	5	$19,625.00	

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City of Loveland
HIP Streets Block Estimate
Block 5 - 4th Street (Garfield Ave to Railroad Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	253	$15,199.00	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	170	$5,955.90	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	83	$12,056.48	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$136,511.38**	
Power					
Total Joint Trench Length	LF		**398**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	5	$3,750.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	5	$37,500.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,750	$17,500.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	5	$22,500.00	
Excavate Joint Trench	CY	$60.00	118	$7,075.56	
Backfill Joint Trench	CY	$35.00	118	$4,127.41	
Power Subtotal				**$92,452.96**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	15	$5,250.00	
Traffic Signs Remove/Replace	EA	$125.00	24	$3,000.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$8,250.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	3	$3,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$3,000.00**	
Sub Total				**$476,725.10**	
General Conditions	12%			$57,207.01	
Bonds & Insurance	1.5%			$7,150.88	
Estimating Contingency	20%			$95,345.02	
Engineering Design Services	15%			$71,508.76	
Owner's Contingency	15%			$71,508.76	
Owner's Project Management	5%			$23,836.25	
GRAND TOTAL				**$803,281.79**	

Budget Range	
-20%	$642,625.43
+50%	$1,204,922.68

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City of Loveland
HIP Streets Block Estimate
Block 6 - 4th Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$40,419.14	1	$40,419.14	5% of subtotals
Traffic Control	ALLOW	$16,167.65	1	$16,167.65	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$8,083.83	1	$8,083.83	1% of subtotals
Construction Surveying	ALLOW	$20,209.57	1	$20,209.57	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$99,880.19**	
Water					
Length of Installation	LF		531		
Size of Installation	IN		10		
Number of Services	EA		18		
Number of Thrust Blocks/Fittings/Valves	EA		7		
Number of Hydrants	EA		0		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		1		
Number of Exterior Water Meters to be Replaced	EA		12		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	811	$48,686.97	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00	531	$23,895.00	
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks	EA	$3,500.00	7	$24,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	18	$4,500.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	18	$22,500.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	7	$3,500.00	
Pipe Bedding Material	CY	$35.00	110	$3,850.17	
Flow Fill/Backfill	CY	$145.00	701	$101,709.44	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	12	$24,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$2,000.00	1	$2,000.00	
Jack and Bore Under Railroad	LF	$750.00	300	$225,000.00	
Water Subtotal				**$487,641.58**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		521		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		5		
Number of Inlets to be Replaced	EA		7		
Average Depth to Invert	FT		6		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	521	$39,075.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	5	$62,500.00	

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City of Loveland
HIP Streets Block Estimate
Block 6 - 4th Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	7	$27,475.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	529	$31,746.68	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	197	$6,910.97	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	332	$48,089.99	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$215,797.63**	
Power					
Total Joint Trench Length	LF		**530**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	7	$5,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	7	$52,500.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00	1	$1,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,990	$19,900.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	157	$9,422.22	
Backfill Joint Trench	CY	$35.00	157	$5,496.30	
Power Subtotal				**$98,568.52**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	10	$3,500.00	
Traffic Signs Remove/Replace	EA	$125.00	23	$2,875.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$6,375.00**	
Sub Total				**$908,262.92**	
General Conditions	12%			$108,991.55	
Bonds & Insurance	1.5%			$13,623.94	
Estimating Contingency	20%			$181,652.58	
Engineering Design Services	15%			$136,239.44	
Owner's Contingency	15%			$136,239.44	
Owner's Project Management	5%			$45,413.15	
GRAND TOTAL				**$1,530,423.02**	

Budget Range	
-20%	$1,224,338.42
+50%	$2,295,634.53

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City of Loveland
HIP Streets Block Estimate
Block 7 - 4th Street (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$20,423.97	1	$20,423.97	5% of subtotals
Traffic Control	ALLOW	$8,169.59	1	$8,169.59	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$4,084.79	1	$4,084.79	1% of subtotals
Construction Surveying	ALLOW	$10,211.98	1	$10,211.98	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$57,890.34**	
Water					
Length of Installation	LF		370		
Size of Installation	IN		10		
Number of Services	EA		15		
Number of Thrust Blocks/Fittings/Valves	EA		6		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		4		
Number of Exterior Water Meters to be Replaced	EA		9		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	565	$33,925.00	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00	370	$16,650.00	
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	6	$21,000.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	15	$3,750.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	15	$18,750.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	6	$3,000.00	
Pipe Bedding Material	CY	$35.00	77	$2,682.80	
Flow Fill/Backfill	CY	$145.00	489	$70,870.99	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	9	$18,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	4	$60,000.00	
Water Subtotal				**$260,128.79**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		145		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		3		
Number of Inlets to be Replaced	EA		1		
Average Depth to Invert	FT		6		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	145	$10,875.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	3	$37,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	1	$3,925.00	

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City of Loveland
HIP Streets Block Estimate
Block 7 - 4th Street (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	177	$10,627.81	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	55	$1,923.40	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	122	$17,715.51	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$82,566.72**	
Power					
Total Joint Trench Length	LF		**384**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	4	$3,000.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	4	$30,000.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,140	$11,400.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	114	$6,826.67	
Backfill Joint Trench	CY	$35.00	114	$3,982.22	
Power Subtotal				**$59,708.89**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	12	$4,200.00	
Traffic Signs Remove/Replace	EA	$125.00	15	$1,875.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$6,075.00**	
Sub Total				**$466,369.73**	
General Conditions	12%			$55,964.37	
Bonds & Insurance	1.5%			$6,995.55	
Estimating Contingency	20%			$93,273.95	
Engineering Design Services	15%			$69,955.46	
Owner's Contingency	15%			$69,955.46	
Owner's Project Management	5%			$23,318.49	
GRAND TOTAL				**$785,832.99**	

Budget Range	
-20%	$628,666.39
+50%	$1,178,749.49

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City of Loveland
HIP Streets Block Estimate
Block 8 - 4th Street (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$22,409.71	1	$22,409.71	5% of subtotals
Traffic Control	ALLOW	$8,963.89	1	$8,963.89	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$4,481.94	1	$4,481.94	1% of subtotals
Construction Surveying	ALLOW	$11,204.86	1	$11,204.86	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$62,060.40**	
Water					
Length of Installation	LF		350		
Size of Installation	IN		10		
Number of Services	EA		14		
Number of Thrust Blocks/Fittings/Valves	EA		7		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		3		
Number of Exterior Water Meters to be Replaced	EA		10		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	535	$32,091.22	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00	350	$15,750.00	
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	7	$24,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	14	$3,500.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	14	$17,500.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	7	$3,500.00	
Pipe Bedding Material	CY	$35.00	73	$2,537.78	
Flow Fill/Backfill	CY	$145.00	462	$67,040.12	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	10	$20,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	3	$45,000.00	
Water Subtotal				**$242,919.12**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		365		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA		4		
Average Depth to Invert	FT		6		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	365	$27,375.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	4	$15,700.00	

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City of Loveland
HIP Streets Block Estimate
Block 8 - 4th Street (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	371	$22,240.95	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	138	$4,841.66	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	232	$33,690.68	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$128,848.29**	
Power					
Total Joint Trench Length	LF		**350**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	4	$3,000.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	4	$30,000.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,680	$16,800.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	2	$9,000.00	
Excavate Joint Trench	CY	$60.00	104	$6,222.22	
Backfill Joint Trench	CY	$35.00	104	$3,629.63	
Power Subtotal				**$68,651.85**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	14	$4,900.00	
Traffic Signs Remove/Replace	EA	$125.00	23	$2,875.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$7,775.00**	
Sub Total				**$510,254.67**	
General Conditions	12%			$61,230.56	
Bonds & Insurance	1.5%			$7,653.82	
Estimating Contingency	20%			$102,050.93	
Engineering Design Services	15%			$76,538.20	
Owner's Contingency	15%			$76,538.20	
Owner's Project Management	5%			$25,512.73	
GRAND TOTAL				**$859,779.11**	

Budget Range	
-20%	$687,823.29
+50%	$1,289,668.67

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City of Loveland
HIP Streets Block Estimate
Block 9 - 4th Street (Jefferson Ave to Washington Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$19,397.91	1	$19,397.91	5% of subtotals
Traffic Control	ALLOW	$7,759.16	1	$7,759.16	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$3,879.58	1	$3,879.58	1% of subtotals
Construction Surveying	ALLOW	$9,698.95	1	$9,698.95	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$55,735.61**	
Water					
Length of Installation	LF		345		
Size of Installation	IN		10		
Number of Services	EA		7		
Number of Thrust Blocks/Fittings/Valves	EA		7		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		6		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	527	$31,632.77	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00	345	$15,525.00	
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	7	$24,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	7	$1,750.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	7	$8,750.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	7	$3,500.00	
Pipe Bedding Material	CY	$35.00	71	$2,501.53	
Flow Fill/Backfill	CY	$145.00	456	$66,082.41	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	6	$12,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$177,741.71**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		350		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		4		
Number of Inlets to be Replaced	EA		6		
Average Depth to Invert	FT		5		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	350	$26,250.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	4	$50,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	6	$23,550.00	

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City of Loveland
HIP Streets Block Estimate
Block 9 - 4th Street (Jefferson Ave to Washington Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	240	$14,424.16	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	133	$4,642.68	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	108	$15,624.42	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$134,491.27**	
Power					
Total Joint Trench Length	LF		**413**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	5	$3,750.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	5	$37,500.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00	1	$1,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,050	$10,500.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	122	$7,342.22	
Backfill Joint Trench	CY	$35.00	122	$4,282.96	
Power Subtotal				**$69,375.19**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	11	$3,850.00	
Traffic Signs Remove/Replace	EA	$125.00	20	$2,500.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$6,350.00**	
Sub Total				**$443,693.77**	
General Conditions	12%			$53,243.25	
Bonds & Insurance	1.5%			$6,655.41	
Estimating Contingency	20%			$88,738.75	
Engineering Design Services	15%			$66,554.07	
Owner's Contingency	15%			$66,554.07	
Owner's Project Management	5%			$22,184.69	
GRAND TOTAL				**$747,624.00**	

Budget Range	
-20%	$598,099.20
+50%	$1,121,436.00

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City of Loveland
HIP Streets Block Estimate
Block 10 - 3rd Street (Garfield Ave to Railroad Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$16,569.42	1	$16,569.42	5% of subtotals
Traffic Control	ALLOW	$6,627.77	1	$6,627.77	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$3,313.88	1	$3,313.88	1% of subtotals
Construction Surveying	ALLOW	$8,284.71	1	$8,284.71	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$49,795.78**	
Water					
Length of Installation	LF		350		
Size of Installation	IN		8		
Number of Services	EA		2		
Number of Thrust Blocks/Fittings/Valves	EA		5		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		1		
Number of Exterior Water Meters to be Replaced	EA		0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	510	$30,580.36	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	350	$12,250.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	5	$17,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	2	$500.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	2	$2,500.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	5	$2,500.00	
Pipe Bedding Material	CY	$35.00	65	$2,261.38	
Flow Fill/Backfill	CY	$145.00	445	$64,533.95	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	0	$0.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	1	$15,000.00	
Water Subtotal				**$159,125.69**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		390		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA		1		
Average Depth to Invert	FT		6		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	390	$29,250.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	1	$3,925.00	

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City of Loveland
HIP Streets Block Estimate
Block 10 - 3rd Street (Garfield Ave to Railroad Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	396	$23,764.31	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	148	$5,173.28	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	248	$35,998.26	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$123,110.85**	
Power					
Total Joint Trench Length	LF		**350**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00	1	$750.00	
Existing Electrical Pole Removal	EA	$1,500.00	2	$3,000.00	
Underground Secondary to Meters/Lights	LF	$10.00	520	$5,200.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	2	$9,000.00	
Excavate Joint Trench	CY	$60.00	104	$6,222.22	
Backfill Joint Trench	CY	$35.00	104	$3,629.63	
Power Subtotal				**$44,301.85**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	6	$2,100.00	
Traffic Signs Remove/Replace	EA	$125.00	14	$1,750.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,850.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	1	$1,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$1,000.00**	
Sub Total				**$380,184.17**	
General Conditions	12%			$45,622.10	
Bonds & Insurance	1.5%			$5,702.76	
Estimating Contingency	20%			$76,036.83	
Engineering Design Services	15%			$57,027.63	
Owner's Contingency	15%			$57,027.63	
Owner's Project Management	5%			$19,009.21	
GRAND TOTAL				**$640,610.32**	

Budget Range	
-20%	$512,488.26
+50%	$960,915.48

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City of Loveland
HIP Streets Block Estimate
Block 11 - 3rd Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$14,101.02	1	$14,101.02	5% of subtotals
Traffic Control	ALLOW	$5,640.41	1	$5,640.41	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$2,820.20	1	$2,820.20	1% of subtotals
Construction Surveying	ALLOW	$7,050.51	1	$7,050.51	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$44,612.15**	
Water					
Length of Installation	LF		418		
Size of Installation	IN		8		
Number of Services	EA		4		
Number of Thrust Blocks/Fittings/Valves	EA		8		
Number of Hydrants	EA		0		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		4		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	609	$36,521.68	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	418	$14,630.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	8	$28,000.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	4	$1,000.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	4	$5,000.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	8	$4,000.00	
Pipe Bedding Material	CY	$35.00	77	$2,700.73	
Flow Fill/Backfill	CY	$145.00	532	$77,071.98	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	4	$8,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$180,424.39**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		82		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		4		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	82	$6,150.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 11 - 3rd Street (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	46	$2,775.76	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	31	$1,087.71	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	15	$2,201.85	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$32,565.33**	
Power					
Total Joint Trench Length	LF		**383**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00	3	$2,250.00	
Existing Electrical Pole Removal	EA	$1,500.00	5	$7,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,900	$19,000.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	2	$9,000.00	
Excavate Joint Trench	CY	$60.00	113	$6,808.89	
Backfill Joint Trench	CY	$35.00	113	$3,971.85	
Power Subtotal				**$65,030.74**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	1	$1,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$1,000.00**	
Sub Total				**$325,632.61**	
General Conditions	12%			$39,075.91	
Bonds & Insurance	1.5%			$4,884.49	
Estimating Contingency	20%			$65,126.52	
Engineering Design Services	15%			$48,844.89	
Owner's Contingency	15%			$48,844.89	
Owner's Project Management	5%			$16,281.63	
GRAND TOTAL				**$548,690.95**	

Budget Range	
-20%	$438,952.76
+50%	$823,036.43

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City of Loveland
HIP Streets Block Estimate
Block 12 - 3rd Street (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$12,718.46	1	$12,718.46	5% of subtotals
Traffic Control	ALLOW	$5,087.38	1	$5,087.38	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$2,543.69	1	$2,543.69	1% of subtotals
Construction Surveying	ALLOW	$6,359.23	1	$6,359.23	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$41,708.77**	
Water					
Length of Installation	LF		385		
Size of Installation	IN		8		
Number of Services	EA		5		
Number of Thrust Blocks/Fittings/Valves	EA		5		
Number of Hydrants	EA		0		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		4		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	561	$33,638.39	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	385	$13,475.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	5	$17,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	5	$1,250.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	5	$6,250.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	5	$2,500.00	
Pipe Bedding Material	CY	$35.00	71	$2,487.52	
Flow Fill/Backfill	CY	$145.00	490	$70,987.35	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	4	$8,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$159,588.26**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		114		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		4		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	114	$8,550.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 12 - 3rd Street (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	64	$3,858.99	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	43	$1,512.19	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	21	$3,061.11	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$37,332.29**	
Power					
Total Joint Trench Length	LF		**349**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00	1	$750.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00	700	$7,000.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	2	$9,000.00	
Excavate Joint Trench	CY	$60.00	103	$6,204.44	
Backfill Joint Trench	CY	$35.00	103	$3,619.26	
Power Subtotal				**$51,323.70**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	10	$3,500.00	
Traffic Signs Remove/Replace	EA	$125.00	21	$2,625.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$6,125.00**	
Sub Total				**$296,078.02**	
General Conditions	12%			$35,529.36	
Bonds & Insurance	1.5%			$4,441.17	
Estimating Contingency	20%			$59,215.60	
Engineering Design Services	15%			$44,411.70	
Owner's Contingency	15%			$44,411.70	
Owner's Project Management	5%			$14,803.90	
GRAND TOTAL				**$498,891.46**	

Budget Range	
-20%	$399,113.17
+50%	$748,337.20

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City of Loveland
HIP Streets Block Estimate
Block 13 - 3rd Street (Jefferson Ave to Washington Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$12,107.90	1	$12,107.90	5% of subtotals
Traffic Control	ALLOW	$4,843.16	1	$4,843.16	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$2,421.58	1	$2,421.58	1% of subtotals
Construction Surveying	ALLOW	$6,053.95	1	$6,053.95	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$40,426.60**	
Water					
Length of Installation	LF		361		
Size of Installation	IN		8		
Number of Services	EA		8		
Number of Thrust Blocks/Fittings/Valves	EA		5		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		7		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	526	$31,541.45	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	361	$12,635.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	5	$17,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	8	$2,000.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	8	$10,000.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	5	$2,500.00	
Pipe Bedding Material	CY	$35.00	67	$2,332.45	
Flow Fill/Backfill	CY	$145.00	459	$66,562.16	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	7	$14,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$170,571.07**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		100		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		5		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	100	$7,500.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 13 - 3rd Street (Jefferson Ave to Washington Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	84	$5,023.97	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	38	$1,326.48	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	46	$6,645.83	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$53,346.28**	
Power					
Total Joint Trench Length	LF		**410**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00	1	$750.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	121	$7,288.89	
Backfill Joint Trench	CY	$35.00	121	$4,251.85	
Power Subtotal				**$16,790.74**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	2	$700.00	
Traffic Signs Remove/Replace	EA	$125.00	6	$750.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$1,450.00**	
Sub Total				**$282,584.69**	
General Conditions	12%			$33,910.16	
Bonds & Insurance	1.5%			$4,238.77	
Estimating Contingency	20%			$56,516.94	
Engineering Design Services	15%			$42,387.70	
Owner's Contingency	15%			$42,387.70	
Owner's Project Management	5%			$14,129.23	
GRAND TOTAL				**$476,155.20**	

Budget Range	
-20%	$380,924.16
+50%	$714,232.80

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City of Loveland
HIP Streets Block Estimate
Block 14 - Railroad Ave (6th Street to 5th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$7,995.37	1	$7,995.37	5% of subtotals
Traffic Control	ALLOW	$3,198.15	1	$3,198.15	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,599.07	1	$1,599.07	1% of subtotals
Construction Surveying	ALLOW	$3,997.68	1	$3,997.68	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$31,790.27**	
Water					
Length of Installation	LF		377		
Size of Installation	IN		8		
Number of Services	EA		1		
Number of Thrust Blocks/Fittings/Valves	EA		3		
Number of Hydrants	EA		0		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		1		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	549	$32,939.41	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	377	$13,195.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	3	$10,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	1	$250.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	1	$1,250.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	3	$1,500.00	
Pipe Bedding Material	CY	$35.00	70	$2,435.83	
Flow Fill/Backfill	CY	$145.00	479	$69,512.28	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	1	$2,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$137,082.53**	
Power					
Total Joint Trench Length	LF		**397**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00	2	$1,500.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	118	$7,057.78	
Backfill Joint Trench	CY	$35.00	118	$4,117.04	
Power Subtotal				**$17,174.81**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	9	$3,150.00	
Traffic Signs Remove/Replace	EA	$125.00	20	$2,500.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	

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City of Loveland
HIP Streets Block Estimate
Block 14 - Railroad Ave (6th Street to 5th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Traffic Subtotal				**$5,650.00**	
Sub Total				**$191,697.61**	
General Conditions	12%			$23,003.71	
Bonds & Insurance	1.5%			$2,875.46	
Estimating Contingency	20%			$38,339.52	
Engineering Design Services	15%			$28,754.64	
Owner's Contingency	15%			$28,754.64	
Owner's Project Management	5%			$9,584.88	
GRAND TOTAL				**$323,010.48**	

Budget Range	
-20%	$258,408.38
+50%	$484,515.71

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City of Loveland
HIP Streets Block Estimate
Block 15 - Railroad Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$9,834.51	1	$9,834.51	5% of subtotals
Traffic Control	ALLOW	$3,933.81	1	$3,933.81	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,966.90	1	$1,966.90	1% of subtotals
Construction Surveying	ALLOW	$4,917.26	1	$4,917.26	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$35,652.48**	
Water					
Length of Installation	LF		396		
Size of Installation	IN		8		
Number of Services	EA		1		
Number of Thrust Blocks/Fittings/Valves	EA		1		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		1		
Number of Exterior Water Meters to be Replaced	EA		1		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	577	$34,599.49	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	396	$13,860.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	1	$3,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	1	$250.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	1	$1,250.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	1	$500.00	
Pipe Bedding Material	CY	$35.00	73	$2,558.59	
Flow Fill/Backfill	CY	$145.00	504	$73,015.56	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	1	$2,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	1	$15,000.00	
Water Subtotal				**$158,033.63**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		55		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA				
Number of Inlets to be Replaced	EA		1		
Average Depth to Invert	FT		5		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	55	$4,125.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	0	$0.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	1	$3,925.00	

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City of Loveland
HIP Streets Block Estimate
Block 15 - Railroad Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	46	$2,763.18	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	21	$729.56	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	25	$3,655.21	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$15,197.96**	
Power					
Total Joint Trench Length	LF		**376**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	111	$6,684.44	
Backfill Joint Trench	CY	$35.00	111	$3,899.26	
Power Subtotal				**$15,083.70**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	10	$3,500.00	
Traffic Signs Remove/Replace	EA	$125.00	23	$2,875.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$6,375.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	2	$2,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$2,000.00**	
Sub Total				**$230,342.77**	
General Conditions	12%			$27,641.13	
Bonds & Insurance	1.5%			$3,455.14	
Estimating Contingency	20%			$46,068.55	
Engineering Design Services	15%			$34,551.42	
Owner's Contingency	15%			$34,551.42	
Owner's Project Management	5%			$11,517.14	
GRAND TOTAL				**$388,127.58**	

Budget Range	
-20%	$310,502.06
+50%	$582,191.36

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City of Loveland
HIP Streets Block Estimate
Block 16 - Railroad Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$9,828.48	1	$9,828.48	5% of subtotals
Traffic Control	ALLOW	$3,931.39	1	$3,931.39	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,965.70	1	$1,965.70	1% of subtotals
Construction Surveying	ALLOW	$4,914.24	1	$4,914.24	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$35,639.80**	
Water					
Length of Installation	LF		368		
Size of Installation	IN		8		
Number of Services	EA		3		
Number of Thrust Blocks/Fittings/Valves	EA		2		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		2		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	536	$32,153.06	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	368	$12,880.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	2	$7,000.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	3	$750.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	3	$3,750.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	2	$1,000.00	
Pipe Bedding Material	CY	$35.00	68	$2,377.68	
Flow Fill/Backfill	CY	$145.00	468	$67,852.84	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	2	$4,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$143,263.58**	
Power					
Total Joint Trench Length	LF		**391**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00	3	$2,250.00	
Existing Electrical Pole Removal	EA	$1,500.00	2	$3,000.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,170	$11,700.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	116	$6,951.11	
Backfill Joint Trench	CY	$35.00	116	$4,054.81	
Power Subtotal				**$48,955.93**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	6	$2,100.00	
Traffic Signs Remove/Replace	EA	$125.00	18	$2,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	

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City of Loveland
HIP Streets Block Estimate
Block 16 - Railroad Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Traffic Subtotal				**$4,350.00**	
Sub Total				**$232,209.30**	
General Conditions	12%			$27,865.12	
Bonds & Insurance	1.5%			$3,483.14	
Estimating Contingency	20%			$46,441.86	
Engineering Design Services	15%			$34,831.40	
Owner's Contingency	15%			$34,831.40	
Owner's Project Management	5%			$11,610.47	
GRAND TOTAL				**$391,272.68**	

Budget Range	
-20%	$313,018.14
+50%	$586,909.02

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City of Loveland
HIP Streets Block Estimate
Block 17 - Railroad Ave (3rd Street to 2nd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$9,718.05	1	$9,718.05	5% of subtotals
Traffic Control	ALLOW	$3,887.22	1	$3,887.22	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,943.61	1	$1,943.61	1% of subtotals
Construction Surveying	ALLOW	$4,859.02	1	$4,859.02	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$35,407.90**	
Water					
Length of Installation	LF		387		
Size of Installation	IN		8		
Number of Services	EA		1		
Number of Thrust Blocks/Fittings/Valves	EA		5		
Number of Hydrants	EA		0		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		1		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	564	$33,813.14	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00	387	$13,545.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	5	$17,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	1	$250.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	1	$1,250.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	5	$2,500.00	
Pipe Bedding Material	CY	$35.00	71	$2,500.44	
Flow Fill/Backfill	CY	$145.00	492	$71,356.11	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	1	$2,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$148,214.69**	
Power					
Total Joint Trench Length	LF		**380**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00	4	$3,000.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	2	$9,000.00	
Excavate Joint Trench	CY	$60.00	113	$6,755.56	
Backfill Joint Trench	CY	$35.00	113	$3,940.74	
Power Subtotal				**$39,196.30**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	12	$4,200.00	
Traffic Signs Remove/Replace	EA	$125.00	22	$2,750.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	

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City of Loveland
HIP Streets Block Estimate
Block 17 - Railroad Ave (3rd Street to 2nd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Traffic Subtotal				**$6,950.00**	
Sub Total				**$229,768.89**	
General Conditions	12%			$27,572.27	
Bonds & Insurance	1.5%			$3,446.53	
Estimating Contingency	20%			$45,953.78	
Engineering Design Services	15%			$34,465.33	
Owner's Contingency	15%			$34,465.33	
Owner's Project Management	5%			$11,488.44	
GRAND TOTAL				**$387,160.58**	

Budget Range	
-20%	$309,728.46
+50%	$580,740.87

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City of Loveland
HIP Streets Block Estimate
Block 18 - Jefferson Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$3,328.74	1	$3,328.74	5% of subtotals
Traffic Control	ALLOW	$1,331.50	1	$1,331.50	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$665.75	1	$665.75	1% of subtotals
Construction Surveying	ALLOW	$1,664.37	1	$1,664.37	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$21,990.35**	
Water					
Length of Installation	LF		0		
Size of Installation	IN		0		
Number of Services	EA		0		
Number of Thrust Blocks/Fittings/Valves	EA		0		
Number of Hydrants	EA		0		
Average Depth TOP	FT		0		
Lines Affected/Needing Dechlorination	EA		0		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	0	$0.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	0	$0.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	0	$0.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	0	$0.00	
Cap and Abandon Existing Valves	EA	$500.00	0	$0.00	
Pipe Bedding Material	CY	$35.00	0	$0.00	
Flow Fill/Backfill	CY	$145.00	0	$0.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	0	$0.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$0.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		31		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA		2		
Average Depth to Invert	FT		8		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	31	$2,325.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	2	$7,850.00	

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City of Loveland
HIP Streets Block Estimate
Block 18 - Jefferson Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	72	$4,321.60	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	12	$411.21	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	60	$8,740.28	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$48,648.08**	
Power					
Total Joint Trench Length	LF		**342**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00	1	$750.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	101	$6,080.00	
Backfill Joint Trench	CY	$35.00	101	$3,546.67	
Power Subtotal				**$10,376.67**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	13	$4,550.00	
Traffic Signs Remove/Replace	EA	$125.00	24	$3,000.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$7,550.00**	
Sub Total				**$88,565.10**	
General Conditions	12%			$10,627.81	
Bonds & Insurance	1.5%			$1,328.48	
Estimating Contingency	20%			$17,713.02	
Engineering Design Services	15%			$13,284.76	
Owner's Contingency	15%			$13,284.76	
Owner's Project Management	5%			$4,428.25	
GRAND TOTAL				**$149,232.19**	

Budget Range	
-20%	$119,385.75
+50%	$223,848.29

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City of Loveland
HIP Streets Block Estimate
Block 19 - Jefferson Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$5,755.08	1	$5,755.08	5% of subtotals
Traffic Control	ALLOW	$2,302.03	1	$2,302.03	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,151.02	1	$1,151.02	1% of subtotals
Construction Surveying	ALLOW	$2,877.54	1	$2,877.54	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$27,085.67**	
Water					
Length of Installation	LF		0		
Size of Installation	IN		0		
Number of Services	EA		0		
Number of Thrust Blocks/Fittings/Valves	EA		0		
Number of Hydrants	EA		0		
Average Depth TOP	FT		0		
Lines Affected/Needing Dechlorination	EA		0		
Number of Interior Water Meters to be Relocated	EA		0		
Number of Exterior Water Meters to be Replaced	EA		0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation - 8"	LF	$35.00			
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	0	$0.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	0	$0.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	0	$0.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	0	$0.00	
Cap and Abandon Existing Valves	EA	$500.00	0	$0.00	
Pipe Bedding Material	CY	$35.00	0	$0.00	
Flow Fill/Backfill	CY	$145.00	0	$0.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	0	$0.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$0.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		81		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		3		
Number of Inlets to be Replaced	EA		5		
Average Depth to Invert	FT		8		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	81	$6,075.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	3	$37,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	5	$19,625.00	

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City of Loveland

HIP Streets Block Estimate

Block 19 - Jefferson Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	188	$11,291.91	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	31	$1,074.45	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	158	$22,837.50	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$98,403.86**	
Power					
Total Joint Trench Length	LF		**444**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00	1	$750.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	132	$7,893.33	
Backfill Joint Trench	CY	$35.00	132	$4,604.44	
Power Subtotal				**$13,247.78**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	7	$2,450.00	
Traffic Signs Remove/Replace	EA	$125.00	8	$1,000.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,450.00**	
Sub Total				**$142,187.31**	
General Conditions	12%			$17,062.48	
Bonds & Insurance	1.5%			$2,132.81	
Estimating Contingency	20%			$28,437.46	
Engineering Design Services	15%			$21,328.10	
Owner's Contingency	15%			$21,328.10	
Owner's Project Management	5%			$7,109.37	
GRAND TOTAL				**$239,585.62**	

Budget Range	
-20%	$191,668.50
+50%	$359,378.43

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City of Loveland
HIP Streets Block Estimate
Block 20 - Cleveland Ave (6th Street to 5th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$17,056.50	1	$17,056.50	5% of subtotals
Traffic Control	ALLOW	$6,822.60	1	$6,822.60	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$3,411.30	1	$3,411.30	1% of subtotals
Construction Surveying	ALLOW	$8,528.25	1	$8,528.25	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$50,818.65**	
Water					
Length of Installation	LF		448		
Size of Installation	IN		8		
Number of Services	EA		7		
Number of Thrust Blocks/Fittings/Valves	EA		2		
Number of Hydrants	EA		0		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		1		
Number of Exterior Water Meters to be Replaced	EA		5		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation (HDD) - 8"	LF	$18.00	448	$8,064.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	2	$7,000.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	7	$1,750.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	7	$8,750.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	2	$1,000.00	
Pipe Bedding Material	CY	$35.00			
Flow Fill/Backfill	CY	$145.00			See COL Development Standards Drawing W-1
Excavate/Backfill/Patch Bore Pits and Service Connections	EA	$6,500.00	7	$45,500.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	5	$10,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	1	$15,000.00	
Water Subtotal				**$100,564.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		393		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA		5		
Average Depth to Invert	FT		6		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	393	$29,475.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	

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City of Loveland
HIP Streets Block Estimate
Block 20 - Cleveland Ave (6th Street to 5th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	5	$19,625.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	480	$28,805.03	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	149	$5,213.07	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	331	$48,015.14	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$156,133.24**	
Power					
Total Joint Trench Length	LF		**428**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00	2	$3,000.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,711	$17,110.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	127	$7,608.89	
Backfill Joint Trench	CY	$35.00	127	$4,438.52	
Power Subtotal				**$56,907.41**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	7	$2,450.00	
Traffic Signs Remove/Replace	EA	$125.00	5	$625.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,075.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	2,128	$22,450.40	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	2	$2,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$24,450.40**	
Sub Total				**$367,498.30**	
General Conditions	12%			$44,099.80	
Bonds & Insurance	1.5%			$5,512.47	
Estimating Contingency	20%			$73,499.66	
Engineering Design Services	15%			$55,124.74	
Owner's Contingency	15%			$55,124.74	
Owner's Project Management	5%			$18,374.91	
GRAND TOTAL				**$619,234.63**	

Budget Range	
-20%	$495,387.70
+50%	$928,851.95

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City of Loveland
HIP Streets Block Estimate
Block 21 - Cleveland Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$8,699.67	1	$8,699.67	5% of subtotals
Traffic Control	ALLOW	$3,479.87	1	$3,479.87	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,739.93	1	$1,739.93	1% of subtotals
Construction Surveying	ALLOW	$4,349.83	1	$4,349.83	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$33,269.30**	
Water					
Length of Installation	LF		395		
Size of Installation	IN		8		
Number of Services	EA		4		
Number of Thrust Blocks/Fittings/Valves	EA				
Number of Hydrants	EA				
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		2		
Number of Exterior Water Meters to be Replaced	EA		0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation (HDD) - 8"	LF	$18.00	395	$7,110.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	0	$0.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	4	$1,000.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	4	$5,000.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	0	$0.00	
Pipe Bedding Material	CY	$35.00			
Flow Fill/Backfill	CY	$145.00			See COL Development Standards Drawing W-1
Excavate/Backfill/Patch Bore Pits and Service Connections	EA	$6,500.00	4	$26,000.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	0	$0.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	2	$30,000.00	
Water Subtotal				**$72,610.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		88		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		3		
Average Depth to Invert	FT		4		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	88	$6,600.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	

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City of Loveland
HIP Streets Block Estimate
Block 21 - Cleveland Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	3	$11,775.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	50	$2,978.87	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	33	$1,167.30	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	16	$2,362.96	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$37,384.14**	
Power					
Total Joint Trench Length	LF		**370**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,310	$13,100.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	110	$6,577.78	
Backfill Joint Trench	CY	$35.00	110	$3,837.04	
Power Subtotal				**$48,264.81**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	7	$2,450.00	
Traffic Signs Remove/Replace	EA	$125.00	12	$1,500.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,950.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,117	$11,784.35	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$11,784.35**	
Sub Total				**$195,478.25**	
General Conditions	12%			$23,457.39	
Bonds & Insurance	1.5%			$2,932.17	
Estimating Contingency	20%			$39,095.65	
Engineering Design Services	15%			$29,321.74	
Owner's Contingency	15%			$29,321.74	
Owner's Project Management	5%			$9,773.91	
GRAND TOTAL				**$329,380.85**	

Budget Range	
-20%	$263,504.68
+50%	$494,071.27

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City of Loveland
HIP Streets Block Estimate
Block 22 - Cleveland Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$7,940.43	1	$7,940.43	5% of subtotals
Traffic Control	ALLOW	$3,176.17	1	$3,176.17	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,588.09	1	$1,588.09	1% of subtotals
Construction Surveying	ALLOW	$3,970.22	1	$3,970.22	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$31,674.91**	
Water					
Length of Installation	LF		426		
Size of Installation	IN		8		
Number of Services	EA		5		
Number of Thrust Blocks/Fittings/Valves	EA		1		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA				
Number of Exterior Water Meters to be Replaced	EA		2		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation (HDD) - 8"	LF	$18.00	426	$7,668.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	1	$3,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	5	$1,250.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	5	$6,250.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	1	$500.00	
Pipe Bedding Material	CY	$35.00			
Flow Fill/Backfill	CY	$145.00			See COL Development Standards Drawing W-1
Excavate/Backfill/Patch Bore Pits and Service Connections	EA	$6,500.00	5	$32,500.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	2	$4,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$67,168.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		66		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA				
Number of Inlets to be Replaced	EA		1		
Average Depth to Invert	FT		5		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	66	$4,950.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	0	$0.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	1	$3,925.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	55	$3,315.82	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	25	$875.48	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	30	$4,386.25	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$17,452.55**	
Sanitary Sewer					
Length of 8" CIPP	LF				
Length of 8" Bursting	LF		126		
Length of 8" Open Trench	LF				
Length of 10" CIPP	LF				
Length of 10" Bursting	LF				
Length of 10" Open Trench	LF				
Length of 12" CIPP	LF				
Length of 12" Bursting	LF				
Length of 12" Open Trench	LF				

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City of Loveland
HIP Streets Block Estimate
Block 22 - Cleveland Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Number of Manholes to be Replaced	EA				
Number of Service Taps	EA				
Average Depth to Invert	FT				
Sanitary Sewer Main CIPP Install - 8"	LF	$0.00	0		
Sanitary Sewer Main CIPP Install - 10"	LF	$0.00	0		
Sanitary Sewer Main CIPP Install - 12"	LF	$0.00	0		
Sanitary Sewer Main Bursting Install - 8"	LF	$125.00	126	$15,808.75	
Sanitary Sewer Main Bursting Install - 10"	LF	$0.00	0		
Sanitary Sewer Main Bursting Install - 12"	LF	$0.00	0		
Sanitary Sewer Main Open Trench Install - 8"	LF	$0.00	0		
Sanitary Sewer Main Open Trench Install - 10"	LF	$0.00	0		
Sanitary Sewer Main Open Trench Install - 12"	LF	$0.00	0		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	
Flow Fill/Backfill	CY	$145.00	0	$0.00	See COL Development Standards Drawing WW-1
Pipe Bedding Material	CY	$35.00	0	$0.00	
Disconnect/Reconnect Existing Taps	EA	$0.00	0		
Precast Concrete Manhole	EA	$0.00	0		
Sanitary Sewer Subtotal				**$15,808.75**	
Power					
Total Joint Trench Length	LF		**445**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,440	$14,400.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	132	$7,911.11	
Backfill Joint Trench	CY	$35.00	132	$4,614.81	
Power Subtotal				**$43,425.93**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	6	$2,100.00	
Traffic Signs Remove/Replace	EA	$125.00	11	$1,375.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,475.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,088	$11,478.40	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$11,478.40**	
Sub Total				**$179,005.13**	
General Conditions	12%			$21,480.62	
Bonds & Insurance	1.5%			$2,685.08	
Estimating Contingency	20%			$35,801.03	
Engineering Design Services	15%			$26,850.77	
Owner's Contingency	15%			$26,850.77	
Owner's Project Management	5%			$8,950.26	
GRAND TOTAL				**$301,623.64**	

Budget Range	
-20%	$241,298.91
+50%	$452,435.46

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City of Loveland
HIP Streets Block Estimate
Block 23 - Lincoln Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$12,225.77	1	$12,225.77	5% of subtotals
Traffic Control	ALLOW	$4,890.31	1	$4,890.31	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$2,445.15	1	$2,445.15	1% of subtotals
Construction Surveying	ALLOW	$6,112.88	1	$6,112.88	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$40,674.11**	
Water					
Length of Installation	LF		435		
Size of Installation	IN		8		
Number of Services	EA		8		
Number of Thrust Blocks/Fittings/Valves	EA		2		
Number of Hydrants	EA				
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA		3		
Number of Exterior Water Meters to be Replaced	EA		3		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation (HDD) - 8"	LF	$18.00	435	$7,830.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	2	$7,000.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	8	$2,000.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	8	$10,000.00	
Cap and Abandon Existing Hydrants	EA	$500.00	0	$0.00	
Hydrant	EA	$7,500.00	0	$0.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	2	$1,000.00	
Pipe Bedding Material	CY	$35.00			
Flow Fill/Backfill	CY	$145.00			See COL Development Standards Drawing W-1
Excavate/Backfill/Patch Bore Pits and Service Connections	EA	$6,500.00	8	$52,000.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	3	$6,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	3	$45,000.00	
Water Subtotal				**$134,330.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		146		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		1		
Average Depth to Invert	FT		7		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	146	$10,950.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	

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City of Loveland
HIP Streets Block Estimate
Block 23 - Lincoln Ave (5th Street to 4th Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	1	$3,925.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	251	$15,040.55	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	55	$1,936.66	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	195	$28,324.68	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$72,676.89**	
Power					
Total Joint Trench Length	LF		**421**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	750	$7,500.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	125	$7,484.44	
Backfill Joint Trench	CY	$35.00	125	$4,365.93	
Power Subtotal				**$19,350.37**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	6	$2,100.00	
Traffic Signs Remove/Replace	EA	$125.00	6	$750.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$2,850.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,451	$15,308.05	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$15,308.05**	
Sub Total				**$269,881.36**	
General Conditions	12%			$32,385.76	
Bonds & Insurance	1.5%			$4,048.22	
Estimating Contingency	20%			$53,976.27	
Engineering Design Services	15%			$40,482.20	
Owner's Contingency	15%			$40,482.20	
Owner's Project Management	5%			$13,494.07	
GRAND TOTAL				**$454,750.10**	

Budget Range	
-20%	$363,800.08
+50%	$682,125.15

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City of Loveland
HIP Streets Block Estimate
Block 24 - Lincoln Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$6,906.13	1	$6,906.13	5% of subtotals
Traffic Control	ALLOW	$2,762.45	1	$2,762.45	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,381.23	1	$1,381.23	1% of subtotals
Construction Surveying	ALLOW	$3,453.07	1	$3,453.07	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$29,502.88**	
Water					
Length of Installation	LF		435		
Size of Installation	IN		8		
Number of Services	EA		2		
Number of Thrust Blocks/Fittings/Valves	EA		3		
Number of Hydrants	EA		1		
Average Depth TOP	FT		5		
Lines Affected/Needing Dechlorination	EA		1		
Number of Interior Water Meters to be Relocated	EA				
Number of Exterior Water Meters to be Replaced	EA		2		
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	0	$0.00	See COL Development Standards Drawing W-1
Water Main Installation (HDD) - 8"	LF	$18.00	435	$7,830.00	
Water Main Installation - 10"	LF	$45.00			
Water Main Installation - 12"	LF	$55.00			
Fittings/Thrust Blocks/Valves	EA	$3,500.00	3	$10,500.00	
Cut, Cap and Abandon Existing Service Connections	EA	$250.00	2	$500.00	
Service Connections/Taps - 3/4" Copper	EA	$1,250.00	2	$2,500.00	
Cap and Abandon Existing Hydrants	EA	$500.00	1	$500.00	
Hydrant	EA	$7,500.00	1	$7,500.00	
Chlorination/Dechlorination	EA	$3,500.00	1	$3,500.00	
Cap and Abandon Existing Valves	EA	$500.00	3	$1,500.00	
Pipe Bedding Material	CY	$35.00			
Flow Fill/Backfill	CY	$145.00			See COL Development Standards Drawing W-1
Excavate/Backfill/Patch Bore Pits and Service Connections	EA	$6,500.00	2	$13,000.00	See COL Development Standards Drawing W-1
Remove and Replace Water Meter Pit	EA	$2,000.00	2	$4,000.00	
Remove Interior Water Meter, Replace in ROW	EA	$15,000.00	0	$0.00	
Water Subtotal				**$51,330.00**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		34		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA				
Average Depth to Invert	FT		4		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	34	$2,550.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	

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City of Loveland
HIP Streets Block Estimate
Block 24 - Lincoln Ave (4th Street to 3rd Street)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	0	$0.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	19	$1,150.93	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	13	$451.00	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	6	$912.96	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$30,064.89**	
Power					
Total Joint Trench Length	LF		**445**		
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00		$0.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,260	$12,600.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	132	$7,911.11	
Backfill Joint Trench	CY	$35.00	132	$4,614.81	
Power Subtotal				**$41,625.93**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	8	$1,000.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$2,750.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,076	$11,351.80	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	1	$1,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$12,351.80**	
Sub Total				**$155,273.69**	
General Conditions	12%			$18,632.84	
Bonds & Insurance	1.5%			$2,329.11	
Estimating Contingency	20%			$31,054.74	
Engineering Design Services	15%			$23,291.05	
Owner's Contingency	15%			$23,291.05	
Owner's Project Management	5%			$7,763.68	
GRAND TOTAL				**$261,636.17**	

Budget Range	
-20%	$209,308.94
+50%	$392,454.26

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City of Loveland
HIP Streets Block Estimate
Alley 1 - Between Railroad Ave and Cleveland Ave (6th St to Artist Alley)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$3,418.38	1	$3,418.38	5% of subtotals
Traffic Control	ALLOW	$1,367.35	1	$1,367.35	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$683.68	1	$683.68	1% of subtotals
Construction Surveying	ALLOW	$1,709.19	1	$1,709.19	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$22,178.61**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		154		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		2		
Number of Inlets to be Replaced	EA		3		
Average Depth to Invert	FT		3		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	154	$11,550.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	2	$25,000.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	3	$11,775.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	62	$3,715.80	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	58	$2,042.78	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	4	$516.90	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$54,600.48**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65	688	$10,767.20	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$10,767.20**	
Sub Total				**$79,779.08**	
General Conditions	12%			$9,573.49	
Bonds & Insurance	1.5%			$1,196.69	
Estimating Contingency	20%			$15,955.82	
Engineering Design Services	15%			$11,966.86	
Owner's Contingency	15%			$11,966.86	
Owner's Project Management	5%			$3,988.95	
GRAND TOTAL				**$134,427.76**	

Budget Range	
-20%	$107,542.21
+50%	$201,641.64

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City of Loveland
HIP Streets Block Estimate
Alley 2 - Artist Alley (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$7,361.24	1	$7,361.24	5% of subtotals
Traffic Control	ALLOW	$2,944.50	1	$2,944.50	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,472.25	1	$1,472.25	1% of subtotals
Construction Surveying	ALLOW	$3,680.62	1	$3,680.62	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$30,458.61**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		76		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		4		
Average Depth to Invert	FT		3		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	76	$5,700.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00			
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	4	$15,700.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	31	$1,833.77	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	29	$1,008.13	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	2	$255.09	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$36,996.99**	
Power					
Total Joint Trench Length	LF				
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00	4	$3,000.00	
Existing Electrical Pole Removal	EA	$1,500.00	3	$4,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	2,880	$28,800.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	284	$17,066.67	
Backfill Joint Trench	CY	$35.00	284	$9,955.56	
Power Subtotal				**$88,072.22**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	

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City of Loveland
HIP Streets Block Estimate
Alley 2 - Artist Alley (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65	1,224	$19,155.60	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$19,155.60**	
Sub Total				**$158,527.82**	
General Conditions	12%			$19,023.34	
Bonds & Insurance	1.5%			$2,377.92	
Estimating Contingency	20%			$31,705.56	
Engineering Design Services	15%			$23,779.17	
Owner's Contingency	15%			$23,779.17	
Owner's Project Management	5%			$7,926.39	
GRAND TOTAL				**$267,119.37**	

Budget Range	
-20%	$213,695.50
+50%	$400,679.06

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City of Loveland
HIP Streets Block Estimate
Alley 3 - Artist Alley (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$303.17	1	$303.17	5% of subtotals
Traffic Control	ALLOW	$121.27	1	$121.27	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$60.63	1	$60.63	1% of subtotals
Construction Surveying	ALLOW	$151.59	1	$151.59	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$15,636.66**	
Power					
Total Joint Trench Length	LF				
Total New UG Primary Length	LF				
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00	1	$1,500.00	
Underground Secondary to Meters	LF	$10.00		$0.00	
Overhead Transformers Removal	EA	$500.00		$0.00	
Placement of Transformers at Grade	EA	$0.00		$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	0	$0.00	
UG Primary Conduit to New Transformers	LF	$12.00	0	$0.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	0	$0.00	
Backfill Joint Trench	CY	$35.00	0	$0.00	
Power Subtotal				**$1,500.00**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65	36	$563.40	
Manhole or Inlet Grate Replacements	EA	$1,000.00	1	$1,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$1,563.40**	
Sub Total				**$20,136.66**	
General Conditions	12%			$2,416.40	
Bonds & Insurance	1.5%			$302.05	
Estimating Contingency	20%			$4,027.33	
Engineering Design Services	15%			$3,020.50	
Owner's Contingency	15%			$3,020.50	
Owner's Project Management	5%			$1,006.83	
GRAND TOTAL				**$33,930.27**	

Budget Range	
-20%	$27,144.21
+50%	$50,895.40

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City of Loveland
HIP Streets Block Estimate
Alley 4 - Sweetheart Alley (Railroad Ave to Cleveland Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$4,919.26	1	$4,919.26	5% of subtotals
Traffic Control	ALLOW	$1,967.70	1	$1,967.70	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$983.85	1	$983.85	1% of subtotals
Construction Surveying	ALLOW	$2,459.63	1	$2,459.63	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$25,330.44**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		333		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA		1		
Number of Inlets to be Replaced	EA		5		
Average Depth to Invert	FT		3		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	333	$24,975.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	1	$12,500.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	5	$19,625.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	144	$8,636.06	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	126	$4,417.18	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	18	$2,570.73	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$72,723.97**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65	1,448	$22,661.20	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$22,661.20**	
Sub Total				**$101,054.42**	
General Conditions	12%			$12,126.53	
Bonds & Insurance	1.5%			$1,515.82	
Estimating Contingency	20%			$20,210.88	
Engineering Design Services	15%			$15,158.16	
Owner's Contingency	15%			$15,158.16	
Owner's Project Management	5%			$5,052.72	
GRAND TOTAL				**$170,276.69**	

Budget Range	
-20%	$136,221.35
+50%	$255,415.04

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City of Loveland
HIP Streets Block Estimate
Alley 5 - Sweetheart Alley (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$212.52	1	$212.52	5% of subtotals
Traffic Control	ALLOW	$85.01	1	$85.01	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$42.50	1	$42.50	1% of subtotals
Construction Surveying	ALLOW	$106.26	1	$106.26	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$15,446.29**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65	16	$250.40	
Manhole or Inlet Grate Replacements	EA	$1,000.00	1	$1,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$1,250.40**	
Sub Total				**$18,446.29**	
General Conditions	12%			$2,213.56	
Bonds & Insurance	1.5%			$276.69	
Estimating Contingency	20%			$3,689.26	
Engineering Design Services	15%			$2,766.94	
Owner's Contingency	15%			$2,766.94	
Owner's Project Management	5%			$922.31	
GRAND TOTAL				**$31,082.00**	

Budget Range	
-20%	$24,865.60
+50%	$46,623.00

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Project & Construction Services

City of Loveland
HIP Streets Block Estimate
Alley 6 - Sweetheart Alley (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$1,398.25	1	$1,398.25	5% of subtotals
Traffic Control	ALLOW	$559.30	1	$559.30	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$279.65	1	$279.65	1% of subtotals
Construction Surveying	ALLOW	$699.12	1	$699.12	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$17,936.32**	
Stormwater					
Length of 18" CIPP	LF				
Length of 18" Bursting	LF				
Length of 18" Open Trench	LF		118		
Length of 21" CIPP	LF				
Length of 21" Bursting	LF				
Length of 21" Open Trench	LF				
Length of 24" CIPP	LF				
Length of 24" Bursting	LF				
Length of 24" Open Trench	LF				
Number of Manholes to be Replaced	EA				
Number of Inlets to be Replaced	EA				
Average Depth to Invert	FT		4		
Storm Sewer Main CIPP Install - 18"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 18"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 18"	LF	$75.00	118	$8,850.00	
Storm Sewer Main CIPP Install - 21"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 21"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 21"	LF	$0.00	0		
Storm Sewer Main CIPP Install - 24"	LF	$0.00	0		
Storm Sewer Main Bursting Install - 24"	LF	$0.00	0		
Storm Sewer Main Open Trench Install - 24"	LF	$0.00	0		
Remove/Replace Precast Concrete Manhole	EA	$12,500.00	0	$0.00	
Remove/Replace Precast Concrete Inlet	EA	$3,925.00	0	$0.00	
Excavation, Removal of Existing Main, and Haul Offsite	CY	$60.00	67	$3,994.39	See COL Storm Trench & Bed "Plastic Storm Pipe"
Pipe Bedding Material	CY	$35.00	45	$1,565.25	See COL Storm Trench & Bed "Plastic Storm Pipe"
Flow Fill/Backfill	CY	$145.00	22	$3,168.52	See COL Storm Trench & Bed "Plastic Storm Pipe"
Stormwater Subtotal				**$17,578.16**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55		$0.00	
Concrete Paving Restoration	SF	$15.65	472	$7,386.80	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$7,386.80**	
Sub Total				**$38,514.48**	
General Conditions	12%			$4,621.74	
Bonds & Insurance	1.5%			$577.72	
Estimating Contingency	20%			$7,702.90	
Engineering Design Services	15%			$5,777.17	
Owner's Contingency	15%			$5,777.17	
Owner's Project Management	5%			$1,925.72	
GRAND TOTAL				**$64,896.90**	

Budget Range	
-20%	$51,917.52
+50%	$97,345.35

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City of Loveland
HIP Streets Block Estimate
Alley 7 - Painter's Alley (3rd St to 4th St)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$5,272.84	1	$5,272.84	5% of subtotals
Traffic Control	ALLOW	$2,109.14	1	$2,109.14	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,054.57	1	$1,054.57	1% of subtotals
Construction Surveying	ALLOW	$2,636.42	1	$2,636.42	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$26,072.97**	
Power					
Total Joint Trench Length	LF		**389**		
Total New UG Primary Length	LF		**1,167**		
Existing Electrical Light Pole Removal	EA	$750.00	2	$1,500.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	2	$15,000.00	
Pendant LED Street Lamps	EA	$750.00	1	$750.00	
Existing Electrical Pole Removal	EA	$1,500.00	6	$9,000.00	
Underground Secondary to Meters/Lights	LF	$10.00	2,400	$24,000.00	
Overhead Transformers Removal	EA	$500.00	6	$3,000.00	
Placement of Transformers at Grade	EA	$0.00	2	$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	1,167	$5,251.50	
UG Primary Conduit to New Transformers	LF	$12.00	1,167	$14,004.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	115	$6,915.56	
Backfill Joint Trench	CY	$35.00	115	$4,034.07	
Power Subtotal				**$87,955.13**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,185	$12,501.75	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	2	$2,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$14,501.75**	
Sub Total				**$117,028.10**	
General Conditions	12%			$14,043.37	
Bonds & Insurance	1.5%			$1,755.42	
Estimating Contingency	20%			$23,405.62	
Engineering Design Services	15%			$17,554.22	
Owner's Contingency	15%			$17,554.22	
Owner's Project Management	5%			$5,851.41	
GRAND TOTAL				**$197,192.35**	

Budget Range	
-20%	$157,753.88
+50%	$295,788.53

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City of Loveland
HIP Streets Block Estimate
Alley 8 - Between 4th St and 3rd St (Painter's Alley to Cleveland)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$2,450.52	1	$2,450.52	5% of subtotals
Traffic Control	ALLOW	$980.21	1	$980.21	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$490.10	1	$490.10	1% of subtotals
Construction Surveying	ALLOW	$1,225.26	1	$1,225.26	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$20,146.09**	
Power					
Total Joint Trench Length	LF		**206**		
Total New UG Primary Length	LF		**618**		
Existing Electrical Light Pole Removal	EA	$750.00		$0.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00		$0.00	
Pendant LED Street Lamps	EA	$750.00		$0.00	
Existing Electrical Pole Removal	EA	$1,500.00	2	$3,000.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,440	$14,400.00	
Overhead Transformers Removal	EA	$500.00	1	$500.00	
Placement of Transformers at Grade	EA	$0.00	1	$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	618	$2,781.00	
UG Primary Conduit to New Transformers	LF	$12.00	618	$7,416.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	61	$3,662.22	
Backfill Joint Trench	CY	$35.00	61	$2,136.30	
Power Subtotal				**$38,395.52**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	627	$6,614.85	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00	1	$1,000.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$7,614.85**	
Sub Total				**$61,541.61**	
General Conditions	12%			$7,384.99	
Bonds & Insurance	1.5%			$923.12	
Estimating Contingency	20%			$12,308.32	
Engineering Design Services	15%			$9,231.24	
Owner's Contingency	15%			$9,231.24	
Owner's Project Management	5%			$3,077.08	
GRAND TOTAL				**$103,697.61**	

Budget Range	
-20%	$82,958.09
+50%	$155,546.41

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City of Loveland
HIP Streets Block Estimate
Alley 9 - Backstage Alley (Cleveland Ave to Lincoln Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$150.00	1	$150.00	5% of subtotals
Traffic Control	ALLOW	$60.00	1	$60.00	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$30.00	1	$30.00	1% of subtotals
Construction Surveying	ALLOW	$75.00	1	$75.00	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$15,315.00**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Sub Total				**$18,315.00**	
General Conditions	12%			$2,197.80	
Bonds & Insurance	1.5%			$274.73	
Estimating Contingency	20%			$3,663.00	
Engineering Design Services	15%			$2,747.25	
Owner's Contingency	15%			$2,747.25	
Owner's Project Management	5%			$915.75	
GRAND TOTAL				**$30,860.78**	

Budget Range	
-20%	$24,688.62
+50%	$46,291.16

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City of Loveland
HIP Streets Block Estimate
Alley 10 - Between 4th St and 3rd St (Lincoln Ave to Jefferson Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$5,247.20	1	$5,247.20	5% of subtotals
Traffic Control	ALLOW	$2,098.88	1	$2,098.88	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,049.44	1	$1,049.44	1% of subtotals
Construction Surveying	ALLOW	$2,623.60	1	$2,623.60	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$26,019.12**	
Power					
Total Joint Trench Length	LF		**193**		
Total New UG Primary Length	LF		**600**		
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00	2	$1,500.00	
Existing Electrical Pole Removal	EA	$1,500.00	3	$4,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	4,340	$43,400.00	
Overhead Transformers Removal	EA	$500.00	3	$1,500.00	
Placement of Transformers at Grade	EA	$0.00	3	$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	600	$2,700.00	
UG Primary Conduit to New Transformers	LF	$12.00	600	$7,200.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	57	$3,431.11	
Backfill Joint Trench	CY	$35.00	57	$2,001.48	
Power Subtotal				**$90,982.59**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,039	$10,961.45	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$10,961.45**	
Sub Total				**$120,001.72**	
General Conditions	12%			$14,400.21	
Bonds & Insurance	1.5%			$1,800.03	
Estimating Contingency	20%			$24,000.34	
Engineering Design Services	15%			$18,000.26	
Owner's Contingency	15%			$18,000.26	
Owner's Project Management	5%			$6,000.09	
GRAND TOTAL				**$202,202.89**	

Budget Range	
-20%	$161,762.31
+50%	$303,304.34

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City of Loveland
HIP Streets Block Estimate
Alley 11 - Fiction Alley (Jefferson Ave to Washington Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$7,245.22	1	$7,245.22	5% of subtotals
Traffic Control	ALLOW	$2,898.09	1	$2,898.09	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$1,449.04	1	$1,449.04	1% of subtotals
Construction Surveying	ALLOW	$3,622.61	1	$3,622.61	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$30,214.96**	
Power					
Total Joint Trench Length	LF		**350**		
Total New UG Primary Length	LF		**1,050**		
Existing Electrical Light Pole Removal	EA	$750.00	3	$2,250.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	3	$22,500.00	
Pendant LED Street Lamps	EA	$750.00	47	$35,250.00	
Existing Electrical Pole Removal	EA	$1,500.00	4	$6,000.00	
Underground Secondary to Meters/Lights	LF	$10.00	3,165	$31,650.00	
Overhead Transformers Removal	EA	$500.00	3	$1,500.00	
Placement of Transformers at Grade	EA	$0.00	3	$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	1,050	$4,725.00	
UG Primary Conduit to New Transformers	LF	$12.00	1,050	$12,600.00	
Manhole for Joint Trench	EA	$4,500.00	1	$4,500.00	
Excavate Joint Trench	CY	$60.00	104	$6,222.22	
Backfill Joint Trench	CY	$35.00	104	$3,629.63	
Power Subtotal				**$130,826.85**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,050	$11,077.50	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$11,077.50**	
Sub Total				**$175,119.31**	
General Conditions	12%			$21,014.32	
Bonds & Insurance	1.5%			$2,626.79	
Estimating Contingency	20%			$35,023.86	
Engineering Design Services	15%			$26,267.90	
Owner's Contingency	15%			$26,267.90	
Owner's Project Management	5%			$8,755.97	
GRAND TOTAL				**$295,076.04**	

Budget Range	
-20%	$236,060.83
+50%	$442,614.05

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City of Loveland
HIP Streets Block Estimate
Alley 12 - Between 4th St and 3rd St (Mid-Block to Garfield Ave)

PREPARED BY: NRJ
ESTIMATE TYPE: CLASS 5

ITEM	UOM	UNIT COST	QTY	EXTENDED COST	NOTES
Construction					
Mobilization	LS	$3,978.94	1	$3,978.94	5% of subtotals
Traffic Control	ALLOW	$1,591.58	1	$1,591.58	2% of subtotals
Erosion Control/Street Sweeping	ALLOW	$795.79	1	$795.79	1% of subtotals
Construction Surveying	ALLOW	$1,989.47	1	$1,989.47	2.5% of subtotals
Landscape Restoration	ALLOW		1	$0.00	
Tree Protection	ALLOW		1	$0.00	
Protect Existing Communication Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Gas Lines	ALLOW	$5,000.00	1	$5,000.00	
Protect Existing Fiber	ALLOW	$5,000.00	1	$5,000.00	
Construction Subtotal				**$23,355.78**	
Power					
Total Joint Trench Length	LF				
Total New UG Primary Length	LF		**300**		
Existing Electrical Light Pole Removal	EA	$750.00	1	$750.00	
Place Fiberglass Electrical Light Poles	EA	$7,500.00	1	$7,500.00	
Pendant LED Street Lamps	EA	$750.00	2	$1,500.00	
Existing Electrical Pole Removal	EA	$1,500.00	5	$7,500.00	
Underground Secondary to Meters/Lights	LF	$10.00	1,800	$18,000.00	
Overhead Transformers Removal	EA	$500.00	1	$500.00	
Placement of Transformers at Grade	EA	$0.00	1	$0.00	
UG Primary Conductor to New Transformers	LF	$4.50	300	$1,350.00	
UG Primary Conduit to New Transformers	LF	$12.00	300	$3,600.00	
Manhole for Joint Trench	EA	$4,500.00	0	$0.00	
Excavate Joint Trench	CY	$60.00	178	$10,666.67	
Backfill Joint Trench	CY	$35.00	178	$6,222.22	
Power Subtotal				**$57,588.89**	
Traffic					
Traffic Pedestrian Pole Removal	EA	$0.00		$0.00	
Traffic Pedestrian Pole Placement - Aluminum	EA	$0.00		$0.00	
Traffic Pole Remove/Replace	EA	$350.00	5	$1,750.00	
Traffic Signs Remove/Replace	EA	$125.00	10	$1,250.00	
Signal Pole Lights Replacement	EA	$0.00		$0.00	
Traffic Subtotal				**$3,000.00**	
Surface Restoration					
Asphalt Restoration	SF	$10.55	1,800	$18,990.00	
Concrete Paving Restoration	SF	$15.65		$0.00	
Manhole or Inlet Grate Replacements	EA	$1,000.00		$0.00	
		$0.00		$0.00	
Surface Restoration Subtotal				**$18,990.00**	
Sub Total				**$102,934.67**	
General Conditions	12%			$12,352.16	
Bonds & Insurance	1.5%			$1,544.02	
Estimating Contingency	20%			$20,586.93	
Engineering Design Services	15%			$15,440.20	
Owner's Contingency	15%			$15,440.20	
Owner's Project Management	5%			$5,146.73	
GRAND TOTAL				**$173,444.92**	

Budget Range	
-20%	$138,755.94
+50%	$260,167.38

Appendix V

- Multi-Criterion Decision Analysis (MCDA) Tool
  - Full HIP Streets Block MCDA model
  - HIP Streets Block MCDA Summary Chart
  - Full HIP Streets Alley MCDA model
  - HIP Streets Block MCDA Summary Chart
  - MCDA for each block and alley with detail
  - HIP Street Block and Alley Group Weight Criteria Analysis

HIP Streets Infrastructure Assessment
Infrastructure Decision Making Model

	Step #1: Assign each group a weight, according to its importance. The higher weight should correspond to the most important infrastructure category. The Group Weights should add to 330 and be placed in the gray cells	**Step #2:** Assign each subcategory a criteria weight within the category. The cumulative sum of the subcriteria cannot exceed the weight of the group weight. The total value will turn red if this is not met.	**Step #3:** Provide a score from 1 to 5 for each item. 1 begin the lowest priority, 5 being the highest priority. To include multiple evaluators, add each score together for each category and take the average. The average value will be input into the spreadsheet for calculation. For definitions of each Rating, please see **MCDA Rating Definitions Table**.					**Step #4:** Scores will be automatically calculated based upon the Criteria weight and Rating. Scores are tabulated in the graph below and on the following tabs.				
			Rating					**Score**				
Criteria Categories	**Group Weight**	**Criteria Weight**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Block 1 - 6th Street (Railroad Ave to Cleveland Ave)	**3**	**3**						**0.3**	**0.3**	**0.2**	**0.1**	**0.2**
ADA		**0.7**	4	4	0	1	5	2.76	2.76	0	0.69	3.45
Water		**0.5**	2	5	5	1.5	2	1.08	2.7	2.7	0.81	1.08
Sanitary Sewer		**0.6**	0	0	0	0	0	0	0	0	0	0
Storm Water		**0.4**	4	2	3	1.5	2	1.44	0.72	1.08	0.54	0.72
Electrical		**0.4**	5	5	3	2	2	2.1	2.1	1.26	0.84	0.84
Traffic		**0.2**	0	0	3	3	5	0	0	0.45	0.45	0.75
Lighting		**0.2**	4	4	4	1	3	0.96	0.96	0.96	0.24	0.72
Block 2 - 5th Street (Railroad Ave to Cleveland Ave)	**8**	**8**						**1.3**	**1.6**	**0.8**	**0.8**	**1.7**
ADA		**1.8**	2	2	0	1	5	3.68	3.68	0	1.84	9.2
Water		**1.4**	2	5	3	1.5	3	2.88	7.2	4.32	2.16	4.32
Sanitary Sewer		**1.6**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1.0**	1	1	2	1.5	2	0.96	0.96	1.92	1.44	1.92
Electrical		**1.1**	5	5	2	2	2	5.6	5.6	2.24	2.24	2.24
Traffic		**0.4**	0	0	2	3	4	0	0	0.8	1.2	1.6
Lighting		**0.6**	4	4	2	1	4	2.56	2.56	1.28	0.64	2.56
Block 3 - 5th Street (Cleveland Ave to Lincoln Ave)	**12**	**12**						**2.2**	**3.0**	**1.5**	**1.7**	**4.0**
ADA		**2.8**	2	2	0	1	5	5.52	5.52	0	2.76	13.8
Water		**2.2**	1	5	1	1.5	4	2.16	10.8	2.16	3.24	8.64
Sanitary Sewer		**2.4**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1.4**	1	1	2	1.5	2	1.44	1.44	2.88	2.16	2.88
Electrical		**1.7**	3	3	2	2	2	5.04	5.04	3.36	3.36	3.36
Traffic		**0.6**	0	0	3	3	5	0	0	1.8	1.8	3
Lighting		**1.0**	4	2	2	1	2	3.84	1.92	1.92	0.96	1.92
Block 4 - 5th Street (Lincoln Ave to Jefferson Ave)	**15**	**15**						**4.0**	**5.5**	**2.7**	**2.7**	**6.0**
ADA		**3**	2	2	0	1	5	6.9	6.9	0	3.45	17.25
Water		**3**	1	5	1	1.5	4	2.7	13.5	2.7	4.05	10.8
Sanitary Sewer		**3**	0	0	0	0	0	0	0	0	0	0
Storm Water		**2**	2	3	3	1.5	1	3.6	5.4	5.4	2.7	1.8
Electrical		**2**	4	4	2	2	2	8.4	8.4	4.2	4.2	4.2
Traffic		**1**	0	0	4	3	5	0	0	3	2.25	3.75
Lighting		**1**	4	2	2	1	2	4.8	2.4	2.4	1.2	2.4

HIP Streets Infrastructure Assessment
Infrastructure Decision Making Model

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			Rating					**Score**				
Criteria Categories	**Group Weight**	**Criteria Weight**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Block 5 - 4th Street (Garfield Ave to Railroad Ave)	**9**	**9**						**1.8**	**2.3**	**1.5**	**0.8**	**2.2**
ADA		**2**	2	2	0	1	5	4.14	4.14	0	2.07	10.35
Water		**2**	2	5	4	1.5	3	3.24	8.1	6.48	2.43	4.86
Sanitary Sewer		**2**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1**	3	5	4	1.5	4	3.24	5.4	4.32	1.62	4.32
Electrical		**1**	5	5	3	2	2	6.3	6.3	3.78	2.52	2.52
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	4	3	3	1	4	2.88	2.16	2.16	0.72	2.88
Block 6 - 4th Street (Railroad Ave to Cleveland Ave)	**20**	**20**						**8.8**	**11.3**	**8.5**	**4.8**	**12.8**
ADA		**5**	2	2	0	1	5	9.2	9.2	0	4.6	23
Water		**4**	2	5	4	1.5	5	7.2	18	14.4	5.4	18
Sanitary Sewer		**4**	0	0	0	0	0	0	0	0	0	0
Storm Water		**2**	3	5	5	1.5	3	7.2	12	12	3.6	7.2
Electrical		**3**	5	5	3	2	2	14	14	8.4	5.6	5.6
Traffic		**1**	0	0	3	3	2	0	0	3	3	2
Lighting		**2**	4	2	3	1	5	6.4	3.2	4.8	1.6	8
Block 7 - 4th Street (Cleveland Ave to Lincoln Ave)	**21**	**21**						**9.3**	**10.0**	**7.6**	**5.2**	**11.2**
ADA		**5**	2	2	0	1	3	9.66	9.66	0	4.83	14.49
Water		**4**	2	5	5	1.5	5	7.56	18.9	18.9	5.67	18.9
Sanitary Sewer		**4**	0	0	0	0	0	0	0	0	0	0
Storm Water		**3**	3	1	2	1.5	2	7.56	2.52	5.04	3.78	5.04
Electrical		**3**	5	5	2	2	2	14.7	14.7	5.88	5.88	5.88
Traffic		**1**	0	0	3	3	2	0	0	3.15	3.15	2.1
Lighting		**2**	3	1	2	1	4	5.04	1.68	3.36	1.68	6.72
Block 8 - 4th Street (Lincoln Ave to Jefferson Ave)	**23**	**23**						**12.1**	**13.2**	**9.8**	**6.3**	**12.0**
ADA		**5**	2	2	0	1	3	10.58	10.58	0	5.29	15.87
Water		**4**	2	5	5	1.5	4	8.28	20.7	20.7	6.21	16.56
Sanitary Sewer		**5**	0	0	0	0	0	0	0	0	0	0
Storm Water		**3**	3	1	3	1.5	2	8.28	2.76	8.28	4.14	5.52
Electrical		**3**	5	5	2	2	2	16.1	16.1	6.44	6.44	6.44
Traffic		**1**	0	0	3	3	2	0	0	3.45	3.45	2.3
Lighting		**2**	5	4	2	1	3	9.2	7.36	3.68	1.84	5.52

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			Rating					**Score**				
Criteria Categories	**Group Weight**	**Criteria Weight**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Block 9 - 4th Street (Jefferson Ave to Washington Ave)	**12**	**12**						**3.3**	**4.3**	**2.2**	**1.5**	**3.5**
ADA		**3**	2	2	0	1	5	5.52	5.52	0	2.76	13.8
Water		**2**	2	5	3	1.5	3	4.32	10.8	6.48	3.24	6.48
Sanitary Sewer		**2**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1**	3	5	4	1.5	2	4.32	7.2	5.76	2.16	2.88
Electrical		**2**	5	5	2	2	2	8.4	8.4	3.36	3.36	3.36
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	5	4	3	1	3	4.8	3.84	2.88	0.96	2.88
Block 10 - 3rd Street (Garfield Ave to Railroad Ave)	**3**	**3**						**0.2**	**0.2**	**0.1**	**0.1**	**0.2**
ADA		**1**	3	3	0	1	4	2.07	2.07	0	0.69	2.76
Water		**1**	2	2	3	1.5	2	1.08	1.08	1.62	0.81	1.08
Sanitary Sewer		**1**	0	0	0	0	0	0	0	0	0	0
Storm Water		**0**	3	2	3	1.5	1	1.08	0.72	1.08	0.54	0.36
Electrical		**0**	2	2	2	2	2	0.84	0.84	0.84	0.84	0.84
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**0**	1	3	1	1	2	0.24	0.72	0.24	0.24	0.48
Block 11 - 3rd Street (Railroad Ave to Cleveland Ave)	**16**	**16**						**6.2**	**6.3**	**3.4**	**2.7**	**4.8**
ADA		**4**	3	3	0	1	5	11.04	11.04	0	3.68	18.4
Water		**3**	3	5	4	1.5	2	8.64	14.4	11.52	4.32	5.76
Sanitary Sewer		**3**	0	0	0	0	0	0	0	0	0	0
Storm Water		**2**	3	1	1	1.5	0	5.76	1.92	1.92	2.88	0
Electrical		**2**	3	3	3	2	2	6.72	6.72	6.72	4.48	4.48
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	5	4	1	1	1	6.4	5.12	1.28	1.28	1.28
Block 12 - 3rd Street (Lincoln Ave to Jefferson Ave)	**15**	**15**						**4.3**	**5.6**	**2.8**	**2.7**	**4.8**
ADA		**3**	1	1	0	1	5	3.45	3.45	0	3.45	17.25
Water		**3**	2	5	3	1.5	2	5.4	13.5	8.1	4.05	5.4
Sanitary Sewer		**3**	0	0	0	0	0	0	0	0	0	0
Storm Water		**2**	2	2	1	1.5	1	3.6	3.6	1.8	2.7	1.8
Electrical		**2**	5	5	2	2	2	10.5	10.5	4.2	4.2	4.2
Traffic		**1**	0	0	3	3	1	0	0	2.25	2.25	0.75
Lighting		**1**	5	5	2	1	2	6	6	2.4	1.2	2.4

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Criteria Categories	**Group Weight**	**Criteria Weight**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Block 13 - 3rd Street (Jefferson Ave to Washington Ave)	**6**	**6**						**0.8**	**1.0**	**0.4**	**0.3**	**0.9**
ADA		**1**	3	3	0	1	5	4.14	4.14	0	1.38	6.9
Water		**1**	2	5	3	1.5	3	2.16	5.4	3.24	1.62	3.24
Sanitary Sewer		**1**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1**	0	0	2	0	0	0	0	1.44	0	0
Electrical		**1**	5	5	1	2	2	4.2	4.2	0.84	1.68	1.68
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**0**	5	5	1	1	5	2.4	2.4	0.48	0.48	2.4
Block 14 - Railroad Ave (6th Street to 5th Street)	**6**	**6**						**0.5**	**0.7**	**0.3**	**0.3**	**0.6**
ADA		**1**	3	3	0	1	5	4.14	4.14	0	1.38	6.9
Water		**1**	2	5	3	1.5	1	2.16	5.4	3.24	1.62	1.08
Sanitary Sewer		**1**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1**	0	0	0	0	0	0	0	0	0	0
Electrical		**1**	1	1	1	2	2	0.84	0.84	0.84	1.68	1.68
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**0**	4	3	1	1	2	1.92	1.44	0.48	0.48	0.96
Block 15 - Railroad Ave (5th Street to 4th Street)	**17**	**17**						**6.6**	**9.6**	**3.1**	**3.4**	**5.7**
ADA		**4**	3	3	0	1	5	11.73	11.73	0	3.91	19.55
Water		**3**	2	5	3	1.5	1	6.12	15.3	9.18	4.59	3.06
Sanitary Sewer		**3**	2	5	1	1.5	1	6.8	17	3.4	5.1	3.4
Storm Water		**2**	0	0	1	0	0	0	0	2.04	0	0
Electrical		**2**	3	3	1	2	2	7.14	7.14	2.38	4.76	4.76
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	5	4	1	1	2	6.8	5.44	1.36	1.36	2.72
Block 16 - Railroad Ave (4th Street to 3rd Street)	**23**	**23**						**10.5**	**13.0**	**4.8**	**4.5**	**10.3**
ADA		**5**	3	3	0	1	5	15.87	15.87	0	5.29	26.45
Water		**4**	2	5	3	1.5	2	8.28	20.7	12.42	6.21	8.28
Sanitary Sewer		**5**	0	0	0	0	0	0	0	0	0	0
Storm Water		**3**	0	0	0	0	0	0	0	0	0	0
Electrical		**3**	5	5	2	2	2	16.1	16.1	6.44	6.44	6.44
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	3	2	1	1	2	5.52	3.68	1.84	1.84	3.68

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Criteria Categories	**Group Weight**	**Criteria Weight**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Public Health & Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Block 17 - Railroad Ave (3rd Street to 2nd Street)	**8**	**8**						**1.8**	**1.5**	**1.1**	**0.7**	**1.0**
ADA		**2**	4	4	0	1	4	7.36	7.36	0	1.84	7.36
Water		**1**	2	5	3	1.5	1	2.88	7.2	4.32	2.16	1.44
Sanitary Sewer		**2**	5	1	5	1.5	1	8	1.6	8	2.4	1.6
Storm Water		**1**	0	0	0	0	0	0	0	0	0	0
Electrical		**1**	1	1	1	2	1	1.12	1.12	1.12	2.24	1.12
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	4	2	1	1	2	2.56	1.28	0.64	0.64	1.28
Block 18 - Jefferson Ave (5th Street to 4th Street)	**15**	**15**						**5.0**	**6.5**	**1.4**	**2.3**	**4.7**
ADA		**3**	4	4	0	1	5	13.8	13.8	0	3.45	17.25
Water		**3**	1	5	1	1.5	1	2.7	13.5	2.7	4.05	2.7
Sanitary Sewer		**3**	0	0	0	0	0	0	0	0	0	0
Storm Water		**2**	2	3	2	1.5	2	3.6	5.4	3.6	2.7	3.6
Electrical		**2**	4	4	1	2	2	8.4	8.4	2.1	4.2	4.2
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	4	2	1	1	3	4.8	2.4	1.2	1.2	3.6
Block 19 - Jefferson Ave (4th Street to 3rd Street)	**7**	**7**						**1.0**	**1.2**	**0.4**	**0.5**	**1.2**
ADA		**2**	2	2	0	1	5	3.22	3.22	0	1.61	8.05
Water		**1**	1	5	1	1.5	2	1.26	6.3	1.26	1.89	2.52
Sanitary Sewer		**1**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1**	3	1	3	1.5	3	2.52	0.84	2.52	1.26	2.52
Electrical		**1**	5	5	1	2	2	4.9	4.9	0.98	1.96	1.96
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	4	4	1	1	3	2.24	2.24	0.56	0.56	1.68
Block 20 - Cleveland Ave (6th Street to 5th Street)	**11**	**11**						**2.1**	**1.8**	**1.0**	**0.6**	**0.9**
ADA		**3**	0	0	0	0	0	0	0	0	0	0
Water		**2**	2	5	2	1.5	2	3.96	9.9	3.96	2.97	3.96
Sanitary Sewer		**2**	0	0	0	0	0	0	0	0	0	0
Storm Water		**1**	3	5	4	1.5	3	3.96	6.6	5.28	1.98	3.96
Electrical		**2**	5	5	2	2	2	7.7	7.7	3.08	3.08	3.08
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	4	2	2	1	2	3.52	1.76	1.76	0.88	1.76

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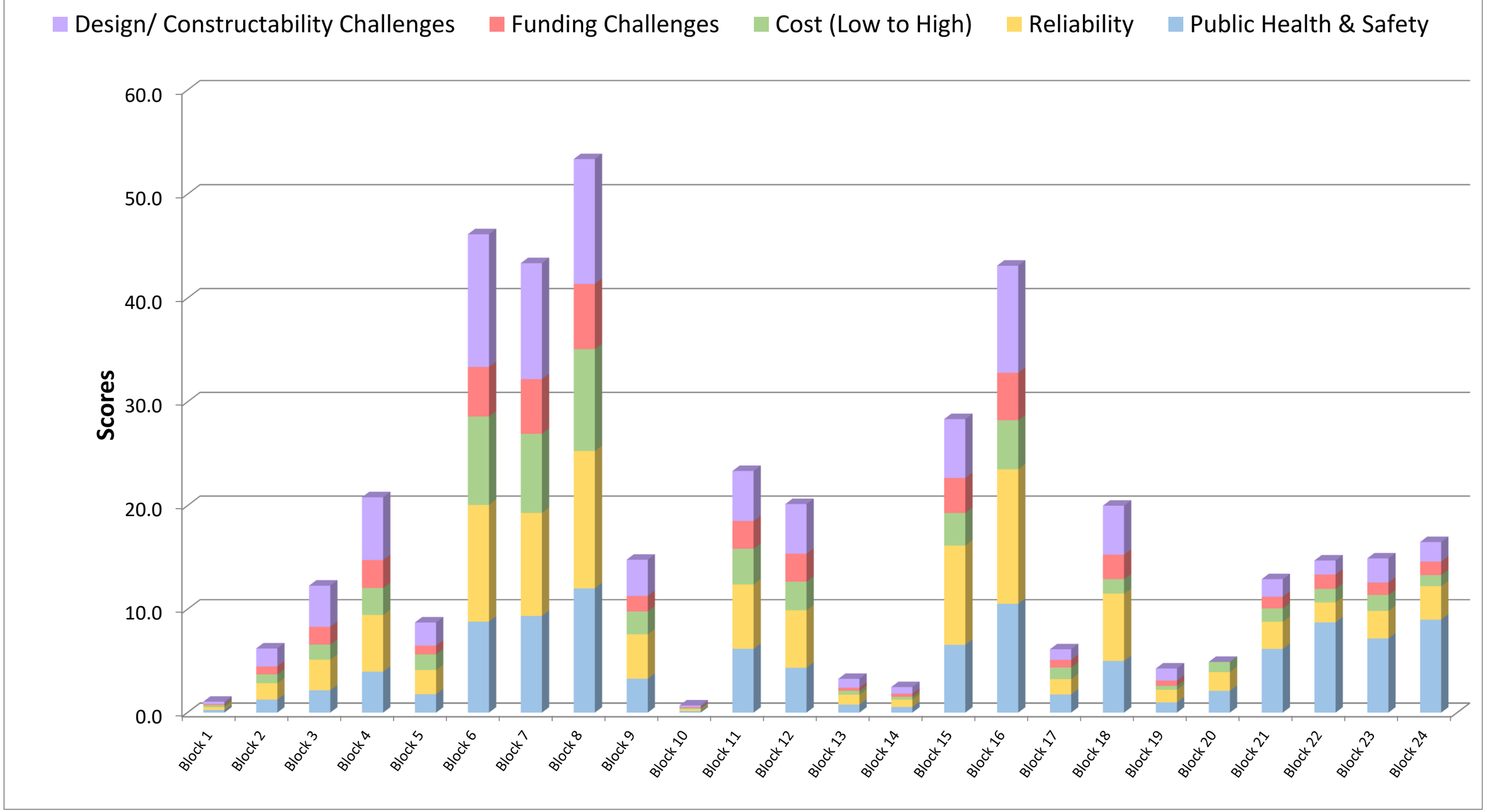
Block 21 - Cleveland Ave (5th Street to 4th Street)	**20**	**20**						**6.2**	**2.6**	**1.3**	**1.1**	**1.7**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	2	5	2	1.5	2	7.2	18	7.2	5.4	7.2
Sanitary Sewer		**4**	0	0	0	0	0	0	0	0	0	0
Storm Water		**2**	2	1	1	1.5	3	4.8	2.4	2.4	3.6	7.2
Electrical		**3**	5	5	2	2	2	14	14	5.6	5.6	5.6
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	3	2	2	1	3	4.8	3.2	3.2	1.6	4.8
Block 22 - Cleveland Ave (4th Street to 3rd Street)	**21**	**21**						**8.7**	**1.9**	**1.4**	**1.4**	**1.4**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	2	1	2	1.5	2	7.56	3.78	7.56	5.67	7.56
Sanitary Sewer		**4**	3	1	1	1.5	1	12.6	4.2	4.2	6.3	4.2
Storm Water		**3**	0	0	0	0	0	0	0	0	0	0
Electrical		**3**	5	5	2	2	2	14.7	14.7	5.88	5.88	5.88
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	4	3	1	1	1	6.72	5.04	1.68	1.68	1.68
Block 23 - Lincoln Ave (5th Street to 4th Street)	**22**	**22**						**7.2**	**2.7**	**1.5**	**1.2**	**2.3**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	2	5	3	1.5	3	7.92	19.8	11.88	5.94	11.88
Sanitary Sewer		**4**	0	0	0	0	0	0	0	0	0	0
Storm Water		**3**	2	1	2	1.5	3	5.28	2.64	5.28	3.96	7.92
Electrical		**3**	4	4	1	2	2	12.32	12.32	3.08	6.16	6.16
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	4	2	1	1	4	7.04	3.52	1.76	1.76	7.04
Block 24 - Lincoln Ave (4th Street to 3rd Street)	**23**	**23**						**9.0**	**3.3**	**1.1**	**1.3**	**1.9**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	2	5	1	1.5	2	8.28	20.7	4.14	6.21	8.28
Sanitary Sewer		**5**	0	0	0	0	0	0	0	0	0	0
Storm Water		**3**	2	1	1	1.5	3	5.52	2.76	2.76	4.14	8.28
Electrical		**3**	5	5	2	2	2	16	16.1	6.44	6.44	6.44
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	5	4	1	1	2	9.2	7.36	1.84	1.84	3.68
Cumulative Weights (Must Equal 336)	**336**											
Weight Remaining to Distribute (Must be Equal to 0 when complete)	**0**											

HIP Streets Infrastructure Assessment MCDA



HIP Alleys Infrastructure Assessment
Alley Infrastructure Decision Making Model

	Step #1: Assign each group a weight, according to its importance. The higher weight should correspond to the most important infrastructure category. The Group Weights should add to 171 and be placed in the gray cells	**Step #2:** Assign each subcategory a criteria weight within the category. The cumulative sum of the subcriteria cannot exceed the weight of the group weight. The total value will turn red if this is not met.	**Step #3:** Provide a score from 1 to 5 for each item. 1 begin the lowest priority, 5 being the highest priority. To include multiple evaluators, add each score together for each category and take the average. The average value will be input into the spreadsheet for calculation. For definitions of each Rating, please see MCDA Rating Definitions Table.					**Step #4:** Scores will be automatically calculated based upon the Criteria weight and Rating. Scores are tabulated in the graph below and on the following tabs.				
			Rating					**Score**				
Criteria Categories	**Group Weight**	**Criteria Weight**	**Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Alley 1 - Between Railroad Ave and Cleveland Ave (6th St to Ar	**7**	**7**						**0.3**	**0.5**	**0.2**	**0.4**	**0.4**
ADA		**2**	0	0	0	0	0	0	0	0	0	0
Water		**1**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**1**	1	1	0	1.5	1	1.4	1.4	0	2.1	1.4
Storm Water		**1**	3	5	2	1.5	2	2.52	4.2	1.68	1.26	1.68
Electrical		**1**	1	1	1	2	2	0.98	0.98	0.98	1.96	1.96
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0
Alley 2 - Artist Alley (Railroad Ave to Cleveland Ave)	**7**	**7**						**0.6**	**0.5**	**0.3**	**0.4**	**0.6**
ADA		**2**	0	0	0	0	0	0	0	0	0	0
Water		**1**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**1**	2	1	0	1.5	4	2.8	1.4	0	2.1	5.6
Storm Water		**1**	3	4	1	1.5	2	2.52	3.36	0.84	1.26	1.68
Electrical		**1**	3	3	4	2	2	2.94	2.94	3.92	1.96	1.96
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0
Alley 3 - Artist Alley (Cleveland Ave to Lincoln Ave)	**11**	**11**						**1.0**	**0.8**	**0.2**	**0.9**	**1.1**
ADA		**3**	0	0	0	0	0	0	0	0	0	0
Water		**2**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**2**	2	1	0	1.5	3	4.4	2.2	0	3.3	6.6
Storm Water		**1**	0	0	0	1.5	0	0	0	0	1.98	0
Electrical		**2**	3	3	1	2	2	4.62	4.62	1.54	3.08	3.08
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0
Alley 4 - Sweetheart Alley (Railroad Ave to Cleveland Ave)	**16**	**16**						**3.6**	**1.5**	**1.0**	**1.9**	**3.8**
ADA		**4**	0	0	0	0	0	0	0	0	0	0
Water		**3**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**3**	4	1	0	1.5	5	12.8	3.2	0	4.8	16
Storm Water		**2**	4	2	2	1.5	3	7.68	3.84	3.84	2.88	5.76
Electrical		**2**	1	1	1	2	1	2.24	2.24	2.24	4.48	2.24
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0

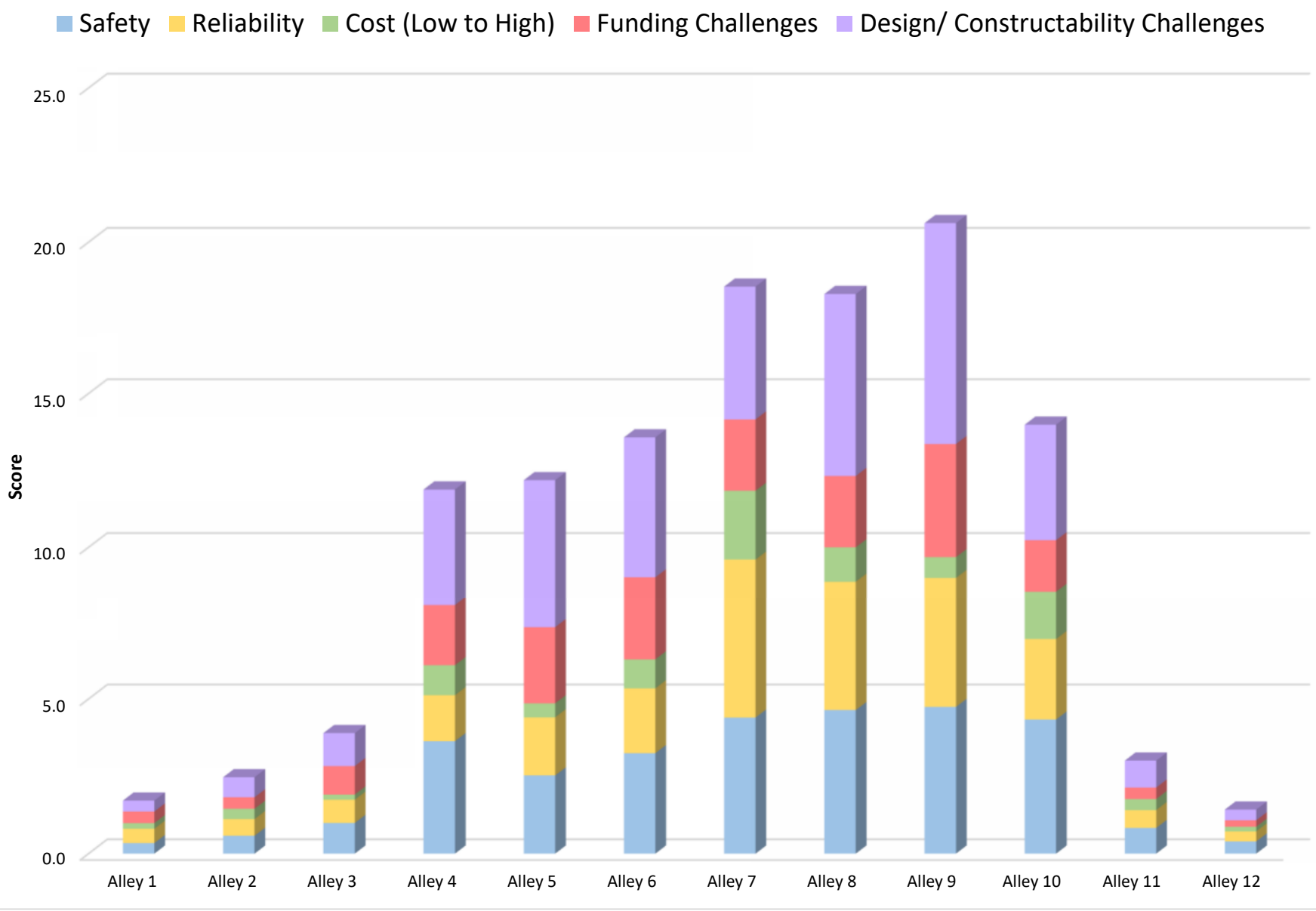
HIP Alleys Infrastructure Assessment
Alley Infrastructure Decision Making Model

	Step #1: Assign each group a weight, according to its importance. The higher weight should correspond to the most important infrastructure category. The Group Weights should add to 171 and be placed in the gray cells	**Step #2:** Assign each subcategory a criteria weight within the category. The cumulative sum of the subcriteria cannot exceed the weight of the group weight. The total value will turn red if this is not met.	**Step #3:** Provide a score from 1 to 5 for each item. 1 begin the lowest priority, 5 being the highest priority. To include multiple evaluators, add each score together for each category and take the average. The average value will be input into the spreadsheet for calculation. For definitions of each Rating, please see MCDA Rating Definitions Table.					**Step #4:** Scores will be automatically calculated based upon the Criteria weight and Rating. Scores are tabulated in the graph below and on the following tabs.				
			Rating					**Score**				
Criteria Categories	**Group Weight**	**Criteria Weight**	**Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Alley 5 - Sweetheart Alley (Cleveland Ave to Lincoln Ave)	**18**	**18**						**2.5**	**1.9**	**0.5**	**2.5**	**4.9**
ADA		**4**	0	0	0	0	0	0	0	0	0	0
Water		**3**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**4**	2	1	0	1.5	5	7.2	3.6	0	5.4	18
Storm Water		**2**	2	2	0	1.5	3	4.32	4.32	0	3.24	6.48
Electrical		**3**	1	1	1	2	1	2.52	2.52	2.52	5.04	2.52
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0
Alley 6 - Sweetheart Alley (Lincoln Ave to Jefferson Ave)	**19**	**19**						**3.2**	**2.1**	**0.9**	**2.7**	**4.5**
ADA		**4**	0	0	0	0	0	0	0	0	0	0
Water		**3**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**4**	2	1	0	1.5	5	7.6	3.8	0	5.7	19
Storm Water		**2**	3	2	1	1.5	1	6.84	4.56	2.28	3.42	2.28
Electrical		**3**	1	1	1	2	1	2.66	2.66	2.66	5.32	2.66
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	0	0	0	0	0	0	0	0	0	0
Alley 7 - Painters Alley (3rd St to 4th St)	**20**	**20**						**4.4**	**5.2**	**2.2**	**2.3**	**4.4**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**4**	2	3	0	1.5	2	8	12	0	6	8
Storm Water		**2**	0	0	0	0	0	0	0	0	0	0
Electrical		**3**	5	5	4	2	5	14	14	11.2	5.6	14
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	0	0	0	0	0	0	0	0	0	0
Alley 8 - Between 4th St and 3rd St (Painters Alley to Clevelanc	**20**	**20**						**4.6**	**4.2**	**1.1**	**2.3**	**6.0**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**4**	3	2.5	0	1.5	4	12	10	0	6	16
Storm Water		**2**	0	0	0	0	0	0	0	0	0	0
Electrical		**3**	4	4	2	2	5	11.2	11.2	5.6	5.6	14
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	0	0	0	0	0	0	0	0	0	0

HIP Alleys Infrastructure Assessment
Alley Infrastructure Decision Making Model

	Step #1: Assign each group a weight, according to its importance. The higher weight should correspond to the most important infrastructure category. The Group Weights should add to 171 and be placed in the gray cells	**Step #2:** Assign each subcategory a criteria weight within the category. The cumulative sum of the subcriteria cannot exceed the weight of the group weight. The total value will turn red if this is not met.	**Step #3:** Provide a score from 1 to 5 for each item. 1 begin the lowest priority, 5 being the highest priority. To include multiple evaluators, add each score together for each category and take the average. The average value will be input into the spreadsheet for calculation. For definitions of each Rating, please see MCDA Rating Definitions Table.					**Step #4:** Scores will be automatically calculated based upon the Criteria weight and Rating. Scores are tabulated in the graph below and on the following tabs.				
			Rating					**Score**				
Criteria Categories	**Group Weight**	**Criteria Weight**	**Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**	**Safety**	**Reliability**	**Cost (Low to High)**	**Funding Challenges**	**Design/ Constructability Challenges**
Alley 9 - Backstage Alley (Cleveland Ave to Lincoln Ave)	**22**	**22**						**4.7**	**4.3**	**0.7**	**3.7**	**7.3**
ADA		**5**	0	0	0	0	0	0	0	0	0	0
Water		**4**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**4**	3	2.5	0	1.5	5	13.2	11	0	6.6	22
Storm Water		**3**	2	2	0	1.5	3	5.28	5.28	0	3.96	7.92
Electrical		**3**	1	1	1	2	1	3.08	3.08	3.08	6.16	3.08
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**2**	0	0	0	0	0	0	0	0	0	0
Alley 10 - Between 4th St and 3rd St (Lincoln Ave to Jefferson A	**17**	**17**						**4.3**	**2.6**	**1.6**	**1.7**	**3.8**
ADA		**4**	0	0	0	0	0	0	0	0	0	0
Water		**3**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**3**	4	1	0	1.5	3	13.6	3.4	0	5.1	10.2
Storm Water		**2**	0	0	0	0	0	0	0	0	0	0
Electrical		**2**	5	5	4	2	5	11.9	11.9	9.52	4.76	11.9
Traffic		**1**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0
Alley 11 - Fiction Alley (Jefferson Ave to Washington Ave)	**8**	**8**						**0.8**	**0.6**	**0.4**	**0.4**	**0.9**
ADA		**2**	0	0	0	0	0	0	0	0	0	0
Water		**1**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**2**	3	1	0	1.5	4	4.8	1.6	0	2.4	6.4
Storm Water		**1**	0	0	0	0	0	0	0	0	0	0
Electrical		**1**	5	5	4	2	4	5.6	5.6	4.48	2.24	4.48
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**1**	0	0	0	0	0	0	0	0	0	0
Alley 12 Between 4th St and 3rd St (Mid-Block to Garfield Ave)	**6**	**6**						**0.4**	**0.3**	**0.2**	**0.2**	**0.3**
ADA		**1**	0	0	0	0	0	0	0	0	0	0
Water		**1**	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer		**1**	2	1	0	1.5	2	2.4	1.2	0	1.8	2.4
Storm Water		**1**	0	0	0	0	0	0	0	0	0	0
Electrical		**1**	5	5	3	2	4	4.2	4.2	2.52	1.68	3.36
Traffic		**0**	0	0	0	0	0	0	0	0	0	0
Lighting		**0**	0	0	0	0	0	0	0	0	0	0
Cumulative Weights (Must Equal 171)	**171**											
Weight Remaining to Distribute (Must be Equal to 0 when complete)	**0**											

HIP Streets Infrastructure Assesment - Alleys



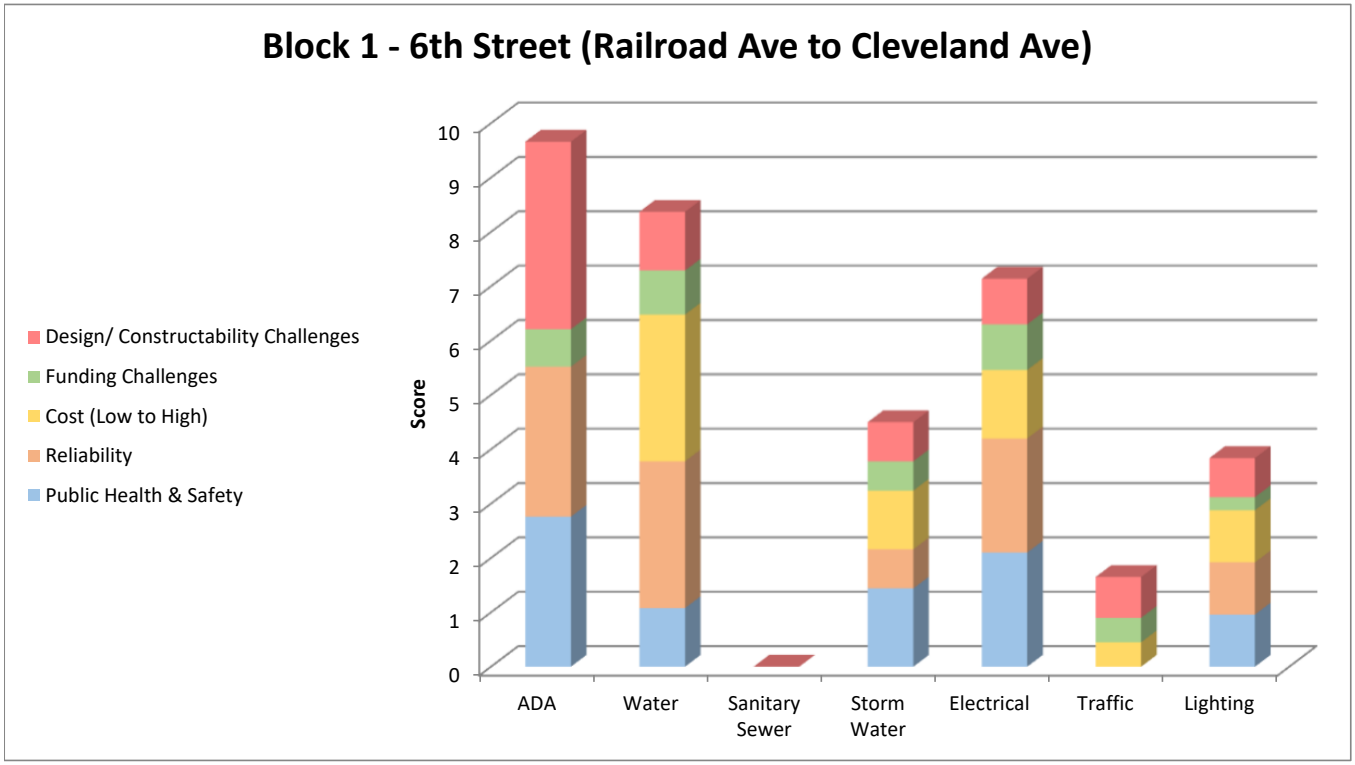
HIP Streets Infrastructure Assessment

Block 1 Decision Making Model

6th Street (Railroad Ave to Cleveland Ave)

Overall Block Priority - W

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 1 - 6th Street (Railroad Ave to Cleveland Ave)	**0.2502**	**0.2772**	**0.1935**	**0.1071**	**0.2268**
ADA	2.76	2.76	0	0.69	3.45
Water	1.08	2.7	2.7	0.81	1.08
Sanitary Sewer	0	0	0	0	0
Storm Water	1.44	0.72	1.08	0.54	0.72
Electrical	2.1	2.1	1.26	0.84	0.84
Traffic	0	0	0.45	0.45	0.75
Lighting	0.96	0.96	0.96	0.24	0.72



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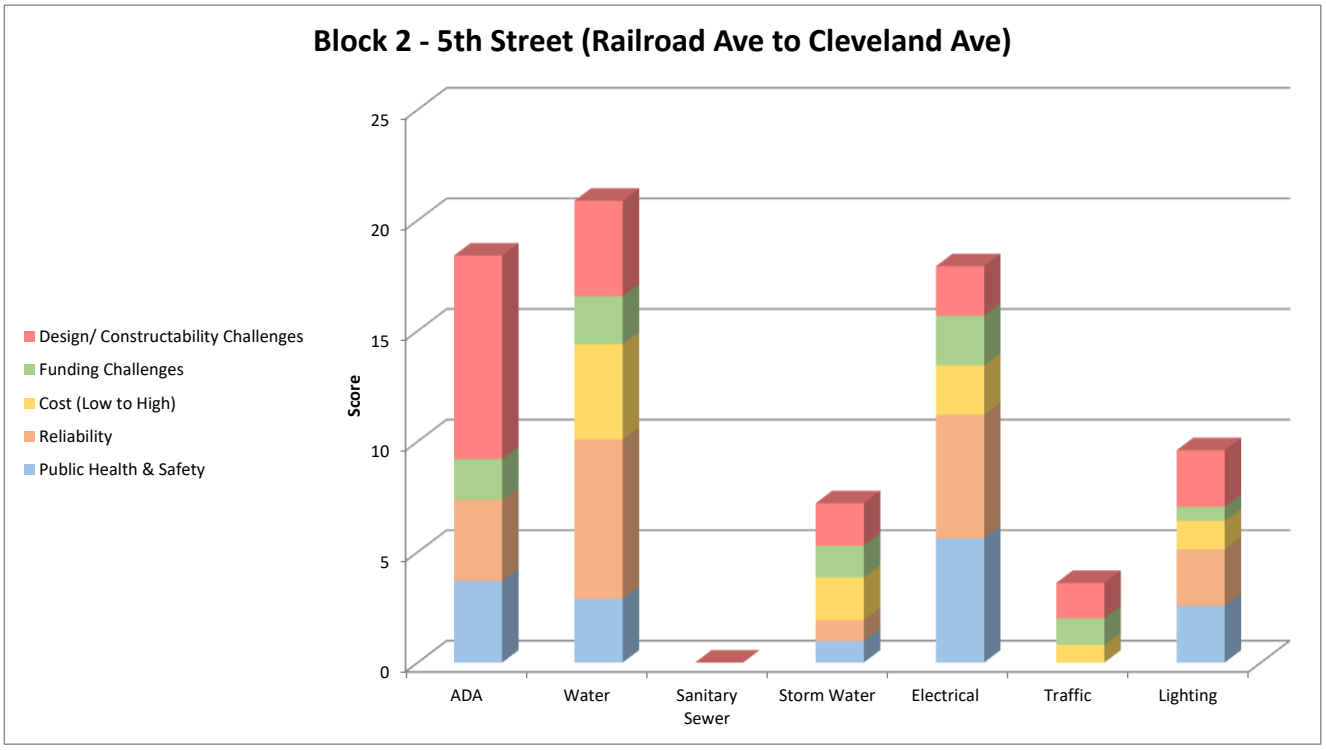
HIP Streets Infrastructure Assessment

Block 2 Decision Making Model

5th Street (Railroad Ave to Cleveland Ave)
Overall Block Priority - Q

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 2 - 5th Street (Railroad Ave to Cleveland Ave)	**1.2544**	**1.6**	**0.8448**	**0.7616**	**1.7472**
ADA	3.68	3.68	0	1.84	9.2
Water	2.88	7.2	4.32	2.16	4.32
Sanitary Sewer	0	0	0	0	0
Storm Water	0.96	0.96	1.92	1.44	1.92
Electrical	5.6	5.6	2.24	2.24	2.24
Traffic	0	0	0.8	1.2	1.6
Lighting	2.56	2.56	1.28	0.64	2.56



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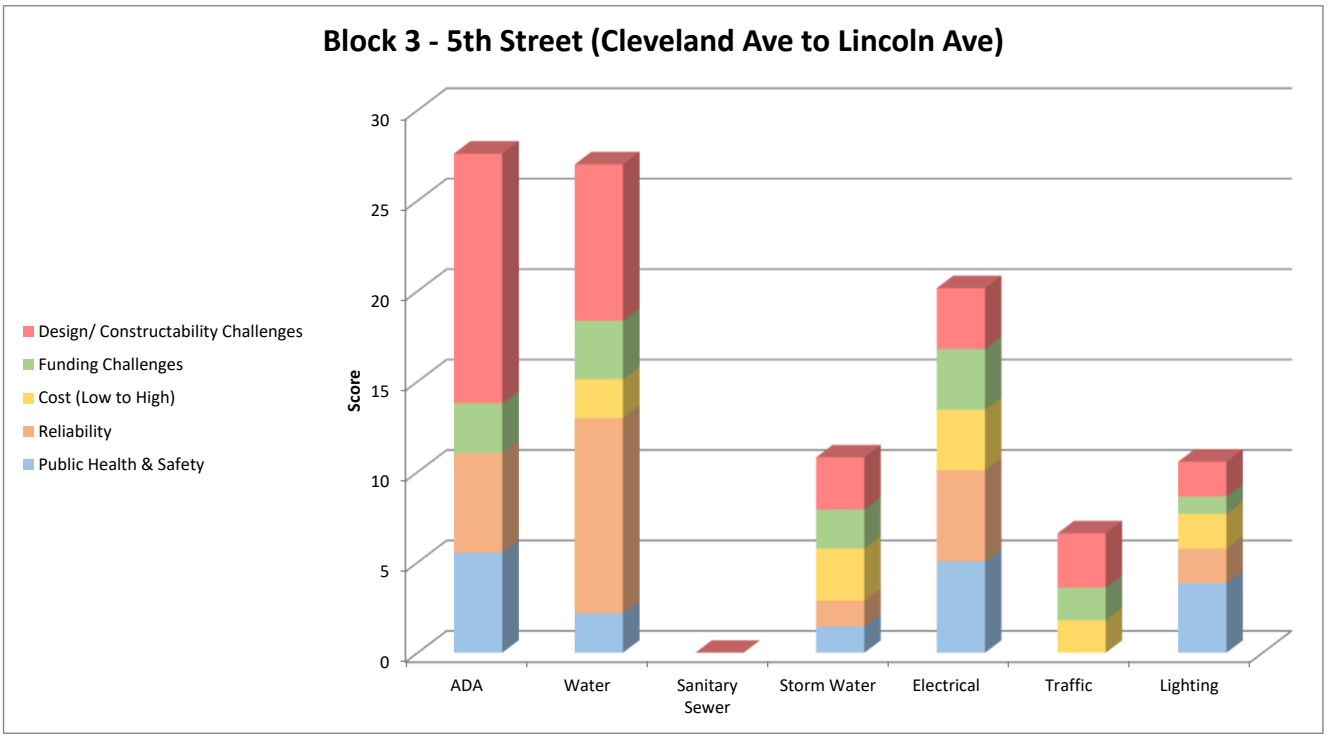
HIP Streets Infrastructure Assessment

Block 3 Decision Making Model

5th Street (Cleveland Ave to Lincoln Ave)
Overall Block Priority - O

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 3 - 5th Street (Cleveland Ave to Lincoln Ave)	**2.16**	**2.9664**	**1.4544**	**1.7136**	**4.032**
ADA	5.52	5.52	0	2.76	13.8
Water	2.16	10.8	2.16	3.24	8.64
Sanitary Sewer	0	0	0	0	0
Storm Water	1.44	1.44	2.88	2.16	2.88
Electrical	5.04	5.04	3.36	3.36	3.36
Traffic	0	0	1.8	1.8	3
Lighting	3.84	1.92	1.92	0.96	1.92



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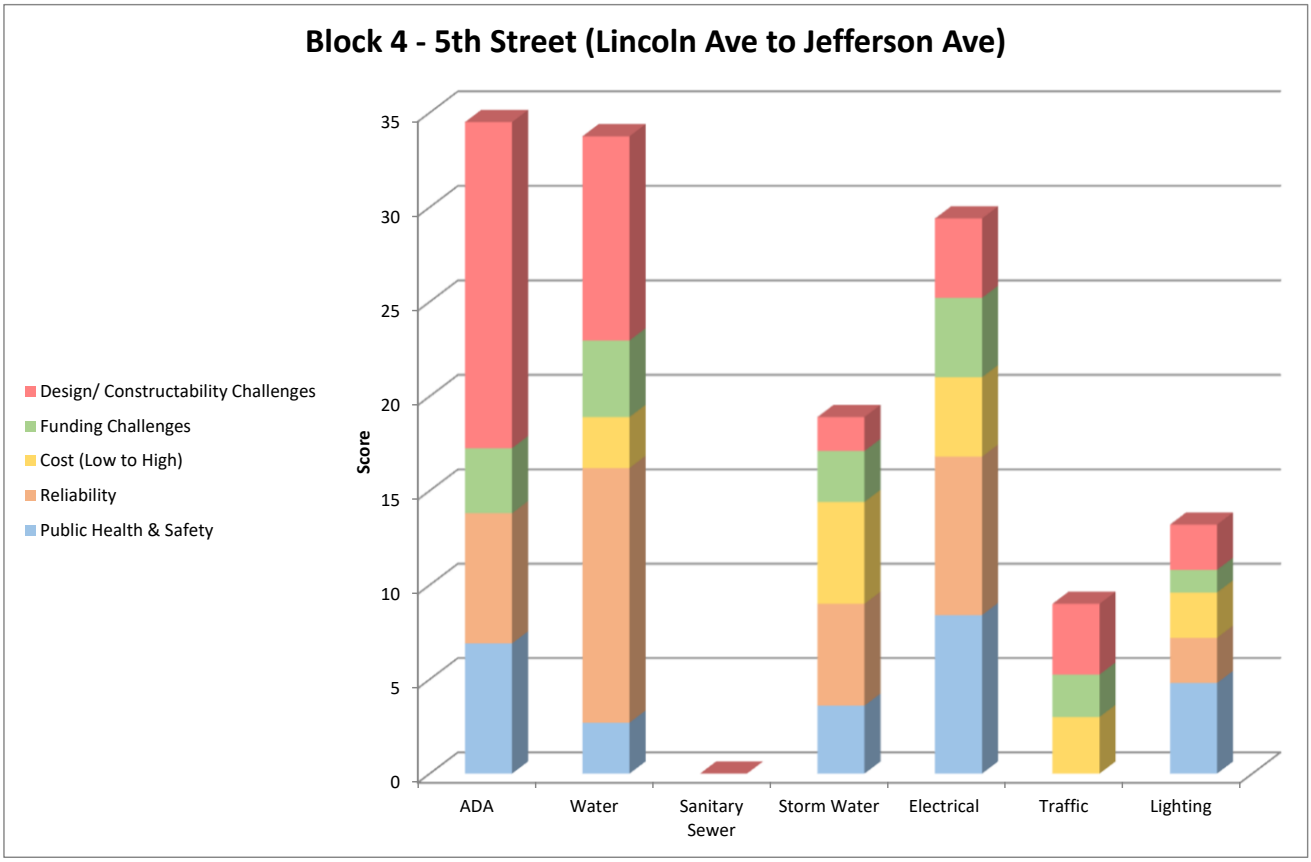
HIP Streets Infrastructure Assessment

Block 4 Decision Making Model

5th Street (Lincoln Ave to Jefferson Ave)

Overall Block Priority - G

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 4 - 5th Street (Lincoln Ave to Jefferson Ave)	**3.96**	**5.49**	**2.655**	**2.6775**	**6.03**
ADA	6.9	6.9	0	3.45	17.25
Water	2.7	13.5	2.7	4.05	10.8
Sanitary Sewer	0	0	0	0	0
Storm Water	3.6	5.4	5.4	2.7	1.8
Electrical	8.4	8.4	4.2	4.2	4.2
Traffic	0	0	3	2.25	3.75
Lighting	4.8	2.4	2.4	1.2	2.4



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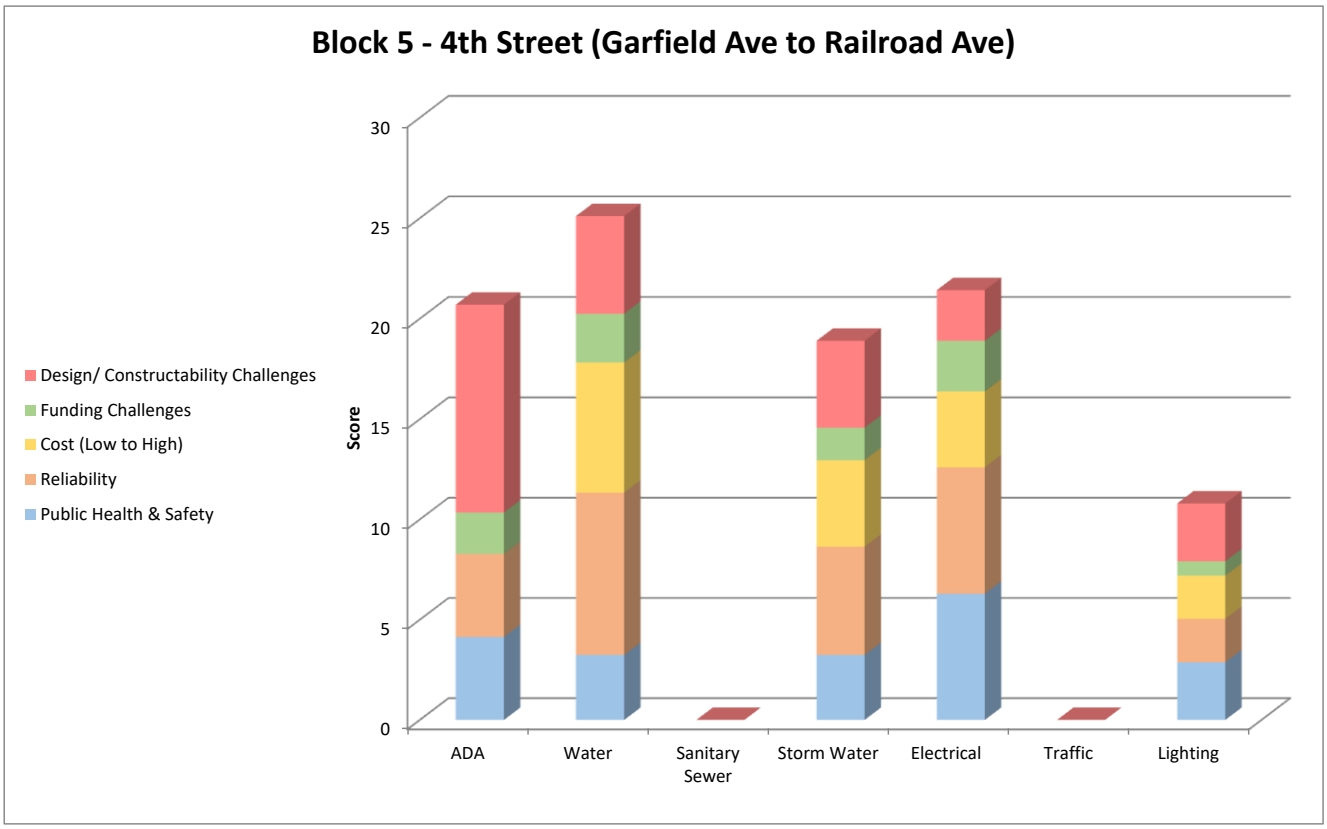
HIP Streets Infrastructure Assessment

Block 5 Decision Making Model

4th Street (Garfield Ave to Railroad Ave)

Overall Block Priority - P

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 5 - 4th Street (Garfield Ave to Railroad Ave)	**1.782**	**2.349**	**1.5066**	**0.8424**	**2.2437**
ADA	4.14	4.14	0	2.07	10.35
Water	3.24	8.1	6.48	2.43	4.86
Sanitary Sewer	0	0	0	0	0
Storm Water	3.24	5.4	4.32	1.62	4.32
Electrical	6.3	6.3	3.78	2.52	2.52
Traffic	0	0	0	0	0
Lighting	2.88	2.16	2.16	0.72	2.88



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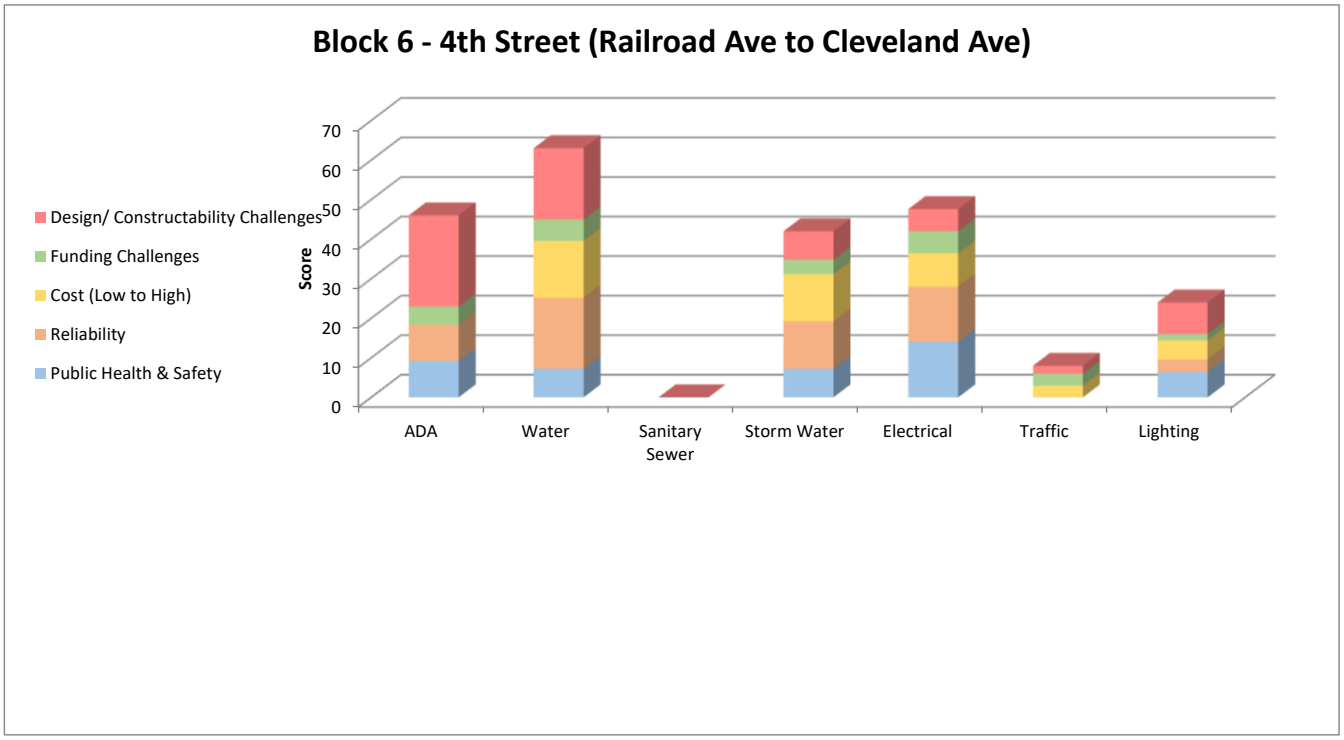
HIP Streets Infrastructure Assessment

Block 6 Decision Making Model

4th Street (Railroad Ave to Cleveland Ave)

Overall Block Priority - B

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 6 - 4th Street (Railroad Ave to Cleveland Ave)	**8.8**	**11.28**	**8.52**	**4.76**	**12.76**
ADA	9.2	9.2	0	4.6	23
Water	7.2	18	14.4	5.4	18
Sanitary Sewer	0	0	0	0	0
Storm Water	7.2	12	12	3.6	7.2
Electrical	14	14	8.4	5.6	5.6
Traffic	0	0	3	3	2
Lighting	6.4	3.2	4.8	1.6	8



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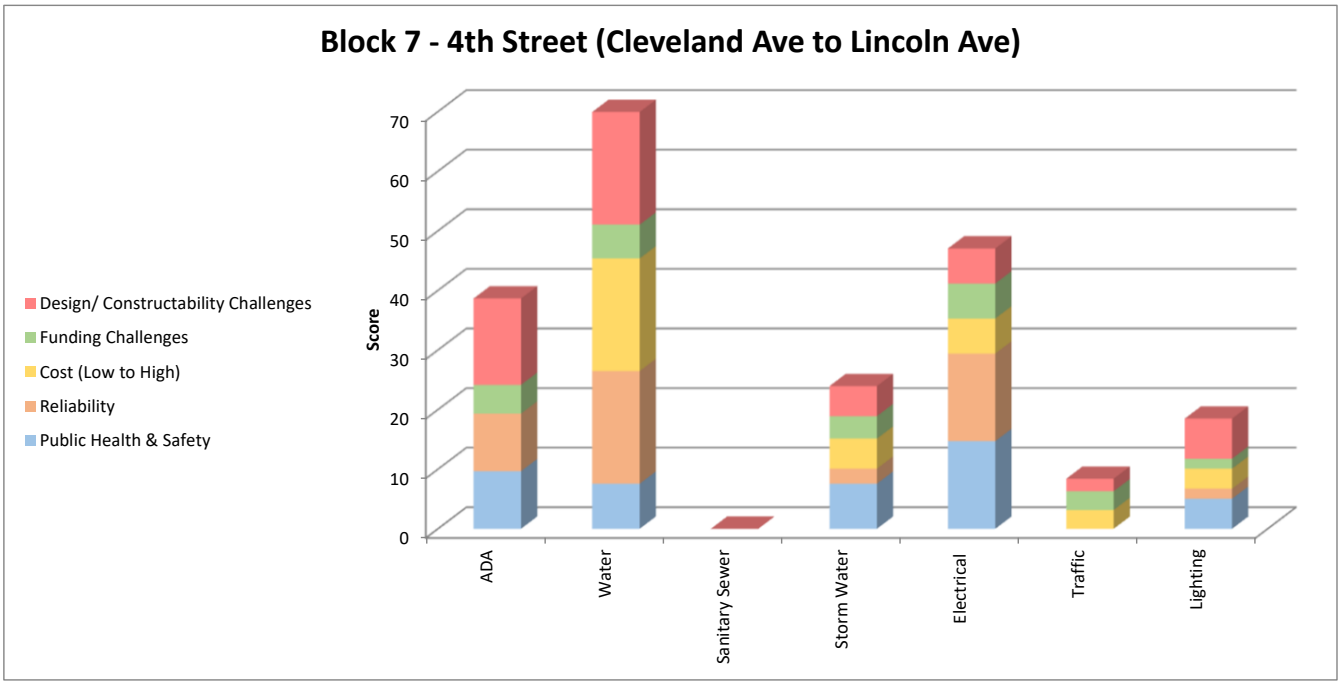
HIP Streets Infrastructure Assessment

Block 7 Decision Making Model

4th Street (Cleveland Ave to Lincoln Ave)

Overall Block Priority - C

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 7 - 4th Street (Cleveland Ave to Lincoln Ave)	**9.3492**	**9.9666**	**7.6293**	**5.2479**	**11.1573**
ADA	9.66	9.66	0	4.83	14.49
Water	7.56	18.9	18.9	5.67	18.9
Sanitary Sewer	0	0	0	0	0
Storm Water	7.56	2.52	5.04	3.78	5.04
Electrical	14.7	14.7	5.88	5.88	5.88
Traffic	0	0	3.15	3.15	2.1
Lighting	5.04	1.68	3.36	1.68	6.72



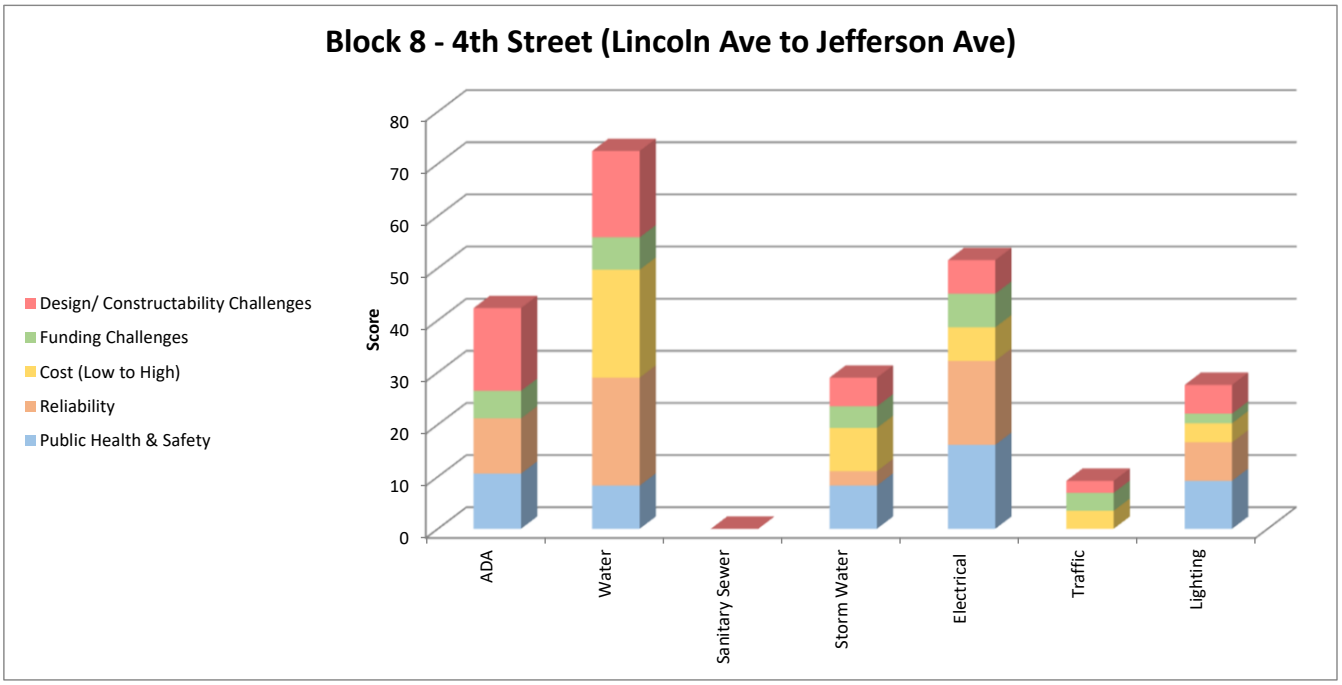
HIP Streets Infrastructure Assessment

Block 8 Decision Making Model

4th Street (Lincoln Ave to Jefferson Ave)

Overall Block Priority - A

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 8 - 4th Street (Lincoln Ave to Jefferson Ave)	**12.0612**	**13.225**	**9.7865**	**6.2951**	**12.0083**
ADA	10.58	10.58	0	5.29	15.87
Water	8.28	20.7	20.7	6.21	16.56
Sanitary Sewer	0	0	0	0	0
Storm Water	8.28	2.76	8.28	4.14	5.52
Electrical	16.1	16.1	6.44	6.44	6.44
Traffic	0	0	3.45	3.45	2.3
Lighting	9.2	7.36	3.68	1.84	5.52



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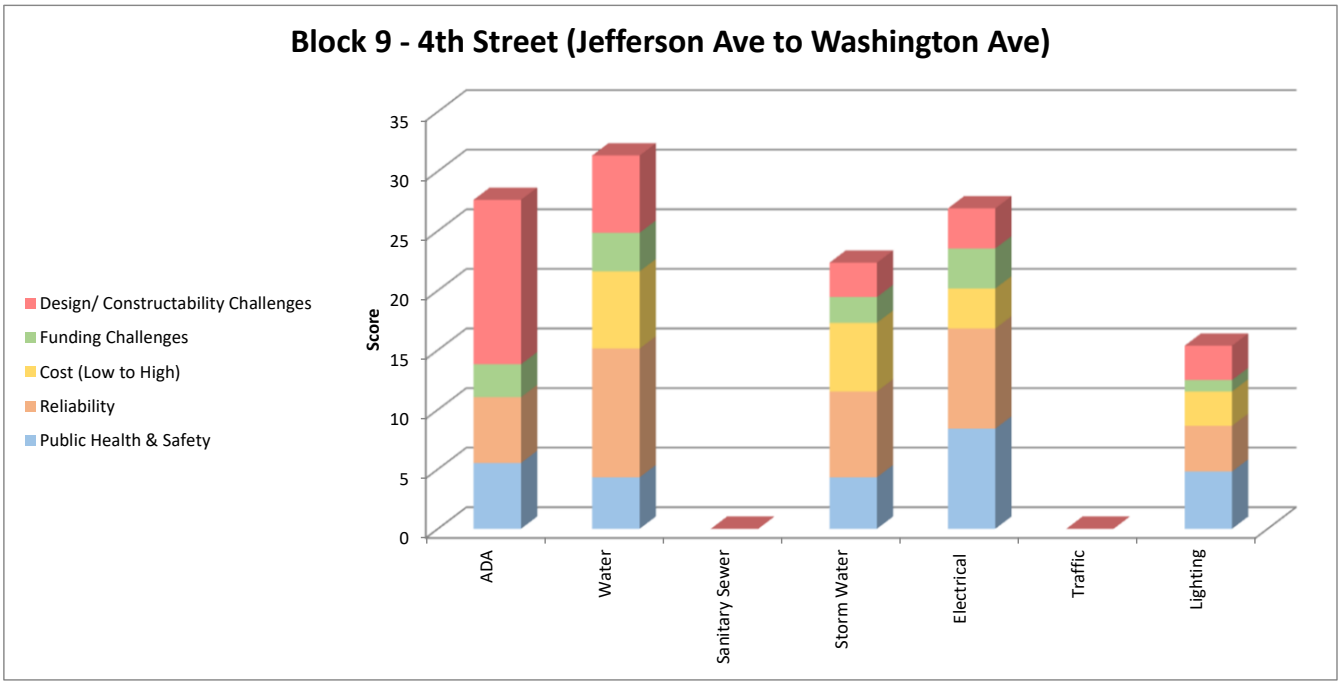
HIP Streets Infrastructure Assessment

Block 9 Decision Making Model

4th Street (Jefferson Ave to Washington Ave)

Overall Block Priority - L

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 9 - 4th Street (Jefferson Ave to Washington Ave)	**3.2832**	**4.2912**	**2.2176**	**1.4976**	**3.528**
ADA	5.52	5.52	0	2.76	13.8
Water	4.32	10.8	6.48	3.24	6.48
Sanitary Sewer	0	0	0	0	0
Storm Water	4.32	7.2	5.76	2.16	2.88
Electrical	8.4	8.4	3.36	3.36	3.36
Traffic	0	0	0	0	0
Lighting	4.8	3.84	2.88	0.96	2.88



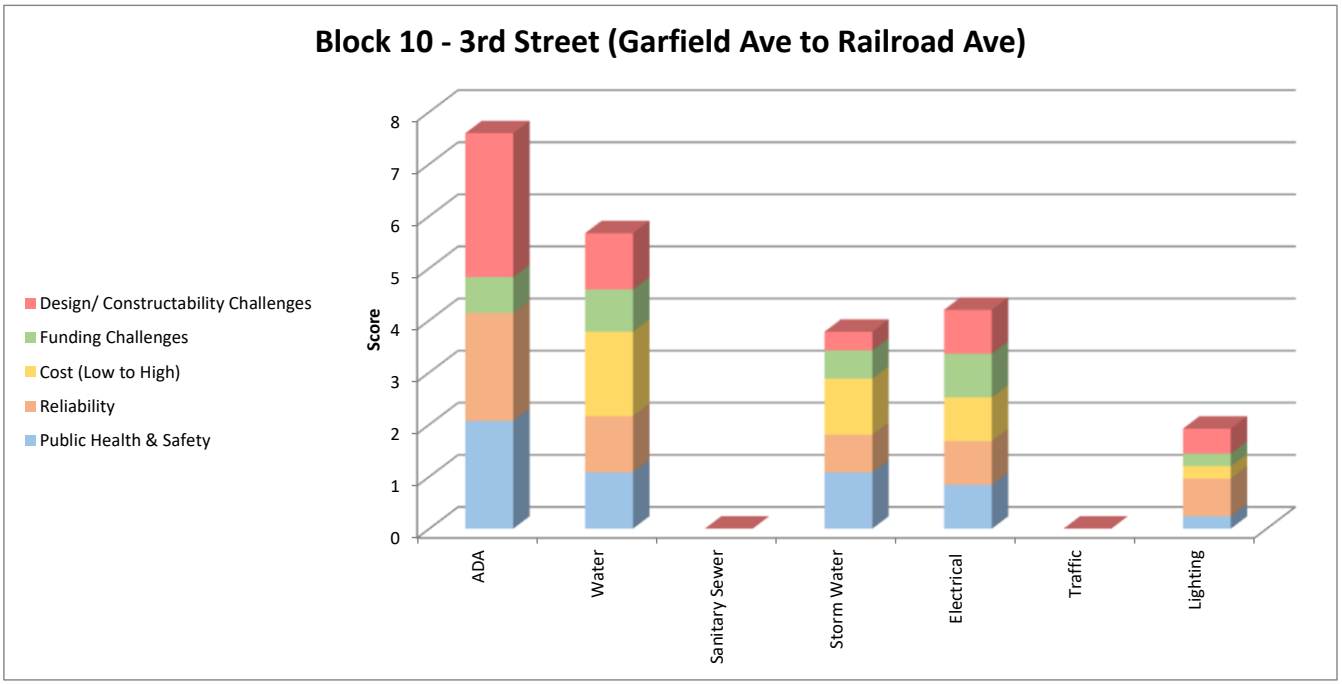
HIP Streets Infrastructure Assessment

Block 10 Decision Making Model

3rd Street (Garfield Ave to Railroad Ave)

Overall Block Priority - X

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 10 - 3rd Street (Garfield Ave to Railroad Ave)	**0.1593**	**0.1629**	**0.1134**	**0.0936**	**0.1656**
ADA	2.07	2.07	0	0.69	2.76
Water	1.08	1.08	1.62	0.81	1.08
Sanitary Sewer	0	0	0	0	0
Storm Water	1.08	0.72	1.08	0.54	0.36
Electrical	0.84	0.84	0.84	0.84	0.84
Traffic	0	0	0	0	0
Lighting	0.24	0.72	0.24	0.24	0.48



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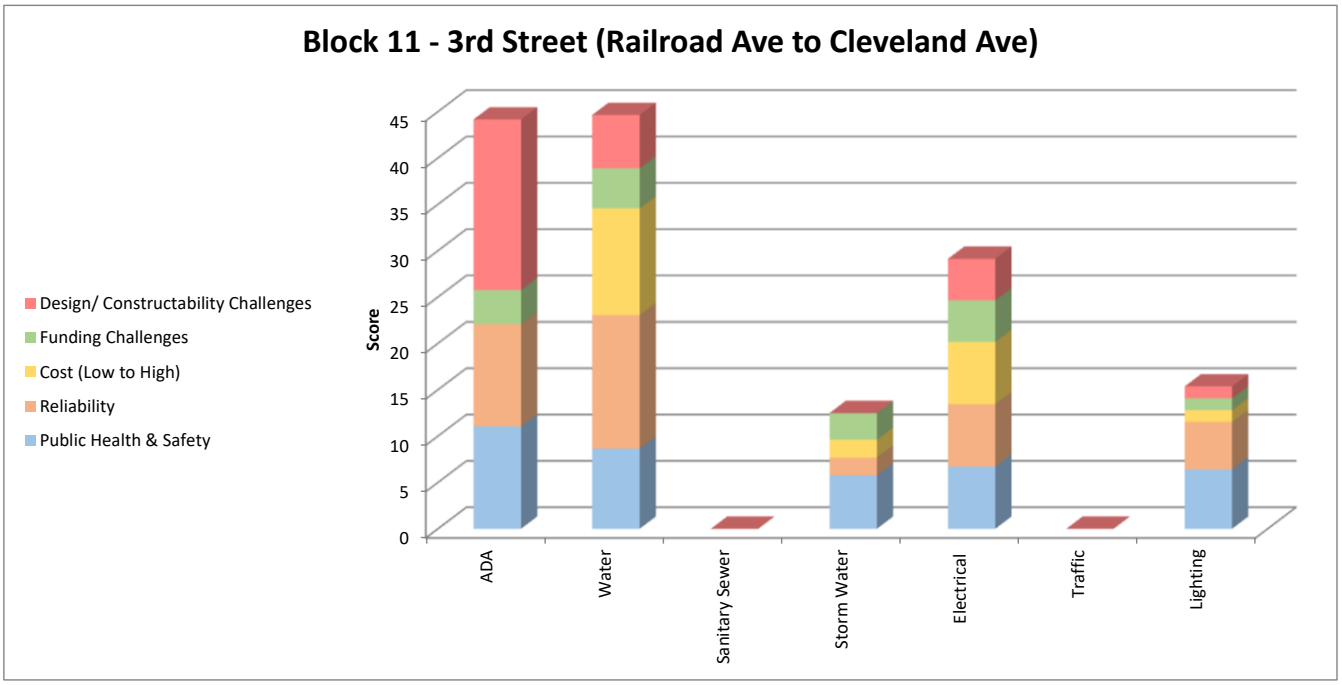
Block 11 Decision Making Model

3rd Street (Railroad Ave to Cleveland Ave)

Overall Block Priority - F

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 11 - 3rd Street (Railroad Ave to Cleveland Ave)	**6.1696**	**6.272**	**3.4304**	**2.6624**	**4.7872**
ADA	11.04	11.04	0	3.68	18.4
Water	8.64	14.4	11.52	4.32	5.76
Sanitary Sewer	0	0	0	0	0
Storm Water	5.76	1.92	1.92	2.88	0
Electrical	6.72	6.72	6.72	4.48	4.48
Traffic	0	0	0	0	0
Lighting	6.4	5.12	1.28	1.28	1.28



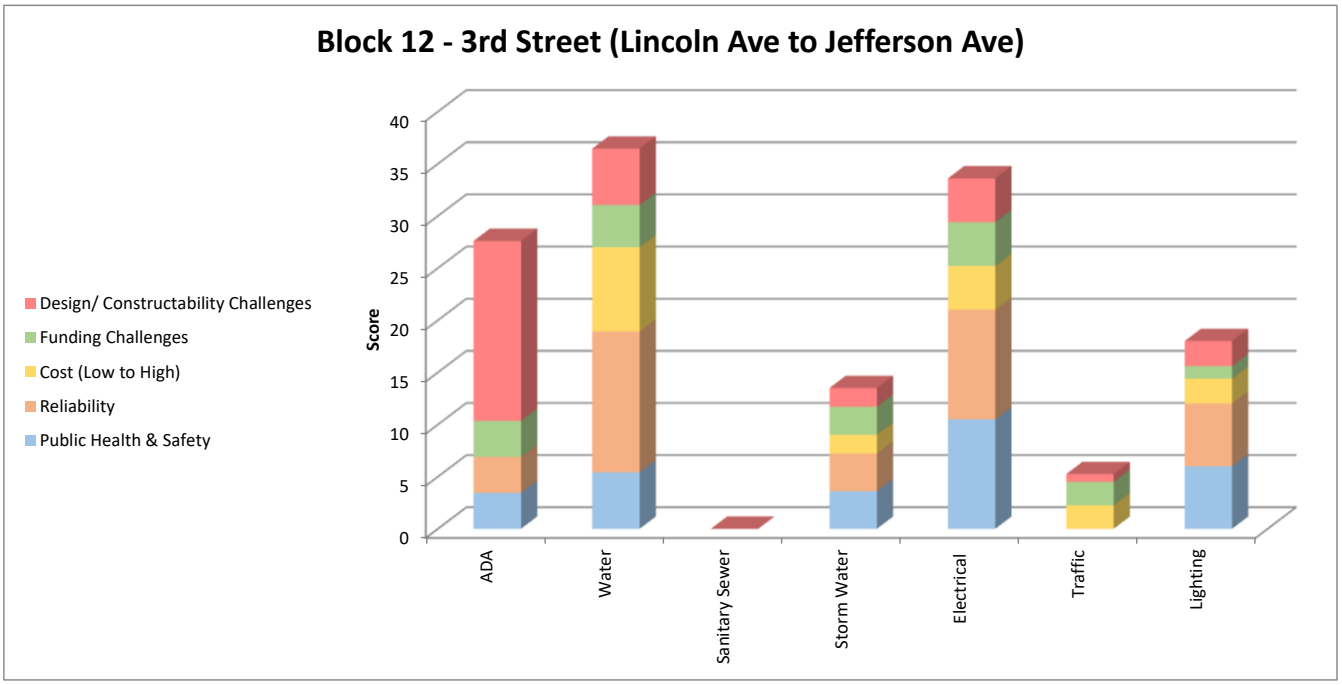
HIP Streets Infrastructure Assessment

Block 12 Decision Making Model

3rd Street (Lincoln Ave to Jefferson Ave

Overall Block Priority - H

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 12 - 3rd Street (Lincoln Ave to Jefferson Ave)	**4.3425**	**5.5575**	**2.8125**	**2.6775**	**4.77**
ADA	3.45	3.45	0	3.45	17.25
Water	5.4	13.5	8.1	4.05	5.4
Sanitary Sewer	0	0	0	0	0
Storm Water	3.6	3.6	1.8	2.7	1.8
Electrical	10.5	10.5	4.2	4.2	4.2
Traffic	0	0	2.25	2.25	0.75
Lighting	6	6	2.4	1.2	2.4



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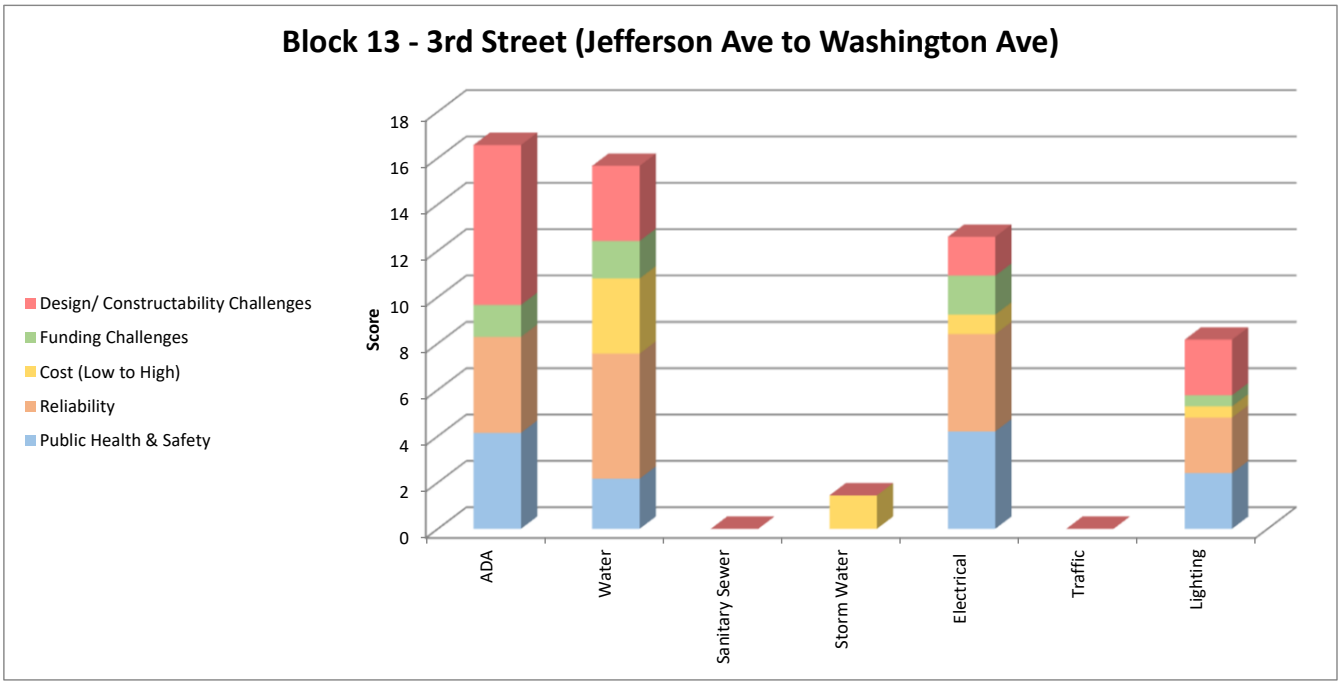
Block 13 Decision Making Model

3rd Street (Jefferson Ave to Washington Ave)

Overall Block Priority - U

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 13 - 3rd Street (Jefferson Ave to Washington Ave)	**0.774**	**0.9684**	**0.36**	**0.3096**	**0.8532**
ADA	4.14	4.14	0	1.38	6.9
Water	2.16	5.4	3.24	1.62	3.24
Sanitary Sewer	0	0	0	0	0
Storm Water	0	0	1.44	0	0
Electrical	4.2	4.2	0.84	1.68	1.68
Traffic	0	0	0	0	0
Lighting	2.4	2.4	0.48	0.48	2.4



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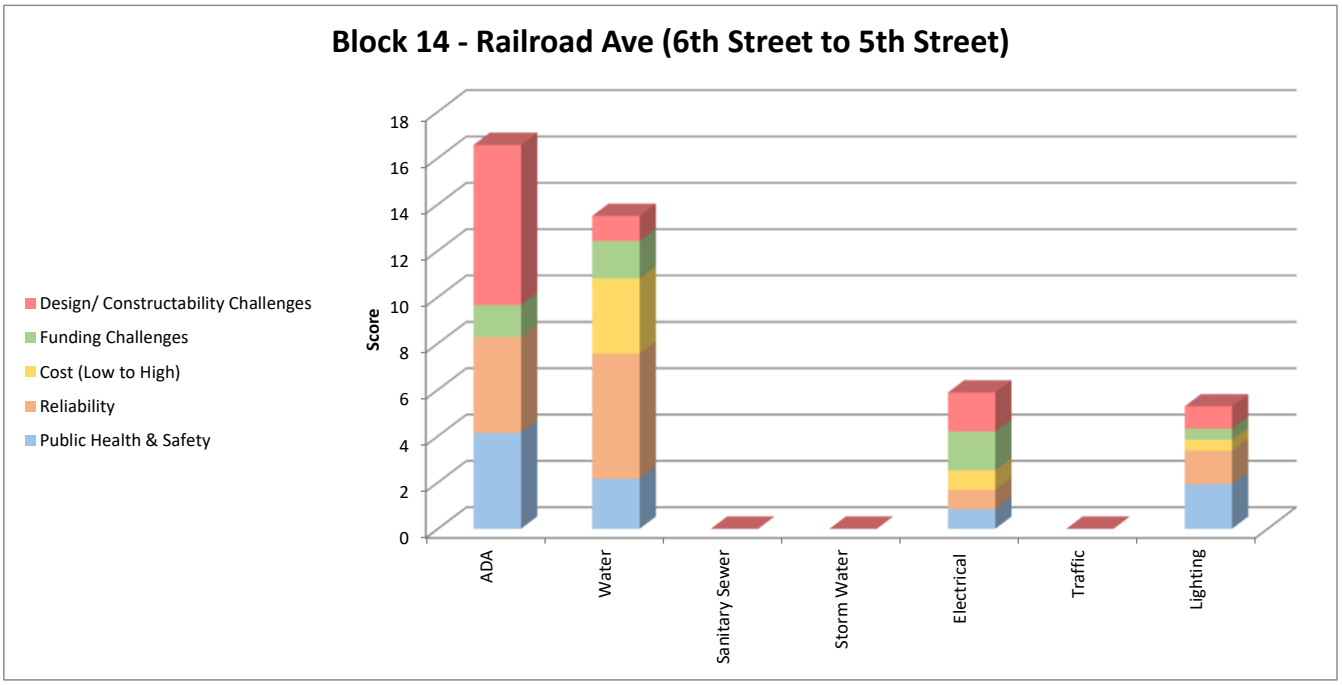
Block 14 Decision Making Model

Railroad Ave (6th Street to 5th Street)

Overall Block Priority - V

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 14 - Railroad Ave (6th Street to 5th Street)	**0.5436**	**0.7092**	**0.2736**	**0.3096**	**0.6372**
ADA	4.14	4.14	0	1.38	6.9
Water	2.16	5.4	3.24	1.62	1.08
Sanitary Sewer	0	0	0	0	0
Storm Water	0	0	0	0	0
Electrical	0.84	0.84	0.84	1.68	1.68
Traffic	0	0	0	0	0
Lighting	1.92	1.44	0.48	0.48	0.96



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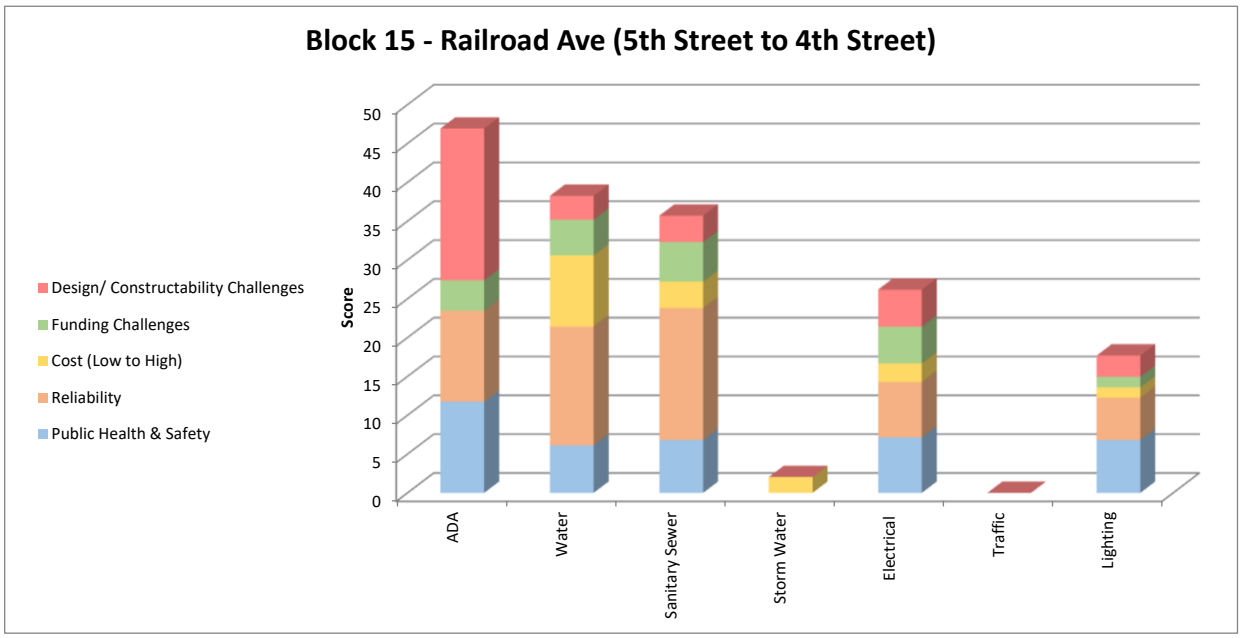
Block 15 Decision Making Model

Railroad Ave (5th Street to 4th Street)

Overall Block Priority - E

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 15 - Railroad Ave (5th Street to 4th Street)	**6.5603**	**9.6237**	**3.1212**	**3.3524**	**5.6933**
ADA	11.73	11.73	0	3.91	19.55
Water	6.12	15.3	9.18	4.59	3.06
Sanitary Sewer	6.8	17	3.4	5.1	3.4
Storm Water	0	0	2.04	0	0
Electrical	7.14	7.14	2.38	4.76	4.76
Traffic	0	0	0	0	0
Lighting	6.8	5.44	1.36	1.36	2.72



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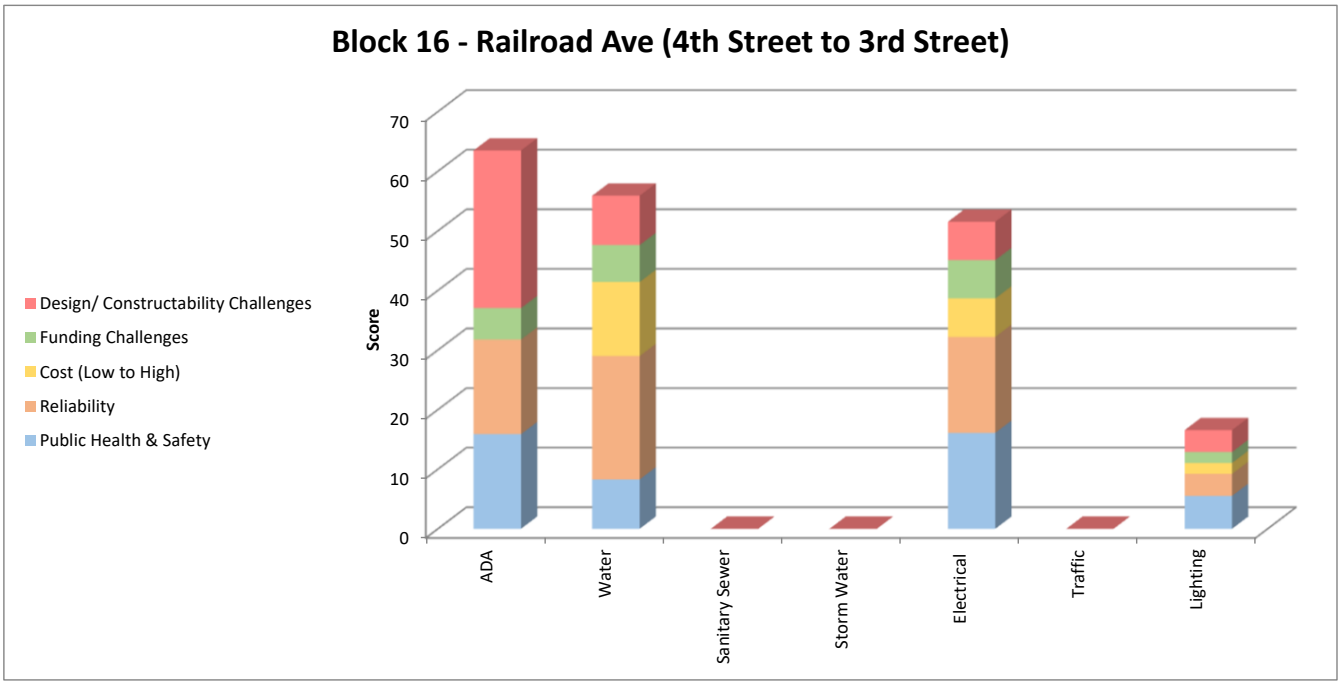
Block 16 Decision Making Model

Railroad Ave (4th Street to 3rd Street)

Overall Block Priority - D

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 16 - Railroad Ave (4th Street to 3rd Street)	**10.5271**	**12.9605**	**4.761**	**4.5494**	**10.3155**
ADA	15.87	15.87	0	5.29	26.45
Water	8.28	20.7	12.42	6.21	8.28
Sanitary Sewer	0	0	0	0	0
Storm Water	0	0	0	0	0
Electrical	16.1	16.1	6.44	6.44	6.44
Traffic	0	0	0	0	0
Lighting	5.52	3.68	1.84	1.84	3.68



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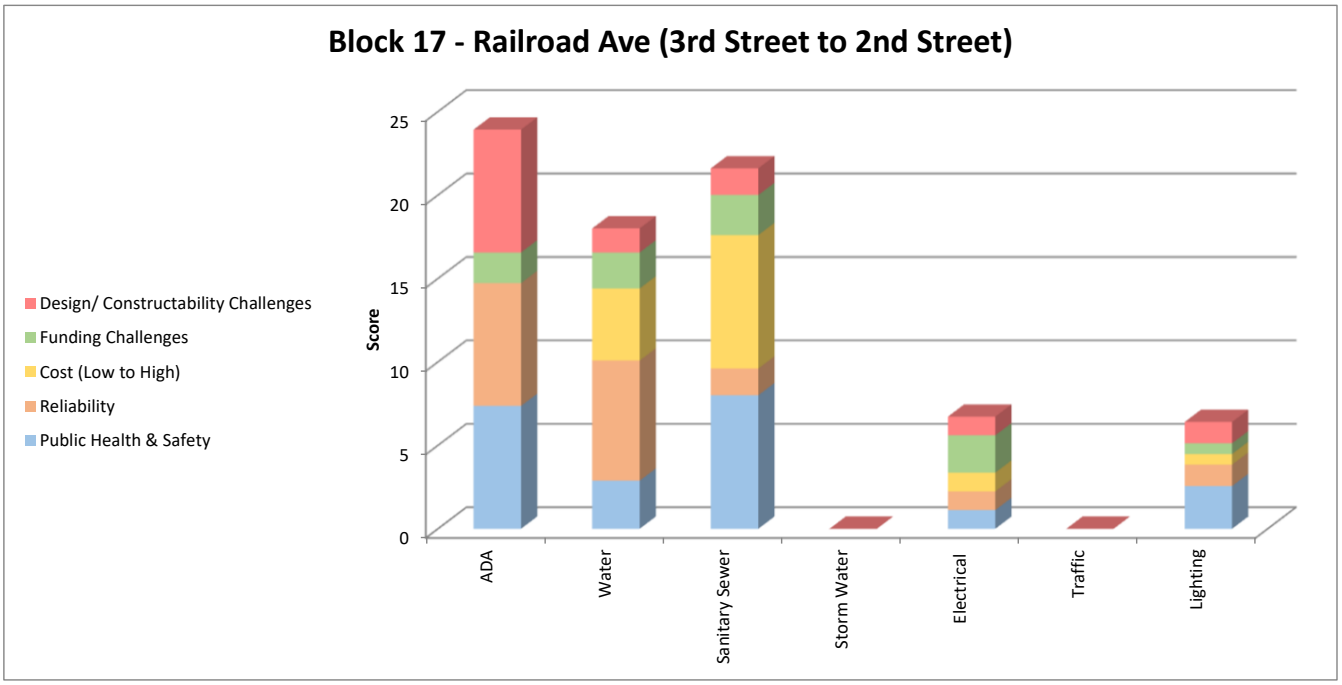
Block 17 Decision Making Model

Railroad Ave (3rd Street to 2nd Street)

Overall Block Priority - R

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 17 - Railroad Ave (3rd Street to 2nd Street)	**1.7536**	**1.4848**	**1.1264**	**0.7424**	**1.024**
ADA	7.36	7.36	0	1.84	7.36
Water	2.88	7.2	4.32	2.16	1.44
Sanitary Sewer	8	1.6	8	2.4	1.6
Storm Water	0	0	0	0	0
Electrical	1.12	1.12	1.12	2.24	1.12
Traffic	0	0	0	0	0
Lighting	2.56	1.28	0.64	0.64	1.28



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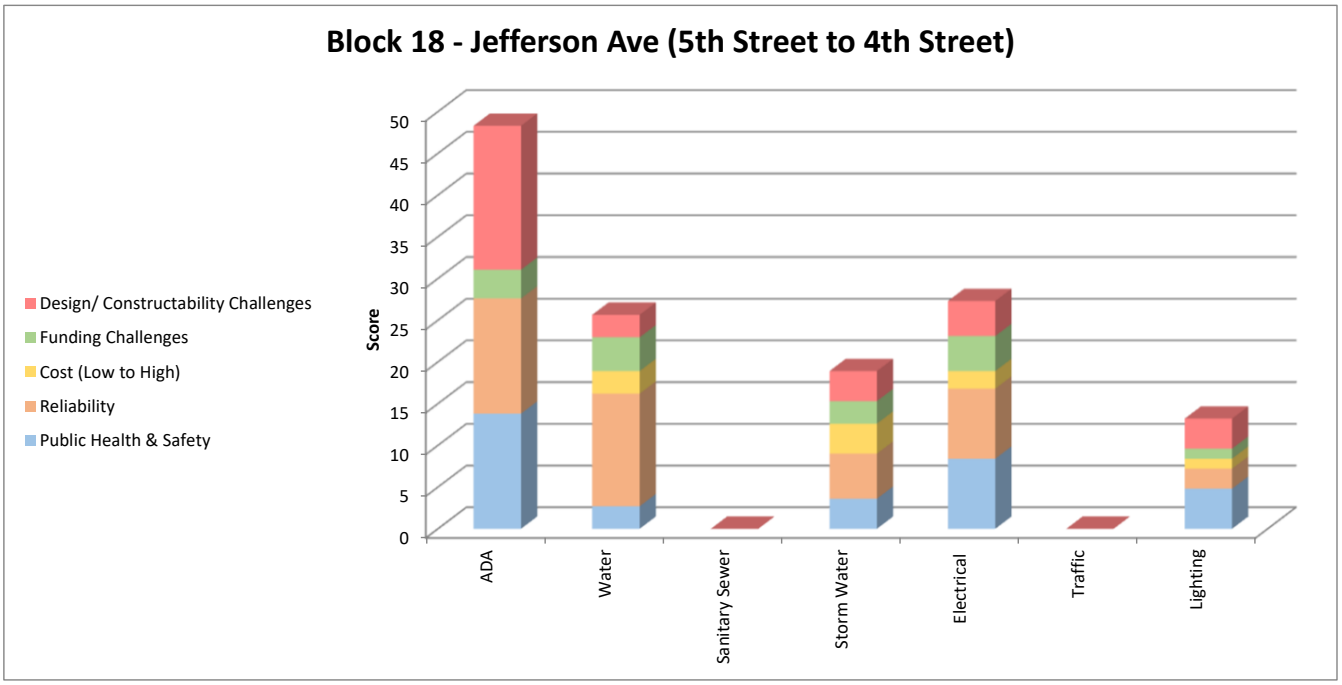
Block 18 Decision Making Model

Jefferson Ave (5th Street to 4th Street)

Overall Block Priority - I

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 18 - Jefferson Ave (5th Street to 4th Street)	**4.995**	**6.525**	**1.44**	**2.34**	**4.7025**
ADA	13.8	13.8	0	3.45	17.25
Water	2.7	13.5	2.7	4.05	2.7
Sanitary Sewer	0	0	0	0	0
Storm Water	3.6	5.4	3.6	2.7	3.6
Electrical	8.4	8.4	2.1	4.2	4.2
Traffic	0	0	0	0	0
Lighting	4.8	2.4	1.2	1.2	3.6



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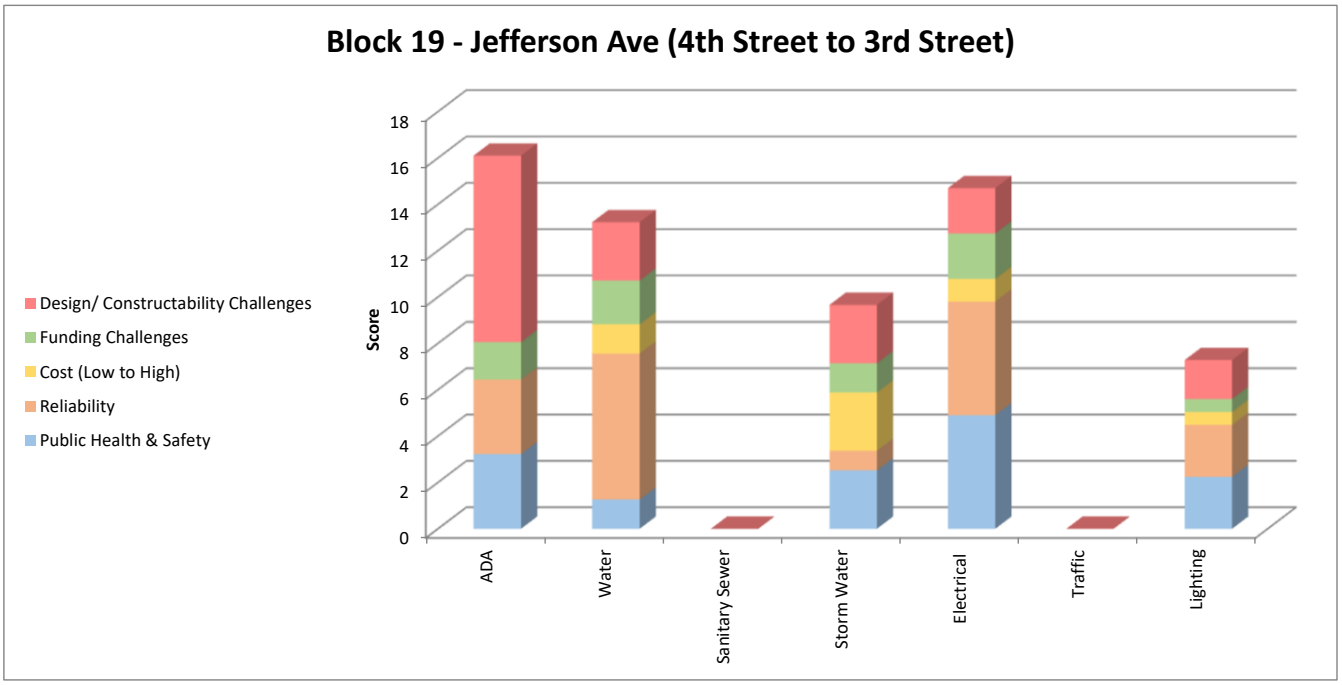
Block 19 Decision Making Model

Jefferson Ave (4th Street to 3rd Street)

Overall Block Priority - T

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 19 - Jefferson Ave (4th Street to 3rd Street)	**0.9898**	**1.225**	**0.3724**	**0.5096**	**1.1711**
ADA	3.22	3.22	0	1.61	8.05
Water	1.26	6.3	1.26	1.89	2.52
Sanitary Sewer	0	0	0	0	0
Storm Water	2.52	0.84	2.52	1.26	2.52
Electrical	4.9	4.9	0.98	1.96	1.96
Traffic	0	0	0	0	0
Lighting	2.24	2.24	0.56	0.56	1.68



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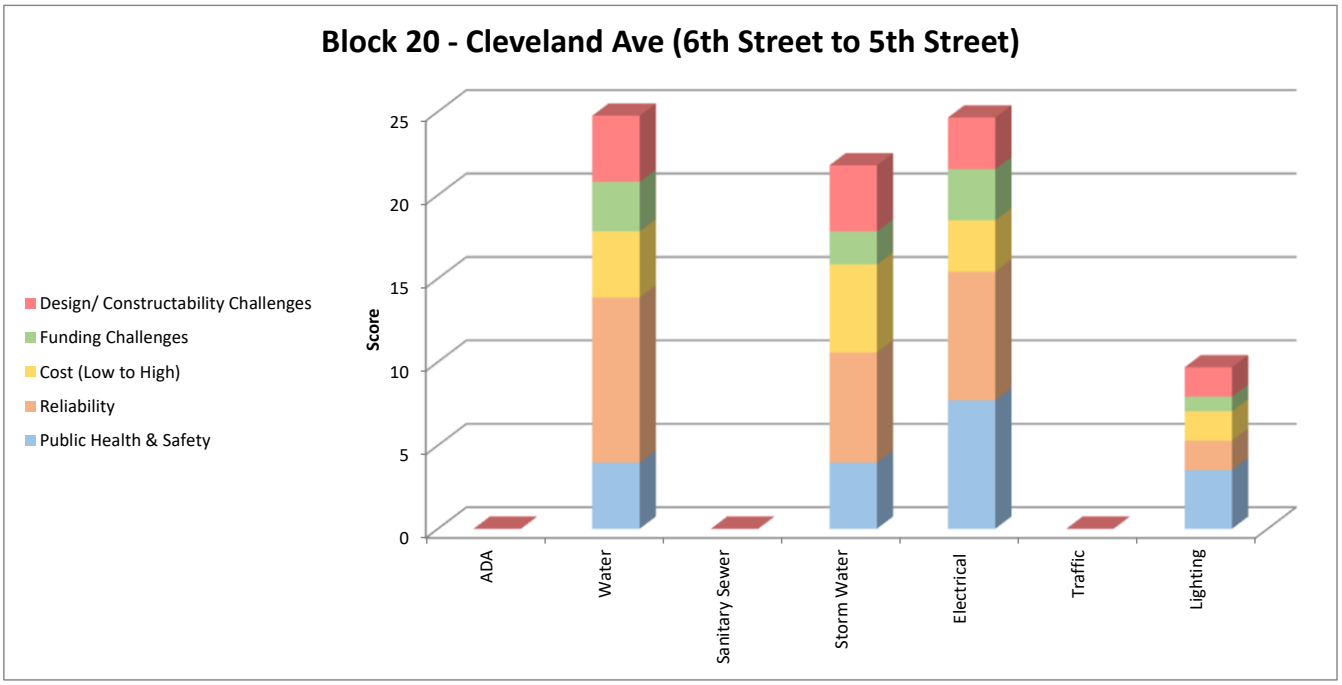
Block 20 Decision Making Model

Cleveland Ave (6th Street to 5th Street)

Overall Block Priority - S

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 20 - Cleveland Ave (6th Street to 5th Street)	**2.1054**	**1.8172**	**0.9856**	**0.6237**	**0.8932**
ADA	0	0	0	0	0
Water	3.96	9.9	3.96	2.97	3.96
Sanitary Sewer	0	0	0	0	0
Storm Water	3.96	6.6	5.28	1.98	3.96
Electrical	7.7	7.7	3.08	3.08	3.08
Traffic	0	0	0	0	0
Lighting	3.52	1.76	1.76	0.88	1.76



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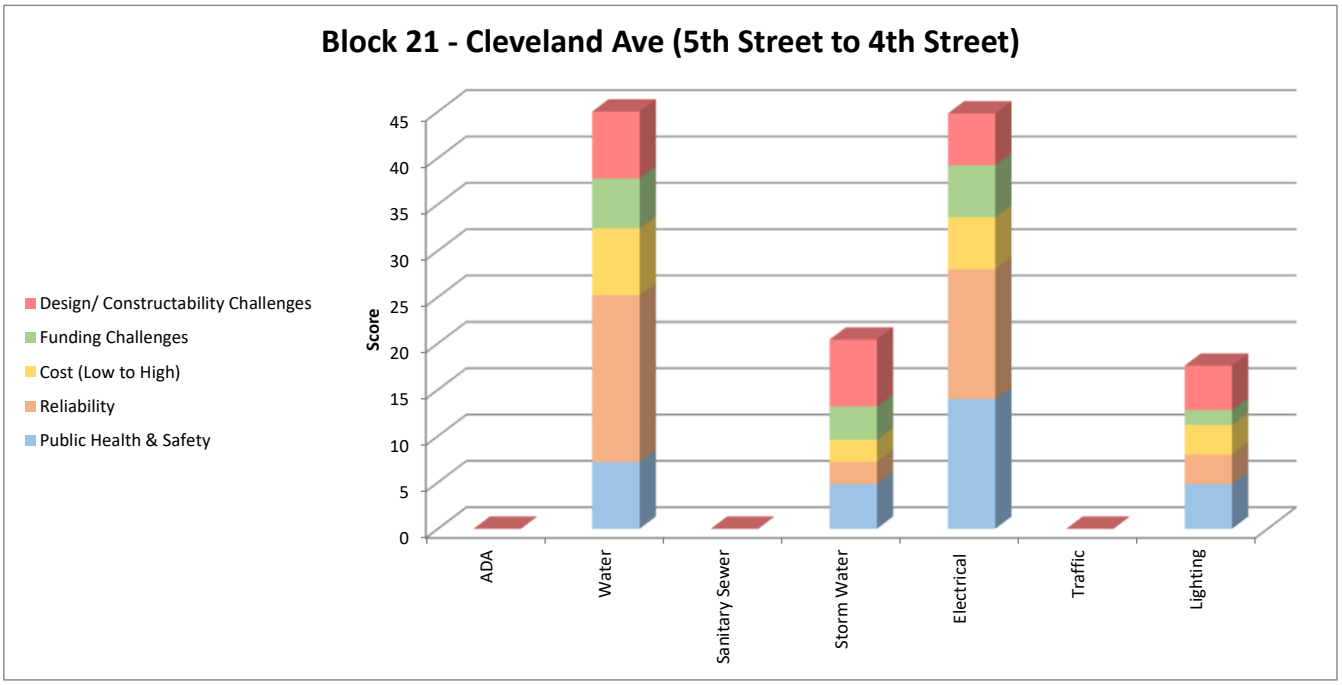
Block 21 Decision Making Model

Cleveland Ave (5th Street to 4th Street)

Overall Block Priority - N

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 21 - Cleveland Ave (5th Street to 4th Street)	**6.16**	**2.632**	**1.288**	**1.134**	**1.736**
ADA	0	0	0	0	0
Water	7.2	18	7.2	5.4	7.2
Sanitary Sewer	0	0	0	0	0
Storm Water	4.8	2.4	2.4	3.6	7.2
Electrical	14	14	5.6	5.6	5.6
Traffic	0	0	0	0	0
Lighting	4.8	3.2	3.2	1.6	4.8



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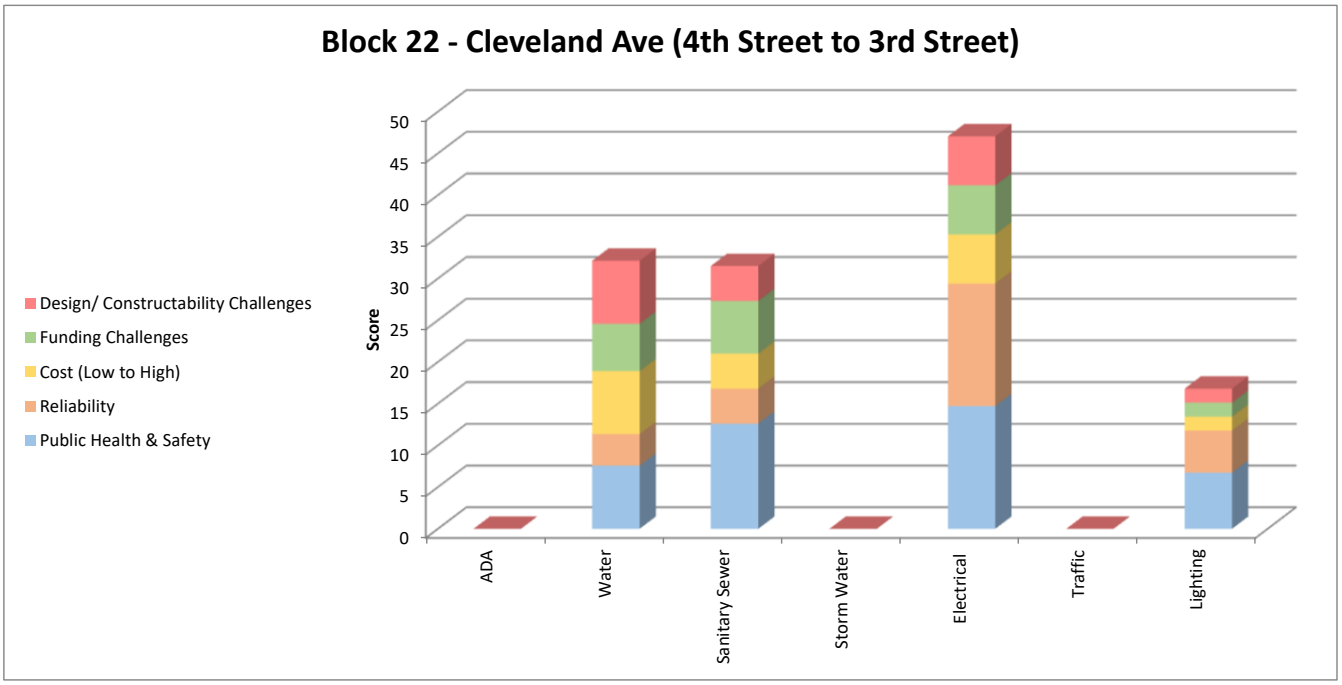
Block 22 Decision Making Model

Cleveland Ave (4th Street to 3rd Street)

Overall Block Priority - M

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 22 - Cleveland Ave (4th Street to 3rd Street)	**8.7318**	**1.9404**	**1.3524**	**1.3671**	**1.3524**
ADA	0	0	0	0	0
Water	7.56	3.78	7.56	5.67	7.56
Sanitary Sewer	12.6	4.2	4.2	6.3	4.2
Storm Water	0	0	0	0	0
Electrical	14.7	14.7	5.88	5.88	5.88
Traffic	0	0	0	0	0
Lighting	6.72	5.04	1.68	1.68	1.68



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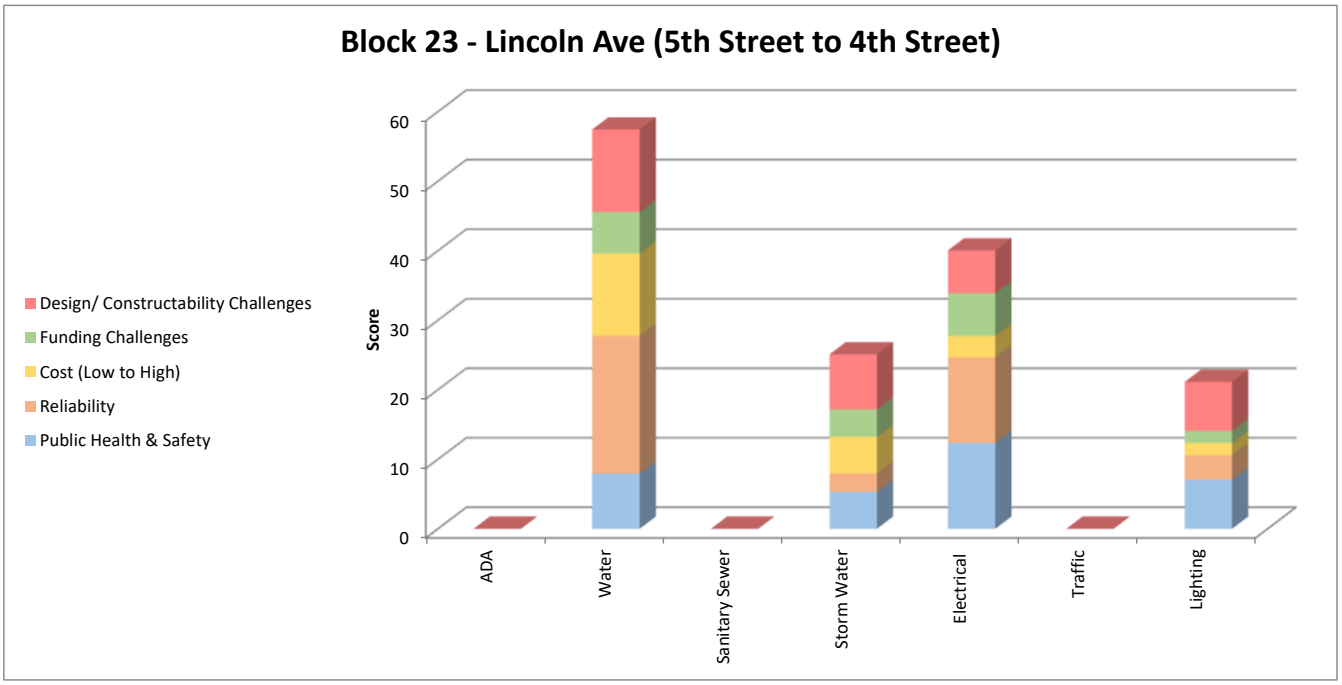
Block 23 Decision Making Model

Lincoln Ave (5th Street to 4th Street)

Overall Block Priority - K

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 23 - Lincoln Ave (5th Street to 4th Street)	**7.1632**	**2.6796**	**1.54**	**1.2474**	**2.31**
ADA	0	0	0	0	0
Water	7.92	19.8	11.88	5.94	11.88
Sanitary Sewer	0	0	0	0	0
Storm Water	5.28	2.64	5.28	3.96	7.92
Electrical	12.32	12.32	3.08	6.16	6.16
Traffic	0	0	0	0	0
Lighting	7.04	3.52	1.76	1.76	7.04



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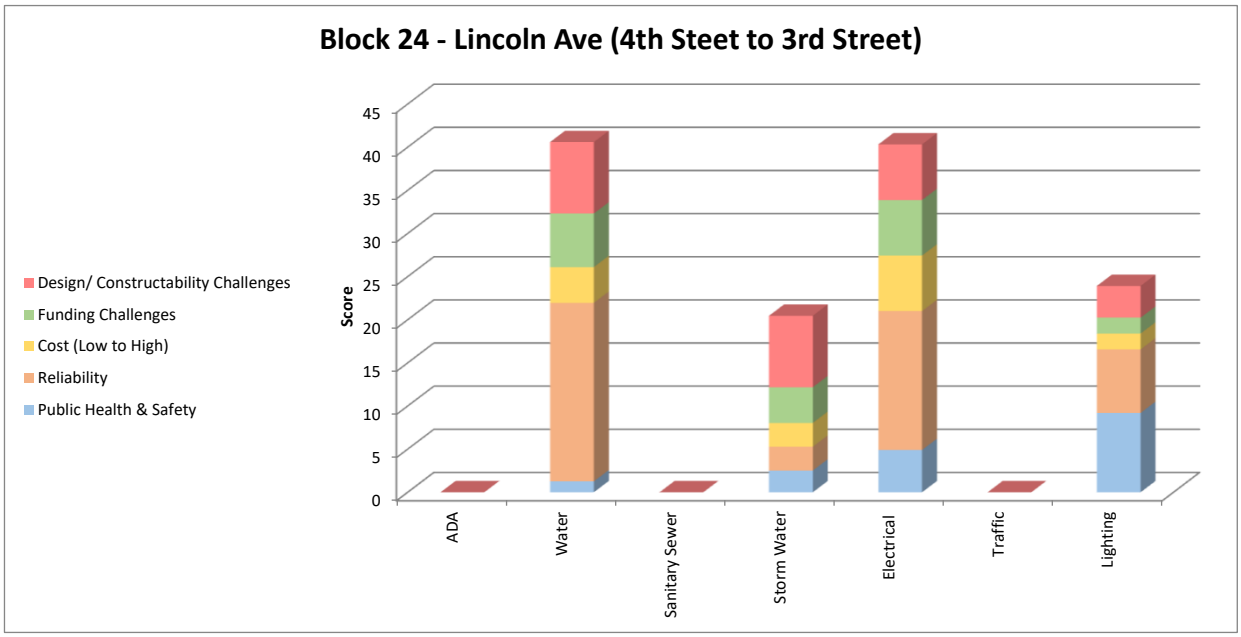
Block 24 Decision Making Model

Block 24 - Lincoln Ave (4th Steet to 3rd Street)

Overall Block Priority - J

Criteria Categories	Score				
	Public Health & Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Block 24 - Lincoln Ave (4th Street to 3rd Street)	**8.993**	**3.2844**	**1.0626**	**1.3041**	**1.8676**
ADA	0	0	0	0	0
Water	1.26	20.7	4.14	6.21	8.28
Sanitary Sewer	0	0	0	0	0
Storm Water	2.52	2.76	2.76	4.14	8.28
Electrical	4.9	16.1	6.44	6.44	6.44
Traffic	0	0	0	0	0
Lighting	9.2	7.36	1.84	1.84	3.68



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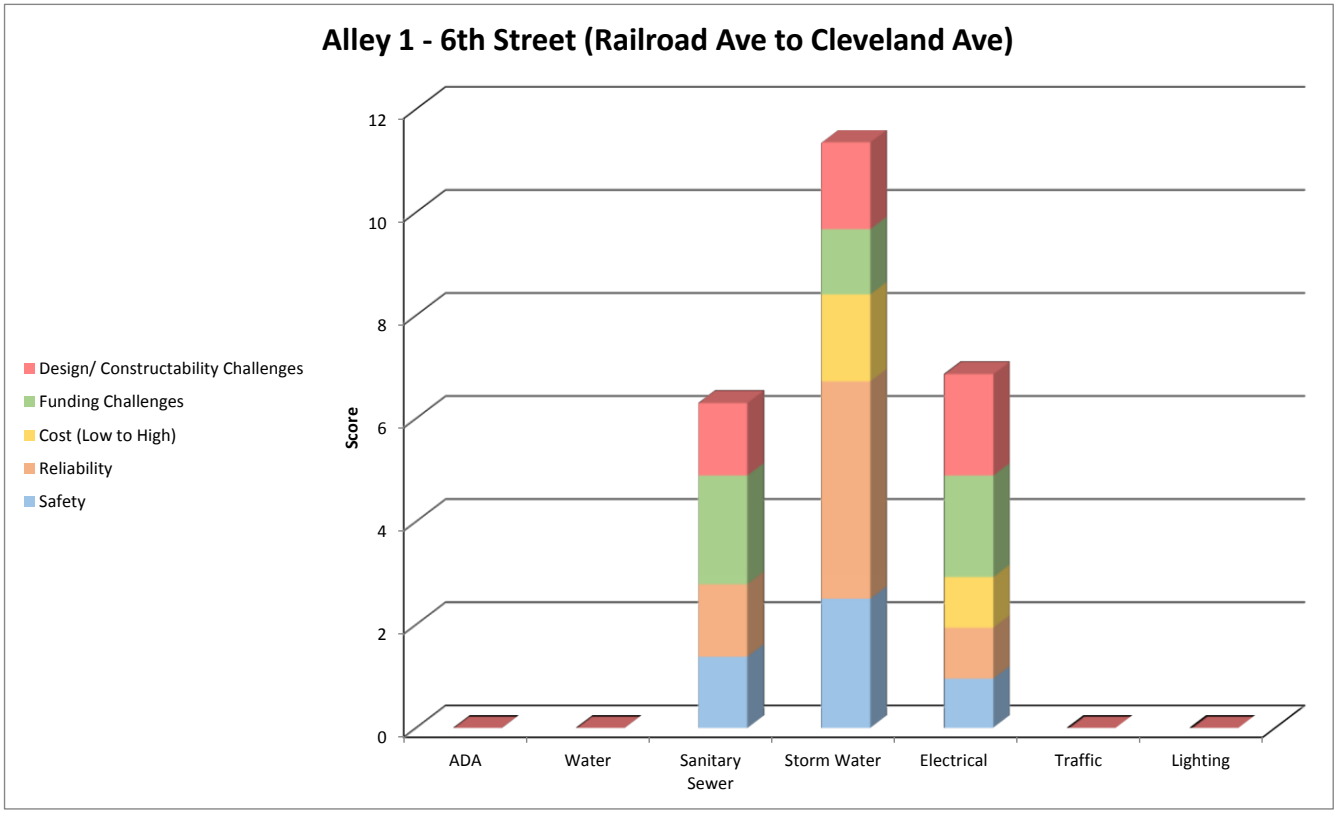
HIP Streets Infrastructure Assessment

Alley 1 Decision Making Model

6th Street (Railroad Ave to Cleveland Ave)

Overall Alley Priority - AK

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 1 - Between Railroad Ave and Cleveland Ave (6th St to Artist All	**0.34**	**0.46**	**0.19**	**0.37**	**0.35**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	1.4	1.4	0	2.1	1.4
Storm Water	2.52	4.2	1.68	1.26	1.68
Electrical	0.98	0.98	0.98	1.96	1.96
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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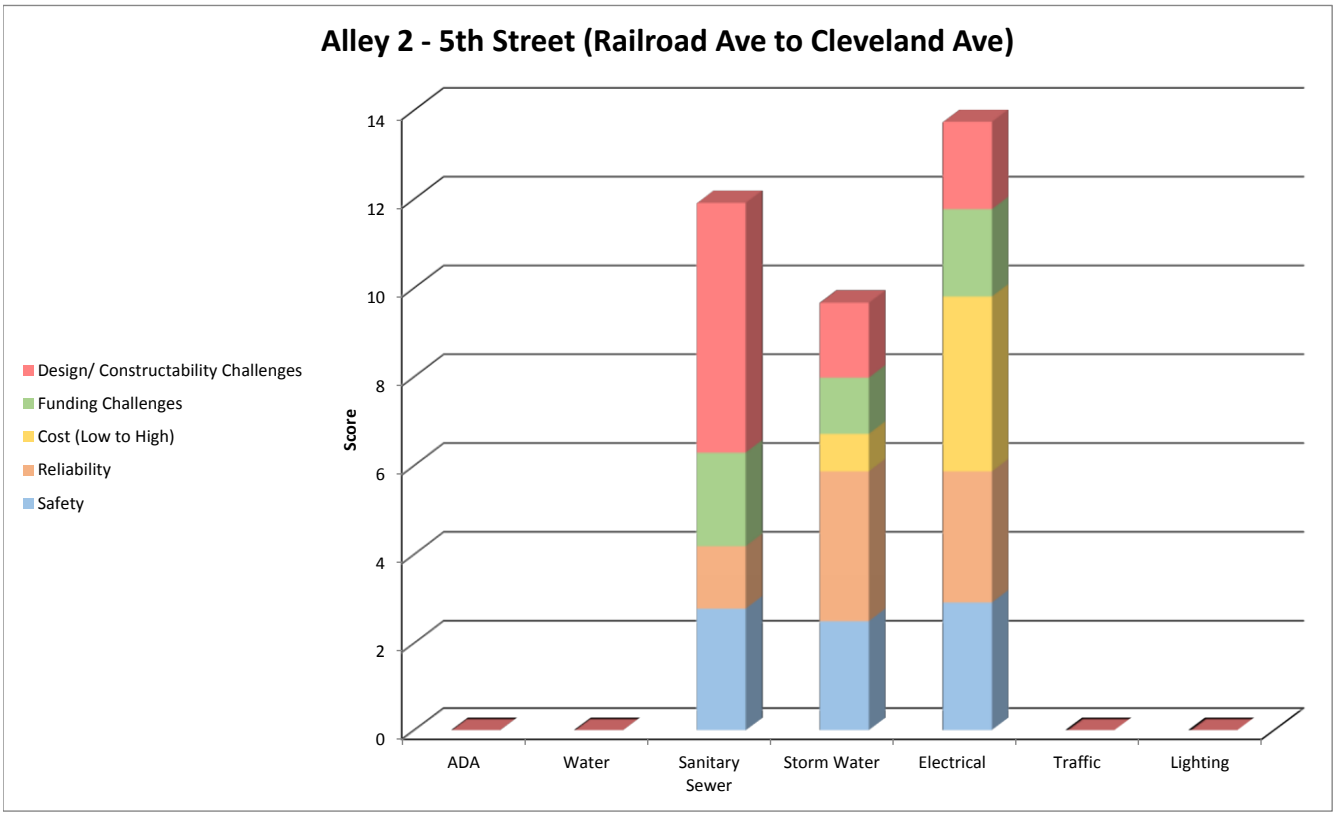
Alley 2 Decision Making Model

5th Street (Railroad Ave to Cleveland Ave)

Overall Alley Priority - AJ

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 2 - Artist Alley (Railroad Ave to Cleveland Ave)	**0.58**	**0.54**	**0.33**	**0.37**	**0.65**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	2.8	1.4	0	2.1	5.6
Storm Water	2.52	3.36	0.84	1.26	1.68
Electrical	2.94	2.94	3.92	1.96	1.96
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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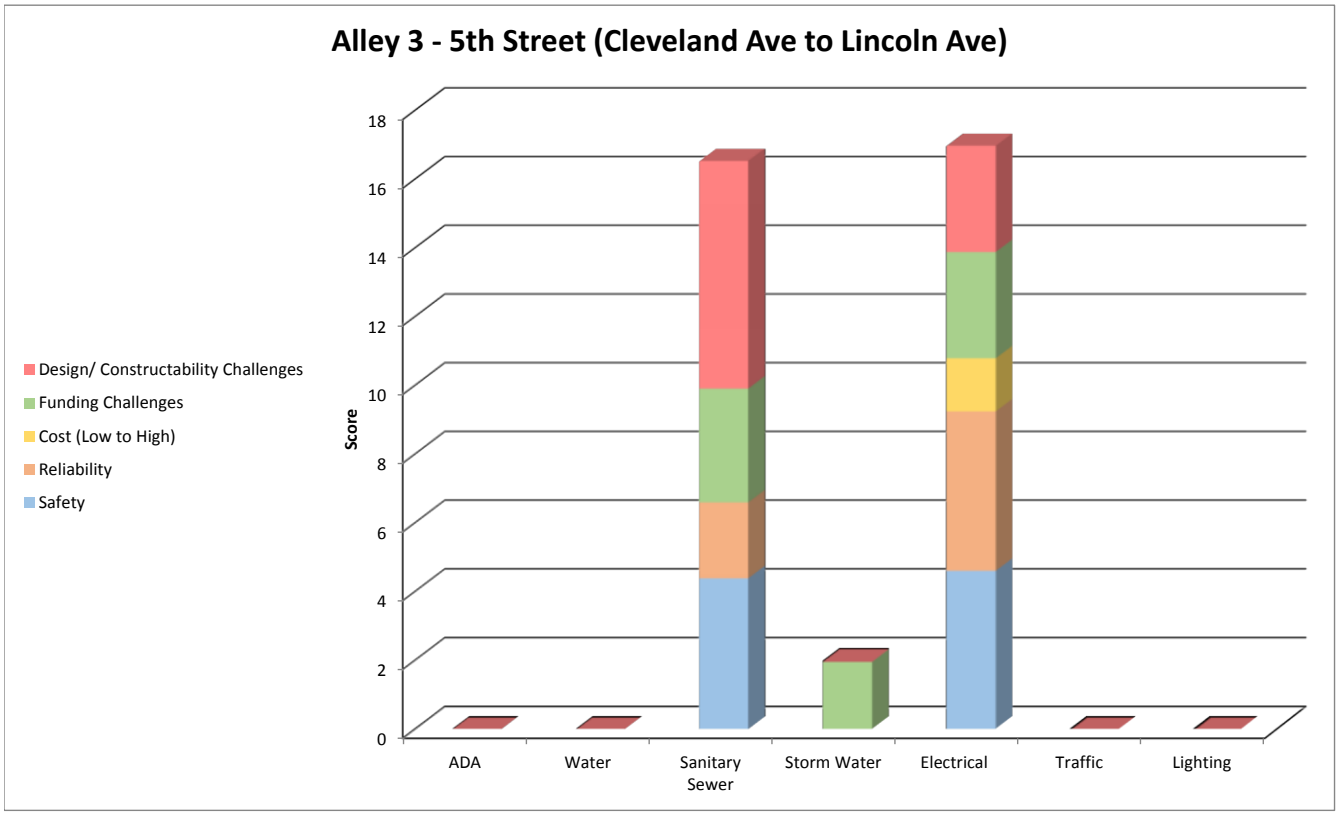
Alley 3 Decision Making Model

5th Street (Cleveland Ave to Lincoln Ave)

Overall Alley Priority - AH

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 3 - Artist Alley (Cleveland Ave to Lincoln Ave)	**0.99**	**0.75**	**0.17**	**0.92**	**1.06**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	4.4	2.2	0	3.3	6.6
Storm Water	0	0	0	1.98	0
Electrical	4.62	4.62	1.54	3.08	3.08
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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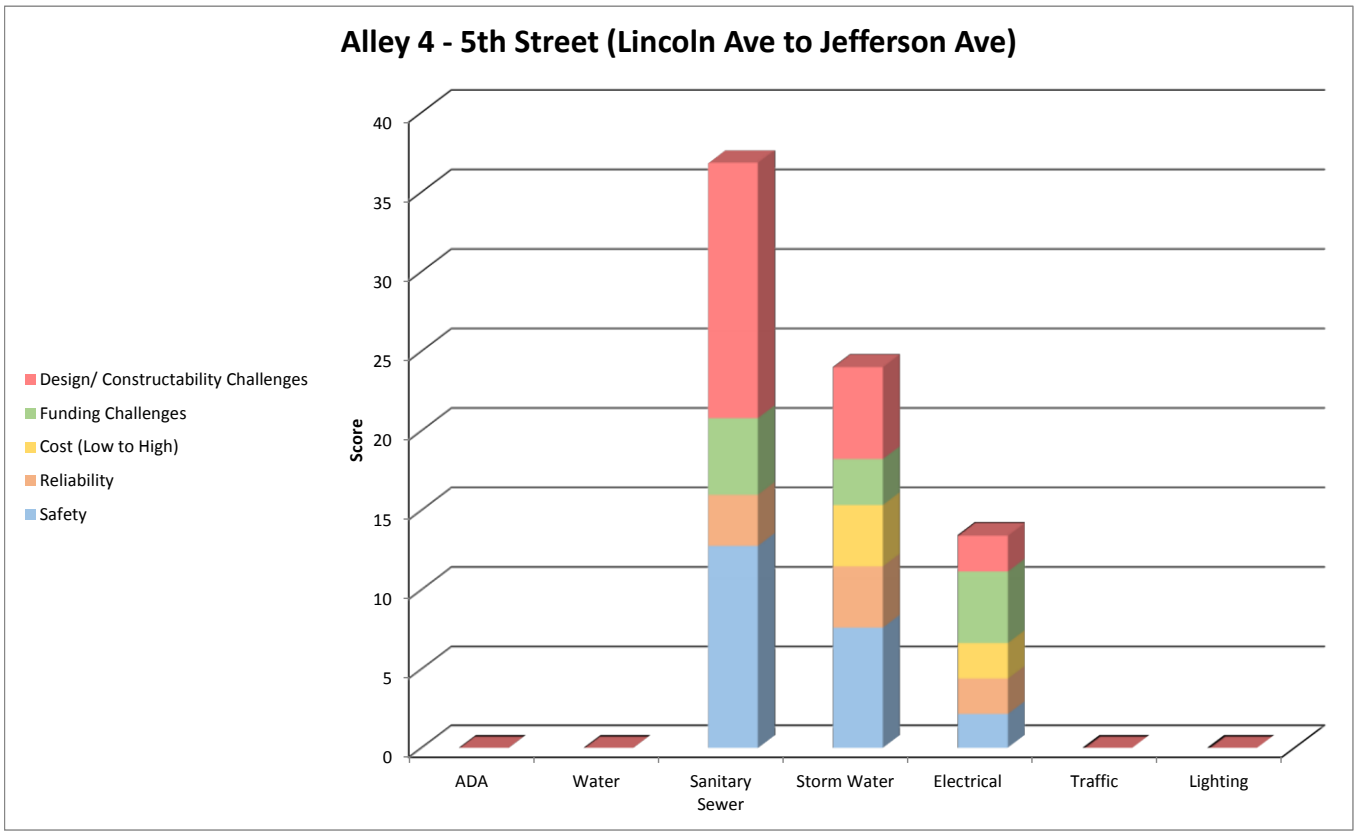
Alley 4 Decision Making Model

5th Street (Lincoln Ave to Jefferson Ave)

Overall Alley Priority - AF

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 4 - Sweetheart Alley (Railroad Ave to Cleveland Ave)	**3.64**	**1.48**	**0.97**	**1.95**	**3.84**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	12.8	3.2	0	4.8	16
Storm Water	7.68	3.84	3.84	2.88	5.76
Electrical	2.24	2.24	2.24	4.48	2.24
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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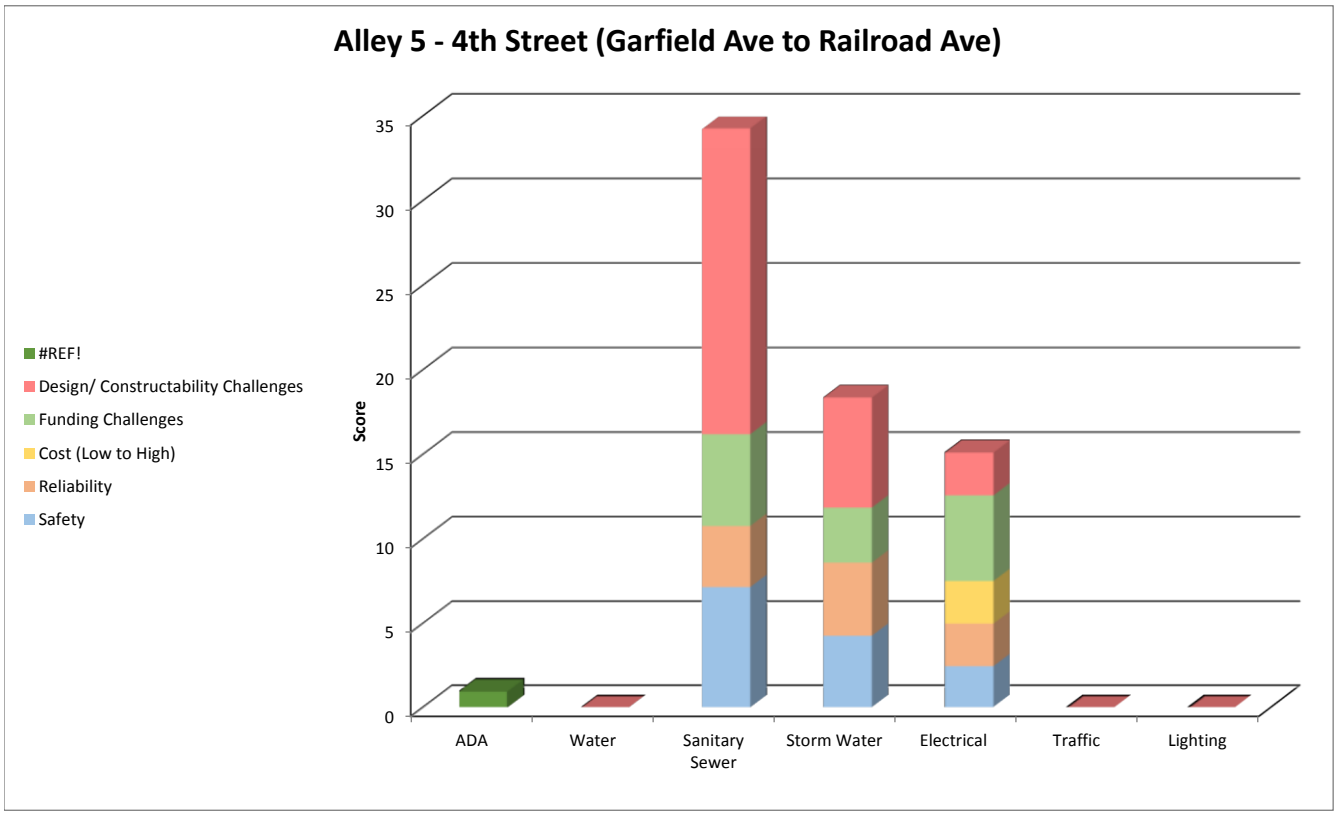
Alley 5 Decision Making Model

4th Street (Garfield Ave to Railroad Ave)

Overall Alley Priority - AE

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 5 - Sweetheart Alley (Cleveland Ave to Lincoln Ave)	**2.53**	**1.88**	**0.45**	**2.46**	**4.86**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	7.2	3.6	0	5.4	18
Storm Water	4.32	4.32	0	3.24	6.48
Electrical	2.52	2.52	2.52	5.04	2.52
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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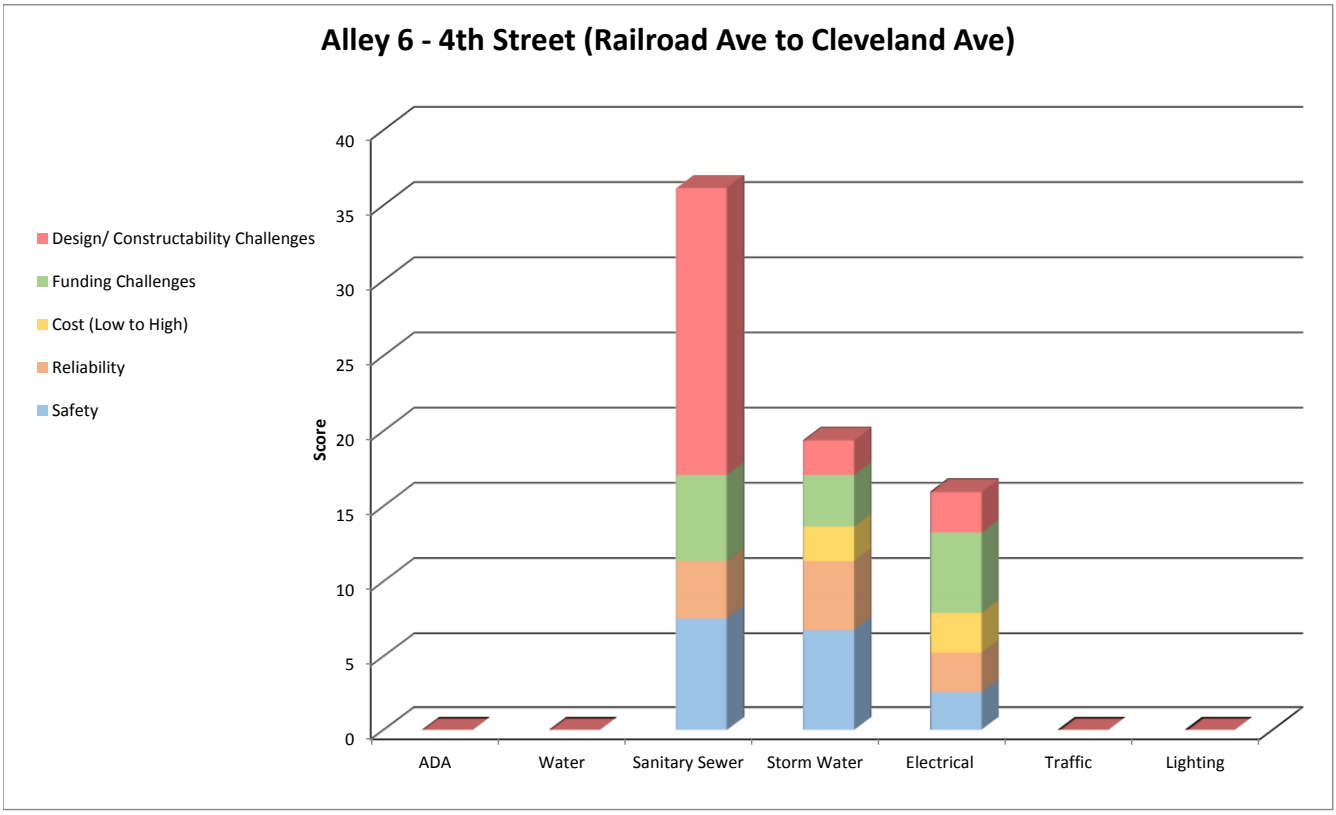
HIP Streets Infrastructure Assessment

Alley 6 Decision Making Model

4th Street (Railroad Ave to Cleveland Ave)

Overall Alley Priority - AD

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 6 - Sweetheart Alley (Lincoln Ave to Jefferson Ave)	**3.25**	**2.09**	**0.94**	**2.74**	**4.55**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	7.6	3.8	0	5.7	19
Storm Water	6.84	4.56	2.28	3.42	2.28
Electrical	2.66	2.66	2.66	5.32	2.66
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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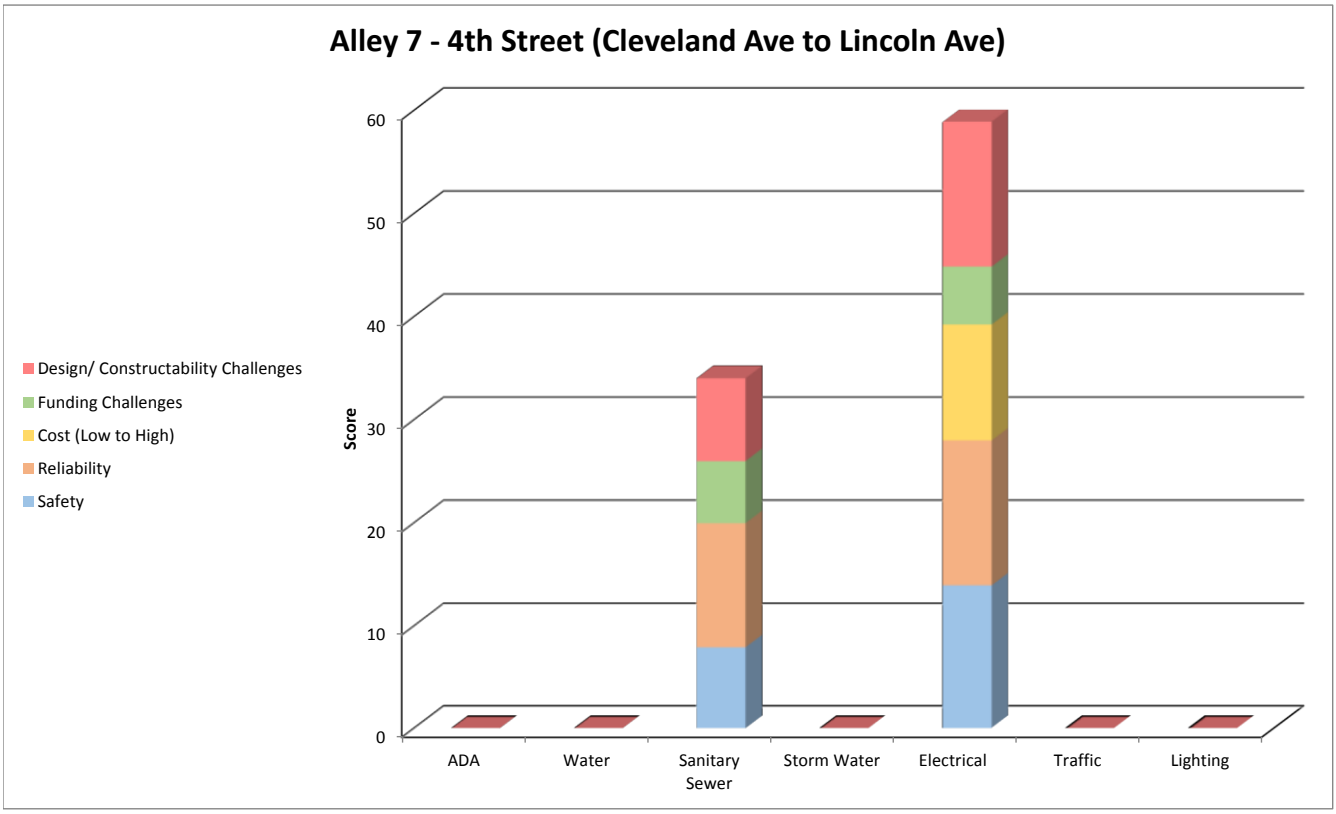
HIP Streets Infrastructure Assessment

Alley 7 Decision Making Model

4th Street (Cleveland Ave to Lincoln Ave)

Overall Alley Priority - AC

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 7 - Painters Alley (3rd St to 4th St)	**4.4**	**5.2**	**2.24**	**2.32**	**4.4**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	8	12	0	6	8
Storm Water	0	0	0	0	0
Electrical	14	14	11.2	5.6	14
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



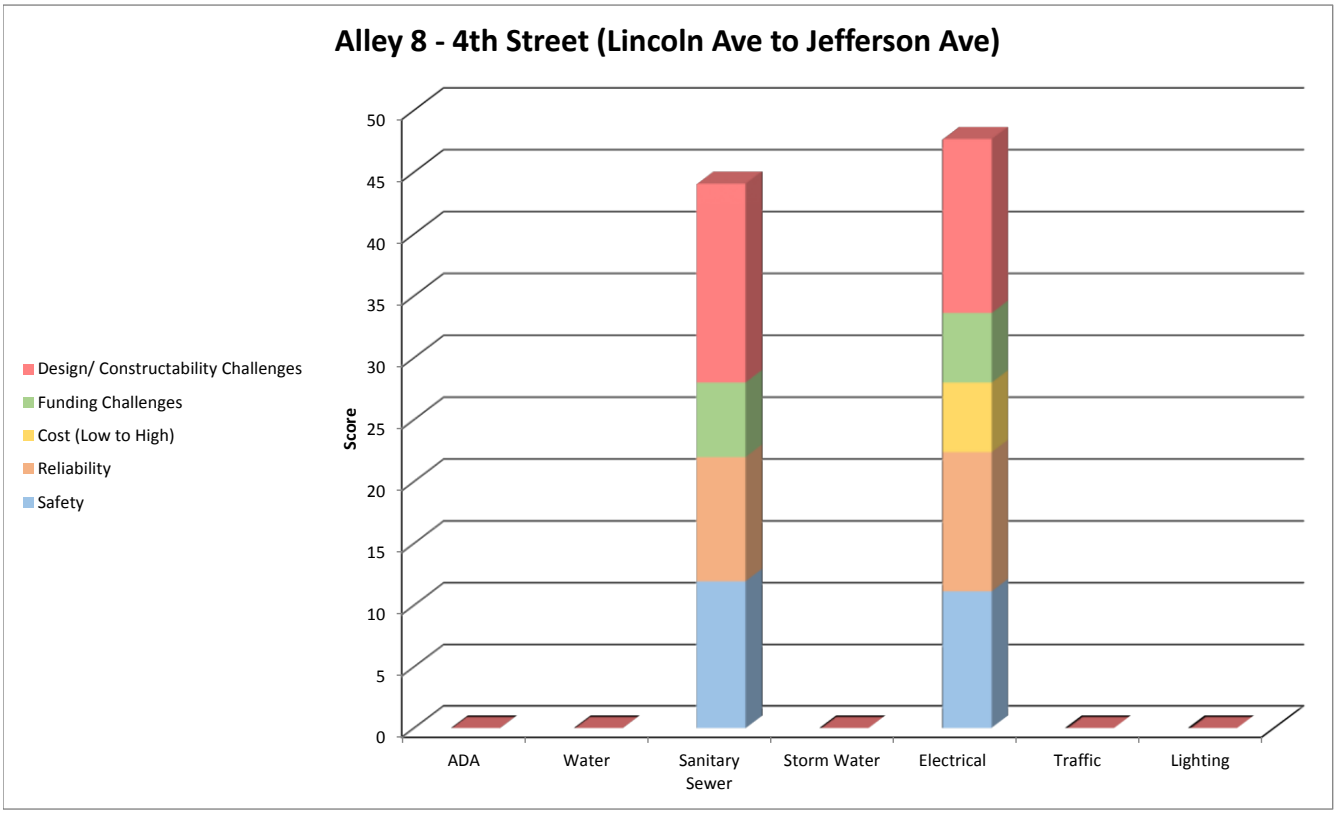
HIP Streets Infrastructure Assessment

Alley 8 Decision Making Model

4th Street (Lincoln Ave to Jefferson Ave)

Overall Alley Priority - AB

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 8 - Between 4th St and 3rd St (Painters Alley to Cleveland Ave)	**4.64**	**4.24**	**1.12**	**2.32**	**6**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	12	10	0	6	16
Storm Water	0	0	0	0	0
Electrical	11.2	11.2	5.6	5.6	14
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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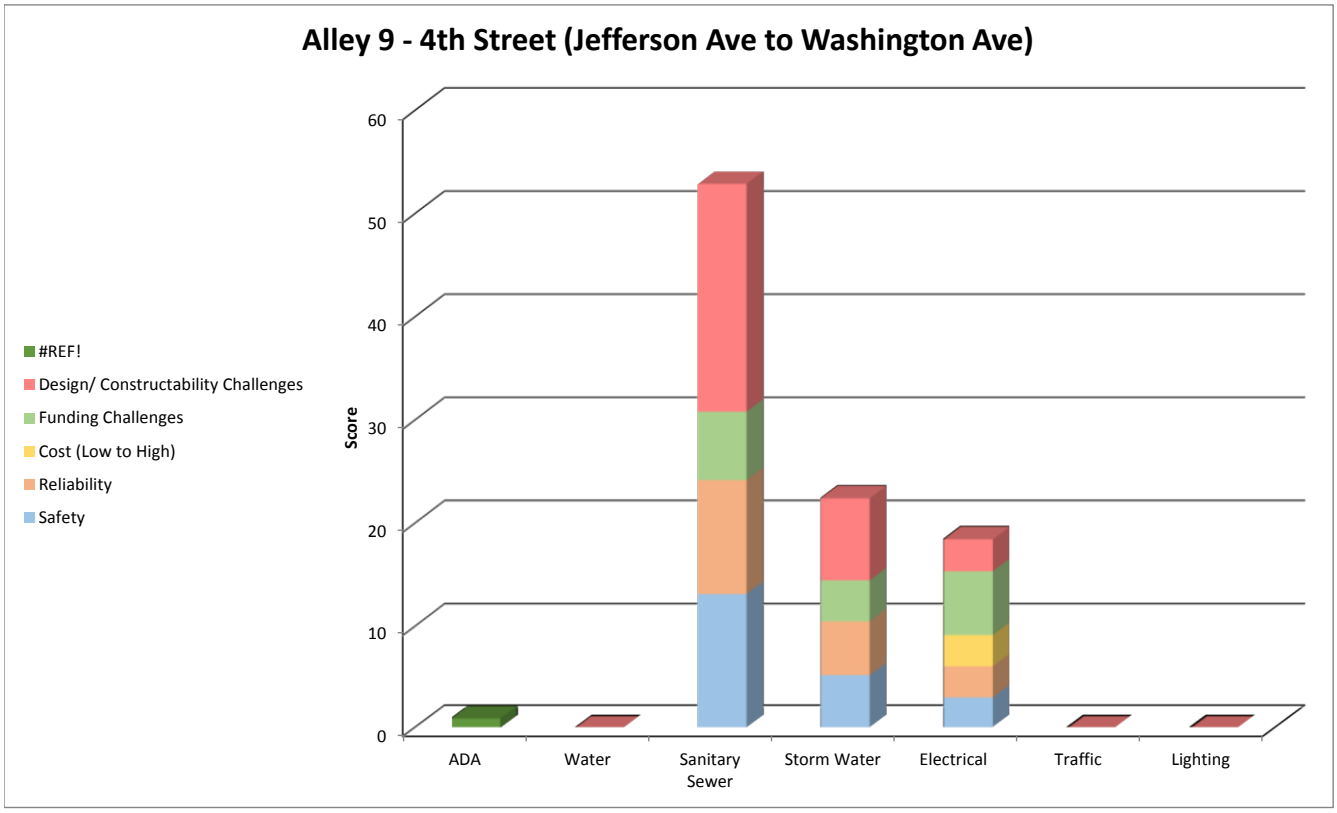
HIP Streets Infrastructure Assessment

Alley 9 Decision Making Model

4th Street (Jefferson Ave to Washington Ave)

Overall Alley Priority - AA

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 9 - Backstage Alley (Cleveland Ave to Lincoln Ave)	**4.74**	**4.26**	**0.68**	**3.68**	**7.26**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	13.2	11	0	6.6	22
Storm Water	5.28	5.28	0	3.96	7.92
Electrical	3.08	3.08	3.08	6.16	3.08
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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HIP Streets Infrastructure Assessment

Alley 10 Decision Making Model

3rd Street (Garfield Ave to Railroad Ave)

Overall Alley Priority - AG

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 10 - Between 4th St and 3rd St (Lincoln Ave to Jefferson Ave)	**4.34**	**2.60**	**1.62**	**1.68**	**3.76**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	13.6	3.4	0	5.1	10.2
Storm Water	0	0	0	0	0
Electrical	11.9	11.9	9.52	4.76	11.9
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0

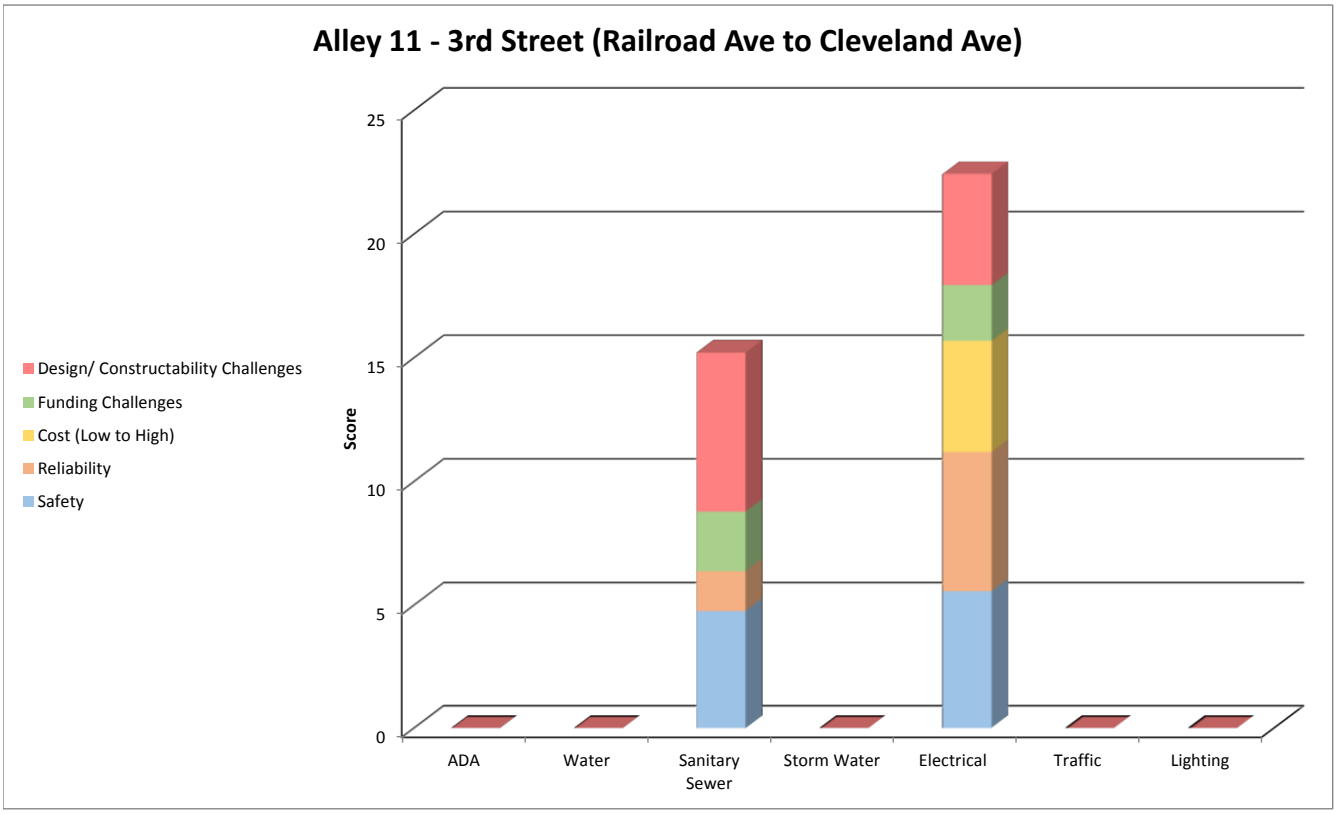
HIP Streets Infrastructure Assessment

Alley 11 Decision Making Model

3rd Street (Railroad Ave to Cleveland Ave)

Overall Alley Priority - AI

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 11 - Fiction Alley (Jefferson Ave to Washington Ave)	**0.83**	**0.58**	**0.36**	**0.37**	**0.87**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	4.8	1.6	0	2.4	6.4
Storm Water	0	0	0	0	0
Electrical	5.6	5.6	4.48	2.24	4.48
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



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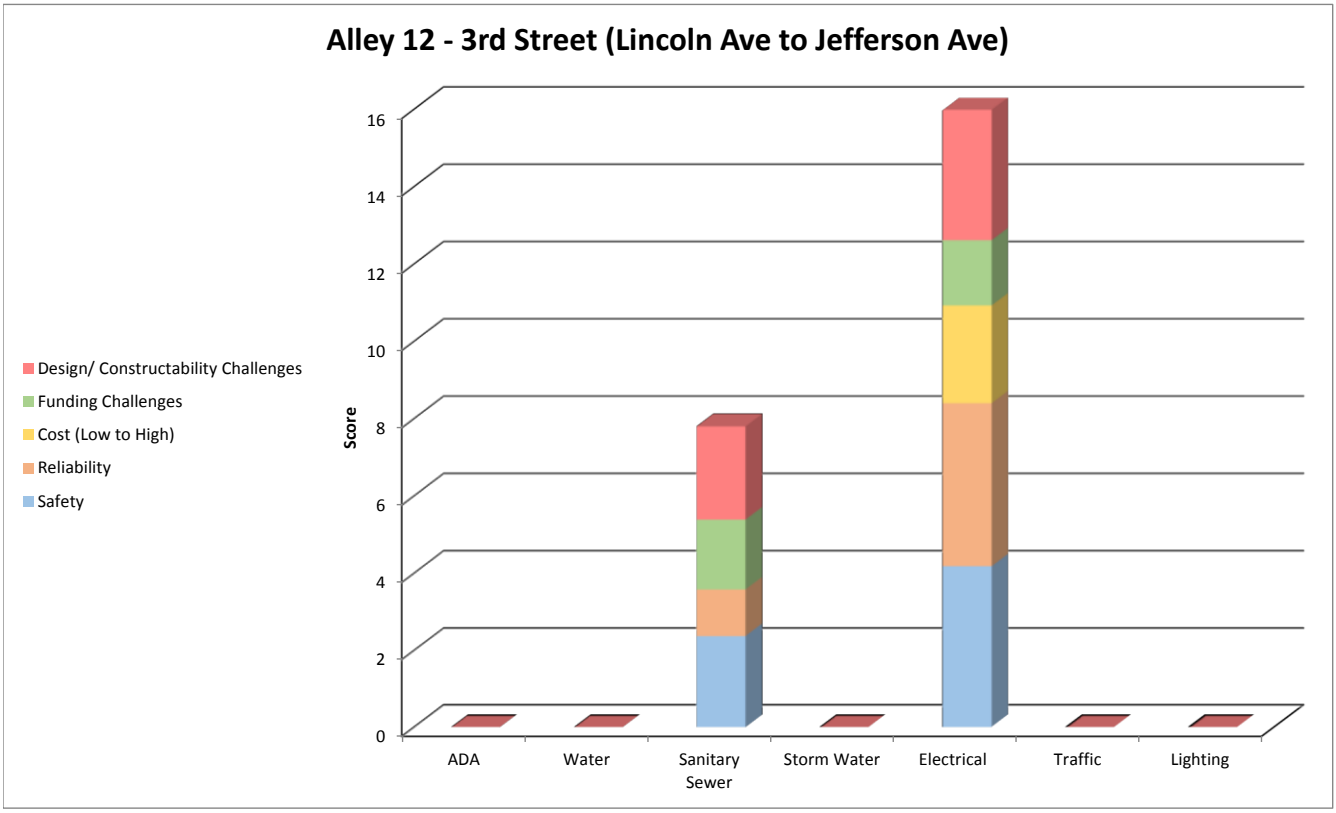
HIP Streets Infrastructure Assessment

Alley 12 Decision Making Model

3rd Street (Lincoln Ave to Jefferson Ave)

Overall Alley Priority - AL

Criteria Categories	Score				
	Safety	Reliability	Cost (Low to High)	Funding Challenges	Design/ Constructability Challenges
Alley 12 Between 4th St and 3rd St (Mid-Block to Garfield Ave)	**0.40**	**0.32**	**0.15**	**0.21**	**0.35**
ADA	0	0	0	0	0
Water	0	0	0	0	0
Sanitary Sewer	2.4	1.2	0	1.8	2.4
Storm Water	0	0	0	0	0
Electrical	4.2	4.2	2.52	1.68	3.36
Traffic	0	0	0	0	0
Lighting	0	0	0	0	0



Block No.	HIP Modernization Plan Level of Detail	Parking Usage Score 8-2-18 12:00PM	Parking Usage Score 8-4-18 12:00PM	Parking Usage Score 8-10-18 12:00PM	Parking Usage Score 8-10-18 6:00PM	Average Parking Score	Combined Score	Combined Score x 2
Block 1	1	2	1	1	1.5	1.375	1	3
Block 2	2	1	1	1.5	4	1.875	4	8
Block 3	2	3.5	1.5	2.5	4	2.875	6	12
Block 4	2	4	3.5	3	4	3.625	7	15
Block 5	2	1	1	3	3.5	2.125	4	9
Block 6	3	4	1.5	4	4	3.375	10	20
Block 7	3	4	2	4	4	3.5	11	21
Block 8	3	4	3.5	4	4	3.875	12	23
Block 9	2	4	2	2	3.5	2.875	6	12
Block 10	1	1	1.5	2.5	1	1.5	2	3
Block 11	2	4	3.5	4	4	3.875	8	16
Block 12	2	3.5	4	4	3.5	3.75	8	15
Block 13	1	2.5	3.5	3.5	2	2.875	3	6
Block 14	1	2	4	1	4	2.75	3	6
Block 15	3	2	1	4	4	2.75	8	17
Block 16	3	4	3	4	4	3.75	11	23
Block 17	1	4	4	4	3	3.75	4	8
Block 18	2	3.5	3.5	4	3.5	3.625	7	15
Block 19	1	3	2.5	3.5	4	3.25	3	7
Block 20	3	1.5	1	1	4	1.875	6	11
Block 21	3	3.5	1.5	4	4	3.25	10	20
Block 22	3	4	2	4	4	3.5	11	21
Block 23	3	3.5	3	4	4	3.625	11	22
Block 24	3	4	3.5	4	4	3.875	12	23
Total								**330**

Alley No.	Alley Score
Alley 1	7
Alley 2	7
Alley 3	11
Alley 4	16
Alley 5	18
Alley 6	19
Alley 7	20
Alley 8	20
Alley 9	22
Alley 10	17
Alley 11	8
Alley 12	6

Note:
Alley scores are the average of all blocks surrounding the alley

Notes:
Parking Usage Score by Peak Occupancy Heat Map from Walker Consultants Parking Study Phase 1; dated December 2018

Legend

Parking Usage Score	% Usage
1	0-49%
2	50-60%
3	70-84%
4	85-100%