

**PLANNING DEPARTMENT
MEMORANDUM 17 - 45**

DATE: July 24, 2017
TO: Honorable Mayor Joyce Downing and City Council Members
FROM: James A. Hayes, AICP, City Manager *JH*
Brook Svoboda, Director of Planning & Development *WS*
SUBJECT: CR-78 South Huron Landscape Project

PURPOSE

City Council will be considering Resolution 78, a resolution to award a contract for the 2017 South Huron Landscape Project.

BACKGROUND

The City issued an IFB for the project and received five (5) proposals (**Attachment 1**). The project reflects implementation of **Option 2** of the South Huron St Implementation Study that was presented to Council on April 14, 2017 (**Attachment 2**).

UPDATE

City Council increased the amount allocated to this project from \$125,000 to \$160,000 at the June 26, 2017 meeting and directed staff to bring forward a contract for the project.

BUDGET IMPLICATIONS

Work completed under this contractor will be expensed from the 4.00 Mills Capital Projects Fund.

Appropriation	\$160,008.00
Western States Reclamation	(\$135,008.00)
Owner Contingency (16%)	(\$25,000.00)
Balance	\$0.00

SCHEDULE/TIME IMPLICATION

May 2017, the City posted an Invitation for Bid was (IFB2017-020) for the South Huron Landscape Project. May 31, 2017, a mandatory pre-bid meeting was held in which five (5) contractors attended. June 2017, The City accepted bids from five (5) contractors. Bids ranged from \$135,008.00 to \$192,200.00. The lowest responsible bidder was **Western State Reclamation Inc.**, with a base bid of \$135,008.00. Reference checks were performed and determined the Contractor's past performance on similar projects meets City Standards.

The project is anticipated to start in September and have a 45-day construction schedule.

STAFF RECOMMENDATION

Attached to this memorandum is a Resolution that, if approved, would:

1. Authorize the Mayor to execute a contract between the City of Northglenn and **Western States Reclamation Inc** for the 2017 South Huron Landscape Project in the amount of \$135,008.00;

2. And authorize the City Manager, on behalf of the City, to approve changes in the scope of work and execute relevant change orders up to the approved expenditure limit of \$160,008.00

Staff recommends approval of Council Resolution 78.

STAFF REFERENCE

Brook Svoboda, Director of Planning & Development, bsvoboda@northglenn.org, 303.450.8937

ATTACHMENTS

- Attachment 1 Bid Summary
- Attachment 2 South Huron St Implementation Study



CITY OF NORTHGLENN
FORMAL BID SUMMARY

BID NUMBER: IFB 2017-020

BID NAME: 2017 South Huron Street Landscape Project

DEPARTMENT: Planning and Development

ATTACHMENT 1

	BID RECEIVED	BID RECEIVED	BID RECEIVED	BID RECEIVED	BID RECEIVED	BID RECEIVED
DATE DUE: 6/15/17	DATE: 6/15/17	DATE: 6/15/17	DATE: 6/15/17	DATE: 6/15/17	DATE: 6/15/17	DATE: 6/15/17
TIME: 2:00 p.m. MST	TIME: 8:54	TIME: 12:56	TIME: 1:45	TIME: 1:50	TIME: 1:51	TIME: 1:51
Addendum 1	yes	yes	yes	yes	yes	yes
Total for all items	159,418.80	178,415.00	155,543.00	135,008.00	192,200.00	192,200.00

Integrated Site Services INC.

Colorado Designscapes INC.

Bloom Floraiscapes

Western States Reclamation INC.

Richdell Construction INC.

Scotty John
Finance Department

Shannon Fields
City's Clerk's Office

6/15/2017
Date

ATTACHMENT 2

PLANNING AND DEVELOPMENT DEPARTMENT

MEMORANDUM 17-22

DATE: April 17, 2017
TO: Honorable Mayor Joyce Downing and City Council Members
FROM: James A. Hayes, AICP, City Manager
Brook Svoboda, Director of Planning and Development
Alan Sielaff, Planning Technician
SUBJECT: Huron Street Interim Improvement Study

Purpose

To present Council the final draft of the Huron Street Interim Improvement Study, as well as build consensus on moving forward with implementation of recommendations within the plan.

Background

This project examines the section of Huron Street that runs south of 104th Avenue to the City boundary at 97th Avenue / Fred Drive, a distance of approximately 4,600 ft. The focus is on the non-roadway portions of the right-of-way (ROW), including sidewalks, landscaping, fencing and any other features in the public realm. The outcome identifies current maintenance responsibilities, examine existing issues, and provides short-term action plan for improvement of the corridor moving forward. City Council has appropriated an initial \$50,000 budget to study the corridor and implement limited immediate improvements beginning in summer 2017. Attached hereto as **Attachment 1** is the Huron Street Interim Improvement Study. The Study details the process and supporting documentation for the recommendations listed in this memo.

Update

NA

Budget Implications

Council has already budgeted \$50,000 towards corridor improvements. Should City Council determine more funds should be allocated towards the project in 2017, a budget amendment would be necessary. Implementation of all identified options is estimated at \$220,000 which would require an additional appropriation of \$170,000.

Schedule/Time Implications

The current budgeted \$50,000 and any additional allocated funds can be spent in 2017. However, additional savings and cost efficiencies could be realized if construction were scheduled for 2018 construction season.

Next Steps/City Council Options

Staff is seeking feedback from Council on whether they concur with the recommendations staff provided as well as direction with how to move forward. Staff has outlined the following options, but additional options or combinations of presented options may be considered.

- Option 1 – Full installation of rock cobble and arterial fencing with budget amendment (\$184,000 - \$219,000 total cost, approximately \$170,000 budget addition required)
- Option 2 – Partial installation of rock cobble with budget amendment (\$66,000 - \$101,000 total cost, approximately \$50,000 budget addition required)
- Option 3a – Partial installation of rock cobble within existing \$50,000 budget (\$37,000 - \$53,000)
- Option 3b – High need installation of rock cobble and partial arterial fence within existing \$50,000 budget (\$39,000 – \$48,000)

Staff Recommendation

Staff recommends Option 2 at a cost of approximately \$100,000. The basis for this recommendation is that it addresses the majority of the area associated with the issue identified as the largest concern, the unpaved portion of City-maintained right-of-way adjacent to detached sidewalks and single-family residences, within the corridor. This action will require a budget amendment to be appropriated from the CIP Fund.

Staff Reference

Brook Svoboda, Director of Planning and Development bsvoboda@northglenn.org 303.450.8937
Alan Sielaff, Planning Technician asielaff@northglenn.org 303.450.8738

Attachments

Attachment 1
Attachment 2

Huron Street Interim Improvement Study
Presentation



Planning & Development

11701 Community Center Drive
Northglenn, CO 80233
P: 303-450-8739
F: 303-450-8708
northglenn.org

HURON STREET INTERIM IMPROVEMENT STUDY

APRIL 17, 2017

PROJECT OVERVIEW

Scope

This project examines the section of Huron Street that runs south of 104th Avenue to the City boundary at 97th Avenue / Fred Drive, a distance of approximately 4,600 ft. The focus is on the non-roadway portions of the right-of-way (ROW), including sidewalks, landscaping, fencing and any other features in the public realm. The outcome will identify current maintenance responsibilities, examine existing issues, and provide short-term recommendations to establish an action plan for improvement of the corridor moving forward. City Council has allocated an initial \$50,000 budget implement limited immediate improvements beginning in summer 2017.



Process

The City Manager identified the Planning & Development Department as the project lead to study this project. An internal stakeholder group consisting of staff from Planning, Parks & Recreation, Neighborhood Services, and Public Works was formed to provide input and direction throughout the project. Planning staff collected data and researched existing policies, coordinated a walking audit conducted with Ward 4 Councilmembers, and drafted the final report. The findings of this report are to be presented to City Council for direction on implementation of short-term recommendations, and to consider future strategies to identify additional improvements to the Huron St. corridor for longer-term Capital Improvement Program (CIP) projects.

DATA COLLECTION & RESEARCH

Current Maintenance Responsibilities

Currently, maintenance by the City takes place along many portions of the unpaved ROW, often in the form of a landscape buffer between the street curb and sidewalk. Maintenance is done by the City's Parks Maintenance staff and consists of snow removal, litter removal, spraying for weeds, and some vegetation mowing. Specifically, these locations include the following (indicated in yellow on the map below):

- West side of Huron St., along the side of single-family properties south of the Riviera apartment from approximately 103rd Ave. to the City boundary at 97th Ave.
- East side of Huron St. along the rear of the single-family properties from 104th Ave. south to Northglenn High School property.
- East side of Huron St., along the side of single-family properties from 100th Pl. to south of Melody Dr. ending at the Korean Church.



These areas are maintained in accordance with Section 11-6-13 (h) of the zoning code. The fencing along this corridor is all privately maintained by abutting property owners. Other features in the ROW area include bus stops, street signs, street lights, utility poles, lines, and boxes, and fire hydrants.

Applicable City Code Sections

Along with 11-6-13 (h), the zoning code provides guidance regarding a few other aspects of the Huron corridor, such as fence consistency, landscaping guidelines, and site access. See below for full code sections:

- Section 11-6-13. Landscaping.
 - 11-6-13 (c) (7): Landscaping along arterial streets should be emphasized by use of more or larger plant materials or special landscape features.
 - 11-6-13 (h): All property owners shall landscape and maintain the unpaved portion of City right-of-way abutting their property with the exception of owners of single family residential properties abutting access controlled arterials. **All City right-of-way access controlled arterials abutting single-family residential properties shall be maintained by the City. Access controlled arterial shall mean 104th Avenue, 112th Avenue, 120th Avenue, Huron Street and Washington Street.**
- Section 11-34-3. Circumstances Requiring Fences and Screens.

- 11-34-3 (c): Fencing and Screening Along Arterial Streets.
 - (1) For any existing development or dwelling, **any new or replacement fence or screen along a rear or side property line abutting an arterial street shall be no less than six feet high and shall be either a privacy fence, a landscaping screen, or a combination of both.**
 - (2) On corner lots, arterial fencing or screening shall comply with the corner vision triangle and height requirements of this Article.
 - **(3) When a new fence is constructed along an arterial property line adjacent to and along an existing fence, the existing fence including posts shall be removed.**
 - (4) Direct vehicular access to arterial streets from abutting properties zoned single-family residential is prohibited. Openings in screens or gates in fences for such access is prohibited except where an arterial is the only access to the property.

Data Inventory

Along with maintenance identification, data on physical aspects of the corridor was collected in order to establish a baseline of current conditions. The following information was collected; abutting subdivision, abutting land use, sidewalk type, sidewalk material, sidewalk width, sidewalk buffer width, sidewalk buffer landscape material, existence of abutting fence, fence material, fence height, landscaping between fence and sidewalk, existence of street lights, overhead utilities, ground utility boxes, fire hydrants, and bus stops (see Appendix A – Data Inventory).

The data provides an overview of the prevalence of various corridor considerations and served as a starting point for issue identification along the corridor. Any hardscape improvements should field verify existing conditions at the time of the project and collect more accurate measurements if necessary.

Previous Planning Efforts and Studies

A known issue is drainage concerns to the north of the high school property along the Tuck Lateral. A 2005 City drainage study that identified this location as an existing deficiency (see Appendix B – J&T Drainage Study_Area 7 & 58).

Huron St. has previously been identified as a candidate for enhanced public improvements. It was included in a Draft Corridor Master Plan that was first developed in 2008 and revisited in 2014. The Master Plan included Huron St. as one of the City's five focus arterials and proposed public realm fencing, widened sidewalks, and a landscaped median. While the master plan was never adopted, some elements of the plan including street improvements have been incorporated in recent years including Huron St. north of 104th Ave (see Appendix C – NG Corridor Study MP 2-23 DRAFT_Huron only).

Current & Future City Projects

The following are known projects that may impact the Huron Corridor study area in 2017 and beyond:

- **Northglenn High School Zone Signage:** Public Works is planning to implement signage improvements to Huron St. approaching and along Northglenn High School to include a new reduced speed school zone and heightened pedestrian awareness. This project is scheduled to be complete by June of 2017 (see Appendix D – School Zone Signage).
- **Concrete Repair Program:** Public Works also administers the sidewalk repair program and is currently finalizing an inventory of repairs to be made during summer of 2017. Three (3) minor improvements are identified for Huron St. to the south of the corridor. These are all small and will encompass only a single sidewalk panel or two (see Appendix E – 2017 Sidewalk Repair).
- **Huron Shopping Center improvements:** As part of the possible improvements, the property owners, including the Northglenn Urban Renewal Authority, are coordinating on providing on-site drainage improvements. That work will decrease the amount of runoff onto Huron St. and should improve existing drainage issues at the northern section of the corridor.
- **Huron Street Rehabilitation 2019-2020:** The 2017 City Budget includes a Capital Improvement Program project for Huron St. south of 104th Ave. The budget item has a January 2019 start date, two year project scope and a budget of \$1.8 million dollars for pavement rehabilitation and drainage improvements. At this point details of the project are minimal (see Appendix F – 2017 City Budget - Huron Street Rehabilitation).
- **Huron Street Rebuild (CIP – unfunded):** Although not included in the 5-year CIP project list, the unfunded projects list includes a \$15,000,000 redesign of Huron St. south of 104th. This project would likely be dependent on the property mill levy being extended in the fall of 2017 elections. Preliminary discussions indicate the work is envisioned to include ROW to ROW reconstruction (between the fences) including sidewalks and landscaping if incorporated into the budget. This is a pivotal consideration, meaning any hardscape improvements implemented in the short-term likely will need to be removed.

ISSUE IDENTIFICATION

Internal Stakeholder Review Group

An internal stakeholder group of City staff members was formed to help guide this report throughout the process. The group helped identify current maintenance practices, challenges along the corridor, and to provide review of the project recommendations. Staff identified the following as key maintenance issues:

- Inconsistent landscaping - changing policy over the decades has resulted in abutting homeowners implementing their own landscape improvements in places, only to have them fall into disrepair in later years.
- Lack of irrigation – upkeep is mainly limited to vegetation mowing and spraying for weeds.
- Narrow sidewalks – combined with proximity of fences, crossing signals, and other obstacles represent a challenge to snow removal with existing equipment.
- Litter - the presence of the high school means a large volume of youth walk to the school both morning, lunch, and afternoon, often with food or snacks in hand. Some locations, especially to the north of the school on the east side of Huron St. are especially susceptible to litter as this area backs up to homes.
- Bus stops – the stops along Huron St. generally have no improvements such as concrete pads or shelters. This can mean the landscaping in these areas are especially distressed due to the high foot traffic.

Walking Audit with Ward 4 Councilmembers & Public

A vital part of this report was to conduct a walking audit of the corridor with Ward 4 Councilmembers Snetzinger and Esquibel. The Councilmembers were joined by two residents who live along the corridor. Members of the staff stakeholder group also joined the discussion of issues and recommendations to provide insight as to how different departments interact with the corridor. The audit focused on corridor sections by public or private maintenance responsibility. The group discussed each section to its specific needs and possible solutions. While the tour did not canvas the entire corridor, it covered a representative portion of the existing issues throughout the corridor, detailed below.



Huron Shopping Center and Riviera Apartments:



This section is adjacent to a large commercial shopping center and a multifamily apartment complex. The maintenance of the landscaping in the right-of-way is the responsibility of the adjacent private property owners. Discussion included how this area immediately south of 104th Ave. is a gateway to the community. While existing aesthetic concerns with the vacant buildings and parking lot at the shopping center were addressed, the focus of street frontage on Huron St. was that the area abutting the commercial properties was irrigated, well maintained and generally in good shape.



The transition to the Riviera Apartments does include a small area devoid of landscaping, which is representative of the larger issue in other sections of the corridor. Staff is working with the Huron Center development team to ensure this area is addressed if disturbed as part of any drainage improvements. The rocks in the landscaped buffer along the apartment property, while aging and distressed in places, was noted as being far better than nothing, and not a major concern. The weed barrier could use repair and

in places the buffer could be raised. Some of this rutting is likely the result of reoccurring flooding from Huron St. over the years, which may be improved with drainage improvements slated for the Huron shopping center in the coming months.

Single-family residential adjacent to Huron St:



Single family homes are the majority of the adjacent land use along the south Huron corridor. This area is maintained by the City. While staff makes periodic sweeps of the corridor to spray for weeds and clean up litter, there is not much in terms of existing landscaping to maintain. The following issues were identified throughout Huron St. south of 104th.

Unpaved Buffers >: Many of the landscaped buffers are bare dirt or a mix of grass and weeds. The corner areas next to intersecting streets were often in the worst condition, with visible rutting in many locations. The residents in attendance noted that efforts to maintain grass along the corridor is often in vain as de-icing chemicals used to treat the road in winter kill vegetation when it is splashed onto the buffer. It was noted that the south and east side of the corridor, from approximately Melody Dr. to 100th Ave. often is in the worst shape in terms of bare and nonexistent landscaping. These areas were identified as the most immediate concern.





< Street Trees: A number of trees exist along these areas of the corridor and many have become overgrown and unkempt. Some may even be dead and are candidates for removal. The trees in general create a difficult situation as they have grown over and around utility lines along the west side of the street.

Bus stops >: The bus stops along this section see heightened use with students from Northglenn High School taking the bus to school. There are no concrete pads or shelters at the stops across from the high school and in other locations along the corridor. Because of the higher foot traffic these unpaved areas are some of the most barren. Mud and snow can pose significant obstacles for transit users in these areas as well.



< Safety: The residents commented about the high speeds on Huron St., which is especially concerning considering the number of students in the area. A Councilmember also pointed to the intersection of 99th Ave. and Huron St. as being particularly difficult for residents to turn out from due to the hill on Huron St. and high speeds on the street.

Fencing >: Neighborhood fences were noted along the corridor for their inconsistency in height, material, and distance from sidewalk. While apparent throughout the corridor, this issue was not identified by Councilmembers as an immediate priority.



Northglenn High School



Street frontage along the high school is maintained by the Adams 12 school district. The landscaping along Norse Park and north to the intersection at 102nd Ave. is irrigated and well maintained. The landscaping north of the 102nd Ave. however appears to have fallen into disrepair until the entire area becomes paved to the north of the school support buildings. The only other issue identified here was the trash build up along the ditch on the north of the high school property and along the fencing of the neighboring houses. The City should reach out to the school district to discuss any maintenance issues and coordination of recommended corridor enhancements.

Single-family residential, east side of Huron St. at 104th Ave:



This section of the corridor is City maintained right-of-way to the rear property lines of a number of homes. Trash, fencing, vegetation, and sidewalk condition were the main issues identified here. Wind-blown trash from the commercial shopping center to the west builds up along the fencing here. The fences along this stretch were particularly inconsistent as short chain-link fences, double chain-line and wood fences, and taller, older and poorly maintained wood fences exist. The sidewalk in this area is

chipping and damaged to a greater extent than elsewhere on the corridor, which is of particular concern since it is a heavily used pedestrian route.

RECOMMENDATIONS

The following recommendations were developed in conjunction with members of the internal stakeholder group following the walking audit. Specific solutions were discussed in terms of addressing the major issues, feasibility, cost, timing, and other impacts such as maintenance and long-term impact. Ultimately it was decided that for improvements of this scale, the majority of the work would need to be done by outside contractors.

Cost estimates are preliminary only; informal quotes were utilized for these recommendations. Full contract bidding processes may need to be initiated and could yield different outcomes depending on the decided scope. For this project to be completed in 2017, a department and project manager will need to be identified and existing workloads accommodated within existing staff resources. It is not clear if this can be done at this time. If delayed until 2018, work can be planned for with existing staff and bids may be more competitive as part of the common summer project schedule between contractors and local governments.

Ultimately the recommendations presented here will be limited in their impact and long-term viability. Sidewalks are not being replaced or widened, irrigation is not being installed to support vegetation, the roadway is not being altered to address drainage and design speed. These are the long-term solutions to the corridor that will need to be incorporated to include pedestrian, bicycle, and transit into a full multimodal design that can be accomplished through a future CIP project. The unadopted 2014 Corridor Master Plan and Connect Northglenn, the recently underway bicycle and pedestrian master plan should be used as guiding documents for any future Huron St. reconstruction CIP project.

The following options are presented as a choice between addressing the full scope of recommendations in the short-term but requiring a budget amendment, or addressing the highest need issues with the highest impact implementation strategies while remaining within the existing budget. Please refer to the overview maps of each option on the following pages. Details of each strategy follow.

Option 1 – Full installation of rock cobble and arterial fencing with budget amendment (\$184,000 - \$219,000 total cost, approximately \$170,000 budget addition required), see map on page 13.

- Install rock cobble along entire City-maintained ROW, 16 ½ blocks (\$81,000 - \$116,000).
 - Includes cost of ground clearing, tree removal, and bus stop access installation.
- Address fences through combination of code amendment and installation of 700' of arterial fencing south of 104th Ave to Northglenn High School (\$103,000).
- Identify and enforce existing code violations throughout corridor (\$0).

Option 2 – Partial installation of rock cobble with budget amendment (\$66,000 - \$101,000 total cost, approximately \$50,000 budget addition required), see map on page 14.

- Install rock cobble in City-maintained landscape buffers, 12 ½ blocks (\$66,000 - \$101,000).
 - Includes cost of ground clearing, tree removal, and bus stop access installation.

- Address fences through combination of code amendment and future installation of 700' of arterial fencing south of 104th Ave to Northglenn High School as part of future CIP project (\$0).
- Identify and enforce existing code violations throughout corridor (\$0).

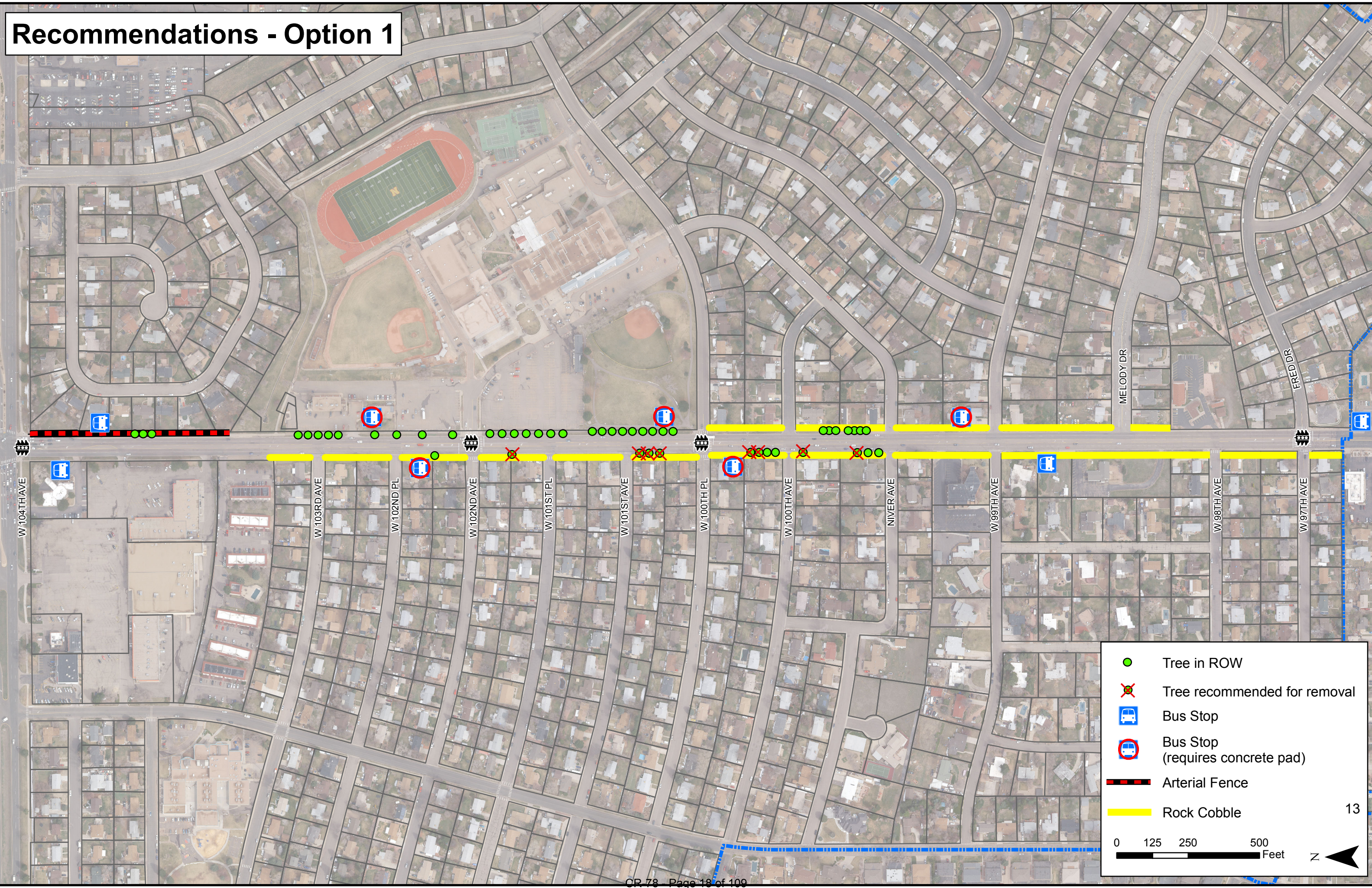
Option 3a – Partial installation of rock cobble within existing \$50,000 budget (\$37,000 - \$53,000), see map on page 15.

- Install rock cobble in 2 ½ block high need portion of City-maintained landscape buffers (\$11,000 - \$15,000) and additional estimated 4 ½ blocks with remaining funds (\$20,000 - \$27,000).
- Address fences through combination of code amendment and future installation of 700' of arterial fencing south of 104th Ave to Northglenn High School as part of future CIP project (\$0).
- Identify and enforce existing code violations throughout corridor (\$0).
- Tree pruning and removal throughout 12 ½ blocks of City-maintained landscape buffers (\$4,000 - 6,000).
- Install bus stop accessibility paths at stops on detached sidewalks throughout corridor (\$2,000 - \$5,000).
 - Pursue outside funding for additional bus stop enhancements – concrete pads, benches, trash bins, and shelters.

Option 3b – High need installation of rock cobble and partial arterial fence within existing \$50,000 budget (\$39,000 – \$48,000), see map on page 16.

- Install rock cobble in 2 ½ block high need portion of City-maintained landscape buffers (\$11,000 - \$15,000).
- Address fences through combination of code amendment and installation of 150' of arterial fencing south of 104th Ave. to existing brick column (\$22,000).
- Identify and enforce existing code violations throughout corridor (\$0).
- Tree pruning and removal throughout 12 ½ blocks of City-maintained landscape buffers (\$4,000 - 6,000).
- Install bus stop accessibility paths on stops at detached sidewalks throughout corridor (\$2,000 - \$5,000).
 - Pursue outside funding for additional bus stop enhancements – concrete pads, benches, trash bins, and shelters.

Recommendations - Option 1



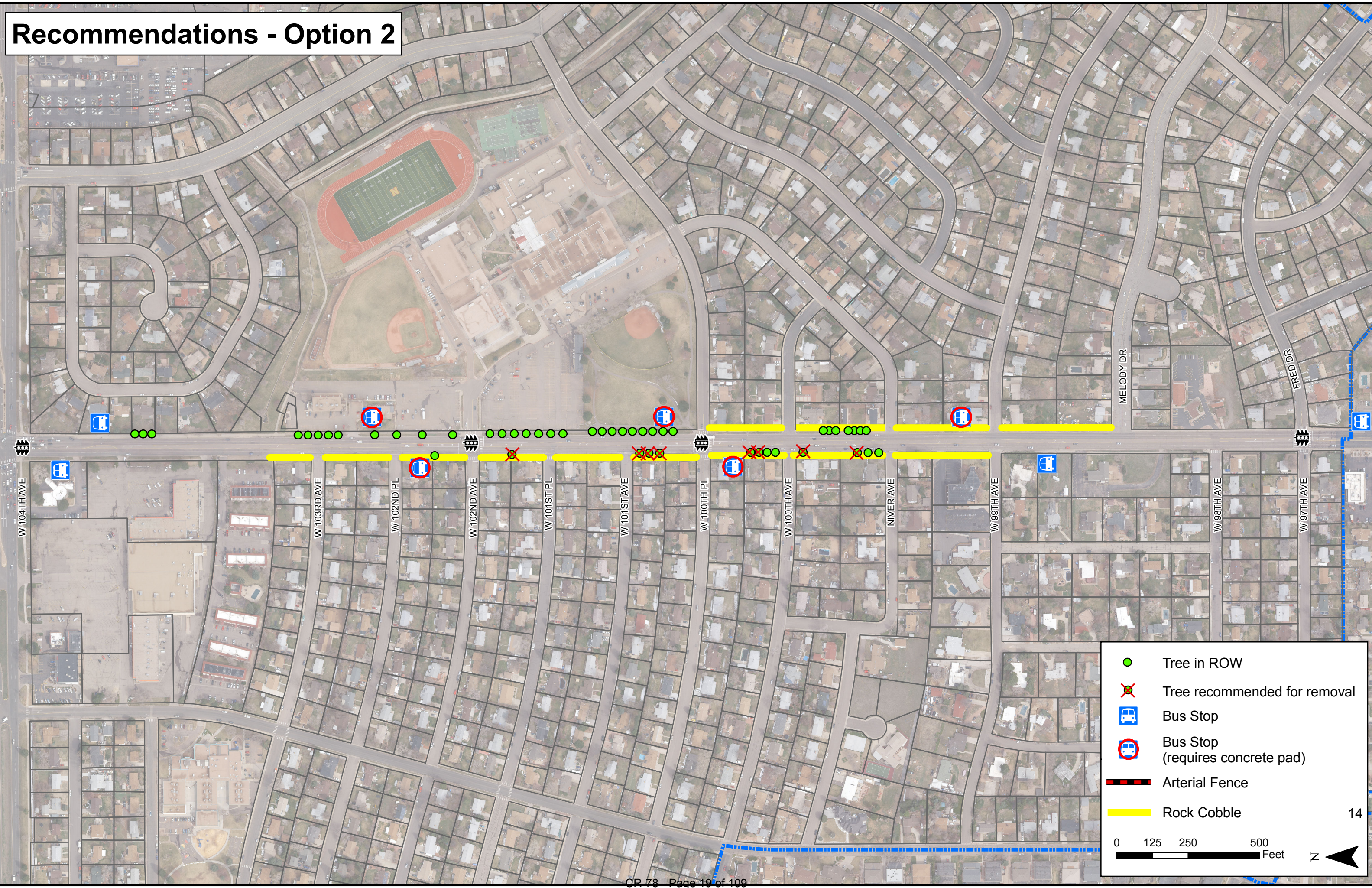
	Tree in ROW
	Tree recommended for removal
	Bus Stop
	Bus Stop (requires concrete pad)
	Arterial Fence
	Rock Cobble

0 125 250 500 Feet

13

N

Recommendations - Option 2



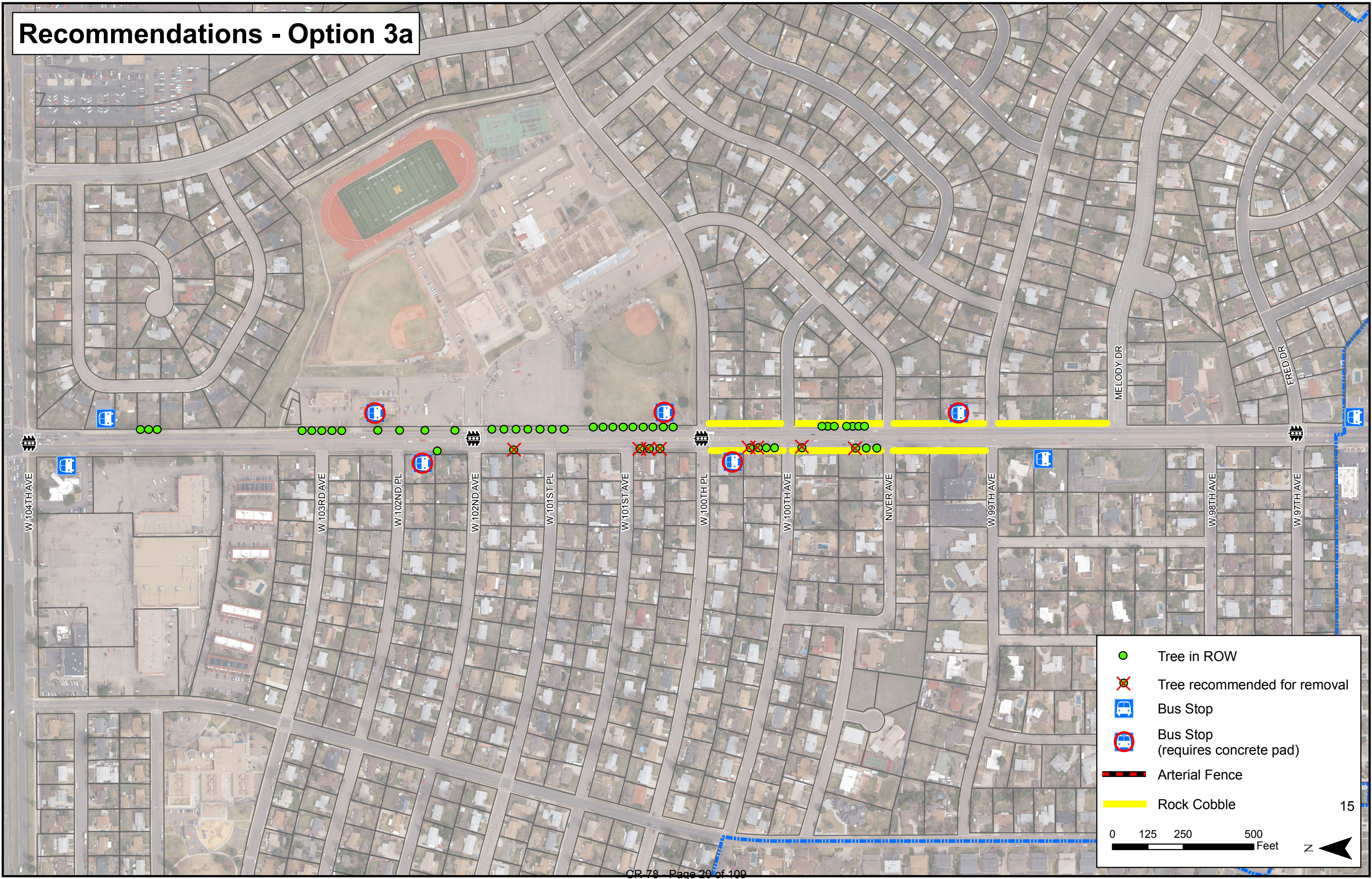
	Tree in ROW
	Tree recommended for removal
	Bus Stop
	Bus Stop (requires concrete pad)
	Arterial Fence
	Rock Cobble

0 125 250 500 Feet

14

North arrow pointing up.

Recommendations - Option 3a



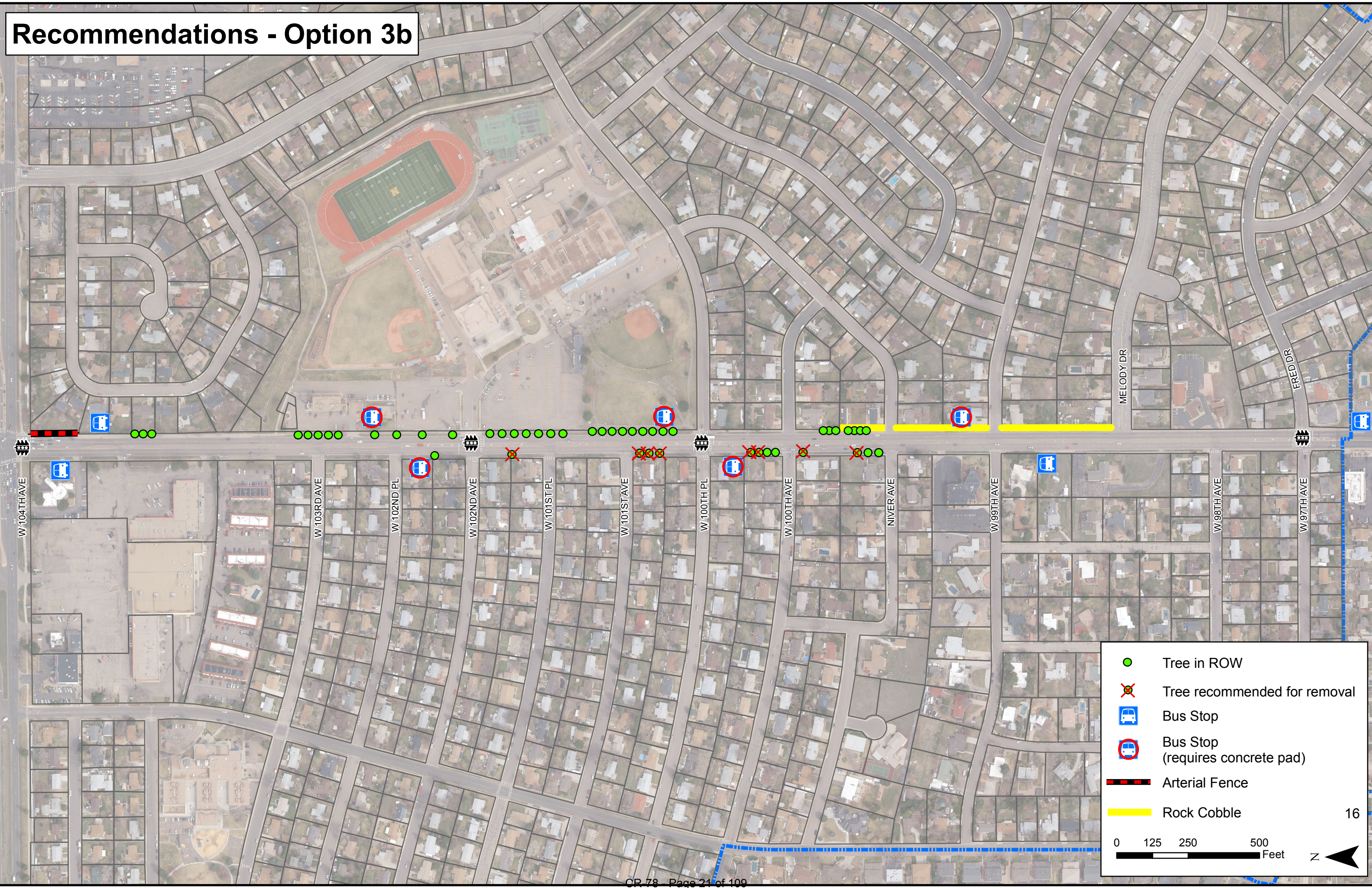
- Tree in ROW
- Tree recommended for removal
- Bus Stop
- Bus Stop (requires concrete pad)
- Arterial Fence
- Rock Cobble

0 125 250 500 Feet

15

N

Recommendations - Option 3b



Recommendation Details

Recommendation 1: Install rock cobble in City-maintained ROW

- **Location:** Unpaved portions of ROW
- **Reason:** These areas identified as highest priority aesthetic concern.
- **Outcome:** Improve consistency and appearance of City-maintained landscaped buffers.

Project Sequence	Action	Considerations	Cost Estimate
1	Communication with adjacent property owners	<ul style="list-style-type: none"> • Contact adjacent property owners to inform of project and communicate maintenance expectations moving forward. • Some residents actively “maintain” these areas including vegetation. Some resident installed vegetation may need to be removed. • City would maintain all installed rock cobble area. 	\$0
2	Remove dead trees, prune remaining	<ul style="list-style-type: none"> • Parks staff has identified a number of trees as candidates for removal. • Overhead utility lines exist along entire west side of corridor. Xcel requires their crews to clear tops of all trees under lines before any other tree maintenance work could be done. This action will likely make additional trees unviable and require most or all trees on west side to be removed. • Parks staff can prune and remove trees, but can only be done within existing project schedules. Completion anticipated to take 6-12 weeks during off-peak seasons. • Quote provided by outside company to accomplish work in 2017. Cost would likely increase w/additional tree removal. 	\$4,000 - \$6,000
3	Clear landscaped buffers of existing vegetation and other materials	<ul style="list-style-type: none"> • A variety of conditions and materials exist in these areas. • Work required by outside contractor, cost largely unknown. Would likely require competitive bid process ~ at least 2 months to contract. • Any existing buried utilities would need to be located and avoided during clearance and excavation. 	\$20,000 - \$40,000

Recommendation 1 continued on next page

Project Sequence	Action	Considerations	Cost Estimate
4	Install bus stop accessibility paths	<ul style="list-style-type: none"> • Five (5) existing bus stops are located in areas with detached sidewalks. • Three (3) of these bus stops are located in existing City-maintained ROW. These would require concrete to maintain accessibility from curb to detached sidewalk if rock cobble installed. • Two (2) additional stops are located on Northglenn High School maintained ROW. Staff recommends improvements for all five stops. • Coordination is required with RTD on design (single 6' path or 30' – 40' landing pads). • Potential cost savings by pursuing RTD SBP Local Government Grant Program project funding for installation of concrete and other enhancements such as benches, shelters, and trash bins. Award timeline as early as June 2017. • Potential cost savings by pursuing installation by private company for concrete and other enhancements such as benches, shelters, and trash bins in exchange for advertising space in ROW. Would require license agreement. • Improvements may need to be removed in future CIP. 	\$2,000 - \$5,000
5	Install rock cobble	<ul style="list-style-type: none"> • Will introduce maintenance and snow removal difficulties. • Installation will require work in ROW, likely adjacent lane closures. • Highest need area identified as 2 ½ blocks east side from Melody Dr. to north of Niver Ave. Estimated cost of \$11,000 - \$15,000 (includes clearance costs). Staff does not believe only addressing this limited area would accomplish goal of project. • Option 3a includes additional 4 ½ block area identified south of 100th Pl. Cost estimated at \$31,000 - \$42,000 (includes high need area and clearance costs). Chosen for consistency with limited high need area. • Additional 4 block optional area identified south of 99th Ave/Melody Dr. Cost estimated at \$15,000 (does not include clearance costs, assumed to be absorbed within high clearance estimate of \$20k - \$40k provided in number 3). Staff does not believe addressing this area as pivotal to goal of project. • Improvements may need to be removed in future CIP. 	\$40,000 - \$50,000 (base estimate for 12 ½ blocks)
Total (including optional blocks to south)			\$81,000 - \$116,00
Recommended 12 ½ block total			\$66,000 - \$101,000

Recommendation 2: Address fences through combination of code improvements and arterial fence installation

- **Location:** Existing fences adjacent to single-family residential properties throughout corridor.
- **Reason:** Current fencing is inconsistent in height, material, design, and condition.
- **Outcome:** Produce a more visually unified corridor.

Project Sequence	Action	Considerations	Cost Estimate
1	Recommend location for City installed arterial fencing	<ul style="list-style-type: none"> • East side of Huron St. north of NGHS is a candidate for arterial fencing. • First 150' of arterial fencing south of 104th Ave. to existing brick column estimated at cost of \$22,000. • Full 700' to Northglenn High School (NGHS) property estimated at total of \$103,000. • Quote based on single business response, costs likely reduced through competitive bid process. 	\$22,000 - \$103,000
2	Address heightened fence standards in Zoning Code Rewrite project	<ul style="list-style-type: none"> • Side yard areas adjacent to single-family residential in remainder of corridor candidate for heightened standards. • Incorporate recommendations from 2014 Corridor Master Plan. • Include as a discussion item for Zoning Project outreach efforts. • Code changes would likely go into effect in 2018 with adoption of new zoning code. 	\$0
Total			\$22,000 - \$103,000
Recommendation Total			\$0

Recommendation 3: Identify and enforce existing code violations throughout corridor

- **Location:** Entire Huron St. corridor south of 104th Ave.
- **Reason:** Existing conditions of unmaintained landscaping and fencing impacting public ROW
- **Outcome:** Clear delineation of public and private maintenance responsibilities

Project Sequence	Action	Considerations	Cost Estimate
1	Enforcement against existing landscaping and fence violations	<ul style="list-style-type: none"> • Existing conditions of overhanging trees and damaged fences can be addressed. • Resident confusion over who is responsible to maintain what. • Community relations may benefit from an outreach effort prior to heightened enforcement. 	\$0

Recommendation 4: Long-term solution for corridor rests in comprehensive “ROW to ROW” redesign as part of future CIP

- **Location:** Entire Huron St. corridor south of 104th Ave.
- **Reason:** Short-term solutions not likely to dramatically increase visual appeal of corridor
- **Outcome:** A more comprehensive multimodal design can address additional identified issues.

Project Sequence	Action	Considerations	Cost Estimate
1	Incorporate into planning and design of future Huron St. reconstruction CIP	<ul style="list-style-type: none"> • Can include sidewalk replacement and widening, installation of irrigation, undergrounding of utilities, reduced design speed, corridor fencing, and other multimodal improvements • Should incorporate 2014 Corridor Master Plan, Connect Northglenn Bicycle and Pedestrian Master Plan • CIP design should be reviewed by Development Review Committee (DRC) and Executive DRC early in process. 	NA

APPENDIX A

West Side Huron

Block	Subdivision	Land Use	Sidewalk Type	Sidewalk Buffer	Buffer Material	Buffer Trees	Buffer Maintenance	Sidewalk Width	Sidewalk Material	Existing Fence	Fence Height	Landscaping (between sidewalk & fence)	Landscaping Maintenance	Street Light	Utility Lines	Utility Box	Bus Stop	Hydrant
W. 97th Ave. (S)	Deza Estates 2nd Flg.	SFD	Attached	None	None	No		10'	Concrete	Wood	6'	Grass / Shrubs	Private	Yes	Yes	Yes	No	No
W. 97th Ave. (N)	Deza Estates 3rd Flg.	SFD	Attached	None	None	No		9'	Concrete	Wood / Split Rail	6' / 3.5'	Grass / Weeds	Private	No	Yes	No	No	No
W. 98th Ave. (S)	Deza Estates 3rd Flg.	SFD	Attached	None	None	No		9'	Concrete	Wood	6'	Grass / Shrubs	Private	Yes	Yes	No	No	No
W. 98th Ave. (N)	Deza Estates 3rd Flg.	SFD	Detached	8'	Grass / Weeds	No		7'	Concrete	Wood / Split Rail	6' / 3.5'	Grass / Weeds	Private	No	Yes	No	No	No
	Deza Estates Flg. 1	Church	Detached	8'	Grass / Weeds	No		7'	Concrete	None	None	None	Private	Yes	Yes	Yes	No	No
W. 99th Ave. (S)	Deza Estates Flg. 1	SFD	Attached	None	None	No		5'	Concrete	Chainlink / Junipers	3.5'	Grass / Weeds	Private	No	Yes	No	Yes, sign only	No
W. 99th Ave. (N)	Victoria Heights West Amended	Church	Detached	8'	Grass / Weeds	No		7'	Concrete	None	None	None	Private	Yes	Yes	No	No	No
Niver Ave. (S)	Victoria Heights West Amended	SFD	Detached	8'	Grass / Weeds	No		7'	Concrete	Wood	6'	Gravel	Private	No	Yes	Yes	No	Yes x2
Niver Ave (N)	Victoria Heights West Amended	SFD	Detached	8'	Grass / Weeds	Yes		7'	Concrete	Wood	6'	Weeds	Private	Yes	Yes	No	No	No
W. 100th Ave. (S)	Victoria Heights West Amended	SFD	Detached	8'	Grass / Weeds	No		7'	Concrete	Wood	6'	Grass / Weeds	Private	No	Yes	No	No	No
W. 100th Ave. (N)	Victoria Heights West Amended	SFD	Detached	8'	Grass / Weeds	Yes		7'	Concrete	Wood	6'	Brick / Dirt	Private	Yes	Yes	No	No	No
W. 100th Pl. (S)	Victoria Heights West Amended	SFD	Detached	8'	Grass / Weeds	No		7'	Concrete	Wood	6'	Dirt	Private	No	Yes	No	Yes, sign only	No
W. 100th Pl. (N)	Victoria Heights West Amended	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood	6'	Grass / Weeds	Private	Yes	Yes	Yes	No	No
W. 101st Ave. (S)	Victoria Heights West Amended	SFD	Detached	12'	Grass / Weeds	Yes		3.5'	Concrete	Chainlink	3.5'	Dirt	Private	Yes	Yes	No	No	No
W. 101st Ave. (N)	Victoria Heights West Amended	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood	6'	None	Private	No	Yes	No	No	No
W. 101st Pl. (S)	Victoria Heights West Amended	SFD	Detached	12'	Dirt / Weeds	No		3.5'	Concrete	Wood / Split Rail	6' / 3.5'	None	Private	Yes	Yes	No	No	No
W. 101st Pl. (N)	Victoria Heights West	SFD	Detached	12'	Grass / Weeds	Yes		3.5'	Concrete	Wood / Masonry	6' / 8'	Gravel	Private	No	Yes	No	No	No
W. 102nd Ave. (S)	Victoria Heights West	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood / Thatch	3.5'	None	Private	Yes	Yes	No	No	No
W. 102nd Ave. (N)	Victoria Heights West	SFD	Detached	12'	Grass / Weeds	Yes		3.5'	Concrete	Wood / Cement	6'	Rocks / Planter Bed	Private	No	Yes	No	No	No
W. 102nd Pl. (S)	Victoria Heights West	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood / Split Rail	6' / 3.5'	Grass / Weeds	Private	Yes	Yes	Yes	Yes, sign only	No
W. 102nd Pl. (N)	Victoria Heights West	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood	6'	Grass	Private	No	Yes	No	No	No
W. 103rd Ave. (S)	Victoria Heights West	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood / Split Rail	6' / 3.5'	Grass	Private	Yes	Yes	Yes	No	No
W. 103rd Ave. (N)	Heftler Homes Hillcrest 3rd Flg.	SFD	Detached	12'	Grass / Weeds	No		3.5'	Concrete	Wood	6'	Grass	Private	No	Yes	No	No	No
	Heftler Homes Hillcrest 6th Flg.	Multi-Family	Detached	12'	Gravel	No		3.5'	Concrete	None	None	None	Private	Yes	Yes	No	No	No
W. 104th Ave. (S)	Heftler Homes Hillcrest 6th Flg. Amended	Multi-Tenant	Detached	10'	Grass	No		3.5'	Concrete	None	None	None	Private	Yes	Yes	No	No	No
	Heftler Homes Hillcrest 6th Flg.	Bank	Detached	10'	Grass	No		3.5'	Concrete	None	None	None	Private	Yes	Yes	Yes	Yes, shelter	Yes

APPENDIX A

East Side Huron

Block	Subdivision	Land Use	Sidewalk Type	Sidewalk Buffer	Buffer Material	Buffer Trees	Buffer Maintenance	Sidewalk Width	Sidewalk Material	Existing Fence	Fence Height	Landscaping (between sidewalk & property)	Landscaping Maintenance	Street Light	Utility Lines	Utility Box	Bus Stop	Hydrant
Fred Dr. (S)	Tol Win	Group Care	Attached	None	None	No		3.5'	Concrete	Masonry	2'	Brick pavers	Private	Yes	No	No	Yes, sign only	No
Fred Dr. (N)	Hepp Duplex Minor	Duplex	Attached	None	None	No		3.5'	Concrete	None	None	None	Private	Yes	No	No	No	Yes
	Hepp Duplex Minor	Duplex	Attached	None	None	No		3.5'	Concrete	None	None	None	Private	No	Yes	Yes	No	No
	None	Church	Attached	None	None	No		3.5'	Concrete	None	None	None	Private	No	No	No	No	No
Melody Dr. (S)	Moldenhauer	SFD	Attached	None	None	No		3.5'	Concrete	Wood	6'	Grass	Private	Yes	Yes	No	No	Yes
Melody Dr. (N)	NG 19th Flg.	SFD	Detached	8'	Dirt / Weeds	No		3.5'	Concrete	Wood	6'	Rocks / Weeds	Private	No	No	Yes	No	No
W. 99th Ave. (S)	NG 19th Flg.	SFD	Detached	8'	Dirt / Weeds	No		3.5'	Concrete	Wood	6'	Grass / Shrubs	Private	Yes	Yes	No	No	No
W. 99th Ave. (N)	NG 19th Flg.	SFD	Detached	8'	Dirt / Weeds	No		3.5'	Concrete	Wood / Split Rail	6' / 3.5'	Gravel / Dirt / Weeds	Private	No	No	No	Yes, sign only	Yes
Niver Ave. (S)	NG 19th Flg.	SFD	Detached	8'	Dirt / Weeds	No		3.5'	Concrete	Wood	6'	Gravel / Grass / Shrubs	Private	Yes	Yes	Yes	No	No
Niver Ave (N)	NG 19th Flg.	SFD	Detached	8'	Dirt / Trees	Yes		3.5'	Concrete	Wood	6'	Rocks	Private	No	No	No	No	No
W. 100th Ave. (S)	NG 19th Flg.	SFD	Detached	8'	Weeds	No		3.5'	Concrete	Plastic	6'	None	Private	Yes	Yes	Yes	No	No
W. 100th Ave. (N)	NG 19th Flg.	SFD	Detached	8'	Weeds	No		3.5'	Concrete	Wood	6'	Gravel	Private	No	No	No	No	No
W. 100th Pl. (S)	NG 19th Flg.	SFD	Detached	8'	Weeds	No		3.5'	Concrete	Wood	6'	Gravel / Weeds	Private	Yes	Yes	Yes	No	No
W. 100th Pl. (N)	NG 17th Flg.	School	Detached	25'	Grass	Yes		8'	Asphalt	None	None	None	Private	Yes	Yes	No	No	No
W. 101st Ave. (S)	NG 17th Flg.	School	Detached	25'	Grass	Yes		8'	Asphalt	None	None	None	Private	No	No	No	No	No
W. 101st Ave. (N)	NG 17th Flg.	School	Detached	25'	Grass	Yes		8'	Asphalt	None	None	None	Private	Yes	Yes	No	No	No
W. 101st Pl. (S)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	No	No	No	Yes, sign only	No
W. 101st Pl. (N)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	Yes	Yes	No	No	No
W. 102nd Ave. (S)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	No	No	No	No	No
W. 102nd Ave. (N)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	Yes x2	Yes	No	No	No
W. 102nd Pl. (S)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	Yes	Yes	No	Yes, sign only	No
W. 102nd Pl. (N)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	No	No	No	No	No
W. 103rd Ave. (S)	NG 17th Flg.	School	Detached	8'	Grass	Yes		8'	Asphalt	None	None	None	Private	No	No	No	No	No
W. 103rd Ave. (N)	NG 17th Flg.	School	Detached	6'	Grass	Yes		8'	Asphalt	None	None	None	Private	Yes	Yes	No	No	No
	None	Public Service Co.	Attached	None	None	No		11'	Concrete	None	None	None	Private	No	No	No	No	No
	NG 17th Flg.	SFD	Attached	None	None	No		11'	Concrete	Wood	6'	Grass	Private	No	Yes	Yes	No	No
	NG 17th Flg.	SFD	Attached	None	None	No		11'	Concrete	Wood	7'	Grass	Private	Yes	Yes	No	No	No
	NG 17th Flg.	SFD	Attached	None	None	No		11'	Concrete	Chainlink	3.5'	Grass	Private	No	Yes	No	No	No
	NG 17th Flg.	SFD	Attached	None	None	Yes		11'	Concrete	Wood	6'	Grass	Private	No	Yes	No	No	No
	NG 17th Flg.	SFD	Attached	None	None	No		11'	Concrete	Wood	8'	Grass	Private	No	Yes	No	No	No
	NG 17th Flg.	SFD	Attached	None	None	No		11'	Concrete	Chainlink & Wood	3.5' / 6'	Grass	Private	Yes	Yes	Yes	Yes, sign only	No
W. 104th Ave. (S)	NG 17th Flg.	SFD	Attached	None	None	No		5'	Concrete	Chainlink	3.5'	Grass	Private	No	Yes	Yes	No	No

Data collected on a block by block basis, utilizing existing GIS data sources, Google Earth aerials and streetview imagery, and existing property plat subdivisions. This data has not been field verified. Measurements should be considered accurate to within a couple of feet.



J&T Consulting, Inc.
 1400 W 122nd Avenue - Suite 120
 Westminster CO 80234
 303-457-0735

November 20, 2005

**City of Northglenn
 Master Drainage Study
 Problem Area Master List**

Red - Improvement Areas

Orange - Areas that can currently be addressed (Stand-alone issues)

Green - Areas with ongoing Maintenance or Minor Issues

Blue - Fixed Problem Areas

<u>Area</u>	<u>Location</u>	<u>Description of Problem</u>	<u>Priority (year)</u>
1	Melody & Belford	Insufficient Capacity of The Tuck Lateral and the Box Culvert Road Crossing	
2	Melody & 100th	Insufficient Capacity of The Tuck Lateral and the Box Culvert Road Crossing	
3	NE Corner of Brigette	Insufficient Capacity of Storm Sewer System. Area is also in the 100year Grange Hall Creek Flood Plain.	
4	104th & Pecos St	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues	
5	East of 104th & Pecos	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues	
6	Croke & 104th	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues	
7	Huron & 103rd	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues	
8	Melody & Monterey	Original Assessment No Longer Valid- See Problem Area 50 and 58	
9	Bannock & 104th	Flooding Problem has been Addressed - Minor Grading and Ponding Water Issue Associated with Median Curb	
10	Roseanna & Brewer	Problem Area has been Addressed	
11	Livingston & Naled	Problem Area has been Addressed - Existing Storm Sewer Requires Maintenance and Cleaning.	
12	Huron & Naled/100th Ave	Problem Area has been Addressed - Additional Monitoring of the Area is Required	
13	Grant Ditch off of Croke Reservoir	Original Assessment No Longer Valid- See Problem Area 51	
14	Claire & Livingston	Insufficient Capacity of Storm Sewer System	
15	Manet & Claire	Insufficient Capacity of Storm Sewer System	
16	Muriel & Washington	Problem Area has been Addressed - Additional Monitoring of the Area is Required	
17	Murray & Muriel	Problem Area has been Addressed - Additional Monitoring of the Area is Required	
18	112th & Washington	Problem Area has been Addressed	
19	114th & Claude	Local Flooding - Possible Insufficient Storm Sewer Capacity - Additional Information Required.	
20	Mallay Dr & Community Center Dr.	Problem Area has been Addressed	
21	115th & Claude	Local Flooding - Possible Insufficient Storm Sewer Capacity - Additional Information Required.	



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November 20, 2005

City of Northglenn
Master Drainage Study
Problem Area Master List

<u>Area</u>	<u>Location</u>	<u>Description of Problem</u>	<u>Priority (year)</u>
22	116th & Claude	Local Flooding - Possible Insufficient Storm Sewer Capacity - Additional Information Required.	
23	I-25 & 120TH Ave/Grant Street	Local Flooding - Insufficient Storm Sewer Capacity - Additional Information Required.	
24a	Huron St. & 114th Pl.	Problem Area has been Addressed	
24b	Melody Dr. & 114th Pl	Problem Area has been Addressed	
24c	Huron & 116th Pl.	Ongoing monitoring and maintenance issues. Clean but the detention pond	
24d	Huron & 117th Pl.	Ongoing monitoring and maintenance issues.	
25	200' E of Claude & 113th (Grange Hall Creek North East Tributary)	Upgrade existing Infrastructure - UDFCD Master plan	
26	Ima & 120th	Private Property Drainage issue - Issues to be addressed during Redevelopment	
27	North of Claude & 120th	Problem Area has been Addressed	
28	North of 120th & Race	Private Property Drainage issue - Issues to be addressed during Redevelopment	
29A & B	North of 120th & Claude	Local Flooding - Drainage Channel Improvements	
30	600' E of Leroy (Grange Hall Creek - North Tributary)	Upgrade existing Infrastructure - UDFCD Master plan	
31	Between Ima & Leroy (Grange Hall Creek North Tributary)	Upgrade existing Infrastructure - UDFCD Master plan - Problem Area also addresses private property drainage issues.	
32	105th & Ima	Upgrade existing Infrastructure - UDFCD master plan components and upgrade of existing local infrastructure.	
33	Grant Dr & 107th Pl.	Local Flooding - Upgrade Existing Infrastructure	
34	Between Lincoln & I-25 -107th	Local Flooding- Upgrade Existing Infrastructure	
35	E 112th Pl. & Grant Dr. - E. 112th Pl. to Leonard Ln.	Ongoing monitoring and maintenance issues.	
36	Malley Dr & Pearl St.	Local Flooding - Upgrade Existing Infrastructure	
37	North of Community Center & Malley Dr	Ongoing monitoring and maintenance issues.	
38	South of Community Center & Malley Dr	Problem Area has been Addressed	
39	West of 112th & Pecos St.	Problem Area has been Addressed	

- Development proposal currently being processed through city with channel improvements



November 20, 2005

City of Northglenn
Master Drainage Study
Problem Area Master List

Red - Improvement Areas

Orange - Areas that can currently be addressed (Stand alone issues)

Green - Areas with ongoing Maintenance or Minor Issues

Blue - Fixed Problem Areas

<u>Area</u>	<u>Location</u>	<u>Description of Problem</u>	<u>Priority (year)</u>
40	111th Way & 112th Ave	Ongoing Monitoring - Evaluate during new development.	
41	East of Pecos & 112th Ave.	Ongoing Monitoring	
42	Community Center Dr. West of I-25	Upgrade existing Infrastructure	
43	S of Huron St. & 112th	Private Property Drainage Issue - Issues to be addressed during Redevelopment	
44	N of 104th & Melody	Local Flooding - Possible Insufficient Storm Sewer Capacity - Additional Information Required.	
45	Clare Ln. & Roseanna	Problem Area has been Addressed	
46	104th & Quivas	Local Flooding - Upgrade existing Infrastructure	
47	Between Pecos & Ura Ln S. of 104th Ave.	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues	
48	600' S of 100th Ave & Lane St	Local Flooding - Insufficient Storm Sewer and Detention Pond Capacity, also Major Drainage Way Issues	
49	1800' S of 125th & 104th Ave.	Problem Area has been Addressed	
50	North of the intersection of Melody Dr & W. 100th Pl - Grange Hall Creek Tributary	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues and UDFCD Improvements	
51	Grange Hall Creek & Washington St	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues and UDFCD Improvements	
52	103rd Pl/Spangler Dr & Croke Dr	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues	
53	East of Huron St & Pinnacle Creek	Upgrade Existing Infrastructure	
54	East of Livingston & 111th	Upgrade Existing Infrastructure - Possible Private Property Concern	
55	Southeast of Leroy & Larson	Upgrade existing Infrastructure - UDFCD Master plan	
56	Southeast of Leroy & Marion	Upgrade existing Infrastructure - UDFCD Master plan	
57	Northwest of Leroy & Marion	Upgrade existing Infrastructure	
58	South of Monterey and Melody	Local Flooding - Insufficient Storm Sewer Capacity, also Major Drainage Way Issues and UDFCD Improvements	
59	Northeast of Muriel and Grant	Local Flooding - Upgrade existing Infrastructure	



104th Avenue and South Outfall Drainage Systems

Date: November 28 , 2005

File No. 05102

Prepared By: JCY/JFM

The 104th Avenue and South Outfall Drainage System consists of several problem areas identified by the City of Northglenn staff (City), previous consultants, and J&T Consulting, Inc. (JT). During the evaluation of these areas/systems various reports were reviewed, basin areas/hydrology was reviewed and in some areas confirmed, storm sewer hydraulics was estimated, and recommendations/options were compiled.

The reports reviewed for the 104th Avenue Drainage System included the 104th Avenue West Drainage Study Preliminary Report by WRC (September 1987), City of Northglenn Master Drainage Study by WRC (1986), Northglenn Drainage Study by ECI (1974). The reports reviewed for the South Outfall System (to Grange Hall Creek) included all of the previous mentioned reports and the Niver Creek Drainage Study for the Urban Drainage & Flood Control District (UDFCD) by ECI (1973), Niver Creek Major Drainageway Planning Study – Alternatives Development and Evaluation by Kiowa Engineering (1996), Niver Creek Major Drainageway Planning Study – Preliminary Design by Kiowa Engineering (1997), Grange Hall Creek Major Drainageway Planning by Hydro Triad (1977), Grange Hall Creek Major Drainageway Planning Study – Alternatives Development and Evaluation by Kiowa Engineering (1996), and Grange Hall Creek Major Drainageway Planning Study – Preliminary Design Report by Kiowa Engineering (1997).

104th Avenue Drainage System Summary of Findings

JT investigated the problem areas associated with the 104th Avenue Drainage System. The problem areas included are 4, 5, 6, 7, 46, 47, 48, and 52. After performing site reviews of each problem area and reviewing the previously mentioned reports, JT performed basin hydrology calculations for problem areas 5, 6, and 46 as the runoff to and capacity of the infrastructure in these areas was not readily available from the previous reports.

The 104th Avenue West Drainage Study Preliminary Report by WRC identifies roughly 172 cfs at the intersection of Pecos Street and 104th Avenue (problem area 4) in the 5-yr storm event. JT performed hydrology calculations and inlet hydraulics at problem area 5 and 6 to check capacity of the existing infrastructure. Our suspicions were confirmed that the inlets at problem areas 5 and 6 are sufficient to take the area draining directly to these inlets however the large flows at problem area 4 are not captured by the existing

104th Avenue and South Outfall Drainage Systems
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infrastructure and overflow to the inlets at problem area 5 and 6 causing flooding and surcharged conditions.

Problem area 7 is located on Huron Street where the 104th Avenue Drainage System and the South Outfall Drainage System join. The flooding problem is caused from the large amount of flow coming from 104th Avenue that creates surcharged conditions on the existing infrastructure that does not have the capacity to pass these flows under Huron Street to the South Outfall Drainage System.

Problem area 46 is simply a capacity problem with the 8-inch pipe that exits the existing inlet. This problem can be solved relatively easy but it does not solve the larger problem of the capacity of the 104th Avenue Drainage System.

Problem area 47 is an extension of the flooding problems associated with problem area 4 where the large amount of flow cannot be collected by the existing infrastructure.

Problem area 48 is also a result of the flooding problems at problem area 4. The detention pond at problem area 48 floods because of the large amount of runoff in the area that cannot be collected by the existing infrastructure.

Problem area 52 is where the Red Lobster is located and floods due to the overflow from 104th Avenue and the existing detention pond is not configured per the original plans.

104th Avenue Drainage System Recommendations

The major problem with the 104th Avenue Drainage System is the lack of capacity during the 5-yr and larger storm events. To better define the capacity problems associated with the existing infrastructure more information is needed for more detailed analysis. The existing storm sewer and street needs to be as-built surveyed. The survey data will provide a basis to begin hydraulic modeling of the existing system. From the hydraulic model street, inlet, and storm sewer capacities can be determined providing valuable information to begin defining how much additional capacity must be obtained to convey the 5-yr or larger storm event. At this point the City must decide what design frequency should be used for sizing the additional infrastructure.

104th Avenue Drainage System Design Options

There are several possible options to increase the capacity of the existing drainage system. The first option is to increase the capacity of the storm sewer to collect the 5-yr storm event. This option would include running a parallel storm sewer in 104th Avenue. A couple different alignments could be used from 104th Avenue to tie into the South Outfall Drainage System. The first would be to run a parallel 54" pipe in Huron Street to 104th Avenue and extend west on 104th past Pecos Street to Ura Street. The second would be to run a 54" pipe from the South Outfall Drainage System at Melody to 104th Avenue and extend west on 104th to Ura. Lateral storm sewer branches could be extended from the improved 104th Avenue storm sewer at the intersections of Ura, Quivas, and Pecos to increase the collection of runoff before it reaches 104th Avenue. More inlets will be needed along 104th Avenue and any laterals that area extended to the aforementioned

104th Avenue and South Outfall Drainage Systems
Page 3 of 5

street intersections. Based on the inlet capture capacity of a 15' Type R on-grade inlet there are roughly 20 inlets needed along the 104th Avenue corridor in order to capture the 5-yr storm event. The costs associated with the infrastructure improvements is detailed out in the opinion of probable costs attached.

Another possible option was to divert flows from 104th Avenue to Croke Reservoir for the 5-yr storm event. This option would require additional storm sewer pipe from 104th down Inca to Croke Reservoir. After looking at the UDFCD master plan for this area it appears that the flows in 104th are to be directed to the South Outfall Drainage System so the option would need further evaluation to see weather or not it is prudent to stay the course with the masterplan. Modeling would be required to confirm that Croke Reservoir could handle the incoming flows as well as maintaining the same outflow as all of the downstream existing infrastructure is not sized to handle the direct runoff that would be entering Croke Reservoir from 104th Avenue.

South Outfall Drainage System Summary of Findings

JT investigated the problem areas associated with the South Outfall Drainage System. Many of the problems associated from the 104th Avenue Drainage System extend downstream to the South Outfall Drainage System, and there are several problem areas identified in the system. The problem areas included are 1, 2, 3, 49, 50, and 58. After performing site reviews of each problem area and reviewing the previously mentioned reports, JT performed basin hydrology/hydraulic calculations for problem area 3 and culvert/ditch capacity hydraulic calculations for problem areas 1 and 2 as the runoff to and capacity of the infrastructure in these areas was not readily available from the previous reports.

The Grange Hall Creek Major Drainageway Planning Study – Preliminary Design Report indicates that the 100-yr storm event flows at Pecos Street are approximately 400 cfs. These flows are conveyed in 104th Avenue via the street and storm sewer to the South Outfall Drainage System. The South Outfall Drainage System continues to collect runoff from surrounding areas as it approaches an existing detention pond next to I-25 where the peak flow is 1290 cfs entering the detention pond and 885 cfs exiting the pond.

Problem area 1 is located near the intersection of Belford and Melody, where the existing culverts are slightly undersized for the cleaned capacity of the existing ditch. If the ditch is not cleaned the ditch is the constriction for this problem area. The area experiences overflow from the Tuck Lateral when the South Outfall Drainage System becomes surcharged.

Problem area 2 is located near the intersection of Melody and 100th where the existing culvert is sized generally for normal irrigation ditch flows in the Tuck Lateral. The existing culvert is silted in and needs cleaning. The area experiences overflow from the Tuck Lateral when the South Outfall Drainage System becomes surcharged.

Problem area 3 is located at the northeast corner of Brigitte where the existing inlets and storm sewer are being surcharged due to overflow from problem areas 1 and 2.

104th Avenue and South Outfall Drainage Systems
Page 4 of 5

Calculations show that the existing infrastructure can accommodate the 2-yr and 5-yr events that include the area that is direct runoff to the system (not the overflows). The problem at this area is directly attributable to the surcharged condition of the South Outfall Drainage System during larger storm events.

Problem area 49 is identified as part of the 100-yr floodplain, and the Grange Hall Creek Major Drainageway Planning Study – Preliminary Design Report calculations indicate that the detention pond functions adequately. A site review of the area was performed but there does not appear to be a problem associated with this area.

Problem area 50 is located just downstream of where the South Outfall Drainage System crosses Melody. Erosion to the channel exists, and this area is identified for improvement in the Grange Hall Creek Major Drainageway Planning Study – Preliminary Design Report. The improvements include drop structures in the channel to eliminate erosion.

Problem area 58 is located at the bifurcation structure where flows in the South Outfall Drainage System are split between the Tuck Lateral Overflow and the South Outfall Drainage System. The flows enter a 48" pipe that is conveyed parallel to the Tuck Lateral where the flows then cross under the Tuck Lateral. An overflow structure is located at the Tuck Lateral to convey flows into the Tuck Lateral when the South Outfall Drainage System becomes surcharged. Once the South Outfall Drainage System overflows into the Tuck Lateral the entire area surcharges and floods existing homes in the area. The problem in this area is insufficient capacity of the existing infrastructure to pass the larger storm events. The problems in this area are the main causes of problems to the prior problem areas discussed for the South Outfall Drainage System.

South Outfall Drainage System Recommendations

The major problem with the South Outfall Drainage System is the lack of capacity during the larger storm events. To better define the capacity problems associated with the existing infrastructure more information is needed for more detailed analysis. The existing storm sewer, streets, channels, etc. needs to be as-built surveyed. The survey data will provide a basis to begin hydraulic modeling of the existing system. From the hydraulic model street, inlet, and storm sewer capacities can be determined providing valuable information to begin defining how much additional capacity must be obtained to convey the larger storm event. At this point the City must decide what design frequency should be used for sizing the additional infrastructure. The City should pursue UDFCD assistance for the upgrades however the 100-yr storm event will likely need to be accommodated if the UDFCD is to participate.

South Outfall Drainage System Design Options

There are really few options to alleviate the constriction in the system at problem area 58. The main option would be to provide two 6'x8' parallel by-pass box culverts under the Tuck Lateral that would run east to Melody Drive north of the existing South Outfall Drainage System (existing 48" pipe that increases in size to a 3'x6' box culvert after crossing under Tuck Lateral) through existing open space and back into the South Outfall

104th Avenue and South Outfall Drainage Systems
Page 5 of 5

Drainage System. Another option would be to increase the size of the existing 48" pipe (two 6'x12' box culverts) and 3'x6' box culvert (one 12'x12' box culvert) to accommodate the flows. Realistically more than one pipe or box culvert is needed to handle the 100-yr storm event. The Tuck Lateral should also be piped in this area to allow for additional spacing to upgrade the capacity of the existing infrastructure.



Ecological Resource Consultants, Inc.

JOB NUMBER: 5102 SHEET 1 OF 1
 JOB NAME: CITY OF NORTHGLENN

PROBLEM AREA NO. 7
 BASIN DESIGNATION _____
 LOCATION DESCRIPTION Huron & 103rd

DATE: 9/26/05 By: JFM

BACKGROUND

Drainage Feature:

- Storm Drain within Roadway / Intersection
- Drainageway with Roadway Crossing
- Drainageway with Canal Crossing
- Storm Drain at Drainageway / Channel
- Pond / Lake
- Other

Description: _____

Problem Issues:

- Local flooding and erosion is occurring due to insufficient inlet capacity.

EXISTING CONDITIONS

Observations:

- Related to Problem Area 4, 5, and 6
- Major Drainageway capacity and local flooding is still an issue at this area.
- See sketch and pictures for summary of current conditions

IMPROVEMENTS

Modifications:

- Original Recommendation - To increase the inlet capacity, a Type-13 combination single and a Type-13 combination double inlet should be installed at the problem area. In addition, a single Type-R inlet should be installed at each corner of 103rd Avenue and Huron Street. These single Type-R inlets should be connected back to the main system with a 21" RCP.
- The recommended modifications were constructed however localized flooding still occurs
- Significant upstream development has occurred since this recommendation was made. Subsequent studies indicate the storm flows have increased and the recommendation is no longer valid. Additional infrastructure is likely required to convey storm flows in this area.
- Refer to 104th Ave and South Outfall System Upgrades for recommendations for this area.

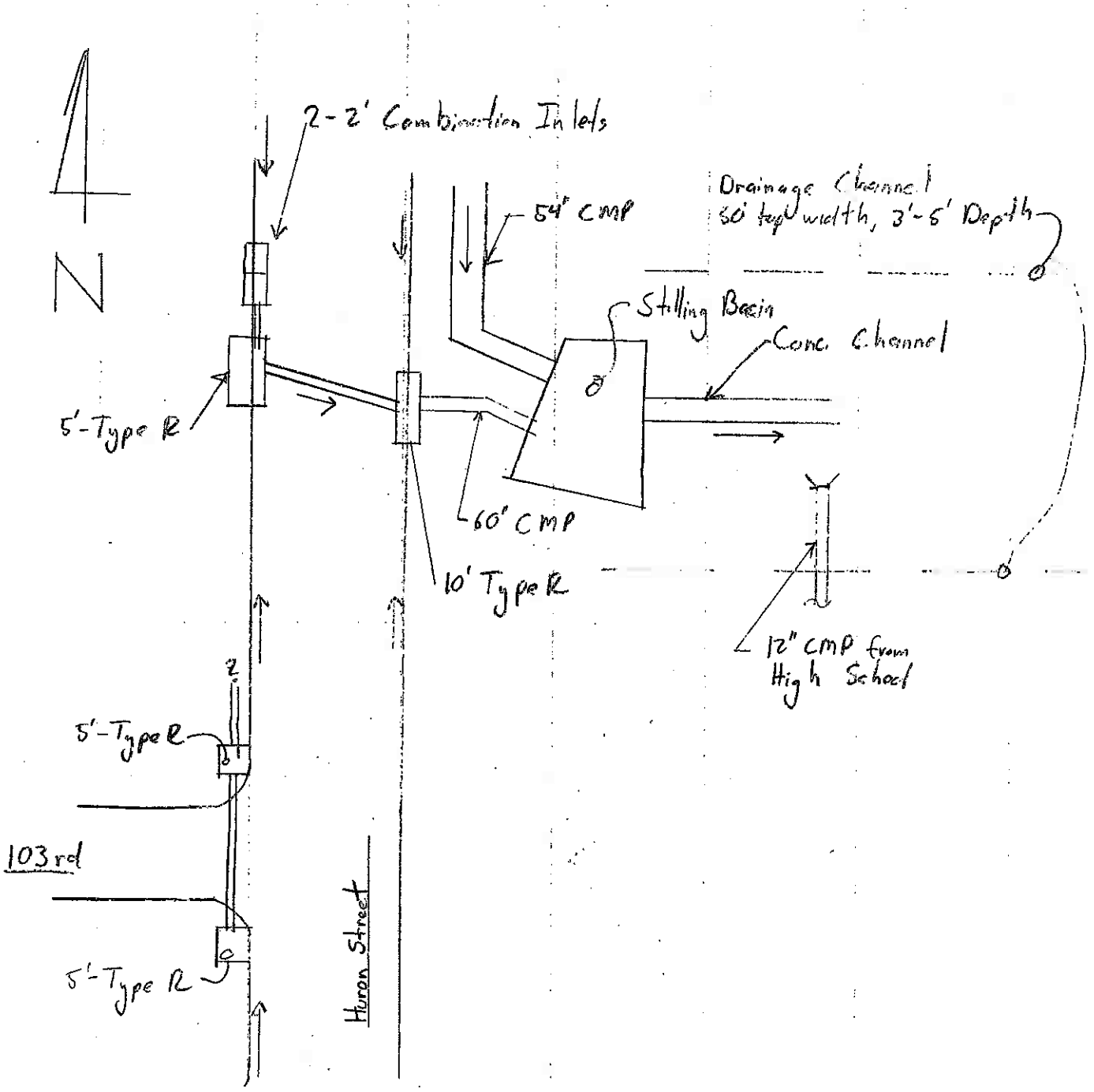


Client: City of Northglenn Sheet No. 1 of

Project: Storm Sewer and Job No.: 05102

Drainage System Analysis Date: 9/26/05

Problem Area: No.: 7 By: JFM



Problem Area 7

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[IMAG0042.JPG](#)
Storm Sewer Outfall Looking West



[IMAG0043.JPG](#)
Storm Sewer Outfall Looking East



[IMAG0044.JPG](#)
Inlets at Outfall



[IMAG0045.JPG](#)
Storm Sewer Outfall

Problem Area 7

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[IMAG0046.JPG](#)

Drainage Outfall from High School



[IMAG0047.JPG](#)

Storm Sewer Outfall Looking West



J&T Consulting, Inc.



Ecological Resource Consultants, Inc.

JOB NUMBER: 5102 SHEET 1 OF 1

JOB NAME: CITY OF NORTHGLENN

PROBLEM AREA NO. 8

BASIN DESIGNATION _____

LOCATION DESCRIPTION Melody & Monterey

DATE: 9/26/05

By: JFM

BACKGROUND

Drainage Feature:

- Storm Drain within Roadway / Intersection
- Drainageways with Roadway Crossing
- Drainageway with Canal Crossing
- Storm Drain at Drainageway / Channel
- Pond / Lake
- Other

Description: _____

Problem Issues:

- Insufficient conveyance capacity in the storm water bypass is causing localized flooding in the area as well as spill over into the Tuck Lateral.

EXISTING CONDITIONS

Observations:

- Staff Observation - Box Culvert (Tuck Lateral) is undersized.
- Staff Observation - Investigate diversion to Tuck Lateral at north end of Croke Reservoir
- Staff Observation - Insufficient conveyance capacity of structures located east of Northglenn High School.
- For a summary of current conditions see problem area 50 and 58.

IMPROVEMENTS

Modifications:

- Original Recommendations:
Re-opening the unused overflow to the Tuck and let excess flow be transferred via the Tuck Lateral and be picked up approximately 300' downstream in the proposed intake structure.
- Modifying existing inlet for more efficient operation by doing the following: 1. Manipulate earth around structure to facilitate ponding around the structure. 2. Create overflow outlet in east bank of Tuck to allow maximum of 50 cfs to flow into proposed inlet structure. 3. Add erosion protection to downstream side of Tuck overflow outlet.
- Recommendations - The proposed modifications have been done and have not been entirely effective at controlling larger flows. Additional upstream development has caused storm flows that exceed the capacity of the original recommendations and modifications.
- Refer to 104th Ave and South Outfall System Upgrades for recommendations for this area.
- Problem Area 8 and the previous descriptions and recommendations no longer accurately represent the problems associated with this area. Refer to Problem area 50 and 58.



J&T Consulting, Inc.



Ecological Resource Consultants, Inc.

Client: City of Northglenn

Sheet No. 1 of

Project: Storm Sewer and

Job No.: 05102



Drainage System Analysis

Date: 9/26/05

Problem Area No.: 8

By: JFM

→ See	Problem	Area	50	and	58	

  <p style="text-align: center;">Ecological Resource Consultants, Inc.</p>	<p>JOB NUMBER: <u>5102</u> SHEET <u>1</u> OF <u>1</u> JOB NAME: <u>CITY OF NORTHGLENN</u></p> <p>PROBLEM AREA NO. <u>58</u> BASIN DESIGNATION _____ LOCATION DESCRIPTION <u>South of Monterey & Melody</u> _____ _____</p> <p>DATE: <u>9/26/05</u> By: <u>JFM</u></p>												
BACKGROUND													
<p>Drainage Feature:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Storm Drain within Roadway / Intersection</td> <td style="width: 20%; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Drainageway with Roadway Crossing</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Drainageway with Canal Crossing</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Storm Drain at Drainageway / Channel</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Pond / Lake</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <p style="margin-left: 40px;">Description: _____</p> <p>Problem Issues:</p> <ul style="list-style-type: none"> - Localized flooding of the Tuck Lateral - Flooding occurs in the houses to the east of Northglenn High School 		Storm Drain within Roadway / Intersection	<input type="checkbox"/>	Drainageway with Roadway Crossing	<input type="checkbox"/>	Drainageway with Canal Crossing	<input checked="" type="checkbox"/>	Storm Drain at Drainageway / Channel	<input type="checkbox"/>	Pond / Lake	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>
Storm Drain within Roadway / Intersection	<input type="checkbox"/>												
Drainageway with Roadway Crossing	<input type="checkbox"/>												
Drainageway with Canal Crossing	<input checked="" type="checkbox"/>												
Storm Drain at Drainageway / Channel	<input type="checkbox"/>												
Pond / Lake	<input checked="" type="checkbox"/>												
Other	<input type="checkbox"/>												
EXISTING CONDITIONS													
<p>Observations:</p> <ul style="list-style-type: none"> - Local flooding occurring - verify inlet and box culvert capacity - Verify quantity of drainage from west outfall channel - Verify capacity of tuck lateral, overflow box, and 48" RCP 													
IMPROVEMENTS													
<p>Modifications:</p> <ul style="list-style-type: none"> - Original recommendations for this area resulted in the construction of the overflow box and the vault. These improvements did not address the flooding issues. - This area receives approximately 1290 cfs during the 100 year event. This flow is many times greater then the capacity of any of the drainage structures. - Refer to 104th Ave and South Outfall System Upgrades for recommendations for this area. 													



Ecological Resource Consultants, Inc.

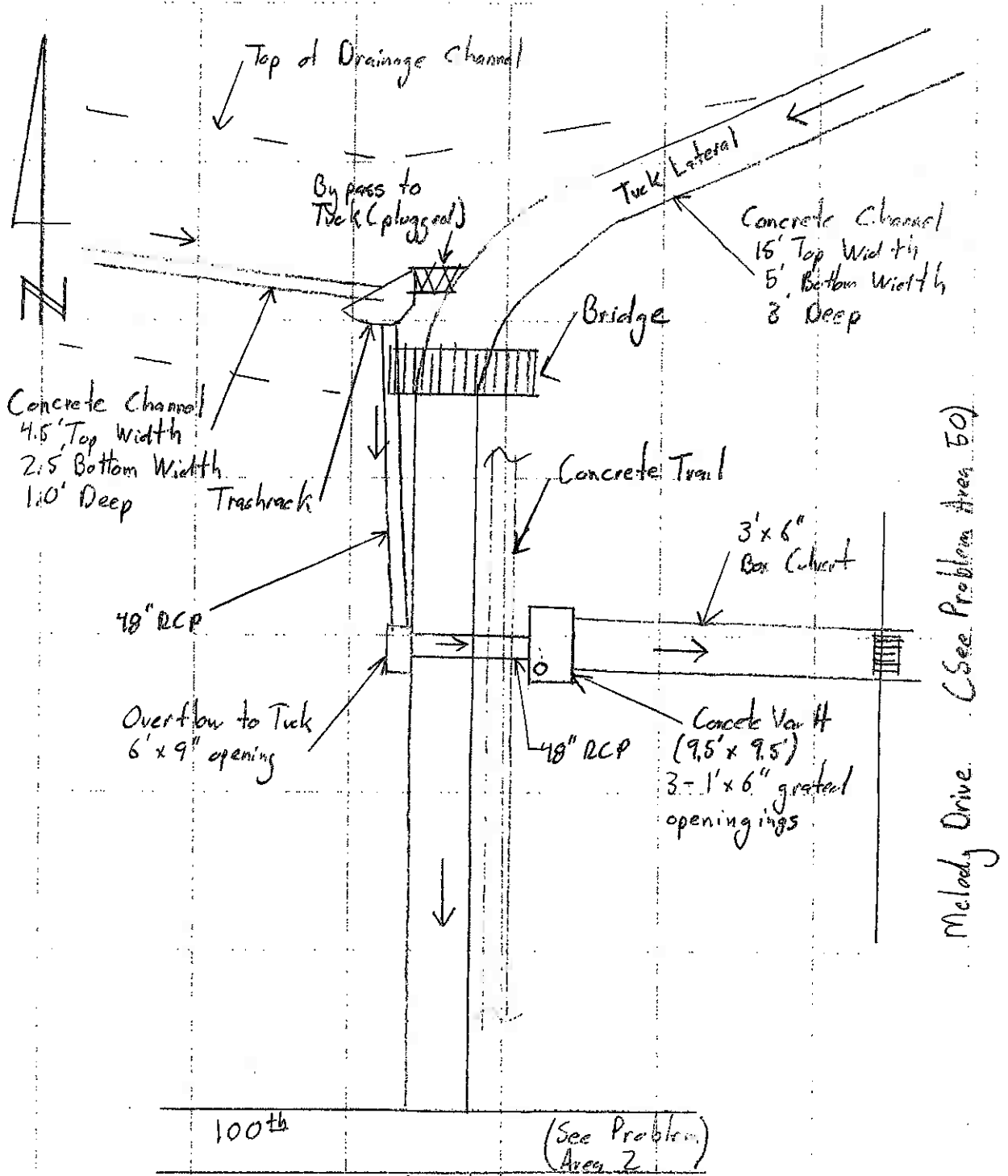
Client: City of Northglenn Sheet No. 1 of

Project: Storm Sewer and Job No.: 05102

Drainage System Analysis Date: 9/26/05

Problem Area: No.: 58

By: JFM



Problem Area 58

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[IMAG0021.JPG](#)
Tuck Lateral Looking North



[IMAG0022.JPG](#)
Outfall to Tuck Lateral from High School



[IMAG0023.JPG](#)
Tuck Lateral Looking South



[IMAG0024.JPG](#)
Tuck Lateral Looking North

[2345](#)

Problem Area 58

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[IMAG0025.JPG](#)
Tuck Lateral Looking North



[IMAG0026.JPG](#)
Collection Vault



[IMAG0027.JPG](#)
Overflow Vault to Tuck Lateral



[IMAG0028.JPG](#)
Collection Vault

Problem Area 58

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[IMAG0029.JPG](#)
Collection Vault



[IMAG0030.JPG](#)
Tuck Lateral Looking North



[IMAG0031.JPG](#)
Tuck Lateral Looking South



[IMAG0032.JPG](#)
Tuck Lateral Looking East

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[IMAG0033.JPG](#)

Overflow to Tuck Lateral - Plugged



[IMAG0034.JPG](#)

Drainage Channel Looking West



[IMAG0035.JPG](#)

Drainage Channel at Tuck Lateral



[IMAG0036.JPG](#)

Drainage Channel at Tuck Lateral

Problem Area 58

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[IMAG0037.JPG](#)

Drainage Channel Looking West



[IMAG0038.JPG](#)

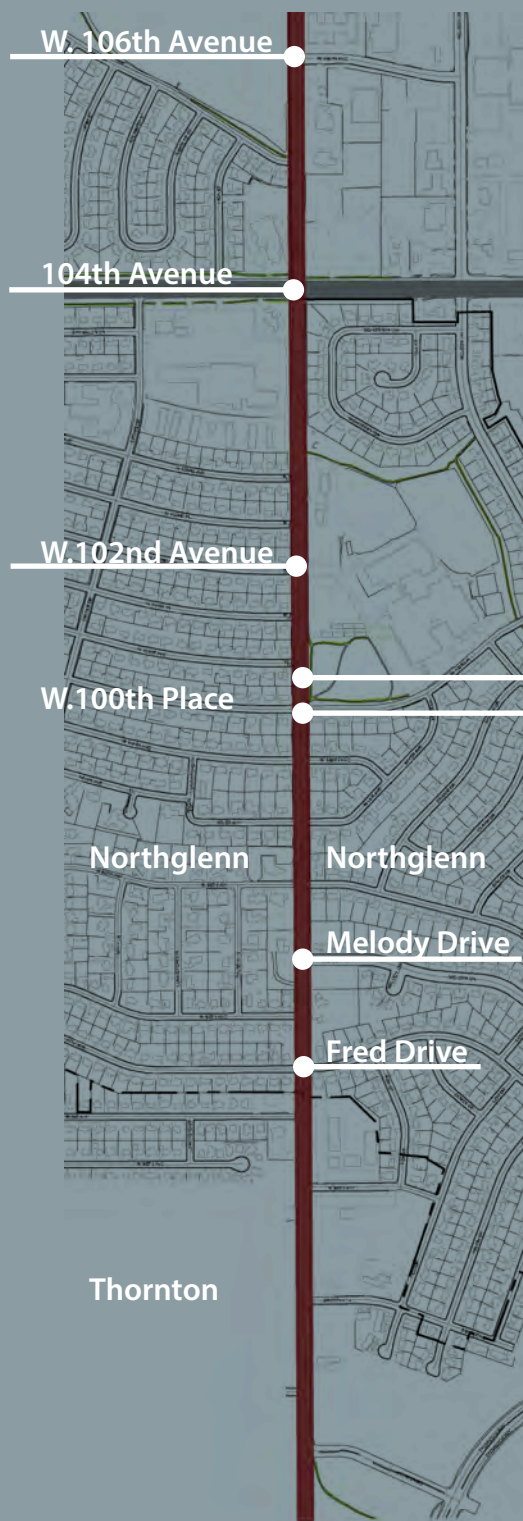
At Collection Vault Looking South



[IMAG0039.JPG](#)

At Collection Vault Looking North

[2](#) [3](#) [4](#) [5](#)



HURON STREET

BACKGROUND

Huron Street is a north-south arterial that runs from 120th Avenue on the north end to the southern Northglenn boundary at approximately 97th Avenue. Between 112th Avenue and 120th Avenue, only the east side of Huron is in the City of Northglenn, the west side is in the City of Westminster. The land uses vary along Huron with most of the residential along the west side and a mix of residential, commercial and retail along the east side. There is also a significant difference between the sections north of 104th Avenue (Commercial and Residential) and south of 104th Avenue (Residential).

NORTH OF 104TH AVENUE

Access from adjacent residential neighborhoods is appropriately limited resulting in long stretches of streetscape edge with opportunities to improve the aesthetic appearance and visual continuity with landscaping, new fencing, sidewalk and street furniture. Limiting access along the corridor could create more opportunity for continuous landscape treatment as well as improved safety for vehicular movements. There is also the opportunity to include a raised median which would further enhance the visual continuity of Huron Street. A

2010 ARRA project rebuilt the section of Huron from 104th Avenue to 112th Avenue. Project highlights included reconstruction of the section using concrete pavement, sidewalk replacement, and drainage improvements

SOUTH OF 104TH AVENUE

The number and frequency of residential streets accessing Huron Street constrains the ability to create visual and aesthetic continuity along this arterial. Based on the original street network design, numerous local streets directly access the Huron arterial at various signalized and unsignalized intersections. This condition is in contrast to appropriate street network design and may impede future arterial function. Further, the numerous traffic movements from local streets that are directly accessing the arterial may pose a safety hazard based on roadway design speed, traffic volumes, and undulating geography. The use of a landscape medians provides the greatest opportunity to control access to these residential streets by limiting vehicular movement to right-in and right-out turns only. The median also offers an opportunity to create visual and aesthetic continuity the entire length of Huron.

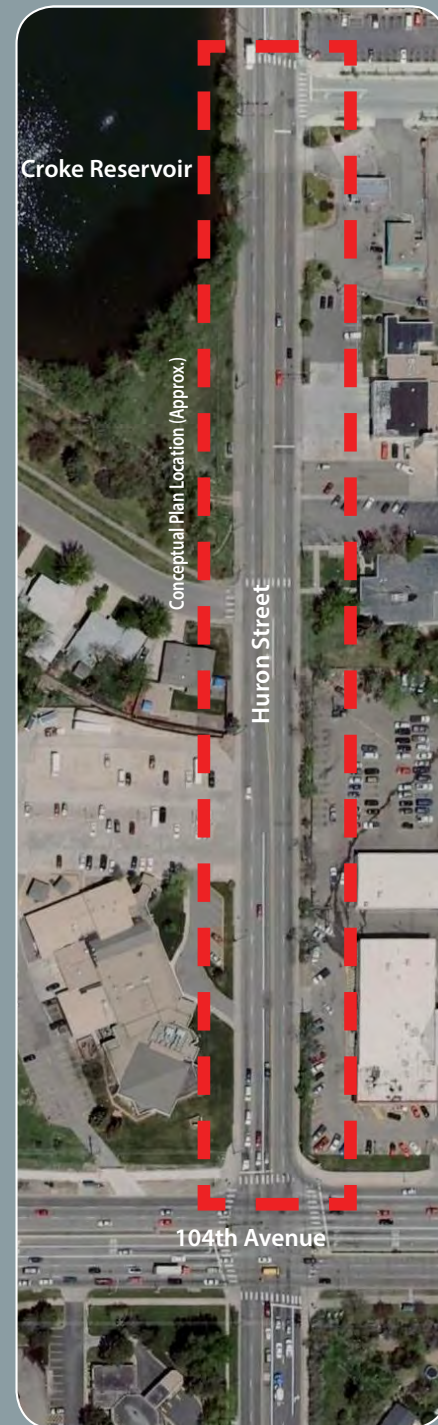
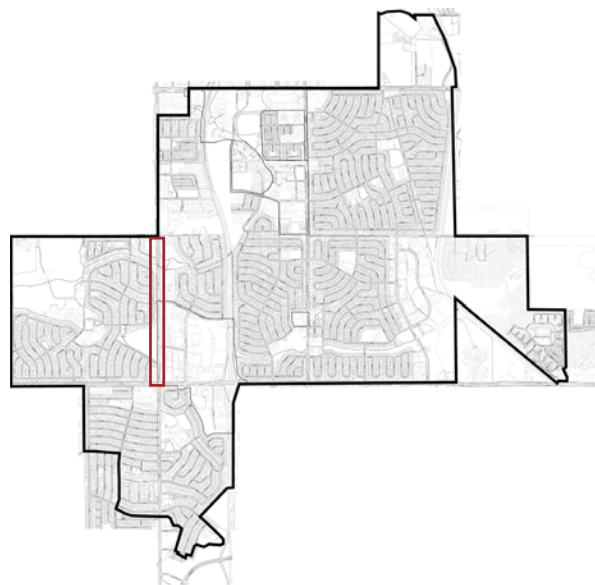


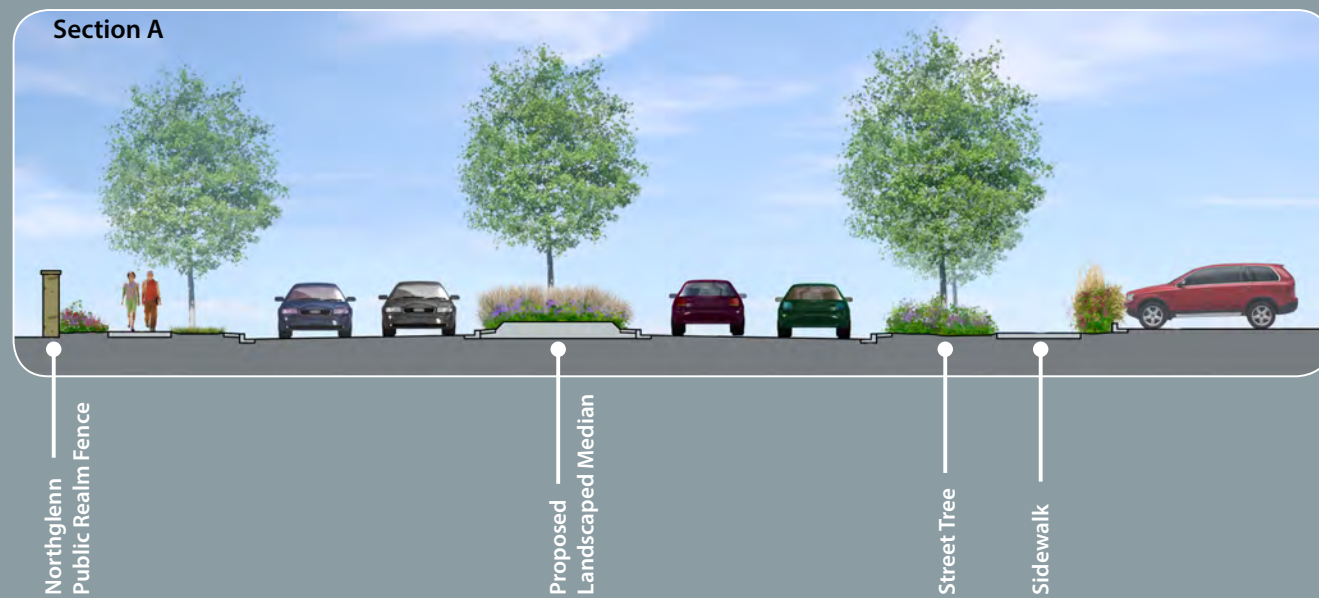
HURON STREET (NORTH) AT 104TH

CONCEPT

The Concept Plan on this page addresses the conditions typical of Huron Street north of 104th Avenue. The number of curb cuts/access drives servicing the adjacent commercial and multi-family parcels should be limited. This will create a more contiguous landscape strip with opportunities for detached walks, street trees and planting to buffer adjacent parking lots. This action, along with implementation of landscaped medians, will also provide more effective and safer traffic flow. Where single family lots are adjacent to Huron Street, a very narrow area exists between the curb and property line fence. In addition to curb and gutter improvements an attached concrete walk should be installed. The existing property line fence should be replaced with the standard Northglenn "Public Realm" fence. The area between the attached walk and new fence should be landscaped utilizing shrubs and perennials, it is too narrow to effectively maintain turf grass. As mentioned, the 2010 project addressed many of the above issues. Further opportunities exist to control access to the arterial with future redevelopment that occurs on adjacent lots.

KEY MAP





HURON STREET

HURON STREET (SOUTH) AT 104TH

CONCEPT

The Concept Plan on this page addresses the conditions typical of Huron Street south of West 104th Avenue. The number of residential streets with full turn movement accessing Huron Street should be limited. This is accomplished with the addition of a landscaped median. In addition to the landscaped median, installation of the typical City of Northglenn "Public Realm" Fence adjacent to existing single family lots, the implementation of a new concrete walk, detached where practical, a new street tree planting program and additional shrub and perennial planting beds will create visual and aesthetic continuity along this arterial. Further study of these conditions is warranted in conjunction with design plans for the corridor.

KEY MAP

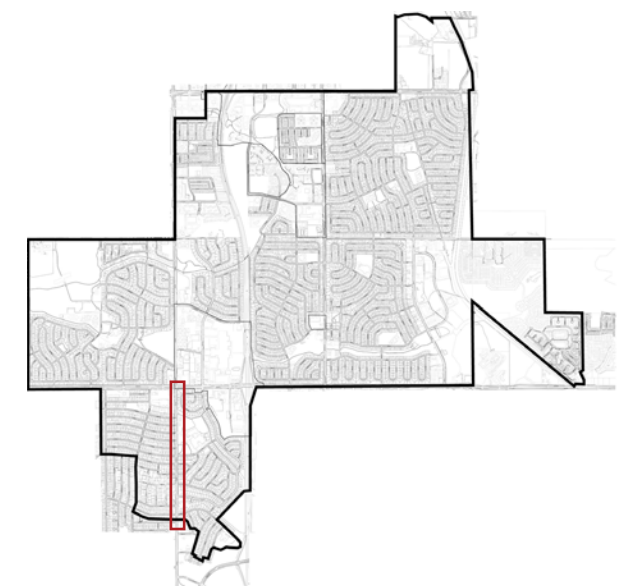
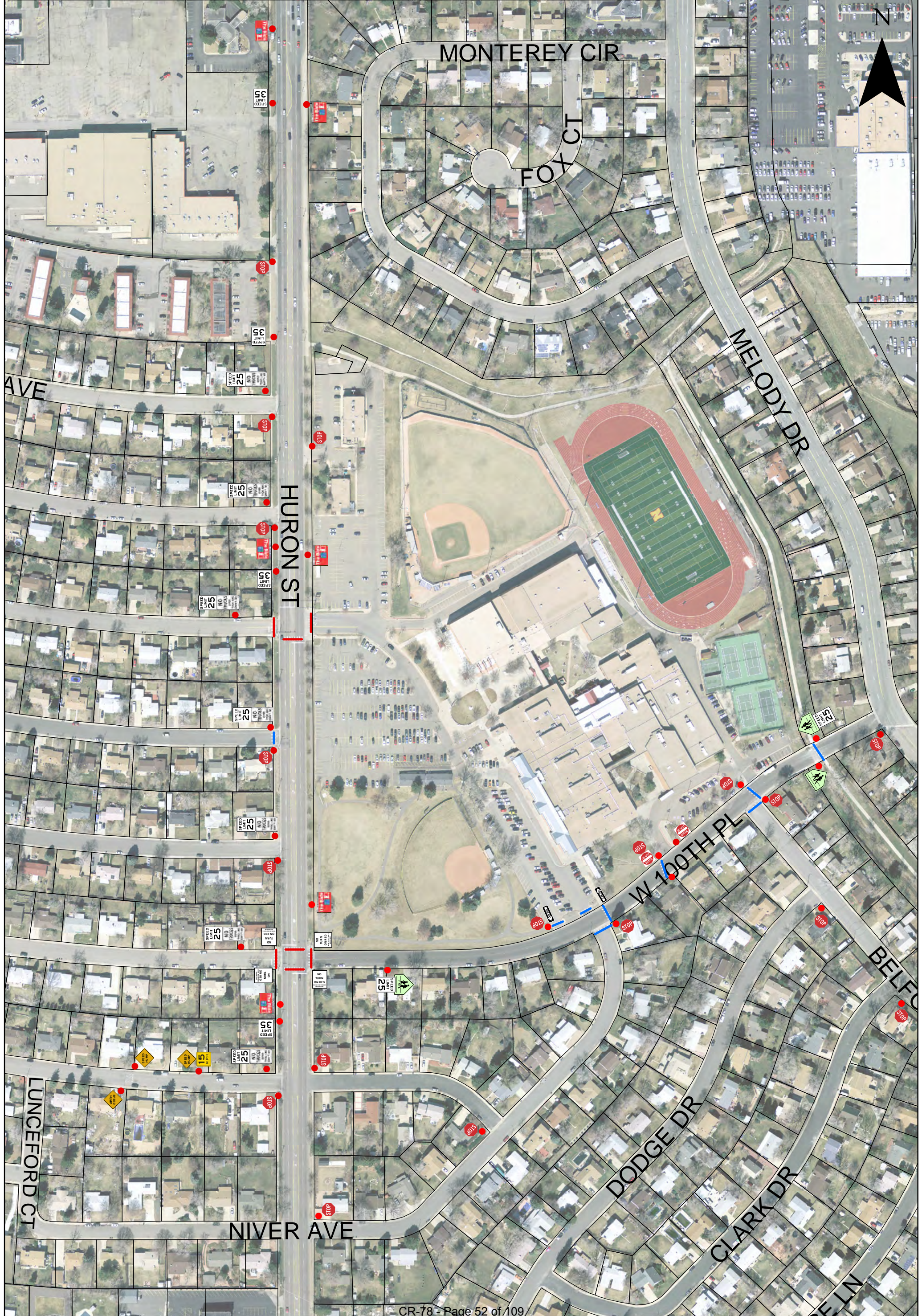




EXHIBIT B - EXISTING SIGNAGE

W 104T

N

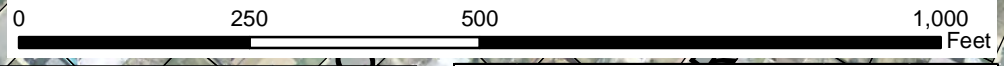




APPENDIX D

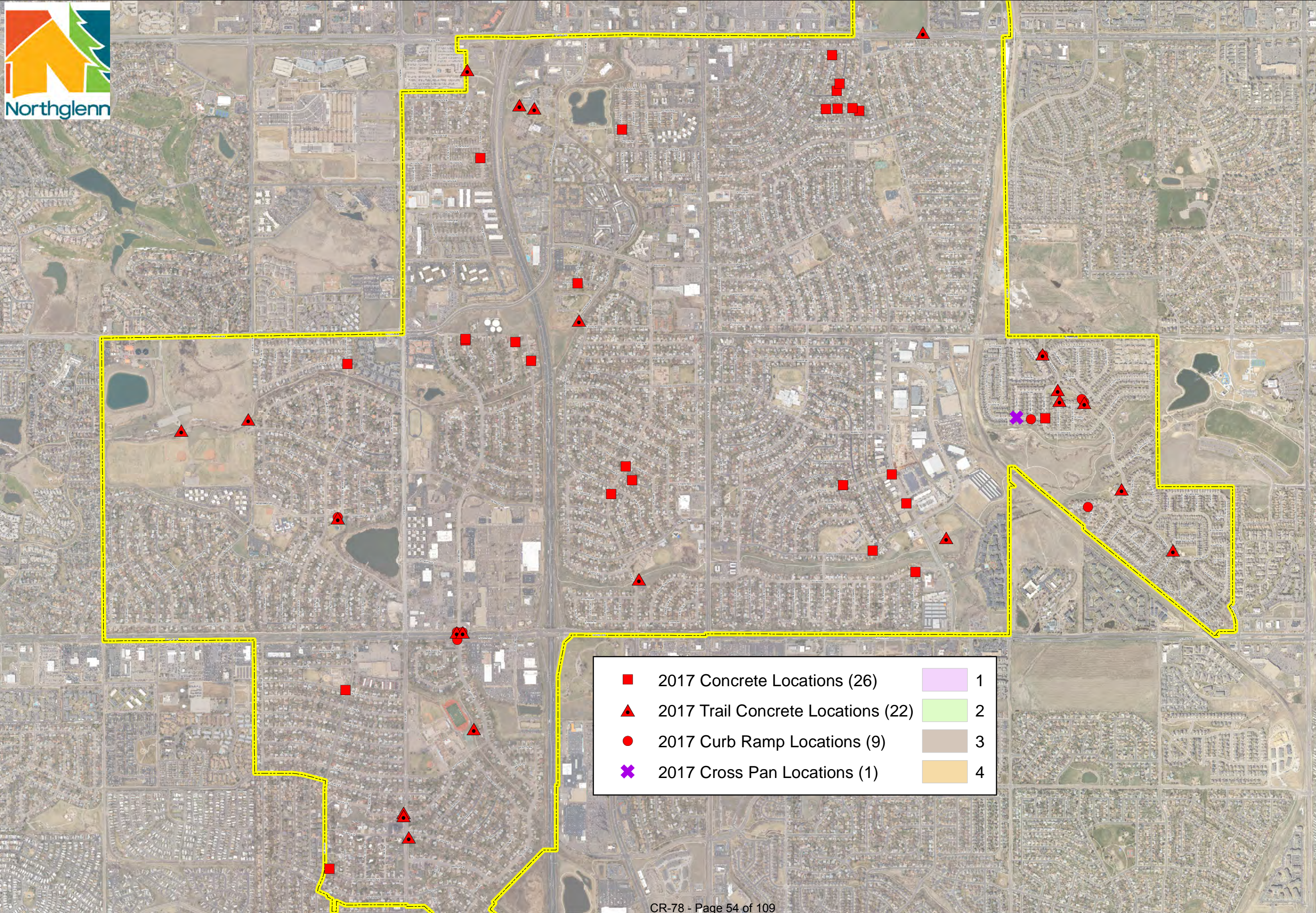
EXHIBIT C - SCHOOL ZONE SIGNAGE MODIFICATIONS

W 104T



<p>SCHOOL SPEED LIMIT 20 WHEN FLASHING</p> <p>SOLAR POWERED SCHOOL ZONE FLASHING</p>	<p>SCHOOL SPEED LIMIT 20</p> <p>7:30-8:30 AM 10:15-1:15 PM 2:45-3:15 PM MON-FRI</p> <p>SCHOOL ZONE SPEED LIMIT ASSEMBLY</p>	<p>SCHOOL CROSSING ASSEMBLY</p>	<p>SPEED LIMIT 35</p> <p>END SCHOOL ZONE</p>
---	--	---------------------------------	---

SCHOOL ZONE SIGNAGE LOG			
SIGN	SIGN DESIGNATION	SIZE	QUANTITY
S5-1	SCHOOL SPEED LIMIT XX WHEN FLASHING	24" x 48"	6
S4-5	REDUCED SCHOOL SPEED LIMIT AHEAD	36" x 36"	2
R2-1	SPEED LIMIT (35 MPH)	24" x 30"	2
R2-1	SPEED LIMIT (25 MPH)	24" x 30"	9
S5-2	END SCHOOL ZONE	24" x 30"	11
S4-3P	SCHOOL (PLAQUE)	24" x 8"	8
R2-1	SPEED LIMIT (20 MPH)	24" x 30"	8
S4-1P	TIME OF DAY (PLAQUE)	24" x 10**	8
S4-6P	MON-FRI (PLAQUE)	24" x 10"	8
S1-1	School (CROSSING)	36" x 36"	16
W16-7P	DIAGONAL ARROW (PLAQUE, OPT. SIZE)	21" x 15**	16



■	2017 Concrete Locations (26)	■	1
▲	2017 Trail Concrete Locations (22)	■	2
●	2017 Curb Ramp Locations (9)	■	3
✕	2017 Cross Pan Locations (1)	■	4

BUDGET 2017

Annual Operating & Capital Improvement



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5-YEAR CAPITAL IMPROVEMENT PROGRAM

Project Name: Huron Street Rehabilitation

Project Dates: **Begin:** Jan-2019 **Finish:** Dec-2020

Comprehensive Project Cost: \$1,800,000.00

Project Rationale: Roadway Rehabilitation

Future Operational Impact: Yes No **Operational Impact Category:** N/A

Description/Justification:
Rehabilitation of Huron Street South of 104th.

Design and construction of the Huron Street Rehabilitation South of 104th may include drainage and cross slope improvements. The total cost shown is for pavement rehabilitation only.

Source of Funding:	2017	2018	2019	2020	2021	5 - Year Total
Mill Levy	-		600,000	1,200,000		\$ 1,800,000
						-
						-
						-
Total Revenue	\$ -	\$ -	\$ 600,000	\$ 1,200,000	\$ -	\$ 1,800,000

Expenditures:	2017	2018	2019	2020	2021	5 - Year Total
Plans/Studies						\$ -
Design			600,000			600,000
Construction	-			1,200,000		1,200,000
Materials						-
Equipment						-
Other -						-
Other -						-
Total Expenditures	\$ -	\$ -	\$ 600,000	\$ 1,200,000	\$ -	\$ 1,800,000



CITY OF
Northglenn

Huron Street Interim Improvement Study

Presented to:

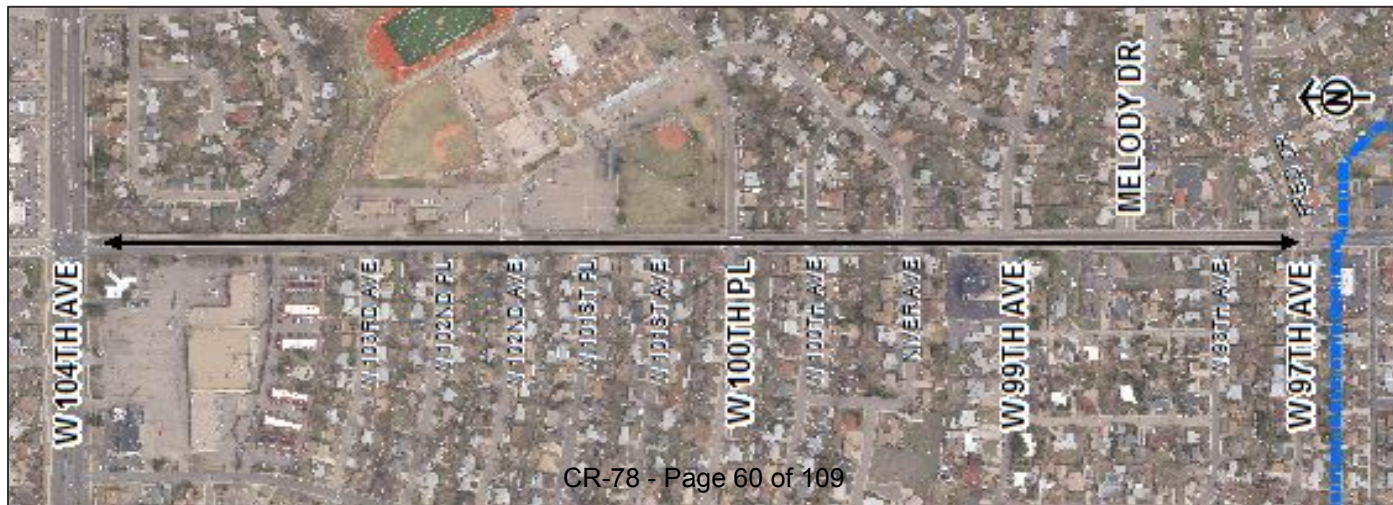
The Northglenn City Council:

April 17, 2017

PROJECT OVERVIEW

Scope

- Huron Street south of 104th Avenue to the City boundary
- Non-roadway portions of the right-of-way, including sidewalks, landscaping, fencing and any other features in the public realm
- Identify maintenance responsibilities, examine existing issues, and provide short-term recommendations
- \$50,000 improvement budget



PROJECT OVERVIEW

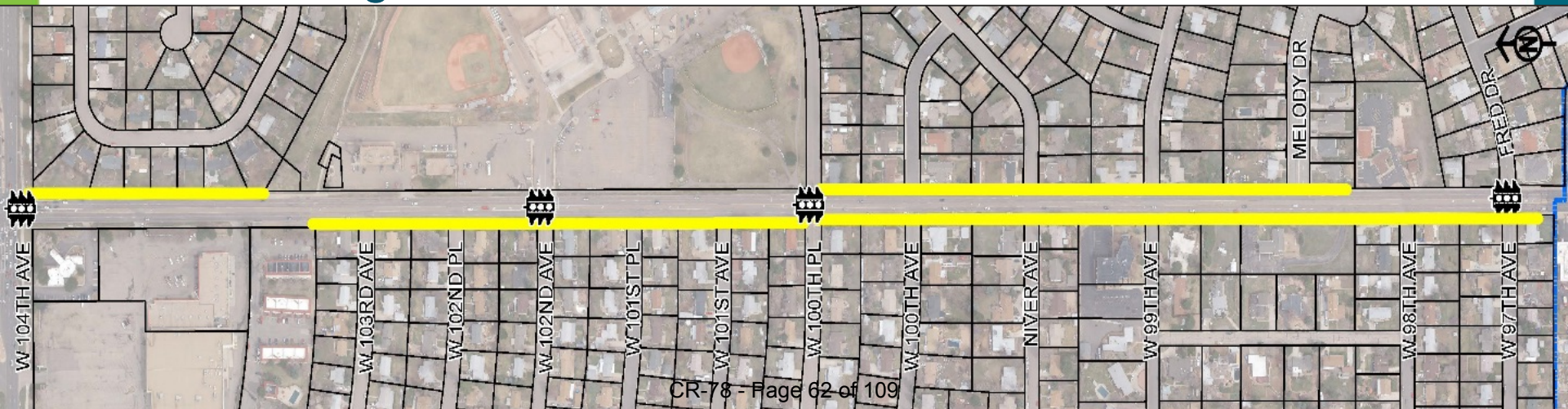
Process

- Data collection and research
- Internal stakeholder group consisting of staff from Planning, Parks & Recreation, Neighborhood Services, and Public Works
- Walking audit conducted with Ward 4 Councilmembers on March 10th



PUBLIC MAINTENANCE

- Highlighted areas in yellow below
- West side of Huron St., south of the Riviera apartment from approximately 103rd Ave. to the City boundary at 97th Ave
- East side of Huron St. from 104th Ave. south to Northglenn High School property
- East side of Huron St., from 100th Pl. to south of Melody Dr. ending at the Korean Church





CURRENT & FUTURE CITY PROJECTS

The following are known projects that may impact the Huron Corridor study area in 2017 and beyond:

- Northglenn High School Zone Signage
- Concrete Repair Program
- Huron Shopping Center improvements
- Huron Street Rehabilitation 2019-2020
- Huron Street Rebuild (CIP – unfunded)

ISSUE IDENTIFICATION

Unpaved Buffers



Bus Stops



Trees



Fencing



RECOMMENDATIONS

These recommendations are...

- Short-term to address aesthetic concerns, not long-term solutions.
- Provide options to address entire corridor or to meet \$50,000 budget. Not possible to accomplish both.
- Target the highest need issues with highest impact implementation strategies.
- Not envisioned to contribute to a larger reconstruction project. Improvements placed now likely will need to be removed for future reconstruction of Huron Street.

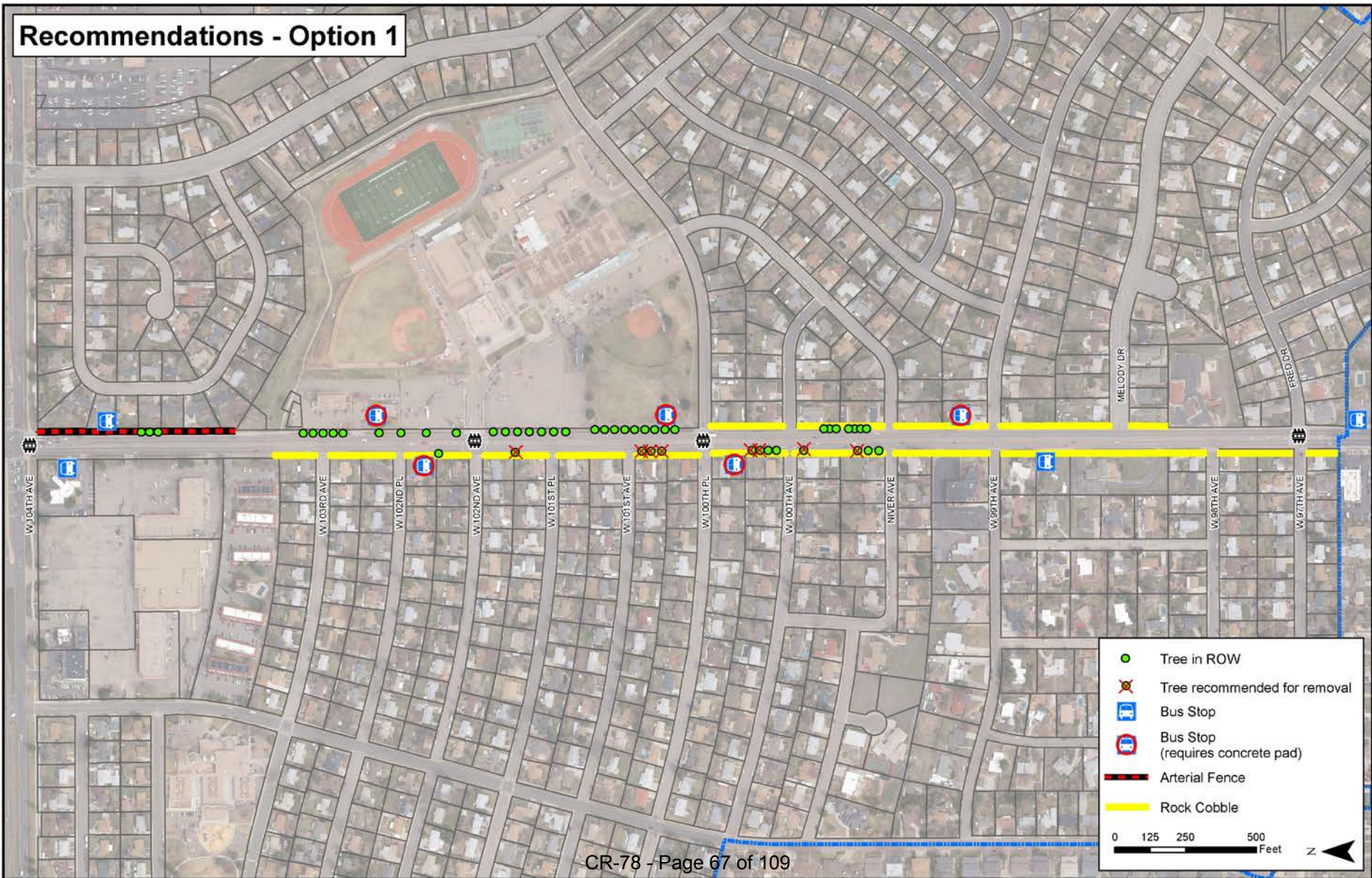
OPTION 1

Full installation of rock cobble and arterial fencing with budget amendment (\$184,000 - \$219,000)

- Install rock cobble along entire City-maintained ROW, 16 ½ blocks (\$81,000 - \$116,000).
 - Includes cost of ground clearing, tree removal, and bus stop access installation.
- Address fences through combination of code amendment and installation of 700' of arterial fencing south of 104th Ave to Northglenn High School (\$103,000).
- Identify and enforce existing code violations throughout corridor (\$0).

OPTION 1

Recommendations - Option 1



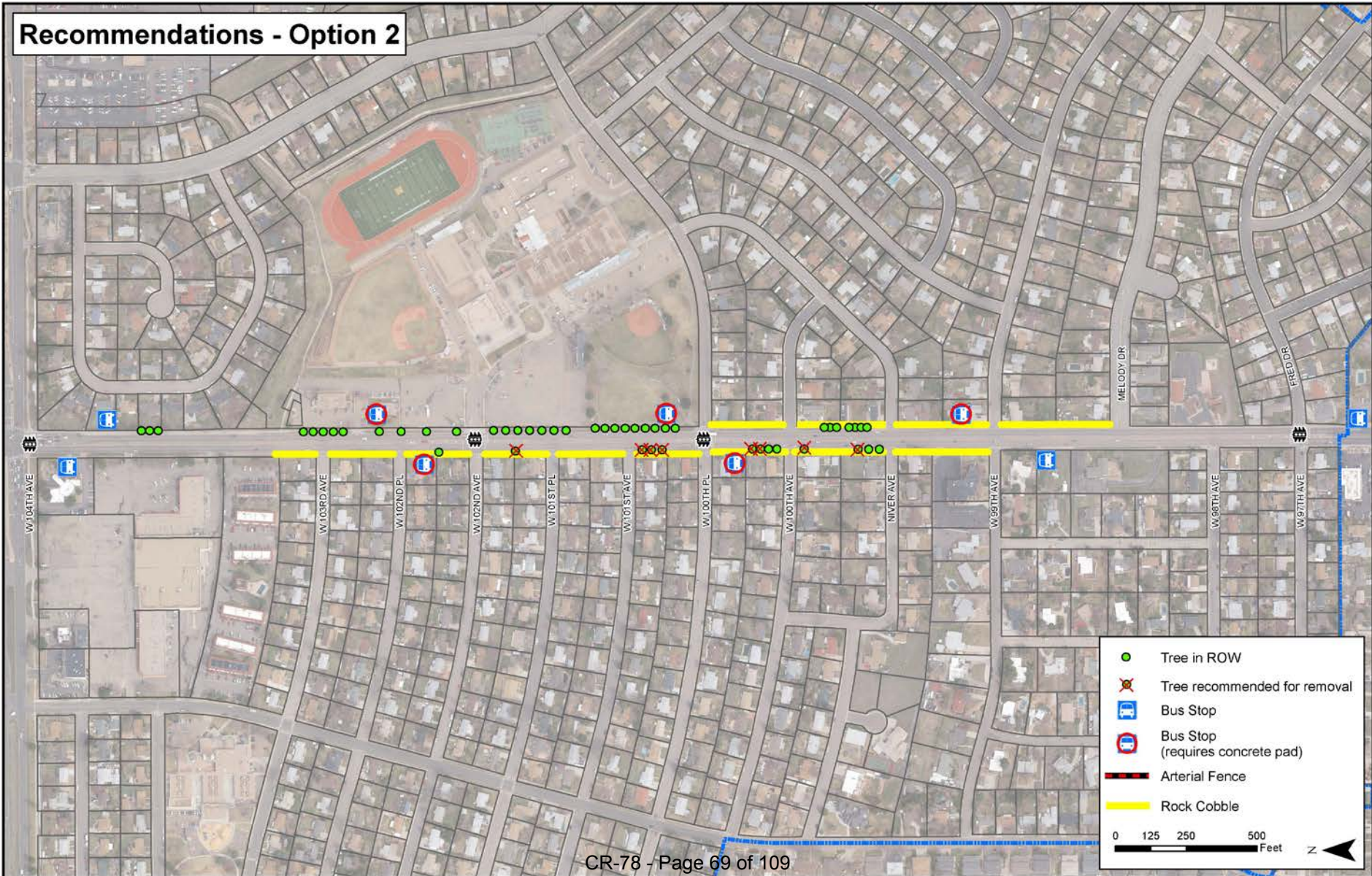
OPTION 2

Partial installation of rock cobble with budget amendment (\$66,000 - \$101,000 total cost, \$50,000 budget addition required)

- Install rock cobble in City-maintained landscape buffers, 12 ½ blocks (\$66,000 - \$101,000).
 - Includes cost of ground clearing, tree removal, and bus stop access installation.
- Address fences through combination of code amendment and future installation of 700' of arterial fencing south of 104th Ave to Northglenn High School as part of future CIP project (\$0).
- Identify and enforce existing code violations throughout corridor (\$0).

OPTION 2

Recommendations - Option 2



- Tree in ROW
- ✕ Tree recommended for removal
- Bus Stop
- Bus Stop (requires concrete pad)
- Arterial Fence
- Rock Cobble

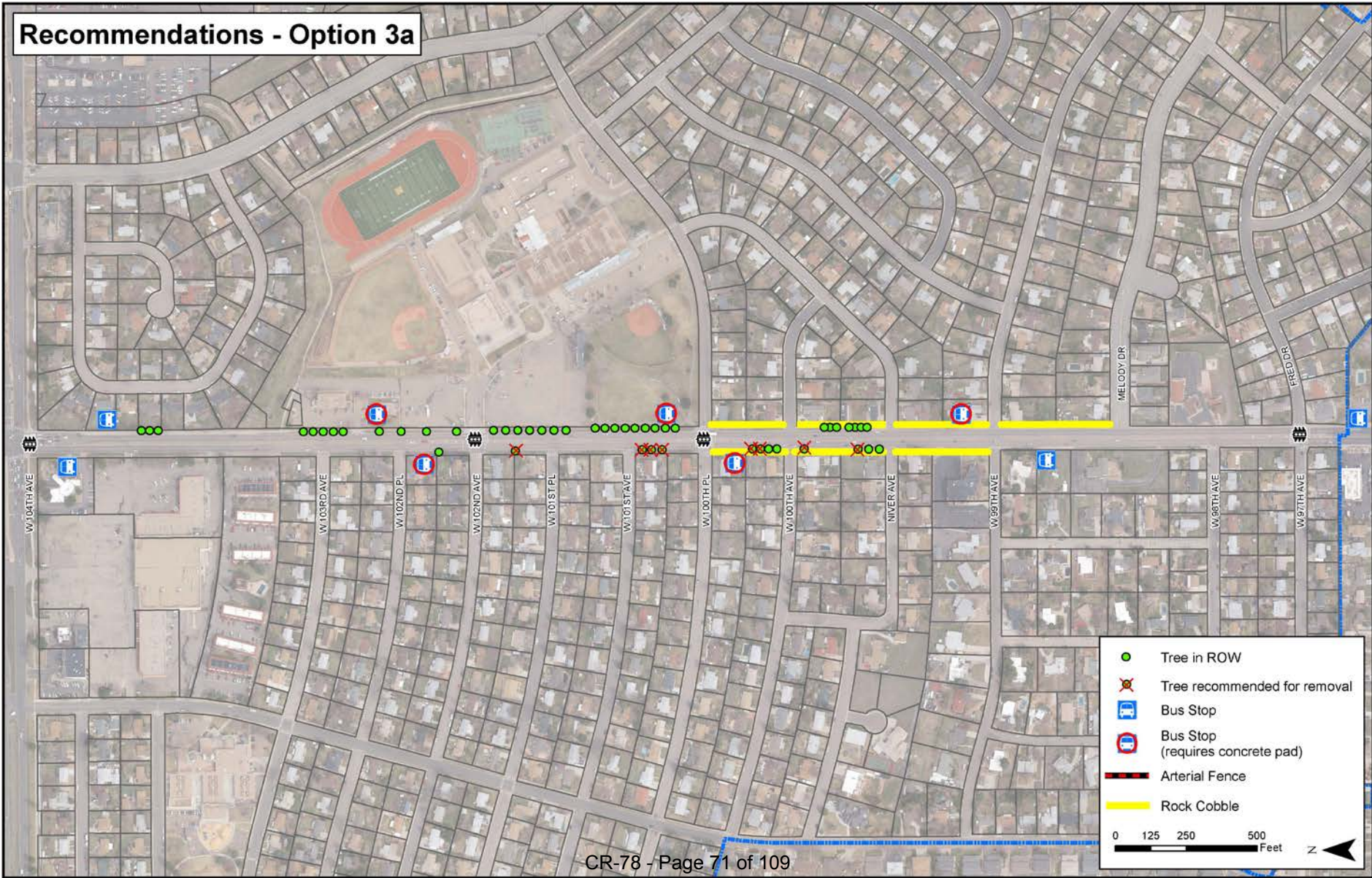
OPTION 3A







Partial installation of rock cobble within existing \$50,000 budget (\$37,000 - \$53,000)

- Install rock cobble in 2 ½ block high need portion of City-maintained landscape buffers and additional estimated 4 ½ blocks with remaining funds (\$31,000 - \$42,000).
- Address fences through combination of code amendment and future installation of 700' of arterial fencing south of 104th Ave to Northglenn High School as part of future CIP project (\$0).
- Identify and enforce existing code violations throughout corridor (\$0).
- Tree pruning and removal throughout 12 ½ blocks of City-maintained landscape buffers (\$4,000 - 6,000).
- Install bus stop accessibility paths at stops on detached sidewalks throughout corridor (\$2,000 - \$5,000).
 - Pursue outside funding for additional bus stop enhancements – concrete pads, benches, trash bins, and shelters.

OPTION 3A

Recommendations - Option 3a



-  Tree in ROW
-  Tree recommended for removal
-  Bus Stop
-  Bus Stop (requires concrete pad)
-  Arterial Fence
-  Rock Cobble

0 125 250 500 Feet

North Arrow

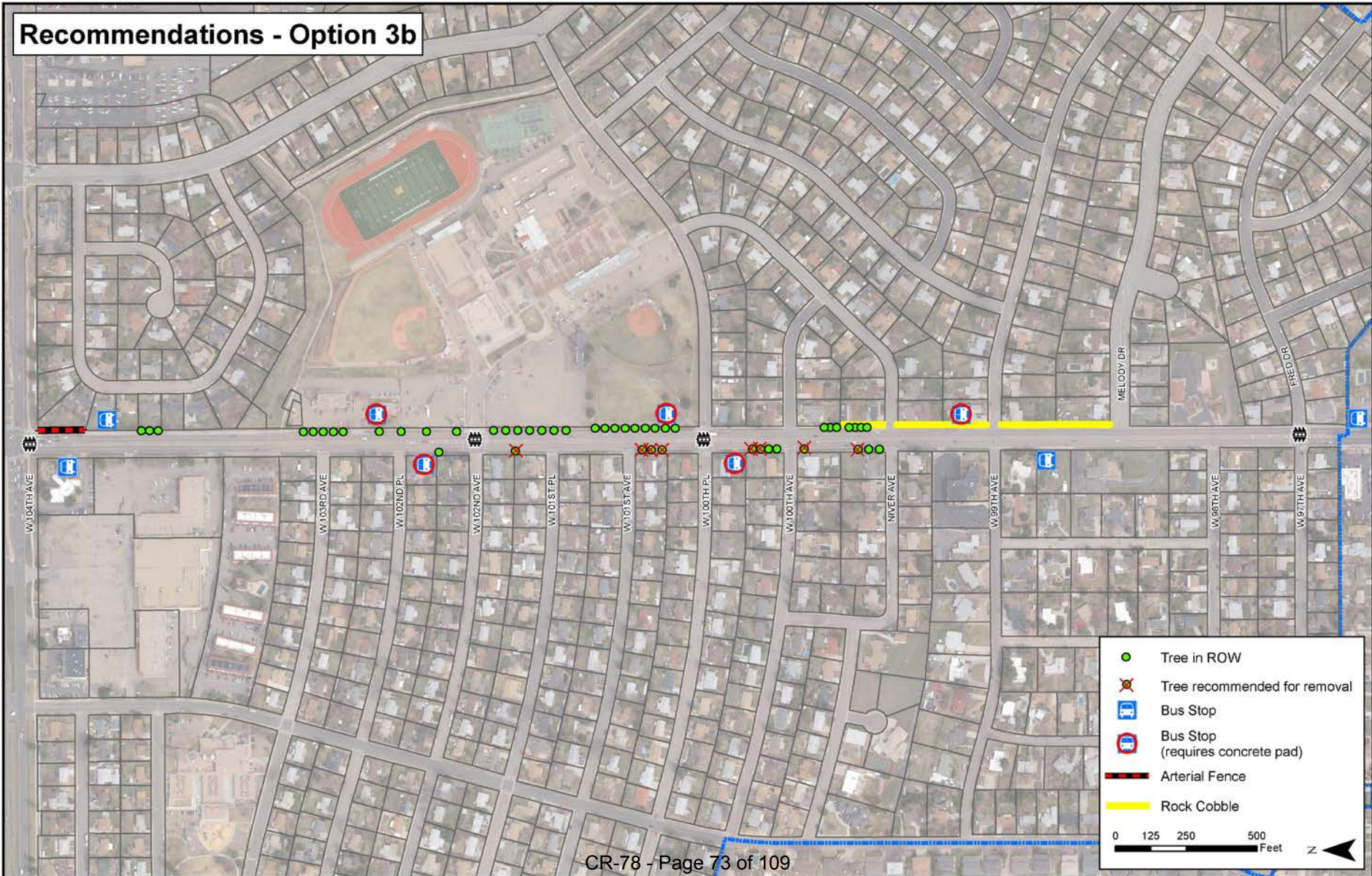
OPTION 3A

High need installation of rock cobble and partial arterial fence within existing \$50,000 budget (\$39,000 – \$48,000)

- Install rock cobble in 2 ½ block high need portion of City-maintained landscape buffers (\$11,000 - \$15,000).
- Address fences through combination of code amendment and installation of 150' of arterial fencing south of 104th Ave. to existing brick column (\$22,000).
- Identify and enforce existing code violations throughout corridor (\$0).
- Tree pruning and removal throughout 12 ½ blocks of City-maintained landscape buffers (\$4,000 - 6,000).
- Install bus stop accessibility paths on stops at detached sidewalks throughout corridor (\$2,000 - \$5,000).
 - Pursue outside funding for additional bus stop enhancements – concrete pads, benches, trash bins, and shelters.

OPTION 3B

Recommendations - Option 3b



QUESTIONS & DISCUSSION

SPONSORED BY: MAYOR DOWNING

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-78
Series of 2017

Series of 2017

A RESOLUTION APPROVING AN AGREEMENT BETWEEN THE CITY OF NORTHGLENN AND WESTERN STATES RECLAMATION, INC. FOR THE SOUTH HURON STREET LANDSCAPE PROJECT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO THAT:

Section 1. The Trade Contractor Agreement between the City of Northglenn and Western States Reclamation, Inc., attached hereto, in an amount of \$135,008.00, with a contingency of \$25,000.00, for a total amount not to exceed \$160,008.00 for the South Huron Street Landscape Project is hereby approved and the Mayor is authorized to execute same on behalf of the City of Northglenn.

DATED, at Northglenn, Colorado, this _____ day of _____, 2017.

JOYCE DOWNING
Mayor

ATTEST:

JOHANNA SMALL, CMC
City Clerk

APPROVED AS TO FORM:

COREY Y. HOFFMANN
City Attorney

TRADE CONTRACTOR AGREEMENT

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TRADE CONTRACTOR AGREEMENT

THIS AGREEMENT is made and entered into this ____ day of _____, 20____, by and between the City of Northglenn, State of Colorado, a Colorado home rule municipal corporation, hereinafter referred to as the "City" or "Owner" and Western States Reclamation Inc., hereinafter referred to as the "Trade Contractor".

ARTICLE 1 - GENERAL PROVISIONS AND SERVICES

A. The Trade Contractor will commence and fully complete the construction of the South Huron Landscape Project Project, which is described in **Exhibit A**, which is attached hereto and made a part hereof ("Project").

B. The Trade Contractor will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the project described herein.

C. The Trade Contractor will commence the work required by the contract documents within ten (10) calendar days after the date of the notification to proceed and will complete the same within forty-five (45) day, unless the period for completion is extended otherwise by the contract documents. The Trade Contractor agrees to pay as liquidated damages, and not as a penalty, the sum of five-hundred-dollars (\$500) for each consecutive calendar day's delay in completing this Contract after the completion dated specified herein, excluding any approved extensions of time because of unavoidable delay.

D. The Trade Contractor agrees to perform all of the work described in the contract documents and to comply with the terms therein for an amount not to exceed one hundred thirty five thousand eight dollars and no/cents (\$135,008.00) as described in Article 5 of this Agreement.

ARTICLE 2 - DEFINITIONS

A. Wherever used in the contract documents; the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1. Addenda - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the contract documents, drawings and specifications, by additions, deletions, clarifications or corrections.

2. Architect - The Architect shall be N/A

3. Bid - The offer or proposal of the bidder submitted in the prescribed form setting forth the prices for the work to be performed.

4. Bidder - Any person, firm or corporation submitting a bid for the work.

5. Bonds - Bid, performance and payment bonds and other instruments of security, furnished by the Trade Contractor and his surety in accordance with the contract documents.

6. Change Order - A written order to the Trade Contractor authorizing an addition, deletion or revision in the work within the general scope of the contract documents, or authorizing an adjustment in the contract price and/or contract time.

7. Contract Documents - The contract, including advertisement for bids, information for bidders, bid, bid bond agreement, bid schedule, labor and material, payment bond, performance bond, notice of award, notice to proceed, change order, general conditions, special conditions, general specifications, special specifications, scopes of work, addenda, drawings, schedules and any and all other documents or papers included or referred to in the foregoing documents are part of the Contract Documents

8. Contract Price - The total monies payable to the Trade Contractor under the terms and conditions of the contract documents.

9. Contract Time - The number of calendar days stated in the contract documents for the completion of the work.

10. Date of Award - Date of award of contract shall mean the date formal notice of such award, approved by the Owner, has been delivered to the intended awardee, or mailed to him at the main business address shown in his proposal by the Owner or it's authorized representative.

11. Day or Days - Unless herein otherwise expressly defined, "day" shall mean calendar day or days.

12. Drawings, Plans or Contract Documents - The part of the contract documents which shows the characteristics and scope of the work to be performed and which has been prepared or approved by the Engineer and/or Architect.

13. Engineer shall be N/A

14. Field Order - A written order effecting a change in the work not involving an adjustment in the contract price or an extension of the contract time, issued by the Engineer or the Owner to the Trade Contractor during construction.

15. Major Equipment or Major Equipment Items - Installation of major equipment to be furnished and placed under the contract awarded to the Trade Contractor and/or installations of major equipment to be furnished by the Owner and received, unloaded, stored, and placed under the contract awarded to the Trade Contractor.

16. Notice of Award - The written notice of the acceptance of the bid from the Owner to the successful bidder.

17. Notice to Proceed - Written communication issued by the Owner to the Trade Contractor authorizing him to proceed with the work and establishing the date of commencement of the work.

18. Owner or City - The City of Northglenn, Colorado, a home rule municipality. The Public Works Director of the Owner, or his designee, is the Owner's representative.

19. Project - Construction of the project described in **Exhibit A**.

20. Shop Drawings - All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Trade Contractor, a subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the work shall be fabricated or installed.

21. Site - The lands and other places on, under, in, or through which the work is to be executed or carried out and any other lands or places provided by the Owner for the purposes of the contract together with such other places as may be specifically designed in the contract documents as forming part of the site.

22. Special Conditions - Supplemental conditions that apply to specific aspects of the project or modifications to the general conditions that are to be adhered to in the project.

23. Subcontractor - An individual, firm or corporation having a direct contract with the Trade Contractor or with any other subcontractor for the performance of a part of the work at the site.

24. Substantial Completion - That date as certified by the Owner when the construction of the project or a specified part thereof is sufficiently completed, in accordance with the contract documents, so that the project or specified part can be utilized for the purposes for which it is intended.

25. Suppliers - Any person, supplier, or organization who supplies materials or equipment for the work, including that fabricated to a special design, but who does not perform labor at the site. A supplier is not a subcontractor who purchases an item of equipment from a manufacturer.

26. Trade Contractor - The person, firm or corporation with whom the City of Northglenn has executed this Agreement.

27. Work - All labor necessary to produce the construction required by the contract documents, and all materials and equipment incorporated or to be incorporated in the project. The work and the project are used interchangeably to mean the same thing.

28. Written Notice - Any notice to any party of the Agreement relative to any part of the Agreement in writing and considered delivered and the service thereof completed when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the work.

ARTICLE 3 - DESCRIPTION OF WORK AND SERVICES

Section 1. Drawings and Specifications.

- A. The intent of the drawings and specifications is that the Trade Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the work in accordance with the contract documents and all incidental work necessary to complete the project in an acceptable manner, ready for use, occupancy or operation by the Owner.

B. Up to three (3) copies of the drawings and specifications will be furnished to the Trade Contractor without charge upon request, and any additional copies which the Trade Contractor may request will be furnished at the cost of reproduction. The drawings and specifications are to be used only in connection with the work specified herein and, with the exception of the signed contract set and As-Built drawings, are to be returned at the completion of the contract.

C. In case of conflict between the drawings and specifications, the drawings will govern. In case of conflict between the special specifications and the general specifications, the special specifications shall govern. Figure dimension on drawings will govern over scale dimensions, and detailed drawings will govern over general drawings. Notwithstanding the above, a document which is more restrictive or requires greater responsibility or increased compliance by the Trade Contractor shall govern.

D. Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in the drawings or specifications shall be immediately reported to the Owner, in writing, who will promptly resolve such inconsistencies or ambiguities in writing. Work done on unreported discrepancies, inconsistencies or ambiguities by the Trade Contractor shall be done at the Trade Contractor's risk.

E. The Trade Contractor may be furnished additional instructions and detail drawings, by the Owner, as necessary to carry out the work required by the contract documents. All additional instructions and detail drawings shall be issued to the Trade Contractor by the Owner.

F. The additional drawings and instructions thus supplied will become a part of the contract documents. The Trade Contractor shall carry out the work in accordance with the additional detail drawings and instructions.

Section 2. Materials, Services and Facilities.

A. It is understood that, except as otherwise specifically stated in the contract documents, the Trade Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.

B. In addition to the requirements for major equipment items previously given, within fourteen (14) days after execution of the Contract, the Trade Contractor shall submit to the Owner and Engineer a complete listing of the manufacturers of each item of equipment or assembly fabricated off the site which he proposed to furnish for the project, together with sufficient information, including shop assembly and detail drawings, manufacturers' specifications and performance data, to demonstrate clearly that the materials and equipment to be furnished comply with the provisions and intent of the contract documents. If the information shows any deviation from the Contract requirements, the Trade Contractor shall advise the Engineer and Owner of the deviation and state the reason for it in writing.

C. Only first class materials and materials which conform to the requirements of the specifications shall be incorporated in the work. All materials shall be new unless specified to be otherwise.

D. When requested by the Owner, the Trade Contractor shall furnish a written statement of the origin, composition, and manufacturer of any or all materials (manufactured, produced or grown) that are to be used in the work. The sources of supply of each material used will be approved by the Owner before delivery is started. If, at any time, sources previously approved, fail to produce materials acceptable to the Owner, the Trade Contractor shall furnish materials from other sources.

E. Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.

F. Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

G. Materials, supplies, and equipment shall be in accordance with samples submitted by the Trade Contractor and approved by the Engineer or Architect.

H. Materials, supplies or equipment to be incorporated into the work shall not be purchased by the Trade Contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

I. The Trade Contractor shall retain, for the benefit of the Owner, all materials and supplies that are purchased for the project but are not used as a part of the project. The Owner may take any of the materials and supplies that are used in the project for any City purpose. Any materials and supplies not taken by the Owner shall be removed from the project site by the Trade Contractor.

Section 3. Shop Drawings.

A. The Trade Contractor shall submit shop drawings, samples and O&M manuals as may be necessary for the prosecution of the work as required by the contract documents on a timely basis so that the project schedule is not affected. The Engineer will promptly review all shop drawings. All such drawings will be approved and signed by the Engineer, and will be null and void unless authorized by such signature. The Engineer's approval of any shop drawing will not release the Trade Contractor from responsibility for deviations from the contract documents. The approval of any shop drawings which substantially deviates from the requirements of the contract documents shall be evidenced by a change order.

B. All drawings and details on items of major equipment will be reviewed by the Engineer only after the complete set of drawings and details covering the entire equipment package to be furnished under a particular major equipment item are submitted. Drawings submitted on a piecemeal basis covering only parts of the equipment package will be held for checking until the entire set of drawings are received.

C. The Trade Contractor shall also submit to the Engineer shop drawings showing all necessary detail for the proper installation of materials into the completed work, as provided by this Agreement.

D. The Trade Contractor shall make any indicated corrections on the drawings returned and shall resubmit corrected drawings until final approval is obtained.

E. The Trade Contractor shall have no claims for damages or extension of time on account of any delay in the work resulting from the rejection of material or from review, revision and resubmittal of drawings when the review, revision and resubmittal is due to changes to the original design documents, and other data for approval by the Engineer.

F. Each shop drawing shall be dated and shall be identified with the name of the project, the division, if any, the Contract item number, and the name of the Trade Contractor.

G. When submitted for the Engineer's review, shop drawings shall bear the Trade Contractor's certification that he has reviewed, checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

H. The Trade Contractor shall submit the shop drawings in accordance with the general requirements.

I. Portions of the work requiring a shop drawing or sample submission shall not begin until the shop drawing or submission has been approved by the Engineer. A copy of each approved sample shall be kept in good order by the Trade Contractor at the site and shall be available to the Engineer.

J. By approving and submitting shop drawings and samples, the Trade Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each shop drawing and sample with the requirements of the work and of the contract documents.

Section 4. Records, Accounts and Audits.

A. The Trade Contractor agrees to keep one complete set of records and books of account on a recognized cost accounting basis (satisfactory to the Engineer), showing all expenditures, of whatever nature, made pursuant to the provisions of this Contract.

B. The Trade Contractor shall furnish the Engineer and Owner with such records, information and data as may be reasonable. The Engineer and Owner shall at all reasonable times be afforded the opportunity to inspect and/or audit the above-specified books and records of said Trade Contractor.

Section 5. Inspection and Testing.

A. All materials and equipment used in the construction of the project will be subject to adequate inspection and testing in accordance with generally accepted standards.

B. The Trade Contractor shall give sufficient advance notice of placing orders to permit tests to be completed before materials are incorporated in the work.

C. The Owner will provide all inspection and testing services required by the Contract Documents, unless specifically noted in the contract specifications for special inspection and testing services, such as, by way of example, welding inspections on off-site assembly.

D. Neither observations by the Engineer, and Owner, tests nor approvals by persons other than the Engineer and Owner will relieve the Trade Contractor from his obligations to perform the work in accordance with the requirements of the contract documents.

E. The Engineer, the Owner, and their representatives will at all times have access to the work and to locations where materials or equipment are being manufactured, stored, or prepared for use under these contract documents, and they shall have full facilities for unrestricted inspection of such materials, equipment, and work including full access to purchasing and engineering information, but not including prices, to the extent of uncovering, testing, or removing portions of the finished work. The Engineer and Owner shall be furnished with such information as may be required regarding materials used and the process of manufacture for the various items of equipment. Inspections by the Engineer and Owner of equipment or materials during its manufacture will be performed by or for the Owner solely in an effort to detect discrepancies and defects as early as possible, when they can be most readily corrected, and the work thereby expedited. No acceptance of equipment or materials will be construed to result from such shop inspections by the Engineer and Owner. Any inspections or tests or waivers thereof will not relieve the Trade Contractor of responsibility for meeting all requirements of these contract documents.

F. In addition, authorized representatives and agents of any participating federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Trade Contractor shall provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.

G. In case of disputes between the Trade Contractor and the Engineer as to materials furnished or manner of performing the work, the Owner will have authority to reject materials or suspend the work until the question at issue can be decided by the Owner. The Owner is authorized to revoke, alter, enlarge, relax or release any requirements of these specifications, and to approve or accept any portion of the work, and to issue instructions contrary to the drawings and specifications.

Section 6. Construction Review

A. The Engineer will periodically observe the construction of all work covered by this Contract. The Engineer, on behalf of the Owner, shall be authorized to determine the amount or quantities of the several items of work which are to be paid for under this Contract; to order field changes within the scope of the Contract and to render decisions on any questions which may arise relative to the execution of the work covered by this Contract. The Engineer does not have authority to suspend work on the project. The Trade Contractor shall not suspend any portion of the work nor resume suspended work without the written authority of the Owner.

B. Neither Engineer's authority to act under the Contract nor any decision made by Engineer in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the Engineer to the Trade Contractor, any subcontractor, any supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

C. Whenever in the drawings, plans or Contract Documents the terms "as ordered", "as directed", or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of Engineer as to the work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the work for compliance with the contract documents. The use of any such

term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility for the project. Neither the Owner nor the Engineer will be responsible for the acts or omissions of Contractor or any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

D. Periodic observation of the work in progress by the Engineer will be done whenever the Contractor is performing work that requires review as determined by the Engineer. The normal working time shall be during a regular 5-day, 40-hour work week, Monday through Friday. If the Trade Contractor elects to work more than 40 hours per week and observation is required during this overtime work as determined by the Engineer, the Engineer shall be paid by the Trade Contractor at the rate as specified herein for all review time required over the normal 5-day, 40-hour week. If the Engineer or his authorized representative is called to the job site to address problems created by the Trade Contractor, he will be paid by the Trade Contractor at the same rate as for overtime review as stated above. This payment shall be made by a credit to the Owner, and then the Engineer shall bill the Owner for the same.

E. If any work has been covered which the Engineer has not been specifically requested to observe prior to its being covered, or if the Engineer considers it necessary or advisable that covered work be inspected or tested by others, the Trade Contractor at the Engineer's request shall uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the work in question, furnishing all necessary labor, materials, tools and equipment. If it is found that such work is defective, the Trade Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective, the Trade Contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate change order will be issued.

Section 7. Surveys, Permits and Regulations.

A. The Owner will furnish any existing land surveys in the Owner's possession. Provided however, the Trade Contractor shall perform all necessary land surveys to complete the work required by this Agreement. The Trade Contractor shall provide detailed construction staking.

B. At the beginning of the construction or as the work progresses, the Trade Contractor shall be responsible for the installation of property corners and the setting of bench marks.

C. Bench marks and survey stakes shall be preserved by the Trade Contractor and in case of their destruction, or removal by him, his employees, or others, they shall be replaced at the Trade Contractor's expense and his Sureties shall be liable therefor.

D. The Trade Contractor shall be responsible for elevations used in computing his bid.

E. The Trade Contractor shall secure and pay for all necessary permits, fees and licenses in connection with the performance of its work and shall pay all municipal and other governmental fees in connection therewith except those expressly provided by the specifications as being the responsibility of the Owner, and shall furnish at its expense any and all bonds and

cash or other deposits required by law or required by any lawful body having the right to make demand therefor.

F. The Owner will provide rights-of-way and permanent and temporary easements as shown on the plans for construction purposes. Any additional land actually needed by the Trade Contractor for the performance of the work, proper location of his plant and equipment, or the storage of materials and supplies for the work, shall be furnished by the Trade Contractor.

Section 8. Protection of Work, Property and Persons.

A. The Trade Contractor shall be responsible for initiating and maintaining all safety precautions and programs in connection with the work. Neither the Owner nor the Engineer will be responsible for Trade Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto. The Trade Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the work who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

B. The Trade Contractor shall at all times consult with and obtain the approval of the Owner for the storage of material, operation of equipment, placing of temporary structures or dispositions of any surplus or waste materials upon property of the Owner anywhere outside the limits of construction. The Trade Contractor shall comply with all state, federal and local laws related to the storage or placement of any supplies, equipment, structures, or any other materials.

C. The Trade Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. He shall notify owners of adjacent utilities when prosecution of the work may affect them. The Trade Contractor shall remedy at his expense all damage, injury, or loss to any property or person caused, directly or indirectly, in whole or in part, by the Trade Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except damage or loss attributable to the fault of the contract documents or to the acts or omissions of the Owner or the Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Trade Contractor. Notwithstanding the provisions of C.R.S. § 13-20-802.5(2), for purposes of this Contract, the measure of damages shall never be deemed to be the fair market value of the real property without an alleged construction defect.

D. The Trade Contractor shall observe all rules and regulations of the health department having jurisdiction and shall take precautions to avoid creating unsanitary conditions.

E. In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the Trade Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss.

F. The Trade Contractor shall at all times conduct and work in such a manner as to

cause the least inconvenience and greatest protection to the general public. The Trade Contractor shall furnish and maintain barricades, warning signs, red flags, lights, and temporary passageways as may be necessary to protect the work and to safeguard the public. The cost of furnishing and maintaining the above facilities shall be incidental to the contract and no extra compensation for it will be allowed.

G. Throughout the performance of the work or in connection with this Contract, the Trade Contractor shall construct and adequately maintain suitable and safe crossings over trenches and such detours as are necessary to care for public and private traffic. The material excavated from trenches shall be compactly deposited along the sides of the trench or elsewhere in such a manner as shall give as little inconvenience as possible to the traveling public, to adjoining property owners, to other trade contractors, or to the City.

H. In performing the work, the Trade Contractor shall take the necessary action, including making arrangements with the owners or operators of existing power, cable and telephone lines, fiber-optic and telemetry lines, gas, water, sewer and other utilities or installations that may be encountered, whether privately or publicly owned, to prevent interference with the conditions, operations and maintenance of the respective utilities in a manner satisfactory to the owners, or operators of the respective utilities. Relocation or repair of utilities encountered even though not shown on the plans, shall be the responsibility of the Trade Contractor. The cost of the above measures, including maintaining of guards, watchmen, signals, barricades and temporary structures, making any necessary repairs and other cooperative or corrective work shall be borne by the Trade Contractor and shall be included in the prices bid in the Proposal for the related items of work. Neither the Owner nor the Engineer shall be responsible to the Contractor for the existence of utilities not shown on the plans or drawings and the Trade Contractor remains obligated under this paragraph for all hidden utilities.

I. The Trade Contractor shall be responsible for the preservation of all private or public property along and adjacent to the work and shall take all necessary precautions to prevent damage or injury thereto. Such preservation and protection shall include but not be limited to, trees, stone walls, fences, mail boxes, monuments, irrigation ditches, driveways, road access culverts, underground pipelines and structures. Such preservation and protection shall apply to all underground pipelines and utilities whether public, private or individually owned that are in or adjacent to the right-of-way. When direct or indirect damage is done to public or private property on account of the act, omission, neglect or misconduct in the prosecution or non-prosecution of the work on the part of the Trade Contractor, such property shall be restored by the Trade Contractor at the Trade Contractor's expense to a condition similar or equivalent to that which existed before such damage or injury was done, and brought up to current codes if applicable. The Trade Contractor shall be responsible for making all arrangements at his own expense for moving and operating equipment at temporary crossings of telephone and transmission lines, railroad tracks, irrigation ditches and pipelines.

Section 9. Communication with the Owner.

The Trade Contractor shall designate a responsible member of its organization at the site, whose duty shall be designated as the contact person for all communication between the Owner and the Trade Contractor. Said designated representative shall also be responsible to attend such meetings, as may be required to insure coordination and adequate performance of the work.

Section 10. Scope of Work.

The scope of work is described in the contract documents which are appended hereto and incorporated herein by this reference.

Section 11. Trade Contractor's Responsibility.

A. The Trade Contractor shall be responsible for all the work under this Contract until completion and final acceptance by the Owner.

B. The Trade Contractor shall supervise and direct the work. He shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

C. The Trade Contractor shall employ on the work only such persons who are competent and skilled in their assignments. Any employee who obstructs the progress of the work through incompetence or other means or conducts himself improperly shall be discharged or removed from the work when so requested by the Owner. This section shall not create a duty for the Owner to evaluate or assess the competence or skills of the Trade Contractors employees.

D. The Trade Contractor warrants that all materials and equipment furnished and incorporated by him in the project shall be new, unless otherwise specified, and that all work under this Trade Contract shall be of good quality, free from fault and defects and in conformity with the contract documents. All work not conforming to these standards shall be considered defective. The warranty provided herein shall be in addition to and not in limitation of any other warranty or remedy required by law or by the contract documents.

E. The Trade Contractor agrees that if he should fail or neglect to prosecute the work diligently and properly, or fail to perform any provisions of this Trade Contract, that the Owner, after three (3) days written notice to said Trade Contractor may, without prejudice to any other remedy, make good such deficiencies and may deduct the cost thereof from the payments then or thereafter due to the Trade Contractor pursuant to this Contract.

F. Tools furnished with any equipment may be used when approved by the Owner and shall be turned over to the Owner after completion of the work in a condition acceptable to the Owner. In case of rejection by the Owner, the Trade Contractor shall replace the tool or tools at no extra cost to the Owner.

G. Upon completion and before final acceptance of the work, the Trade Contractor shall remove from the site of the work and property of the Owner, all machinery, equipment, surplus materials, rubbish, barricades, signs and temporary structures and shall leave the premises in a condition which is satisfactory to the Owner.

H. The Trade Contractor shall keep one record set of the contract documents annotated to show all changes made during construction.

I. The Trade Contractor shall be responsible for the acts and omissions of all his employees and all subcontractors, their agents and employees and all other persons performing any of the work under a contract with the Trade Contractor.

J. Upon completion of the work, the Trade Contractor shall, at his or its expense, remove from the vicinity of the work, all plant, buildings, rubbish, unused materials, concrete forms

and other like material, belonging to him or used under his direction during construction, and in the event of his failure to do so, the same may be removed by the Owner and the Trade Contractor, his Surety or Sureties, shall be liable for the cost thereof. Also during the construction of the work, the site, partially finished structures, and material stockpiles shall be kept in a reasonable state of order and cleanliness.

Section 12. Changes in the Work.

A. CHANGES. Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, only by Change Order, Construction Change Directive, or Order for a Minor Change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

1. A Change Order shall be based upon agreement among the Owner, Contractor, and Engineer; a Construction Change Directive requires agreement by the Owner and Engineer and may or may not be agreed to by the Contractor; an Order for a Minor Change in the Work may be issued by the Engineer alone.

2. Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive, or Order for a Minor Change in the Work.

3. If unit prices are stated in the Contract Documents or subsequently agreed upon, and if the quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to the quantities of work proposed will cause substantial inequity to the Owner or the Contractor, the applicable unit prices shall be equitably adjusted; provided however, that Owner may increase the number of units without change in the unit price if reasonable.

B. CHANGE ORDERS. The Contract Sum and the Contract Time may be changed only by Change Order. Methods used in determining adjustments to the Contract Sum may include those listed in Subsection C below. A Change Order is a written order to the Contractor, signed by the Contractor, the Owner and the Engineer, stating their agreement upon all of the following:

1. A change in the Work;
2. The amount of the adjustment in the Contract Sum, if any; and
3. The extent of the adjustment in the Contract Time, if any.

C. CONSTRUCTION CHANGE DIRECTIVES. A Construction Change Directive is a written order directed to the Contractor and signed by the Owner and Engineer, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

1. A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

2. If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

a. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

b. By unit prices stated in the Contract Documents or subsequently agreed upon;

c. By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

d. By the method provided in Subparagraph (C)(3)(5).

3. Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the work involved and advise the Engineer and Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

4. A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

5. If the Contractor does not respond promptly to the Construction Change Directive or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Engineer on the basis of reasonable expenditures and savings of those performing the work attributable to the change, including, in case of an increase in the Contract Sum, a percentage fee for overhead and profit not to exceed five percent (5%) of such work's actual cost for Contractor and ten percent (10%) of such work's actual cost to be apportioned between any and all subcontractors and sub-subcontractors. For work performed by Contractor's own forces, Contractor's mark-up shall be limited to actual cost plus a percentage fee for overhead and profit not to exceed ten percent (10%). In such case, the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting of actual costs together with appropriate supporting data. For the purposes of this Subparagraph, actual costs shall be defined as and limited to the following:

a. Costs of labor, including Social Security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

b. Costs of materials, supplies, and equipment, including costs of transportation, whether incorporated or consumed;

c. Reasonable rental costs of machinery and equipment, exclusive of hand tools, obtained and used specifically for such work, whether rented from the Contractor or others; and

d. Costs of premiums for all bonds (if any), permit fees, and sales, use or similar taxes directly attributable to such work. Actual cost does not include any item which could be deemed to be a general conditions cost or overhead, such as but not limited to, the cost of Contractor and Subcontractor supervisory personnel assigned to the Work, and field office and related expenses.

6. Pending final determination of actual cost to the Owner, amounts not in dispute may be included in applications for payment. The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Engineer. When both additions and credits covering related work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

7. If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for determining it, the adjustment or the method shall be determined in accordance with Article 5 hereof.

8. When the adjustments in the Contract Sum and Contract Time are determined as provided herein, such determination shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

D. MINOR CHANGES IN THE WORK

1. The Engineer will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

2. The Owner may at any time as the need arises, order changes within the scope of work without invalidating the Agreement. If such changes increase or decrease the amount due under the contract documents or in the time required for performance of the work, and equitable adjustment will be authorized by change order.

3. The Owner also may, at any time, by issuing a field order, make changes in the details of the work. The Trade Contractor shall proceed with the performance of any changes in the work so ordered by the Owner unless the Trade Contractor believes that such field order entitles him to a change in contract price or time, or both, in which event he shall give the Owner written notice thereof within ten (10) days after the receipt of the ordered change, and the Trade Contractor shall not execute such changes pending the receipt of an executed change order or further instruction from the Owner.

Section 14. Contract Documents.

In case of conflict between this Contract, the general conditions of the contract for construction, and the supplementary conditions, this Contract will govern.

ARTICLE 4 – TRADE CONTRACTOR'S CONSTRUCTION SCHEDULE

Section 1. Preconstruction Conference.

A preconstruction conference shall be scheduled at the time the Notice of Award is issued. The Trade Contractor, at the preconstruction conference, shall prepare and submit for the Owner's and the Engineer's review and approval a Trade Contractor's construction schedule for the Work, in such and form and detail as the Owner may require. The schedule shall not exceed time limits under the Contract Documents, shall be revised as required herein and at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire project to the extent required by the Contract Documents, and shall provide for the expeditious and practicable execution of the Work. The schedule shall indicate the proposed starting and completion dates for the various subdivisions of the Work as well as the totality of the Work. The schedule shall be updated every fourteen (14) days for submitted to Engineer with Trade Contractor's applications for payment. Each schedule shall contain a comparison of actual progress with the estimated progress for such time stated in the original schedule. If any schedule submitted sets forth a date for Substantial Completion for the Work or any phase of the Work beyond the date(s) of Substantial Completion established in the Contract (as the same may be extended as provided in the Contract Documents), the Trade Contractor shall submit to Engineer and Owner for their review and approval, a narrative description of the means and methods which Trade Contractor intends to employ to expedite the progress of the Work to ensure timely completion of the various phases of the Work as well as the totality of the Work. To ensure such timely completion, Trade Contractor shall take all necessary action including, without limitation, increasing the number of personnel and labor on the Project and implementing overtime and double shifts. In that event, Trade Contractor shall not be entitled to an adjustment in the Contract Sum or the Schedule.

Section 2. Schedule of Submittals.

The Contractor shall prepare and keep current, for the Engineer's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Engineer reasonable time to review submittals.

Section 3. Conformance to Schedule.

The Contractor shall conform to the most recent schedules.

ARTICLE 5 - TIME FOR COMPLETION AND LIQUIDATED DAMAGES

A. The date of beginning and the time for completion of the work are essential conditions of the contract documents and the work embraced shall be commenced on a date specified in the notice to proceed.

B. The Trade Contractor shall proceed with the work at such rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed, by and between the Trade Contractor and the Owner, that the contract time for the completion of the work described herein is a reasonable time. If Trade Contractor is delayed in the progress of the Work by fire, unusual delay in transportation, unanticipated adverse weather conditions, or other unavoidable casualties beyond Trade Contractor's control other than unanticipated adverse weather conditions, the Contract Time shall be extended for a reasonable period of time. "Weather" means precipitation, temperature, or wind, and an "adverse weather condition" means

weather that on any calendar day varies from the average weather conditions for that day by more one hundred percent (100%) as measured by the National Oceanic and Atmospheric Administration. The term "unanticipated adverse weather conditions" means the number of days in excess of the anticipated adverse weather days per month as set forth below:

MONTHLY ANTICIPATED ADVERSE WEATHER DAYS											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
7	4	4	4	6	3	4	2	3	3	2	5

By reason of example only, if in March there are two (2) days when the snowfall exceeds the average snowfall for that day by one hundred percent (100%), those two (2) days will have experienced an adverse weather condition. However, there will have been no unanticipated adverse weather condition in March, because there are four (4) anticipated adverse weather days in March, which should be accounted for in the schedule. If, however, there are five (5) days in which the snowfall exceeds the average snowfall by one hundred percent (100%), an unanticipated adverse weather condition will have occurred, and Trade Contractor shall be entitled to request an extension of time.

C. If the Trade Contractor shall fail to complete the work within the Contract Time, or extension of time granted by the Owner, then the Trade Contractor shall pay to the Owner the amount of liquidated damages and not as penalty the sum of five-hundred-dollars (\$500) for each calendar day that the Trade Contractor shall be in default after the time stipulated in the contract documents.

D. The Owner will charge the Trade Contractor, and may deduct from the partial and final payment for the work, all architectural, engineering and construction management expenses incurred by the Owner in connection with any work accomplished after the specified completion date.

E. The Trade Contractor will not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following, and the Trade Contractor has promptly given written notice of such delay to the Owner.

1. To any preference, priority or allocation order duly issued by the Owner.
2. To unforeseeable causes beyond the control and without the fault or negligence of the Trade Contractor, including, but not restricted to, unforeseen conditions, acts of God, or of the public enemy, acts of the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and
3. To any delays of subcontractors occasioned by any of the causes specified in subparagraphs 1 and 2 of this paragraph E.

F. The Trade Contractor waives any right of recovery or reimbursement or by whatever name, as against the Owner or the Engineer, as a result of any delay or increase on overhead cost incurred by the Trade Contractor's association with any action or inaction on the part of any other trade contractor or supplier.

G. Any request for extension of the Contract Time shall be made in writing to the

Project Manager not more than seven (7) days after commencement of the delay; otherwise it shall be waived. Any such request shall contain an estimate of the probable effect of such delay on the progress of the Work.

H. In strict accordance with C.R.S. § 24-91-103.5, the City shall not amend the Contract Price to provide for additional compensation for any delays in performance which are not the result of acts or omissions of the City or persons acting on behalf of the City.

ARTICLE 6 - CONTRACT SUM

Section 1. Monthly or Progress Payments.

A. The City Council of the City of Northglenn has appropriated the money necessary to fund this project. The Owner shall pay the Trade Contractor in current funds for the performance of the work, subject to any additions and deletions, by written change order, the total sum not to exceed one hundred thirty five thousand eight dollars and no/cents (\$135,008.00) (the "Original Contract Amount"). Notwithstanding anything to the contrary contained in this Agreement, no change order or other form of directive by the Owner requiring additional compensable work to be performed, which causes the aggregate amount payable under this Agreement, to exceed the amount appropriated for the Original Contract Amount, unless the Trade Contractor is given written assurance by the City of Northglenn that lawful appropriations have been made by the City Council of the City of Northglenn to cover the cost of the additional work.

B. The Engineer has, by separate agreement with the Owner, agreed to include in its monthly work estimate to the Owner, a review of the Trade Contractor's estimates of the value of all work, labor, and materials of the Trade Contractor incorporated into the Project. The Trade Contractor hereby agrees that estimates provided to the Engineer for review for the Owner shall be for work actually performed upon the project and that all such work, including labor and materials, have been paid. The determination of the amount of work completed on each application for payment by the Trade Contractor shall be made by the Engineer and shall thereafter be subject to approval by the Owner. Such determination, however, by the Engineer or approval by the Owner shall not be construed as acceptance of the work.

1. Before the first application for payment, the Trade Contractor shall submit to the Engineer and Owner a schedule of values to be allocated to the various portions of the Work, which in the aggregate equals the total Contract Sum, divided so as to facilitate payments to subcontractors, supported by such evidence of correctness as the Engineer may direct. This schedule, when approved by the Engineer, shall be used to monitor the progress of the Work and as a basis for making progress payments hereunder. Application for monthly progress payments shall be made in writing in accordance with this Contract and shall be submitted on approved forms provided by the Owner and shall be submitted to the Owner on or before the twentieth (20th) day of each month. Applications received on time will be paid on the twentieth (20th) day of the following month, providing that the Owner approves such recommendations of the Engineer. Applications received after the twentieth (20th) day of each month shall be paid after the Owner's next pay period.

2. Pursuant to Colo. Rev. Stat. § 24-91-103, as may be amended, where the Original Contract Amount exceeds one hundred fifty thousand dollars (\$150,000.00), the

Owner may retain up to five percent (5%) of the calculated value of completed work from each progress payment up until the contract is completed satisfactorily and finally accepted by the Owner. If the Owner finds satisfactory progress is being made in any phase of the contract, the Trade Contractor may make written request of the Owner for final payment of the withheld percentage. The Owner may agree to final payment of the withheld percentage if the Owner finds satisfactory and substantial reasons exist for the payment. The Trade Contractor must provide written approval to the Owner from any surety furnishing bonds for the contract work in order to receive said payment of the withheld percentage.

3. Upon receipt of written notice from the Trade Contractor that his work is ready for final inspection and acceptance by the Owner and upon receipt of final application for payment, the Owner will promptly make such final field review subject to the final payment requirements contained in Colo. Rev. Stat. § 38-26-107, as amended. If the Owner finds that the work is acceptable under the contract documents, he will recommend to the Owner that a final certificate of payment be issued. Neither final payment nor the remaining retention shall become due until the Trade Contractor submits to the Engineer an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work, have been paid or otherwise satisfied. Likewise, final payment shall not be made until the consent of the surety to final payment has been obtained, and if required by the Owner, such other data establishing payment or satisfaction of all obligations, including releases, final lien waivers, and receipts and warranties, if any, have been provided to the Engineer for the use and benefit of the Owner. Should any subcontractor of the Trade Contractor or supplier of said Trade Contractor refuse to furnish any warranty and/or release or waiver, the Owner in its sole discretion, may refuse to certify final payment. The Trade Contractor may then furnish sufficient bonds satisfactory to the Owner to indemnify the Owner against any such liens.

4. Notwithstanding anything else to the contrary contained herein, such final payment by the Owner shall not be construed as a waiver of any claims affecting or arising from:

- a. Unsettled liens;
- b. Faulty or defective work appearing after substantial completion;
- c. Failure of the work to comply with the requirements of the contract documents;
- d. Terms of any special warranties required by the contract documents.

5. The acceptance by the Trade Contractor of final payment shall be and shall operate as a release to the Owner from all claims and all liability to the Trade Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of the work other than claims in stated amounts as may be specifically expected by the Trade Contractor with the consent of the Owner. Any payment, however, final or otherwise, will not release the Trade Contractor or his sureties from any obligations under the contract documents or the performance bond and labor and material payment bond.

ARTICLE 7 - CORRECTION OF WORK

A. During the life of the Contract and for a period of two (2) years after final acceptance, the Trade Contractor shall promptly remove from the premises all work rejected by the Owner for failure to comply with the contract documents, whether incorporated in the construction or not, and the Trade Contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the Owner and shall bear the expense of making good all work of other trade contractors destroyed or damaged by such removal or replacement. The Owner, however, may at its discretion elect to accept an equitable reduction in price or a refund instead of correction of the condemned work.

B. All removal and replacement work shall be done at the Trade Contractor's expense. If the Trade Contractor does not take action to remove such rejected work within ten (10) days after receipt of written notice, the Owner may remove such work and store the materials all at the expense of the Trade Contractor.

ARTICLE 8 - TEMPORARY FACILITIES AND SERVICES

Unless otherwise provided in this Contract, the Trade Contractor shall furnish and make available, at no cost, all temporary facilities, including all power needed for heating and protection of facilities and work. It is the expressed intent of the parties that the Trade Contractor shall be responsible for and at its sole cost all heating and protection of facilities and work.

ARTICLE 9 - INDEMNIFICATION AND INSURANCE

Section 1. Indemnification.

The Contractor, to the fullest extent permitted by law, shall defend, indemnify and hold harmless the City, its officers, employees, agents and their insurers, from and against all liability, claims and demands on account of injury, loss or damage, including without limitation, claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage or any other loss of any kind whatsoever, which arises out of or is in any manner connected with this Contract, to the extent that such injury, loss or damage is attributable to the act, omission, error, professional error, mistake, negligence or other fault of the Contractor, the Contractor's employees, subcontractors or anyone else employed directly or indirectly by the Contractor, Contractor's employees or subcontractor.

The Contractor, to the fullest extent permitted by law, shall defend, investigate, handle, respond and provide defense for and defend against any such liability, claims or demands at the sole expense of the Contractor, or at the option of the City, Contractor agrees to pay the City or reimburse the City for defense costs incurred by the City in connection with any such liability, claims, or demands. The Contractor, to the fullest extent permitted by law, shall defend and bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not such liability, claims or demands alleged are groundless, false or fraudulent.

This indemnification provision is intended to comply with C.R.S. § 13-21-111.5(6), as amended, and shall be read as broadly as permitted to satisfy that intent.

Section 2. Insurance.

A. The Contractor agrees to obtain and maintain during the life of this Contract, a policy or policies of insurance against all liability, claims, demands and other obligations assumed by the Contractor pursuant to Section 1 above. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Contractor shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section 1 above, by reason of its failure to obtain and maintain during the life of this Contract insurance in sufficient amounts, durations, or types.

B. Contractor shall obtain and maintain during the life of this Contract, and shall cause any subcontractor to obtain and maintain during the life of this Contract, the minimum insurance coverages listed below. Such coverages shall be obtained and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands and other obligations assumed by the Contractor pursuant to Section 1 above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Worker's Compensation Insurance to cover obligations imposed by applicable law for any employee engaged in the performance of the work under this Contract, and Employers Liability Insurance with minimum limits of five hundred thousand dollars (\$500,000) each incident, five hundred thousand dollars (\$500,000) disease—policy limit, and five hundred thousand dollars (\$500,000) disease—each employee.

2. General Public Liability Insurance to be written with a limit of liability of not less than one million dollars (\$1,000,000) for all damages arising out of bodily injury, personal injury (including coverage for employee and contractual acts), including death, at any time resulting therefrom, sustained by any one person and not less than two million dollars (\$2,000,000) for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by two or more persons in any one accident. This policy shall also include coverage for blanket contractual and independent contractor risks. The limits of General Public Liability Insurance for broad form property damage (including products and completed operations) shall be not less than one million dollars (\$1,000,000) for all damages arising out of injury to or destruction of property in any one (1) accident and not less than two million dollars (\$2,000,000) for all damages arising out of injury to, or destruction of property, including the City's property, during the policy period. The General Public Liability Insurance policy shall include coverage for explosion, collapse and underground hazards. The policy shall contain a severability of interests provision.

3. Protective Liability and Property Damage insurance covering the liability of the Owner, including any employee, officer or agent of the Owner with respect to all operations under the Contract by the Trade Contractor or his sub-contractors shall be obtained and maintained during the life of the contract. The limits of the Owner's Protective Liability Policy, to be provided by the Trade Contractor, as described in this Section 2, shall be increased to the same limits as described above for the Trade Contractor's General Public Liability Insurance.

4. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than one million dollars

(\$1,000,000) each occurrence and one million dollars (\$1,000,000) aggregate with respect to each of the Trade Contractor's owned, hired, and non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision. If the Trade Contractor has no owned automobiles, the requirements of this paragraph shall be met by each employee of the Trade Contractor providing services to the Owner under this contract.

C. To the extent that liability results from the acts or omissions of the Trade Contractor, all Insurance Policies and Certificates of Insurance issued for this project shall name as additional insured(s), the Owner, whether private or governmental, the Owner's officers and employees, and the Engineer and its agents and employees, and any other person(s), company(ies), or entity(ies) deemed necessary by the Owner. The Trade Contractor shall be solely responsible for any deductible losses under any policy required herein.

D. The insurance provided by the Trade Contractor shall be primary to insurance carried by the Owner, the Engineer, and all other additional insureds, and the principal defense of any claims resulting from the Trade Contractor's obligations under the Contract shall rest with the Trade Contractor's Insurer.

Section 3. Certificates of Insurance.

A. The certificate of insurance provided by the Trade Contractor shall be completed by the Trade Contractor's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the Owner prior to commencement of the contract. No other form of certificate shall be used. The certificate shall identify this Contract and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the Owner. The completed certificate of insurance shall be sent to:

Director of Public Works
City of Northglenn
11701 Community Center Drive
Northglenn, Colorado 80233-8061

B. Failure on the part of the Trade Contractor to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the Owner may immediately terminate this contract, or at its discretion the Owner may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the Owner shall be repaid by the Trade Contractor to the Owner upon demand, or the Owner may offset the cost of the premiums against any monies due to the Trade Contractor from the Owner.

C. The Owner reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

D. The parties hereto understand and agree that the Owner is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently three hundred fifty thousand dollars (\$350,000) per person and nine hundred ninety thousand dollars (\$990,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, 24-10-114 et seq., C.R.S., as from time to time

amended, or otherwise available to the Owner, its officers or employees.

ARTICLE 10 - PERFORMANCE, LABOR AND MATERIAL PAYMENT BONDS

The Trade Contractor shall within ten (10) days after the receipt of a notice of award, furnish the Owner with a performance bond and a payment bond in penal sums equal to the amount of the contract price, conditioned upon the performance by the Trade Contractor of all undertakings, covenants, terms, conditions and agreements of the contract documents, and upon the prompt payment by the Trade Contractor to all persons supplying labor and materials in the prosecution of the work provided by the contract documents. Such bonds shall be executed by the Trade Contractor and a corporate bonding company licensed to transact such business in the state in which the work is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these bonds shall be borne by the Trade Contractor. If at any time a surety on any such bond is declared a bankrupt or loses its right to do business in the state in which the work is to be performed or is removed from the list of Surety Companies accepted on Federal Bonds, the Trade Contractor shall within ten (10) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Trade Contractor. No further payments will be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the Owner.

ARTICLE 11 – CLAIMS AND DISPUTES

A. Definition. A claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment of contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. The term "claim" also includes other disputes between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate claims shall rest with the party making the claim.

B. Decision of Engineer or Architect. Claims may, upon request of both the Contractor and the Owner, be referred initially to the Engineer or Architect for action as provided in Article 3, Section 12.

C. Time limits on Claims. Claims by either party must be made within twenty one (21) days after occurrence of the event giving rise to such claim or within twenty one (21) days after the claimant first recognizes, or reasonably should have recognized, the condition giving rise to the claim, whichever is later. An additional claim made after the initial claim has been implemented by change order will not be considered unless submitted in a timely manner.

D. Continuing Contract Performance. Pending final resolution of a claim, including litigation, unless otherwise directed by Owner in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

E. Waiver of Claims: Final Payment. The making of Final Payment shall constitute a waiver of claims by the Owner except those arising from:

1. Liens, claims, security interests, or encumbrances arising out of the Contract and unsettled;

2. Failure of the Work to comply with the requirements of the Contract Documents;
3. Terms of special warranties required by the Contract Documents; or
4. Faulty or defective work appearing after Substantial Completion.

F. Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than seven (7) days after first observance of the conditions. Site conditions which an experienced and prudent contractor could have anticipated by visiting the site, familiarizing himself with the local conditions under which the Work is to be performed and correlating his observations with the requirements of the Contract Documents shall not be considered as claims for concealed or unknown conditions, nor shall the locations of utilities which differ from locations provided by the utility companies. The Engineer or Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or the required time for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Engineer or Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Engineer or Architect shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within twenty-one (21) days after the Engineer or Architect has given notice of the decision. If the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Engineer or Architect for initial determination, subject to further proceeding pursuant to these Contract Documents.

G. Claims for Additional Cost. If the Contractor wishes to make claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the work. Said notice shall itemize all claims and shall contain sufficient detail and substantiating data to permit evaluation of same by Owner and Engineer or Architect. No such claim shall be valid unless so made. Prior notice is not required for claims relating to an emergency endangering life or property. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Engineer or Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Engineer or Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension, or (7) other reasonable grounds, claim shall be filed in accordance with the procedure established herein. Any change in the Contract Sum resulting from such claim shall be authorized by change order or construction change directive.

H. Claims for additional time. If the Contractor wishes to make claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one claim is necessary.

I. Injury or damage to person or property. Subject to the Parties' obligations and responsibilities under the Contract Documents in general and Article 8 hereof in particular, if either party to the Contract suffers injury or damage to person or property because of an act or omission

of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding ten (10) days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a claim for additional cost or time related to this claim is to be asserted, it shall be filed as provided in Article 3, Section 12.

ARTICLE 12 - RESOLUTION OF CLAIMS AND DISPUTES

A. The Engineer (if the matter is referred to the Engineer for initial decision) will review claims and take one or more of the following preliminary actions within ten (10) days of receipt of a claim: (1) request additional supporting data from the claimant; (2) submit a schedule to the parties indicating when the Engineer expects to take action; (3) reject the claim in whole or in part, stating the reasons for rejection; (4) recommend approval of the claim by the other party; or (5) suggest a compromise. The Engineer may also, but is not obligated to, notify the surety, if any, of the nature and amount of the claim.

B. If a claim has been resolved, the Engineer (or at the Owner's option, Owner), will prepare or obtain appropriate documentation.

C. If a claim has not been resolved, the party making the claim shall within ten (10) days after the Engineer's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Engineer; (2) modify the initial claim; or (3) notify the Engineer that the initial claim stands.

D. If a claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Engineer, the Engineer will notify the parties in writing that the Engineer's decision will be made within seven (7) days, which decision will be considered advisory only and not binding on the parties in the event of litigation in respect of the claim. Upon expiration of such time period, the Engineer will render to the parties the Engineer's written decision relative to the claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Trade Contractor's default, the Engineer may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

E. The dispute clause does not preclude the considerations of questions of fact or law in connection with decisions provided for in Paragraph A above. Nothing in this Agreement, however, shall be construed as making final a decision of an administrative official, representative or City Council on a question of fact or law.

F. As between the parties of this Agreement, as to all acts or failure to act by either party of this Agreement, any applicable statute of limitation shall commence to run from the date of the agreed party's discovery of such act or failure to act.

G. The Trade Contractor shall give written notice to the Owner within ten (10) days of any dispute/claim arising under this Contract upon which the Trade Contractor seeks compensation or change of contract documents, otherwise the Trade Contractor's dispute/claim shall be deemed waived. Said ten (10) days written notice shall not be deemed to run from the date of discovery in this instance but from the date the dispute/claim has arisen.

ARTICLE 13- TERMINATION

A. This Agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party; provided that no such termination may be effected unless the other party is given (1) not less than ten (10) days written notice (delivered by certified mail, return receipt requested) of intent to terminate; and (2) an opportunity for consultation with the terminating party prior to termination.

B. This Agreement may be suspended or terminated in whole or in part, in writing, by the Owner for its convenience; provided that no such termination may be effected unless the Trade Contractor is given (1) not less than ten (10) days written notice (delivered by certified mail, return receipt requested) of intent to suspend or terminate; and (2) an opportunity for consultation with the Owner prior to suspension or termination.

C. Suspension for Convenience: The Owner, for its own convenience, may suspend the contract in whole or in part at any time by written notice to the Trade Contractor. Such notice shall state the extent and the effective date of such suspension, and on the effective date thereof the Trade Contractor shall promptly suspend such work to the extent specified, and during the period of such suspension shall properly care for and protect all work and materials, housing and equipment on hand for construction under the contract. The Trade Contractor also shall promptly supply the Owner with copies of all outstanding orders for materials, equipment and services, and shall take such action relative to such orders as may be directed by the Owner. If the performance of the work is thus suspended, the Trade Contractor shall be entitled to be reimbursed for all additional expense incurred by reason of such suspension as agreed upon by the Trade Contractor and the Owner.

D. Termination for Convenience:

1. The Owner may for its own convenience terminate work under the contract in whole or in part at any time by written notice to the Trade Contractor. Such notice shall state the extent and effective date of such termination and on the effective date thereof, the Trade Contractor will, and as to the extent directed, stop work under the contract and the placement of further orders of subcontracts under the contract, terminate work under order and subcontracts under the contract, and take any necessary action to protect property in the Trade Contractor's possession in which the Owner has or may acquire an interest.

2. In the event of such termination, the Owner shall pay to the Trade Contractor: (1) its direct costs (excluding overhead) for all work done in conformity with the Contract to the effective date of such termination and (2) other costs pertaining to the work which the Trade Contractor may incur as a result of such termination, all as approved by the Owner plus ten percent (10%) of such costs (excluding costs under (2) above) for overhead and profit, provided, however, that in no event shall the total amount to be paid under this Article 11, Section D.(2) plus payments previously made, exceed the lesser of (a) the total aggregate contract price specified in the Trade Contract; or (b) that proportion of the aggregate total contract price specified in the date of termination bears to the entire work to be performed hereunder. Any payment under this Article 11, Section D.(2) shall be made upon the expiration of the period within which liens may be filed under the laws of the state of Colorado, subject, however, to withholding by the Owner for the reasons and in the manner provided in those provisions pertaining to withholding of payments for

liens.

E. Termination for Default:

1. The Owner shall have the right to terminate the employment of the Trade Contractor after giving ten (10) days written notice of the termination to the Trade Contractor in the event of any default by the Trade Contractor. In the event of such termination, the Owner may take possession of the work and of all materials, tools and equipment thereon and may finish the work by whatever method and means he may select. It shall be considered a default by the Trade Contractor whenever he shall:

a. Disregard or violate important provisions of the contract documents or the Owner's instructions, or fail to prosecute the work according to the agreement schedule of completion, including extensions thereof;

b. Fail to provide a qualified representative, competent workmen or subcontractors, or proper materials, or fail to make prompt payment therefor; and

c. Fail to submit a completion schedule within fourteen (14) days after award of contract.

2. Upon termination of the contract by the Owner for default by the Trade Contractor, no further payments shall be due to the Trade Contractor until the work is completed. If the unpaid balance of the contract amount shall exceed the cost of completing the work including all overhead costs, the excess shall be paid to the Trade Contractor. If the cost of completing the work shall exceed the unpaid balance, the Trade Contractor shall pay the difference to the Owner. The amount of the cost incurred by the Owner in implementing the work, and the damage incurred through the Trade Contractor's default, shall be approved by the Owner.

3. The provisions of this Article 11, Section D.(2) shall not apply in the event of default of the Trade Contractor; provided, however, that the provisions of Article 11, Section D.(2) shall apply in the event of substantial failure by the Owner to fulfill its obligations under this Agreement.

ARTICLE 14 - SIMULTANEOUS WORK BY OTHERS

A. The Owner reserves the right to let other contracts in connection with this project. The Trade Contractor shall afford other trade contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

B. If the proper execution or results of any part of the Trade Contractor's work depends upon the work of any other trade contractor, the Trade Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results. Failure of the Trade Contractor to so inspect and report defects shall constitute an acceptance of the other trade contractors' work as fit and proper for the addition of his work thereto, except as to defects which may develop in the other trade contractors' work after the execution of his work.

C. The Trade Contractor shall coordinate his operations with those of other trade contractors. Cooperation will be required in the arrangement for the storage of materials and in

the detailed execution of the work.

D. The Trade Contractor, including his subcontractors, shall keep informed of the progress and the detail work of other trade contractors and shall notify the Engineer immediately of lack of progress, defective workmanship, or lack of coordination on the part of other trade contractors. Failure of the Trade Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress, defective workmanship, or lack of coordination by others shall be construed as acceptance by him of the work and the status of work as being satisfactory for proper execution of his own work.

E. All materials and labor shall be furnished at such times as shall be for the best interest of all trade contractors concerned, to the end that the combined work of all may be properly and fully completed on contract time.

F. Nothing herein shall be construed in any way as giving the Trade Contractor a claim as against the Owner and the Engineer resulting in any revised schedule based upon delay caused by any other trade contractor or supplier.

ARTICLE 15 - SUBCONTRACTING

A. The Trade Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

B. Before execution of the contract, the Trade Contractor shall submit the names of all subcontractors, including contact persons, phone numbers, and addresses to the Engineer or Architect and Owner. The Trade Contractor shall also promptly notify all parties of any changes in subcontractors or subcontractor contact information.

C. The Trade Contractor shall be fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

D. The Trade Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Trade Contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the Trade Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Trade Contractor under any provision of the contract documents.

E. Nothing contained in this Contract will create any contractual relation between any subcontractor and the Owner.

ARTICLE 16 - GUARANTY

A. The Trade Contractor shall guarantee all materials and equipment furnished and work performed for a period of two (2) years from the date of final acceptance of the contract by the Owner that the work is free from all defects due to faulty materials or workmanship and that the Trade Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Trade Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Trade Contractor the cost thereby incurred. The performance bond shall remain in full force and effect through the guarantee period.

B. Whenever in the specifications a guarantee or maintenance bond is required to be furnished for any item of equipment, material or portion of the work, such guarantee shall be submitted to the Owner and a written approval will be issued to the Trade Contractor before any such equipment, material or construction is ordered and incorporated in work by the Trade Contractor.

ARTICLE 17 - SALES TAX

The Trade Contractor and all of his subcontractors must make application to the Colorado State Department of Revenue for a certificate of exemption to permit the purchase of building materials for the construction of this project without payment of the sales tax. Prior to the start of construction, the Trade Contractor shall furnish copies of such certificates to the Owner. Applications and certificates must be on forms provided by the Department of Revenue.

ARTICLE 18 - MISCELLANEOUS PROVISIONS

A. This Agreement is made and entered into subject and conformable to the laws of the State of Colorado and the Home Rule Charter of the City of Northglenn. To the extent any provision hereof is inconsistent with said laws and Charter, said laws and Charter shall control.

B. The Trade Contractor shall comply with all federal and state laws and local ordinances and regulations which affect those engaged or employed in the work or which affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the Owner and the Engineer against any claim or liabilities arising solely from or based solely on the violations of such law, ordinance, regulation, order or decree, whether by itself, its subconsultants, agents, or employees.

C. The Trade Contractor will take affirmative action to not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex or handicap, if otherwise qualified.

D. In the event any provision of this Agreement is held invalid and unenforceable, the remaining provisions shall be valid and binding upon the parties.

E. One or more waivers by either party of any provision, term, condition or covenant

shall not be construed by the other party as a waiver of a subsequent breach of the same by the other party.

F. The Owner and the Trade Contractor each binds itself and its partners, successors, executors, administrators, and assigns to this Agreement. Neither the Owner nor the Trade Contractor will assign, sublet, or transfer its interest in this Agreement without the written consent of the other.

G. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the Owner and the Trade Contractor.

H. Illegal Aliens.

1. Certification. By entering into this Agreement, Contractor hereby certifies that, at the time of this certification, it does not knowingly employ or contract with an illegal alien who will perform work under the Agreement and that Contractor will participate in either the E-Verify Program administered by the United States Department of Homeland Security and Social Security Administration or the Department Program administered by the Colorado Department of Labor and Employment in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the Agreement.

2. Prohibited Acts. Contractor shall not:

a. Knowingly employ or contract with an illegal alien to perform work under this Agreement; or

b. Enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

3. Verification.

a. Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement through participation in either the E-Verify Program or the Department Program.

b. Contractor shall not use the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

c. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien who is performing work under the Agreement, Contractor shall:

i. Notify the subcontractor and the City within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien who is performing work under the Agreement; and

ii. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to subparagraph (a) hereof, the subcontractor does not stop employing or contracting with the illegal alien who is performing work under the Agreement; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien who is performing work under the Agreement.

4. Duty to Comply with Investigations. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation conducted pursuant to C.R.S. § 8-17.5-102(5)(a) to ensure that Contractor is complying with the terms of this Agreement.

5. If Contractor does not currently employ any employees, Contractor shall sign the No Employee Affidavit attached hereto.

6. If Contractor wishes to verify the lawful presence of newly hired employees who perform work under the Agreement via the Department Program, Contractor shall sign the Department Program Affidavit attached hereto.

I. Keep Jobs in Colorado Act: Pursuant to the Keep Jobs in Colorado Act, C.R.S. 8-17-101 *et seq.* (the "Act") and the rules adopted by the Division of Labor of the Colorado Department of Labor and Employment implementing the Act (the "Rules"), the Contractor shall employ Colorado labor to perform at least eighty percent (80%) of the work and shall obtain and maintain the records required by the Act and the Rules. For purposes of this Section "Colorado labor" means any person who is a resident of the state of Colorado at the time of this Project, without discrimination as to race, color, creed, sex, sexual orientation, marital status, national origin, ancestry, age, or religion except when sex or age is a bona fide qualification. A resident of the state is a person who can provide a valid Colorado driver's license, a valid Colorado state-issued photo identification, or documentation that he or she has resided in Colorado for the last thirty (30) days. Contractor represents that it is familiar with the requirements of the Act and the Rules and will fully comply with same. This Section shall not apply to any project for which appropriation or expenditure of moneys may be reasonably expected not to exceed five hundred thousand dollars (\$500,000) in the aggregate for any fiscal year.

ARTICLE 19 - ATTACHMENTS, SCHEDULES AND SIGNATURES

It is further mutually agreed that this Agreement and the contract documents constitute the entire Agreement between the Owner and the Trade Contractor and supersede all prior or oral understandings. This Agreement may only be amended, supplemented, modified, or cancelled by a duly executed written amendment.

ATTACHMENT A

BID SUMMARY

Western States Reclamation, Inc.
(Vendor Name)

Hereby submits to the City of Northglenn, Colorado the following bid items, complete and in place, as specified for the:

2017 South Huron Landscape Project - IFB 2017-020

Item	Description	Quantity	Unit	Unit Cost	Total Cost
Scope of Work					
1	Mobilization/Demob	1	LS	\$ 5100	\$ 5100
2	Traffic Control	1	LS	\$ 13,200	\$ 13,200
3	Unclassified Excavation	3750	SY	\$ 7.75	\$ 28,055
4	Concrete Pads	1,200	SF	\$ 14.60	\$ 17,520
5	Landscape Fabric	3750	SY	\$ 1.15	\$ 4163
6	4"-6" Cobble Landscape Rock	3750	SY	\$ 18.50	\$ 66,910
Total					\$ 135,008

Notes:

1. All prices shall include 2 year bond.
2. Reference Special Conditions - Section 013500 for Measurement and Payment.
3. The City of Northglenn reserves the right to increase or decrease quantities at the unit cost to ensure project completion within the allocated budget.

TOTAL FOR ALL ITEMS \$ 135,008

TOTAL IN WORDS One Hundred, Thirty Five thousand, and eight dollars

NO EMPLOYEE AFFIDAVIT

1. Check and complete one:

I, _____, am a sole proprietor doing business as _____ I do not currently employ any individuals. Should I employ any individuals during the term of my Agreement with the City, I certify that I will comply with the lawful presence verification requirements outlined in that Agreement.

OR

I, David R. Chenoweth, am an owner member/shareholder of WSRE, a Corporation [specify type of entity-i.e, corporation, limited liability company], that does not currently employ any individuals. Should I employ any individuals during the term of my Agreement with the City, I certify that I will comply with the lawful presence verification requirements outlined in that Agreement.

2. Check one.

I, David R. Chenoweth, am a United States citizen or legal permanent resident.

The City must verify this statement by reviewing one of the following items:

- o A valid Colorado Driver's license or a Colorado identification card
- o A United States military card or a military dependent's identification card
- o A United States Coast Guard Merchant Mariner card
- o A Native American tribal document or
- o In the case of a resident of another state, the driver's license or state-issued identification card from the state of residence, if that state requires the applicant to prove lawful presence prior to the issuance of the identification card
- o Any other documents or combination of documents listed in the City's "Acceptable Documents for Lawful Presence Verification" chart that prove both the contractor's citizenship/lawful presence and identity.

OR

I am otherwise lawfully present in the United States pursuant to federal law.

Contractor must verify this statement through the federal systematic alien verification of entitlement program, the "SAVE" program, and provide such verification to the City.

Signature

July 12th, 2017
Date