



**TOWN COUNCIL STUDY SESSION AGENDA
VIRTUAL MEETING
April 13, 2020
6:00 P.M.**

Please use the following link for instructions on how to view the Study Session meeting.
www.ParkerOnline.org/Calendar

I. Town Council Items

II. Study Session Items

1. 2020 Roadway Maintenance Plan - Gilbert/Smith - 25 minutes
2. Roadway Design & Construction Criteria Manual Revision - Mestdagh/Williams - 10 minutes
3. LDO Modernization Project Update - Munekata/Nerger/Matthews/Guest (Clarion) - 30 minutes



MEMORANDUM

TO: Michelle Kivela

FROM: Jim Gilbert, Deputy Director of Operations
Danny Smith, Operations Manager, Streets & Stormwater Maintenance

DATE: April 13, 2020

SUBJECT: 2020 Roadway Maintenance Update

ISSUE:

Presentation by staff to Council to review the 2020 roadway maintenance plan.

FISCAL/BUDGET IMPACT:

The budget for the 2020 roadway maintenance work has been appropriated in the Public Works-Streets (101-4310) and Street Capital Project (301-4310) accounts.

BACKGROUND:

The Town of Parker annually undertakes roadway maintenance projects which consist of preventative maintenance, rehabilitation, and reconstruct activities on various roadways within the Town. Town staff review the work plan annually with Town council in the spring to inform them of the upcoming work season. The 2020 budget for the annual roadway maintenance work is in excess of five (5) million dollars. Planned work was competitively bid and will be completed by contractors working for the Town. Planned work for 2020 includes the following:

- 1) Resurfacing (asphalt overlay)
- 2) Slurry & Chip Seal
- 3) Grind, Saw, Seal - concrete pavement rehabilitation
- 4) Concrete repair and replace
- 5) Reconstruct

A PowerPoint presentation will be used at the study session to review the 2020 maintenance plan.

RECOMMENDATION:

Proceed with the planned roadway maintenance activities to be reviewed.

REQUESTED DIRECTION:

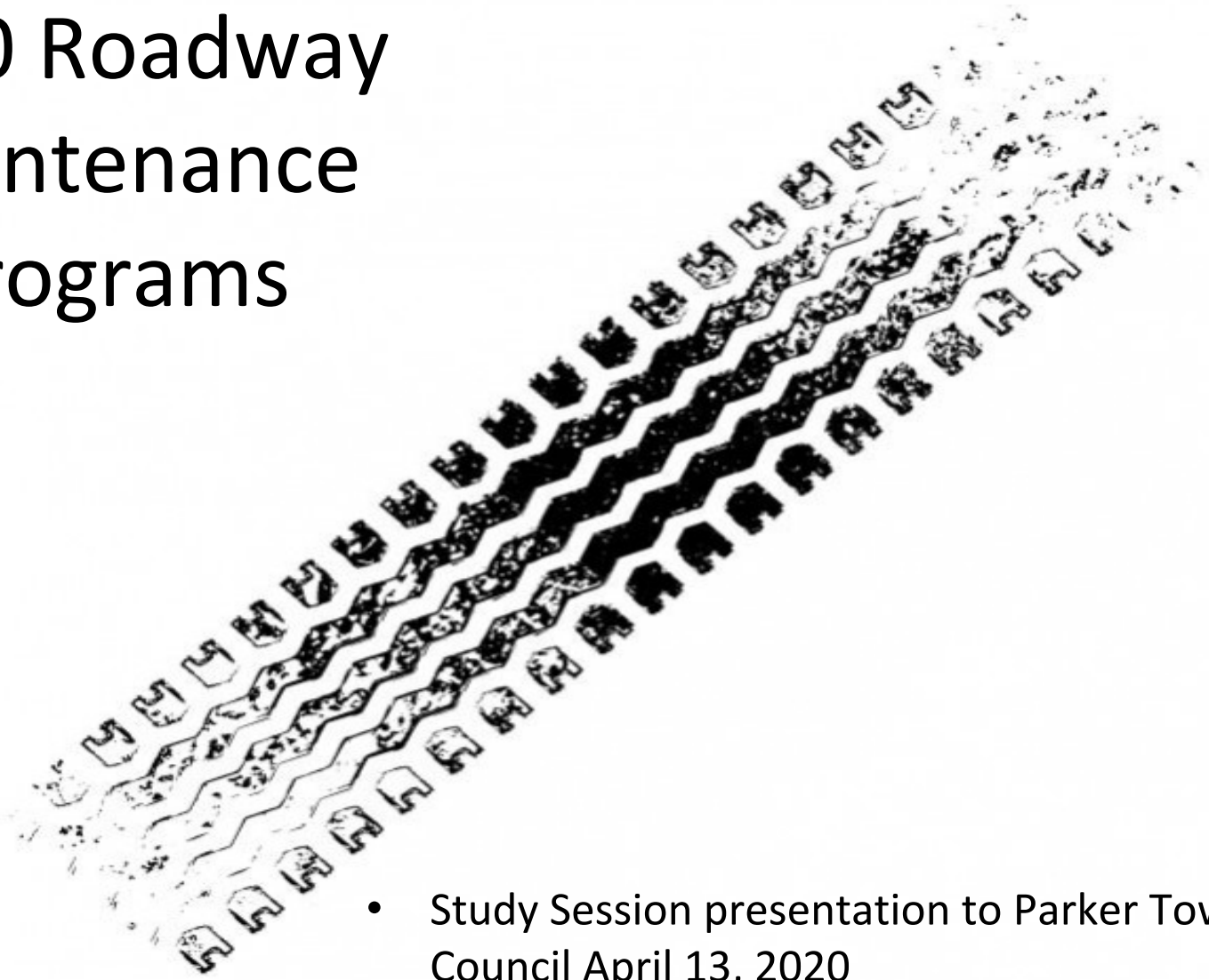
None- The purpose of the presentation is to inform Town Council of the 2020 roadway

maintenance work plan

ATTACHMENT:

1. 2020 Roadway Maintenance Presentation

2020 Roadway Maintenance Programs



- Study Session presentation to Parker Town Council April 13, 2020

ENGINEERING/PUBLIC WORKS
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Purpose of this presentation

- To provide information about where significant Town resources are being expended this year
- To inform Town Council of locations planned for street maintenance this summer
- To assist Town Council in responding to constituents should questions arise about work activities
- Area maps of planned activities are presented at the end of this presentation



Town of Parker Roadway Statistics

- The Town maintains approximately 534 lane miles of concrete & asphalt roadways (12' X 5280')
- Current Pavement Condition Index(PCI) is 76
- If constructed side by side, the total road surface area would cover about 921 acres
 - ~ 87% of Town roads are constructed of asphalt
 - ~ 13% are concrete





\$1,426,125 contracted for the roadway rehabilitation program (mill & overlay)

\$1,823,229 contracted for the preservation program (chipseal & slurry)

\$762,737 contracted for grind/saw seal for concrete pavement

\$1,282,400 planned for concrete repairs

Smaller amounts planned for Town parking lots, bridge repairs, management/inspection, and other services

Pavement Preservation

Pavement preservation treatments are utilized to extend the life of pavements to maximize ROI and limit disruption to residents

- Typically, slurry seals are limited to residential and low traffic volume streets
- Chip seals are most effective on collector or arterial roadways
- Both of these practices are common, preventative and extend pavement life
- Conventional mill and overlays(rehabilitation) are employed when preventative maintenance or preservation options have been exhausted



Town staff maintenance work



Town staff performs minor asphalt patching/concrete repairs and crack sealing prior to the application of slurry or chip seals

The majority of concrete curb/gutter/sidewalk repairs are contracted through a competitively bid process

Slurry Sealing

- Local (residential) street focus
- The 2020 slurry seal will cover about 50 lane miles of Town streets, roughly 8% of the network
- Highlights – Portions of Cottonwood, Parker Homestead, Bradbury Ranch, Jordan Crossing, Stroh Ranch, Village on the Green, Country Meadows, Pine Bluffs, Hidden River, Canterbury Crossing, Compark Village
- TOP Parking Lots – Preservation Park and Stroh Park



Chip Sealing

- Collector and arterial street focus
- 36 lane miles of chip surface planned in 2020, roughly 5.7% of the network
- Highlights – Lincoln Rd, Jordan Rd, Pine Dr, Hess Rd, Parker House Rd, Recreation Dr, Solar Cir, Sun Wy



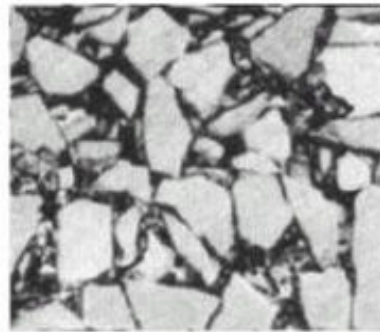
Rehabilitation (Mill & Overlay) with SMA



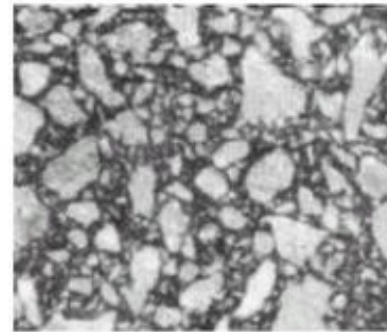
- Road surface deteriorated beyond preservation or preventative maintenance ability
- 8.2 lane miles planned in 2020, 1.3% of Network
- Highlights – Crown Crest Blvd & Round About, Dransfeldt Rd

Stone Matrix Asphalt (SMA)

- Developed in Germany in the 1960's
- Used in the front range since 2002
- Initial cost is 25% more than standard hot mix asphalt (HMA)
- Life cycle is 50% to 100% longer than HMA
- Resists cracking, rutting and potholes, used only on arterials or select collector roadways



(a) Stone mastic asphalt



(b) Dense graded asphalt

Concrete Repairs

Grind , Saw, Seal

- Diamond grind to improve ride quality, smoother ride, eliminates “wheel slap”
- Joint saw and seal, re-establish control joints for expansion/contraction, seal joints to prevent water intrusion
- Hilltop Rd, Parker to Narrow Pine



Concrete Repairs Street Surface

- Replace damaged panels on concrete surface streets
- Ensure maximum life from concrete streets
- Highlighted streets-
Parkglenn Wy, Plaza Dr,



Concrete Repairs curb/gutter/sidewalk

- Focus on streets slated for preservation efforts in 2021
- Replacing damaged curb/gutter/sidewalks
- Highlighted neighborhoods- Bradbury Ranch, Douglas 234, Stroh Ranch, Pine Bluffs, Parker Vista, Villages of Parker



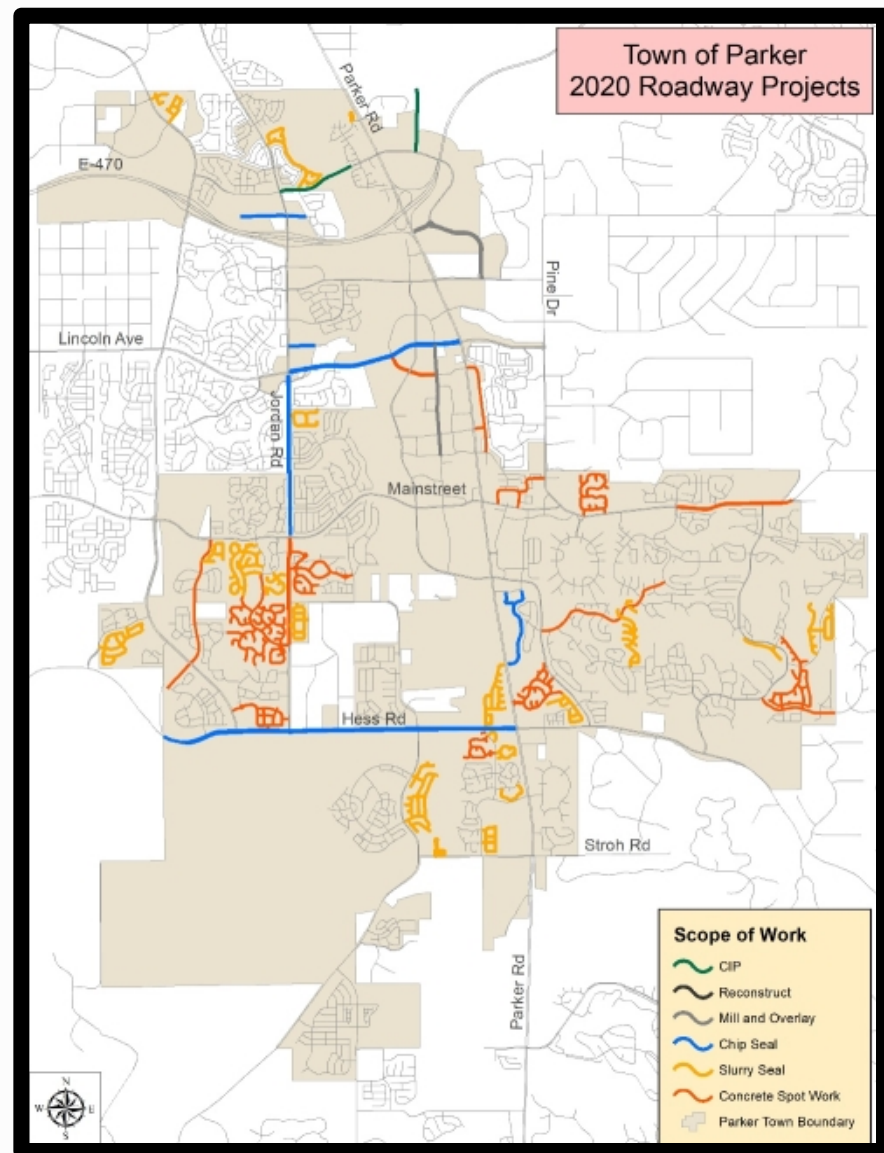
Concrete Repairs ADA ramp upgrades

The Town includes curb ramp improvements in annual projects.

The Americans with Disabilities Act (ADA) requires ramp upgrades to current standards for overlay and chip seal projects.



Roadway Maintenance and Construction 2020

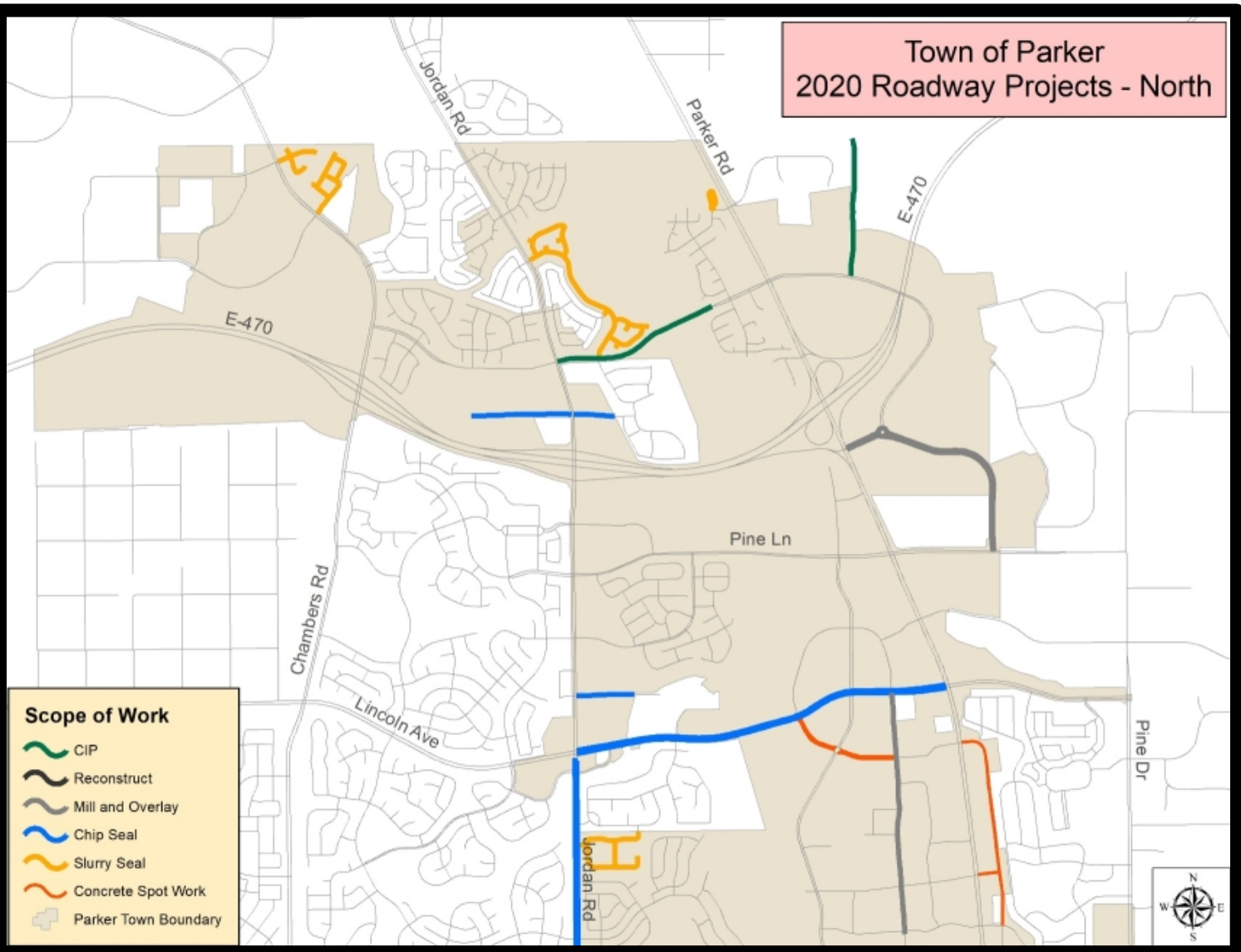


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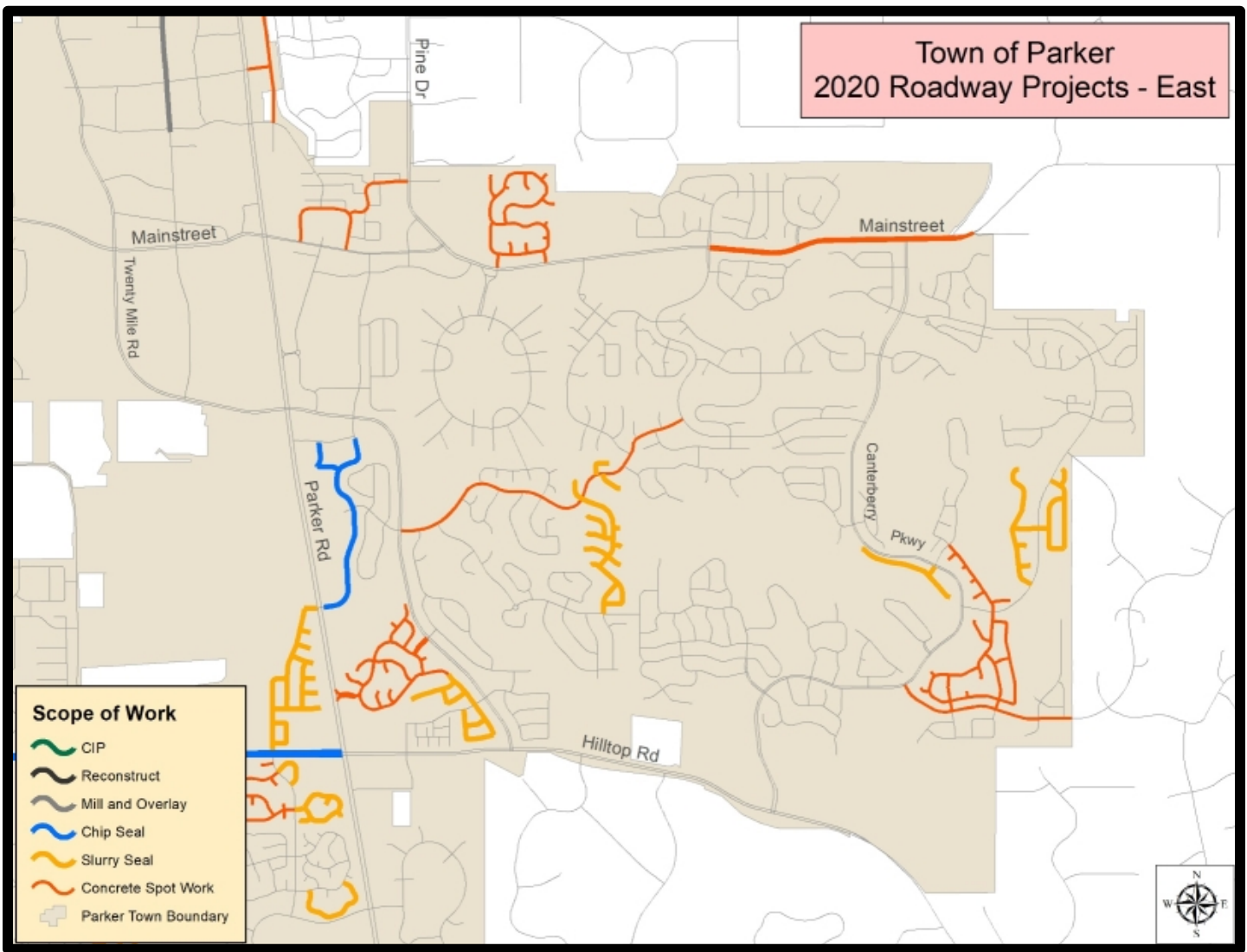
Town of Parker
2020 Roadway Projects - North



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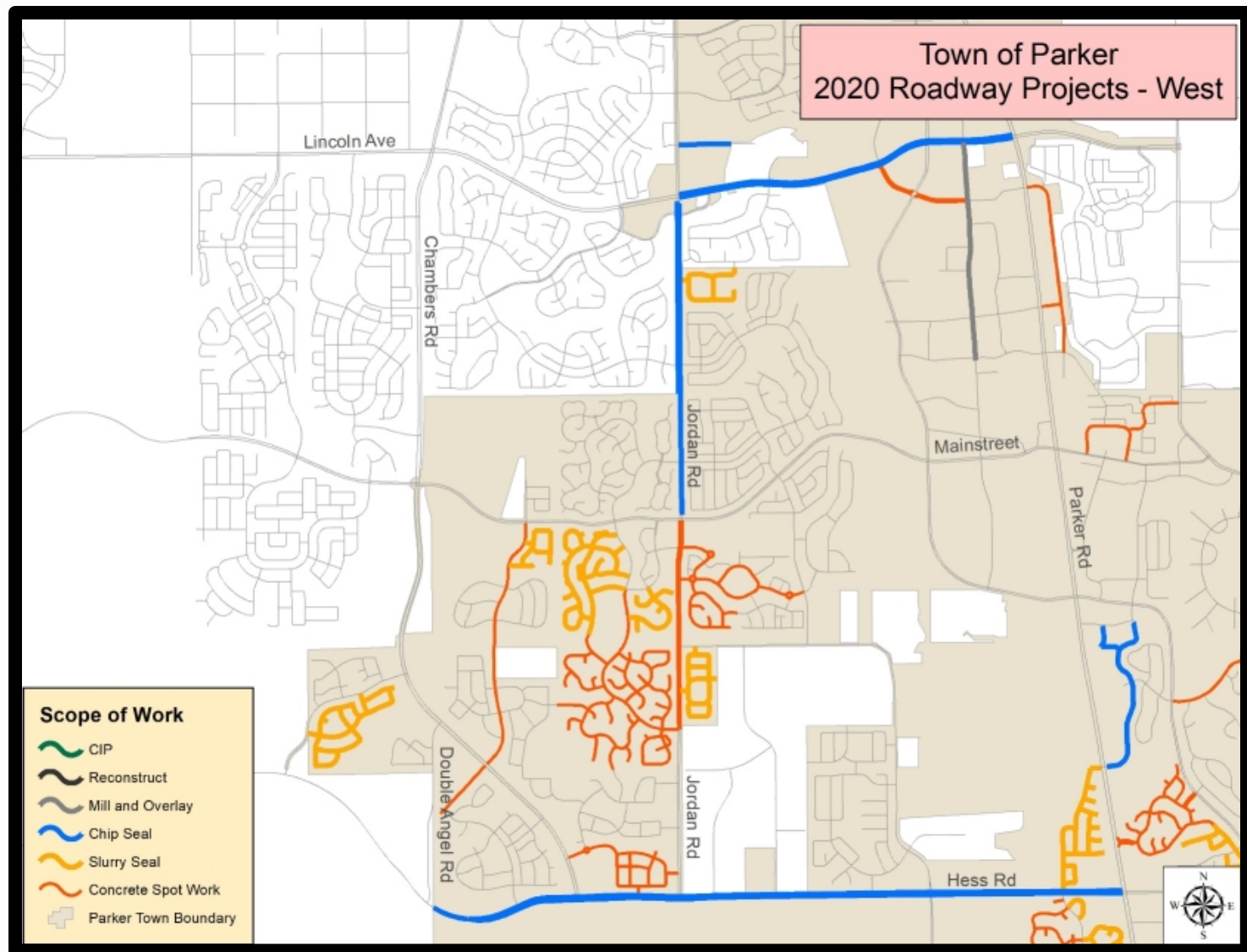
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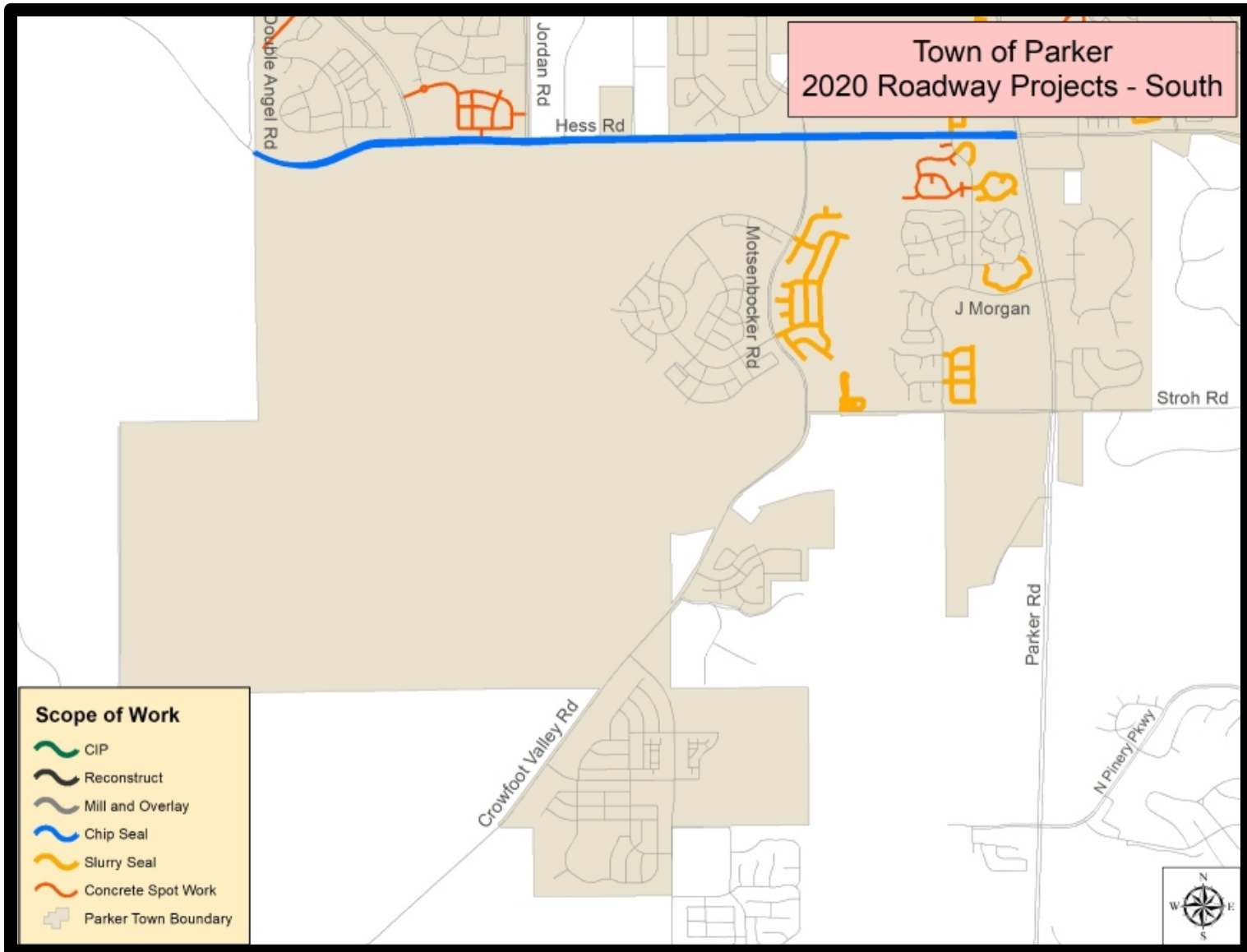


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Town of Parker 2020 Roadway Projects - South



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Because people always ask...



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C O L O R A D O

Thank you



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MEMORANDUM

TO: Michelle Kivela

FROM: Alex Mestdagh, Engineering Service Manager
Tom Williams, Director Eng/PW

DATE: April 13, 2020

SUBJECT: Roadway Design & Construction Criteria Manual Revision

ISSUE:

This item is to inform Council of proposed revisions to the Town's Roadway Design and Construction Criteria Manual. The key changes involve revisions to the Town's pavement design standards.

FISCAL/BUDGET IMPACT:

The proposed revisions will require developers to adhere to pavement thickness minimums currently followed by the Town for capital projects. The revisions will also result in incremental cost increases to arterial road construction projects for both the Town and developer.

BACKGROUND:

A proposed revision to the Town's Roadway Design and Construction Criteria Manual proposes two key changes for Council's consideration:

-Addition of a minimum pavement thickness for collector and arterial roadways. Criteria currently prescribes a minimum depth for local roadways only. Historically, pavement designs for development projects had always resulted in adequate pavement thickness for all roadways. However, Town staff was involved last year in a disagreement regarding the interpretation of pavement design parameters with a developer that was proposing what staff viewed as substandard pavement thicknesses. This criteria revision would remove any future disputes of this nature by requiring a minimum of six inches of asphalt for residential collector roadways, and a minimum of eight inches of asphalt for all higher classification.

-Staff is also proposing to add a requirement that all Town capital projects and development projects use a minimum 2-inch surface asphalt course of Stone Mastic Asphalt (SMA) on all arterial roadways. SMA is a form of asphalt that provides increased durability and resistance to rutting when compared to conventional asphalt mixes. Several other jurisdictions in the metro area are currently utilizing this product in a similar fashion, and are reporting increased performance value beyond the additional cost of the product. Staff would like to begin using

this product on arterial roadways throughout the Town.

SMA does bring an additional cost to projects - an SMA surface course costs approximately 30% more than conventional surface course, which equates to around 5% increase in the total cost of the roadway pavement/base section. Staff believes that this initial investment will create value in the long run by increasing the life and performance of these roadways and decreasing the frequency and scope of necessary maintenance.

RECOMMENDATION:

Staff recommends proceeding with the proposed criteria revisions.

REQUESTED DIRECTION:

None.

ATTACHMENT:

1. Roadway Criteria Updates

Proposed Revisions to
*Roadway Design and Construction
Criteria Manual*

Town Council Study Session
April 13, 2020



Key Revisions – Pavement Standards

- Pavement Design Revisions
 - Added minimum asphalt thickness for collector and arterial roadways
 - Added requirement to use a stronger SMA asphalt mix for surface lifts on arterial roads

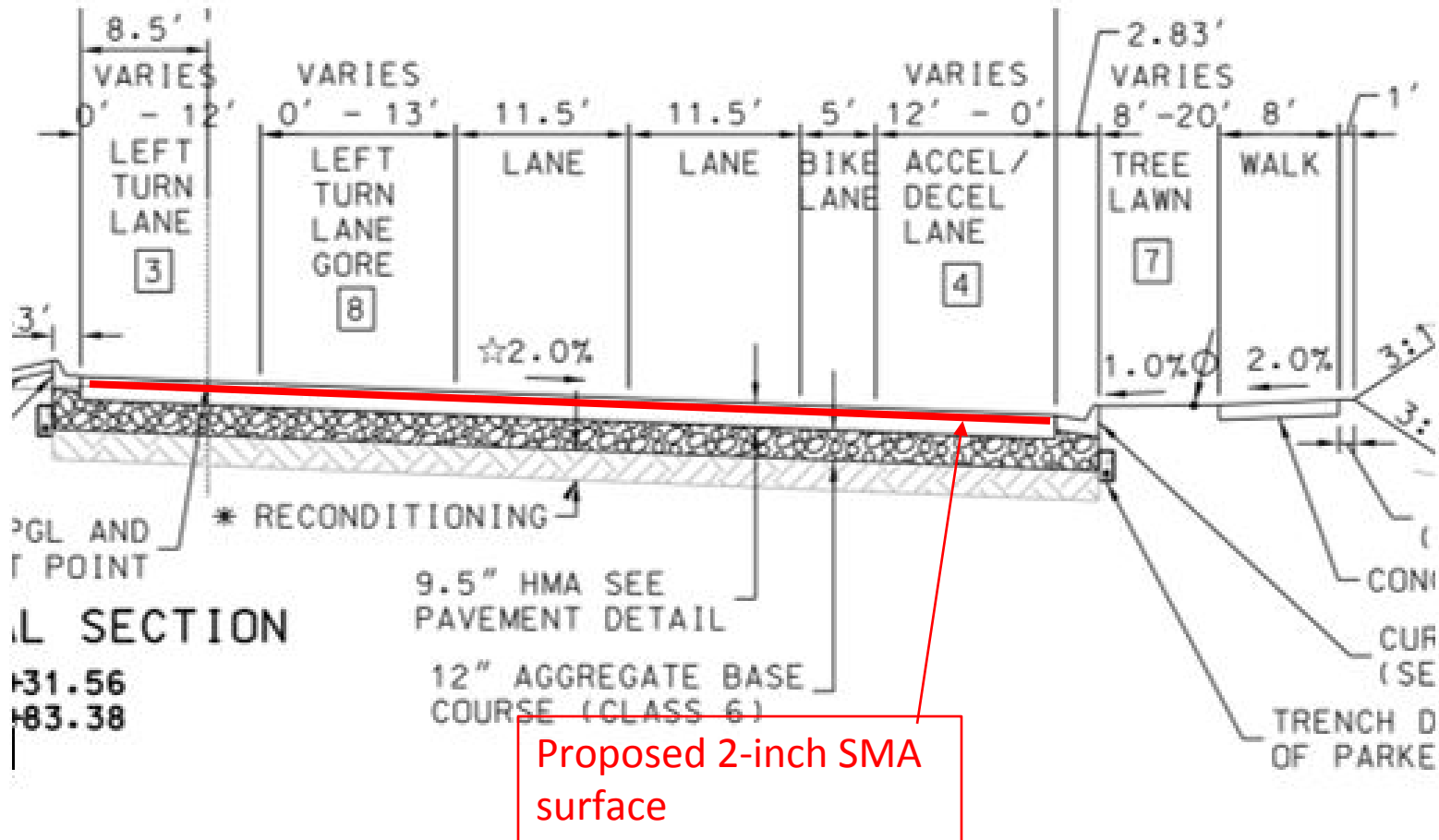
Minimum Asphalt Thickness

- Current criteria:
 - 5-inch minimum asphalt thickness for local roadways
 - No minimum for collectors and arterials
- Proposed criteria:
 - Adds 6-inch minimum asphalt thickness for residential collectors, and 8-inch minimum for non-residential collectors and arterials
- These minimums are used on Town capital projects and are consistent with other jurisdictions.

SMA Mix Requirements

- Stone Mastic Asphalt (SMA) is a more durable, rut-resistant asphalt mix used on high-traffic roadways.
- Some metro agencies (CDOT, Aurora, Lakewood) are currently using SMA for surface course only on major roadways.
- SMA costs approximately 30% than standard surface course asphalt (5% more cost for the entire pavement section), but has been shown to provide value beyond the added cost in performance and pavement longevity.

SMA Mix Requirements



SMA Mix Requirements

- Proposed criteria would require all Town and development projects for arterial roadways to use 2-inch SMA surface.
- Staff will be discussing this with the Development Liaison Committee (DLC) later in April. We will be proposing some schedule flexibility for developers as SMA must be installed in the summer months.
- Questions?



MEMORANDUM

TO: Honorable Mayor and Members of Town Council

FROM: Mary Munekata, Senior Planner
Stacey Nerger, Associate Planner
Bryce Matthews, Planning Manager
John Fussa, Community Development Director

DATE: April 13, 2020

SUBJECT: Parker Land Development Ordinance (LDO); Module 1 - Zoning Districts & Uses PUBLIC DRAFT

ISSUE:

The Land Development Ordinance (LDO), Chapter 13 of the Parker Municipal Code, governs land use and development within the Town. Its purpose is to preserve and promote the public health, safety and general welfare of the community. It is one of the Town's most important tools to implement the vision and goals of the Parker 2035 Master Plan including guiding growth and development in the Town of Parker. The Community Development Department is currently preparing a comprehensive update of the LDO for the first time since its adoption in 1981.

The first of three installments, Module 1- Zoning Districts and Uses, has been completed and a summary of this public draft and the proposed changes to several sections of the Code will be presented at the April 13th Town Council Study Session.

FISCAL/BUDGET IMPACT:

None.

BACKGROUND:

The LDO was originally adopted in 1981 from Douglas County zoning as part of the incorporation of the Town. It contains administrative provisions and regulations governing the use and development of land in the Town. Portions of LDO have remained unchanged for over 30 years, while others have been amended and expanded incrementally over time in response to growth issues, changing market conditions and Town Council priorities. This has caused an increasing number of issues with certain administrative provisions, lack of clarity, overly complex standards and regulations that may be inflexible. The LDO Modernization project is intended to address these issues.

The updating of the LDO to incorporate best practices, modernize standards and provide greater transparency will have the following benefits:

- Greater alignment and consistency with the *Parker 2035 Master Plan*
- Improved development standards
- Adoption of modernized zoning approaches & best practices
- Reduced reliance on Planned Development (PD) zoning
- More predictable and efficient processes
- Easier to read and use

The LDO Modernization project commenced in October, 2018 with Phase 1. It included community engagement, analysis of the current LDO, preparation of a Diagnostic Report/Annotated Outline and finally a Project Charter. The Charter is a roadmap of how the project is to be carried out.

After the successful completion of Phase 1 in mid-2019, staff and the consultant immediately moved into Phase 2 and the drafting the revised LDO. The first of three (3) installments, Module 1 – Zoning Districts and Uses is now complete and a public draft has been prepared. The public draft covers the following proposed changes to sections of the LDO:

1. General Formatting & Minor Corrections – Significant changes to the LDO's formatting, style, and grammar allows for easier reading and navigating the Code. The public draft also includes temporary 'Commentary & Footnotes' explaining the changes that have been made from the current LDO.

2. Chapter 13.02: Rules of Construction and Definitions (Partial) – Includes expanded general rules for interpreting the LDO and definitions related to zoning districts and uses. Subsequent installments will include remaining terms/definitions relevant to those sections when they are drafted.

3. Chapter 13.04: Zoning Districts – Several changes to the zoning districts are based on the project's Diagnostic Report/Annotated Outline. The proposed approach to zoning districts increases the number of districts from 12 to 18, allowing easier implementation of and alignment with the Parker 2035 Master Plan. The Master Plan General Land Use Plan envisions a diverse mix of Character Areas throughout the Town. The current zoning, which is mostly Planned Development (PD), is misaligned with the community vision and land use planning policies of the Master Plan. As a result, it sometimes fails to accommodate and promote the Town's desired patterns of development and balance of uses.

a. Proposed Zoning Districts

i. Consolidated similar districts such as the five Greater Downtown Districts are now two 'Downtown East' and 'Downtown West'

- ii. Established new districts such as three new mixed-use districts (Neighborhood, Community and Regional)
- iii. Renamed districts, for example, all single-family districts start with 'SF' for single-family
- iv. Eliminated unnecessary districts

b. Organization of Zoning Districts – Each district contains a new purpose statement, summary table of basic lot and building standards and graphics

c. Lot and Building Standards – Many proposed revisions provide an updated, flexible standard that reflects the built character of neighborhoods.

d. Measurements and Exceptions – Clarified information on measurement of lot and building standards

4. Chapter 13.05: Use Regulations – This Chapter identifies land uses allowed by each zoning district and also cross-references with established standards that apply to those uses.

a. New Table of Allowed Uses – The Chapter begins with the Table of Allowed Uses (Table 13.05.A). This list of uses is based on the current uses in the Parker LDO, with several proposed consolidations and additions.

- i. Includes use 'category' and subcategories for grouping of similar uses
- ii. Cross-references to any applicable 'Use-Specific Standards'
- iii. Reflects all proposed zoning districts for easy comparison between districts

b. Use-Specific Standards – These are additional standards that will apply to the specific use. Most of the uses listed in the LDO have use-specific standards such as proximity, compatibility, environmental or aesthetics.

NOTE: Special consideration should be taken when reviewing this section regarding whether use types in the table have issues that should be addressed by additional standards, or whether a prohibited use might be acceptable provided additional standards were established.

c. Wireless Communication Facilities - Regulatory standards in this Chapter were carried forward from the current LDO with minor revisions to formatting.

d. Accessory Uses and Structures – This section was expanded by including/consolidating several other existing uses that were located elsewhere in the LDO. New uses were also added such as Accessory Dwelling Units (ADUs) and Urban Agriculture.

e. Temporary Uses and Structures – This section was mostly carried forward from the current LDO.

5. Chapter 13.06: Oil and Gas Regulations – This Chapter has been carried forward with no changes after consultation with the Town Attorney's Office.

6. Chapter 13.07: Marijuana Facilities – This Chapter has been carried forward with no changes per Town Attorney's Office.

After presentation and discussion with Town Council, the next steps include posting the public draft to the project website which will be available online through May 22, 2020. The public, stakeholders, Mayor and Town Council, Planning Commission, staff and any other interested parties may review and comment on the draft through project website on Let's Talk Parker at www.parkeronline.org/LDO. The Mayor and Council may provide their comments, questions or concerns to Mary Munekata at mmunekata@parkeronline.org or Stacey Nerger at snerger@parkeronline.org. Staff will also be available to have a follow-up discussion with the Council if necessary.

Once all comments are received, the final draft of Module 1 – Zoning Districts and Uses will be revised and added to the project website. Staff and the consultant will then move into development of the second installment, Module 2 – Development Standards.

RECOMMENDATION:

Town Council will receive information about the recently completed public draft of Module 1 – Zoning Districts and Uses. Staff seeks Town Council's input and direction on the draft.

REQUESTED DIRECTION:

Staff and the consultant seek feedback and direction on the Module 1 - Zoning Districts and Uses public draft.

ATTACHMENT:

None