

Assessment of the Development Review, Permitting, and Inspections Process

KNOXVILLE, TENNESSEE

FINAL REPORT

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matrix 
consulting group

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1. Project Introduction and Executive Summary

Matrix Consulting Group was retained by the City of Knoxville to assess their development review, permitting, and inspection functions. The study covered these operations in the following department City Departments: Plans Review and Inspections, Engineering – Stormwater, and Fire Marshal’s Office. Additionally, the services provided on behalf of the City through Knoxville – Knox County Planning, Knoxville Utilities Board and the Knox County Health Department were evaluated.

Knoxville conducted this study to assess the state of the City’s development review, permitting, and inspection processes and to identify service improvement opportunities. As part of this assessment, the City requested a thorough review of the staffing, technology, and organizational changes and processes. The City sought to develop operational and process changes that increase efficiency and improve customer service whilst continuing to fulfill the City’s regulatory responsibilities.

This study includes a detailed evaluation of current development review and related operations as well as a roadmap to enhance services. The roadmap contains the identification of process, code, and technology improvements and staffing needs.

1. Study Scope and Methodologies

In this study, the Matrix Consulting Group’s project team utilized a wide variety of data collection and analytical techniques, including the following:

- **Key Issues.** Developed an in-depth understanding of key issues impacting key areas of the development review, permitting, and inspection processes. Conducted multiple interviews with staff representatives from each functional area. Interviews focused on determining roles and responsibilities of staff, levels of services provided, resources available to perform said services, and current or potential issues.
- **Current State Assessment.** The project team developed a current state assessment that captured staffing levels, roles and responsibilities, workload, and performance metrics for each operational area. This document was utilized as a base point of comparison for future analysis to demonstrate how the changes recommended differed from existing practice.
- **Conduct process mapping workshops.** The project team met with representatives from each development review department to process map their involvement in

the development process. Current process diagrams were created as a result of this exercise.

- **Stakeholder Survey and Focus Groups.** The project team surveyed past and present customers familiar with the development review process. The survey allowed these customers to share their thoughts on the strengths as well as opportunities for improvement of current processes. In addition, four stakeholder focus group meetings were held in person and virtually to hear from prior development customers to gauge their perception of the services provided by the City. An additional four focus groups were held with the individuals who are involved in the Mayor's Development Roundtable.
- **Best Management Practices.** A best management practices assessment was conducted. This compared current department practices to industry standards. The project team focused on best management practices for management and administration, process, staffing levels, organizational structure, policies, and technology utilizations.
- **Recommendations.** Based on the project team's activities and initial findings, the team analyzed issues, explore alternative service delivery options, and developed recommendations for a more effective process. These recommendations extend to staffing, services, processes, and technology usage with the goal of identifying resource, operational, and organizational needs to assist the City in reaching its goals.

The report is divided into the following chapters:

- Management and Culture
- Technology
- Process Evaluation and Improvement
- Customer Interaction and Information
- Code Analysis
- Staffing and Organizational Assessment
- Appendices that include copies of the interim deliverables (current state assessment, best practice assessment, process diagrams, and stakeholder survey summary).

Each of these sections provide recommendations and insight into the City's development practices, processes, technology, organizational, and staffing needs to implement the recommendations.

2. Key Strengths and Challenges of the Organization

While many of this report's recommendations focus on improvement opportunities, it is important to highlight strengths of the organization's functions and processes, which include:

- As of November 1, 2022, Plans Review and Inspection launched a new permitting software system (Accela) and a new version of the digital application portal and review platform KnoxPlans (ProjectDox). These systems are primarily used by Plans Review and Inspection, Engineering, and Fire for all building permit applications.
- Plans Review and Inspection and Knox Planning have transitioned to fully digital application submittals.
- Knoxville-Knox County Planning has a robust website that includes detailed application materials for each application going to public hearing.
- Engineering provides a robust land management guide on their website.
- The KGIS system is robust and provides a bevy of development related information through this platform.
- The Mayor's Development Roundtable was established to help identify and address current challenges.

As the points above indicate, the City is already meeting a variety of best practices.

3. Summary of Recommendations

Based on the project team's assessment and analysis, there are several recommendations for each topic covered in this assessment. These are discussed in detail throughout this report.

The following table consolidates the recommendations and is presented in the order they are discussed in the report. A priority level (low, medium, and high) was assigned to each recommendation to help guide the urgency of implementation and the potential impact on improving development services provided by the City.

#	Recommendation	Priority
Management and Oversight		
1	Create a Development Leadership Council between the leadership of PRI, Engineering, Fire, and Planning to enhance collaboration, discuss and resolve issues, and formalize roles and responsibilities of each department in the review process.	High
2	Develop training material that provides staff an overview of the various development review processes, individual and team roles within the processes. Materials should be created for onboard training for new hires. Training materials should be readily accessible to staff for consultation.	High
3	Hold regular staff meetings and socials with all development review staff to encourage team building and establish stronger working relationships between all review staff.	High
4	Create a formalized customer service training program that includes initial and ongoing trainings to staff. Refresher training should be provided quarterly.	High
5	Customer service related performance metrics should be included in annual employee performance evaluations for those involved in the development review process.	Medium
6	Formalized customer service metrics should be established for development review staff (e.g., return phone calls and voicemails within 24 hours / next business day).	High
7	Create a customer service survey that is provided to each applicant after their permit is issued.	Medium
8	Create and implement a unifying mission statement for all development review and permitting functions.	High
9	Develop clear performance expectations (processing timelines) for plans review by function. Include all agencies involved in the review process.	High
10	Create standard performance reports to be used by managers to track whether standards are being met. Provide simpler standard reports for the public to be posted on-line.	High
11	Create a robust succession plan to develop and retain development review staff.	Medium
12	Standardize the development process for application intake, routing, review, and permit issuance for PRI, Engineering, Fire, and Planning.	High

#	Recommendation	Priority
13	Standardize the review comment format to ensure that applicable code, ordinance, or design standards are referenced in the review comment letter or plan markups.	High
14	City staff should determine cost recovery goals and City Council should adopt a fee schedule for fire permitting and inspection services.	Medium
15	Develop an online dashboard that provides an implementation status for each adopted study recommendation and who is responsible for leading the implementation for outstanding recommendations.	High
Technology Analysis		
16	All development review staff in PRI, Engineering, Fire, and Planning should be provided access to Accela and KnoxPlans.	High
17	Ensure that all best practice elements are incorporated into the new versions of KnoxPlans and the Accela platforms.	High
18	Provide new hire and in-service training for the Accela and KnoxPlans software platforms.	High
19	Create a desk manual / reference guide for the software programs and update as new releases are activated.	High
20	Each department should identify an internal staff member who will serve as the software expert for their department.	High
21	The software experts in each department will be used to create a team to augment the Development Services Coordinator (software administrator) in the creation and maintenance of the training materials and assist with software training.	High
22	Create standardized and automated performance reports in the new permitting software system.	Medium
23	Upgrade hardware for all staff to facilitate use of technology.	High
24	Conduct customer training workshops prior to the activation of the new software systems.	High
25	Provide new customer orientation training for the online software application portal at least twice a year.	High
26	As new updates are released that impact the customer portal, conduct training sessions with end users.	High
27	Develop a customer user guide that provides detail instructions and examples for the most common customer processes.	High

#	Recommendation	Priority
28	Hire a temporary position(s) to digitize and catalog historic development records. Linking historic records to appropriate parcel, permit, or address identifiers.	High
Process Evaluation		
29	Revise the preapplication process to require materials to be submitted at time of scheduling, all review disciplines review materials prior to the meeting, and the preapplication meeting be facilitated by someone besides the Department Director.	High
30	Fire should transition the submission, review, and permit issuance for their direct permits through KnoxPlans.	High
31	All fire inspections for building and fire permits should be requested through the same online portal as building inspection requests.	High
32	The requirement to record easements for existing parcels should be changed prior to final or certificate of occupancy inspections.	Medium
33	Right-of-way closure applications should not be reviewed by the Planning Commission.	Medium
34	Planning and Zoning leadership need to formalize an agreement on their respective roles in the reviewing applications and determining compliance with the Hillside Overlay protection ordinance.	High
35	Evaluate the platting process for parcels that are not currently recorded accurately on the City's official map of record.	High
36	Engineering should serve as the primary department for the intake and review for plat applications.	High
37	All plat review comments should be consolidated into a single letter that is sent to the applicant by the department who intakes and processes the application.	Low
38	Engineering should take the lead on reviewing traffic impact analysis and a formalized agreement for roles and responsibilities with Knoxville – Knox County Planning should be created.	Medium
39	Adopt tiered review processing times to allow staff more time to conduct reviews for complex application types.	Medium
40	Create a formalized application process for complex questions and inquiries that cannot be answered by development services front line staff as a way to combat the influx of informal inquiries and to establish processing times.	High
41	Transition the facilitation of rezoning applications to the Zoning team.	Medium

#	Recommendation	Priority
42	Remove the Administrative Review Committee (ARC) from the Level II / III form based code review process.	High
43	Petition the State of Tennessee to dissolve the Tennessee Technology Corridor Development Authority overlay zone.	Medium
Customer Information and Interaction		
44	Modify the approach to the Mayor's Roundtable to meeting regularly and to focus on identification and resolution of current challenges.	High
45	Redesign the development portion of the City's web site to provide clearer information about the development review, permitting, and inspection process, steps involved, and information required. Creating a centralized development webpage to serve as a starting point for the public.	High
46	Assign a staff representative from each department who is responsible for maintenance of their Department's webpage.	Medium
47	As part of the implementation of the new Accela program an active permit page should be created to provide an overview of recently permitted and under construction projects in the City.	Low
48	Create a comprehensive development guide that provides an overview of the primary development processes.	High
49	The Engineering Land Development Manual should include hyperlinks to the applicable code sections.	Medium
50	Staff the PRI/Engineering public counter with a staff member to better assist the public.	Medium
51	Create an online performance dashboard that shows historic workload and performance metrics and estimated current processing times.	Low
Code Analysis		
52	Remove the sector plan and one-year plan requirement from the adopted City codes and ordinances.	Medium
53	Modify the adopted code to specifically outline the improvement requirements that trigger the need to comply with the current stormwater regulations.	High
54	Examine the adopted subdivision regulations and create a more concise and streamlined code that better groups similar requirements.	Medium
55	Engineering staff (or consultants) should conduct a comprehensive review of the engineering regulations and identify opportunities to modify the code to better align with the type of development occurring in the City.	High

#	Recommendation	Priority
56	The landscape code should be revised to reduce the number of alternative compliance applications.	High
57	For zoning classifications that allow zero lot line development an alternative approach for the bicycle rack requirement should be adopted.	High
58	The approach to variance requests should be reviewed with the intent to reduce variance requests for design elements that are not a result of true physical hardships. Where appropriate, the code should be updated to address common variance requests.	Medium
Organizational Structure and Staffing Assessment		
59	The City is strongly encouraged to establish their own City Planning Department.	High
60	Once a new City Planning Department is established, evaluate the current structure of the Knoxville - Knox County Planning Commission.	High
61	Upon creation of a City Planning Department, the zoning function should be consolidated to create a comprehensive department of planning and zoning.	High
62	Plans Review and Inspections, Engineering – Stormwater, and Planning Departments should report to the Chief Development Officer.	High
63	Eliminate the requirement that Fire Inspectors must make the rank of Captain before becoming an inspector.	High
64	Modify the requirement that Fire Inspectors must maintain their firefighter and emergency medical certifications.	High
65	Create the position of Permit Pilot to provide oversight of the entire development review and permitting processes. The Permit Pilot would also serve as a liaison between the City and development community.	High
66	A total of seven positions are needed for the City Planning Department. This includes a Planning Director, five Planners (from Planning Tech to Senior/Principal Planner), and an Administrative Assistant.	High
67	Create the position of Deputy Chief Building Plans Reviewer to assist with plans review and increased field oversight of the Building Inspectors.	High
68	A total of 20 positions are needed for Plans Review and Building Inspectors. This includes the Chief Plans Reviewer, Deputy Plans Reviewer, 2 Chief Inspectors, and 16 Inspectors. This is an increase in four authorized positions.	High

#	Recommendation	Priority
69	The Development Services team should consist of the Development Services Coordinator, two Administrative Specialist who are cross trained to provide permitting support, one Office Assistant III and seven Development Services Technicians. This is an increase in one authorized Development Service Technician position.	High
70	Maintain the current allocation of the Chief Zoning Examiner and three Zoning Examiners.	High
71	A total of four Professional Stormwater Engineering positions are needed to process the current workload. This is an increase of two authorized position.	High
72	Maintain the current allocation of four Stormwater Engineering Technician II positions.	High
73	Conduct a workload analysis for Fire Inspectors and reduce the number of inspector districts to seven. This will allow one Fire Inspector position to be freed up to conduct plan review and assist with inspections as needed.	Medium
74	Create the position of Deputy Fire Marshal who primarily conducts plan review, assists with inspections, and provide administrative support.	Medium

The following chapters provide an analysis of the development services provided by the City of Knoxville. Each section is introduced with an overview statement, followed by analysis, and a recommendation is provided at the end.

2. Management and Oversight

Knoxville's development related operations are decentralized and include a combination of internal City Departments (Plans Review and Inspection, Fire Marshall, Engineering - Stormwater), the Knoxville – Knox County Planning Agency (referred to as Planning), Knoxville Utilities Board, and the Knox County Health Department. The majority of development related activities occur across the three City departments and Knox Planning.

Plans Review and Inspection (PRI) is the City department that is primarily responsible for facilitation of the City's development process. With the exception of a few specific fire related permits, PRI serves as a one-stop shop for the City's development process, including intake of applications, issuing permits, and completing inspections.

Knox Planning, while not a City department, is responsible for much of the planning related activities with the exception of zoning review and enforcement. The "zoning administrator" responsibility is designated via City ordinance to the Building Official or their designee. Zoning review and enforcement is under the purview of PRI. Planning is a consolidated City and County planning agency and additionally serves as the regional transportation agency and administers KGIS for both the City and Knox County.

Engineering and land development functions are under the purview of the Engineering - Stormwater team. Engineering – Stormwater (aka Engineering) is located in the City – County building and share much of the same office suite as PRI. This team is responsible for reviewing private development infrastructure for compliance with adopted city codes and ordinances.

Knoxville Utilities Board (KUB) is responsible for reviewing the utility infrastructure (e.g., water, wastewater, electric, gas, and now fiber internet) for private development in the City and service area. Their participation in the development process includes reviewing applications for compliance with design standards, utility design development for certain new development, types and inspection of new utility construction.

Knox County Health Department is responsible for environmental health review for new and existing septic tanks, food service operations, and commercial swimming pools.

Each functional area has a unique role in the development review, permitting, and inspection processes within the City of Knoxville corporate limits. This chapter will analyze current approaches to management oversight and interaction between these groups.

1. There is significant opportunity to improve the working relationship between the review disciplines.

A clear theme that was evident in stakeholder conversations and through staff interviews and interaction, was that there are varying degrees of interaction and collaboration between the review entities. The three primary departments of PRI, Engineering, and Planning are located adjacent to each other in the City – County building, but it is clear there are some operational disconnects between these departments. Fire is located on a separate floor of the City – County building and their relationships with the other three departments varies as well.

A few examples of disconnects between these four departments include:

- Planning does not have access to the current permitting software (Permits Plus) and is not expected to be added as an immediate user to the new permitting software system (Accela).
- In several application materials reviewed, Zoning failed a building permit application because it did not include a Hillside Overlay review. Instead of routing the application to Planning internally for review, the applicant had to submit the application to Planning directly, even without insight from Zoning on why the application was not approved.
- There is a lack of a formal policy of assigning specific responsibility for Hillside Overlay review. Planning has taken this role on as they wrote and shepherded the ordinance through the legislative process. Although this is a zoning inspection. A lack of clear policies and roles and responsibilities for several types of reviews is present.
- Fire has their own application process for their fire specific permits and these permits are not integrated into the building permitting process. There are challenges associated with a parent – child relationship for building and fire permits.
- Staff rely on institutional knowledge to know if an application should be reviewed by other functional areas. This approach had led to a lack of formal training and knowledge on who should be involved in the review process. Current approaches often result in late hits on reviews and additional steps or submittals for the applicant before their application is approved.
- There is a general lack of knowledge of each department's role and responsibility in the review process. Leading to issues with who should be reviewing particular applications especially on infrequent application types.
- Collaboration between departments most often happens at the highest level of the respective departments versus at the reviewer level. Creating a culture of having

to go up in one's respective department leadership before going across to their peers to ask questions or address issues.

- Preapplication meetings are held mostly with the highest level staff in each department versus with individuals who will likely conduct the review when an application is submitted.

These are just a few examples of challenges of the working relationship between review departments and functional entities. In the stakeholder survey, respondents were asked "the City did a good job coordinating input from different review entities" only 24.4% agreed with this statement. Currently there are challenges associated with coordination between review disciplines.

There are several recommendations to improve the working relationships between review disciplines.

- Departmental leadership needs to meet regularly (e.g., monthly) to discuss their team's roles and responsibilities in the development process. For any "gray areas" there needs to be a formalized agreement on individual discipline responsibility.
- Training needs to be developed and provided to staff so that all staff have a basic understanding of their department and individual role in the process. Provide this training to new hires.
- Hold regular development review staff meetings so staff can learn who their counterparts are in other departments.
- The majority of development applications should come through a single portal. This will ensure that all departments are on the same permitting software system and force greater collaboration.

Implementation of these recommendations will enhance collaboration between PRI, Engineering, Fire, and Planning, but will not overcome all the current issues.

Recommendation #1: Create a Development Leadership Council between the leadership of PRI, Engineering, Fire, and Planning to enhance collaboration, discuss and resolve issues, and formalize roles and responsibilities of each department in the review process.

Recommendation #2: Develop training material that provides staff with an overview of the various development review processes, and individual and team roles within the processes. Materials should be created for onboard training for new hires. Training materials should be readily accessible to staff for consultation.

Recommendation #3: Hold regular staff meetings and socials with all development review staff to encourage team building and establish stronger working relationships between all review staff.

2. A culture of customer service needs to be established for the development review disciplines.

Customer service was a topic of discussion at the stakeholder meetings and received mixed responses in the stakeholder survey of past customers. The following table summarizes the agreement level when stakeholders were asked: “staff provided good customer services throughout the process.” This question was asked for each functional area.

	Planning	PRI	Engineering	KUB
Agreement Rate	51.8%	51.3%	33.7%	71.0%

The agreement rate ranged from a low of 33.7% in Engineering to a high of 71.0% for KUB.

Customer service or the lack thereof was brought up by nearly all focus group participants. Furthermore, numerous recent examples of customer service related challenges were provided by current customers to the project team.

For many of the recommendations that result from this study to be successfully implemented, a culture of customer service needs to be established across all review disciplines. Customer service is not a department, but an attitude of serving and helping both external and internal customers and stakeholders. The following changes are needed to improve customer service.

- The City needs to develop a customer service training program and start with those individuals who are involved in the development review process. Customer service training needs to be provided at a minimum quarterly until a culture of strong customer service is embedded across the departments.
- Expectations of responses to customer questions (email, phone call, walk-ins, etc.) need to be formally established. For example, all phone calls / voicemails and emails should be acknowledged within one business day. When staff are out of the office for more than one day, out of office automatic email responses should be required that state when staff will return to office. All staff need to be held to these standards and those who do not need to be disciplined.
- Customer service related elements should be included in employee’s annual performance review.
- Create a customer survey that is emailed automatically to the applicant when their permit is issued.
- Customer survey responses should be reviewed monthly by department management and reoccurring and major issues should be addressed quickly.

- Customer service expectations should be included in job descriptions and discussed in interviews to ensure that new hires understand the importance of strong customer service as part of their responsibilities.
- Management should be held accountable for their own level of customer service both externally and internally. This should be an integral part of their annual performance review. Modeling strong customer service to staff will improve the type of service provided to each other and to external customers.

The changes presented above will help create a culture that is customer service based.

Recommendation #4: Create a formalized customer service training program that includes initial and ongoing trainings to staff. Refresher training should be provided quarterly.

Recommendation #5: Customer service related performance metrics should be included in annual employee performance evaluations for those involved in the development review process.

Recommendation #6: Formalized customer service metrics should be established for development review staff (e.g., return phone calls and voicemails within 24 hours / next business day).

Recommendation #7: Create a customer service survey that is provided to each applicant after their permit is issued.

3. All primary development review functions should be united under a clear, central mission that emphasizes both quality and customer service.

A key element to effective and efficient operations is a common sense of mission. This is always challenging within the development review world because the processes involved cross a number of complex technical areas, aimed at ensuring appropriate development, protecting the environment, maintaining strong infrastructure, and ensuring public safety. The process also can be seen to have multiple “customers” – current and future residents of the city, elected and appointed officials, developers, builders, residents, and more.

Interviews with staff within the different review disciplines indicated that staff were often very focused on their technical roles (e.g., ensuring approved plans are consistent with code) but saw a tension between these roles and the need to provide customer service to permit applicants. In addition, some staff did not consistently see a sense of common purpose across the different technical disciplines – planning, engineering, fire, and building.

Department leadership should work with staff in the respective department / disciplines to help ensure that there is an overarching sense of purpose that includes both their specific technical area (e.g., appropriate land use, environmental protection, fire safety, structural integrity) and their role in ensuring that the process works well.

A sample mission statement that was adopted in another community is provided as an example that served to effectively communicate a united sense of purpose and focus for staff:

Model Development Services Mission

- To deliver a process that is **predictable, efficient, and understandable** to the people who use it;
- To be **viewed as a single organization** in the delivery of development services, not separate departments working independently;
- Not to **sacrifice the quality** of the end product;
- Ensure that we continue to protect the quality of the public and private infrastructure, the safety and integrity of the built environment, and the livability of the city.

Our shortcut is fast, predictable, and one-city.

Source: Bellevue, Washington

Creating a mission statement is an important part of staff having a better understanding of how their role is part of the greater City organization.

Recommendation #8: Create and implement a unifying mission statement for all development review and permitting functions.

- 4. The department should adopt performance targets and measures, and report on performance for all functions, including planning, engineering, fire, and building. Reviewers should be held accountable for meeting assigned timelines.**

The various review disciplines have some target turnaround times for their specific applications. With many departments working autonomously, turnaround times vary greatly by disciplines. For applications that cross review disciplines, each reviewer does work towards meeting the primary departments processing timeline. However, there is no consistent approach to measuring and monitoring performance as each department is using a different software system and historically Permits Plus has had some challenges. As performance metrics are established, the new permitting system (Accela) should be utilized to track performance.

For each application type, performance goals should be established. For applications that receive multiple reviews, realistic performance goals should be established by the

collective leadership team (e.g., subdivision, commercial new construction). Goals should be established for first and resubmittals by application type.

For each application type, there should be a designated “lead agency” (whichever division is responsible for the overall plan type) and there should be review targets for all potential reviews under that application type. The following is an example of a performance table.

PERFORMANCE TARGETS			
Permit Type	Completeness Review	Initial Plan-Review	Resubmittal Plan Review
LEAD AGENCY: PLANNING			
Conditional Use Permit			
Assigned planner	X days	Y days	Z days
Engineer	Na	Y days	Z days
Fire Prevention	Na	Y days	Z days
Public Services	Na	Y days	Z days
Etc....for Design Review, General Plan Development, Maps, Use Permits, Variances, and Zoning.			
LEAD AGENCY: ENGINEERING			
Improvement Plan			
Engineer	X days	Y days	Z days
Planning		Y days	Z days
Fire		Y days	Z days
Public Services		Y days	Z days
Other		Y days	Z days
LEAD AGENCY: BUILDING			
Commercial Tenant Improvement			
Building Reviewer	X days	Y days	Z days
Planning/Zoning		Y days	Z days
Fire		Y days	Z days
Engineering		Y days	Z days
LEAD AGENCY: FIRE			
Fire Sprinkler			
Fire	X days	Y days	Z days

Once the performance metrics are established, they should be formalized through a written agreement signed off on by the manager or supervisor responsible for overseeing that function. These official performance metrics should be incorporated into the electronic workflow of the permitting software system when implemented. This will help all staff develop an understanding of performance expectations and be automatically notified of upcoming deadlines.

Using the Accela system, regular reports should be provided to managers indicating whether targets are being met and, where they are not, and to discuss options to address this. The performance report would also indicate the average number of resubmittals required by permit type. An example for Planning permits follow:

PERFORMANCE REPORT: (TIME FRAME)				
Planning Division Plan Review / Revisions				
Planning Review of Planning Applications				
	Total #	Initial Review	Re-Review	# of Revisions Required
Administrative Design Review	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Design Review	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Tree Permit	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Conditional Use Permit	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Zone Verification	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Etc.				
Planning Review of Building Permit Applications				
Building – Residential	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Building – Commercial	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Etc.				
Planning Review of Engineering Applications				
Improvement Plan	Target: Actual:	Target: Actual:	Target: Actual:	Target: Actual:
Etc.				

A similar report should be developed for applicable Engineering, Fire, and Building applications.

Performance should be reviewed monthly by managers of each function, and quarterly by the City leadership. Based on actual versus target timelines managers should examine options to address any shortfalls. Options include:

- Streamlining processes or simplifying reviews
- Adding resources (staff or contracted)
- Changing the performance expectations if unrealistic

The above reports are to be utilized by managers to examine how timely review is within their divisions. As a result, the information should show performance by division, whether or not the permit originates in that division. For example, the planning manager will look at turnaround time for planning review of planning applications but also of building and engineering applications where their team is a reviewer.

In addition to this, the City should develop public reports that identify the overall timelines for different permit types. This is for the benefit of permit applicants so that they can understand how long a permit typically takes from submission to issuance. The applicant typically does not care which division is slow or fast with reviews, they simply want to understand how long the entire process typically takes.

Below are several examples of online reports provided by other agencies as an example of the type of information that is provided on-line.

Development Services Oversight Reports
Processing Days By Application Type grouped by Activity Type
Completed 8/29/2021 to 8/29/2022

excludes OTC permit types

NOTE: Activity Types were globally changed July 2013.

The obsolete ones will disappear as older applications are completed.

Repair or Replacement	Total Activity Type Completed	1	Average Days	48	Average Weeks	6.8
			Median Days	48	Median Weeks	6.8

FC Single Family Fire Sprinklers **Total Completed 163**

Addition to Existing Structure	Total Activity Type Completed	3	Average Days	24	Average Weeks	3.4
			Median Days	10	Median Weeks	1.4

New Structure	Total Activity Type Completed	160	Average Days	19	Average Weeks	2.6
			Median Days	10	Median Weeks	1.5

FD Underground Sprinkler Mains **Total Completed 19**

New Structure	Total Activity Type Completed	18	Average Days	119	Average Weeks	17.0
			Median Days	82	Median Weeks	11.8

Repair or Replacement	Total Activity Type Completed	1	Average Days	29	Average Weeks	4.1
			Median Days	29	Median Weeks	4.1

FE Fire Service Systems **Total Completed 23**

Building Radio Coverage	Total Activity Type Completed	17	Average Days	92	Average Weeks	13.1
			Median Days	43	Median Weeks	6.2

Firefighter Air Systems	Total Activity Type Completed	6	Average Days	250	Average Weeks	35.7
			Median Days	179	Median Weeks	25.6

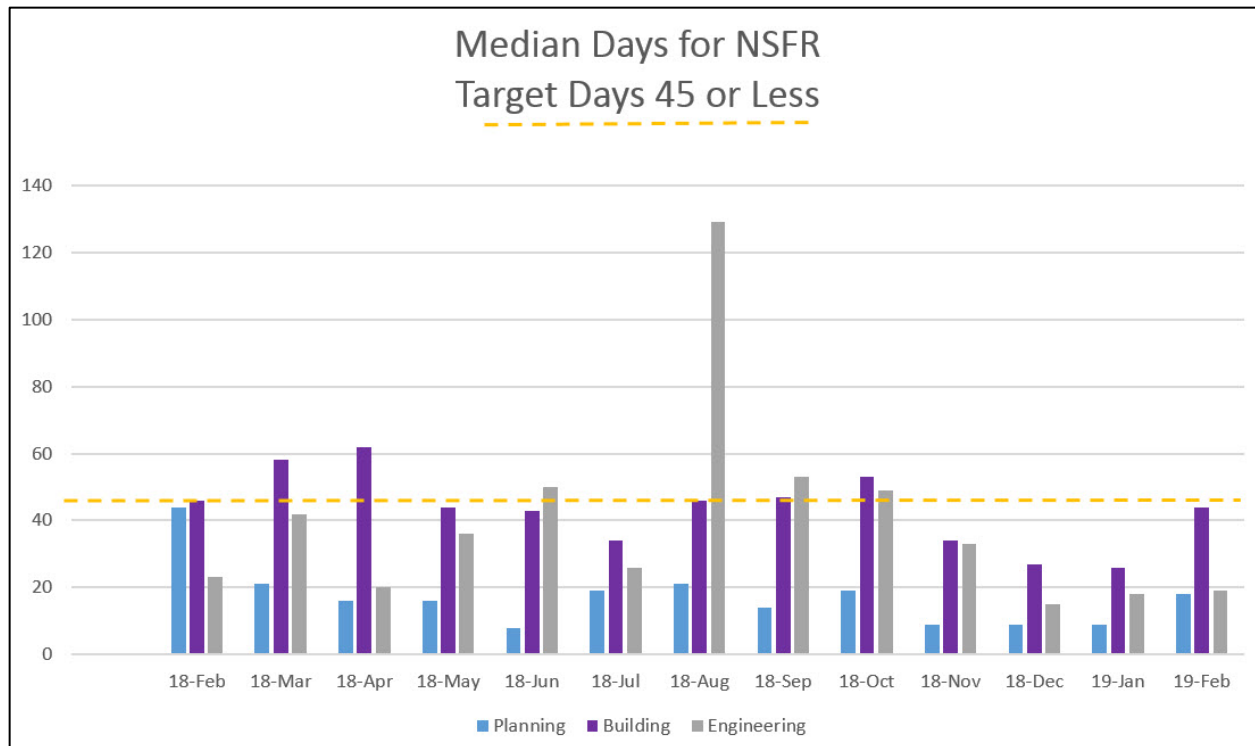
Source: Bellevue, Washington

Permit or Application	Type	Approximate Business Days*	Currently Processing
Building Permit	Intake	13	2nd Week of August
Building Permit Rapid Review	Intake	9	3rd Week of August
Building Construction Change - (Hybrid Process PTS/Accela)	Intake	5	4th Week of August
Building Construction Change	Intake	4	4th Week of August
Demo, Stand Alone Mechanical, Plumbing and Electrical Permits	Intake	6	3rd Week of August
Discretionary Projects	Intake	1	Current
Grading, Public Improvement, Mapping	Intake	23	4th Week of July
Sign Permit	Intake	6	3rd Week of August

Source: San Diego, California

Residential Permitting	1106 Permits
85% of the permits have been issued in under: 13 Weeks	
Percentage of the permits meeting first review target: 93%	
Click Here to a Breakdown by Record Type	
Commercial Permitting	722 Permits
85% of the permits have been issued in under: 24 Weeks	
Percentage of the permits meeting first review target: 64%	
Click Here to a Breakdown by Record Type	
Site Permitting	311 Permits
85% of the permits have been issued in under: 50 Weeks	
Percentage of the permits meeting first review target: 56%	
Click Here to a Breakdown by Record Type	

Source: Tacoma, Washington



Source: Lake Oswego, Oregon; NSFR=New Single Family Residence

This report should encompass all permit types and review disciplines.

Both the management reports and the reports for the public should be produced by Accela, not manually. While it can be fairly time-consuming to design such reports and set them up in the software system as standardized reports, once they are designed there is much less work involved in reproducing them on a monthly, quarterly, or annual basis. These reports may be set up to automatically generate and email to specific staff.

Recommendation #9: Develop clear performance expectations (processing timelines) for plans review by function. Include all agencies involved in the review process.

Recommendation #10: Create standard performance reports to be used by managers to track whether standards are being met. Provide simpler standard reports for the public to be posted on-line.

5. Each development review department needs to implement a formal succession planning program.

Succession planning is an important aspect of all organizations, especially those that are highly regulatory or include highly technical positions. This is especially critical for development operations that are decentralized across multiple departments and divisions as there are many opportunities for succession planning to properly develop their employees and grow organically.

Succession planning is a deliberate program that is intended to properly equip the organization for continuity of operation when key individuals are absent. Recent turnover in the organization has presented some continuity of operations issues for various teams.

Succession planning can take many forms and it can occur within any size organization or team. Succession planning should occur for all positions throughout an organization and not solely for key positions. Succession planning is skill set development focused to equip other team members to step in and perform specific duties when needed and not only when a position is vacated. This includes cross-training staff to fill in positions as needed. Succession planning should fall to all team members throughout the organization.

Steps that may be taken during the succession plan development and implementation include:

- Identify the roles that are included and those that are not.
- Engage all stakeholders who will be impacted throughout the process.
- Develop immediate, short- and long-term succession plans.
- Identify internal staff members who could have a positive impact on the organization and might be future leaders.
- Tailor succession plans at the division level but for each individual member identified as part of the plan (either through their role or skill set).
- Encourage all employees to create an individual development plan, regardless of their position. This inspires employees to be more accountable in their current role and future roles in the organization.
- Identify resources needed for creation and implementation of plan.
- Evaluate employee talent on a regular basis, ideally annually.
- Outline succession plan goals broadly and individually.
- Leaders should engage with staff on a regular basis to receive and provide feedback.
- Create an open environment where employees can engage in conversations with each other and with departmental leadership.

The above points outline steps to facilitate the development and implementation of succession plans for all department staff. These points should be used as guiding principles as each department (or organization) develops succession plans for staff. The goal of succession planning is to equip all staff with the necessary skill sets to maintain operations and to encourage staff's growth and development.

Recommendation #11: Create a robust succession plan to develop and retain development review staff.

6. Formalize policies and procedures for each functional review discipline (or department) in the development review process.

Due to the autonomy of each review discipline, internal processes, procedures, and policies are tailored to meet the individual needs versus focusing on the collective good. This has resulted in operational challenges and multiple processes for the same general processes. This approach has led to issues with staff and the public understanding the overall process. In interviews, most staff indicated they know their department's process and not the overall process. In the workflow diagramming meetings, it was evident that staff knew their process, but many were uncertain how their department/discipline's process integrated with the overall process.

To address these issues, it is important for PRI, Engineering, Fire, and Planning to formalize and adopt policies and procedures for the development review, permitting, and inspection processes. A standardized approach will create greater consistency in the review process and establish clear lines of communication and understanding. It will also require each discipline to utilize the same software platform and in a consistent manner. The process approach in each discipline should be consistent and generally interchangeable. Providing the ability for staff to be cross trained in their particular discipline, and also understand their role in the overall process.

Recommendation #12: Standardize the development process for application intake, routing, review, and permit issuance for PRI, Engineering, Fire, and Planning.

7. Greater consistency is needed in how review comments are provided to applicants.

When analyzing review comment letters and receiving feedback from stakeholders, it was clear that each reviewer has their own style when providing review comments. While this is to be expected, there is one area that improvement is needed. When referencing an issue with an adopted code, ordinance, or design standard, the reviewer needs to specifically identify which code is not being met. Some reviewers were very good at referencing the code (even including a hyperlink to the code) while others provide more

generic code comments (e.g., please meet the minimum distance requirements). This lack of consistency results in challenges for the applicant and during the review process for resubmittals.

By including the reference to the applicable code, it provides the applicant with the exact information that is not being met and provides for a quicker re-review when resubmitted. Including code references in review comments is considered best practice and should be provided in a consistent format for all review disciplines. Leadership from each of the primary review disciplines should work together to formalize an official format for providing code references.

Recommendation #13: Standardize the review comment format to ensure that applicable code, ordinance, or design standards are referenced in the review comment letter or plan markups.

8. Cost recovery goals and a fee schedule should be established for fire permits.

The Fire Marshal's Office does not charge for their respective permits since the Fire Department is funded through the General Fund. Development review and permitting services are provided because these services are requested by the public. As such, consideration should be given to charging for reviewing and issuing fire permits. It is common to charge for fire specific permits and services similar to the approach that building permit and inspection fees are assessed for those services. This will help defer some of the operating cost associated with providing development related services.

Staff should determine cost recovery goals for the Fire Marshal's Office and City Council should adopt a corresponding fee schedule for fire permits and inspections.

Recommendation #14: City staff should determine cost recovery goals and City Council should adopt a fee schedule for fire permitting and inspection services.

9. An online dashboard should be created to provide a status update for the implementation of the adopted study recommendations.

As a way to increase transparency regarding the implementation of this study's recommendations, an online dashboard should be created. The dashboard will provide an overview of this study, the recommendations, and the implementation status for each recommendation. This dashboard would be used to indicate status of the recommendations that were adopted for implementation. Each recommendation should be shown with a quick identification method such as color coded status and the expected implementation date for outstanding recommendations. For recommendations that have been successfully implemented, it should show when it was completed and any associated changes that are upcoming. For outstanding recommendations, a timeline

for implementation and who is responsible for execution should be indicated. Providing this information will set expectations for the public and provide relevant information regarding upcoming changes.

This dashboard should also have a link to the study report and any accompanying information.

Recommendation #15: Develop an online dashboard that provides an implementation status for each adopted study recommendation and who is responsible for leading the implementation for outstanding recommendations.

3. Technology Analysis

Technology is an important part of the development review, permitting, and inspection process for local governments. Technology is used in a variety of ways and should make the process more efficient for both customers and staff. Technology best practices for development related activities include:

- Digital application submittals for all development application types.
- Electronic plan review and mark up platforms.
- Tailored workflows that align specifically with each application type.
- Systems that are accessible via tablet for field staff to access permit and files / records and can result inspections immediately.
- GIS integration into the system.
- All development reviewers have access to the permitting software platform and utilize it as a digital one stop shop for all permitting and inspection processes.

The City currently uses the PermitsPlus software system, which is no longer supported by the vendor. This system has multiple limitations and does not have the capability to meet the majority of industry best practices. Throughout this study, the City has been transitioning to a new Accela permitting software system to serve as the permitting database. This transition to the new software package will be the baseline for the technology assessment for this study. The new Accela system went live on November 1, 2022.

The City deploys a second software package, ProjectDox, that is used to submit and review digital applications and plan sets. This system is known internally as KnoxPlans. KnoxPlans is an online portal that allows the customer to submit an application electronically, monitor the review process, receive and view comments in the customer portal, and ultimately receive their permit through this system. Reviewers access the application submittal and plan set and can mark up or “redline” the materials electronically. Then they can post or distribute their comments to the applicant through this portal.

The implementation of the new Accela software and modifications to KnoxPlans will have a significant impact on processes and operational efficiencies for Knoxville development review and inspection staff.

1. All development review staff should have access to the permitting software system (Accela) and KnoxPlans.

During the course of this project, the project team asked City staff who was receiving access to the new Accela platform. All the primary development review departments, except Planning were going to be given access to Accela. A consistent answer as to why Planning was not being provided access to the system was not provided. Access to Accela was going to be provided to all other review local review entities, including those, such as KUB, who have much less involvement in the development process than Planning.

All primary development review entities (PRI, Engineering, Fire, KUB, and Planning) need to have full access to the Accela software system. By including all review entities in the application workflow and accessibility to access current and historic permitting information will facilitate a more collaborative and inclusive process for all review staff. Second, it will also promote a more efficient review process for the customer and reduce the need for the applicant to go between departments to obtain sign offs and resolve other issues. With a cloud based platform for Accela, there is no reason that all review entities cannot have access to the software. This may require additional user licenses.

For process efficiencies and enhanced collaboration all applicable development review staff in PRI, Engineering, Fire, and Planning should have access to the Accela program and their respective workflows should be included in the software. Future analysis and recommendations assume that all applicable staff have access to the primary permitting software system.

While currently not all development review staff have access to Accela, all applicable staff have access to KnoxPlans, including Planning staff. This format works well as all reviewers can access applications/plans sets when permission or access is granted.

Recommendation #16: All development review staff in PRI, Engineering, Fire, and Planning should be provided access to Accela and KnoxPlans.

2. The new Accela software package and the new version of KnoxPlans should incorporate permitting software best practices.

To improve operational efficiencies and effectiveness, it is critical that technology and software packages enhance the service environment. The project team has not reviewed all the features of Accela and KnoxPlans system that is being implemented in Knoxville, but to ensure optimal operational efficiencies, the following elements should be included:

- Provides a robust online system for the public. Online features should include:
 - Submittal of all development application types.

- Applicant online portal including access to review comments, status updates, and ability to request inspections.
- Integrated feature for the general public to search application and development activity status (e.g., status of an application, view approved site plans for new commercial development, etc.).
- Integrates the City's development process and workflow so that progress can be tracked by staff from application submittal to certificate of occupancy.
- Calculates application and permitting fees and accepts payment through the software and/or online portal. This may be accomplished through integration with the City's finance software or through the permitting system itself.
- Ability to calculate applicable development impact fees in the software system and ability for applicant to pay through the software system.
- Allows review staff to receive notifications regarding new tasks, deadlines, and status updates by application. Ideally, these preferences are customizable for each staff member.
- Allows for the uploading of review comments (both on the plan sheet and in the permit record) and monitors the status of individual reviewers (e.g., pending Planning comments, Building Inspection has approved, Engineering submitted comments, etc.). All users should have the ability to see other reviewer's comments and markups.
- Feature that allows the City development review staff to notify the applicant if delays in the review with an updated completion time.
- Utilizes templates to prepopulate standardized information for review comment checklist, staff reports, permits, etc., including checklists, ability to link to ordinances, codes, and design standards, automate public notices, etc.
- Has a searchable database by address or other approved identifier such as parcel number.
- Contains approved and constructed / as-built plan sets that are linked to the permit file.
- The mobile version of the software program allows field staff to remotely access the system to consult approved plan sets, inspection results, and determine open permits and violations.

- Ability to upload photos via mobile version and link to the permit file.
- A web-based access portal for staff to access the system remotely.
- Allows for the integration of the City's GIS system and links to the permit file by identifier.
- Allows for managers to run performance/workload reports from the system. Ideally, the system could link to a performance dashboard on the City's website.
- Has a code enforcement module that tracks open code violations and is integrated into the permitting portal.

Incorporating these elements into the permitting software system will provide the applicant with an easy to use online application portal. The online application portal should be comprehensive and serve as a one stop shop for applicants. Similarly, the permitting software system will serve as a centralized program for all development activity and functions for the City. Incorporating these elements into the software system will result in enhanced operational efficiency and increased collaboration and accountability for all development review staff.

Recommendation #17: Ensure that all best practice elements are incorporated into the new versions of KnoxPlans and the Accela platforms.

3. An internal staff training program should be established for all staff who use Accela and KnoxPlans.

To ensure that all staff members can use the KnoxPlans and Accela software programs efficiently and effectively, it is important that the City create an internal training program. The following elements should be incorporated into the software training program.

- Create a comprehensive on-board training program for all new staff that is designed to provide an overview of each system and a more detailed training program for their specific role (e.g., intake and permit issuance for development review techs, reviewing and posting comments for plan reviewers). This on-board training program should be provided for all staff prior to the launch of the new software systems.
- Ensure that staff receive ongoing training for the software as new updates and features are implemented.
- Provide training for managers on how to utilize the software system and performance metric features.

- Create a user guide/desk manual (electronic) so that staff can reference the majority of their questions. This manual should be updated as new features are released.

A formalized training program should be created prior to launching the new software programs. Additionally, all new hires should receive an on-board training prior to being provided access to the system. Finally, staff should be provided with a reference guide.

Recommendation #18: Provide new hire and in-service training for the Accela and KnoxPlans software platforms.

Recommendation #19: Create a desk manual / reference guide for the software programs and update as new releases are activated.

4. **In addition to the software administrator in PRI, each department should have an internal staff member who serves as the primary software liaison.**

Plans Review and Inspection is the primary City department who is responsible for the Accela and KnoxPlans platforms. These duties fall to the Development Services Coordinator who has been tasked with the implementation and administration of these two systems. Utilizing a staff member who is knowledgeable about the collective development practice is best practice as they can tailor the system to the unique needs of the various internal users. This approach should be maintained in addition to network support coming from City Information Technology staff.

One approach to this model that should be modified, is to train and establish a power user in each review discipline. While the system administrator (Development Services Coordinator) has overall responsibility for the whole software package, there is a need to have secondary experts embedded within each department to assist their staff. This approach alleviates some of the burden on the System Administrator and provides more expertise on individual workflows and processes at the departmental level. A secondary advantage is that there are additional resources available to backfill when the system administrator is not available (e.g., vacation, sick leave, training) and provides a different perspective. Also, these departmental experts can help develop training materials and update the reference guide.

Identifying and establishing departmental software experts will create a team of individuals who both are strong in understanding the software but also have the subject matter expertise to improve the software systems to enhance the useability for all review disciplines. This team will be responsible for providing training, maintaining the reference guide, and serve as front line support staff in their respective departments. This collaborative approach will improve operational efficiencies throughout the organization.

Recommendation #20: Each department should identify an internal staff member who will serve as the software expert for their department.

Recommendation #21: The software experts in each department will be used to create a team to augment the Development Services Coordinator (software administrator) in the creation and maintenance of the training materials and assist with software training.

5. Use the software platform to develop automated performance reports.

In the management chapter, it was recommended to create performance standards. To ensure that performance goals are met, it is important that management have the ability to analyze staff performance. With the implementation and transition to the new software platforms, performance reports should be automated and provided to supervisors and managers on a monthly basis or more frequently if desired.

Both software systems have the capability to create standardized reports. This feature should be implemented immediately after new systems have been brought online.

Recommendation #22: Create standardized and automated performance reports in the new permitting software system.

6. Staff must have appropriate hardware to be able to effectively use these systems and move away from paper-based processes.

All development review staff may not have the necessary tools to efficiently perform their jobs. Staff, especially plan reviewers, are not provided the necessary computer infrastructure to utilize the functionalities of the software system fully and efficiently. Hardware limitations should never be a constraint preventing the efficient use of technology. All staff should be supplied with multiple, large high-resolution monitors to allow them to take advantage of the systems that are or will be deployed. All computers should be equipped with web cameras and adequate memory and graphics capability to fully utilize Accela and KnoxPlans, and to hold electronic meetings with multiple reviewers where plans can be discussed and viewed remotely.

Recommendation #23: Upgrade hardware for all staff to facilitate use of technology.

7. Create a training program and “how to guide” for customers.

It is just as equally important to create a training program and resource guides for customers as it is for staff. The more relevant information and training that is provided for end users, the less burden it will be on staff.

Prior to launching the new software systems, City staff need to create a training program. This training should initially serve to provide frequent customers with a short training

program on how to set up an online account, submit an application, track their application through the online portal, receive comments, upload revised plan sets, obtain their permit, and pay fees through the portal. In addition to providing this training in person or via a remote platform, these sessions should be recorded and be available through the City's website.

Training should be provided for users when new updates are released that impact the user's portal. Also, it is important for regularly scheduled training workshops be provided so that new users can also receive training at least twice a year.

In addition to creating and implementing a customer training program, a resource guide should be developed that walks the user through the most common practices. The resource guide should be posted on the City's website. The resource guide should include a frequently asked questions component and screen shots that are annotated with appropriate notes to guide the customer through the various system processes. The guide should be detailed enough that the average user can successfully set up an account, submit an application, receive comments, resubmit, pay fees, and download their permit.

Recommendation #24: Conduct customer training workshops prior to the activation of the new software systems.

Recommendation #25: Provide new customer orientation training for the online software application portal at least twice a year.

Recommendation #26: As new updates are released that impact the customer portal, conduct training sessions with end users.

Recommendation #27: Develop a customer user guide that provides detail instructions and examples for the most common customer processes.

- 8. As the City transitions to a new permitting system, historic development records should be digitized, cataloged, and linked to parcel/address identifiers in the system.**

As the City migrates to the new permitting software system and expands access to all development review functions, it is important for staff to easily access historic records. Current permitting records in PermitsPlus will be transitioned to Accela, however this will primarily focus on when a building permit was issued and closed out. The system will have limited historic information and only past applications that were submitted through KnoxPlans will be linked in the system. There is still a significant amount of paper documentation that PRI and Engineering have not linked in the software. Additionally,

since all Planning related records are property of Knoxville – Knox County Planning, this historic information is not included.

The City should hire a temporary position(s) to scan, catalog, and digitally link historic development records for PRI, Engineering, and Planning back for a specific time period (e.g., from 2005). This information should be stored in the permitting software system (ideal) or in a document management system on the City's internal servers or through a cloud based system if the City has transitioned to this service. Once historic development records have been digitized, they should be linked to the permitting system by parcel or address identifier. Providing access directly to appropriate development records.

Recommendation #28: Hire a temporary position(s) to digitize and catalog historic development records. Linking historic records to appropriate parcel, permit, or address identifiers.

4. Process Evaluation

This chapter focuses on evaluation of existing development processes. It is assumed that all PRI, Engineering, Fire, and Planning applications will be submitted through KnoxPlans moving forward.

1. The preapplication process should be modified.

Knoxville meets a best practice by conducting preapplication meetings with prospective applicants. Generally, any individual can request a preapplication meeting to discuss the feasibility of their potential project and meet with most of the primary review disciplines. However, there are several modifications that should occur to improve the process for both staff and customers.

- The preapplication meeting is currently facilitated by the PRI Director / Chief Building Official. Ideally this meeting would be facilitated by a Development Service Technician or the lead plans examiner better aligning preapplication duties more appropriately in the organization.
- Staff are often reviewing the proposed plan for the first time at the preapplication meeting. Drawings and other related materials should be provided to the City at the time the preapplication meeting is scheduled. Materials should be submitted electronically.
- All reviewers should review the applications prior to the preapplication meeting. This will help determine if their attendance is necessary at the preapplication meeting and ensure that the meeting is more effective and impactful as comments and input provided will be based upon a more thorough review of the documentation.
- Transitioning to an electronic submittal and review, prior to preapplication meeting, reviewers can upload their comments to the permitting system. After the preapplication meeting, reviewers should update their comments/notes within one business day and all feedback is sent to the customer. Memorializing comments and key discussion points is important as this will reduce challenges when an official application is submitted, especially if a different staff member conducts the review upon official submittal.
- It was observed during the meetings that Zoning was the last reviewing entity to provide input. Zoning should provide input first during these reviews. In the event that the proposed use is not allowable, this may impact other discipline's comments or negate the need for discussion from the other reviewing entities.

These modifications to the preapplication process will facilitate a more thorough discussion between reviewers and the applicant. Second, it will ensure that only review disciplines who need to attend the preapplication meeting are in attendance and prepared to speak. This will result in streamlining the preapplication process and allow the team to meet with more applicants in the same time period.

Recommendation #29: Revise the preapplication process to require materials to be submitted at time of scheduling, require all review disciplines to review materials prior to the meeting, and the preapplication meeting be facilitated by someone besides the Department Director.

2. Direct Fire applications should be submitted through KnoxPlans.

The Fire Marshal's Office is responsible for conducting building permit reviews for life safety and other elements of the building and fire codes. Building permit review is routed through KnoxPlans and fire reviews are conducted electronically. Fire is also responsible for processing and permitting several fire specific permits (e.g., hazardous, tanks, fireworks, and blasting). These fire specific permits are submitted directly to Fire via email or paper and not through KnoxPlans. These permits should transition to fully online submittals and issuance and be processed utilizing the KnoxPlans platform.

Recommendation #30: Fire should transition the submission, review, and permit issuance for their permits through KnoxPlans.

3. New development and construction Fire Inspections should be scheduled through the permitting system.

Fire Inspectors are responsible for conducting both building permit and fire specific inspections for the City. The current approach to request a fire inspection is to call the Fire Marshal's Office and request an inspection which is completed the next day. This approach is different from building inspections which are requested online. All fire and building inspections should be requested through the online permitting portal. The portal should serve as a single location for all building, fire, zoning, and engineering inspections.

Recommendation #31: All fire inspections for building and fire permits should be requested through the same online portal as building inspection requests.

4. The timing associated with recording easements during the development process should change.

As part of the development process, frequently the property owner is required to dedicate an easement for utilities, sidewalks, etc. in order to properly service the parcel or building being constructed. Knoxville is similar to many other jurisdictions and requires that proposed easements be shown on plan sets during the review and permitting process.

These easements eventually must be recorded as part of the development process, but Knoxville requires the easement to be recorded prior to issuing the building permit. This is a unique requirement that should be changed because often, the easement location, size, or shape is changed due to unknown field conditions and the easements have to be modified and re-recorded.

Easements should not be required to be recorded for existing parcels until prior to final inspection or certificate of occupancy inspections. This approach ensures that the developer only records one document for easements. This process change reduces the workload for the developer and City staff as it should reduce the number of revised plats to be reviewed and re-recorded.

As part of the development review process, the applicant is still required to submit information regarding easement location and all the necessary requirements, except the easement(s) do not have to be recorded prior to receiving the building permit. The easement modification requirements would remain the same as the current process to ensure City approval and acceptance. The timing of the recoding would need to occur prior to final or certificate of occupancy inspections and be included as part of the permit close out process.

Recommendation #32: The requirement to record easements for existing parcels should be changed prior to final or certificate of occupancy inspections.

5. Modifications to the right-of-way closure process is needed.

Knoxville has a formal process for right-of-way closure and abandonment. The process starts with Planning and the application is routed to Planning, Fire, KUB, Engineering, AT&T, TDOT, and the Law Department. Routing the application to these functional areas ensures that all staff sign off before moving forward with the application request. The approach of routing to applicable parties meets best practice.

The application then is routed to the Planning Commission for their review and recommendation. After the Planning Commission meeting and recommendation, the application is sent to City Council for their review and decision. Routing the closure application to the Planning Commission is unique and the project team has not seen this approach before. City Council has the final decision on closing the right-of-way and only receives the application if all internal and partner agencies have reviewed the application and generally have no concern with the closure. Routing the application through the Planning Commission increases the timeline for application processing and increases the amount of work for staff and provides little to no added value to the process. This practice should be discontinued. The closure application should go directly from staff to

City Council. The departments currently involved in reviewing the application will be maintained, the step of going to Planning Commission before City Council is removed.

Recommendation #33: Right-of-way closure applications should not be reviewed by the Planning Commission.

6. An agreement on who is responsible for Hillside Overlay review should be formalized.

In 2020, the City established a hillside protection overlay zone but did not specifically identify who is responsible for reviewing applications for compliance and who is responsible for enforcing the ordinance. Currently, the review is completed primarily by Planning but there are times when Zoning reviewers will review and determine if the application must comply with the Hillside ordinance. The review criteria and who completes a review is not consistently applied and is often a point of confusion for staff and certainly for applicants. In the event there is a hillside zoning violation, the investigation and enforcement is conducted by Zoning staff.

The roles and responsibilities for determining if Hillside Overlay criteria is applicable and who reviews the ordinance should be the same team. Planning and Zoning leadership need to formalize an agreement on who is responsible for determining if hillside protection applies and who reviews the application for compliance. The project team is agnostic on who should be responsible for these reviews, but only one department should be responsible, and responsibility should be clearly outlined and communicated with applicants. Understanding that Zoning is responsible for enforcement there may be a benefit to have the same team responsible for determining applicability of the code during application review.

Recommendation #34: Planning and Zoning leadership need to formalize an agreement on their respective roles in reviewing applications and determining compliance with the Hillside Overlay protection ordinance.

7. The process for platting unrecorded parcels should be revised.

When reviewing building permit applications, Knoxville reviews the application and ensures that the parcel is a legal parcel before a building permit is issued. In the older parts of the City, such as those neighborhoods closer to downtown, when many of these parcels were created, they were not properly subdivided and platted with the City. This has resulted in the inability of the City to issue a building permit because the parcel is not a legal parcel. The property owner is then required to obtain a survey of the parcel and go through the subdivision and platting process with the City. This can be an expensive and time consuming effort for the property owner.

This issue arises only a few times a year and impacts only a small percentage of individuals who go through the permitting process. When it is an issue, it can dramatically delay the issuance of a building permit and negatively impact the timeline for the applicant. The City needs to reevaluate the process for properly recording these previously divided parcels with an eye of shortening the timeline for processing the application, while ensuring that the minimum state requirements are met.

Recommendation #35: Evaluate the platting process for parcels that are not currently recorded accurately on the City's official map of record.

8. Planning and Engineering need to determine their specific roles and responsibilities in the platting process and streamline their approach.

The platting process for the City of Knoxville is a very complex process and includes reviews by Planning, Engineering, and KUB staff. The current process is for each review discipline to review the application and provide comments. Engineering sends their comments directly to the applicant, while KUB sends their comments to Planning who then send theirs and KUB's comments to the applicant. Once the application is approved, then the plat is recorded and then all three departments are notified of the recorded plat.

It is recommended that the platting process be facilitated by Engineering. With this change all review comments should be routed through Engineering, who will review the comments to ensure clarity and remove any duplicative comments and send a consolidated comment letter to the applicant. This recommendation is change in the current approach as Engineering would be responsible for the intake of the plat application and serve as the application lead. The current review disciplines would still conduct review and provide comments to Engineering. A formal policy and agreement should be created to outline the change in the process.

Recommendation #36: Engineering should serve as the primary department for the intake and review for plat applications.

Recommendation #37: All plat review comments should be consolidated into a single letter that is sent to the applicant by the department who intakes and processes the application.

9. Clarity on who is responsible for reviewing the Traffic Impact Analysis (TIA) should be established.

Planning and Engineering staff both indicated they review traffic impact analysis (TIA) but are unsure of their respective roles in reviewing the analysis. While having two entities review a TIA is not uncommon, it is challenging when those individuals are unsure of their

role in the review. Planning and Engineering should formalize their respective role in reviewing the TIA.

Knoxville – Knox County Planning includes the Transportation Planning Organization (TPO) for the region. However, this team has limited authority over transportation related issues. Engineering serves as the primary review entity for transportation and traffic related elements. It is logical that Engineering takes the lead on reviewing TIAs and identification when a TIA is required. A formal agreement should be created to outline the specific roles of Engineering and the TPO.

Recommendation #38: Engineering should take the lead on reviewing traffic impact analysis and a formalized agreement for roles and responsibilities with Knoxville – Knox County Planning should be created.

10. Tiered review times should be adopted for more complex applications to allow for a more thorough review.

Review timelines for all building permit and planning applications is 10 days, this includes more complex applications such as concept and special use plans. A turnaround time of 10 days for building permits is a strong processing time, especially for large or difficult applications. Concept and special use plans often include a detailed site plan and other design elements that may require a more comprehensive review.

A key complaint received by both staff and stakeholders is the quality of review, especially for more complex development applications. Stakeholders indicated that they often receive review comments that should have been caught on the first review versus on the second or subsequent reviews. When staff were asked about this issue, several indicated that in order to meet the 10-day turnaround time, they are unable to conduct as comprehensive review as may be needed.

One way to address the issue of “late hits” for review comments is to have a tiered processing time for more complex applications with longer review times for more complex applications. This will allow reviewers more time to review these often difficult and complex applications and identify all the relevant issues. This approach should ultimately lead to a more thorough initial review and fewer total reviews which will shorten the total processing time for the application.

Recommendation #39: Adopt tiered review processing times to allow staff more time to conduct reviews for complex application types.

11. Staff receive a significant number of informal inquiries, which distracts them from completing official application reviews. A process for answering informal inquiries should be developed.

Staff in both PRI and Engineering indicated they frequently receive questions from the public regarding design details and elements. These questions are often complex and often require staff research to find an answer or may require some level of plan review. This impacts staff's ability to work efficiently as these inquiries often take precedent over reviewing applications that have been submitted and are awaiting review. Several stakeholders indicated they use this informal inquiry to obtain answers on potential projects because it is more efficient for them versus submitting an official application or it is used in lieu of an open records request. This approach has negatively impacted staff efficiency.

The City should establish an official process for inquiries that cannot be handled by Development Services Technicians, front line staff, or easily by plan reviewers. This process should require an official online submittal with an established turnaround processing time. Ideally, the processing time would be tiered based on the complexity of the request and should be assigned after the question/inquiry has been submitted. By formalizing this process, it is intended to reduce the number of informal inquiries and require applicants and developers to formally request information for more difficult questions. It will also establish formal processing times and customer expectations.

Recommendation #40: Create a formalized application process for complex questions and inquiries that cannot be answered by development services front line staff as a way to combat the influx of informal inquiries and to establish processing times.

12. Rezoning applications should be processed by the Zoning team.

As previously mentioned, there is ambiguity between the role of the Planning and Zoning staff in the various development review processes. The Zoning team in PRI is responsible for enforcement of the zoning ordinance and making determinations whether the proposed use is allowed in a particular zoning district. However, Planning staff also make zoning determinations as well. Planning is also responsible for processing rezoning applications, while Zoning facilitates the variance process. Since the Zoning Administrator or their designee is located in PRI and has the final authority on all zoning issues, rezoning applications need to be facilitated by PRI – Zoning staff. This would include the intake of rezoning applications by Zoning.

Zoning staff have the ultimate authority on interpreting the zoning code and this change will align additional zoning responsibilities to staff under the Zoning Administrator. Shifting rezoning applications to the Zoning team will facilitate a more efficient and effective process as it will align more zoning related activities under a single team versus the current informal split between Planning and Zoning.

Recommendation #41: Transition the facilitation of rezoning applications to the Zoning team.**13. The Administrative Review Committee component for the form based code districts should be eliminated.**

When the form based code zoning ordinance was adopted for the South Waterfront and Cumberland Avenue Districts certain applications (Level II) were required to go to the Administrative Review Committee (ARC) before they are approved. The application is routed to the same review disciplines as standard building and development applications. This group has been expanded to include a variety of other individuals in the City, totaling approximately 35 to 40 staff.

The ARC process takes a total of 20 business days for review, which is double what the standard processing time is for other application types. The expanded review disciplines such as a representative of the Planning Commission is not warranted as these applications are reviewed for compliance with adopted standards (including building design and form), and includes prescriptive standards adopted as part of the form based code zoning ordinance. There is no subjectivity of form based code applications that require additional input from appointed officials.

Level III applications is for alternative compliance review and ARC should be removed from this process as well. The traditional review process will work just as well and more quickly for these application types. Level III applications are decided by the Planning Commission and applications should not be presented to the Commission prior to staff review, similar to other application types.

The ARC process should be eliminated from the form based code process to streamline the review process. Elimination of the ARC from the code will not impact the City review disciplines who review the applications, as each review entity is responsible for reviewing and approving standard applications.

Recommendation #42: Remove the Administrative Review Committee (ARC) from the Level II / III form based code review process.**14. The TTCDA overlay district should be dissolved.**

The Tennessee Technology Corridor Development Authority (TTCDA) overlay district was established in 1983 to provide a technology overlay zone in Knoxville. TTCDA was established by the State of Tennessee but was turned over to the Knoxville – Knox County Planning Authority in 1999.

The TTCDA served as a way to incentive technology related development. Technology has changed dramatically since 1983 and the current TTCDA overlay now adds an additional layer of review for all types of development. Applications in the overlay require an additional layer of review by the TTCDA Board of Commissioners and extends the timeline for applications. The TTCDA overlay code is overly generic and adds minimum value to the public. The TTCDA overlay should be eliminated from the zoning code. The City will have to petition the state legislature to dissolve the TTCDA overlay zone.

Recommendation #43: Petition the State of Tennessee to dissolve the Tennessee Technology Corridor Development Authority overlay zone.

5. Customer Information and Interaction

The City and associated development review entities engage with their customers in a variety of ways. Information is shared via different platforms, websites, and outreach efforts depends on the functional group. This Chapter will analyze opportunities to improve sharing development related information with customers and the general public.

1. The Mayor's Development Roundtable provides important interaction with and input from the development community and its effectiveness can be further enhanced with some minor changes.

The Mayor's Development Roundtable was established as a mechanism for Knoxville leaders to hear from the development community about strengths and challenges when working with the City. The Roundtable has been used as a way for the development community to provide feedback about the development process to the City. This type of engagement with the development community is critical to identify and resolve challenges. This group can be more effective if the following changes are implemented:

- The Roundtable should hold regularly scheduled meetings. These meetings should be held monthly or quarterly.
- The Roundtable meeting should include representatives from the primary development review departments (Building, Zoning, Planning, and Engineering). These representatives should attend regularly.
- An agenda should be established one week in advance of each meeting so that attendees are aware of the meeting focus and prevent these meetings from turning into a compliant session. The meeting should be facilitated by a development neutral City staff member.
- Attendees should have an opportunity to share current challenges they or their peers have recently experienced interacting with the City. (e.g., XYZ department has not been following up timely, inspectors are failing our rough in inspections, etc.).
- City representatives should share challenges they are experiencing with developers (e.g., recent increase with issues for exterior sheathing nail patterns).
- Limit participants to approximately 20 individuals and rotate a portion of this group annually.

The intent of the Roundtable should focus on developing a working relationship between the development community and City officials. The meetings should focus on improving the relationships and general complaints should be limited, except if provided in advance of the meeting.

Recommendation #44: Modify the approach to the Mayor's Roundtable to meeting regularly and to focus on identification and resolution of current challenges.

2. Development review websites need to be redesigned to better facilitate sharing of information.

There are a total of six different departmental webpages related to the entire development process in Knoxville. This includes City maintained webpages for PRI, Engineering, and Fire. Knox County – Knox Planning, KUB, and the Knox County Health Department have their respective websites and dedicated development webpages. With a total of four different entities responsible for maintaining development related information online, there are plenty of opportunities for improvement.

A few of the challenges with the current websites of development review websites:

- There is a lack of integration between the development review disciplines. This issue is even noted between the individual City webpages.
- Links between different review entities are absent on most individual departmental webpages.
- The City's website does not link to the Planning website and nor does Planning's website provide links to the City's website.
- Information is presented differently between the City departmental webpages and Engineering has direct links to their development ordinance while no zoning code link was found on PRI webpage.
- There is no centralized development webpage that provides an overview of the development process.
- Identification of roles, responsibilities, and processes are inconsistent between webpages. Some departments have development guides and process diagrams, while others may have an overview of their process, or no discussion on their particular processes.
- Staff contact information is not presented consistently between the Departments.

These are just a few of the challenges noted in reviewing the respective development review webpages for each group.

The City's website should serve as a hub for all development related information for the City. Since the City departments and Planning are the primary development review entities, recommendations will focus on how these websites can be improved. KUB and Health may want to incorporate some of the recommended elements on their websites.

The City needs to redesign their development review department websites and incorporate the following elements.

- Create a centralized development review webpage. Elements included on this webpage include:
 - An overview of the entire development process.
 - Link to a comprehensive development guide.
 - Narrative for responsibilities of the respective departments/divisions involved in the development review process. Including outside agencies who may be involved in the development process.
 - A centralized link to the online application portal(s). Including a link to the “How To” guide for application submittal.
 - The inspection request link located in a prominent location(s).
 - Links to individual departmental development webpages.
 - Link to the KGIS system and other pertinent maps.
 - Webpage link to the City’s adopted ordinances/design standards/regulations. This needs to be expanded beyond Engineering.
 - Fee estimator/calculator for all development fees.
 - Performance reports link.
 - Frequently asked question section.
- Establish a consistent approach including application overview information - either within the application PDF or as a separate document. (e.g., flowchart, narrative, or other graphic representation).
- Development staff contact information should be provided on each departmental webpage. Information should include name, title, email address, and phone number.
- A consolidated fee schedule should be included on all development departmental webpages.
- Each department’s webpage should provide an overview of the processes that it manages.
- Designate an individual staff member from each development review department to maintain their respective webpage.
- Establish a consistent approach to providing development information links on departmental webpages. Include a consistent depth of information on the primary information page and provide links to secondary sources.
- All development webpages should have a link to take the user back to the centralized development webpage.

- Include a development matrix that shows each application and who is responsible for decision making (e.g., staff, Planning Commission, Council, etc.).

Incorporating these elements on the City's website will provide greater information to the public and customers. Resulting in less inquiries for staff and making the process more efficient. A strong web presence is important for the City as most individuals will begin their research on the City's website prior to contacting the City.

It is important to maintain a strong website presence and to include the most up-to-date information. There should be a single point person from each Department who is responsible for the maintenance of the departmental and all development related webpages. This person should be someone who is well versed in the department's development process. Ideally, this would be the staff member who also serves as the Department's representative to the permitting software working group.

KUB and the Health Department webpages should include links to the City's centralized development webpage.

Recommendation #45: Redesign the development portion of the City's web site to provide clearer information about the development review, permitting, and inspection process, steps involved, and information required. Creating a centralized development webpage to serve as a starting point for the public.

Recommendation #46: Assign a staff representative from each department who is responsible for maintenance of their Department's webpage.

3. A current projects page should be created to provide more development information to the public.

Accela is a robust permitting software system that has many capabilities. One of the features of Accela is the ability to auto generate current development maps. This feature provides the City the opportunity to post a current projects map online. A current project map will provide the public with the opportunity to view development projects that have been recently approved (e.g., commercial building permits) and other applications that include public hearings / notices. As part of this feature, the public should be able to access information regarding the permit type issued, applicant name, and if applicable schematic designs of the site and building. Upon the permit closeout, the project should automatically be moved from the current project map and transitioned to completed status. The project should stay on the map as "closed" for a limited duration (e.g., 45 days).

Recommendation #47: As part of the implementation of the new Accela program an active permit page should be created to provide an overview of recently permitted and under construction projects in the City.

4. A comprehensive development guide should be created.

The availability of resources and information on the departmental webpages varies greatly. A similar issue to the lack of a centralized development webpage, there is no comprehensive development guide that the public and staff can use as a resource to better understand the overall development process. Although some departments have created and published detailed user guides (Engineering and KUB) there is not a comprehensive guide that provides an overview of the development process, and these guides are specific for their respective operations and have limited linkage to the other review entities.

A comprehensive development guide needs to be completed that provides an overview of the primary development review, permitting, and inspection processes. The development guide should include:

- Overview of the entire development process both in narrative and graphical formats.
- Matrix that includes the primary permit applications and the disciplines who are involved in the review (e.g., single family building permit, rezoning application, subdivision, etc.).
- Links to the appropriate websites for each department included in the process.
- Contact information for each review entity. This should be general so that the guide does not have to be updated every time staff changes.
- Link to current application checklists for each application type.
- Link to applicable ordinance, policies, and standards.
- Identify when the development guide was last updated.

A comprehensive development guide will provide much needed information to the public regarding the City's development review, permitting, and inspection processes.

Recommendation #48: Create a comprehensive development guide that provides an overview of the primary development processes.

5. The Engineering Land Development manual should include links when referencing adopted codes and standards.

Engineering has a land development manual on its webpage. The manual was updated in October 2022 but had not been fully updated since 2003. One opportunity to make the

functionality of the manual more user friendly would be to embed links to the City's ordinance in the document. The City uses the platform MuniCode for sharing their adopted ordinances online. This platform provides the opportunity to embed links to particular code sections in the land development manual.

Embedding links in the Engineering Land Development Manual will create an interactive guide that takes the user directly to the code and limits the need to include much of the information in the manual. This will result in the need for fewer manual updates, especially as the code is updated or revised. Also, it will reduce the redundancy in the manual that currently exists and shorten the guide to include the most critical elements.

Recommendation #49: The Engineering Land Development Manual should include hyperlinks to the applicable code sections.

6. Staff should be available at a public counter in PRI to assist the public.

At the onset of the Covid-19 Pandemic, the public counter in PRI/Engineering was shut down and has not reopen. Staff are available to assist customers who come into the offices, but no staff member resides at the public counter adjacent to the PRI suite.

For individuals who may not have interacted frequently with the development processes or the City, the lack of an individual who is readily accessible in person creates a perception that staff are not available to assist them with their questions. To improve customer service, especially for individuals who are not well versed in the development process, it is important to have staff at the PRI/Engineering front counter.

Recommendation #50: Staff the PRI/Engineering public counter with a staff member to better assist the public.

7. A real time performance report card should be published on the City's website.

Several recommendations were made in this report that focuses on processing and performance times for the development review process. The City has the opportunity to showcase the level of service they are providing through consistent reporting of historic and current performance. The City should create a dashboard that shows historic performance trends. Examples of this would include the number of single family permits issued last month, the average processing time (from when the application deemed complete until the review comment / permit issue was provided).

The City of Lewisville, Texas has an online performance dashboard. A few screenshots are provided below.

Fire Prevention - Permit Plan Review (Days to Complete)

✓ LIVE

+3
vs yesterday

7

HISTORY

DETAILS

Department:

Inspections and Permitting

Description:

Average number of days it takes to approve Fire Prevention permit plans over the past 30 days.

Goal:

< 14 days

Period Measured:

30 Days

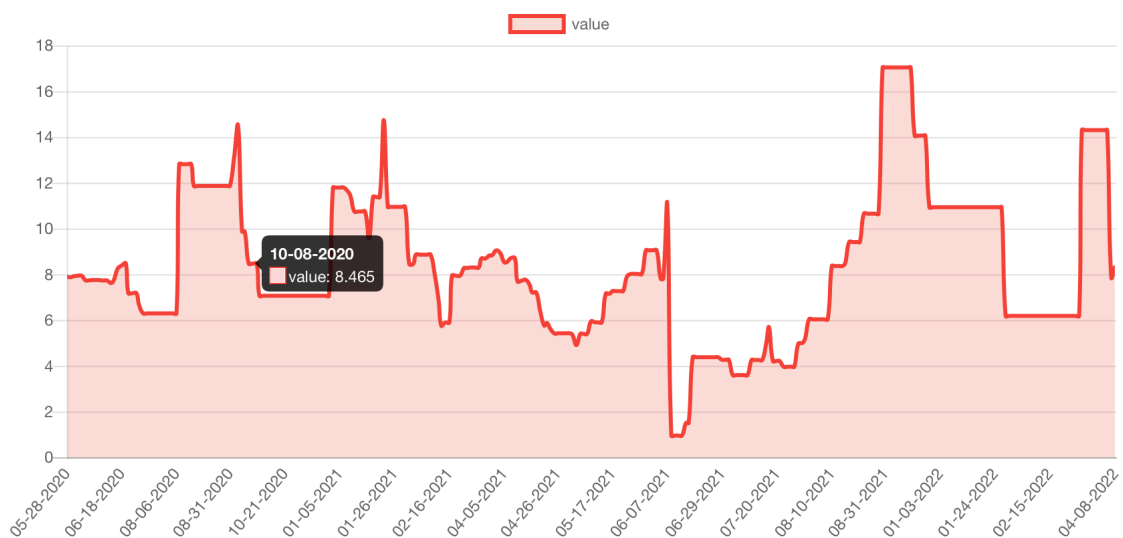
Data Source:

MyGovernmentOnline

Last Updated:an hour ago
2022-11-02 17:11:62

Inspections and Permitting (6)

Avg Number of Business Days to Review and Approve Fence Permits



An online dashboard can provide historical performance information and can include real time data as well. Knoxville should create a dashboard that shows historic data and current estimated processing times.

Recommendation #51: Create an online performance dashboard that shows historic workload and performance metrics and estimated current processing times.

6. Code Analysis

This chapter will analyze how the City's adopted code impacts the efficiency of the development review process. An in depth review of the code was not completed, but there are several opportunities for improvement with the existing code to help facilitate a streamlined and predictable development process.

1. The sector and one-year plan amendments should be eliminated.

Knoxville has a complex system in place for establishing the future land use map. The City officially adopts a General Plan that identifies future land uses to help guide future growth and development. As part of the General Plan, the plan is further divided in a one-year plan that looks at shorter term land uses and sector plans that divide the City into small subsections. In order to complete a rezoning, it requires a change to both the sector and one-year plans. This creates additional work for staff to ensure that both the sector and one-year plans are changed if the rezoning is approved.

One-year plans have minimal impact on the future land use maps and plans but creates additional work for staff. The one-year plan requirement should first be removed from the City's ordinances. In conjunction with this change, the sector plan amendment should be removed too. The future land use map should encompass both of these plans and rezoning a property should take into consideration the holistic future use designation for the general area. Striking one-year and sector plan requirements will streamline the process and not negatively impact the built environment. The future land use designation has the greatest impact in determination of a rezoning request as it looks more holistically at the future development desires for that general area.

It is important to note that the one-year plan requirement is adopted in the City's charter and will require a charter amendment to remove this requirement.

Recommendation #52: Remove the sector plan and one-year plan requirement from the adopted City codes and ordinances.

2. The 50% improvement value threshold for triggering stormwater upgrade requirements aligns with many other jurisdictions but establishing different criteria may have positive benefits.

A key theme that emerged from both City staff and development customers was the threshold for requiring stormwater improvements. The current requirement for upgrading stormwater infrastructure is when construction value is greater than 50% of the current property value. This threshold is incorporated into the City's National Pollutant Discharge

Elimination System (NPDES) permit. This threshold is uniformly applied for all building and site renovations, even if the renovations are only for the interior of a commercial building and there are no site changes.

The threshold to require updating infrastructure and buildings to current codes and standards upon the renovation of more than 50% of the property value is common for most communities. This is predominantly based upon building code requirements for achieving an appropriate permit and is intended to update structures that are going to be significantly impacted and extend the structure's useful life into the provisions of the new code. The 50% requirement is set by the International Existing Building Code (IEBC) that is adopted by Knoxville within their Code of Ordinances Section 6-53. The 50% threshold is also applicable in the zoning code related to parking lot improvements.

Within the IEBC, Chapter 8 and Chapter 9 are specific to the 50% requirement in which occupied space requirements then require compliance of the entire structure with the remaining code. This section however does not specifically call out stormwater or other site improvements as these are not typically handled by building code regulations.

Stormwater requirements for property in Knoxville are further regulated by Chapter 22.5 of the Code of Ordinances and the rule requiring compliance with this code appears to be in Section 22.5-20 which sets requirements for site development plan access to be provided, however, this should not apply for renovation projects. Sec 22.5-27 states that a Site Development Plan is not required if, in the opinion of the Engineering department, the project does not "affect the drainage on the site or the quality of stormwater runoff from the site." It also further provides emergency exemption authority in times of disaster.

The project team reviewed the stormwater requirement codes for several other communities and states. The following jurisdictions have the same or similar requirement as Knoxville.

- State of Tennessee
- Nashville, TN
- Memphis, TN & Shelby County
- Germantown, TN (through Shelby County)
- State of North Carolina
- Asheville, NC (using the State Code)
- State of Kentucky
- City of Lexington, KY

The City of Chattanooga sets a requirement of 30%¹ by Ordinance 12600 that sets the code on Existing Buildings to comply with aspects of the building code (Section 3401.7 Existing buildings or structures). This section does not specifically call out site work or stormwater, similarly to the IEBC.

The NPDES requirement is specific to both the site and the building, which creates challenges for structures/sites that have lower property/building values and may prevent some property owners with lower valued property from renovation. While the 50% rule is applied equally across the City it may prevent redevelopment of properties in areas with lower values. In parts of the City with lower property values this requirement may be a barrier to redevelopment. The City should consider changes to this code to facilitate redevelopment of properties and serve as an economic catalyst.

There are three alternatives that the City may consider:

- Formally revise their adopted code to specifically state the threshold requirements that trigger stormwater improvements. This may include language that says that if no site work is completed on the parcel, then the stormwater improvements are not required or when only building renovations are completed then stormwater requirements would not apply.
- If the City desires to continue to enforce stormwater improvements based on a renovation values of the building and/or site then they can adopt a tiered approach. For example, no stormwater improvements are required for properties valued less than \$500,000. For valuations above \$500,000 then if renovation cost exceeds 50% of the current value, then stormwater improvements are required. The threshold value can be set at whatever level the City desires.
- The City may want to adopt an ordinance that waives the stormwater requirements for certain geographic areas of the City or specify for certain redevelopment zones, overlays, or other designations that provide flexibility in requirements. Creating specially designated areas will group multiple properties and areas together so that it does not appear that the City is providing special treatment to specific parcels or development opportunities. This approach may require additional work for staff to adopt such zones or overlays.

1

https://chattanooga.gov/images/citymedia/publicworks/ordinances/2012_Adopted_Codes.pdf

If the City were to revise their current interpretation or adopt new code language that is more specific, this would eliminate the ambiguity of the current ordinance and resolve many of the challenges referenced by staff and stakeholders. It is recommended to adopt new code language to specifically outline the requirements for stormwater improvements.

Recommendation #53: Modify the adopted code to specifically outline the improvement requirements that trigger the need to comply with the current stormwater regulations.

3. The Subdivision regulations (Appendix A) in the City's ordinances should be cleaned up and consolidated.

There are several opportunities to clean up the existing adopted code to be more streamlined and better presentation of the adopted regulations. Opportunities for consolidation in the Subdivision regulations include:

- Consolidation of Section 6 – Design Standards and Section 7 – Required Improvements can be consolidated into a single chapter. For example, Section 6 discusses standard details and specifications (e.g., grade, width, pavement requirements), while Section 7 discuss the type of pavement for different street types. Consolidation of these standards into a single section and incorporating additional tables would help clarify the standards.
- Update Section 4 – Plats and remove the requirements for four paper copies of the plats for review. The City has transitioned to all applications being submitted electronically for review. If Engineering already accepts digital plats, then the code should be updated to reflect current practice. *Note: the Register of Deeds is evaluating software solution to digitize the sign off and recording process. Once this new system and process is in place, then the code should be updated accordingly.*

The subdivision regulations should be reviewed with an emphasis on consolidation and conciseness and with how the code is presented. Incorporating more tables will convey the materials more concisely.

Recommendation #54: Examine the adopted subdivision regulations and create a more concise and streamlined code that better groups similar requirements.

4. Engineering should review Chapters 22 and 23 of the Code to address current challenges experienced by applicants.

The majority of the regulations that Engineering is responsible for enforcing fall within Chapter 22 and 23 of the City ordinances. Engineering needs to take a comprehensive review of the top 10 to 15 issues that their reviewers encounter on a consistent basis and identify opportunities to modify the code to help avoid these challenges. Additionally, Engineering staff should review the code to ensure that it regulates the type of development that is occurring in Knoxville.

Upon reviewing the code, there are potential discrepancies between the type of development occurring in Knoxville (redevelopment) and the code which has many “greenfield” type of requirements. Assessing the entirety of the code and identifying changes that better align with the type of development occurring in Knoxville will help streamline the overall development process.

Recommendation #55: Engineering staff (or consultants) should conduct a comprehensive review of the engineering regulations and identify opportunities to modify the code to better align with the type of development occurring in the City.

5. Three elements of the zoning code should be revised to address recurring issues.

Knoxville adopted a new zoning ordinance in 2020 and is continuously addressing issues with the new code. In July 2022, a total of nine text amendments were presented by staff to address some of the challenges with the new code. There are three additional elements that should be addressed to help facilitate a more streamlined development review process.

- The landscape requirements should be comprehensively reviewed. The landscape code is comprehensive and requires a significant effort to meet the intent of the code. The code was written in such a way that the writers created an alternative compliance approach when the code was initially adopted. Many of the stakeholders who had projects that were subject to the new zoning code, automatically defaulted to the alternative landscaping process versus trying to meet the code. This indicates a challenge with reasonably meeting the code. A strong landscape ordinance is important to ensure aesthetically and environmentally friendly landscaping surrounding development. But if a significant number of applicants are asking for alternative compliance, then the intent of the code is not being fulfilled. The City should evaluate the landscape requirements and revise the code as needed to best meet the needs of the development community, while still achieving their desired goals.
- The requirements for bike racks for zoning that requires zero lot line development was an issue discussed by multiple stakeholders. Alternative transportation is an

important mobility aspect for any community, especially those with a strong urban development corridor such as Knoxville. However, the requirement for providing bike racks in zoning districts that allow development up to the lot line, creates some challenges for developers. The City should review the current bike rack requirements for zero lot line zoning districts and consider changes to continue to promote alternative transportation methods.

- The City needs to evaluate the current approach to the use of variances to satisfy the desires of developers. The Board of Zoning Appeals hears a significant number of variance requests. Variances provide a relief valve for a property owner / developer when there are extenuating circumstances for a particular parcel (e.g., physical feature that impacts setback requirements). However, in a review of many of the variance requests, they focus more on the use or design elements and desires of the applicant to receive an exception to the zoning requirements when there may not be a true hardship. Based on application packets reviewed and conversations with developers it appears that staff promote the variance process as a work around for a variety of design issues and wish list items of the developer. The City should review the variance requests for the past three years and identify potential code changes based on the request for variances and those approved by the Board of Zoning Appeals. For more commonly approved requests it is more beneficial to update the zoning ordinance to help streamline the process versus subjecting applicants to a longer process having to go through the Board of Zoning Appeals. It also takes out the subjectivity of the Board, which means applicants can provide stronger applications because they know what the code specifically requires.

Revising the code to address these three issues will facilitate a more streamlined development review process.

Recommendation #56: The landscape code should be revised to reduce the number of alternative compliance applications.

Recommendation #57: For zoning classifications that allow zero lot line development an alternative approach for the bicycle rack requirement should be adopted.

Recommendation #58: The approach to variance requests should be reviewed with the intent to reduce variance requests for design elements that are not a result of true physical hardships. Where appropriate, the code should be updated to address common variance requests.

7. Organizational Structure and Staffing Assessment

This Chapter will evaluate the organizational structure and staffing needs of the development review, permitting, and inspection processes. The staffing assessment is based on the implementation of the recommendations made in this study.

1. The Planning function should be moved under the City and become its own department.

As mentioned previously, the City's defacto Planning Department is not a City department but is a consolidated agency that provides planning services to both the City of Knoxville and Knox County. This is a common structure in Tennessee where there are numerous consolidated City / County planning agencies.

Planning is responsible for developing the zoning and land use regulations but are not responsible for enforcing the zoning code, which falls to the Zoning Administrator in the City of Knoxville which is the PRI Director. The current separation of planning and zoning has created multiple operational challenges as outlined in this report, along with many other issues. The current operational approaches by the City and Planning impacts collaboration and engagement between both entities. The current approach is simply not working, and applicants are negatively impacted by the current business approach.

One way to address the current dysfunction is to move the planning functions under the direct supervision of the City. Creating a City of Knoxville Planning Department that is responsible for the creation and maintenance of the planning and zoning ordinance and guiding documents such as the general plan. Moving Planning will bring the four primary development related departments under the City's umbrella. This move is critical to help improve the development process in the City. It will help improve accountability, collaboration, and functionality among the four primary development review entities for the City. The City is strongly encouraged to establish their own City Planning Department.

By creating a new City Planning Department, the City should evaluate the structure of the current Knoxville – Knox County Planning Commission and determine if the current structure best meets the needs of the City. If not, then the City may consider establishing their own Planning Commission. This would likely require a change to the City's charter and municipal code updates. If a new Planning Commission was established, it should be comprised of an odd number of Commissioners.

Recommendation #59: The City is strongly encouraged to establish their own City Planning Department.

Recommendation #60: Once a new City Planning Department is established, evaluate the current structure of the Knoxville – Knox County Planning Commission.

2. Planning and Zoning functions should be a consolidated department.

Creating a City Planning Department will require significant effort on behalf of the City. This is a major change in the operational philosophy for the City. After the City has established a Planning Department, the zoning function should be consolidated to create a Planning and Zoning Department. A consolidated planning and zoning department is common across the United States and provides a single department who is responsible for crafting the zoning ordinance and enforcing it. Additionally, it helps ensure that long range and current planning efforts align to promote a unified development vision for the City.

This will require standing up a consolidated planning and zoning operation at the same time, which is a major organizational undertaking. An alternative approach would be to first establish the Planning Department and within two years consolidate the zoning component with Planning.

Recommendation #61: Upon creation of a City Planning Department, the zoning function should be consolidated to create a comprehensive department of planning and zoning.

3. All City development functions should be consolidated under a single person in the City who sole responsibility is development oversight.

The development review process is split between PRI, Engineering – Stormwater, Fire Marshal's Office, and with Knoxville – Knox County Planning. With the recommendation to create a City Planning Department, there is a need to consolidate all development review functions in the City under a single manager.

Development is a critical component to a robust and economically healthy City and is highly regulatory. Development functions are an outward facing municipal operation that primarily serves the public versus many other City operations (e.g., Finance, IT, HR) and thus receive a significant share of the complaints from the public. Development can be contentious, and it is important to have leadership who is well versed in the environment and can solely focus on development related issues. Therefore, it is recommended to create a position that has direct oversight of the functions that currently fall under PRI, Engineering – Stormwater, and Planning. The Directors of these three departments will report directly to the Chief Development Officer (or similar title). A single individual who has direct responsibility for all development related functions will improve overall accountability.

For development related activities and issues under the purview of the Fire Marshal Office's, these decisions should be vetted through the Chief Development Officer first and secondarily with the Fire Chief. The Fire Marshal's Office will organizationally be located under the Fire Department but will also report to the Chief Development Officer for development related activities.

Recommendation #62: Plans Review and Inspections, Engineering – Stormwater, and Planning Departments should report to the Chief Development Officer.

4. The requirement for Fire Inspectors to maintain their firefighter and EMT certifications should be discontinued.

The Fire Department has a requirement that in order to be a fire inspector they must first obtain the rank of captain. Once staff become a fire inspector, they are required to maintain their firefighter and emergency medical qualifications.

First, these requirements impact the ability of the City to recruit fire inspectors because it requires fire inspectors to be seasoned employees before they qualify for the position. This is a unique requirement for Knoxville fire inspectors and disqualifies many well trained and experience individuals who are certified fire inspectors. Second, the requirement for being a firefighter before becoming a fire inspector further limits those individuals who may qualify for the positions. It is not imperative for a fire inspector to be a trained fire fighter before becoming an inspector. A firefighter and inspector require significantly different training and qualifications before being eligible to serve in their respective role. Finally, requiring inspectors to maintain their firefighter and medical training impacts their availability to perform critical development related activities and reduce their overall availability to do their job. Inherently it does provide the Fire Department more flexibility to pull inspectors in a staffing emergency, but this rarely occurs.

The City needs to change the requirements for Fire Inspectors and eliminate the requirements to be a firefighter that has achieved the rank of Captain. The requirement to maintain firefighter and medical certifications should be discontinued but the City could still incentivize this as a preferred qualification. These two changes may require the City to develop additional employee classification and pay ranges to ensure staff are properly compensated for the specific certifications needed to maintain their inspector credentials. Additional compensation may be provided to inspectors who maintain fire fighter and medical certifications.

Recommendation #63: Eliminate the requirement that Fire Inspectors must make the rank of Captain before becoming an inspector.

Recommendation #64: Modify the requirement that Fire Inspectors must maintain their firefighter and emergency medical certifications.

- 5. The position of Permit Pilot should be created to serve as the internal expert on the entirety of the development review process and serve as a resource to the development community.**

Throughout this study, it was clear that staff have varying degrees of understanding of the individual and collective roles in the development review and permitting processes. It appears that only a few, if any staff members have a complete knowledge and understanding of the current development processes across the various development review departments. To ensure the integrity of the entire development review process, increase customer service, and provide a single point of contact regarding development, a Permit Pilot position should be created.

The Permit Pilot would be tasked with understanding the entire development review and permitting process (from pre-application to final certificate of occupancy). This would include all major permitting processes, primarily in PRI, Planning, Fire, and Engineering. Second, this position would be knowledgeable of the development operations of other departments (e.g., KUB, Health Department, business licensing, etc.). Third, the Permit Pilot would serve as the first point of contact for individuals who have overarching questions related to the development process. This would include initial inquiries related to the overall development process, but also resolve issues from applicants. Ultimately, the Permit Pilot would serve as a liaison between the City and the development community.

Additional roles this position may be responsible for conducting periodic meetings with the development community to discuss current issues and opportunities for improving the City's processes. The Permit Pilot would work with appropriate staff to revise plan review, permitting and inspection processes as needed. Finally, the Permit Pilot would provide training to new staff on the overall permitting process and serve as an internal resource to all individuals involved in the development review and permitting processes.

Incorporating the position of Permit Pilot will provide a centralized staff member who is knowledgeable of the entire review and permitting process and will help ensure better quality control over this process. This is an important staff position, as they will interact with numerous departments. This position would report to the Chief Development Officer. The Permit Pilot would not have any supervisory duties but would primarily serve as a resource to the development community, City Council, and City staff regarding the development review process. The Permit Pilot is envisioned as a single position.

Recommendation #65: Create the position of Permit Pilot to provide oversight of the entire development review and permitting processes. The Permit Pilot would also serve as a liaison between the City and development community.

6. Planning staffing analysis.

The staffing needs for Planning is based on an average of the past three full years' workload and meeting the currently adopted performance goals outlined either internally or in the adopted ordinance. Currently, Planning staff may work on both City and Knox County applications and projects, but this analysis only analyzes the staffing needs for the City's workload.

The following table summarizes the historic workload and assigns an average amount of work required by application type.

Application Type	FY19-20	FY20-21	FY21-22	Average	Avg Processing Time (Hours)	Total Workload Hours
Address Assignment	9	8	3	6.7	0.2	1
Alley/Street Closure	14	13	10	12.3	5	62
Concept Plan	7	6	8	7.0	8	56
Development Plan	7	9	7	7.7	5	38
Downtown Design Review	38	33	35	35.3	5	177
Final Plat	224	238	239	233.7	4	935
Historic Zoning	106	107	65	92.7	8	741
Infill Housing	28	48	40	38.7	4	155
One Year Plan	16	15	20	17.0	2	34
Planned Development	3	2	2	2.3	40	93
Rezoning	38	43	45	42.0	10	420
Sector Plan	3	12	17	10.7	5	53
Slope Analysis	4	36	38	26.0	2	52
Street Name Change	1	1	0	0.7	1	1
TTCDA	5	3	12	6.7	5	33
Use On Review/Special Use	24	43	37	34.7	25	867
Total	527	617	578	574.0		3,718
Staff's Availability						1,560
Total Staff Needed						2.5

Based on the historic workload, a total of 2.5 planning staff are needed to process the number of applications that are official submitted. This number does not account for informal inquiries, preapplication meetings, internal meetings, etc. which takes up a significant amount of time in addition to other long range and special projects that the Department may be involved with. Based on historic workload and to continue to provide a high level of customer service, a total of five planning positions should be budgeted. These five Planning positions should range from Planning Technician to Principal Planner. Based on the complexity of the workload one Principal Planner, two Senior Planners, Planner, and Permit Tech is appropriate.

With the creation of a new City Planning Department, an additional Planning Director position should be budgeted to provide oversight of the department. Also, an Administrative Assistant position is required to provide administrative support to staff. Overall, a total of seven positions are needed to meet the current needs of the City of Knoxville Planning Department.

Recommendation #66: A total of seven positions are needed for the City Planning Department. This includes a Planning Director, five Planners (from Planning Tech to Senior/Principal Planner), and an Administrative Assistant.

7. Building plan review and inspections staffing analysis.

PRI is responsible for conducting building permit plan review and inspections for the City. Currently there are three teams that focus on plan review and inspections: Building and Plans Review, Plumbing / Mechanical / Gas, and Electrical. The following summarizes the current authorized staffing levels:

- Building and Plans Review: 1 Chief and 8 combination Building Inspectors
- Plumbing, Mechanical, and Gas: 1 Chief and 3 Plumbing/Mechanical Inspectors
- Electrical: 1 Senior Inspector and 2 Electrical Inspectors.

The Chief of Senior Electrical Inspector is responsible for oversight of the team and generally serves as the primary plan reviewer. Although some Inspectors are certified to conduct plan review.

The following table summarizes the historic number of permits issued.

Historic Workload				
Permit Type	2019	2020	2021	Average
Building	2,562	2,128	2,095	2,262
Electrical	3,719	4,040	3,947	3,902
Gas	971	797	806	858

Mechanical	1,048	793	936	926
Plumbing	1,779	1,357	1,472	1,536
Sign	716	426	399	514
Total Permits	10,795	9,541	9,655	9,997

The total number of permits issued has declined approximately 10% since 2019.

The total number of plan reviews completed was provided in aggregate for the past three years. The current software system was unable to break out the type of plan reviews (single family new construction, commercial renovation, etc.).

Plan Reviews Completed

	2019	2020	2021	Average
Plans Review Completed	1,604	1,768	2,058	1,810

Based on an average processing time of 1.75 hours per plan review, a total of 3,170 hours of work is associated with review building applications. This equates to approximately 1.8 plan reviewers. The current approach of utilizing a primary plan reviewer (Chief Plans Reviewer) and supplemented by using building inspectors to assist with plan review is appropriate. It would be beneficial to have a Deputy Chief Plans Reviewer to focus on providing plan review, meeting with applicants, and attending preapplication meetings. A Deputy position for the plan reviewer will create an additional employee classification tier for professional development and this position can also provide enhanced supervision of inspectors in the field.

Also, these teams are also responsible for conducting inspections. The following table summarizes the historic workload for inspectors.

Inspections Completed

Type	2019	2020	2021	Average
Building Permit Inspections	16,675	14,769	12,508	14,651
Electrical Permit Inspections	17,756	18,750	16,033	17,513
Gas Permit Inspections	4,334	4,144	4,007	4,162
Mechanical Permit Inspections	4,719	3,979	3,861	4,186
Plumbing Permit Inspections	8,383	7,813	7,129	7,775
Sign Permit Inspections	868	2,347	496	1,237
Total	52,735	51,802	44,034	49,524

Building inspections dropped approximately 16% between 2019 and 2021.

To determine the staffing needs, the following assumptions were used in the staffing analysis:

- Building Inspectors on average will conduct an average of 12 inspections per day.
- Electric, Plumbing/Mechanical Inspectors will conduct an average of 16 inspections per day. These inspections are generally less complex than electrical inspections and more can be completed in a day.
- Inspectors are available an average of 220 days or 1,760 hours per year. This accounts for holidays, vacation, sick leave, certification maintenance, training, etc.

The following table summarizes the inspector staffing calculation.

		Building	Electrical	MEP
Avg Annual Inspections		14,651	17,513	16,123
Average Inspections Per Day	÷	12	16	16
Total Workdays	=	1,221	1,095	1,008
Staff Availability (Days)	÷	220	220	220
Total # of Inspectors	=	5.5	5.0	4.6

Overall, a total of 16 inspectors are needed to cover the trades and conduct respective plan reviews. This is an increase in two authorized inspector positions (excluding chief inspectors). The Department is in the process of reorganization and encouraging the growth of staff by transitioning to combination inspectors. This will help provide enhanced flexibility for staff to properly handle the inspection workload.

The inspector staffing analysis does not take into account Chief Inspectors who are responsible for plan review and supervision of the inspection team. Currently, two Chief Inspector positions exist, and this is appropriate for a team of 16 inspectors, which results in a span of control of 1 supervisor per 8 inspector. Therefore, a total of 16 Inspectors and two Chief Inspectors is recommended for building inspections.

Recommendation #67: Create the position of Deputy Chief Building Plan Reviewer to assist with plans review and increased field oversight of the Building Inspectors.

Recommendation #68: A total of 20 positions are needed for Plans Review and Building Inspectors. This includes the Chief Plans Reviewer, Deputy Plans Reviewer, 2 Chief Inspectors, and 16 Inspectors. This is an increase in four authorized positions.

8. Development services team staffing analysis.

Development services staff provide support to the plan review, inspection, and zoning teams and is primarily responsible for assisting public inquiries, intake and routing of permit applications, collecting fees, issuing permits, and departmental administrative

support. The team is led by a Development Services Coordinator, five Development Services Technicians, an Administrative Technician, an Office Assistant III, and two Administrative Specialists.

The Office Assistant III primarily serves as the administrative support staff to PRI leadership. This role should remain.

The two Administrative Specialists provide support to the various PRI teams, including assisting with public notices and other duties associated with the Zoning Board of Appeals, other appointed boards, and committees. Two positions are appropriate for the recommended size of the Department.

The Development Services Coordinator oversees the entire team and serves as the KnoxPlans and Accela software administrators. A full time staff member dedicated to supporting these systems is necessarily.

The Development Services Technicians (DST) and Administrative Technician (former title) are primarily responsible for the intake, routing, and issuing permits. The following table summarizes the workload and staffing analysis for DSTs.

Avg Annual Permits Issued		9,997
Average Processing Time (Mins)	x	10
Total Workload (Hours)	=	1,666
Staff Availability (Days)	÷	225
Total # of Staff	=	7.3

A total of 7.3 DSTs are required to meet the historic workload. This is an increase in two additional positions. Based on the proposed changes in processes and technology improvements, it is recommended to continue to cross train all staff member in the Development Services team. This will result in the need for seven DSTs, two Administrative Specialist (cross-trained to provide DST support), and one Office Assistant III position. This is an increase in one authorized DST position.

Recommendation #69: The Development Services team should consist of the Development Services Coordinator, two Administrative Specialist who are cross trained to provide permitting support, one Office Assistant III and seven Development Services Technicians. This is an increase in one authorized Development Service Technician position.

9. Zoning Team analysis.

The Zoning Team is responsible for the review of building permit applications for compliance with the adopted zoning code. Zoning is comprised of a Chief Zoning Examiner and three Zoning Examiner.

Without a breakdown between the types of building permits it is difficult to determine the workload associated with the Zoning team. An average of 2,262 building permits were issued over the last three years. Averaging one hour per building permit for plan review, a total of 1.3 zoning reviewers are needed based on 80% availability. By implementing the recommendations related to hillside overlay and rezoning applications being facilitated by Zoning, then the current allocation of three Zoning Examiners is appropriate.

Recommendation #70: Maintain the current allocation of the Chief Zoning Examiner and three Zoning Examiners.

10. The Engineering – Stormwater plan review and inspection staffing analysis.

Engineering includes a total of 12 staff members who are responsible for reviewing applications and conducting field inspections. The following points summarizes the current staffing allocation:

- Engineering Planning Chief (oversees Plans Review and Inspection Team and Technical Services Team).
- Stormwater Water Engineering Manager (2)
- Professional Stormwater Engineer (2)
- Stormwater Engineering Technician III
- Stormwater Engineering Technician II
- Stormwater Engineering Technician I (4)
- Principal Secretary
- Engineering Manager II position – located under the Engineering Project Manager team but serves as the City's floodplain administrator.

This team is responsible for reviewing applications for compliance with stormwater, traffic / transportation, and site design standards and ordinances. This includes the review of site development permits, plats, building applications, floodplain certifications, special pollution abatement permits (SPAP), and other relevant development applications. Engineers primarily are tasked with performing a high level technical review, while Technicians are responsible for less technical review and primarily conducting field inspections.

The project team was provided with calendar year 2021 plan reviews conducted. A total of 2,884 reviews were completed, with 1,086 being re-reviews. Based on an average review time of two hours per review, a total of 5,768 hours of work is required. Based on average availability of 220 days per year, this equates to a total of 3.3 full time equivalents. This workload does not take into account additional work of assisting the public on inquiries and other workload not associated with a formal application. Nor does this analysis incorporate any of the new additional workload associated with serving as the lead on plat and TIA applications that is recommended to transition to Engineering.

It is assumed that the two Professional Stormwater Engineers perform the bulk of the reviews, with support from the Stormwater Engineering III position. Based on the current workload and additional changes, it is recommended to add two additional Stormwater Engineering positions. These two additional positions will primarily be assigned to conduct plan review and with additional project management support for the Department as the review and update the engineering standards and ordinances in the near future.

A minimum of four stormwater inspectors are required per the City's NPDES permit. Between July 1, 2021, and June 30, 2022, a total of 10,330 stormwater inspections were completed. This is an average of 861 inspections per month.

Based on an average of 40 minutes per each inspection, there is a total of 6,890 hours of workload per year. With an average of 220 workdays (1,760 hours) per year, a total of 3.9 stormwater inspectors are needed. The current allocation of four Stormwater Inspections is appropriate.

Recommendation #71: A total of four Professional Stormwater Engineering positions are needed to process the current workload. This is an increase of two authorized position.

Recommendation #72: Maintain the current allocation of four Stormwater Engineering Technician II positions.

11. Workload for Fire Inspectors was not provided to the project team but the current approach to assigning inspectors to districts is best practice.

Fire Inspectors are tasked with conducting plan review, new construction inspections, and perform annual fire inspections. Currently, there are a total of eight Inspectors positions who are each assigned a geographic district in the City. The district approach is considered best practice and should be continued, with one modification. There are a total of eight districts and eight inspectors. If staff are on leave or there is a vacancy, then there is no backup to take the workload in that district. This requires other inspectors to cover the district in addition to their own district. The lack of relief can

negatively impact staff's ability to work efficiently. It is recommended to perform a spatial analysis to ensure that all districts have an equal workload (mostly focused on annual inspections) and then reduce the number of districts to seven. Freeing up one inspector who can provide additional support for plan review and backfill inspectors as needed. Considering this new position will focus on plan review and inspector relief, this position should be reclassified as a Deputy Fire Marshall. This change in classification will provide additional administrative oversight of the team and provide greater career progression in the Fire Marshal's Office. This is especially important when the Captain requirement is discontinued.

It is recommended to evaluate the current annual inspection workload distribution and reduce the number of districts by one. Freeing up one inspector position to be transition to a Deputy Fire Marshall and provide enhanced plan review support and complete inspection as needed when staff are on leave.

Recommendation #73: Conduct a workload analysis for Fire Inspectors and reduce the number of inspector districts to seven. This will allow one Fire Inspector position to be freed up to conduct plan review and assist with inspections as needed.

Recommendation #74: Create the position of Deputy Fire Marshal who primarily conducts plan review, assists with inspections, and provide administrative support.

12. Knoxville County Health Department and Knoxville Utilities Board development staffing needs were not analyzed.

Knoxville County Health Department and KUB staffing needs related to development review functions were not analyzed. Staff in these two agencies who are assigned to review development applications and conduct inspections also have other primary duties that are not directly related to development activities. Therefore, it is not appropriate to assess their staffing needs without evaluating their entire workload and business practices. This analysis was not included in the current scope of work.

Appendix A: Current State Assessment

1 INTRODUCTION

This current state assessment outlines the organization, structure, and staffing of the development review processes in the City of Knoxville. This document includes the following City departments and agencies: Plans Review and Inspection, Engineering, Fire Marshal, Knoxville-Knox County Planning, Knox County Health Department – Environmental Health Division, and Knoxville Utilities Board. The information contained in the profile has been developed through a series of interviews conducted with management and staff from the various departments.

The primary objective of the current state assessment is to document the current approaches utilized by the various development review entities. Consequently, no analysis or findings are contained in this document. Instead, this interim deliverable focuses on outlining the following items:

- The organizational structure of the various operations within the project scope.
- The roles, and service delivery responsibilities for each department/entity.
- The organizational composition and allocation of staff by position classification assigned to the development review, permitting, and inspection processes.
- Identification of primary applications processed by each functional group.

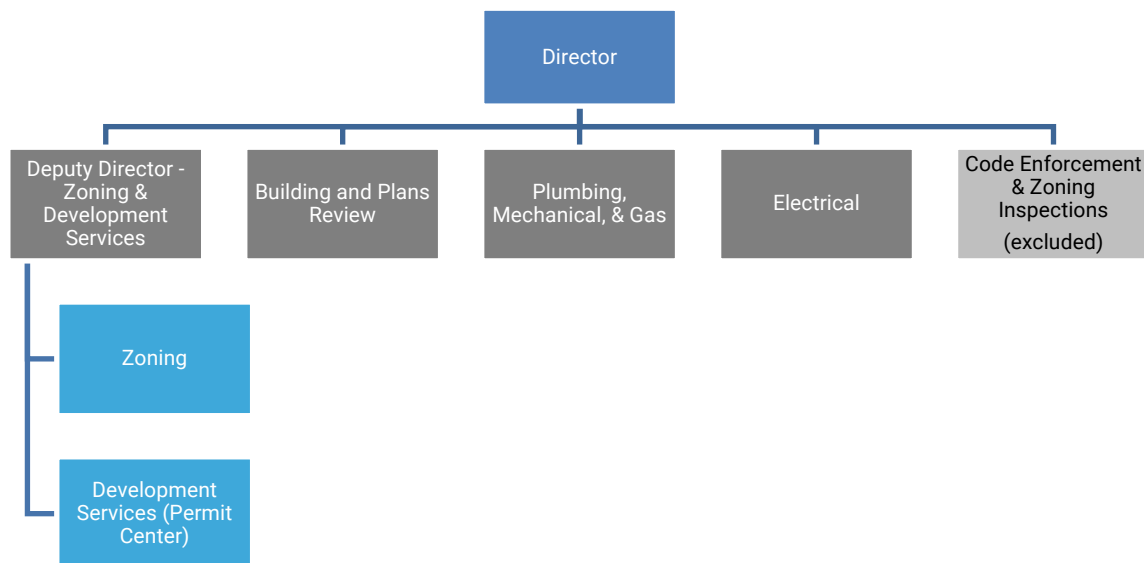
The current state assessment will be utilized later in the process to compare recommendations developed for the final report against the current state and demonstrate the impact of the proposed changes.

2. PLANS REVIEW AND INSPECTIONS

The Plans Review and Inspections Department is responsible for the review, permitting, licensing, and inspection of all construction and development projects within the City. It enforces and interprets all construction-related codes and zoning ordinances for the protection of health, safety, and public welfare. This department serves as the primary facilitator of the development review, permitting, and inspection processes for the City of Knoxville.

1. ORGANIZATIONAL STRUCTURE AND CURRENT STAFFING RESOURCES

The Plans Review and Inspections Department has multiple divisions as outlined in the following organizational chart.



The following table details the major functional teams and staffing allocations for the division, including the number of staff by position title by group.

Summary of Duties and Resource Allocation

Administration	
The division is led by the Director who also serves as the Chief Building Official for the City. The Director is supplemented by a Deputy Director who oversees the Zoning and Development Services (permitting) teams.	
<u>Position Title:</u>	<u>Number of Positions:</u>
Director– Plans Review and Building Inspections	1
Deputy Director – Zoning and Development Services	1
Total	2

Zoning	
Zoning is responsible for review of development applications for compliance with the adopted land use and zoning ordinances in the City and makes interpretations of the zoning code. This team works closely with Knoxville-Knox County Planning to ensure compliance with adopted zoning ordinance and other land use requirements/conditions that are included with previous planning applications.	
<u>Position Title:</u>	<u>Number of Positions</u>
Zoning Chief	1 (Vacant)
Zoning Examiner	3 (1 Vacant)
Total	4
Development Services	
The Development Services team is responsible for the intake and routing of all building and zoning applications. The team is also responsible for the maintenance of the City's various permitting software programs in conjunction with City Information Technology staff. Development Services staff issue a building permit once the application has been approved. The team also provides administrative support to the various teams.	
<u>Position Title</u>	<u>Number of Positions</u>
Development Services Coordinator	1
Development Services Technician	5
Administrative Technician	1
Office Assistant III	1
Administrative Specialist	2
Total	10
Building and Plans Review	
Team is responsible for conducting plan review and inspections for all structure and building related codes that do not fall under the specific trades. Plan review primarily falls to the Chief and a couple of the building inspectors.	
<u>Position Title</u>	<u>Number of Positions</u>
Building and Plans Review Chief	1
Combination Building Inspector	8
Total	9
Plumbing, Mechanical, and Gas	
Team is responsible for the completion of plan review and conducting inspections related to plumbing, mechanical, and gas portions of the adopted building code. Plan review is primarily completed by the Chief.	
<u>Position Title</u>	<u>Number of Positions</u>
Plumbing, Mech., and Gas Chief	1
Plumbing/Mechanical Inspector	3
Total	4
Electrical	
The Electrical Team is tasked with conducting plan review and inspections related to the adopted electrical code. Plan review is conducted by the Senior Inspectors and the Building and Plan Review Chief.	
<u>Position Title</u>	<u>Number of Positions</u>
Electrical Inspector Sr.	2
Electrical Inspector	2
Total	4

2. Role in the Development Process

The following table highlights the specific development-related tasks that this division has authority over.

Permit/Item	Summary of Tasks
Customer Support	Responsible for addressing customer inquiries related to the development process. Assists with the application/review/permitting/inspection processes for both customers and internal staff. Processes records request and performs associated research concerning the history of property use, permitting, and violations.
Licensing and Registrations	Responsible for processing, fee collection, and the maintaining of annual licensing for mechanical, electrical and plumbing contractors, low-voltage electrical installers, and mechanical, electrical and plumbing installers. Licensing is primarily processed by the Administrative Specialist with assistance from the DS Coordinator and DS Technicians. Responsible for processing and maintaining registrations for State of TN licensed building contractors, unlicensed contractors, and homeowner contractors. Registrations are primarily processed by DS Technicians.
Project Review	Responsible for reviewing all building and development applications for compliance with the adopted building and zoning ordinances. Internal goal of conducting the plan review of commercial projects within 10 business days and residential projects within 4 business days.
Permit Issuance	Responsible for the issuance of project permits that have completed the project review process; the routing and issuance of project permits where the scope of work does not require completion of a full plans review; and issuance of trade permits whether associated with a permitted building project or general MEP system maintenance. Internal goal of permit issuance of 0-2 business days from application receipt/project approval.
ARC Review	Under the guidance of the CBO or his designee (Zoning Chief), special review is performed by a committee comprised of representatives from Civil Engineering, the Fire Department, KUB, Planning, Parks & Recreation, Public Services, Stormwater Engineering, and Traffic Engineering. ARC review is required for projects located in the CU Cumberland Form District and the SW South Waterfront Form District. Under the guidance of the CBO or his designee, the ARC committee also makes recommendations on Alternative Landscape Design reviews for projects that do not comply with the ordinance requirements associated with commercial landscape designs. Internal goal of conducting ARC review/providing results within 10 business days.
Inspections	Conducts various inspections for development and construction activity. Also conducts inspections on non-permitted activity as necessary. Inspections received by 2 p.m. are conducted the next business days.

Appeals Boards	<p>Responsible for processing applications and preparing submittal packages for the various appeals boards (Board of Zoning Appeals, Public Hearing Officer, and Construction Appeals Board). Maintains a detailed record of all proceedings including the decisions, reasoning, and the vote/absence of board members.</p> <p>Meetings are guided by the CBO or his designee (Administrative Specialist). Depending on the case, input is provided to the Board by one or more of the division Chiefs, the Deputy Director, or the CBO.</p>
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3. Technology

The Plans Review and Inspections Department is in the process of updating their software systems. The following table summarizes the primary software systems that will be utilized by the Department once they are fully implemented.

System	Summary
Accela	<p>Accela will serve as the City's primary database and permitting software solution. The system will store all applications for services and building/trade permits. Accela will replace the current Permits Plus permitting software system.</p> <p>Plans Review and Inspection, Engineering, Fire Marshal, and Knoxville Utilities Board have access to this software system.</p>
Knox Plans / ProjectDox	<p>This software solution serves as the City's plan review software. It allows the public to submit electronic plans and construction details for review. Plan reviewers will review the provided materials, amend/mark-up submittals as necessary, and provide comments through the system. The system is linked to Accela, allowing for review status to be viewed in both programs. Plans Review and Inspection, Engineering, Fire Marshal, Knoxville-Knox County Planning, and Knoxville Utilities Board have access to this software system.</p>
OpenCities	<p>Website development software designed to work in conjunction with the OpenForms platform. The software will provide a more intuitive web experience for the citizen/end-user and will give users three different options for making application:</p> <ol style="list-style-type: none"> 1. Direct access to specific service and permit applications. 2. Access to an interactive process (Permit Wizard) that will result a list of required permits for a project based on customer inputs. 3. The option to navigate through a series of webpages that provide descriptions, details, and requirements associated with the different project or permit types to allow the customer to determine what permit request is appropriate. <p>This is an interactive tool to help applicants compile the appropriate information prior to application submittal.</p>
OpenForms	<p>OpenForms is a web-based application software that allows for the ability to develop interactive permit and services applications. These applications allow the user the ability to answer a short series of logic-based questions about the scope of their project or make an application for proposed work. The user responses are imported into Accela as a project or permit application.</p>

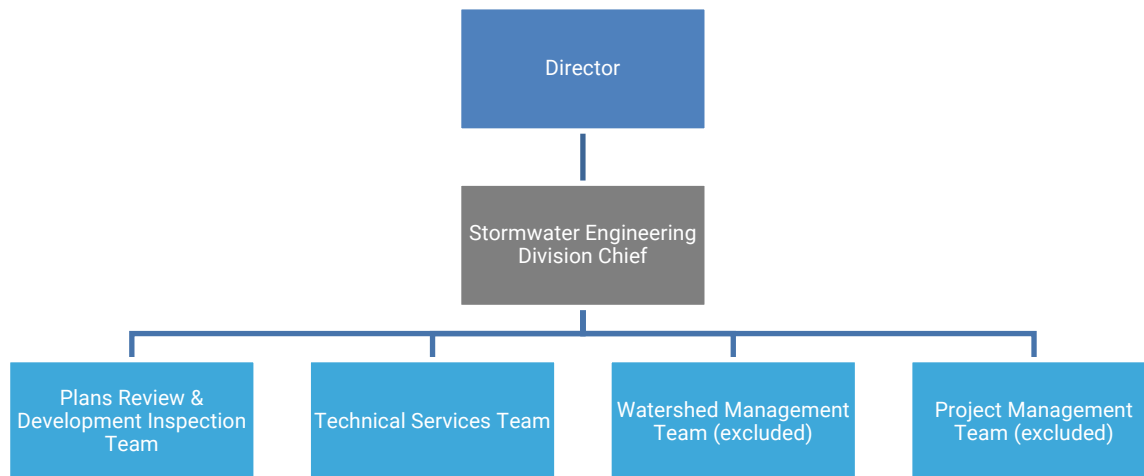
Selectron/Insight	This software suite serves as the scheduling and resulting solution for inspections. Citizens use an app to schedule inspections and monitor project progress. The software collects inspection requests and performs the initial sort of daily inspections, providing the inspection distribution via list view and map view to the supervisors. Supervisors will have the ability to quickly rearrange, balance distribution, and monitor progress using their interface. The inspector's interface will provide the ability for the inspector to lay out routes, exchange inspections, result inspections, and notify contractors/citizens of project status.
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3. ENGINEERING – STORMWATER ENGINEERING DIVISION

Knoxville's Engineering Department is responsible for development review for site development, stormwater, transportation, and other site improvements. Engineering teams involved in the development process includes Plans Review and Development Inspection Team, Technical Services Team, and Transportation Division. The Division liaisons with TDOT, Knox County Engineering, Knoxville-Knox County Planning, and Engineering – Transportation Division.

1. ORGANIZATIONAL STRUCTURE AND CURRENT STAFFING RESOURCES

The Engineering Department – Stormwater Services Division has multiple divisions as outlined in the following organizational chart.



2. CURRENT STAFFING RESOURCES

The following table details the major functional areas and staffing allocations for the Engineering Department, including the number of staff by position title for each major division or unit.

Summary of Duties and Resource Allocation

Engineering Plans Review and inspections Team

This team is responsible for reviewing applications for compliance with stormwater, traffic / transportation, and site design standards and ordinances. This includes the review of site development permits, plats, building applications, floodplain certifications, special pollution abatement permits (SPAP), and other relevant development applications. Engineers primarily are tasked with performing a high level technical review, while Technicians are responsible for less technical review and primarily conducting field inspections. *Note: Under the Project Management Team is one Engineering Manager II positions that serves as the City's floodplain enforcement administrator.*

<u>Position Title:</u>	<u>Number of Positions:</u>
Engineering Planning Chief	1 (Oversees entire Stormwater Division)
Stormwater Engineer Manager	2
Professional Stormwater Engineer	2
Stormwater Engineering Technician III	1
Stormwater Engineering Technician II	2
Stormwater Engineering Technician I	3 (2 Vacant)
Principal Secretary	1
Total	12
Engineering Manager II	1 (Assigned to Project Management Team)
Technical Services Team	
The Technical Services Team is primarily involved in the development process by conducting plat review. The team is tasked with maintaining appropriate GIS layers. The two Stormwater Engineering Technician positions are primarily responsible for plat reviews for Engineering.	
<u>Position Title</u>	<u>Number of Positions</u>
Technical Services Administrator	1
Geographic Information Coordinator	1
Geographic Info. Analyst	1
Stormwater Engineering Tech III	1
Licensed Land Surveyor	1 (Vacant)
Technical Services Technician	2
Total	7

2. Role in the Development Review Process

The following table highlights the specific development-related tasks that this division has authority over.

Permit/Item	Summary of Role / Responsibility
Building	Secondary reviewer of building applications for compliance with site and grading requirements.
Stormwater	Primary reviewer for compliance to all stormwater, NPDES, and MS4 ordinances and requirements.
Floodplain	Reviews applications for floodplain compliance.
Streets & Sidewalks	Review building and other applications for conformance to the city's transportation regulations, including reviewing traffic impact analysis (TIA).
Site Plan / Grading	Standalone permit for site plan and grading ordinance requirements. Application is submitted and issued through Plans Review and Inspection.
Platting	Review Plat applications submitted through Planning for site development, transportation, stormwater, and floodplain compliance.
Special Pollution Abatement Permit (SPAP)	Review application for compliance with NPDES permit for potential pollutants for certain size properties and specific uses. May also include components related to fats, oils, and grease (FOG) systems.

4. FIRE MARSHAL

The Fire Marshal's Office in the Fire Prevention Bureau performs plans review and/or inspections for fire sprinklers, fire alarms, fuel tanks, firework permits, and blasting. The division is led by an Assistant Chief. Inspectors perform plan review and inspections in the field. These positions are staffed by veteran members of the Fire Department, who must maintain their fire fighter certifications.

1. CURRENT STAFFING RESOURCES

The following table details the major functional areas and staffing allocations for the division, including the number of staff.

Summary of Duties and Resource Allocation

Administration & Inspections	
Fire Inspectors perform plan review and on-site inspections. Each inspector specializes in a specific area of review (sprinklers, alarms, fuel tanks, fireworks, etc.). Inspectors are assigned to one of eight geographic areas throughout the City and perform both new construction and annual inspections per the adopted fire code. The annual inspections component is excluded from this study.	
Position Title:	Number of Positions:
Assistant Chief/Fire Marshal	1
Fire Inspector	8 (1 vacant)
Administrative Assistant	2
Total	11

2. Role in the Development Review Process

The following table highlights the specific development-related tasks that this division has authority over.

Permit/Item	Summary of Role / Responsibility
Fire Alarms	Performs plans review and inspections for fire alarms. Applications may be submitted through the Plans Review and Inspections Department or directly to the Fire Marshal's Office.
Fire Sprinklers	Performs plans review and inspections. Applications may be submitted through the Plans Review and Inspections Department or directly to the Fire Marshal's Office.
Fuel Tanks	Performs plans review and inspections. Applications are submitted directly to the Fire Marshal's Office.
Fireworks Permit	Approves the use of fireworks for large events. Applications are submitted directly to the Fire Marshal's Office.
Blasting Permit	Approves the use of explosive materials (ex. Quarries) and is present during the use of said explosives. Applications are submitted directly to the Fire Marshal's Office.

5. KNOXVILLE – KNOX COUNTY PLANNING

Knoxville-Knox County Planning is responsible for comprehensive county-wide planning and the creation and partial administration of zoning and land subdivision regulations. The agency exists as a City/County partnership. Knoxville-Knox County Planning has three divisions – Planning Services, Transportation Planning, and Information Services.

1. CURRENT STAFFING RESOURCES

The following table details the major functional areas and staffing allocations for the agency, including the number of staff by position title for each major division or unit.

Summary of Duties and Resource Allocation

Administration	
The Executive Director is appointed by the City and County Mayors to oversee the work program, budget, and staff activities. The Executive Director serves as technical advisor to the Planning Commission, County Commission, and the City Council.	
<u>Position Title:</u>	<u>Number of Positions:</u>
Executive Director	1
Senior. Admin Assistant	1
Finance Officer	1
Total	3
Planning Services	
The Planning Services Division is responsible for processing a variety of zoning and land use applications. Staff are also responsible for the development of future land use plans and policies to inform the work of the agency. Staff serve as liaisons to the Planning Commission for all planning, some zoning, and development related applications and initiatives. All staff provide services for both the City of Knoxville and Knox County.	
<u>Position Title:</u>	<u>Number of Positions:</u>
Planning Manager	1 (Vacant)
PS Coordinator/Principal Planner	1
Principal Planner	2
Senior Planner	2
Planner	2 (1 Vacant)
Planning Tech	2 (1 Vacant)
Sr. Admin Assistant	1
Admin. Assistant II	1
GIS Specialist	2
Total	12
Transportation Planning	
This Division acts as staff to the Knoxville Regional Transportation Planning Organization (TPO). The TPO serves multiple counties and is responsible for developing a 20 year long range plan and a transportation improvement program. The Division is also responsible for providing review of transportation impacts on a wide variety of planning and development applications.	

<u>Position Title</u>	<u>Number of Positions</u>
Trans. Planning Coord./TPO Director	1
Principal Planner/FTA DBE Liaison	1
Principal Planner	1
Senior Planner	1
Senior Transportation Engineer	1
Transportation Engineer	1 (Vacant)
Smart Trips Program Coordinator	1
Total	7
Information Services	
This Division provides the website, mapping, graphic design, and reference services for the agency.	
<u>Position Title</u>	<u>Number of Positions</u>
Information Services Manager	1
Communications and Outreach Coord.	1
Research Associate	1
GIS Specialist	2
Sr. Graphic Designer/Webmaster	1
Graphic Designer	1
Total	7

2. Role in the Development Review Process

The following table highlights the primary development-related permits and activities that this entity has authority over.

<u>Permit/Item</u>	<u>Summary of Role / Responsibility</u>
Addressing	Issues addresses for the City and County. Also processes street name changes.
Design Review Board	Responsible for reviewing applications for Downtown Design Guidelines and Infill Housing applications. Issues certificate of appropriateness for applications.
Tennessee Technology Corridor Development Authority	Provides staff to the Tennessee Technology Corridor Development Authority (TTCDA). Staff review applications and provide recommendations to the TTCDA Board of Commissioners.
Hillside Overlay	Review building permit applications in the hillside protection overlay areas for exceptions and applications for determination of compliance with adopted ordinance. Issues certificate of appropriateness for the application.
Historic Zoning	Applications for compliance with historic overlay districts. Application may go to Historic Zoning Commission for review and decision. Issues certificate of appropriateness for the application.
Plats	Applications that focus on the subdivision of lands. This includes concept plans and final plats.
Rezoning / Plan Amendments	Applications for the reclassification of the zoning designation of a particular parcel. Application is reviewed by staff and goes to the Planning Commission for recommendation and to City Council for a final decision.
EN District Reviews	Responsible for reviewing permit applications for new constructions, additions, and alterations in the EN District.
RN-4 Reviews	Responsible for reviewing permit applications for new construction, additions, and alterations for townhouses and multi-family dwellings.

Permit/Item	Summary of Role / Responsibility
DK-E Sub-District Reviews	Responsible for new construction, additions, and alterations in the DK-E Sub-District.
Pocket Neighborhoods	Responsible for review of pocket neighborhoods in the RN-4, RN-5, RN-6, and RN-7 Districts.
ROW / Street Closure	Application to abandon a previously dedicated right-of-way or street. Application goes to Planning Commission for recommendation and City Council for decision.

6. KNOX COUNTY HEALTH DEPARTMENT – ENVIRONMENTAL HEALTH DIVISION

Knox County Health Department has a variety of responsibilities and includes two development related functions within the Environmental Health Division. This division is responsible for plan review and inspections of for septic systems and food service establishments along with other activities not included in this study.

1. CURRENT STAFFING RESOURCES

The following table details the major functional areas and staffing allocations for the Environmental Health Division, including the number of staff by position title for each major division or unit.

Summary of Duties and Resource Allocation

Food	
Colloquially known as ‘The Food Division’ – this team handles the permit review and inspections of restaurants, daycares, swimming pools, tattoo parlors, and more. The team is responsible for both development and inspections. The involvement in the development process includes the review, permitting, and inspection of food services establishments for compliance with adopted state standards. Staff also complete required annual/semi-annual food service health inspections, which is excluded from the scope of this study.	
<u>Position Title:</u>	<u>Number of Positions:</u>
Food Program Manager	1
EH Specialist/Food	10
Office Manager	1
Admin Assistant	1
Total	13
Groundwater	
The Groundwater division is responsible for reviewing applications for septic tanks, inspecting sites for septic tanks and drain fields, design septic systems, and inspects the installation of septic systems. Staff will also conduct inspections for septic systems that have failed.	
<u>Position Title:</u>	<u>Number of Positions:</u>
Groundwater Program Manager	1
EH Specialist/Groundwater	3
Executive Secretary	1
Total	5

2. Role in the Development Review Process

The following table highlights the specific development-related tasks that the Environmental Health Division is responsible for performing.

Permit	Summary of Role / Responsibility
Food Establishment	Reviews applications for both permanent and mobile food service establishments. Areas of focus are food preparation areas, storage, food protection, hygiene, plumbing/backflow, and solid waste compliance.
Septic	Review applications and design septic systems for private development in areas of the City where public sewer is not available.

7. KNOXVILLE UTILITIES BOARD

The Knoxville Utilities Board (KUB) provides water, wastewater/ sanitary sewer, gas, electric, and (soon) internet services to Knoxville residents. It is governed by a seven-member board appointed by the Mayor and confirmed by City Council. They act as the final authority for public utility plans, performing their own review and inspections.

1. CURRENT STAFFING RESOURCES

The following table details the major functional areas and staffing allocations for KUB staff involved in the development process. Staff are part of the Utility Plan Review Team.

Summary of Duties and Resource Allocation

Utility Plan Review	
The primary role of the Utility Plan Review team is the review of various development applications for compliance with adopted utility related codes, ordinances, and standards. Review applications may be submitted through Plans Review and Inspections or directly to KUB. Staff are also responsible for the design of certain gas and electric utility infrastructure.	
<u>Position Title:</u>	<u>Number of Positions:</u>
Manager	1
Engineers	3
Inspectors	4
Total	8

2. Role in the Development Review Process

The following table highlights the specific development-related tasks that this division has authority over.

Permit/Item	Summary of Role / Responsibility
Building Permit	Receives notification from Knox Plans to review building application for wastewater utility standards. Provides comments in Knox Plans and Accela/Permits Plus.
Plat	Receives plat applications from Planning, reviews for utility access and signs approved/final plats.
Water/Wastewater	Application submitted directly to KUB. Engineers review for compliance with adopted standards.
Gas / Electrical	KUB Engineers will design public gas and electrical distribution systems for applicants for new projects.

Appendix B: Stakeholder Feedback Analysis

Stakeholder Survey Analysis

As part of the Matrix Consulting Group's study of Knoxville, TN's development review process, a survey of the City's past customers was conducted. The survey was hosted online on SurveyMonkey from June 16 to July 4, 2022. The project team sent email invitations to 3,950 former customers and received a total of 426 responses for a response rate of 10.7%.

Survey participants were asked a series of multiple choice and open-ended responses. For the multiple-choice portion, respondents were asked to indicate their level of agreement using either "Strongly Agree", "Agree", "Neutral", "Disagree", or "Strongly Disagree".

1. Key Findings

Later sections discuss the survey responses in more depth, however the key takeaways from the survey are summarized in the following bullet points:

- **Staff highlights:** Respondents were generally content with most of the staff they interacted with during the development review process. Building inspectors and KUB reviewers were viewed as being knowledgeable and willing to help.
- **Interdepartmental Collaboration:** Customers noted a lack of communication between review agencies. This issue was highlighted most prominently in the open-response sections of the survey.
- **Website:** While the online submittal process was largely well-received (see sections 9 and 10), some customers were less likely to agree with statements related to the availability of information online. Some open-response comments noted that it is sometimes hard to find educational materials related to the development process.
- **Differences by Department/Function:** Engineering received some of the lowest agreement rates across all functions involved in the development process. Conversely, KUB received some of the most positive feedback.
- **Process:** Statements related to the timeliness of the development review process generally received lower levels of agreement than others. Open-response statements further corroborated this, with many of the suggested process improvements being a "streamlining of the process."

2. Respondent Demographics

While the survey was anonymous, respondents were asked a series of questions to help provide context for analysis. Participants were asked for their role in interacting with the City, the functions they commonly interact with, the frequency of their interactions, and the last time they did business with the City.

(1) What is your role in interacting with the City of Knoxville's development review, permitting, and inspection process? Check all that apply.

Role	Number of Respondents	Percentage of Respondents
Architect	58	13.6%
Attorney	0	0.0%
Builder	79	18.5%
Business Owner	88	20.7%
Contractor	202	47.4%
Engineer	27	6.3%
Homeowner/Landowner/Tenant	117	27.5%
Landscape Architect	1	0.2%
Lender	0	0.0%
Real Estate Professional	30	7.0%
Planner	8	1.9%
Property Developer	69	16.2%
Other (please specify)	13	3.1%

Those that selected "Other" identified as the following roles:

- Project Management
- Homeowner (2)
- Permitting Manager
- SCHEDULER
- Registered Land Surveyor
- Retired
- Residential Designer
- Executive Director of a Museum
- ELECTRICAL PERMITS FOR ALARMS
- Hardscapes
- Landlord
- Tecom

The survey received no responses from Lenders and Attorneys, and only received one response from a Landscape Architect.

(2) Which of these functions do you commonly interact with? Check all that apply.

The next questions asked respondents to identify which functions they most commonly interact with.

Function/Department	Number of Respondents	Percentage of Respondents
Building Plans Review and Permits	366	85.9%
Building Inspections	295	69.3%
Engineering / Civil / Site Design	137	32.2%
Fire	94	22.1%
Knoxville Utilities Board (KUB)	190	44.6%
Planning (Knoxville / Knox Planning)	184	43.2%

An overwhelming majority of respondents had interacted with building plan review, permitting, and inspection processes. Respondents had a broad experience interacting with the various entities involved in the development review process.

(3) How frequently do you interact with the City's development process?

Response	Number of Respondents	Percentage of Respondents
Several times per month	140	32.9%
Several times per year	135	31.7%
Once or twice per year	69	16.2%
Less than once or twice a year	82	19.3%

The majority of respondents indicated they interact with the City's development process several times per month or several times per year. Indicating that respondents are frequent customers of the City.

(4) When was your most recent interaction with the City?

Response	Number of Respondents	Percentage of Respondents
Within the last 12 months.	379	89.0%
Greater than 12 months ago.	47	11.0%

Similar to the question regarding frequency of interaction, 89% of respondents had interacted with the City in the past year.

3. Multiple-Choice Responses – Knoxville/Knox County Planning

The following table shows a variety of statements aimed at understanding the respondent's experience interacting with Knoxville/Knox County's Planning Agency. This section received input from 313 participants:

#	Statement	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
1	I clearly understood what approvals / permits were processed by Knoxville - Knox County Planning.	62.7%	12.9%	24.5%
2	I clearly understood what information and documentation I needed to include in my application.	55.3%	15.3%	29.4%
3	I clearly understood the timeline associated with the review process for my project.	46.2%	17.8%	36.0%
4	I clearly understood who had the decision-making authority (Staff, Planning Commission, City Council) for my application.	44.7%	18.0%	37.3%
5	If my application was reviewed and approved/denied by staff, I clearly understood what Department made the decision (e.g., Knox Planning, Plans Review and Inspection, etc.).	56.0%	15.2%	28.8%
6	I clearly understood what fees would be required for my project.	66.5%	18.4%	15.1%
7	Staff was helpful in explaining what I needed to do and how to accomplish it.	48.6%	18.1%	33.3%
8	Knox Planning website had the information I needed to prepare a complete application.	41.2%	27.6%	31.3%
9	The City of Knoxville's website clearly indicated what applications required review and approval from Knox Planning.	38.6%	24.5%	36.9%
10	The initial review of my application was complete and comprehensive.	54.3%	18.0%	27.8%
11	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	47.7%	22.2%	30.0%
12	The comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	45.9%	30.2%	24.0%
13	Staff provided good customer service throughout the process.	51.8%	16.3%	31.8%
14	The time it took to process my application was appropriate.	38.2%	20.3%	41.5%
15	The current land use and zoning code aligns with current development trends.	34.8%	32.6%	32.6%
16	I clearly understand the role of Knox Planning in the development process.	50.6%	24.3%	25.1%

(1) Analysis

Overall, customer sentiment appears to be mixed. Average agreement across all statements was 48.9%, while disagreement averaged 30.3%. The average neutral response was 20.7%. While agreement outweighs disagreement for all but one statement, none of these statements received more than 19.2% “strong agreement”.

Some of Planning’s stronger areas highlighted by this section included the customer’s familiarity with the function’s involvement in the development process (#1), their understanding of what documentation is required for a planning application (#2), the transparency in the review process (#5), and the clarity of the fee structure (#6). These statements all received agreement levels exceeding 55%.

Using a threshold of 35% disagreement or more, some potential problem areas involve the clarity of the timeline provided to customers (#3), how well customers understand who has authority over their application (#4), the website’s ability to educate customers on Planning’s role in the process (#9), and the timeliness of the process overall (#14). Statement #14 received the highest level of disagreement across all statements (41.5%).

Two statements received neutral response rates of 30% or more, statements #12 and #15. The latter related to how well the current code aligns with development trends and received a near even split across agreement/neutral/disagreement.

(2) Differences by Customer Type

To better understand the results, the project team compared results based on how each participant identified (Builder, Homeowner, Architect, etc.). Results based on customer type generally tracked with overall responses as shown above, with some exceptions. The following bullets summarize some key findings from this analysis:

- On average, Architects, Contractors, and Engineers had a higher level of agreement than other groups, with each having an overall agreement rate of 50% or more.
- Interestingly, Engineers were also highly neutral on how well staff helped them through the process (#7) with a rate of 46.7%. None of the other customer groups exceeded a neutral response rate of 20% for this statement
- Architects were much more positive than other groups, with some of the highest levels of agreement compared to others. They had agreement levels exceeding 65% for statements #1, #5, #6, #10, and #13.
- Homeowners generally had a lower agreement/higher disagreement than others. This is not surprising, as this group is more likely to lack familiarity with the process. This group had a particularly negative response to statements related to the City’s website. 43.7% stated that the website did not have the information the

needed to prepare a complete application (#8). 52.1% noted that the website did not clearly indicate which applications required approval from Planning (#9).

- Business owners also had lower levels of agreement compared to others.
- Builders, Business Owners, Real Estate Professionals, and Property Developers were the most concerned with the timeliness of the application process (#14), with all having disagreement levels of 50% or more for this statement.
- Engineers, Real Estate Professionals, and Property Designers were much more likely to take issue with how current land use and zoning code aligns with development trends (#15). These groups had the highest levels of disagreement for this statement, all exceeding 50%.

(3) Open Responses

The section also gave participants an opportunity to provide written comments directed towards Planning functions. The following bullets summarize some of the information received from respondents:

- **Customer Service:** Several positive comments specifically dealt with the quality of the customer service received by applicants.
- **Consistency:** Eight negative comments remarked on the lack of consistency in the process. A common complaint was receiving conflicting information from different members of staff.
- **City vs. County:** Four comments noted the disparity between working with the City vs. Knox County. These respondents felt as though working with the County was easier overall.
- **Customer Education/Understanding of the Process:** 18 respondents indicated that they perceived the Planning process as confusing and inefficient. Several of these respondents also remarked on how lengthy the process is, with some comparing the timeline to other municipalities they have previously worked in.
- **Interdepartmental Collaboration:** Multiple participants would like to see better communication between entities involved in the review process.

4. Multiple-Choice Responses – City Plans Review and Inspections

The next section deals with Plans Review and Inspections. Respondents were provided with two sets of survey questions, one for each function.

(1) Survey Questions - Plans Review and Permitting

285 survey participants provided input on the building application and permitting function. The following table shows responses overall:

#	Statement	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
1	I clearly understand the role of Plans Review and Inspections in the development process.	74.8%	11.0%	14.2%
2	I clearly understood what approvals / permits would be required for my project.	63.5%	16.0%	20.6%
3	I clearly understood what applications/permits that Plans Review and Inspections is responsible for processing.	63.9%	18.9%	17.1%
4	I clearly understood what information and documentation I needed to include in my application.	55.5%	20.6%	23.8%
5	I clearly understood the timeline associated with the review and approval process for my project.	43.3%	21.6%	35.1%
6	I clearly understood the steps of the review process for my project.	49.1%	21.4%	29.5%
7	I clearly understood what fees would be required for my project.	63.3%	20.5%	16.3%
8	The City's website had the information I needed to prepare a complete application.	45.7%	23.9%	30.4%
9	Submitting my application through the online portal was efficient.	47.8%	21.6%	30.6%
10	The initial review of my building application was complete and comprehensive.	55.6%	19.0%	25.5%
11	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	46.1%	22.1%	31.8%
12	The comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	51.1%	24.8%	24.1%
13	Staff was helpful in explaining what I needed to do and how to accomplish it.	50.2%	19.2%	30.6%
14	Staff provided good customer service throughout the process.	51.3%	18.2%	30.6%
15	The time it took to process my building permit application was appropriate.	35.7%	18.6%	45.7%
16	The current building code aligns with the type of development occurring in Knoxville.	42.2%	31.8%	26.0%

(2) Analysis – Plans Review

Average agreement for all responses in this section was 52.4%, with 27% average disagreement and 20.6% neutral. Statements #1, #2, #3, and #14 received more than 20% “strong agreement”.

Similar to Planning, Plans Review received higher levels of agreement for statements related to how well they understood the functions’ role in the development process (statements #1-#3) and the fees required for their project (#7). Respondents indicated higher levels of agreement for the quality of their initial review as well (#10). These five statements received agreement levels of 55% or higher.

Only two statements received 35% or more disagreement, each relating to the timeline associated with a submittal. 35.1% of participants indicated that the timeline provided to them was unclear, while 45.7% felt as though the time it took to process their application was inappropriate.

(3) Differences by Customer Type – Plans Review

To better understand the data, the project team compared results based on how each participant identified (Builder, Homeowner, Architect, etc.). Results based on customer type generally tracked with overall responses as shown above, with some exceptions. The following bullets summarize some key findings from this analysis:

- Architects once again had largely positive responses to all statements, with an average agreement level of 66.4% and 19.1% disagreement. Contractors were also more positive than others, with 58.8% average agreement and 20.9% disagreement.
- Homeowners, Real Estate Professionals, Planners, and Property Developers were more likely to indicate that they did not understand which documents were necessary for their application (#4). These groups had a disagreement level of 30% or more for this statement, while other groups were at 25% or less.
- While 35.1% of all participants disagreed with statement #5 (the timeline associated with their project), disagreement was higher among certain groups. Engineers, Real Estate Professionals, Planners, and Property Developers all had 50% disagreement or more, with Planners reaching 71.4% disagreement for this statement.
- Regarding the quality of comments (#11), Real Estate Professionals, Planners, and Property Developers were more likely to disagree than other groups (50% or more disagreement). Engineers didn’t have as high a disagreement level for this statement but did have a low agreement level of 27.8%. These groups also had similar sentiment towards how well comments align with code (#12).

- Architects, Contractors, and Homeowners were more likely to have positive sentiment towards the time it took to process their application (#15). While overall response to this statement was negative (45.7% disagreement), these groups had agreement level of 35% or more, while the others were at 25% or less.
- Engineers once again indicated strong disagreement/low agreement for statement #16. Only 11.8% agreed that the current building code aligns with the type of development occurring in the City. This sentiment was echoed to a lesser degree by Planners and Property Developers.

(4) Survey Questions – Building Inspections

256 survey participants provided input related to the building Inspections process:

#	Statement	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
1	The City did a good job at communicating what inspections were required.	59.2%	20.0%	20.8%
2	It was easy to request and schedule a building inspection.	61.9%	17.4%	20.7%
3	The timeline to schedule an inspection is timely.	59.4%	22.0%	18.7%
4	Inspectors dealt with me using a positive approach of "here's how to get your work approved".	63.3%	18.2%	18.5%
5	If deficiencies were identified during an inspection, inspectors indicated the applicable code section.	63.1%	23.0%	13.9%
6	The inspector showed up when expected.	66.5%	21.2%	12.2%
7	Inspectors were fair and consistent in applying the codes and regulations to my project.	67.2%	17.8%	15.0%
8	The process to obtain the certificate of occupancy for my permit was efficient.	55.4%	26.0%	18.6%
9	Staff provided good customer service throughout the process.	57.5%	21.1%	21.5%

(5) Analysis – Inspections

Responses to this group were more positive than those found in prior sections, with an average agreement level of 61.5%, 17.8% disagreement, and 20.7% neutral. Agreement ranged between 55.4% and 67.2%.

While all areas received agreement of 55% or more, some of the stronger areas included the ease of scheduling an inspection (#2) as well as the attitude, knowledge, and timeliness of inspectors (#4, #5, #6, #7).

(6) Differences by Customer Type – Inspections

To better understand the data, the project team compared results based on how each participant identified (Builder, Homeowner, Architect, etc.). Results based on customer type generally tracked with overall responses as shown above, with some exceptions. The following bullets summarize some key findings from this analysis:

- Sentiment from Engineers was significantly more neutral compared to other response groups. This group had neutral responses of 35% or higher for all but three statements – those being #1 (required inspections), #4 (inspector attitude), and #9 (customer service). The average neutral response rate for Engineers was 37.9%.
- Planners had a more negative response to most statements, with an average disagreement rate of 43.1%. Two statements received low disagreement from this group, however: statements #5 and #7. Each dealt with the fairness/knowledge of inspectors. Among Planners, these statements received disagreement levels of 16.7% and 14.3% respectively.
- Home and Business Owners, who may interact with the City less frequently, had fairly similar levels of agreement across all statements. Homeowners indicated slightly lower agreement with statement #1, which dealt with how well the City communicated the necessary inspections. 33.3% of Homeowners disagreed, which was lower than the overall disagreement rate of 20.8%. Business Owners were more likely to take issue with the process of obtaining a certificate of occupancy (CO) than others, with 31.1% disagreeing with this statement.

(7) Open Responses – Plans Review and Inspections

Plans Review and Inspections (PR&I) customers were also given the opportunity to provide written responses. The following bullets summarizes key themes found for **both** functions:

- **Inspectors:** Several comments indicated positive sentiment for the inspection staff. Respondents noted that inspectors are knowledgeable and easy to work with.
- **Process:** Ten responses noted issues with the PR&I process, namely the amount of time it takes for an application to reach approval. Some respondents felt as though the process is too thorough, with one saying “it goes beyond code compliance.”
- **Consistency and Communication:** Similarly, another common theme was a lack of consistency and communication between staff. Some indicated that they receive differing levels of scrutiny depending on which reviewer/inspector they are

working with. Some customers would also like to see better communications between the various review/inspection disciplines.

5. Multiple-Choice Responses – Engineering

The following questions related to the Engineering department. They received input from 178 respondents:

#	Statement	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
1	I clearly understood what Engineering approvals / permits would be required for my project.	38.8%	30.0%	31.2%
2	I clearly understood what information and documentation I needed to include in my application.	40.7%	30.5%	28.7%
3	I clearly understood the timeline associated with the review and approval process for my project.	30.4%	35.7%	33.9%
4	I clearly understood the steps of the review process for my project.	30.5%	35.9%	33.5%
5	I clearly understood what fees would be required for my project.	42.9%	33.3%	23.8%
6	The City's website had the information I needed to prepare a complete application.	25.9%	38.0%	36.2%
7	The initial review of my application was complete and comprehensive.	37.4%	36.8%	25.9%
8	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	37.0%	30.3%	32.7%
9	Comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	38.4%	33.5%	28.0%
10	Staff was helpful in explaining what I needed to do and how to accomplish it.	34.9%	35.5%	29.5%
11	Staff provided good customer service throughout the process.	33.7%	39.2%	27.1%
12	I clearly understood what inspections were required for my project.	38.4%	42.1%	19.5%
13	I clearly understood how to schedule an inspection.	50.3%	34.6%	15.0%
14	The time it took to process my application was appropriate.	27.1%	36.1%	36.7%
15	The City's current design standards align with industry prevailing practices.	28.0%	38.7%	33.3%

(1) Analysis

Agreement levels for this department were lower than those featured in other sections, while neutral and disagree responses were higher. On average, statements related to Engineering received 35.6% agreement, 29% disagreement, and 35.4% neutral responses.

The only statement that received an agreement level of 50% or more was statement #13, which dealt with how well customers understood the process of scheduling an inspection.

As indicated above, this section received much higher neutral responses than some of the other functions. Nine statements received a neutral response rate of 35% or more. Customers were particularly neutral towards the quality of customer service (#11) and the clarity of what inspections were required for their project (#12).

Despite the higher levels of neutrality, only two statements received disagreement levels of 35% or more. 36.2% of respondents indicated that the City's website did not help them in preparing their application (#6), while 36.7% noted that it took too long to process their application (#14).

(2) Differences by Customer Type

To better understand the data, the project team compared results based on how each participant identified (Builder, Homeowner, Architect, etc.). Results based on customer type generally tracked with overall responses as shown above, with some exceptions. The following bullets summarize some key findings from this analysis:

- Architects, Homeowners, and Property Developers were less likely to understand the approvals/permits required for their project (#1). Each of these groups had a disagreement level of 50% or more. Conversely, 61.1% of Engineers agreed with this statement.
- In general, Home and Business Owners tended to have some of the lowest agreement levels for most statements, especially those related to their understanding of the process. For instance, only 24.4% of Homeowners understood the timeline for their project (#3), while 19.5% of Business Owners agreed with this statement. Only 19.5% of Business Owners felt as though they understood the steps of the review process (#4), as did 24.4% of Homeowners.
- Homeowners also had the highest disagreement level for statement #8, which dealt with the quality of comments when it came to revisions. 66.7% of Homeowners disagreed with this statement.
- Multiple groups had agreement levels of 20% or less when it came to the availability of information on the City's website (#6). Business Owners,

Homeowners, Real Estate Professionals, and Property Developers all fell within this group.

- Contractors made up one of the largest response groups for this section and was also the most positive on average, with an overall agreement rate of 41.5%. This group was more likely receive approval of their application after initial review (#7), the comments they received (#8 and #9), and which inspections were required (#12).

(3) Open Responses

Engineering customers were given the opportunity to provide written input via an open response question. The following bullets summarize some key themes:

- **Process:** 13 comments specifically took issue with the process of working with Engineering. Many felt as though their review times were too long/thorough and can sometimes hold up projects.
- **Communication and Consistency:** Another common complaint was a lack of communication and consistency within Engineering. Respondents would like a way to contact with the department in-person. Again, multiple respondents noted that they received differing information depending on who they spoke to within the department.

6. Multiple-Choice Responses – Knoxville Utilities Board (KUB)

The following table features statements related to the Knoxville Utilities Board (KUB). This section received input from 290 survey participants.

#	Statement	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
1	I clearly understood what application types needed to be submitted directly to the City of Knoxville.	64.7%	21.3%	14.0%
2	I clearly understood what application types needed to be submitted directly to KUB.	60.8%	26.4%	12.8%
3	I clearly understood what information and documentation I needed to include in my application.	62.3%	26.0%	11.6%
4	I clearly understood the timeline associated with the review and approval process for my project through the City's development process.	52.4%	27.6%	20.0%
5	I clearly understood the steps of the review process for my project.	54.9%	29.2%	16.0%

6	I clearly understood what fees would be required for my project.	57.7%	26.8%	15.5%
7	The Knoxville Utilities Board website had the information I needed to prepare a complete application.	42.9%	35.0%	22.1%
8	The initial review of my application was complete and comprehensive.	59.9%	32.4%	7.8%
9	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	63.1%	27.0%	9.9%
10	Comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	59.4%	28.3%	12.3%
11	Staff was helpful in explaining what I needed to do and how to accomplish it.	70.8%	16.0%	13.2%
12	Staff provided good customer service throughout the process.	71.0%	16.6%	12.4%
13	I clearly understood what inspections were required for my project.	64.5%	24.6%	10.9%
14	I clearly understood how to schedule an inspection.	66.0%	26.1%	8.0%
15	The time it took to process my application was appropriate.	58.9%	24.0%	17.1%
16	The current design standards align with industry prevailing practices.	62.5%	23.5%	14.0%

(1) Analysis

Responses in this section were largely positive, with an average agreement level of 60.7%. Average disagreement was 13.6%.

Several statements received more than 55% agreement. Most customers were clear on what applications needed to be submitted directly to the City versus KUB (#1 and #2), as well as what documents needed to be included with their application and the accompanying fees (#3 and #6). The quality of comments was also largely well received (#8-#10). Customer service-related statements (#11 and #12) received the strongest levels of agreement, with each exceeding 70% overall. Most respondents also indicated that the inspection process was easy to understand (#13 and #14). Finally, 58.9% of respondents felt that the time it took to process their application was appropriate (#15) and that current design standards align with industry practices (#16).

Some of the weaker areas involved how well respondents understood the timeline associated with their project as well as the steps involved (#4 and #5), and the usefulness of KUB's website (#7). Statement #7 received the lowest level of agreement at 42.9%, with a relatively high neutral response rate of 35%.

(2) Differences by Customer Type

To better understand the data, the project team compared results based on how each participant identified (Builder, Homeowner, Architect, etc.). Results based on customer type generally tracked with overall responses as shown above, with some exceptions. The following bullets summarize some key findings from this analysis:

- Architects had much higher neutral responses compared to other customer groups, with 11 statements receiving a neutral response rate of 40% or more. Statements that received a high level of neutrality from this group related to how well they understood the application process (i.e., which application go to KUB, what to include, how helpful the website was, etc.).
- Homeowners were more likely to indicate that they had trouble determining which applications go to the City versus KUB (#1 and #2), followed by Property Developers. These groups had disagreement levels for these statements of 20% or more.
- Statement #7, which dealt with the usefulness of KUB's website, received lower agreement than others at 42.9%. Architects, Builders, Business Owners, and Planners all had lower agreement for this statement at 30% or less.

(3) Open Responses

Customers were given the opportunity to provide written input via an open response question. The following bullets summarize some key themes:

- **Customer Service:** Multiple responses commended the quality of customer service provided by KUB.
- **Collaboration:** Some comments noted KUB appears isolated from the rest of the development process, and that the lack of communication between them and the City led to some sticking points during their project.

7. Multiple-Choice Responses – Development Review Overall

The final multiple-choice section provided respondents with an opportunity to provide input on the development review process overall. This section received 215 responses.

#	Statement	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
1	The process is predictable.	39.4%	14.4%	46.2%

2	It is clear what applications are processed by the City and by other government entities.	38.6%	31.0%	30.5%
3	The City made clear the amount of time it would take to process my application.	32.1%	22.5%	45.5%
4	The amount of time taken to review and approve my application was acceptable.	31.9%	23.5%	44.6%
5	The City met its time commitments for processing my application.	36.1%	24.0%	39.9%
6	The pre-application meeting is effective.	38.8%	38.3%	23.0%
7	City staff were accessible and responsive when I had questions regarding my application.	43.5%	21.1%	35.4%
8	City staff provided good customer service throughout the process.	44.5%	23.0%	32.5%
9	The City did a good job coordinating input from different City departments.	28.1%	32.5%	39.4%
10	The City did a good job coordinating input from different government entities (e.g., Knox Planning, Knoxville Utilities, Environmental Health, etc.).	24.4%	37.3%	38.3%
11	The City's technical requirements were consistent with the codes and ordinances that the City enforces.	41.6%	33.7%	24.8%
12	The City provided an efficient online submittal process.	40.0%	22.9%	37.1%

(1) Analysis

This section received some of the lowest agreement rates across all sections, with multiple statements receiving higher levels of disagreement versus agreement. Average agreement across all statements was 36.6%, while disagreement was 36.4%. This section received an average neutral response rate of 27%.

While none of the statements received more than 50% agreement, statements related to the quality of staff (#7 and #8) received the highest agreement levels across all statements with 43.5% and 44.5% agreement respectively.

Conversely, areas with the highest levels of disagreement related to the predictability of the process (#1) as well as the timeline associated with a project (#3 and #4).

Responses to statements #9 and #10 indicate that few customers feel as though the City does a good job of coordinating input from the various entities involved in the development review process. Customers were more likely to be neutral or disagree with these statements.

(2) Differences by Customer Type

- Engineers were much more likely to find the process unpredictable (#1) compared to other respondent groups. 81.3% of Engineers disagreed with this statement. On the other hand, Contractors had a slightly more positive view, with 51.9% agreeing that the process is predictable.
- Architects, Contractors, and Homeowners had a slightly more positive response rate for statements related to customer service (#7 and #8).
- Statements related to the coordination of review entities (#9 and #10) received low agreement from Builders, Business Owners, Real Estate Professionals and Property Developers. Levels of agreement for each of these groups were lower than 20% for these statements.
- Sentiment towards the online submittal process (#12) was more negative among Builders, Business Owners, Real Estate Professionals, and Property Developers. These groups had disagreement levels of 45% or more for this statement, compared to overall response of 40.0% agreement.

8. Open-Ended Responses – Greatest Strengths

The survey featured an open response section where participants could, in their own words, list up to three strengths of the City's development review process. This section received 276 responses from 115 respondents. Key themes are summarized below:

(1) Customer service and staff's attitude are one of the City's greatest strengths.

Several comments highlighted the high quality customer service provided by staff during the development review process. 16 responses specifically mentioned that customers perceived staff attitude as being "willing to work through issues." 13 comments mentioned the staff manning the phones as being very helpful.

(2) Building Inspectors are well received by customers.

26 comments mention the attitude and overall knowledge of building inspectors as being one of the City's greatest strengths. Respondents noted that inspectors appear to care about their work, are knowledgeable in their discipline, and are punctual.

(3) Customers are a fan of the online submittal process.

While the quality of the information available online received mixed reviews (see prior sections), respondents indicated that they are a fan of the online submittal process. 38 comments referred to the ability to submit, monitor, and pay fees for a project online is one of the City's greatest strengths.

9. Open-Ended Responses – Opportunities for Improvement

The second open response section dealt with opportunities for improvement. Respondents were again able to provide up to three written responses. 131 participants provided 326 comments.

(1) Customers would like better access to review staff.

19 respondents mentioned that they would like to have a means of contacting the review staff working on their application directly.

(2) Respondents indicated that communication could be improved.

12 participants noted that communication between different departments could be improved. A further 11 remarked that better communication between the City and its customers would improve the process. These issues were also mentioned in prior open-ended sections.

(3) Some customers would like to see more consistency in the development process.

18 comments pointed towards a lack of consistency in the process, specifically when it came to Plans Review and Inspections.

(4) Customers would like to see the development process streamlined.

73 responses mentioned a desire for some form of improvement or modification to the development process to be more simplified and faster. Results from prior sections corroborate this, as some of the lower areas of agreement related to the timeline associated with the various functions involved in development review.

(5) Respondents suggested that improvements could be made to the City's website and online application submittal process.

36 responses mentioned having some form of issues with the City's website. While the online submittal process seemed to be well received by several customers, some still felt that it was too complicated. Another issue mentioned here was that customer educational materials were hard to find or did not exist online. This issue was also highlighted in some of the prior sections.

10. Stakeholder Focus Group Meetings

The project team conducted in-person stakeholder focus group meetings between July 12 and 14, 2022 in Knoxville. A virtual focus group was conducted on July 19, 2022.

Invitees to these focus group meetings including members of the Mayor's Development Roundtable, small and medium business owners, and 250 randomly selected prior customers of the City from the last three years. A total of 32 individuals attended the focus group meetings. A variety of individuals who had been involved in all phases of the development review, permitting, and inspection process attended these meetings.

The key themes that emerged from the focus group meetings were similar to those of the online survey. However, attendees were able to dive deeper into the challenges and strengths of the City's development processes. The following points summary the key themes received from the stakeholder meeting attendees.

- Perception that the services provided by the City and adjacent departments have improved over the past five years.
- The majority of attendees indicated that leadership in the various departments was generally accessible and worked to resolve issues.
- Attendees indicated that there is a lack of consistency between employees regarding application review comments, interpretations of various adopted codes and standards, interpretations of the zoning code between Planning and Plans Review and Inspections, and the lack of unified voice in the City. Many felt these challenges delayed the development review, permitting, and inspection processes.
- A consistent theme received focused on the stringiness of certain requirements and codes in the City. Examples that were provided in all meetings was related to sidewalk requirements, especially in areas where sidewalks do not currently exist, bicycle parking in Downtown, and the stormwater improvement threshold of 50%.
- There was a strong desire to increase administrative variance requests, especially related to engineering requirements and to some of the zoning requirements in the older and developed parts of Knoxville.
- Variances was a topic of conversation as many individuals indicated they often have to request a variance as part of their project.
- It was clear that most individuals thought the landscape requirements of the new zoning ordinance were overly burdensome and was not practical, especially in Downtown.
- The platting process (all components) was a point of concern for a majority of individuals who have to plat their property.
- Individuals noted that it appears Fire and Engineering staff are working more closely with Plans Review and Inspection in the past few years.
- It was noted that the pre-development meeting was beneficial to work through potential issues, but there was a disconnect once building permits were submitted. There was a desire to have the actual plan reviewers attend these meetings and to memorialize the discussions to prevent problems during review.

- Significant feedback was provided regarding issues during inspections with the inspector failing the inspection even though it was constructed to the approved permitted plan set. Conflicts between the approved plan set and inspector interpretations was noted for both building and engineering inspections.
- Communication and responsiveness were an issue for specific staff members, especially those that conducted application review. It was indicated that supervisors and managers were more readily accessible, but it was split regarding individual reviewers and their availability and ability to respond to customer inquiries.

Overall, many of the same issues noted in the survey responses were discussed in the stakeholder focus group. Individuals noted that the various departments involved in the development process have improved services in the past few years but there was significant conversation related to challenges and improvement opportunities.

APPENDIX

The following tables show a more detailed perspective of multiple-choice responses received by providing the specific percentages in each category – Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree:

(1) Planning

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I clearly understood what approvals / permits were processed by Knoxville - Knox County Planning.	18.5%	44.2%	12.9%	18.9%	5.6%
2	I clearly understood what information and documentation I needed to include in my application.	16.9%	38.3%	15.3%	20.6%	8.9%
3	I clearly understood the timeline associated with the review process for my project.	15.4%	30.8%	17.8%	22.3%	13.8%
4	I clearly understood who had the decision making authority (Staff, Planning Commission, City Council) for my application.	14.3%	30.3%	18.0%	23.8%	13.5%
5	If my application was reviewed and approved/denied by staff, I clearly understood what Department made the decision (e.g.,	14.4%	41.6%	15.2%	20.2%	8.6%

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Knox Planning, Plans Review and Inspection, etc.).					
6	I clearly understood what fees would be required for my project.	18.4%	48.2%	18.4%	10.2%	4.9%
7	Staff was helpful in explaining what I needed to do and how to accomplish it.	18.5%	30.0%	18.1%	17.7%	15.6%
8	Knox Planning website had the information I needed to prepare a complete application.	13.6%	27.6%	27.6%	18.5%	12.8%
9	The City of Knoxville's website clearly indicated what applications required review and approval from Knox Planning.	10.4%	28.2%	24.5%	21.6%	15.4%
10	The initial review of my application was complete and comprehensive.	13.9%	40.4%	18.0%	15.5%	12.2%
11	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	14.0%	33.7%	22.2%	16.1%	14.0%
12	The comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	12.8%	33.1%	30.2%	13.6%	10.3%
13	Staff provided good customer service throughout the process.	19.2%	32.7%	16.3%	15.1%	16.7%
14	The time it took to process my application was appropriate.	13.4%	24.8%	20.3%	17.9%	23.6%
15	The current land use and zoning code aligns with current development trends.	10.2%	24.6%	32.6%	17.0%	15.7%
16	I clearly understand the role of Knox Planning in the development process.	17.3%	33.3%	24.3%	15.6%	9.5%

(2) Plans Review

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I clearly understand the role of Plans Review and Inspections in the development process.	23.1%	51.8%	11.0%	9.9%	4.3%

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
2	I clearly understood what approvals / permits would be required for my project.	20.2%	43.3%	16.0%	14.5%	6.0%
3	I clearly understood what applications/permits that Plans Review and Inspections is responsible for processing.	20.7%	43.2%	18.9%	10.7%	6.4%
4	I clearly understood what information and documentation I needed to include in my application.	16.0%	39.5%	20.6%	17.1%	6.8%
5	I clearly understood the timeline associated with the review and approval process for my project.	14.2%	29.1%	21.6%	22.0%	13.1%
6	I clearly understood the steps of the review process for my project.	14.2%	34.9%	21.4%	16.7%	12.8%
7	I clearly understood what fees would be required for my project.	17.3%	45.9%	20.5%	11.3%	5.0%
8	The City's website had the information I needed to prepare a complete application.	11.8%	33.9%	23.9%	18.6%	11.8%
9	Submitting my application through the online portal was efficient.	16.6%	31.3%	21.6%	17.3%	13.3%
10	The initial review of my building application was complete and comprehensive.	14.3%	41.2%	19.0%	13.6%	11.8%
11	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	14.6%	31.4%	22.1%	18.2%	13.6%
12	The comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	14.4%	36.7%	24.8%	10.8%	13.3%
13	Staff was helpful in explaining what I needed to do and how to accomplish it.	18.2%	32.0%	19.2%	13.9%	16.7%
14	Staff provided good customer service throughout the process.	21.7%	29.5%	18.2%	12.1%	18.5%
15	The time it took to process my building permit application was appropriate.	12.5%	23.2%	18.6%	21.8%	23.9%
16	The current building code aligns with the type of development occurring in Knoxville.	15.2%	27.1%	31.8%	12.6%	13.4%

(3) Inspections

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	The City did a good job at communicating what inspections were required.	16.0%	43.2%	20.0%	10.4%	10.4%
2	It was easy to request and schedule a building inspection.	19.0%	42.9%	17.4%	10.1%	10.5%
3	The timeline to schedule an inspection is timely.	19.1%	40.2%	22.0%	9.4%	9.4%
4	Inspectors dealt with me using a positive approach of "here's how to get your work approved".	24.2%	39.1%	18.2%	9.3%	9.3%
5	If deficiencies were identified during an inspection, inspectors indicated the applicable code section.	17.2%	45.9%	23.0%	7.0%	7.0%
6	The inspector showed up when expected.	22.5%	44.1%	21.2%	5.7%	6.5%
7	Inspectors were fair and consistent in applying the codes and regulations to my project.	22.7%	44.5%	17.8%	7.3%	7.7%
8	The process to obtain the certificate of occupancy for my permit was efficient.	15.7%	39.7%	26.0%	9.5%	9.1%
9	Staff provided good customer service throughout the process.	21.1%	36.4%	21.1%	10.1%	11.3%

(4) Engineering

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I clearly understood what Engineering approvals / permits would be required for my project.	16.0%	43.2%	20.0%	10.4%	10.4%
2	I clearly understood what information and documentation I needed to include in my application.	11.8%	27.1%	30.0%	21.8%	9.4%
3	I clearly understood the timeline associated with the review and approval process for my project.	9.0%	31.7%	30.5%	19.2%	9.6%

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4	I clearly understood the steps of the review process for my project.	8.9%	21.4%	35.7%	20.2%	13.7%
5	I clearly understood what fees would be required for my project.	9.6%	21.0%	35.9%	20.4%	13.2%
6	The City's website had the information I needed to prepare a complete application.	8.9%	33.9%	33.3%	14.9%	8.9%
7	The initial review of my application was complete and comprehensive.	7.8%	18.1%	38.0%	22.3%	13.9%
8	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	10.8%	26.5%	36.8%	13.3%	12.7%
9	Comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	10.3%	26.7%	30.3%	17.6%	15.2%
10	Staff was helpful in explaining what I needed to do and how to accomplish it.	9.8%	28.7%	33.5%	15.2%	12.8%
11	Staff provided good customer service throughout the process.	10.8%	24.1%	35.5%	16.3%	13.3%
12	I clearly understood what inspections were required for my project.	11.5%	22.3%	39.2%	14.5%	12.7%
13	I clearly understood how to schedule an inspection.	8.2%	30.2%	42.1%	9.4%	10.1%
14	The time it took to process my application was appropriate.	9.8%	40.5%	34.6%	6.5%	8.5%
15	The City's current design standards align with industry prevailing practices.	8.4%	18.7%	36.1%	15.7%	21.1%

(5) KUB

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I clearly understood what application types needed to be submitted directly to the City of Knoxville.	16.0%	48.7%	21.3%	6.0%	8.0%
2	I clearly understood what application types needed to be submitted directly to KUB.	16.9%	43.9%	26.4%	6.8%	6.1%

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
3	I clearly understood what information and documentation I needed to include in my application.	15.1%	47.3%	26.0%	6.2%	5.5%
4	I clearly understood the timeline associated with the review and approval process for my project through the City's development process.	15.2%	37.2%	27.6%	14.5%	5.5%
5	I clearly understood the steps of the review process for my project.	16.0%	38.9%	29.2%	11.1%	4.9%
6	I clearly understood what fees would be required for my project.	15.5%	42.3%	26.8%	12.0%	3.5%
7	The Knoxville Utilities Board website had the information I needed to prepare a complete application.	13.6%	29.3%	35.0%	13.6%	8.6%
8	The initial review of my application was complete and comprehensive.	15.5%	44.4%	32.4%	3.5%	4.2%
9	After receiving comments on my application, I clearly understood what I needed to revise on my application to achieve compliance with adopted codes and ordinances.	16.3%	46.8%	27.0%	4.3%	5.7%
10	Comments received outlining deficiencies were appropriately aligned with ensuring code compliance.	18.1%	41.3%	28.3%	6.5%	5.8%
11	Staff was helpful in explaining what I needed to do and how to accomplish it.	27.1%	43.8%	16.0%	7.6%	5.6%
12	Staff provided good customer service throughout the process.	27.6%	43.5%	16.6%	6.2%	6.2%
13	I clearly understood what inspections were required for my project.	18.8%	45.7%	24.6%	5.8%	5.1%
14	I clearly understood how to schedule an inspection.	19.6%	46.4%	26.1%	2.9%	5.1%
15	The time it took to process my application was appropriate.	17.1%	41.8%	24.0%	8.9%	8.2%
16	The current design standards align with industry prevailing practices.	16.9%	45.6%	23.5%	5.2%	8.8%

(6) Development Review Overall

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	The process is predictable.	8.2%	31.3%	14.4%	25.5%	20.7%
2	It is clear what applications are processed by the City and by other government entities.	8.1%	30.5%	31.0%	19.1%	11.4%
3	The City made clear the amount of time it would take to process my application.	10.1%	22.0%	22.5%	26.3%	19.1%
4	The amount of time taken to review and approve my application was acceptable.	8.5%	23.5%	23.5%	19.3%	25.4%
5	The City met its time commitments for processing my application.	8.7%	27.4%	24.0%	19.2%	20.7%
6	The pre-application meeting is effective.	12.8%	26.0%	38.3%	11.2%	11.7%
7	City staff were accessible and responsive when I had questions regarding my application.	14.4%	29.2%	21.1%	18.2%	17.2%
8	City staff provided good customer service throughout the process.	15.8%	28.7%	23.0%	14.8%	17.7%
9	The City did a good job coordinating input from different City departments.	8.9%	19.2%	32.5%	20.2%	19.2%
10	The City did a good job coordinating input from different government entities (e.g., Knox Planning, Knoxville Utilities, Environmental Health, etc.).	8.5%	15.9%	37.3%	19.4%	18.9%
11	The City's technical requirements were consistent with the codes and ordinances that the City enforces.	9.9%	31.7%	33.7%	13.9%	10.9%
12	The City provided an efficient online submittal process.	11.2%	28.8%	22.9%	18.1%	19.0%

Appendix C: Best Practices Assessment

1. Overview

This diagnostic assessment of the development review process covers the development review, permitting, and inspection processes for the City of Knoxville. This includes the operations of Plans Review and Inspections, Engineering, Fire, Knoxville – Knox Planning (City portion only), Knoxville Utilities Board, and Knox County Health Department (KCHD). The purpose of this analysis was to obtain an understanding of how the development services operation within the City compares to best practices.

The following sections introduce the diagnostic assessment followed by a detailed diagnostic matrix of best practices for each functional area involved in the development review process highlighting key existing strengths and identifying potential opportunities for improvement.

2. Introduction

This document represents an important step for the project team to report on initial key findings and opportunities related to the development review processes of the City of Knoxville. In order to make the assessments of operational strengths and improvement opportunities, the project team utilized a set of best management practices against which to evaluate the various development review operations.

The project team utilized a variety of data collection and analytical techniques to compare current operations against measures of effective operations in municipal organizations. This best management practices assessment provides measures of operation for major functions with the development review process. Collectively the best practices consist of:

- Statements of “best or prevailing practices” based on the study team’s experience in evaluating high-performing development review operations.
- Statements of “best practices” or “recommended practices” or performance targets derived from national professional service organizations (such as American Planning Association, International Code Council, etc.).
- Identification of whether the particular unit meets these performance targets.

The diagnostic assessment is one of several tools that will be used to identify recommended reforms. Following completion of this analysis, it will be used along with

information obtained from stakeholder surveys and workshops, feedback from the City, and data analysis by the project team to develop a final set of recommendations.

3. Key Strengths

Although, the diagnostic assessment is designed to identify improvement opportunities, it is also an opportunity to identify existing strengths of the current processes. Some of the key strengths of the City's development review process include:

- Plans Review and Inspections (which incorporates Engineering, Fire, and Planning) is in the process of implementing a new permitting software system and upgrading their digital application portal. The portal will have an interactive component to guide the customer on the type of application they need to submit. Staff have received training for the new permitting software system in the last few months.
- Plans Review and Inspections and Knoxville-Knox County Planning only accepts digital applications through an online submittal portal and email respectively.
- Knoxville-Knox County Planning has a robust website that includes detailed application materials for each application going to public hearing.
- Engineering provides a robust land management guide on their website.
- Each review entity has robust development guides, fact sheets, or checklists available on their respective webpages.
- KUB has a robust development guide and design guideline checklists available on their website.
- The KGIS system is robust and provides a bevy of development related information through this platform.

As the points above indicate, the City is already meeting a variety of best practices.

4. Key Opportunities for Improvement

The comparison of the City's current approach to best management practices also identified some improvement opportunities. Some of the most notable issues are listed below:

- The current approaches to development review as well as inspections are very siloed and is noted in the fact that each entity involved in the review process has

different approaches, technology utilization and access, and a lack of linking to other review entities on respective webpages. This is also present with the exclusion of including Knoxville-Knox County Planning in the new permitting software system or use of the online application portal for Plans Review and Inspections.

- While each review entity makes documentation available to applicants (as noted in the strengths section), there is a lack of consistency between entities.
- Comment letters are consistent in their format, but the information provided by reviewer is inconsistent. For instance, on Plans Review and Inspections comment letters, the reviewer is identified by their initials unless included in the narrative. It is worth noting, however, that this practice will be eliminated when the new software is implemented.
- Many of the functional discipline areas are siloed with limited interaction between personnel, often requiring the applicant to have to bounce between departments. Planning, Fire, and Utilities are housed separate from other review entities.
- Customer service approaches and level of responsiveness varied by functional area and was noted as an issue by stakeholders

The above items are not in alignment with best practices and indicate challenges that impact the efficiency and effectiveness of the processes and operations related to development review, permitting, and inspection activities. The project team will expand on these and other issues in subsequent analysis and in the draft and final reports.

5. Diagnostic Assessment

This section provides an initial overall assessment of current operations and processes and identifies initial opportunities for organizational, operational, and technology improvements. The assessment is presented in a checklist format. The checklist identifies whether current practices do or do not meet the target. Descriptions for improvement opportunities are included in the last column of the table. The issues identified in this review will be analyzed further by the project team, leading to the development of the draft report. This analysis will primarily focus on the development review operations for the City.

This diagnostic assessment of best practices is broken down into the major subsections of: Management and Administration; Customer Information and Interaction; Processes; and Technology Utilization.

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Management and Administration			
The City has goals, objectives, and performance measures for permitting activities.	✓		<p>The City has adopted a 10 business day processing time for building applications not issued over the counter/immediately.</p> <p>Knox Planning, Fire, KUB, and KCHD have their own processing times. Which vary by the application type.</p>
Managers routinely review performance (speed, efficiency) of the permitting process.	✓		Managers generally monitor performance of their teams.
Managers and staff have access to clear and accurate reports showing current workload, timelines, and other measures of performance.		✓	<p>The current Permits Plus system does not accurately capture data related to processing times and workload.</p> <p>Knox Planning provides their team with performance reports.</p>
The department has backup plans in place in the event of absence or departure of key staff.	✓	✓	Some key positions have established backups in various departments. However, there are limited staff in several technical review positions in Engineering, KCHD, and Fire and backups are not identified.
Customer satisfaction with each phase of the development process is monitored.		✓	The City does not officially track customer satisfaction. A customer survey may be appropriate to monitor changes in customer perceptions and satisfaction. The project team was informed that Plans Review and Inspections are in the process of implementing such a survey.

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Staff are provided with on-going in-service training opportunities for their professional development.	✓	✓	This varies by Department, but general requirements and in-service training is provided to maintain professional certifications.
Internal staff training is provided for processes and code changes.		✓	Staff indicated that limited training is provided on code and ordinance changes that were adopted. Knox Planning indicated there was minimal training when the new zoning regulation was adopted.
Internal staff training is provided on new features within the permitting software system.		✓	Staff have recently been provided training for the new software program that will be implemented in late 2022.
The organizational structure of each team and/or division is designed to promote career succession.	✓	✓	There are multiple employee classifications within each team which indicates opportunity for professional growth. However, there is limited opportunity for growth in Engineering as there are only a couple of engineering classifications. Positions in KUB, and KCHD were not reviewed. Knox Planning and Plans Review and Inspections have career progressions within their current organizational structures.

Customer Information and Interaction

The City provides easy-to-understand and attractive guides to the planning, building permit, and inspections process.	✓	✓	There are several "Fast Fact Sheets" on the Plans Review and Inspections website. This information provides relevant information and should be updated at least annually as many were last updated prior to 2017.
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Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
			<p>Engineering has a link to their Land Development Manual (LDO), which has a significant amount of information and requirements. Engineering is currently in the process of revising the LDO.</p> <p>Knox Planning has incorporated several PDF documents and guides to inform the public about their various processes.</p> <p>KCHD has application guides on their website regarding their processes and requirements.</p> <p>KUB's website features a development guide (posted 2016), as well as design checklists for a variety of utilities.</p>
The City has a "one stop shop" that includes all development review entities at one location.		✓	<p>Plans Review and Inspections and Engineering share a public counter. The public counter was closed at the beginning of Covid and will reopen on November 1, 2022.</p> <p>Planning is not a City department, but their public counter is in the adjacent suite to Plans Review and Inspections.</p> <p>The Fire Marshal Office is located on the 5th floor of the City – County building.</p>

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
All development staff are available at a single easy to access location.	✓	✓	All City agencies are located in the City/County building. KUB and KCHD are located in separate buildings in Knoxville and not near other review entities.
The City's web site includes a virtual "one stop shop" that provides an overview of all permitting requirements and links to permitting requirements by department or division.		✓	There is not a centralized development webpage on the City's website. Each department has a separate webpage and connectivity between departments/agency was not found.
Fee schedule is published and regularly updated.	✓	✓	Plans Review and Inspections fee schedule was provided and was last updated in April 2022, it is assumed it is updated annually. Knox Planning's fee schedule, last updated September 2022, was also provided. It is assumed that it is updated annually. Engineering fees are located in the Stormwater Ordinance, but there is not a consolidated fee schedule posted on their webpage.
The City reaches out to the business and development community through periodic communications.	✓	✓	The City created a Developer Roundtable with approximately 25 individuals. The City participates in periodic public outreach, such as being the primary presenter at local development symposiums.
The City regularly obtains input from the business and development community on issues related to development review and permitting.	✓		They receive input from the Developer Roundtable and the Business Roundtable groups.

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
The City provides clear and comprehensive checklists identifying all items required to be submitted for each application type.	✓		Plans Review and Inspections, Engineering, Knox Planning, KUB, and KCHD provide checklist as part of their application or reference materials.
Application forms are available on-line and can be filled out electronically.	✓		Online application forms were fillable, except for Plans Review and Inspections which has an online portal where applications are completed and submitted.
Long-term planning documents and land development codes are available on-line.	✓		Information is provided on respective review entity webpages.
Adopted ordinance, regulations, and design standards are available and up to date online.	✓	✓	Information is provided on respective entity webpages.
The City has a dedicated webpage that identifies major on-going development projects.	✓	✓	<p>The City does not have a specific development project webpage.</p> <p>Knox Planning provides links under their public meeting webpage to respective applications and provides information regarding pending cases.</p>
The City's webpage provides direct contact information for the various development review functions.	✓	✓	Plans Review and Inspections, Engineering, and Knox Planning webpages identify staff who conduct review. Contact information is providing in an inconsistent format by all six review entities.
The City has established standards for responding to customer inquiries.		✓	Standards are not officially adopted by any review entity.

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Processes			
Permit technicians are certified by the International Code Council (ICC).		✓	This is an opportunity for Development Services Technicians in Plans Review and Inspections to be certified to promote professional development, career succession, and incentivize pay program.
Permit technicians review applications for completeness at time of submittal.	✓		A cursory completeness check is completed by all relevant review staff at submittal.
Plans are routed only to departments for whom the project is relevant.	✓	✓	Applications are not routinely routed to Knox Planning that come through Plans Review and Inspections; especially applications that require Hillside review.
Staff uses a case management approach for larger projects.		✓	<p>Generally, the assigned reviewer for each function serves as the project manager for that entity. There is not an overall ownership of the application in Plans Review and Inspections.</p> <p>The assigned Planner serves as the project manager in Knox Planning.</p>
Preapplication meetings are held for major projects.	✓		<p>Pre-application meetings are available for all application types and encouraged for larger and complex projects. The pre-application process is facilitated through Plans Review and Inspections.</p> <p>Not all review entities staff attend consistently, which may prevent a complete review.</p>

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Review timelines are posted on the City's website.		✓	Review timelines were not found on any development review entities' webpage.
Expedited building plan review services are provided.		✓	This service is not provided and may not be relevant given the desired 10 day review timeline.
Resubmittal review turnaround times are quicker than new applications.		✓	Plans Review and Inspections/Engineering applications are processed in the order they are received. Fire, Knox Planning, KUB, and KCHD will review resubmittals quicker for their specific applications.
Adopted review timelines are met consistently.		✓	The historic permitting software system is unable to report on performance timelines and thus it is unknown the percentage of timelines is being met. PRI indicated they are having challenges consistently meeting the deadlines, especially for reviews outside of their control. Engineering indicated they are not meeting desired turnarounds either. Knox Planning, Fire, KCHD, and KUB indicated they are meeting their timelines for their respective permit applications.
A formal internal Development Review Committee is responsible for ensuring that plans address all City requirements.		✓	There is not a formal development review committee that meets to review applications consistently. However, as needed, appropriate staff will meet to discuss certain applications.

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
All review comments are incorporated into a single comment letter and distributed to applicant by project manager.	✓		Plans Review and Inspections, Engineering, and Knox Planning review letters consolidate all comments into a single document. Note: Excludes platting.
Review comment letters are consistent in their approach, format, and information provided.	✓	✓	There is consistency in the formatting between Plans Review and Inspections and Knox Planning review letters respectively. Comment depth, content, and contact information varies greatly by reviewer. Noted discrepancies include embedding appropriate code/standard section, depth of comment, identification of the reviewer, and contact information. Plans Review and Inspections/Engineering comment letters identify the reviewer by initials and limits the applicant's ability to identify the reviewer unless included in the comment. Contact information for the plan reviewers should be clearly identified.
Project review / comment letters provide reference to checklist and / or code reference.	✓	✓	Most comment letters provided links to applicable codes/standards. Opportunity exists to utilize a checklist approach for resubmittals to help ensure all comments are addressed by the applicant.

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Plans are reviewed by each review discipline concurrently to avoid delays.	✓	✓	Plans are generally reviewed concurrently. However, it was indicated by stakeholders and Knox Planning that some Plans Review and Inspections applications that require Knox Planning review are not routed originally to them or at all and thus not reviewed concurrently. KCHD also indicated that some building applications they should be reviewing for restaurants but are not included in the review and the customer must submit a separate application.
For re-submitted plans, reviewers focus on ensuring that comments have been addressed, not issues that should have been brought up in initial review.		✓	The project team was not provided with this information. Stakeholders identified several instances where comments were provided on subsequent reviews that should have been identified on the original review.
Applicants can track their permit application on-line.	✓	✓	Plans Review and Inspections applications only can be tracked online. Other department's specific applications are not submitted through the online portal and cannot be tracked online.
Staff reports to Planning Commission, BZA, and/or City Council are thorough.	✓	✓	Knox Planning staff reports and application files were found online and provided clear identification of the request, staff/commission recommendation, and information regarding the application and request. Reports provide sufficient information to the appropriate body. BZA "staff reports" found online only include the application materials and did

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
			not provide a staff report component. It is unclear if a staff report is completed by staff.
Simple permits (e.g., basic electrical, mechanical, and plumbing permits and minor building alterations) can be issued on the spot or online with no review, subject to inspection.	✓		There are several application and permit types that are approved administratively or subject to inspection.
Customers are given an approximate time to expect their inspector.		✓	The current approach to assigning and scheduling inspections does not provide customers with an approximate time. The new software system has the capability and should be implemented.
Applicants can request inspections up to 5 pm on the day before; next day inspections are available for 100% of requests.		✓	<p>Building inspection requests cut off is 2 p.m. currently. The plan is to consider an alternative time once the new software system is implemented.</p> <p>Fire inspections can be scheduled until 5 p.m. the day before.</p> <p>Engineering inspections can be requested at any time and are generally completed within the next day. In the rare occurrence that inspectors are fully booked, new inspection requests are booked two days from the time of the request.</p>
An online inspection request system is utilized to receive inspections with linkage to the permit information system.	✓	✓	<p>Building inspection requests are online and connected to the permit application.</p> <p>Fire inspection requests are through phone or email and are not linked directly to the permit application.</p>

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Combination reviewers/ inspectors are used to reduce the need for duplicate inspections at a single project.	✓		<p>Plans Review and Inspections has both combination reviewers / inspectors and single trade inspections.</p> <p>Fire Inspectors and Engineering Inspectors are cross trained in various disciplines with specific individuals completing more specialized reviews and inspections.</p>
Building Inspectors conduct between 12 and 18 inspections.	✓		<p>Building Inspectors workload falls within this range daily.</p> <p>Fire Inspectors do not typically conduct this many construction inspections per day as they also have to perform annual inspections which is not included in this study.</p> <p>Engineering inspections should range between 4 and 8 inspections per day due to the complexity and sizes of the inspections they must complete.</p>
The City charges a re-inspection fee to encourage builders to make sure work is complete and ready to inspect at time of inspection.	✓		<p>Plans Review and Inspections has the ability to charge a re-inspection fee for the second re-inspection and beyond. However, this is capped at \$50 per re-inspection. Consideration of a higher fee after third re-inspection should help deter excessive inspections.</p> <p>The application of the re-inspection fee is subject to each inspector.</p> <p>Engineering does not currently charge inspection/ reinspection fees.</p>

Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Zoning inspections are completed before the certificate of occupancy (CO) is approved.	✓		Zoning has their own inspection team, which focuses on new development zoning compliance and enforcement violations.
For Certificate of Occupancy Inspection all applicable inspectors complete the inspection at the same time.		✓	Final inspections are completed within the same time frame by all disciplines. Stakeholders did not report any issues with this process. Note: Engineering is not part of the CO final inspection process.

Technology Utilization

Note: For Plans Review and Inspection and Engineering this assessment is completed based on the soon to be implemented Accela permitting system and updated Knox Plans (ProjectDox).

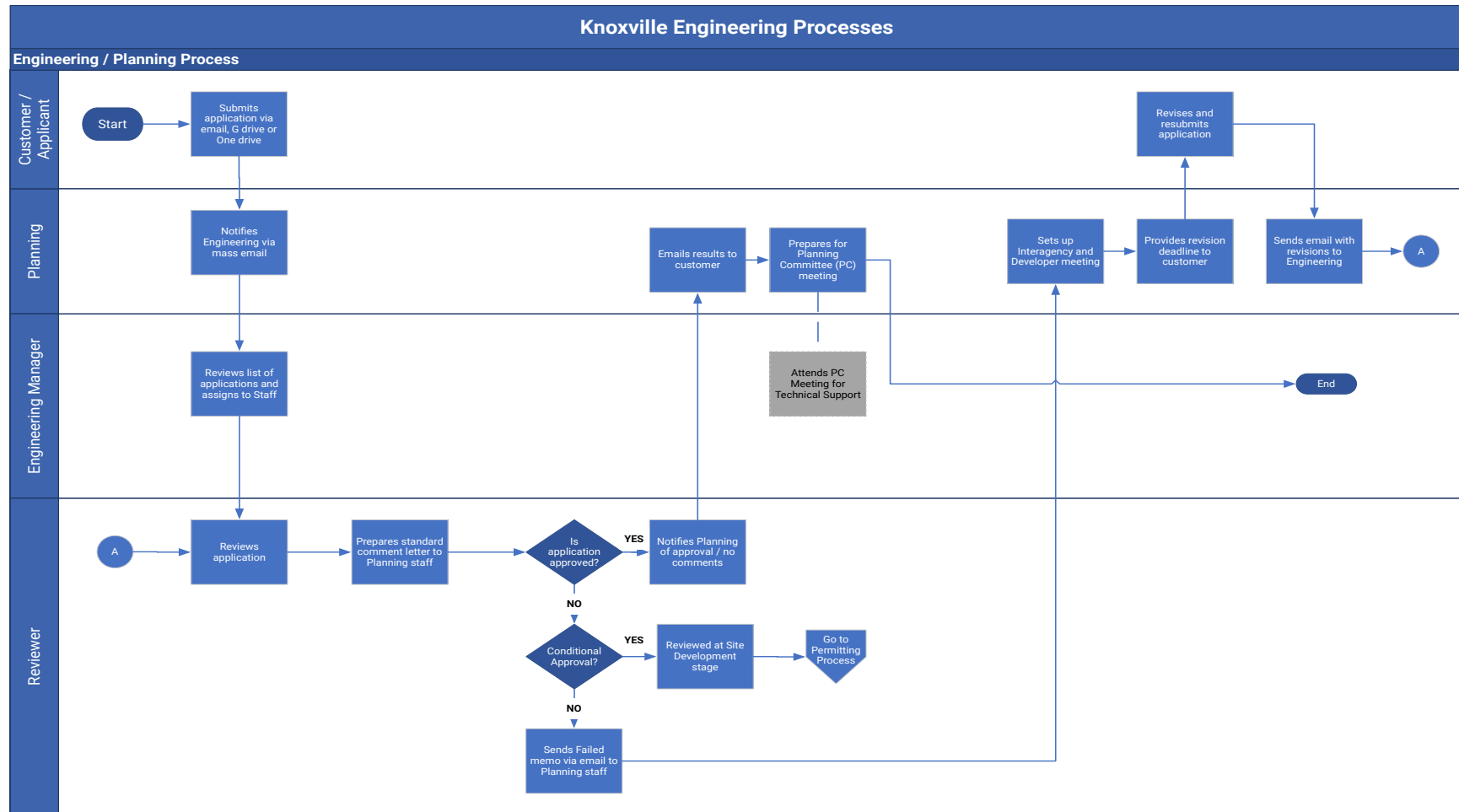
All review entities have access to the City's primary permitting and plan review software systems.		✓	Plans Review and Inspections, Engineering, Fire, and KUB have access to Knox Plans and Accela. Knox Planning will not be provided access to this platform.
Applicants can apply, pay for, and receive permits, some instantly, using an on-line portal.	✓	✓	This is only applicable to Plans Review and Inspections and Engineering applications/permits. This should be expanded to all review disciplines.
The permit software system can calculate the appropriate plan check and permitting fees.	✓	✓	This is only applicable to Plans Review and Inspections applications/permits and should be expanded to all review disciplines.

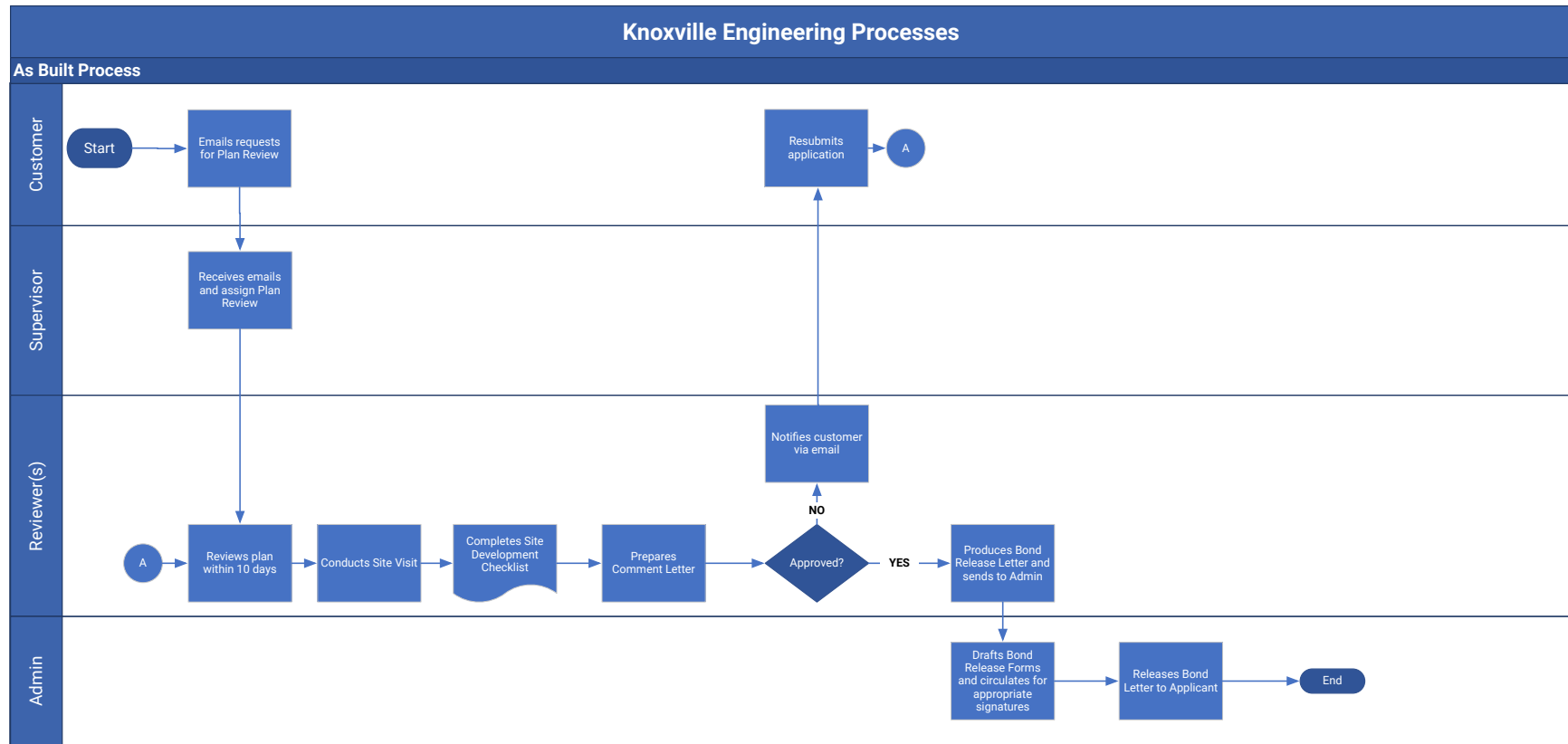
Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
Staff can look up the status of a permit, including comments from reviewers, on-line or using the software.	✓	✓	This is only applicable to Plans Review and Inspections applications/permits. Staff who have access to the system will be able to access all staff comments that are uploaded to the platform. Expand software access to all review entities.
Permit tracking software is used to manage the permit intake, review, and issuance process as well as related inspections.	✓	✓	This is only applicable to Plans Review and Inspections applications/permits and should be expanded to all review disciplines.
All plan review comments are entered into the system and available to other reviewers, permit techs, and applicants (via the front end).	✓	✓	All comments should be entered into Accela and available to all other reviewers, regardless of discipline.
The permitting system electronically routes applications to all reviewers, who can also electronically approve, disapprove, and provide comments.	✓	✓	Knox Planning would require access to meet this best practice.
The City is moving towards a paperless system for all stages of permitting and development review.	✓		Except for some Fire permits, the majority of applications are now submitted electronically.
The permitting system generates clear, user friendly reports on permitting activity which can be posted to the internet.	✓		The new Accela program has this feature and should be utilized. Knox Planning can generate workload reports from their database.
Development staff has access to applicable GIS layers.	✓		KGIS is a robust program that is readily available to staff and the public. Ideally, information will be linked and embedded with individual address/parcel files and permits in the new Accela software program.

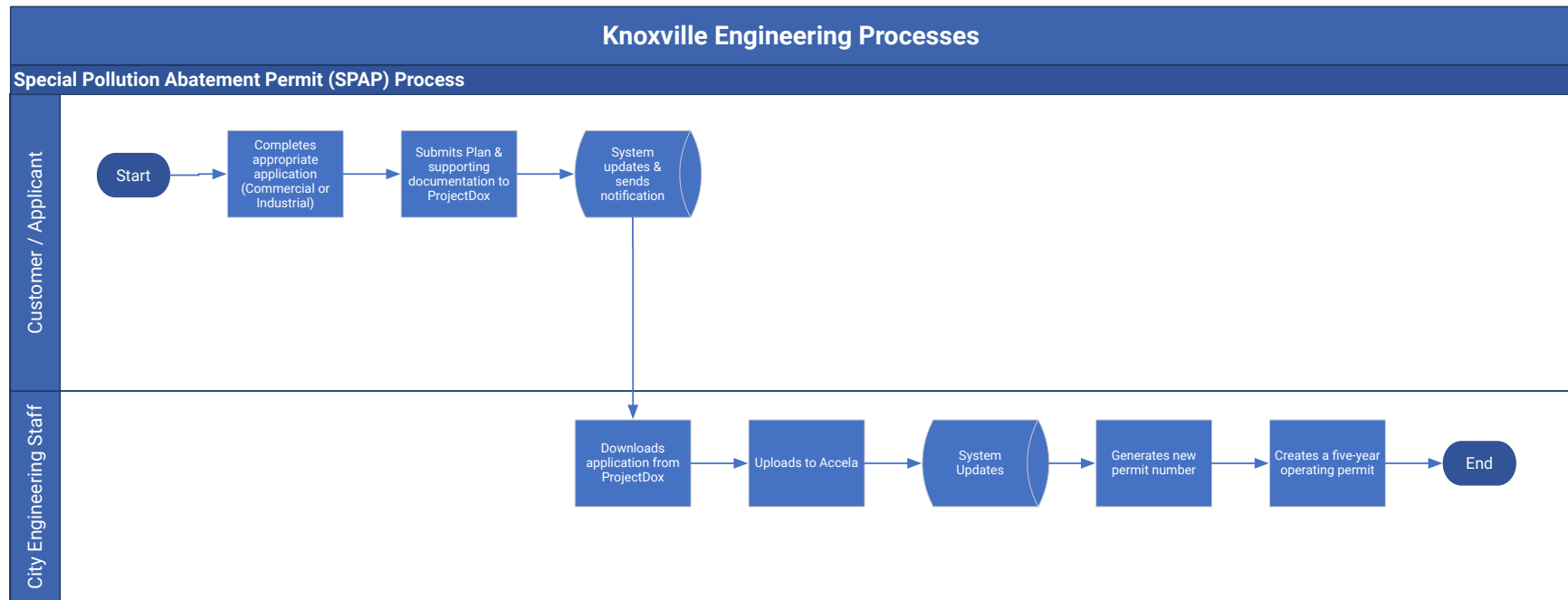
Best Practice / Operational Target	Meets Target	Does Not Meet Target	Improvement Opportunity / Notes
The general public can look up zoning information, flood zones, and other pertinent information using Web GIS.	✓		This access is provided by KGIS, which is a robust system.
Inspectors enter inspection results and correction items in the field via tablet and have it instantly available and viewable on-line.	✓		Plans Review and Inspections Fire, and Engineering inspectors have this capability, but may not consistently use this feature.
The permitting software system is utilized as a database for all development related information for the parcel/address.		✓	For all Plans Review and Inspections applications this will serve as their database.
One software system is utilized for all permitting, inspection, and code enforcement functions in the City.		✓	Fire has a separate platform for their annual inspections and Knox Planning will not be provided access to the new permitting system (Accela).
Permitting software users are provided with new user training upon hiring with the City.	✓		It was indicated that with the new software system, onboard training will be provided.
Permitting software users are provided with training when new features of the permitting software are released.	✓		It was indicated that moving forward as updates are released that staff will be provided with appropriate training.
Training sessions are held with the public prior to implementation of the new software program.		✓	Plans Review and Inspections staff should hold training sessions prior to rolling out the new software program.
Regularly scheduled training sessions are held for the public regarding use of the online permitting system.		✓	Provide scheduled training sessions for the public on how to use the software and use this as an opportunity to receive feedback on the system's functionality.

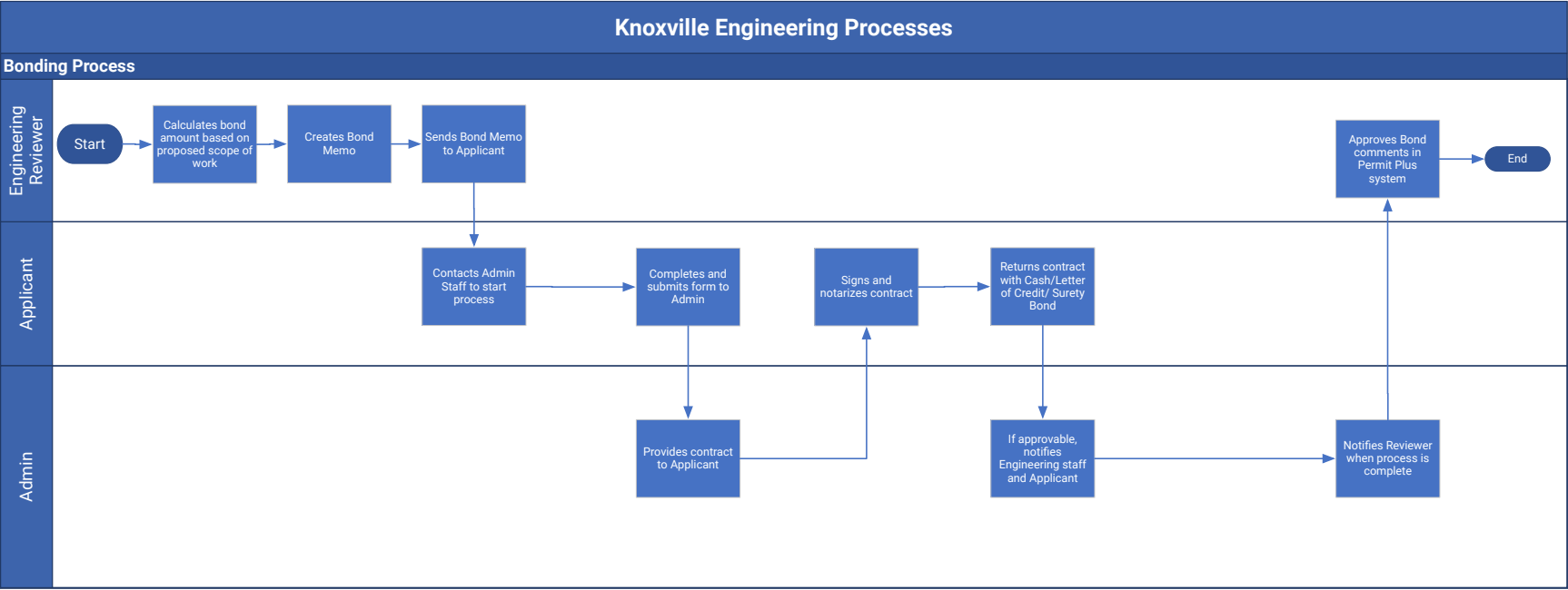
Appendix D: Process Diagrams

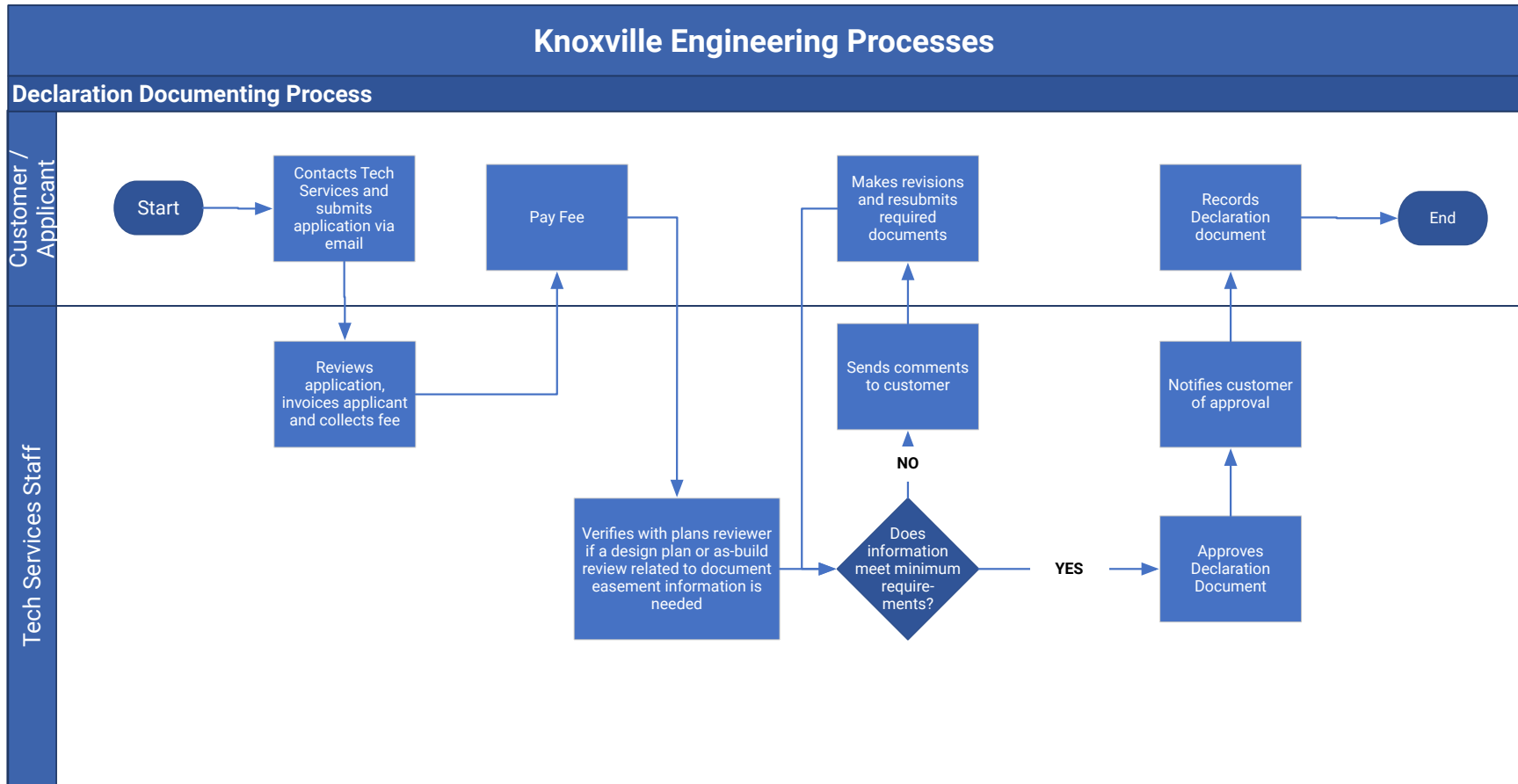
(1) Engineering Process



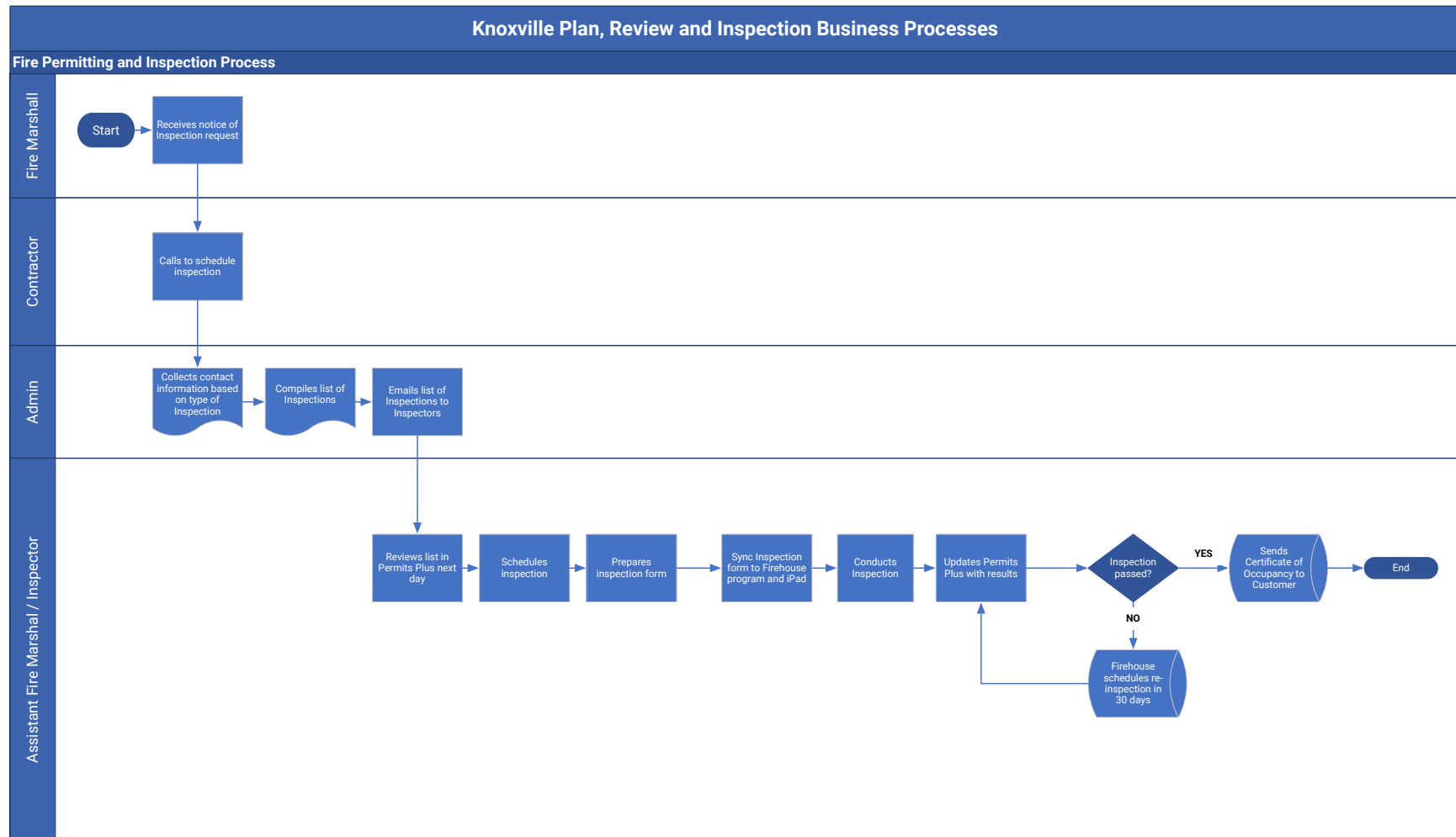


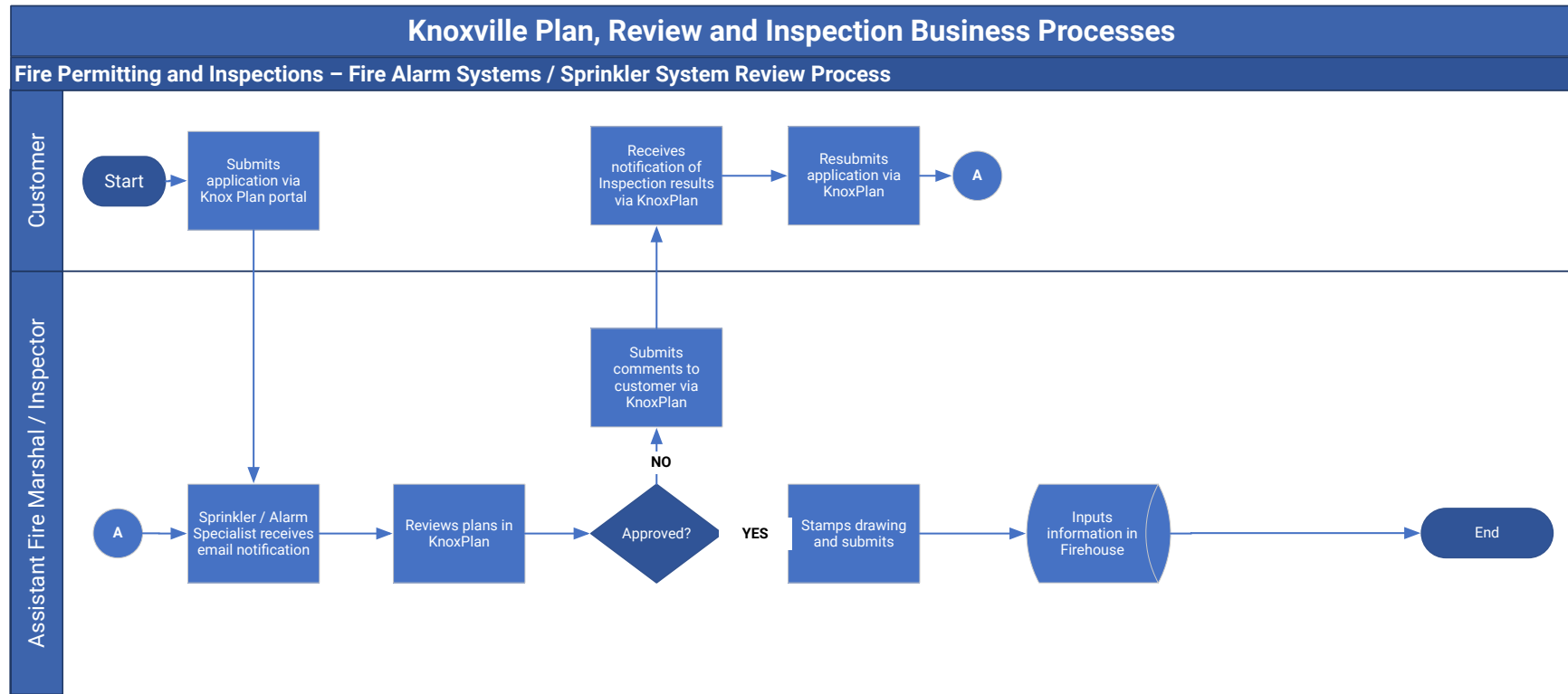


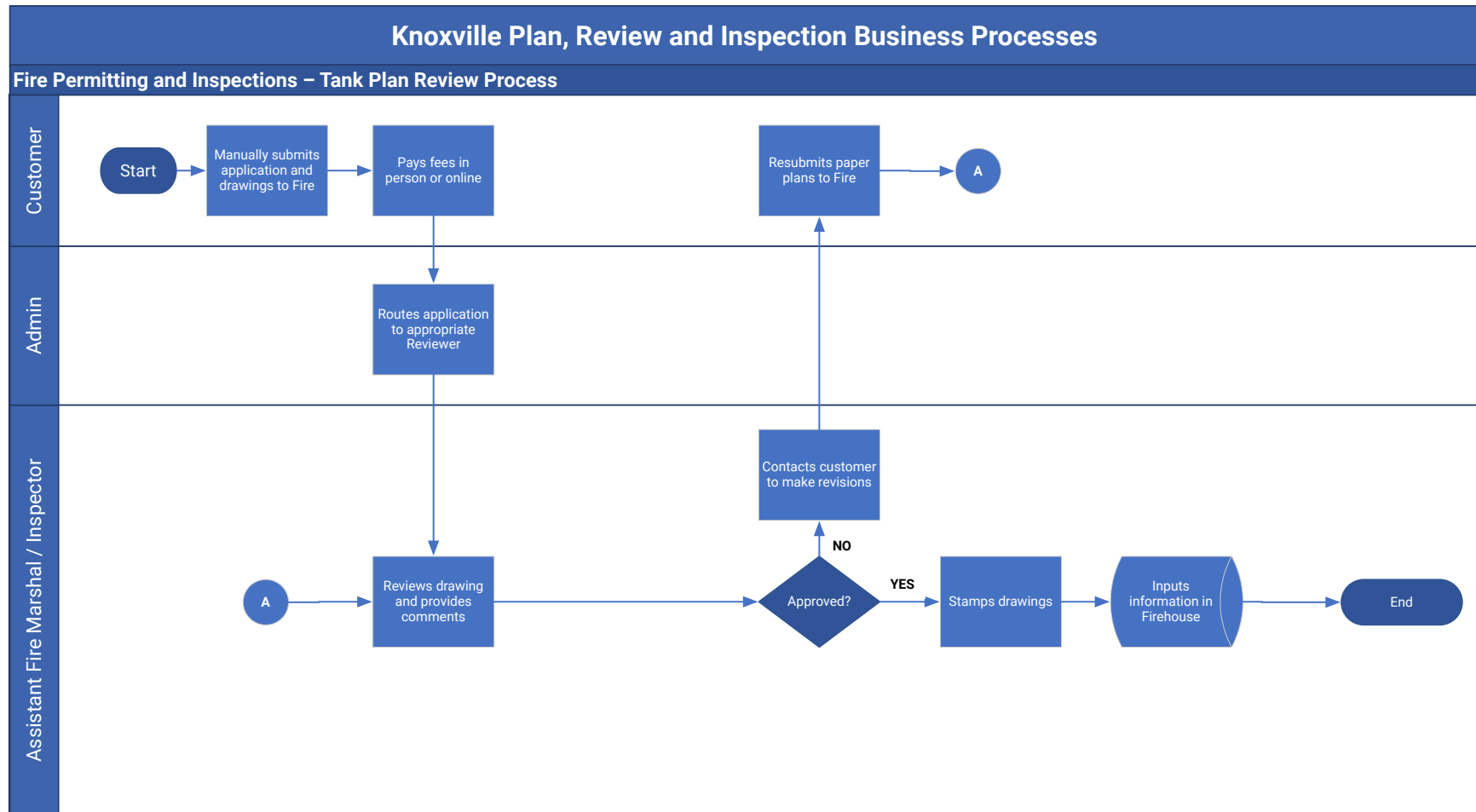




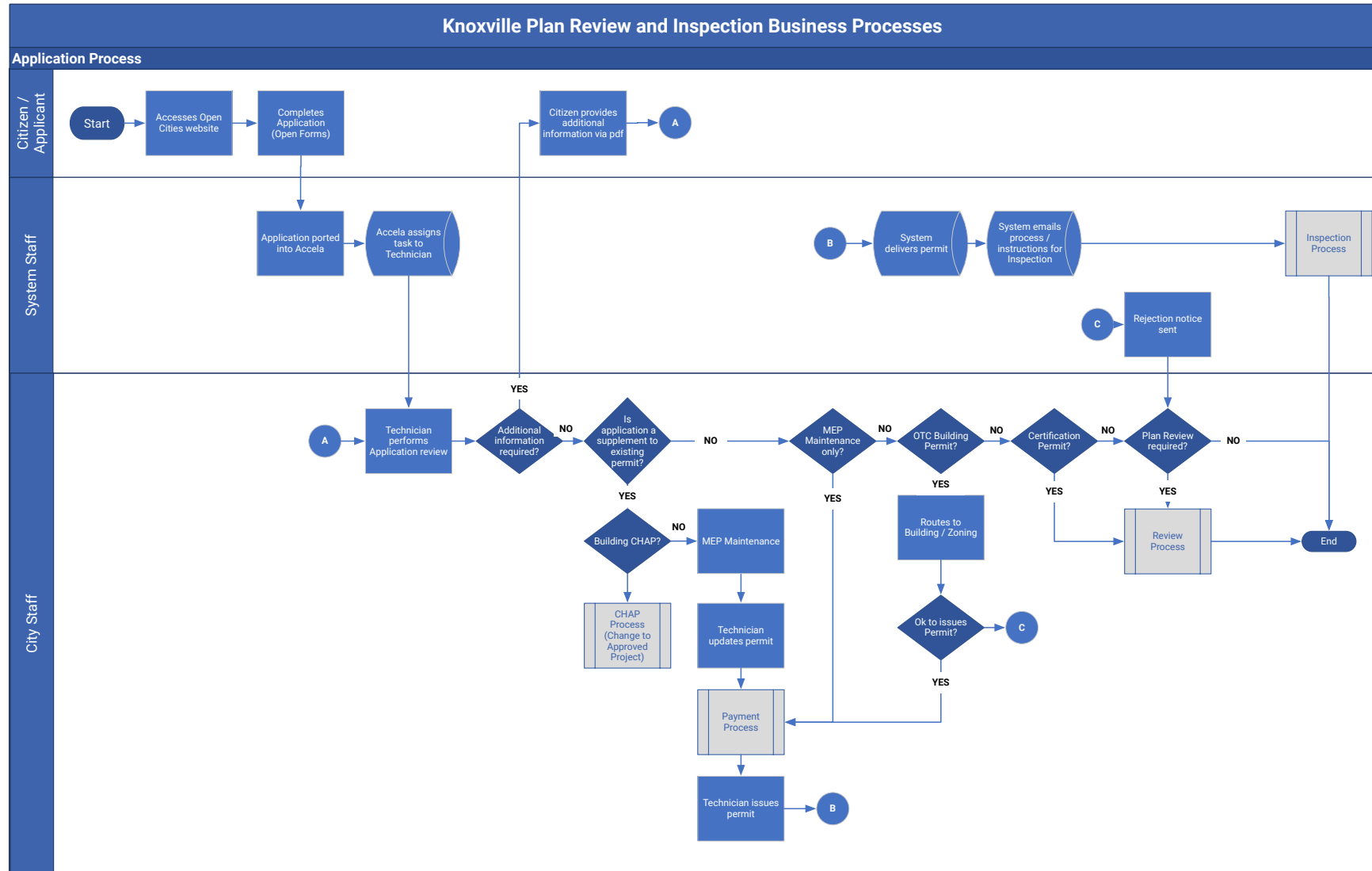
(2) Fire Processes

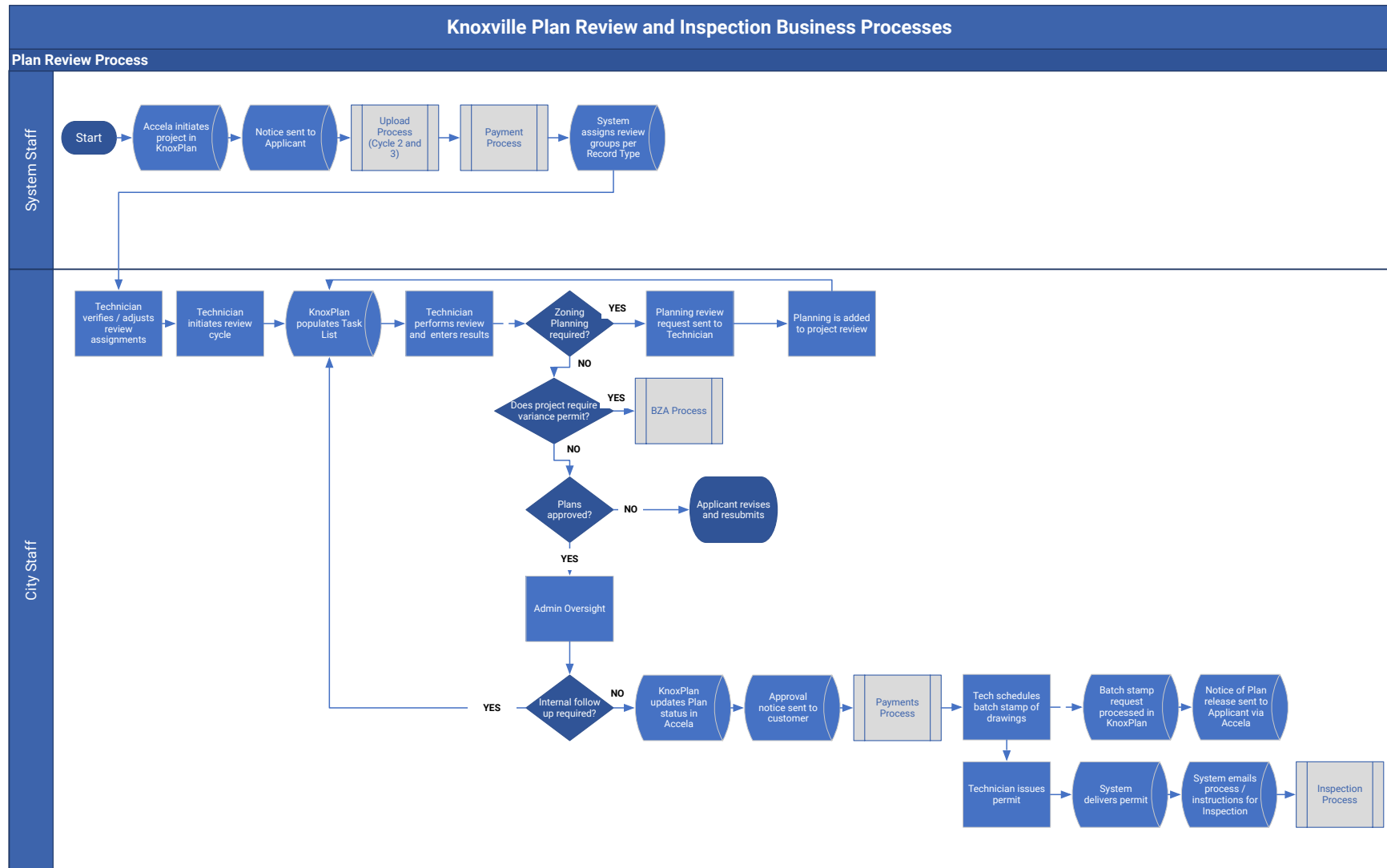


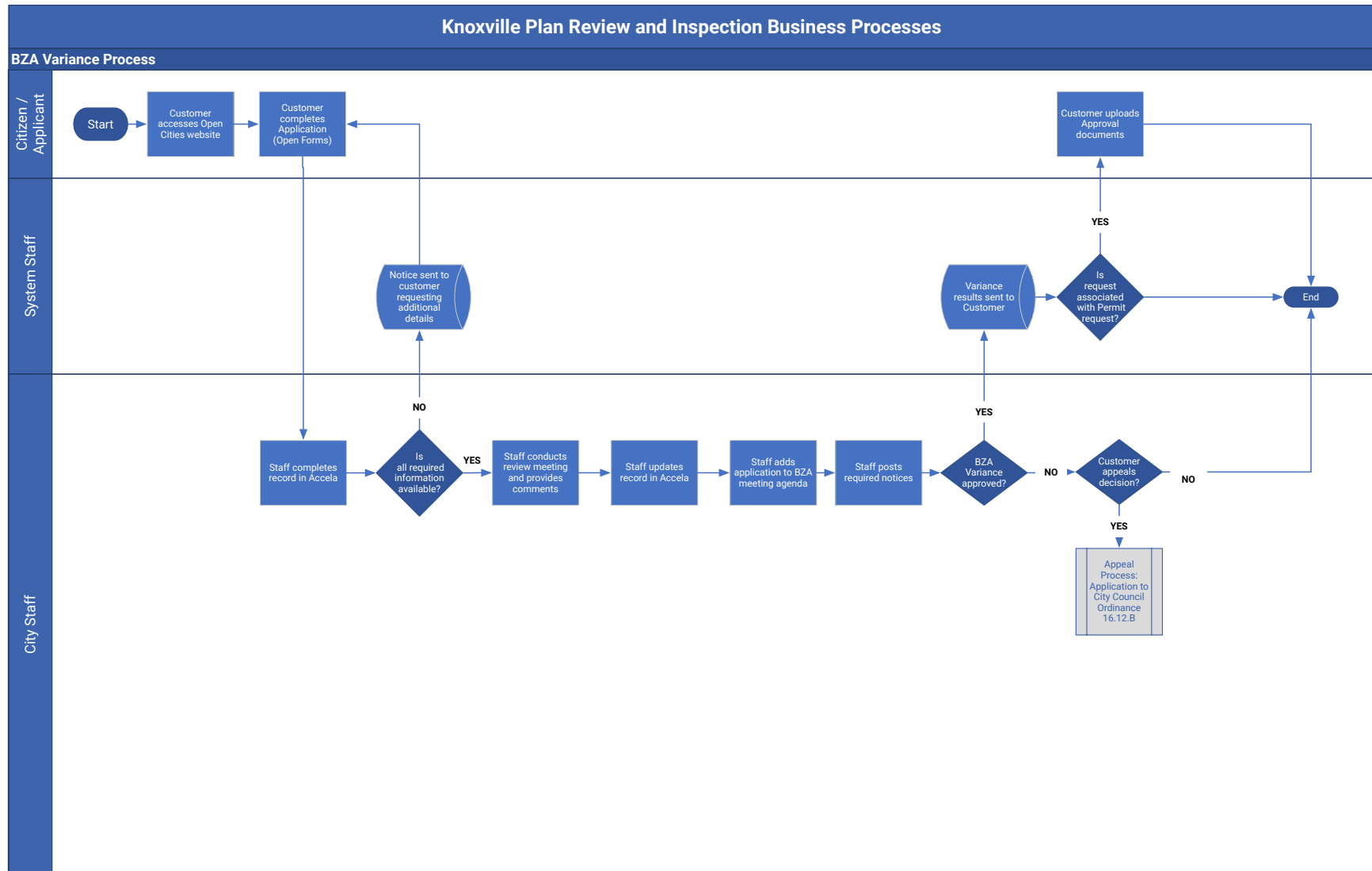


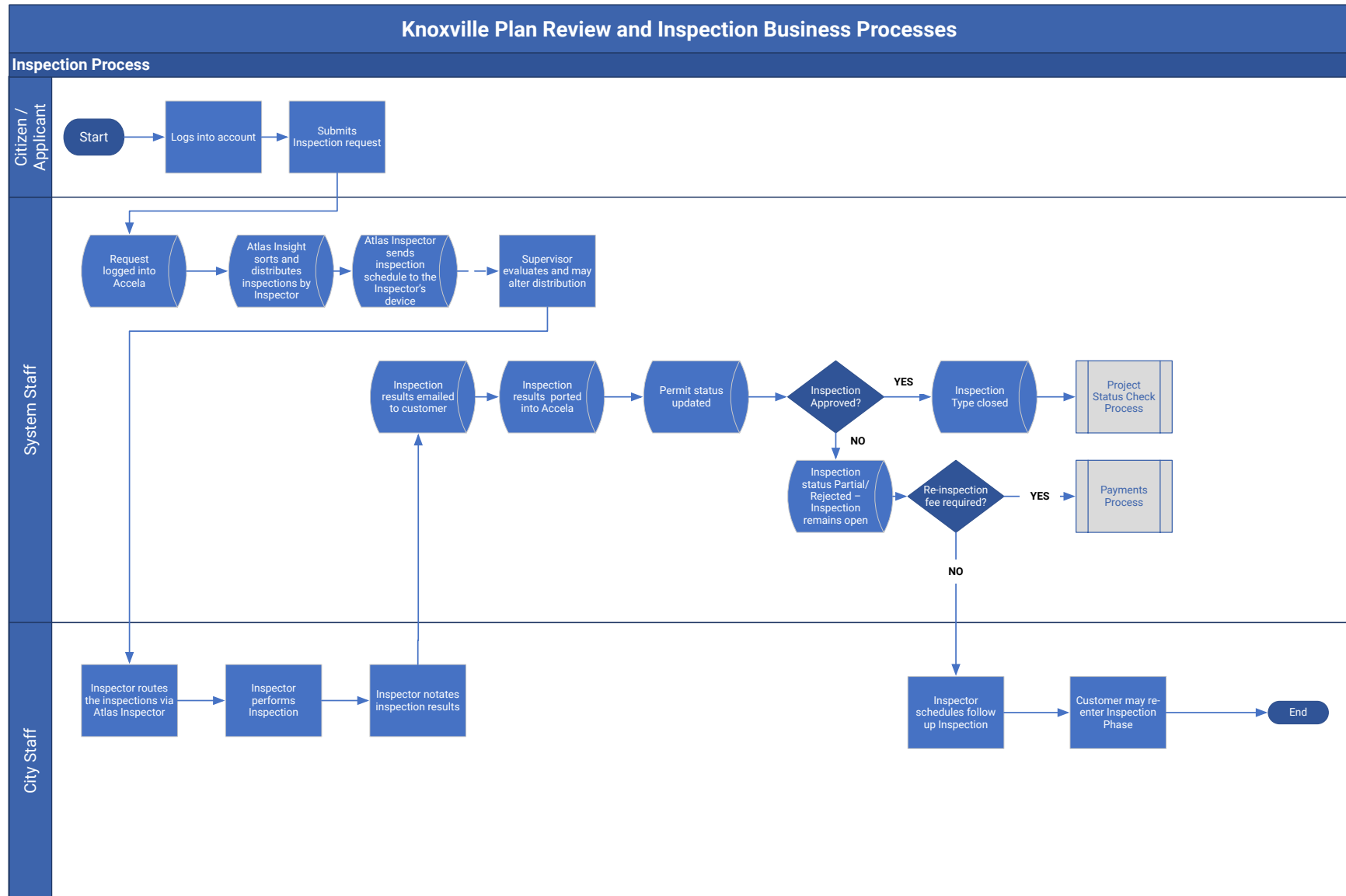


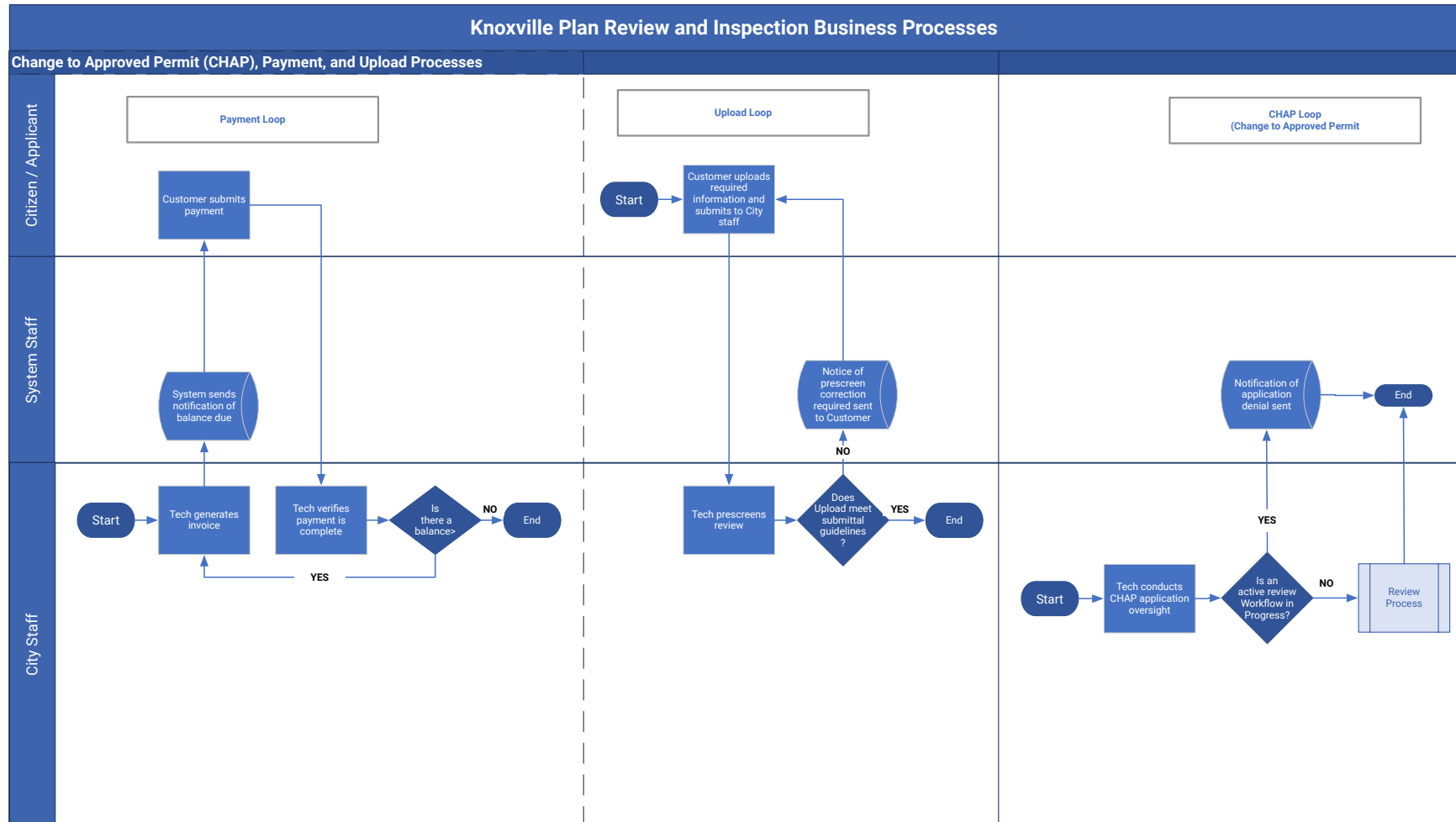
(3) Plans Review and Inspections Processes



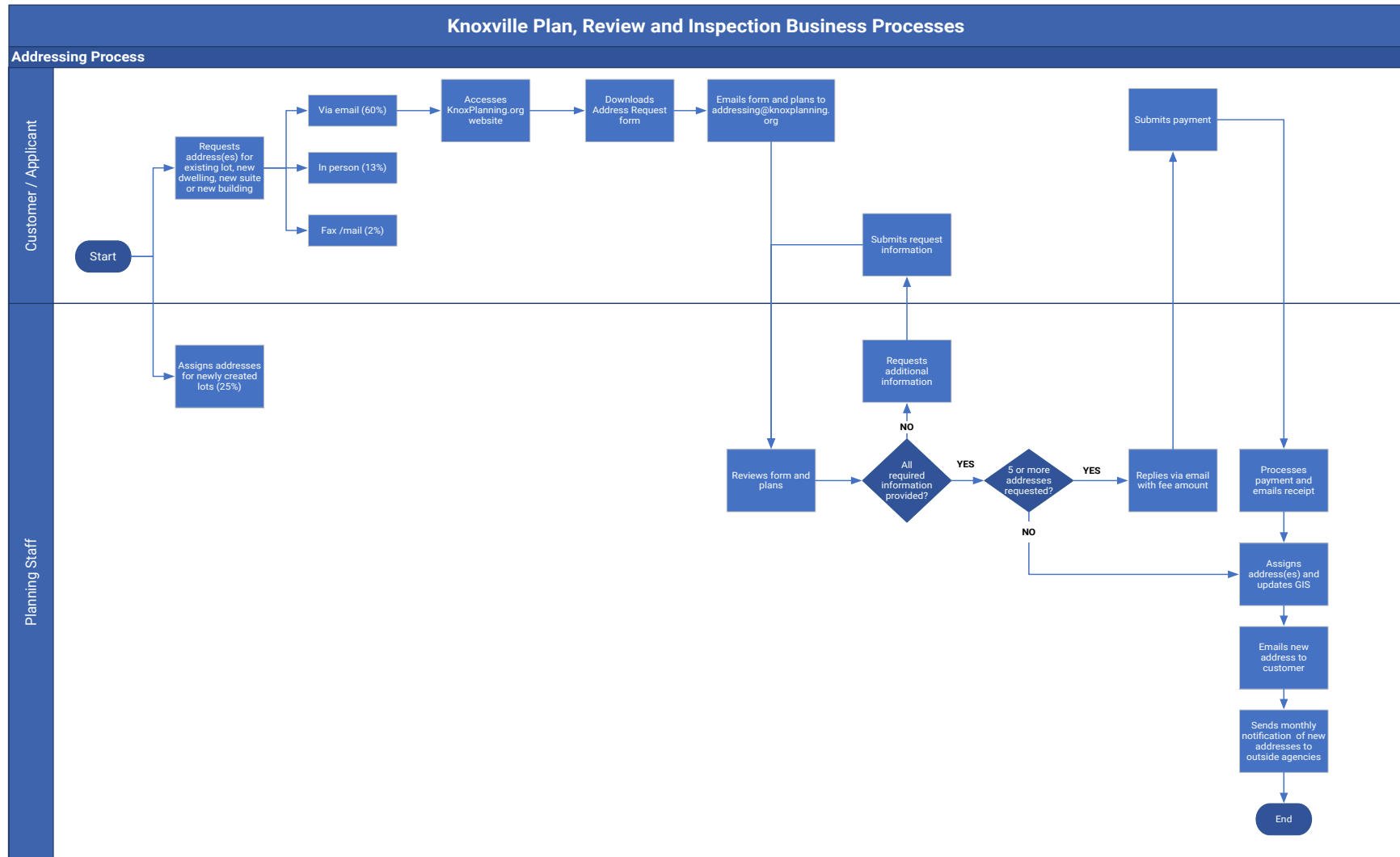


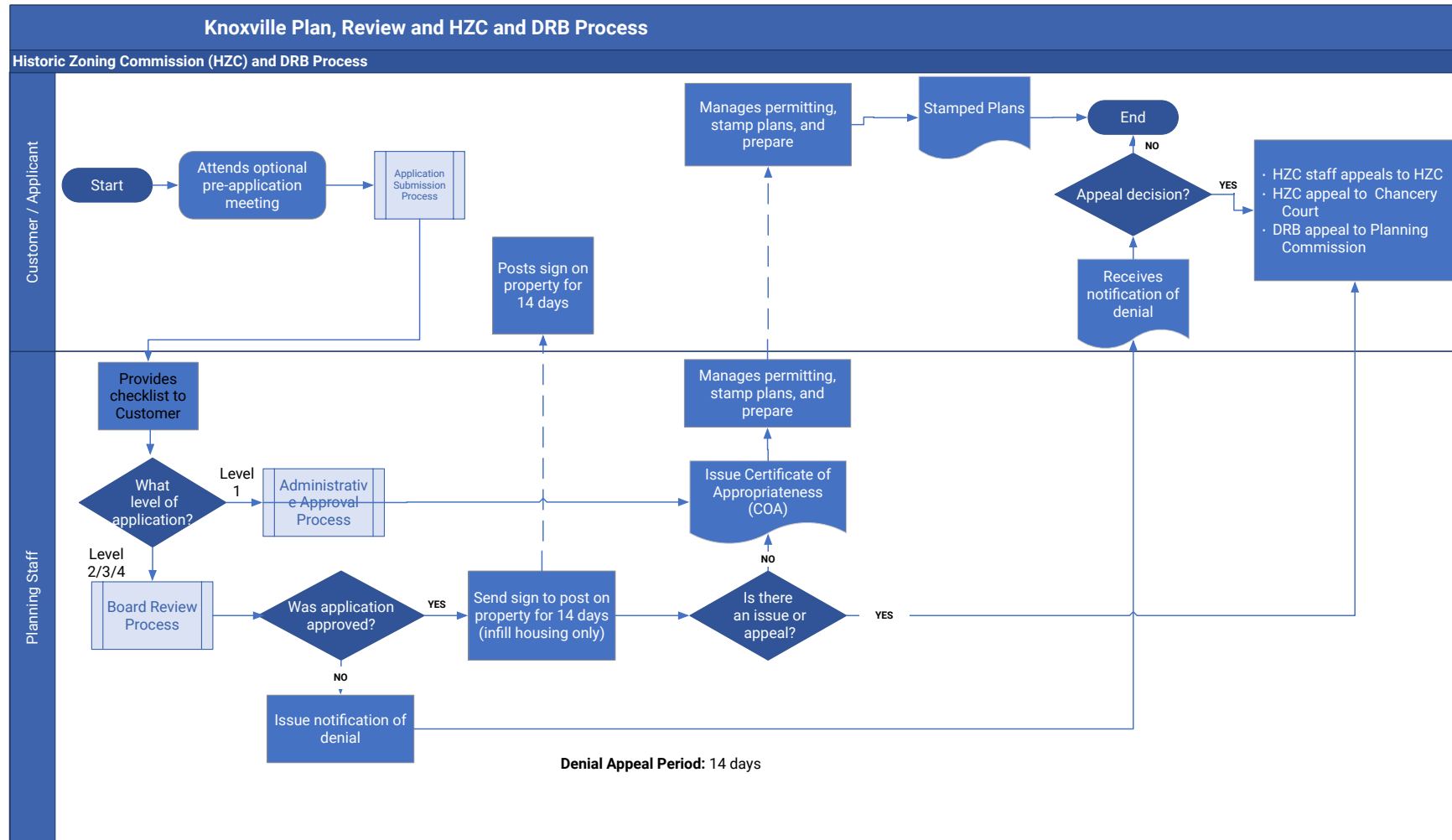


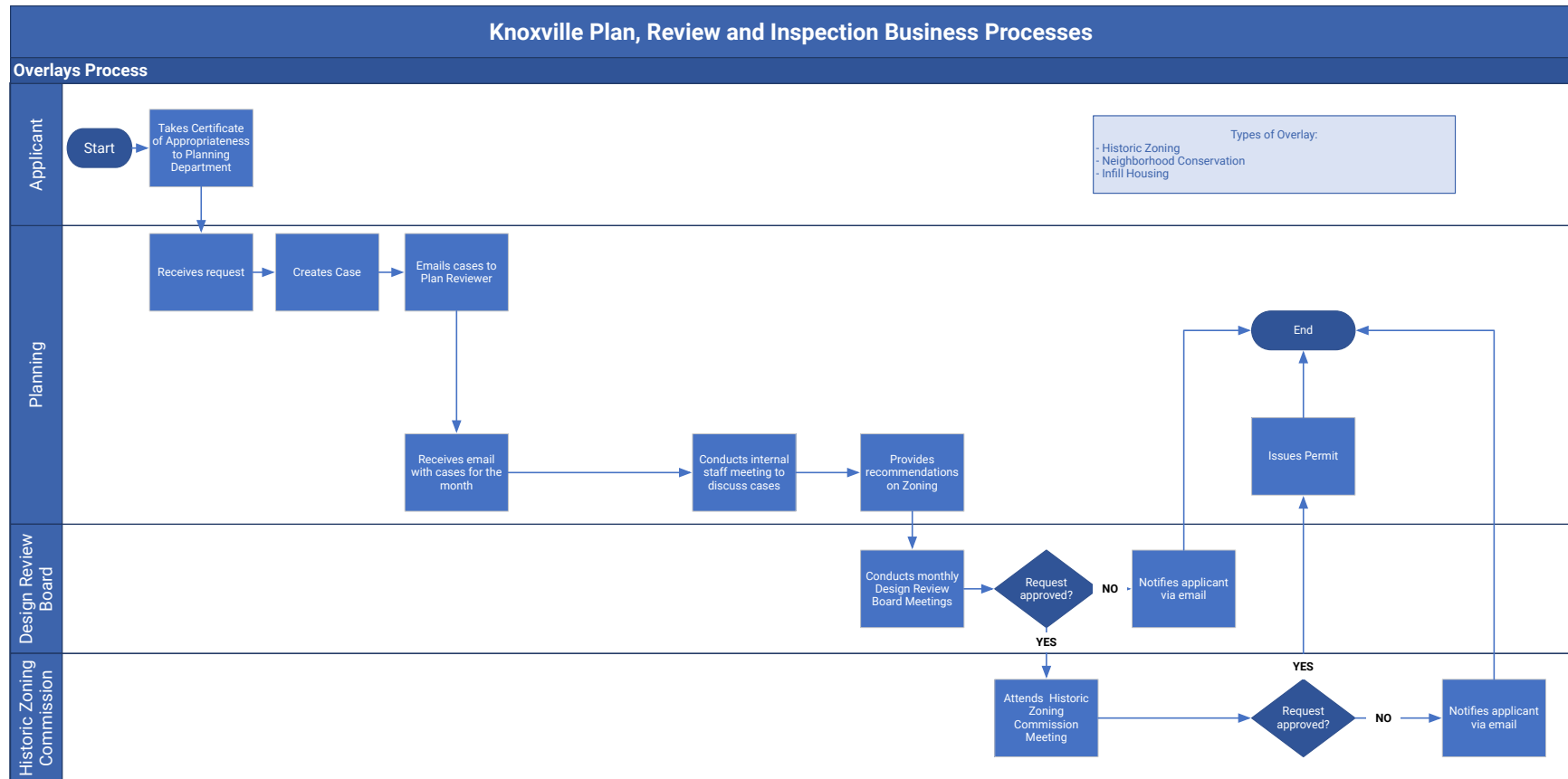


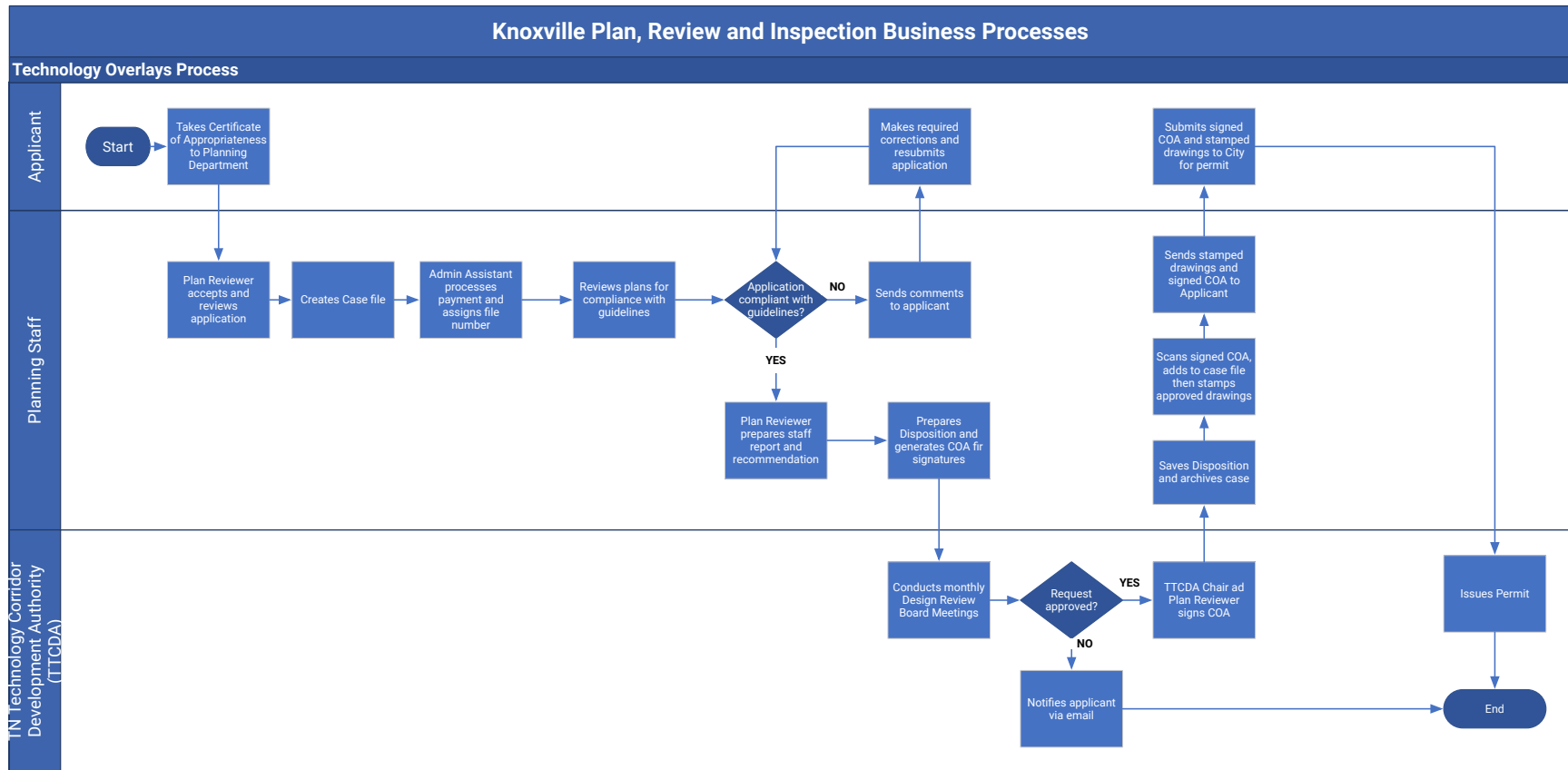


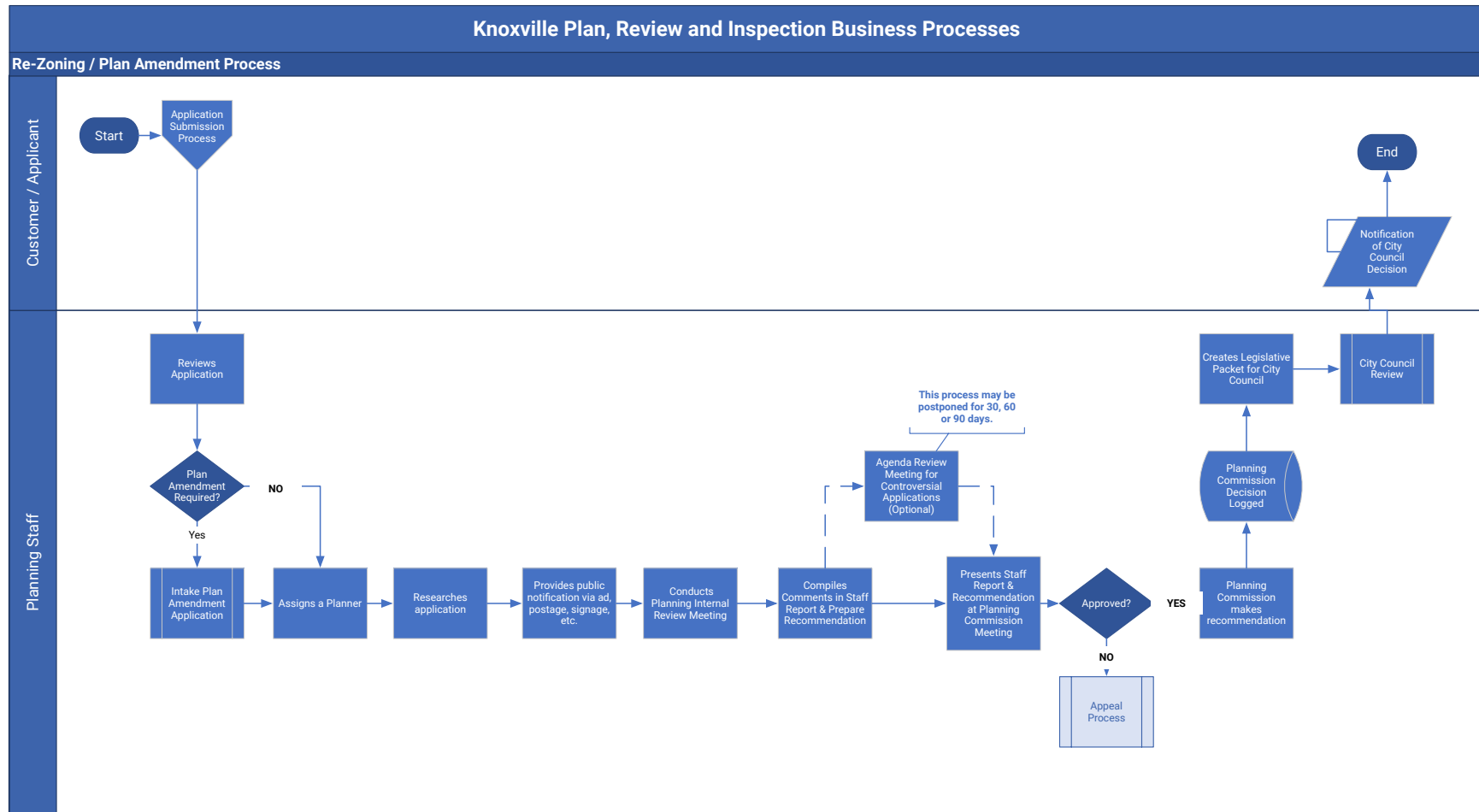
(4) Planning Processes







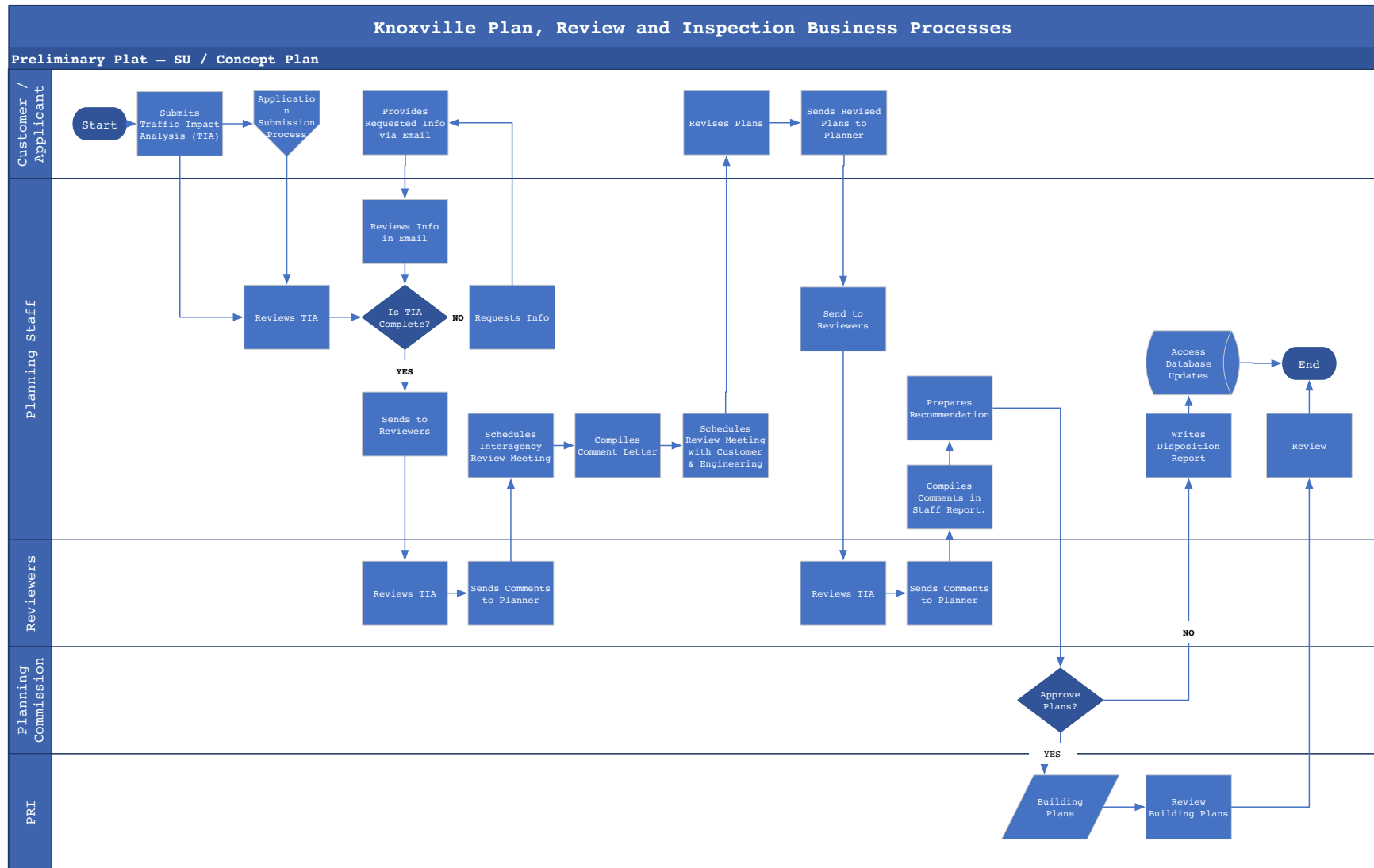


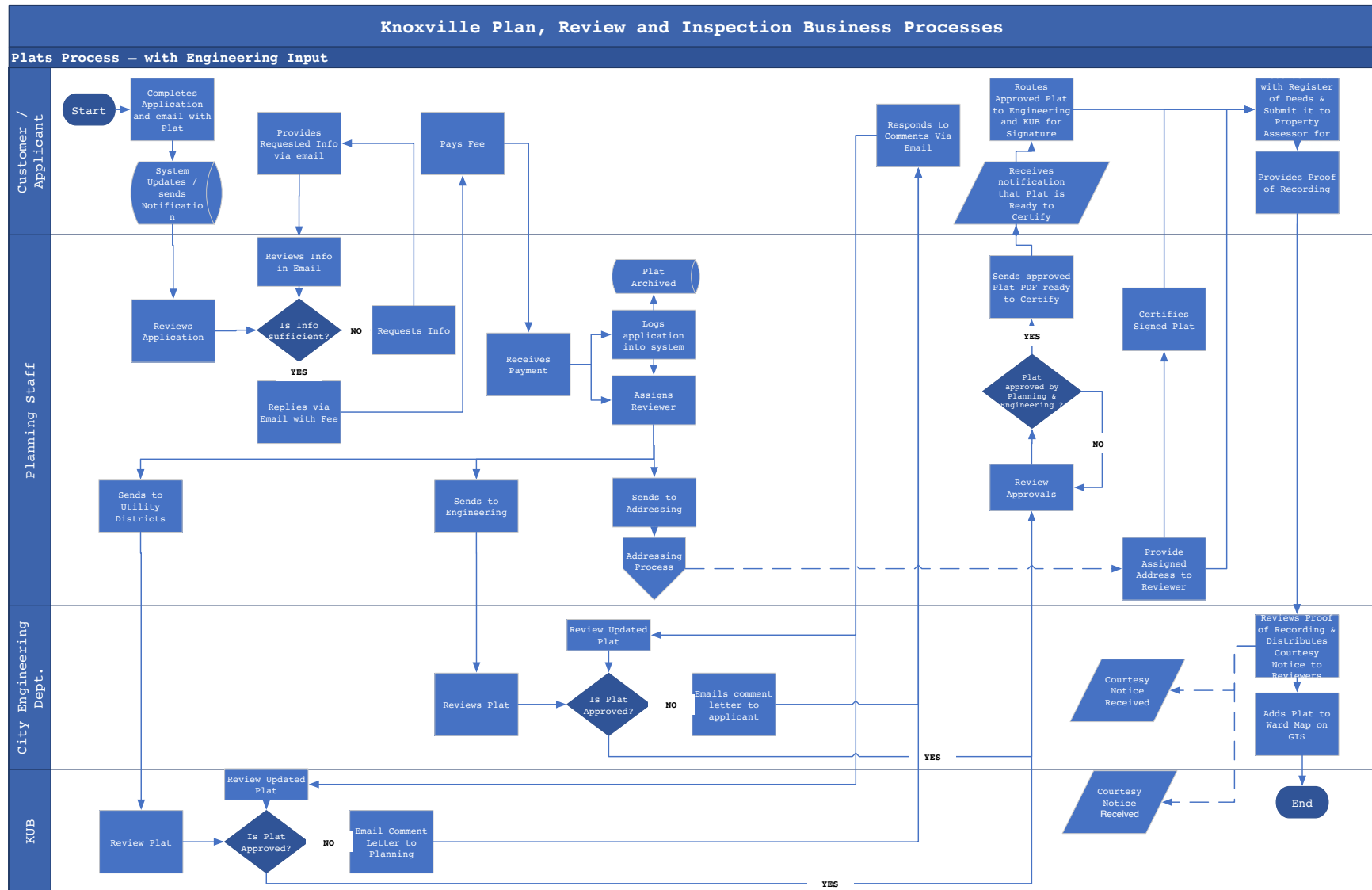


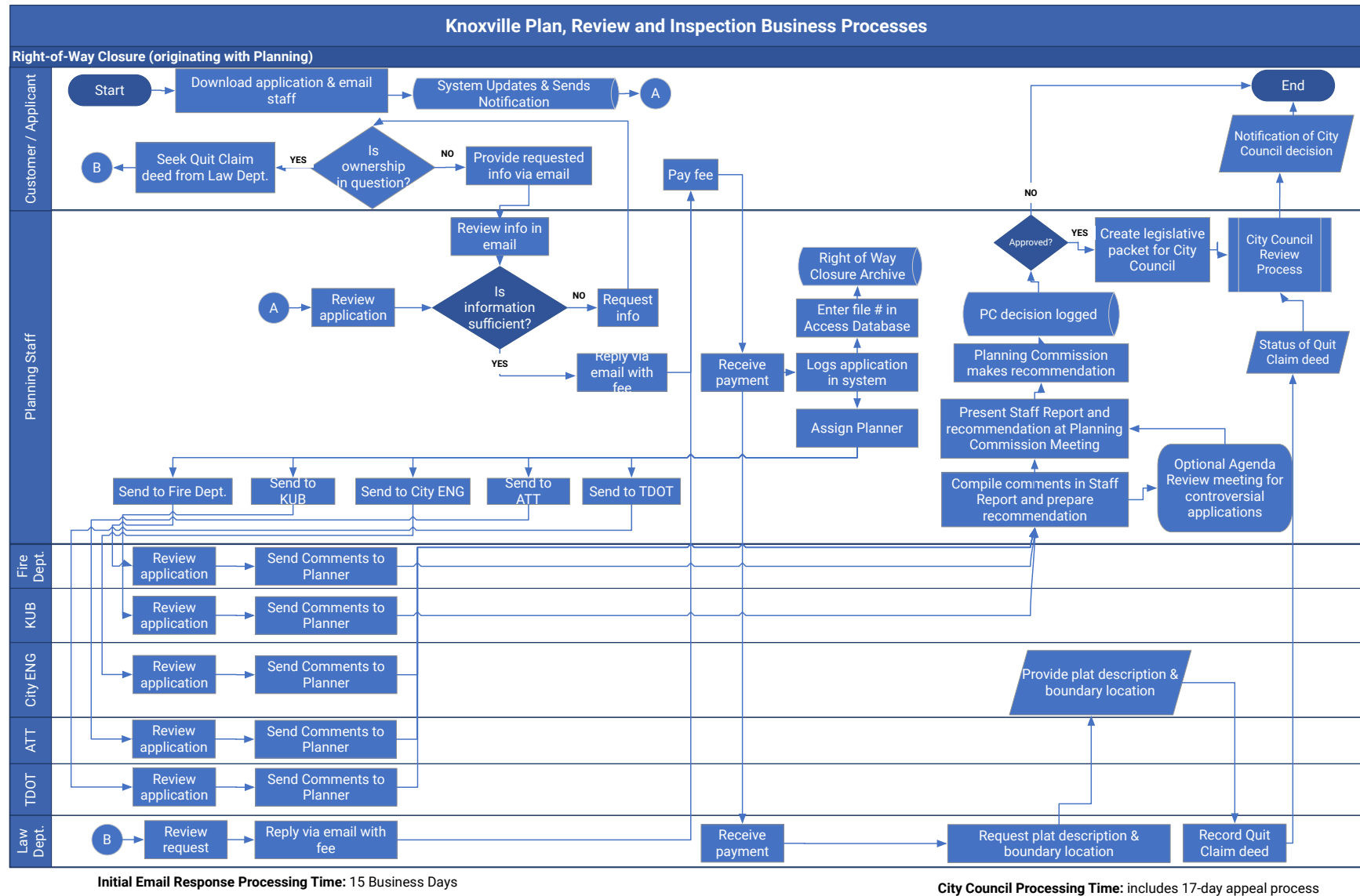
Time to Assign a Planner: 1 week

Note: Sector or 1-Year Plan Amendments are done concurrently.
Rezoning requires a Board vote.

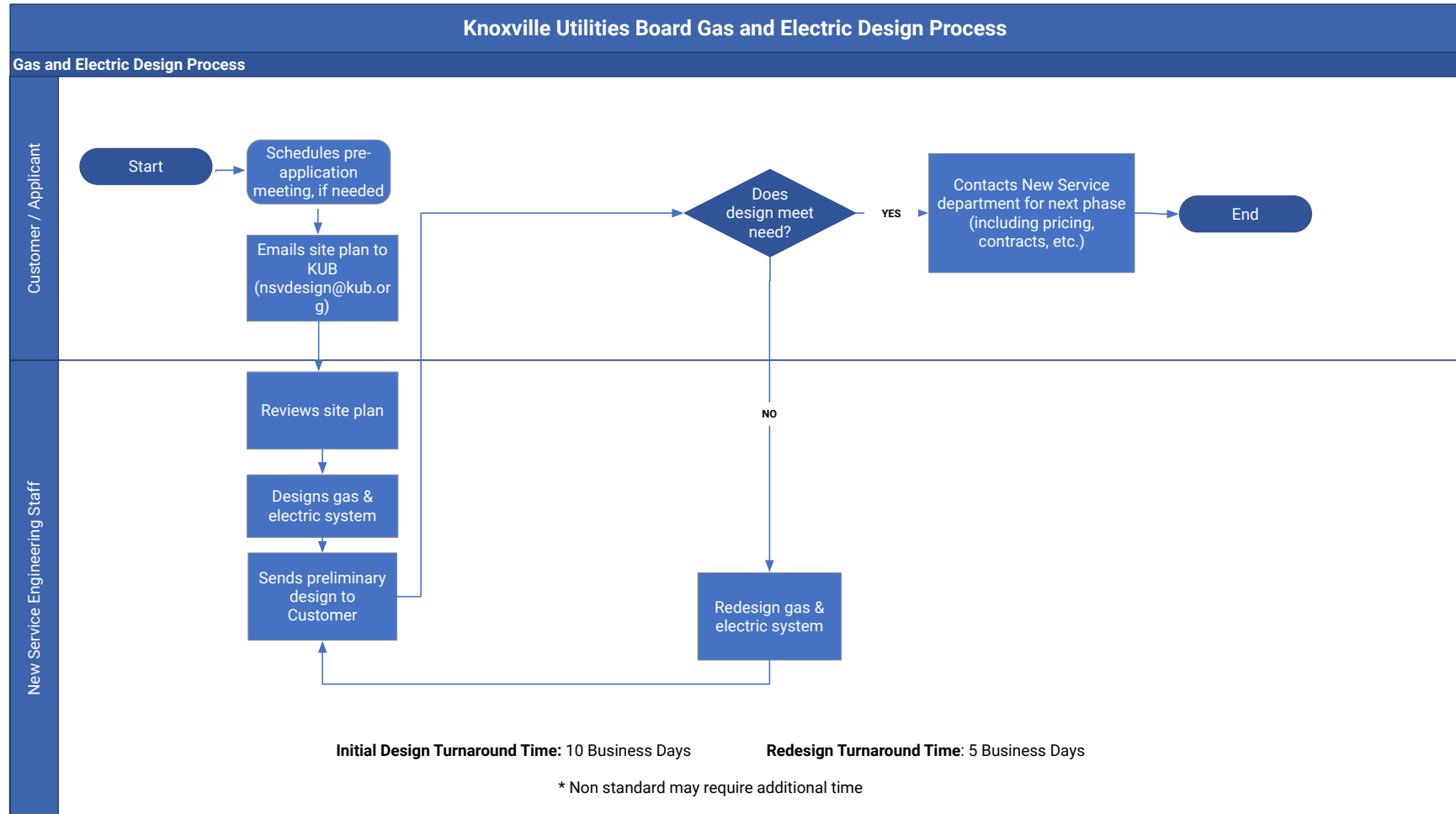
City Council Processing Time: includes 17-day appeal process

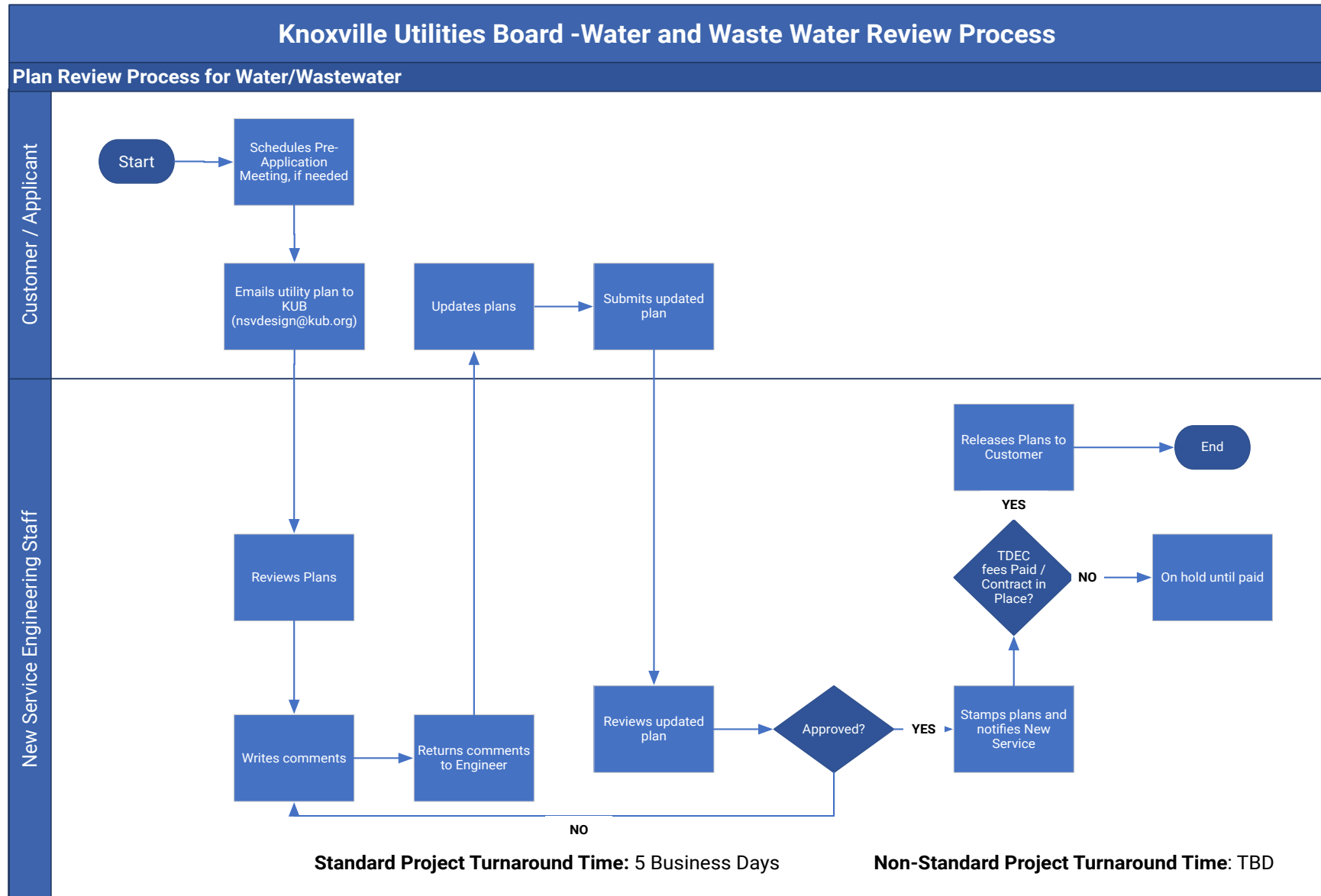






(5) KUB Processes





(6) Knox County Health Department Processes

