Fall 2019 Capital Improvement Program (CIP) Worksessions

Public Infrastructure

November 7, 2019
AGENDA

• **Public Infrastructure**
  • Recreation & Parks
  • Transportation
  • Sanitary Sewers and Stormwater Management
  • Waterfront Implementation & Flood Mitigation
NEXT STEPS

• This worksession focuses on the State of Good Repair and major projects underway or proposed for Public Infrastructure

• During this worksessions, consider the following:
  • The capital projects discussed, relative to the overall affordability of the CIP
  • Alignment of these projects with City Council’s priorities
IDENTIFIED CITY CAPITAL NEEDS
SUMMARY OF FY 2021 – FY 2030 PROJECT SUBMISSIONS

FY 2021 – FY 2029 Gap between funding requests and funding planned in Approved CIP for City and Schools: $646.7 M
Recreation, Parks & Cultural Activities (RPCA)

CIP Worksession – Public Infrastructure

November 7, 2019
What We Do
RPCA Strategic Plan 2018-2023

**Mission**
We enrich the City of Alexandria by creating meaningful experiences through public space, cultural activities, and programming.

**Vision**
We will improve the well-being of every person in our community by connecting them to each other and their environment.
RPCA Strategic Plan Focus Areas

Connect the Community

Improve Well-Being

Invest in Our Natural Environment

Support a Responsible and Engaged Workforce
State of Good Repair

State of Good Repair is the point where all parks and recreation or cultural facilities are safe, clean, accessible, reliable and open to the community for their intended purposes.
Current State: Reinvestment
Current State:
Partnership Projects
Current State: Aquatics
Current State: Athletic Fields
Execution Gaps

Fund maintenance of:
- Recreation Centers
- Newly acquired facilities from City approved Small Area Plans
- Recently renovated parks
- Newly acquired public art
Execution Gaps

Fund current CFMP programs with an increase for escalation.

Increase CFMP funding for public pools and public art to address existing infrastructure needs.

Increase CFMP funding to include contingency to address market fluctuations and new regulations.

Fully fund requests to complete Citywide, Neighborhood and Pocket Park Plans.
Community Satisfaction Measures

**Parks**
- 2002: 79%
- 2011: 86%
- 2013: 84%
- 2015: 85%
- 2017: 86%
- 2019: 90%

**Programs or Events**
- 2002: 90%
- 2011: 90%
- 2013: 93%
- 2015: 90%
- 2017: 93%

**Recreation Facilities**
- 2002: 95%
- 2011: 93%
- 2013: 90%
- 2017: 97%
Questions
Overview/CIP Sections to Discuss

• Transportation & Transit
• Sewers

West End Transitway
Key Discussion Items

• Consider the following:
  - The capital projects discussed relative to the overall affordability of the CIP
  - Alignment of these projects with City Council’s priorities
  - What ‘state of good repair’ looks like
City Infrastructure

4 Metrorail stations
33 bus routes with 765 bus stops
560 Lane Miles of Roads

254 Signalized Intersections
429 miles of storm & sanitary sewer
29 City Maintained Bridges

3,500 fire hydrants
270 Parking Meters
10,000 streetlights

17 Crosswalks with flashing beacons
276 mile of water mains
319 miles of sidewalks
Key Performance Indicators

City Strategic Plan

Eco-City Alexandria

Non-SOV Travel
Increase the percentage of commuters using alternative transportation options

Safety
Reduce the number of:
* All traffic crashes
* Severe injury and fatality crashes
* Pedestrian and bicycle crashes

Environment
Chesapeake Bay Water Pollution Reduction
Greenhouse Gas Emissions

State of Good Repair
Increase Alexandria’s Pavement Condition Index
Residents’ rating of sidewalk conditions
Planned Investment Priorities:

- State of Good Repair
- Meeting Federal & State Mandates
- Public Safety
- Mobility & Congestion Reduction
- Sustainability & Adapting to Climate Change
Where we plan to invest

FY21 – FY30 Transportation Priorities

- Smart Mobility - $20.1M
- Other Transit - $92.5M
- DASH - $120.8M
- WMATA - $150.2M
- State of Good Repair - $95M
- Multi-Modal/Safety - $34M

- Safety 6%
- Smart Mobility 4%
- Other Transit 18%
- WMATA 29%
- DASH 24%
- State of Good Repair 20%
Where we plan to invest

FY21 – FY30 Sewer Priorities

- State of Good Repair - $58.3M
- Future Growth and Capacity - $2.2M
- Regulatory Compliance - $68.2M
- Flooding and Drainage - $38.6M

State of Good Repair - 35%
Flooding & Draining - 23%
Regulatory Compliance - 41%
Growth Capacity - 1%
City Transitways

✓ Funding: State & Regional
✓ Service Expansion with Economic Development Impact

Corridor A (Metroway)
  • Awarded $5m (HQ2) for extension

Corridor B (Duke Street)
  • Awarded $12m for planning
  • Requested up to $75m in FY24-25 NVTA

Corridor C (West End Transitway)
  • Awarded $73m for design, buses, spots
  • Awarded $3M operating (AT1 Plus) with I-395 funds, buses every 10 minutes
  • Begin Phase 1 design in 2020; operations 2028
Phase 1:
- $73m (State/NVTA grants)
- Mostly shared lanes with queue jumps & transit signal priority
- No dedicated transit lanes
- 20 new buses
- Begins 2028 (FY 24-45 funds)

Phase 2:
- Full build (pictured)
**DASH Electrification**

✓ Funding: State & Regional
✓ State of Good Repair (Replacement follows established schedule)

- 6 Electric Buses from **VW Mitigation Fund** to be delivered mid-2020

- 20 additional Zero-Emission Buses funded:
  - NVTA 70% and SmartScale by FY25
  - 100% of DASH replacement buses to be Zero-Emission by FY27

- Facility & Utility Upgrades starting next year to support Electric fleet

- Total CIP Proposal (Entirely Restricted):
  - $17M for FY21-26 (Smart Scale, NVTA)
  - $64M over 10-year CIP lifespan (NVTA 30%)
Drainage, Flooding and Chesapeake Bay Pollution Reduction

✓ Funding: Stormwater Utility Fees
✓ State of Good Repair & Mandated

• In September, Council approved Phase 2 Bay action plan & City is ahead of schedule on meeting mandates

• More intense and frequent rainfall events are leading to significant increases in requests for drainage and flooding

• $34.6 million programmed in storm sewer resiliency, capacity improvements & drainage/flooding
Bridges

✓ Funding: General Fund (Potential VDOT Grants)

✓ State of Good Repair: Federally mandated, biannual inspection for 21 city bridges – reportable to VDOT. All City bridges in satisfactory condition.

• FY 2019: Long-term maintenance plan developed. New CIP request reflects needs identified in plan:
  • Projected 10-year cost = $25M (inspection, corrective and preventative work)

• City may cost share for replacement of two Arlington County bridges crossing Four Mile Run
  • Bridges in Arlington’s inventory but historical cost sharing
  • City share of West Glebe may be up to $6M in FY 2021
  • City share of the Arlington Ridge may be up to $14M (FY 2022-23)
  • Proposal dependent on Arlington cost share of Route 1 and Potomac Avenue

West Glebe Road Bridge
✓ Funding: State & Regional
✓ Service Expansion with Economic Development Impact

Applying information technology to roads, traffic signals and transit to manage congestion, make buses fast & reliable, and optimize the road space we have
2009 Waterfront Flood Mitigation Study
2014 Schematic Landscape and Flood Mitigation
2019 – Current Design Concept

- 100'
- 80'

3' x 5' CONCRETE CAP

2x6 MODIFIED WOOD DECKING W/ 3x12 JOISTS
Φ 1'-4" O.C. TYP.
BOARDWALK BOAT CLEAT

3"x12" ROUGH SAWN TIMBER FENDER, TYP.
TIMBER PILE NOTCHED TO ACCEPT DOUBLE 3x12 GIRDER, TYP. (SEAL CUT END AND FASTEN W/ THROUGH BOLTS)

#57 STONE FILL, TYP.
12" DIA. TIMBER PILE Φ 10'-0" O.C. (COORDINATE SPACING W/ BATTER PILES, TYP.)

SHEET PILE, TYP.
BATTERED H-PILE, TYP.
EXISTING BULKHEAD, TYP. (LOCATION VARIES, SEE BULKHEAD ALIGNMENT PLAN)
Current Program Costs

- Current budget (FY 2021) = $ 50.2 million
- Funding required = $ 122.0 million ($71.8 million add’l)
- Increases from 2016 CIP:
  - Construction cost basis due to scope refinement, new design information, market increases (cost and competition).
  - Escalation to mid-year of construction – 10 years from original estimate.
Cost Drivers – new information

- Geotechnical investigations
- Continued stormwater and pumping design
- Continued bulkhead analysis
- Permitting and mitigation
- Interactive fountain and equipment
- Electrical infrastructure coordination
Next Steps

- Continue with Progressive Design-Build (PDB) process.
- Concept review:
  - Resiliency and climate change
  - Current best practices
  - Cost
- Community process to validate project priorities.
USGS River Elevation
July 2008 - Oct 2019
Maximum Daily Water Surface Elevation

Elevation

-1.0
-0.5
0.0
1.0
2.0
3.0
4.0
5.0
6.0

Date

10 yr WSEL
2 days/yr
33 days/yr
Process Schedule

2. Owner-advisor procurement: through February 2020
3. PDB RFP development: Spring 2020 – Late 2020
   • Cost validation
   • Criteria development to qualify PDB
   • Industry outreach
4. PDB procurement: Early 2021 – Late 2021
5. PDB phase 1 (design): 2022
6. Negotiate GMP: Late 2022 / Early 2023
7. PDB phase 2 (construction): Begin 2023