



# Stormwater Management Criteria, 2023 Adoption (SW1907)

Work Session Presentation - August 22, 2023

# Agenda

- Project Review
- June 2020 Feedback Survey
- Scope of Change
- Major Topics
- Public Comment
- Proposed Adoption Timeline
- Questions & Feedback



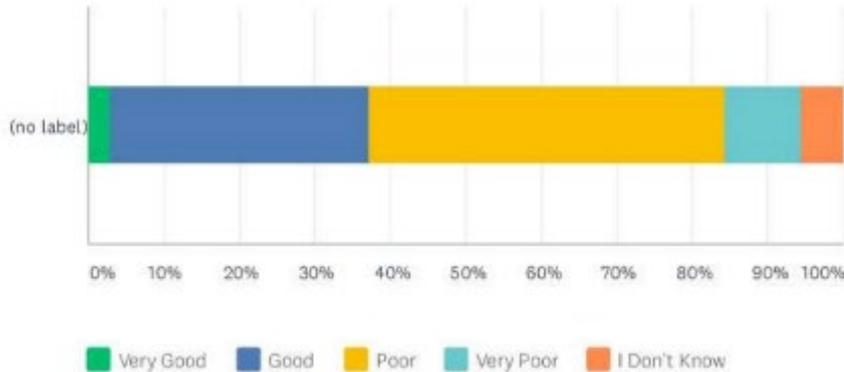
# Project Review

- City's current stormwater design manual dates to 1995 – Stormwater Management Master Plan (SWMMP). Periodic amendments made.
- Burns and McDonnell with BG Consultants selected in 2019 to assist City in updating the stormwater manual.
- Online Survey Conducted June 2020 – 70 respondents
- 1<sup>st</sup> Public Comment period from Sept to December, 2022. Public Meetings Held in October 2022
- Coordination with Manhattan Development Code Adoption 2021.
- Engagement from engineering, development and architectural community – follow-up visits/presentations made.
- 2<sup>nd</sup> Public Comment in progress now, closing September 7.

# 2020 Feedback Survey

Q3 How would you rate the overall function and condition of the stormwater systems in Manhattan?

Answered: 70 Skipped: 0



	HIGH PRIORITY	MODERATE PRIORITY
Handling Major Overflow Events/Floodplain Management	72.46% 50	21.74% 15
Detention and Retention Systems	47.83% 33	39.13% 27
Conveyance System of Pipes, Inlets & Ditches	47.06% 32	39.71% 27
Accuracy of Flow Estimates (Hydrology)	29.41% 20	41.18% 28
Natural Streamway Protections	34.78% 24	34.78% 24
Erosion Control from Construction Sites	28.99% 20	37.68% 26
Green Infrastructure/ Water Quality Enhancements	28.99% 20	33.33% 23
Yard Drainage and Subdivision Grading	21.74% 15	37.68% 26

# Scope of Changes



- Stormwater Management Criteria – complete rewrite of 1995 document
- Stormwater Standard Details – major updates
- Stormwater Construction Specifications – new document, previously just referred to KDOT or job-specific write-ups.
- Post-Construction BMP Manual – interim amendment.
- Design Submittal Worksheets – new tool

# Major Topics



- 30 years of Practical Updates
  - KDOT, Federal Agencies Standards, and Peer Kansas Cities
- Grading Plans and Overflow System Design – Major Source of Issues
- Detention Basin Design and Analyses
- Natural Streams Protection
- Flow Estimate Calculations – Updated Data and Eliminating Inconsistency – Managing Flood Risk
- Guidance for Submittals/Studies – “Right-sizing analyses – at right time”
- Integration with Water Quality/Environmental Regulations

# Highlight Topic - Grading



- Grading is the act of laying out the contours and shaping of the landscape post-construction
- Crucial to proper drainage, perhaps more important than pipes design
- Level of detail and clarity in plans now is often insufficient for review
- Grading issues are much easier to fix on paper than on the ground.
- Focus
  - General Grading Overall
  - Specific Focus on Key Lots
- Various duties among civil engineer, mass grading contractor, home builder & reviewers – new system gives clearer lines of communication.

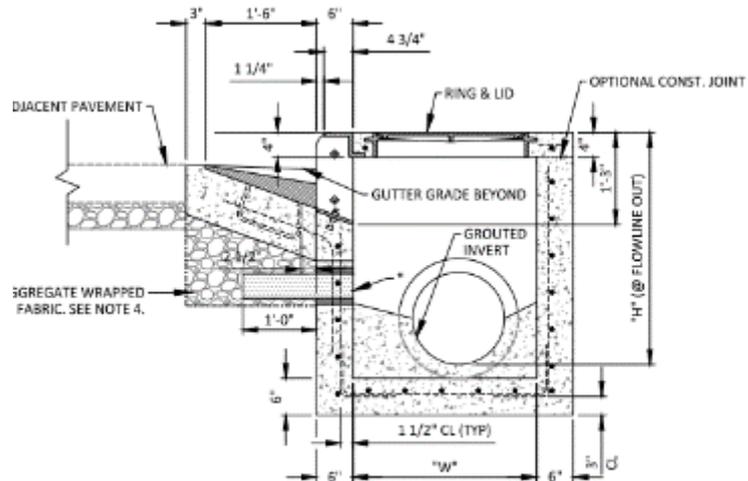
# Highlight Topic – Natural Streams



- Conservation of Natural Streams is a Priority under the Clean Water Act.
- Traditional concerns about erosion can be mitigated with proper buffer widths – limiting costly bank stabilization demands
- Proposed buffers vary from 20 to 120 feet on each side), depending on drainage area of stream.
- When handled correctly, can reduce construction costs and conserve an amenity.
- Attitudes have shifted dramatically in 40 years – this critical modernizes our approach.

# Highlight Topic – Construction Standards

- Updates and Clarification to Many Construction Standards
- Additional Guidance on Erosion Dissipations at Culverts
- New Stormwater Specifications to give greater clarity



\* 4' Ø PERFORATED [SCH 40] PVC PIPE GROUDED INTO WEEPHOLE BLOCKOUT. CAP EXTERIOR END.

6  
2410

SECTION B

SCALE: 3/4" = 1'-0"

# Public Comments

- Keep Study and Submittal Processes Streamlined
- Accommodations for Projects “In Progress”
- Grading Design Review – Some Questions. Stay Targeted
- Agreement that Better Communications Can Avoid Problems
- Detention Basin Design Changes – Cautious
- Consistency with Peer Communities
- Engineering Community is Ready for Updated Manual
- Be Cautious & Sensitive to Cost & Schedule Impacts.
- Support for Fee-in-lieu programs when applicable.

# Adoption Timeline

- 2<sup>nd</sup> Public Comment Period
  - Opened on Aug 11
  - Closes on Sept 7
- Final Adoption of design criteria, specifications and standard drawings by DPW & City Engineer by Sept/October 2023



# Questions & Discussion



- Major Topics
- Public Feedback
- Adoption & Implementation