Common Causes of Residential Flooding

Glenview’s Local Drainage Inspection Program

IAFSM
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Village of Glenview

Three primary watersheds
48 sub-watersheds
60% of Village built to old standards
- No stormwater detention
- No overland flow paths
- Limited conveyance

Clayey soils
Flat terrain
Stormwater Task Force Creation

16 area residents
14 public meetings
Very public and active engagement
Created the Village’s Flood Risk Reduction Program

- Approved August 2010
- Identified $125M of local infrastructure projects
- Updated in 2013

$125M of local projects identified
Residential Flooding

• Resident Call Volume Increasing

• Identifying Problem:
  ➢ Public Infrastructure
  ➢ Private Residence Issue
  ➢ Hybrid (Cost Share)
Public-Private Hybrid

- Where does drainage originate?
- Benefitting multiple parcels?
- Resident support?
Residential Assistance Programs (50/50)

Over-head Sewer Conversion

Raingardens

Local Drainage Inspection Program (LDIP)
Residential Flood Inspection

Pre-Visit Preparations

• Review Questionnaire
• Check GIS
  ➢ Inundation Maps
  ➢ Topography
  ➢ Utilities
• Check CIP

Types of Issues

• Basement Sewer Backup
• Sump Pit Surcharge
• Foundation Seepage
• Garage Flooding
• Yard Flooding
• Yard Ponding
• Foundation Overtopping
Why Am I Here?

- What are all the problems
- Do the neighbors have problems
- What is the primary concern
- What do you think causes it
- How do you think we can fix it
- My suggestions
It’s Their Fault!!!

I’ve lived here for 32 years and 7 months and I’ve never experienced this problem until they built the new library/house/road/park/flower bed/fence/(you name it)/etc...

Sometimes there is merit...
Global Warming!!!

Rainstorms are larger and more frequent.
Global Warming!!!

Rainstorms are larger and more frequent.
Old Math!!!

10 yr – 100 yr rainstorm
Rates not total inches
How Storm Sewers Work

Storm Sewers only convey the 10-year storm event – at most
Depressed property = Depressed Owner

“Why do I have to take everyone’s water”

“Why is my house at the low point”

“This isn’t my water, it’s from their yard”

“Only my house floods”

“Whose fault is it!”
Is it Yard Flooding or Yard Ponding?

Ponding:
- Private storm sewer
- Infiltration trench
- Dry Well
- Rain garden
- Regrading
- Fill

Flooding:
Wet Basement – Brown Water vs. Clear Water
Backup Prevention
Wet Basement – Clear Water

- Sump Pit Surcharge
- Drain Tile
- Window Well Drains
- Downspout Connections
- Sewer Connections
- Foundation Freeway
Leaking (or pouring) in around basement windows

- Glass block windows
- Raise window wells
- Divert water
Wet Basement – Clear Water

Overtopping Foundation

• Regrade yard
• Dry Floodproofing
• Wet Floodproofing
Window Wells
Downspouts!
Downspouts!
Downspouts!
Final Report

- Existing Site Conditions
- Existing Site Drainage Issues
- Apparent Causes of Drainage issues
- Potential Solutions to Drainage Issues (Alternatives)
- Preliminary Cost Estimate
- Recommendation(s)

Cover Letter
Contractor List
Permit Voucher
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