

## **Turf Vs. Grass Cost Drivers**

Generally speaking, replacing the current Roosevelt Turf proposal with a Grass based one would require details on design to arrive at an accurate estimate

- Key design considerations and cost-drivers for a natural grass solution.
  - Level of play, amount of use and type of sports must be considered; define expectations for quality of the natural grass turf; soil composition; turf species; subdrainage; irrigation; and maintenance
- Field base type: Native Soil-Based vs Sand-Based? Each has pros and cons:
  - Native soil base: drains overland with a 1% to 1.5% slope minimum, 2% slope preferred; field raised to get drainage to perimeter
    - Raising field would displace flood storage and require compensatory storage; unclear where it could be made up and whether permitting would be a challenge
    - Feasibility of re-using existing topsoil; extent of required soil amendment.
    - Add sand cap to improve drainage??? Added cost.
  - Sand base: drains vertically and allows lesser slope (e.g. 0.5% to 1%); may mitigate flood storage concerns.
    - Requires subsurface drainage
    - More costly initially (drainage system and associated drainage layer)
    - Maintenance intensive ongoing; compaction, irrigation
- General Design
  - Seed vs. sod; first cost; time required to establish turf growth before field can be used.
  - Grass based design unlikely to look the same as turf base
    - Current turf design geared toward high use sports playability
  - Neighborhood/school engagement likely to change current design

A redesign to a grass-based solution should address steps needed to operate and maintain a grass field for optimum turf grass quality and field usability

- Policies to limit use to maintain desired quality of natural grass turf surface
- Policies for use during and after inclement weather
- Limit practice activities and recreational uses to non-high wear areas
- Field rotation to shift heavy play/compaction areas
- Routine maintenance of reseeding and re-establishing high-wear areas
- Annual field shutdowns as part of an overall field rotation program for 'recovery'

A turf to grass option would result in the following general expense changes

- Savings by removing the cost associated with the turf itself (turf, infill and resilient pad only) (approx. \$6.50 to \$8.00 per SF)
- Replacement cost for sod as a natural replacement: Range is from \$2.50 to \$3.00 per SF
- Cost change for base preparation, including subdrainage, driven purely by design and decisions and NOT included in above figures
  - Additional cost to 'go down further' driven by regulations; Estimate to go down full three feet required by a grass solution: (\$1.3 million)
  - Based solution for grass field as outlined above (Native soil vs sand)
- Additional costs associated with any related field improvements if applicable to compensate for field space lost
  - Maplewood or other field renovation driven by this change