Athletic Construction

Drainage

or

Have you changed your filters lately?

Tony L. Strickland, CSFM

Will your field be able to handle what Mother Nature dishes out?

We all have to cut costs where we can

Left Field

We have some very creative minds in this group

Left Field

Right Field

Multiple drain pipes exposed

Center Field

Sock around a flat panel

Hole cut into drain pipe sock

Water Standing in area supposed to be drained by pipe with fabric around it

Same area after we cut through the fabric that was silted over

Silted over non-woven filter fabric

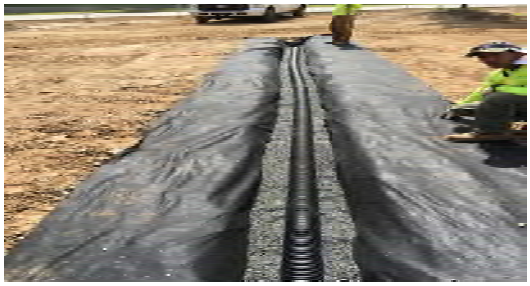
Silted over Trench Drain

Silted over fabric

Silted over filter fabric

2-3” layer of gravel

No sock Perf pipe centered



When it is wrong…… rain did this to a field that had a slow draining base

Sod over gravel is never a good idea

Last load of finish materials backing on field notice no tire rutting

It will peal like an Orange

1.25 inch rain in 10-15 min follow time line on the next several slides 6:32pm

6:33 pm

6:35 pm

6:33 pm

6:35 pm

6:34 pm

6:38 pm

6:39 pm

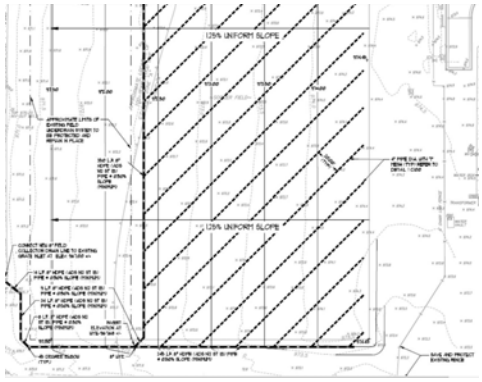
6:44 pm

6:39 pm

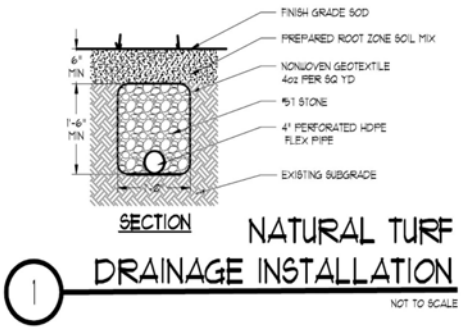
Surface & Subsurface Drainage is essential

- Turf with heavy native soils or poorly percolating soils **need surface drainage**
- What and how much will depend upon your expectations of field performance and event time on the turf area.
- Remember too much slope and your irrigation cost will go through the roof.
- A balance of slope and infiltration is a must

6:43 pm



- Too much slope and you have little moisture infiltration on the heavy soil turf and a great deal of washing of red infield materials as well as warning track areas
- Too little slope on the heavy soil turf and you have mud and soft soil conditions that cannot be managed, mowed or played upon



A great Base handles heavy loads without shifting

- If you design a field for one set of conditions do not expect the same field performance if you change those conditions
- Always remember Mother Nature has a wicked slider and a massive hanging curve ball not to mention her on side kick has put many a field manager on the bench scratching his head.
- Engineering the field root-zone for zero slope has many advantages and benefits from maintenance to new events that the field can accommodate.

Engineered Soils and USGA

- Here is a great way to have the best of both
- Soils that have designed percolation rates should have the best interests of the turf and the event time that are to be used on that field.
- Even with great engineered soils before field event times change the field management and maintenance needs to be revisited to meet the new parameters.

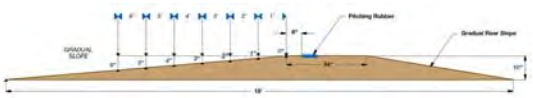
Intentions are good but poor planning has some drastic results

Which slope do you use?

- Many use the expert recommended .5% slope on infields of all infield mix (exception is the mound to plate line which should always be ZERO%)
- Many use the same .5% on infields with sod and infield mix
- Most have to use a combination of 0-.75% slope to accommodate the pitcher/catcher relationship and adhere to the regulations of their game while providing some runoff and infiltration for the turf.

When it is all done properly we are

Baseball pitchers Mound Shows slopes for proper drainage and the mechanics of the game



Questions

Top elevation shows slopes to allow for drainage and proper mechanics of the pitcher