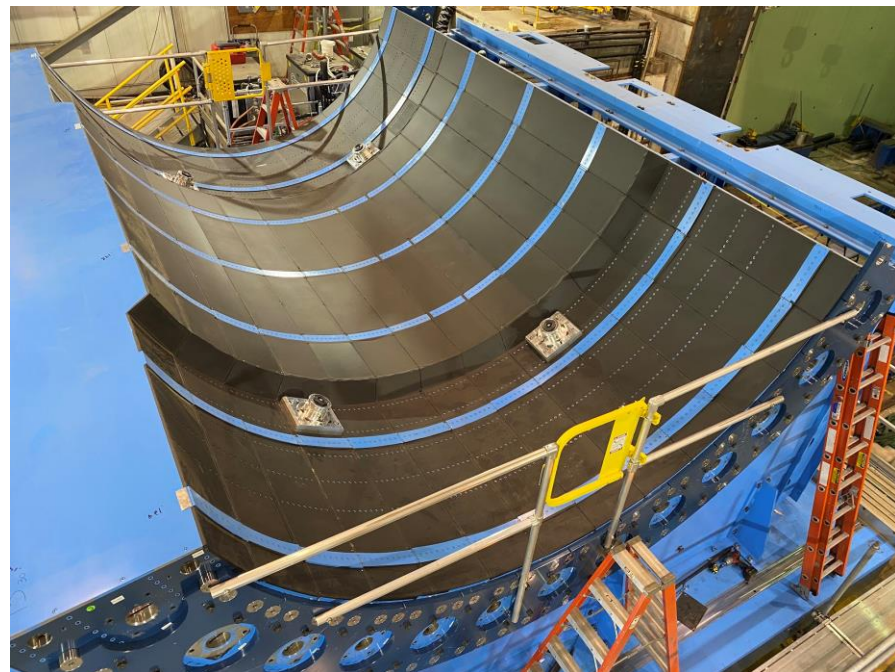
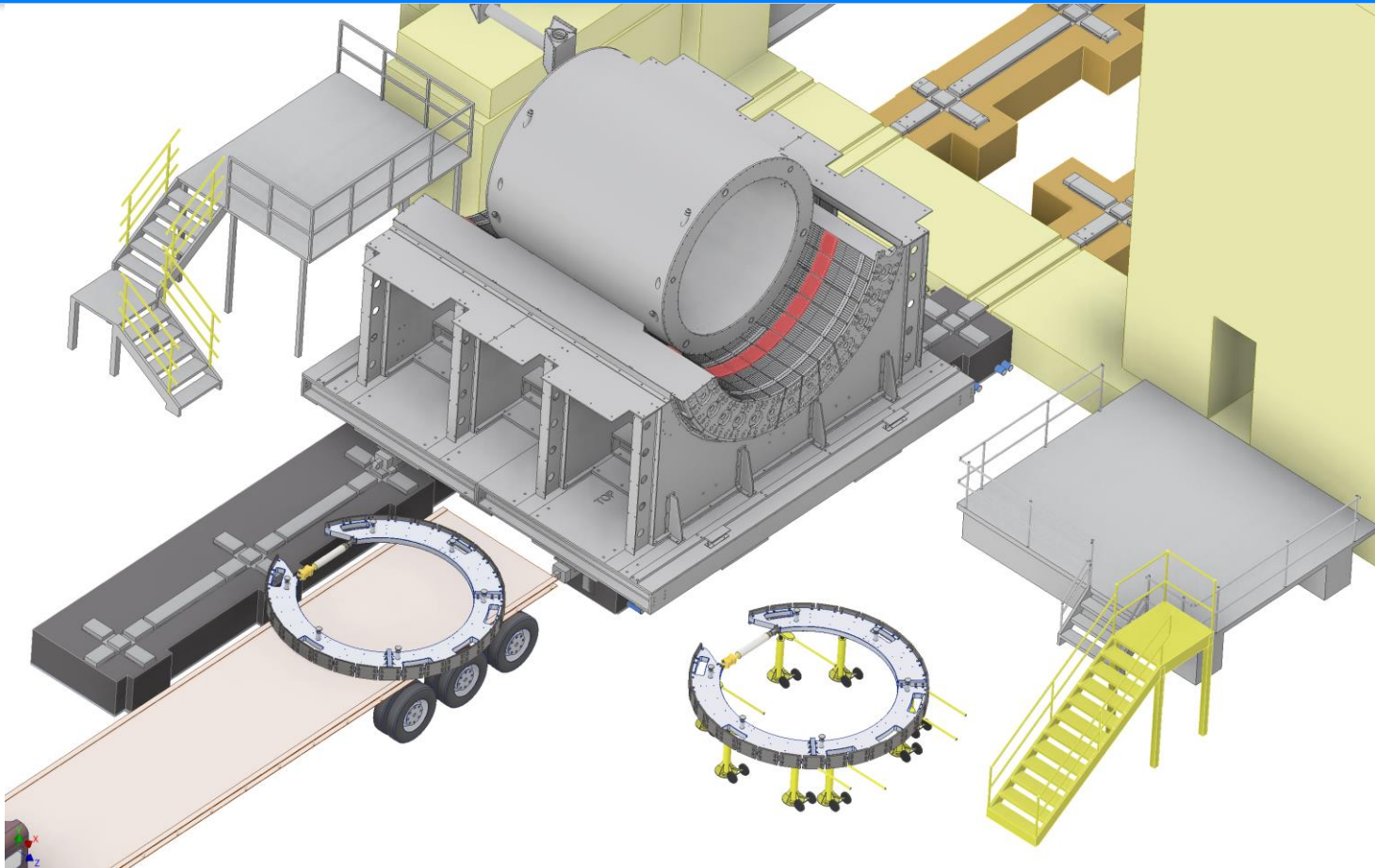


sPHENIX PMG Engineering and Construction Update

Sept 23, 2021



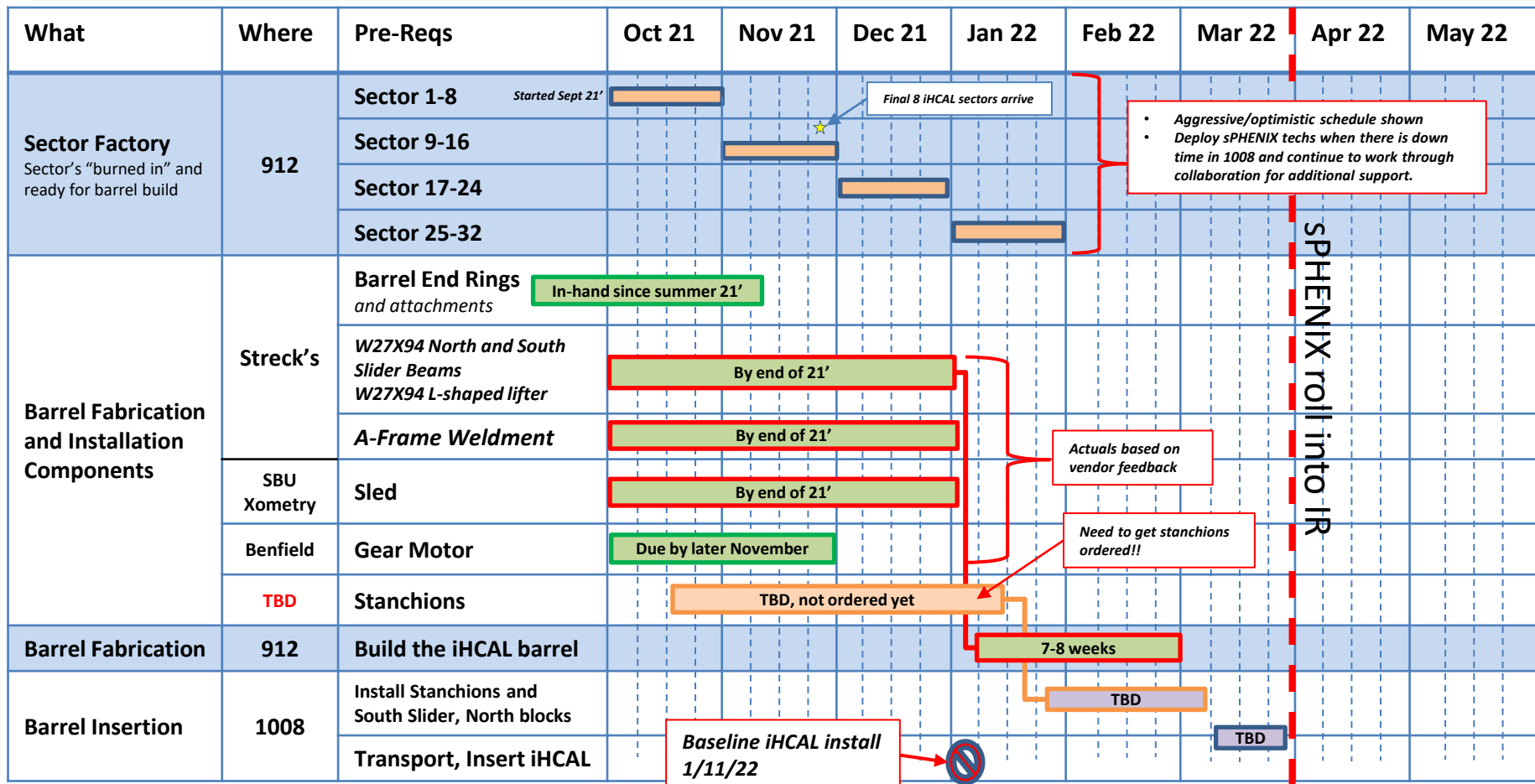
Next sPHENIX construction steps: Land cryostat, Install Large Support Rings



1. **1008 IR track upgrade**
 - A. Complete by Nov 1
2. **Preparing for magnet installation**
 - A. Aligning and repositioning sPHENIX
 - B. Work planning approvals for 912→ 1008 move and installation
3. **Large support ring installation in early November**
 - A. Feder and Pontieri visiting Streck's next week to inspect LSR parts
 - B. Delivery to BNL mid-October, then assembly in 912
4. **Shield wall replacement early November**
 - A. 2 week pause
 - B. Shuffling sPHENIX with magnet and LSRs
5. **Carriage and platform construction**
 - A. Carriage columns and main beams from Streck's 1/7/22, Pole Tip Doors 1/18/22
 - B. Carriage/platform construction runs in parallel with iHCAL factory and barrel fabrication
6. **iHCAL factory and barrel fabrication**
 - A. See next slide

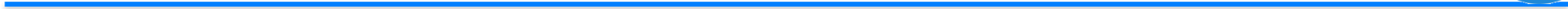
iHCAL Assembly Schedule → Need to keep things moving

sPHENIX can not move into IR at end of FY22 run until iHCAL is inserted

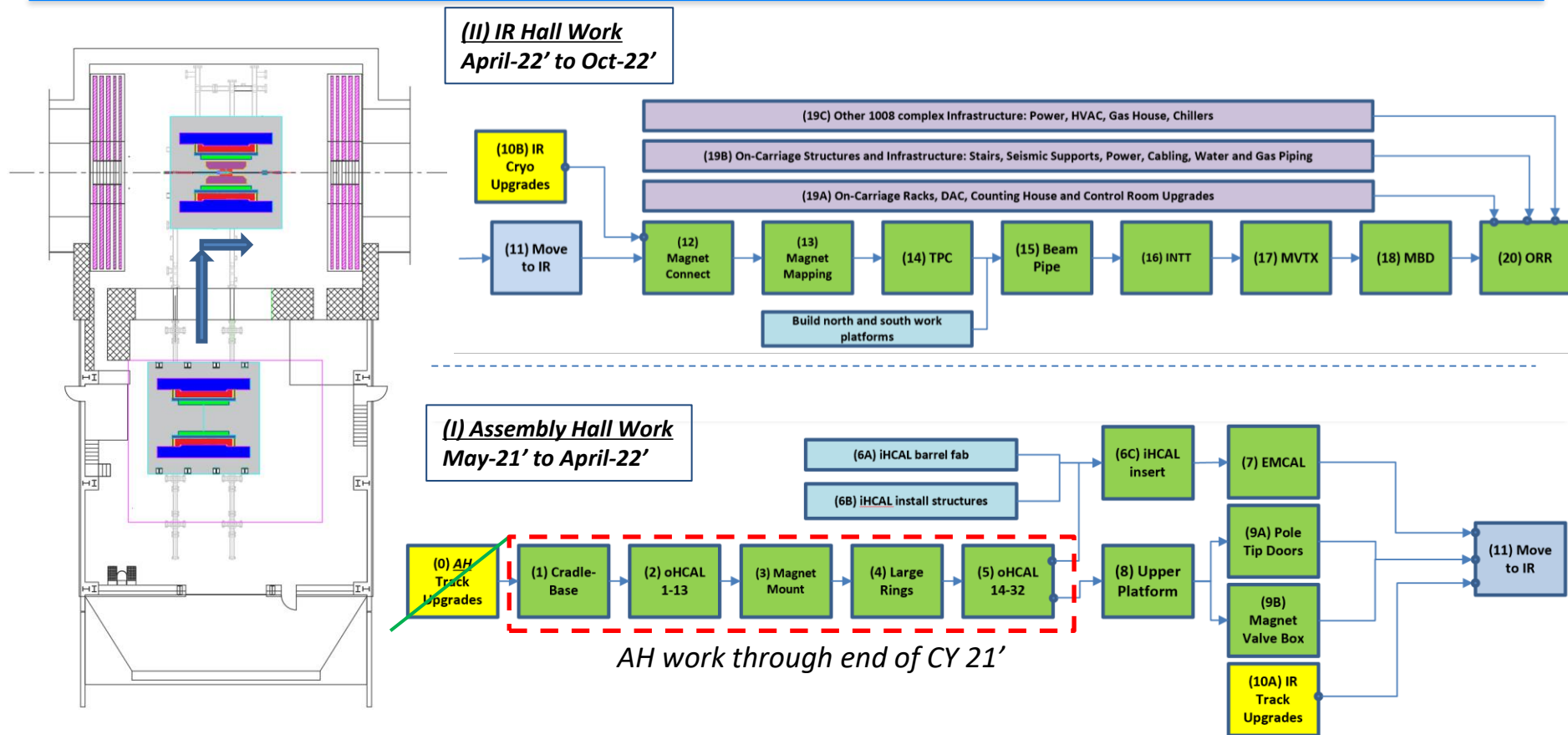


I&F Mechanical Engineering Design Tasks to Go SPHENIX

- **Seismic restraints** for carriage in IR ([Hock\(CAD\)](#), [Mills\(CAD\)](#))
- **iHCAL installation stanchions** ([Feder](#), [Scheblein](#), [DeMino\(ATRO\)](#), [Ruggiero](#)) **Done!**
- **iHCAL local air cooling system** ([Brenton \(ATRO\)](#))
- **EMCAL installation tooling and install fixture testing** ([Cacace](#), [DeMino\(ATRO\)](#))
- **TPC supports** and installation structures ([Miraval\(ATRO\)](#), [Ruggiero](#), [Runyan\(ATRO\)](#)) → **FDR late October**
- **Magnet Mapping supports** and infrastructure ([DeMino\(ATRO\)](#) [Feder](#), [Haggerty](#)) → **CERN meeting 10/6**
- **INTT-MVTX-Beam Pipe-MBD integrated supports, installation tools and structures** ([Bates-MIT](#), [Breton\(ATRO\)](#), [Feder](#), [Cacace](#), [Ruggiero](#))
- **INTT installation fixture and tooling** ([RIKEN scope](#), [Cacace](#))
- **Beam pipe bake control** and precautions, thermal analysis ([CAD Vacuum group](#), [Runyan\(ATRO\)](#))
- On-carriage **water** and **gas distribution** piping ([Feder](#), [Hamblen](#), [Pisani](#), [Puleo\(CAD\)](#))
- On-carriage **cable routing** and **cable trays, pipe supports** ([Feder](#), [Hamblen](#), [Puleo\(CAD\)](#))
- **1008 HVAC** and **cooling water** distribution ([Vasquez](#), [Chan\(CAD\)](#))



sPHENIX Assembly Sequence



sPHENIX AH Installation Schedule

Baseline Dates from Aug 21' PCR

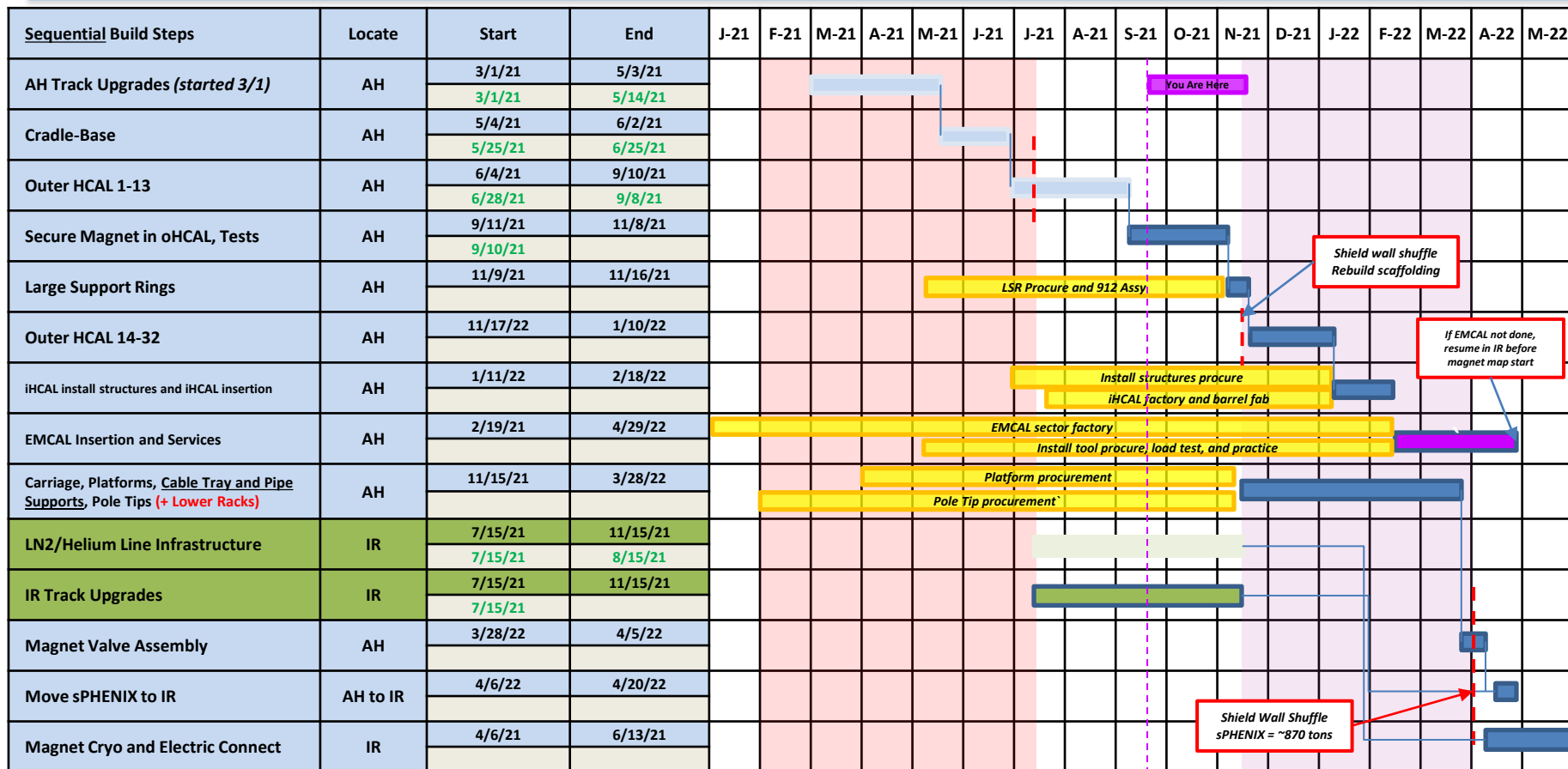
Actual Dates

6/4/21 9/10/21

6/28/21 9/8/21

sPHENIX

Updated baseline from Aug 21' PCR



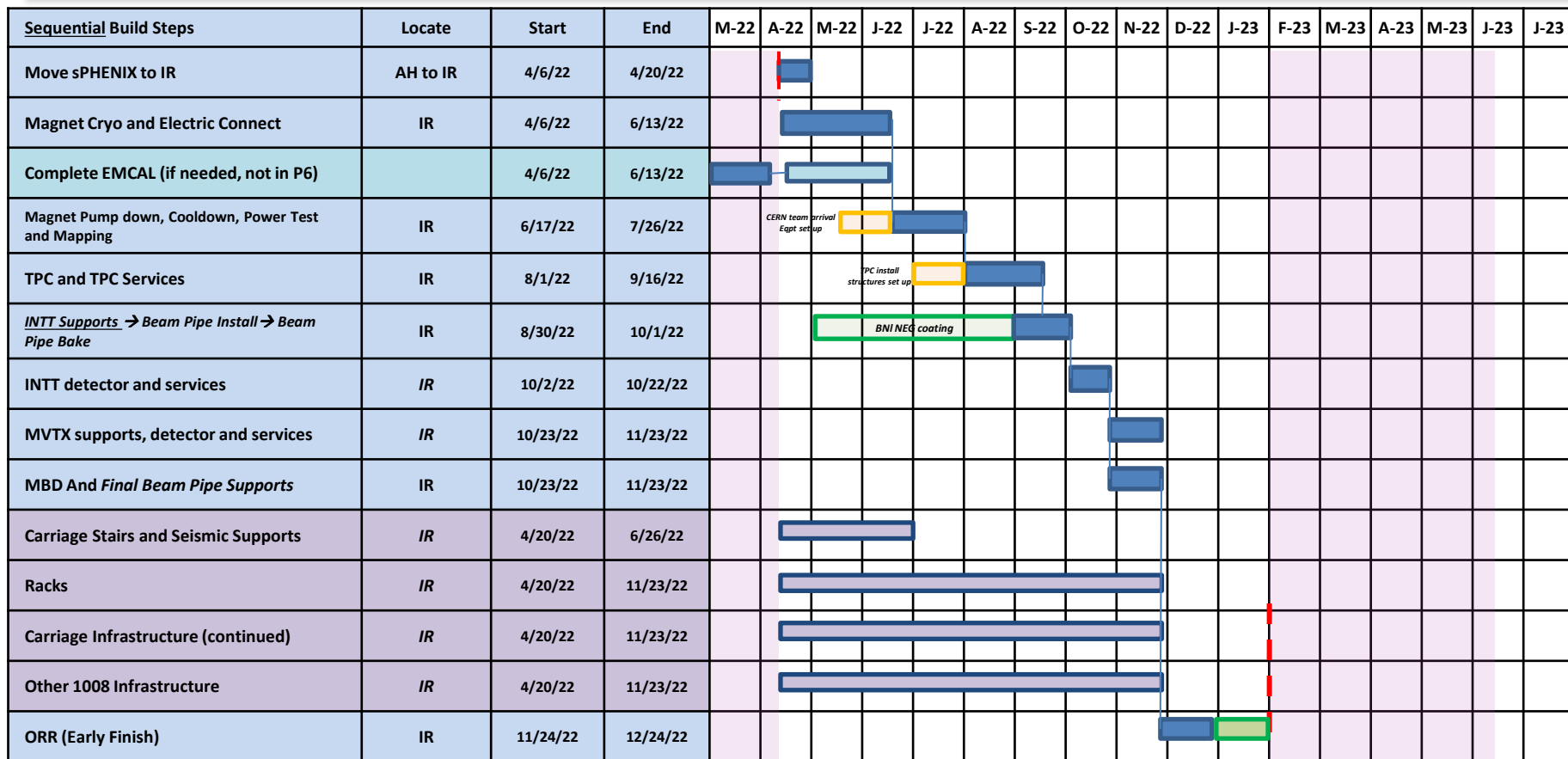
RHIC Run FY21
1/30/21 to 7/15/21

RHIC Run FY22
11/15/21 to 4/3/22

sPHENIX IR Installation Schedule



Updated baseline from Aug 21' PCR



RHIC Run FY22
11/15/21 to 4/3/22

RHIC Run FY23
Model (Jan to June)