For the IR Superconducting magnet design, fabrication of quadrupole coil winding machine, coil heating and curing system has been finished. The requirement for IR sextupole magnets is updated and conventional sextupole magnet technology can be used. New Φ20mm IR beam pipe is designed and synchrotron radiation is checked. For the beam loss background with multipole errors and beam-beam effects, collimators are preliminary improved. Tungsten IR beam pipe is preliminary designed, first results shows dose on coil of SC magnets will not cause SC quench. The full detector simulation shows the impact on detector due to background could reach EMC or more. Pair Production contributes most; beam thermal photon scattering and beam-gas scattering are at same level, lower than pair production. Preliminary feedback from detector, impacts small enough. Needs further verification.