

References

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7 - 27 Progress in Civil Construction of HIAF

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1. National Investment Component of HIAF

HIAF civil construction covers about 33 025.51 m² in total that are jointly supported by the National investment and local government. The actual construction scale of national investment in High Intensity Heavy-ion Accelerator Facility (HIAF) civil engineering is about 33 025.51 m². The planned commencement date was December 18, 2020, the planned completion date was December 31, 2023, and the actual commencement date was in December 2020. The construction content includes six dedicated buildings, including the Operation Building, Accelerator Tunnel, iLinac Building, No.1 Comprehensive Station, No.2 Comprehensive Station, and No.3 Comprehensive Station.

By the end of 2022, procedures such as the construction preparation, construction drawing design, budget estimate and budget preparation, civil construction bidding, construction supervision bidding, cost consultation bidding, construction contract signing, construction permit handling, and so on have been completed. In terms of civil construction, 75% of the overall construction work has been completed. Started in December 2020, 98% of the Operation Building has been completed. Started in March 2021, 93% of the Accelerator Tunnel covered by National Investment has been finished. Started in the middle of October 2021, 98% of the No.3 Comprehensive Station building has been completed. The overlook of each dedicated building is shown in Fig. 1.



Fig. 1 (color online) The Aerial view of HIAF campus by the end of 2022 (The buildings with yellow labels are supported by local government, and those with white labels are supported by National Investment).

2. Civil Construction and Campus Engineering of 48 000 Square Meters in the Installation Area

The actual total construction scale of the supporting project of HIAF and CiADS supported by local government is about 48 880 m². The planned commencement date was October 15, 2021, and the planned completion date was April 30, 2023, but the actual commencement date was April 2021. Its construction content includes 13 dedicated buildings, which include the No.1 Test Hall, No.2 Test Hall, The Comprehensive Test Hall, the No.1 Cooling Center,

Gate of Science Building, Guest House Building, Water Supply Station, Sewage Treatment Station, No.2 Cooling Center, Cooling No.3 Center, and No.3 Test Hall.

By the end of 2022, procedures such as the construction preparation, preliminary design, feasibility study, construction drawings, budget estimates and budgets, civil engineering bidding, construction contract signing, construction permit handling, and so on have been completed. In terms of civil construction, 30% of the overall construction work has been completed. The Water Supply Station was started in April 2021 and has been completed by 93.58%. The Comprehensive Test Hall was started in October 2021, and has been completed by 80%. The Guest House Building was started in November 2021 and has been completed by 80%. The Gate of Science Building was started in November 2021 and has been completed by 75%. The No.1 Cooling Center Building was started in December 2021 and has been completed by 70%. 85% of The Sewage Treatment Station Building was started in November 2021 and has been completed by 85%. The No.2 & No. 3 Cooling Center Building were started in May 2021 and have been completed by 60% . The No.3 Test Hall was started in April 2022 and has been completed by 65%. The basic parts of the main building structure of the No.1 Test Hall, No.2 Test Hall was started in April 2021, and the construction of the tunnel is close to the end. The aerial view of each dedicated building is shown in Fig. 1.