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F. No. 23(29-I)/CPM/F 1/PWD/2016/ 317

Date: - 4-2-16

**Inspection Note**

**Sub: - Inspection Note for the work of "Comprehensive Development of Corridor (Outer Ring Road) between Vikaspuri to Meera Bagh."**

Inspected the site of Vikaspuri to Meerabagh Project on 03.02.2016 along with the Superintending Engineer, F-12 and Project Manager of M/s. Simplex.

First, inspected the footpath adjacent to A-2 ramp on R.H.S. It was observed that at certain locations, paver tiles have settled. These tiles were got removed and it was surprising to note that the joints of the cover blocks have not been sealed with mortar and only geo-fabric has been pasted which has led to bedding sand to seep into the drain. The undersigned has been telling the methodology of construction of footpath for a long time on countless occasions verbally as well as through inspection notes but the same is not being followed. After discussion, it is apprehended that wherever footpath has been done, joints between the drain cover have not been sealed which will definitely lead to the settling of paver tiles due to seeping of sand into the drain. **It was directed to remove all footpath tiles everywhere and re-fix after sealing of the joints of paver blocks with mortar then re-fixing the geo fabric properly.**

The methodology already communicated is reiterated as below: -

1. Manhole covers should be perfectly levelled with the adjoining paver tiles. At number of locations, either its level is above the tiles or below the tiles which is not acceptable.
2. Before fixing paver tiles, drain covers should be properly placed abutting each other, sealed with mortar and then covered with geo textile. It should also be ensured that vertical gap between the manhole cover is also properly sealed with the mortar and /geo textile material so that sand does not seep into the drain. This exercise is very important as to ensure the proper strength of the tiles, while doing the above exercise, strength of the tiles should also be got checked after collecting the sample from laid tiles.
3. Before allowing fixing of tiles, proper resettling/sealing of drain covers as stated above should be checked.
4. While laying the tiles, specifications of the sand for bedding and joint filling may be ensured. Surface compactor should be used to have the perfect level. Once a stretch is complete, the spare tiles/spare sand should be removed and surface should be properly cleaned.
5. Continuity of the tuck tile should also be ensured.
6. The gap between the tile and manhole cover frame should be filled up with rich concrete, then properly finished and line engraved in line with the joint of the tiles so that it looks nice. At number of locations, these gaps have been filled with mortar in a crude way.
7. The distance between the kerb stones of footpath should be such that minimum filling of mortar between end of tile and kerb stone is required.
8. Kerb stones should be properly placed in line and then the joints should be properly sealed as at few locations, it has been observed that during laying of tiles/PCC below tiles, the kerb stones have been disturbed. Such kerb stones should be properly reset and fixed with the mortar.
9. Continuity of bell mouth pipe into the drain should be ensured.
10. It should also be ensured that before taking over the footpath, the drain below the footpath is completely and thoroughly cleaned.



***The SE, F-12, PWD should ensure that the entire footpath is re-laid as per above methodology.***

The underdeck finishing was in progress and it was directed to prepare a deficiency list of the entire stretch span-by-span. Priority should be given to the repairs of fins, repairs at the location of sapling of concrete, etc. The gap between the stub and wing should be properly filled up using proper reinforcement to ensure that filling does not fall due to vibration later on. The gap of horizontal fin/vertical fin of wing and side surface of the spine should also be filled with epoxy/GP-2 properly to ensure that these fillings also does not fall due to vibration after opening of the elevated corridor.

The lifting holes of the wing segments were filled earlier but it has been observed that at few locations, the concrete from these holes has slipped down. Proper care should be taken to avoid its fall later on. All such holes should be protected from down by fixing a plate as being done in the stretch from Mangolpuri to Madhuban Chowk. The same may not be required in the holes which have been filled later on after using a L-shape reinforcement bar as already suggested earlier.

Then, went to the Najafgarh nallah portion where one portal beam has been protected but fixing of bolts, grouting of bearing etc. is still pending. It is regretted to point out that as per the last inspection on 28.01.2016, this portal erection of the beam was supposed to be completed in all respects by 31.01.2016 and erection of longitudinal beam in this span was to be completed by 4<sup>th</sup> Feb.' 2016 but the progress is far behind the schedule. The matter was also discussed with Mr. Pawaljit of M/s. P&R to expedite the erection process in Najafgarh Drain. The work of Najafgarh Drain is lagging behind for a long time and it is felt that no sincere efforts are being put in by M/s. Simplex to expedite the progress. Message was also sent to Mr. Mundra, M.D. of M/s. Simplex to look into this aspect. It was made very clear to the Project Manager of M/s. Simplex that erection in the Najafgarh Drain portion should be completed by 24.02.2016, as per commitment made during the inspection on 28.01.2016.

A lot of cuts are there from main road on L.H.S. and R.H.S. to service roads. The SE, F-12 was directed to ensure that road work is completed on these cuts immediately so that smooth entry is available to the public.

At few locations, especially on R.H.S. in front of petrol pump, the gap between the two drain covers was found and it may lead to an accident. All such spots should be identified and necessary action should be taken on priority.

At number of locations, malba was found lying along the kerb line as well as on service road. ***Strict action should be taken against the agency for non-removal of malba. The SE, F-12 should ensure that the entire site is free from malba and dust. Regular sprinkling of water on dusty location should also be made.***

Then, took the round of site. The work in A-1 ramp is not progressing with the desired pace which should be expedited.

In the site office, reviewed the program of completion of elevated corridor except drain portion. Earlier, it was committed to be completed on 28.02.2016 but the program shown was not matching with this target. The Project Manager of M/s. Simplex was directed to modify the program and submit the same to SE, F-12 and the undersigned by tomorrow i.e. on 04.02.2016. In no case, activities over elevated corridor, except nallah portion, should go beyond 28.02.2016.

Following important details were pointed out to the team of PWD and M/s. Simplex for strict compliance:-

- a. Care should be taken while laying BC to achieve perfect level while laying concrete on both sides of the expansion joints. Long aluminum rods should be used to check the level of BC layer longitudinally and laterally.
- b. The gap between the crash barrier/central verge and bituminous wearing course should be properly sealed with proper material to stop ingress of water which may otherwise damage the bituminous road.
- c. Special care should be taken while filling the concrete in the cross drainage pipe in central verge. Aluminum rod should be used to check the leveling and it should be



ensured that there is no cavity left between the concrete and the PVC pipes, fixed in the central verge.

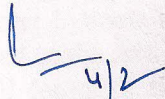
- d. Kerb channel should be provided along the crash barrier in line with rain water spouts.
- e. Level of the rain water spouts should be such that there is no problem of drainage of water and it should correspond to the level of kerb channel at that location.

Grinding of central verge and crash barrier, repair etc. should also be started in full swing in the entire elevated corridor as it takes a lot of time. It was also directed to prepare at least 10 mtr. sample of central verge and crash barrier after painting so that agency is clear what is required to be done.

Long back, color shades of anti-carbonation paint were approved but no sample has been prepared. It should be expedited.

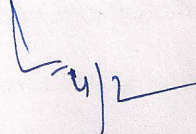
The issue of construction of a F.O.B. was also discussed in detail and agency has not even submitted the fabrication drawings. It should be expedited. It is felt that agency is not taking construction of FOB seriously, which will ultimately delay the entire work.

There is a half constructed table top near PVR Sonia red light, which should be completed. The SE, F-12 informed that the same has been stopped by the Traffic police. He was directed to write a letter to DCP (Traffic) to complete the same and it should be made clear to traffic police that in case of any accident, due to half constructed table top, PWD will not be responsible. The undersigned also tried to talk to DCP (Traffic) but he didn't pick up the phone.

  
pce Chief Project Manager  
(Flyover) 1, PWD

**Copy to:-**

- (1) The E-in-Chief (Projects), (Flyover) 1, PWD, 12<sup>th</sup> Floor, MSO Building, I.P. Estate, New Delhi for kind information please.
- (2) The Pr. Chief Engineer (Projects), PWD, 9<sup>th</sup> Floor, MSO Building, I.P. Estate, New Delhi for kind information please.
- (3) The OSD (PWD) to Minister, O/o of the Minister, Power, PWD, Health, Industries & Home, GNCTD, A-Wing, 7<sup>th</sup> Level, Delhi Secretariat, I.P. Extension, New Delhi-110002 for kind information please.
- (4) The Superintending Engineer, F-12, PWD for information & necessary action please.

  
pce Chief Project Manager