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**Government of India (Bharat Sarkar)
Ministry of Railways (Rail Mantralaya)
(Railway Board)**

No.2012/Sig/SF/2(Policy)

New Delhi,

dated: 14.9.2018

PCSTEs
All Indian Railways

CSTE/CORE/ALD
ED(Sig) Coordination, RDSO, Lucknow
ED(Sig), RVNL, New Delhi

Sub: Commissioning of new works.

Ref: This office letters of even no dated 9/4/12 and 30/12/16 (copies enclosed)

Detailed instructions/guidelines were circulated vide letter No.2012/Sig/F2 (Policy) dated 9.4.12 with the approval of Board (ML, MT & ME) to ensure adequate precautions, full preparedness for commissioning of PI/EI/RR.

2. During the CSEs Conference, it was highlighted that quality of work is being compromised on the pretext of urgency. To ensure good quality work, it was directed vide this office letter of even no. dated 30.12.16 that agency executing the work should submit certain quality control documents to PCSTEs of the Zone for approval before undertaking non-interlocking or commissioning of Interlocked Stations. To ensure that the cable is laid as per the extant instructions, Technical Advisory Note (TAN) /checklist issued by RDSO is implemented for commissioning of all the electronic equipments. The "Safety & Quality Book" should be maintained for each Station.

3. PCSTEs may kindly ensure implementations of these guidelines. However, these instructions should not be used to refuse permission to the various agencies to take up commissioning provided all safety requirements for the same are met. For balance items, commitment from the agencies to be obtained for complying them within a reasonable time.

This issues with approval of Board (DG/S&T).

Encl: As above.

21
14.9.18
(Arvind Mital)

Principal Executive Dir (Signal)

Government of India (भारत सरकार)
Ministry of Railways (रेल मंत्रालय)
Railway Board (रेलवे बोर्ड)

No.2012/Sig/SF/2(Policy)

New Delhi, Dt: 09.04.2012

General Managers,
All Indian Railways.

Sub: Non-Interlocked (NI) working – Commissioning of RRIs
at Major Junction stations.

1. In order to meet the changing and challenging needs of safe train operation, to create additional capacity and to ensure higher level of safety, Zonal Railways have undertaken large scale works for upgradation of signalling and remodeling of yards. For this, non-interlocked (NI) working and/or major blocks are being taken to commission new signaling systems. It has been observed that recently on some of the Zonal Railways, unwarranted restrictions were noticed during the course of NI working and the work was not carried out in a co-ordinated manner which led to avoidable signal failures after completion of non-interlocked working affecting train operations. The following instructions are, therefore, reiterated for implementation on Zonal Railways:

- (i) For major RRI work and yard remodeling, CSTE (Open Line) shall be the overall in-charge for pre-NI and NI works and he shall work in close co-ordination with COM. It must be ensured that the project does not get delayed and the targets for construction organization be assigned the required priority and yard remodelling work shall be closely monitored by CSTE(OL). CSTE(Con.) shall work under the guidance of CSTE(OL).
- (ii) Most of the works should be completed in advance, leaving the bare minimum work for completion during pre-NI periods with final changing over, testing/commissioning to be completed during NI period.
- (iii) The preparatory works should be closely monitored and reviewed jointly by Construction organization with Open Line officers and outdoor works should be re-confirmed and re-tested before taking up
- (iv) The NI period should be the barest minimum to ensure operational safety with minimum detentions to trains.
- (v) Adequate deployment of trained staff, supervisors and officers must be ensured for completing these works. Additional resources should be arranged as standby including obtaining assistance from adjoining divisions/zones, wherever required, to meet any contingency.

NI.

Ministry of Railways
Railway Board

(iv)

(v)

- (vi) Planning and execution of major RRI works should be reviewed at the level of General Manager.

2. It is reiterated that Railways should prepare plan for executing such works carefully and execute NI taking adequate precautions ensuring full preparedness for handling train operations immediately after completion of NI work. Broad guidelines in this regard are enclosed. These guidelines/instructions are not comprehensive as Zonal Railways shall have to prepare specific action plan for each location.

This issues with the approval of Board (ML, MT & ME).

Encl : As above.

05.04/12
(Arun Saxena)
Adviser (Signal)

Copy to:

- (i) CSTEs, PCEs & COMs All Indian Railways
(ii) AM(CE), AM(T), Adv(Bridge) & Adv(Safety) 22/12/12

N.O.O.

- (i) PPS to ML for kind information of ML
(ii) Sr. PPS to ME for kind information of ME
(iii) PPS to MT for kind information of MT 2/12/12

**Government of India
Ministry of Railways
Railway Board**

No. 2012/Sig/SF/2 (Policy)

New Delhi, dt. 30.12.2016

**The CSTE
All Indian Railways**

**ED/Signal/Coord
RDSO
Lucknow**

**The CSTE
CORE
Allahabad**

**ED/Signal
RVNL
Bhikaji Cama Place
New Delhi**

Sub: Commissioning of EI/PI/RRI

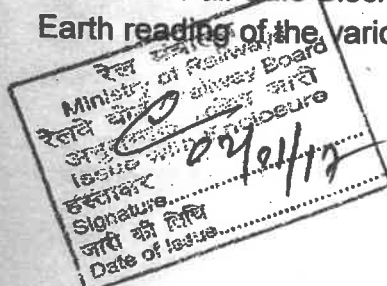
Ref: Rly. Bd's letter No. 2012/Sig/SF/2 (Policy) dt. 9.4.2012

Detailed instructions/guidelines were circulated vide letter No. 2012/Sig/SF/2 (Policy) dt.9.4.2012 with the approval of Board (ML, MT & ME) to ensure adequate precautions, full preparedness for commissioning of PI/EI/RRI

In recent past it has come to notice that Non interlocked working is being taken without full preparedness resulting in the bursting of Non interlocked period and large number of failures post commissioning. This issue was also discussed during CSTE's Conference held on 27th November, 2016. A copy of the guidelines issued under reference is enclosed for ready reference.

To ensure good quality work and full preparedness, agency executing the work shall submit following documents to CSTE of the Zone for approval before undertaking Non-interlocking or commissioning of interlocked station. These documents compiled in a folder will be titled as "Safety and quality book for Station XYZ".

- (i) Work ready for interlocking certification for CSTE's approval. Appendix 1 & 2 as mentioned in the Railway Board's letter No. 2012/Sig/SF/2(Policy) dt. 9.4.2012
- (ii) Cable Route Plan and Cable Core Chart.
- (iii) Cable Depth Record in A4 size, Cable Meggering Record.
- (iv) Track Circuit Bonding Plan.
- (v) Signal Sighting Committee Report.
- (vi) Pre-commissioning Checklist for EI, IPS, Axle Counters, BPAC, Data Logger Universal Fail Safe Block Interface, etc.
- (vii) Earth reading of the various earth provided; Earthing arrangement diagram.



**Government of India
Ministry of Railways
Railway Board**

New Delhi, dt. 30.12.2016

No. 2012/Sig/SF/2 (Policy)

**The CSTE
All Indian Railways**

**ED/Signal/Coord
RDSO
Lucknow**

**The CSTE
CORE
Allahabad**

**ED/Signal
RVNL
Bhikaji Cama Place
New Delhi**

Sub: Commissioning of EI/PI/RRI

Ref: Rly. Bd's letter No. 2012/Sig/SF/2 (Policy) dt. 9.4.2012

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- (vii) Earth reading of the various earth provided; Earthing arrangement diagram.



- (viii) Testing record of Selection Table/Table of Control, FAT & SAT.
- (ix) Reading/parameters of Point Machine, Signals – including distance from Centre Line of Track, Track Circuit reading.
- (x) Copy of CRS sanction/authorization letter.
- (xi) Inspection Certificates of RDSO for EI, UFSBI, IPS, Axle Counters Data Loggers, Relays, Battery Chargers, cables, ELD's etc.
- (xii) Works to be done during pre-NI & NI


(Arvind Mital)
ED/Signal-I

End: Rly Board letter No. 2012/Sig/SF/2 (Policy) dt 9.4.12

O/C

O/C

Annexure

L Planning and Preparation of works:

- 1.1 Detailed planning of all the activities should be done keeping in view of basic requirement of short NI working and/or traffic blocks. All issues related to each and every portion of the Indoor and Outdoor Signalling & Telecom works, Yard Modifications, Electrical & OHE, P. Way and Engineering works should be listed out and tied up for execution in time.
- 1.2 All plans and system design documents like Engineering Scale Plan (ESP), Signal Interlocking Plan (SIP), Route Section Plan (RSP), Selection Table or Route Control Chart (RCC), Track Circuit Bonding Plan, Station Working Rule Diagram (SWRD), Indoor & Outdoor Wiring Diagram and Key Plan (Mini Engg Plan in A4 / A3 size) should be carefully prepared and got approved along with the tentative wiring diagram. Contact booking / allotment and Contact Analysis should be made available to assess the repeater relays. SIP shall be prepared fresh after three alterations.
- 1.3 For better appreciation of SIP, Route Table in the following format should be sent to Traffic branch listing out all routes required for safe train operations as per the proposed SIP:

S. No.	Signal No.	Route upto Signal No.	Remarks (Regarding Short Shunt, Overlap / Isolation Points locked, Sectional Route Release, Parallel movements and Restrictions, if any).
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CRS Observations:

- 1.4 All observations of CRS should be discussed with CTPM and an agreed version of comments duly approved by CSTE & COM should be sent to CRS to avoid dispute at a later date specially with regard to short shunt, overlap release, isolation, simultaneous movements etc.
- 1.5 In case of existing interlocked installations, completion drawing should be physically verified before starting fresh wiring for incorporating the alterations. Fresh wiring should be done using wires of different colour to distinguish it from existing wiring. At-least 2 level checking should be done before a wire is tagged and terminated.
- 1.6 Wiring alterations in existing PVRRI installations should generally not be allowed in case alteration involved in existing relay wiring is large. The permission to carry out a sanctioned work by wiring alteration in existing PVRRI shall be granted after due deliberation at the level of CSTE only.
- 1.7 Requirement of NI for alteration work in existing installation should not be compared with that of new work. Adding one cross over on main line may involve large scale changes in circuit.
- 1.8 NI period for alteration in existing installation should be sought based on number of jumper wires involved and testing of panel as per selection table.

1.9 Calling On signal below Starter Signals should be allowed to take off with zero time delay. Calling On below Home Signals should be provided with time delay of 60 Seconds.

1.10 Compatibility of ECR with LED signal shall be ensured as per extant instructions.

1.11 All Signalling reliability improvement measures issued by Board & RDSO should be complied while executing new RRI/EI/PI works to avoid alterations at a later stage.

II. Execution of Field Works:

General

2.1 As the work progresses, 60 days before proposed NI, regular weekly reviews at SAG level should be done for final planning of all the activities during Pre-NI, NI and Post-NI periods. During these reviews, progress of these activities should be closely monitored and all hurdles should be resolved in close coordination with concerned departments and agencies.

2.2 NI for all RRI works at major station / junction stations shall commence only after approval of CSTE, COM and GM.

2.3 Phased commissioning should be adopted to reduce NI period.

2.4 Executing unit should give certificates for compliance of instructions as per Format enclosed as Appendix-I & II and should be submitted through Divisional Officers before permitting NI by CSTE & COM.

2.5 10 days before NI, all major activities/works, which can be completed prior to NI, should be completed in all respects.

2.6 Assistance of OEM, RDSO & Zonal Design Team etc to be taken to resolve any design related issues.

Points:

2.7 Care should be taken while laying switch rails. LH tongue rail should be provided with LH turn out and similarly for RH side.

2.8 All the points to be inserted should be pre-assembled on a staging outside and point machine fixing arrangements and ground connections should be pre-tested and kept ready for final adjustment. Proper housing of tongue rails should be ensured in assembled turnouts by Engineering officials at site.

2.9 Single / Double Slip points should be avoided where space is available for a fan shaped turn out.

2.10 Interlocking of Siding point should be done with care, keeping in view restriction imposed if any on CSL.

Schedule of Dimensions (SOD):

2.11 All infringements should be checked at the time of installation of the equipment, Signal Posts with Units, Point machines and their ground connection, Location boxes etc and again rechecked before the NI commences.

2.12 Point fittings should not infringe SOD. Infringing fittings should be corrected.

Relay Wiring & Testing:

2.13 For all new works, NI should not be commenced unless wiring of the interlocking logic is complete and at-least one stage of signal lowering is

checked from control panel. In case of alteration/modification to existing Signalling/Interlocking, testing of new functions and outside gears should be done in advance. In alteration work, verification of existing wiring, contact analysis etc should be done deploying additional trained staff.

- 2.12 Old wiring / cabling / fitting of points / track circuiting and signals etc, lying unused for more than 3 months, should be rechecked jointly by concerned construction & maintenance supervisors and officers before taking up NI. For old wiring, wiring is re-checked from base point to tag block and tag block to tag block before NI. Control Panel should be checked and verified as per SIP before starting wiring.
 - 2.13 Physical check of wiring shall be done to check dry soldering, loose connection, short circuit on terminals/tag blocks, clip not plugged etc before plugging relays and extending power supply.
 - 2.14 Relays stored for more than 6 months should be separately tested from Testing Jig for checking their working and contact resistance. Testing jig should be provided in Maintenance Panel Room.
 - 2.15 Quality of wiring work should be of high standard. Temperature controlled soldering iron should be used. Dropping of solder material on the terminal/wire should be prevented.
- Track Circuiting:**
- 2.16 Condition of ballast, track, sleepers should be thoroughly checked for their suitability for Signalling. GFN liners and rubber pads for all PSC sleepers in track circuited zones should be ensured.
 - 2.17 Track circuit bonding should be done with double bonds. J clips for Glued Joints portion should be ensured.
- Power Supply:**
- 2.18 Power supply arrangement should be properly designed to cater for the additional load, on account of modification in existing signalling. Dual power supply arrangement should be provided for RRI work at major station / Junction station. Adequate power supply for outdoor circuit should be made available to ensure proper functioning of farthest point under load.
- Maintenance Staff Deployment, Training, Spares etc:**
- 2.19 Maintenance Panel should be fully wired and made functional along with RRI for quick rectification of fault. Data logger wiring and validation should be done in advance before Pre-NI.
 - 2.20 Maintenance staff of the station should be fully associated during the course of RRI work. Additional staff as required for maintenance should be got sanctioned and deployed.
 - 2.21 Spare Modules: 10% of each sub-system / module should be made available before commencing NI. Required T&P items, vehicles and other measuring instruments should be made available by construction before NI. Wherever, new concrete sleepers are required to be inserted, they should be electrically re-tested even though they are tested earlier in the sleeper plant.
 - 2.22 Training in advanced modern Signalling being installed at the station should be ensured for all S&T staff posted for maintenance before NI.

- 2.23 NI working should be carefully planned, listing out activities required to be completed during the allowed period and should be checked for adequacy at the minimum level of JA Grade officer consulting the Divisional Operating & Signal officers at every stage. In case of stations having more than 100 routes, the planning and checking of requirements should be done at a higher level.

Telecom facilities & Communication Arrangements:

- 2.24 All Telecom facilities in new RRI building must be commissioned before NI.

- 2.25 CUG public mobile communication should not be used. Communication amongst Staff working on Panel and Relay Room/Equipment Room should be through hands free talk back system and VHF/Walkie-Talkie sets. Communication with staff deployed at Goomties / Relay Huts, Temporary shelters and in the field should be only through VHF with standby point to point Magneto Telephones. Sufficient VHF batteries and battery chargers shall be available.

- 2.26 Telecom Officer of the Railway should be deputed at station, responsible for collection of regular updates from field and relaying them to Divisional / Zonal Railway / Board officials. He should also look after the Telecom Arrangements.

Cable Testing:

- 2.27 All cables should be tested jointly with supervisor of maintenance organization.

III. Pre NI / NI works:

General:

- 3.1 Before permitting NI at major yard / junction station, a foot by foot inspection of entire yard at least by JS/SS officers of all concerned departments should be done along with SS of the station.

- 3.2 Security and lighting arrangements should be ensured during Pre-NI/NI.

- 3.3 Transportation, Boarding and lodging facilities should be made available for all staff & officers deployed for NI work. Special Imprest should be got sanctioned for the same.

Deployment of Staff and Distribution of Works:

- 3.4 Separate teams in round the clock shifts should be formed for Panel, Relay Room, Equipment Room, Data Logger room, Relay Huts, Locations and a set of field gears. Activities assigned to each team should be clearly documented and a copy given to all concerned for immediate reference by them.
- 3.5 Distribution of works should be done to different teams by name giving them documents for various activities / works on S&T equipment expected to be done by them. Officers deputed for NI work should come with their full support team of supervisors, technicians and helpers to form effective working team. They should not leave the work site without permission of CSTE/C or Officer in-charge. Team of Officers / Supervisors / Technicians & Helpers deployed from other Divisions and Railways should report at least 3 days before NI and should remain available at least 5 days after NI.

- 3.6 Dy CSTE, incharge of field work should take control remaining stationed at Control Panel staying in continuous touch with Relay room, Equipment room,

each of the site locations, relay huts etc through VHF communication, and occasionally inspect the outdoor locations.

- 3.7 S&T officer in-charge of design along with his group should be available at site during the period for assisting in testing and commissioning and issuing of design corrections/modifications, if required.
- 3.8 For RRI work, SAG officers should be available at major / Jn station,
- 3.9 Adequate Engineering, Operating, Electrical and Signalling teams should be available 3 days before the NI working and for a period of at least 5 days after the NI is completed.
- 3.10 SAG / Officer in-charge should review the NI work every six hours and give directions and send update to Divisional / Zonal Railway / Board officials through nominated telecom officers.

Training of Operating Staff:

- 3.11 Training of ASMs is extremely important. They should be available during simulation and functional test. Before handing over the panel to traffic, special emphasis should be given for button identification for various Signalled Routes, Crank handle release, LG Gate locking / release, Emergency Operations for route cancellation, emergency sub route release, emergency point operations, Calling On etc. ASMs posted at Panel should have Panel Competency Certificate issued by Zonal Training School. ASM should have earlier worked on the Panel and be familiar with buttons, various routes etc.

Testing of Functions:

- 3.12 In Outdoor, special attention is to be paid for greasing and oiling of points where new point machine / new turn out is provided or new cable is provided in existing point machine.
- 3.13 Proper adjustments of various parameters of Point including packing of Points, track, signal, EGR etc shall be done for their correct functioning.
- 3.14 Old Slot / Block / BPAC working etc shall be kept fully tested for proper change over.
- 3.15 Track bonding to be got checked & verified jointly with Engg & TRD department.
- 3.16 Corresponding test of each function is to be done, before NI between cable terminations from Relay Room to Location Box and from Panel to function during NI.
- 3.17 Full testing of correspondence of all functions, wire count test, square sheet test for conflicting signals, simulation and functional test (100%) shall be done and records are maintained.

Plans & Documents:

- 3.18 Copy of wiring / circuit diagram should be available at each Gears / Locations / Relay Huts / Goomties.
- 3.19 Copies of Mini SIP / SWRD should be made available for display at important locations like Relay Room, Panel room, Equipment Room, Maintenance Panel Room, Relay Huts and also handed over to each officer deployed at site.

3.20 Supervisors and officials deployed for execution of the work and for train operations should be made to read the documents and instructions to understand the procedure and sequence of NI working and sign the assurance register.

3.21 Deployment of Contractor Staff: Technical representatives of the contractor shall be available and visible during Pre-NI and NI period for immediately attending to faults / prompt removal of released material etc.

3.22 Deployment of Contractor Staff as per requirement should be ensured during work. Technicians and Engineers of Contractors and/or Manufacturers should be available 3 days before the start of NI and should continue for a period of at least 5 days after the NI is completed.

IV. For Train Operations and Control during NI:

4.1 No short cut should be adopted to run trains under any circumstances.
4.2 All preparatory works and arrangements pertaining to Signal, Permanent Way, Traction Distribution and Electric General and Telecommunication should be pre-tested and kept ready for NI working. PA system should be provided for NI working.

4.3 Free Home and Starter Signals should be made available for use of the traffic staff during NI working. For Block working, existing system of block working should be provided for each block section. Point to Point telecommunication facilities as required for NI shall be provided, tested and kept in working order.

4.4 Rehearsal of Special duty traffic staff for setting, clamping and padlocking of points for different routes during NI.

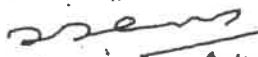
4.5 ASM who are trained in use of crank handle for operating the point machines and for prompt delivery of paper authority to the driver in case of signal failure, should be deployed.

4.6 At stations, where NI is being undertaken crossings and precedence of trains should be avoided during duration of NI. No shunting should normally be done. Points should be set in the normal position and clamped and padlocked for straight Up / Down movements.

4.7 Train operations during NI working should be effectively controlled by deploying the required number of traffic staff and an officer for monitoring their working. Prompt receipt and dispatch of trains be ensured during NI. An operating officer (DOM/Sr.DOM/G) should be available at site during NI period to monitor and control operations. If required, goods trains / less important passenger trains may be regulated / terminated for major stations.

4.8 SWR should be issued fresh every five year or after issue of three amendment slips.

- 4.9 The above instructions shall be legislated in the Temporary Working Order (Instructions / Rules) / Green Notice / Draft Circular Notice / Disconnection Notice.
5. Post NI Maintenance & Monitoring:
- 5.1 Nominated Maintenance Teams should be stationed at every 10-12 points, Relay Huts and other locations having S&T equipment.
- 5.2 Trouble shooting flow chart should be provided in Relay room, Panel Room, Maintenance Panel room, relay huts etc. for quick diagnostic of failures.
- 5.3 Released materials should be shifted promptly from station after NI working period is completed and the system handed over for operations.
- 5.4 Proper record of various events shall be kept in separate register and this shall continue till the installation gets fully stabilized.
- 5.5 Field lighting of the yard during night hours shall continue for 3 days after NI is over.
- 5.6 At major station / Junction station, Operating Staff deployed for NI working should continue even after commissioning of Panel till it get stabilized and certified by Sr.DSTE & Sr.DOM of the Division.
- 5.7 Completion Drawing should be carefully prepared with the required level of checking and finalized. One copy be kept available at station.


9.4.12
Rajmal Khosla
Director (Signal)

Work Ready for Non Interlocking Certificate for CSTE's Approval

Appendix-1

	Items	Status	Compliance
A	General		
A 1	Name of work		
2	Date of work sanction & cost		
3	scope of work		
4	Name of station for which NI to be taken		
5	Type of work - New RRI/PI/EI or alteration in Existing Installation, IBS, LC gate etc.		
6	Name of indoor contractor		
7	Name of outdoor contractor		
8	Name of officer Incharge		
9	Name of supervisor Incharge		
10	name of ASTE/DSTE executed the work		
11	Any other detail		
B	Drawings		
1	ESP No. and approved date		
2	IP and approved date		
3	RSP/ST/PD approved date		
4	Circuit diagram issued date		
5	circuit diagram approval date & name of officer checked & approved		
6	position of contact analysis		
7	datalogger contact sheet.		
8	Building plan No. and date of approval		
	Field Diagrams		
1	Cable route plan approval date		
2	cable core plan -Checked/Approved name & date		
3	TC or Bonding plan also showing no. of G/I, I/I, Bonds, Liners, Rubberpads etc. C/A name & date		
4	Location diagrams total sheets, C/A details		
5	SWR diagram		
6	SWR		
7	working diagram or key diagram showing old & new layout		
8	Mini diagram		
9	function wise cable conductor sheets		
10	Relay rack arrangement- no. of racks		
11	floor plan of RR, Power and panel room		

Work Ready for Non Interlocking
Certificate for CSTE's Approval

Items	Status	Compliance
12 Jumpering sheets No. - C/A by		
13 Tag block analysis sheets (1/2 wire count sheets)		
14 panel diagram tag block sheets		
15 power diagram - C/A by		
16 Cable termination details		
17 CRS papers details		
18 Signal infringement details C/A by		
19 Square sheet P/C/A by		
20 patch cable details P/C/A by		
C Work completed Total / Done / Bal.		
1 Indoor Circuit wiring No. of Jumper T/D/B		
2 Realy rack erection & pre wiring T/D/B		
3 Power equipments Wiring		
4 Panel wiring		
5 CT rack erection T/D/B		
6 Relays T/D		
7 Loc. F/E - T/D/B		
8 Signals F/E - T/D/B		
9 Point m/c fixing - T/D/B		
10 T/O assemble outside - T/D/B		
11 T/o Insertion in track - T/D/B		
12 G/J - T/D/B		
13 Insulation Joints - T/D/B		
14 DAC DP fixing - T/D/B		
15 AFTC Installation - T/D/P		
16 TC charging - T/D/B		
17 ICC wiring - T/D/B		
18 Block Instrument Inst. T/D/B		
19 Control & other phones		
20 provision of VHF set		
21 Provision of D/L, ELD, Fuse SB system,		
22 Provision of DG sets		
23 Battery charging		
24 Loc. TC equipment wiring		
25 Electrical - AT supply & General supply		
26 Provision of A/C		
27 OHE bonding		
28 Engg - provision of Rubberpad, liners etc		
29 Engg - Ballasting & packing by unimat		
30 Engg - Drains construction		
31 Any other work		

Work Ready for Non Interlocking
Certificate for CSTE's Approval

	Items	Status	Compliance
D	Works proposed to be done in Pre		
1	Signal F/E/		
2	Loc Box, F/E		
3	cable Termination in CT rack or Loc. Boxes		
4	cable laying or shifting		
5	Insertion of G/I or I/I		
6	No. of T/o removal and Insertion		
7	No. of sleeper Insertion/removal		
8	fixing of point machines		
9	fixing of TLJBs/TU of AFTCs		
10	Track connections		
11	Bonding by OHE		
12	Bonding by S&T		
13	fixing of DAC track units		
14	No. of Jumpers removal/Insertion		
15	ICC /slot, block Inst. wiring		
16	Locking alterations in L/F if any		
E	Works proposed During NI		
1	Signal F/E/		
2	Loc Box, F/E		
3	cable Termination in CT rack or Loc. Boxes		
4	cable laying or shifting		
5	Insertion of G/I or I/I		
6	No. of T/o removal and Insertion		
7	No. of sleeper Insertion/removal		
8	fixing of point machines		
9	fixing of TLJBs/TU of AFTCs		
10	Track connections		
11	Bonding by OHE		
12	Bonding by S&T		
13	fixing of DAC track units		
14	No. of Jumpers removal/Insertion		
15	ICC /slot, block Inst. wiring		
16	Locking alterations in L/F if any		
F	Testing completed		
F1	Indoor		
1	Indoor cable meggering - by		
2	wire to wire continuity test - by & date		
3	1wire/ 2 wire checking - by & date		
4	IPS/Power wiring test - by/ date		
5	panel thro test - by & date		
6	First functional test - by & date		

Work Ready for Non Interlocking
Certificate for CSTE's Approval

20

	Items	Status	Compliance
1	soldering of jumpers - by & date		
1	Contact break test - total sheets, By /dates		
1	square sheet test - by & date		
1	datalogger contact validation test - by & date		
1	DAC/AFTC function tests by OEM		
1	Relay verification test - total no., etc details to be given - By/Date		
1	Recording of Bus voltages in R/R, voltage drop is in permissible limits.		
1	ELD testing, No alarm noticed		
FL	Outdoor Test		
15	Cable meggering joint test - By/date		
16	cable function assurance test		
17	charging of track circuits if possible (Nos.)		
18	Point machine operation by dummy plates/at site By/date		
19	cable patching arrangement for charging new cables for old gears or vice versa		
20	charging of new signal cables		
21	signal wiring & lamps position		
22	Earthing values		
23	TC data sheets filled & values in limit. - By/date		
24	Signal voltages measured & card filled at site-parameter in limit. - by/date		
25	Cutting-in Relay voltages checked By/date		
26			
6	Training and other works during NI & post NI		
1	Technical training for new gears to maint. Staff -EI, DAC, AFTC, ELD, D/L, Fuse alarm, etc by OEMs - details & date		
2	2nd Functional test completed by/date		
3	safety certificate will be signed by		
4	Any work proposed after commissioning like contact break test, Functional test, etc for alterations etc.		

**Work Ready for Non Interlocking
Certificate for CSTE's Approval**

	Items	Status	Compliance
5	Whether NI is necessary - give justifications		
6	Whether New Wiring is done instead of alteration in circuits, If not give justifications.		
7	All the documents have been provided at respected places like in R/R, Loc. Boxes and signal units etc.		
8	All the items prescribed in PRIME has been provided in installation. Any deficiencies need to be explained. And commitment to complete it.		
It is certified that all the above information is correct and verified. Kindly grant CSTE sanction and permission for NI work of station -.			
	DyCSTE/C	DyCE/C	DyCEE/C
	Countersigned CSTE/C		
	Recommended by DyCSTE/HQ CSE		
	Sanctioned CSTE		

**Work Ready for NonInterlocking
Certificate for CSTE and COM**

Appendix-II

(21)

Items	Status	Compliance
General		
A Name of work		
2 Date of work sanction & cost		
3 scope of work		
4 Name of station for which NI to be taken		
5 Type of work - New RRI/PI/EI or alteration in Existing Installation, IBS, LC gate etc.		
6 Name of Engg officer incharge		
7 Name of Electrical officer incharge		
8 Name of S&T officer incharge		
9 Any other detail		
Drawings & Documents		
1 ESP No. and approved date		
2 IP and approved date		
3 SWR No. and approved date		
4 SWR approval date		
Works proposed During Pre NI & NI		
1 Signal F/E		
2 Loc Box, F/E		
3 cable Termination in CT rack or Loc. Boxes		
4 cable laying or shifting		
5 Insertion of G/J or I/I		
6 No. of T/o removal and insertion		
7 No. of sleeper insertion/removal		
8 fixing of point machines		
9 fixing of TLJBs/TJ of AFTCs		
10 Track connections		
11 Bonding by OHE		
12 Bonding by S&T		
13 fixing of DAC track units		
14 No. of Jumpers removal/insertion		
15 ICC /slot, block Inst. wiring		
16 Locking alterations in L/F if any		
Training and others		
1 Hands on training to ASMs on new panel. No. of ASMs trained - by & Date		
2 Routes locking explanation to optg staff by & to whom - names/date		
3 CRS sanction details		
4 DCN approved by SrDSTE & srdom on		

Work Ready for Noninterlocking Certificate for CSTE and COM

Items	Status	Compliance
5 Temp. working instructions and affect of NI on train movements		
6 staff required during NI - planning & availability		
Other details for Pre-NI and NI period		
1 Name of officers available during NI		
2 Panel I/C resp. for function assurance test		
3 Officer I/c from Engg, S&T, Elec, optg deptt. etc.		
4 Period of Pre NI & NI period.		
5 Date by which NI to be taken		
6 2nd Functional test completed by/date		
7 safety certificate will be signed by		
8 Post commissioning staff planning details		
9 Any work proposed after commissioning like contact break test, Functional test, etc for alterations etc.		
10 whether NI is necessary - give justifications		
11 Whether CSTE tech. sanction have been taken - date		
It is certified that all the above information is correct and verified. Kindly grant permission for:		
DyCSTE/C		DyCEE/C
Countersigned by		
CSTE/C		CEE/C
SrDSTE, SrDOM, SrDEN, ADRM		
Approved by		
CSE		
Put for Info of --- before issue		
CSTE, COM & GM		