

Civil & Structural works of Township Boundary wall, approach road for existing facilities, strengthening of Old Gasification Sub-station building and other Miscellaneous facilities including allied Electrical Works at TFL, Talcher

NIT NO. : PNPM/PC-183/E-212/NCB dated 24.10.2025

AMENDMENT No.: III Dated 17.11.2025



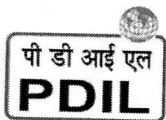
Sl. No.	Reference of Bidding Document				Existing Clause	Amended Clause
	Vol/ Sec	Page No.	Clause No.	Subject / Heading		
1	S-II	08 of 30	9.0	PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA	9.1. Order (Public Procurement No. 1) dated 23.07.2020, Order (Public Procurement No. 2) dated 23.07.2020 and Order (Public Procurement No. 3) dated 24.07.2020, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website https://doe.gov.in/procurement-policy-divisions 9.2. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement No. 1) dated 23.07.2020.	Existing clause is modified as below: "9.1 OM no. 7/10/2021-PPD(1) dated 23.02.2023, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website https://doe.gov.in/procurement-policy-divisions 9.2 Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement no. 4) dated 23.02.2023.

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Sl. No.	Reference of Bidding Document				Existing Clause	Amended Clause
	Vol/ Sec	Page No.	Clause No.	Subject / Heading		
					Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India	<i>Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority.</i> <i>Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development</i>

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						<i>projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India."</i>
2	S-II	08 of 30	9.0	PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA		Repeated Sl. No. 9.7, 9.8 & 9.9 of clause 9.0 to be read as <u>9.9, 9.10 & 9.11.</u>
3	S-III			Form No. "F-14"	INTEGRITY PACT	Revised Format of <u>INTEGRITY PACT</u> is attached with this amendment as Form No. F-14.
3	S-VI		Annx-II	Drawings	Not attached	Drawing attached for Tender purpose.
4	S-VI				Not attached	Technical Specification for Automatic Boom Barrier (Annexure-I to Section-VI).

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Sl. No.	Reference of Bidding Document				Existing Clause	Amended Clause
	Vol/ Sec	Page No.	Clause No.	Subject / Heading		
5	S-VI				Not attached	Technical Specification for FLAP/ SWING Barrier (Annexure-II to Section-VI).
6	S-VI				Not attached	Technical Specification for Automatic Sliding Gate (Annexure-III to Section-VI).

FOR & On behalf of
(Projects & Development India Ltd.)

for K.L.W.
Abhilesh Kumar
Kailash Joshi
(Project Manager)

INTEGRITY PACT

INTEGRITY PACT

INTRODUCTION:

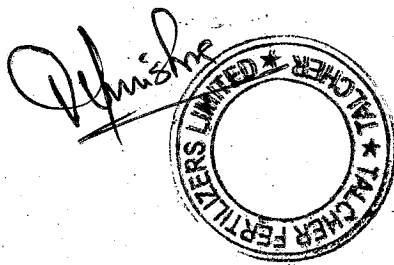
TFL, as one of its endeavour to maintain and foster most ethical and corruption free business environment and to ensure transparency, equity & competitiveness in public procurement, has adopted Integrity Pact, to ensure that all activities and transactions between the Company (TFL) and its Counterparties (Bidders, Contractors, Vendors, Suppliers, Service Providers/Consultants etc.) are handled in a fair and transparent manner, completely free of corruption.

The adoption and implementation of Integrity Pact is governed as per directives and Standard Operating Procedure (SoP) issued by Central Vigilance Commission from time to time.

Bidder is required to execute the Integrity Pact on plain paper as per format & terms and conditions enclosed with all tenders having estimated value of **Rs 1 Crore and above**. In case, a bidder does not sign the Integrity Pact, their bid shall be liable for rejection.

If a Counterparty commits a violation of its Commitments and Obligations under the Integrity Pact during bidding process, their entire Earnest Money Deposit/ Bid Security, would be forfeited and in addition, action shall be taken as per **"Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices"**.

In case of violation of the Integrity pact by Counterparty after award of the Contract, TFL shall be entitled to terminate the Contract. Further, TFL would forfeit the Security Deposit/ Contract Performance Security and in addition, action shall be taken as per **"Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices"**.



INDEPENDENT EXTERNAL MONITORS (IEMS)

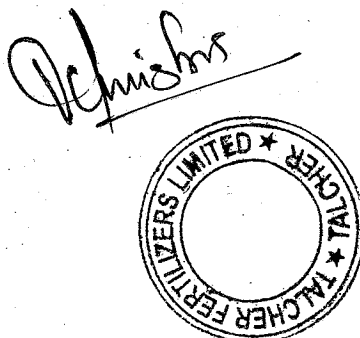
Presently the panel consisting of the following Independent External Monitors (IEMs) have been appointed by TFL, in terms of Integrity Pact (IP) which forms part of TFL Tenders / Contracts.

- i) Shri Sanjeev Prasad Narain Singh (Email ID: spns108@gmail.com)
- ii) Shri Anil Kumar Sharma (Email ID: aksharma1512@gmail.com)

This panel is authorised to examine / consider all references made to it under this tender/ contract.

“The bidder(s), in case of any dispute(s) / complaint(s) pertaining to this tender falling under provisions of Integrity Pact may raise the same either directly with the IEMs on the panel or with CC to them through their Nodal Officer - Sh. Vivek Mishra, CM (C&P) – Email: vivekmishra@tflonline.co.in, Address: Talcher Fertilizers Limited, Administrative Building, Post – Vikrampur, Dist. Angul, Odisha - 759106.

On receipt of such complaints/representations, Nodal Officer shall coordinate with IEM Panel and TFL authorities concerned for their disposal as per extant guidelines.



INTEGRITY PACT (IP)

(To be executed on plain paper)

Between

Talcher Fertilizers Limited (TFL) [here-in-after referred to as "Principal"].

AND

_____ (here-in-after referred to as "The Bidder/
Contractor").

(Principal and the Bidder / Contractor are here-in-after are referred to individually as "Party" or collectively as "Parties").

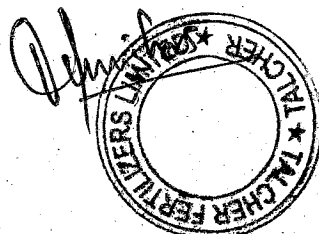
PREAMBLE

The Principal intends to award under laid down organizational procedures, contract/s for _____ (name of the tender / contract). The Principal values full compliance with all relevant laws of land, rules, regulations, and economic use of resources and of fairness / transparency in its relations with its Bidder (s) and/or Contractor (s).

In order to achieve these goals, the Principal has appointed Independent External Monitors (IEMs) who will monitor the tender process for compliance with the principles mentioned in this Integrity Pact, the terms and conditions of which shall also be read as integral part and parcel of the tender document and contract between the parties.

Section 1 – Commitments of the Principal

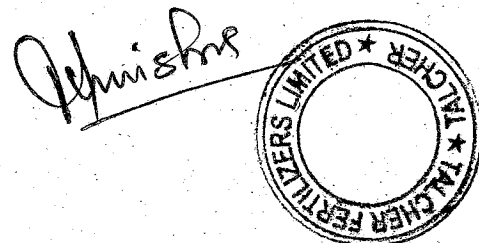
1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following Principles:-
 - i) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or for a third person, any material or immaterial benefit which the person is not legally entitled to.
 - ii) The Principal will, during the tender process treat all Bidder(s) with equity and reasons. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.



- iii) The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Bharatiya Nyaya Sanhita (BNS)/ Prevention of Corruption Act (PC Act), or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can also initiate disciplinary action(s) as per its internal laid down policy and procedure.

Section 2 – Commitments of the Bidder (s)/Contractor (s)

1. The Bidder (s) / Contractor (s) commits themselves to take all measures necessary to prevent corruption. The Bidder (s)/ Contractor (s) commits themselves to observe the following principles during participation in the tender process and during the Contract execution:
- i) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the Contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the Contract.
 - ii) The Bidder(s) / Contractor(s) will not enter with other Bidders into any illegal or undisclosed agreement or understanding, whether formal or informal, including but not limited to prices, specifications, scope of work, certifications, subsidiary contracts, submission or non-submission of bids or any other action(s) to restrict competitiveness or to introduce cartelization in the bidding process.
 - iii) The Bidder (s) / Contractor (s) will not commit any offence under the relevant BNS/PC Act. Further, the Bidder (s) / Contractor (s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - iv) The Bidder (s)/ Contractor (s) of foreign origin shall disclose the name and address of the agents/ representatives in India, if any, involved directly or indirectly in the bidding. Similarly, the Bidder (s)/ Contractor (s) of Indian Nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the bidding. Further, all the payments made to the Indian agent/ representative have to be in India Rupees only.



- v) The Bidder (s) / Contractor (s) will, when presenting their bid, disclose any and all payments made, or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract, and/or with the execution of the Contract.
 - vi) The Bidder(s)/Contractor(s) shall not misrepresent facts or furnish false/forged documents/information in order to influence the bidding process or the execution of the contract to the detriment of the Principal.
 - vii) Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.
2. The Bidder(s)/ Contractor(s) shall not instigate third person to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

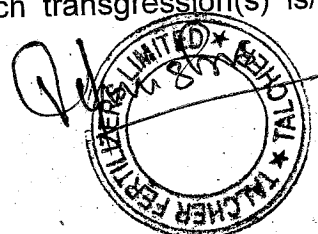
If the Bidder (s) / Contractor (s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder (s) / Contractor (s) from the tender process and / or take action as per provisions of “**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**”.

Section 4 – Compensation for Damages

1. If the Principal has disqualified the Bidder (s) from the tender process prior to the award in accordance with Section 3, the Principal is entitled to demand and recover the damages by forfeiting Earnest Money Deposit / Bid Security.
2. If the Principal has terminated the Contract in accordance with Section 3, or if the Principal is entitled to terminate the Contract in accordance with Section 3, the Principal shall be entitled to demand and recover from the Contractor the damages by forfeiting Contract Performance Security or its equivalent amount (in part/full), as may be decided by the Principal besides resorting to other remedies under the contract and as provided under law.

Section 5 – Previous transgression

1. Bidder(s) to disclose any transgressions with any other public/government organization that may impinge on the anti-corruption principle. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the Competent Authority. The period for which such transgression(s) is/are to be



reported by the bidders shall be the last three years to be reckoned from date of bid submission. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.

2. If the Bidder(s) make false statement on this subject, they can be disqualified from the tender process and/or actions can be taken as per provisions of **"Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices"**

Section 6 – Equal treatment to all Bidders / Contractors / Subcontractors

1. If the Bidder is a Partnership Firm, **Integrity Pact(IP)** is required to be signed by all the Partners. If the Bidder is a Consortium/ Unincorporated Joint Venture/Association of Persons, formed solely for the purpose of executing the tendered project, this Pact must be signed by all the Partners/ members of such Consortium/Unincorporated Joint Ventures/Association of Persons. In case Bidder is a Company, including Joint Venture Company, the Pact must be signed by a representative of the Company duly authorized by Board resolution.
2. The Bidder (s) / Contractor(s) shall alone be responsible for any compliance or violation (s) of the provisions laid down in the Pact by any/all of their sub-contractor (s) or sub-vendor (s).
3. The Principal will enter into agreements with identical conditions with all Bidders and Contractors as per this format.
4. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

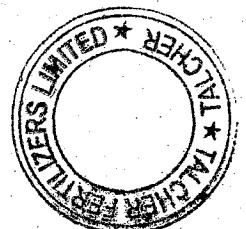
Section 7 – Criminal charges against violating Bidder (s) / Contractor (s) / Sub-contractor (s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer (CVO).

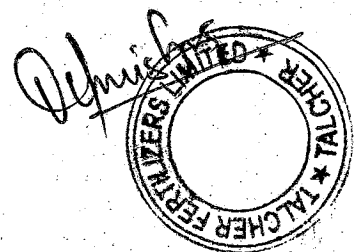
Section 8 –Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

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2. The IEM(s) are not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The IEM(s) would have access to all documents / records pertaining to the contract for which a complaint or issue is raised before them, as and when warranted. It will be obligatory for him/her to treat the information and documents of the Bidders / Contractors as confidential. IEM(s) reports to MD, TFL.
3. The Bidder (s)/ Contractor (s) accepts that the IEM(s) have the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the IEM(s), upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors and it shall be the responsibility of the Bidder(s) to ensure the compliance by their sub-contractor(s) appointed as per the provisions of tender as and when warranted.
4. The IEM(s) are under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality. The IEM(s) have also signed declarations on 'Non-Disclosure of Confidential Information' and of 'Absence of Conflict of Interest'. In case of any conflict of interest arising at a later date, the IEM(s) shall inform MD, TFL and recuse himself/herself from that case.
5. The Principal will provide to the IEM(s) sufficient information about all meetings among the parties related to the Project/tender provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEM(s) the option to participate in such meetings.
6. As soon as the IEM(s) notice, a violation of this agreement, they will so inform the Management of the Principal and request the Management to discontinue or to take corrective action, or to take other relevant action. The IEM(s) can in this regard submit non-binding recommendations. Beyond this, the IEM(s) have no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
7. The IEM(s) will submit a written report to the MD, TFL within 30 days from the date of reference or intimation to them by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
8. If the IEM(s) has reported to the MD, TFL a substantiated suspicion of an offence under the relevant BNS/PC Act, and the MD, TFL has not, within the reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, then only in case of very serious issue having a specific, verifiable Vigilance angle, the matter may be reported directly to the Central Vigilance Commission (CVC).



9. The word IEM(s) would include both singular and plural.
10. In case of any complaints is referred under IP Program accompanied by IP duly signed by an intending bidder, only then the same shall be taken into cognizance by the IEM(s). The role of IEM(s) is advisory and would not be legally binding and it is restricted to resolving the issues raised by an intending bidder regarding any aspect(s) of the tender which allegedly restricts competition or bias towards some bidder.
11. The IEM(s) shall examine all the representations / grievances / complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/specifications etc.

Section 9 – Pact Duration

This IP shall come into force when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded. Any violation to the same would entail disqualification of the bidders and exclusion from future business dealings as provided under the tender.

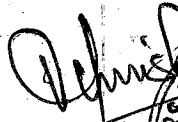
If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by the MD, TFL.

Section 10 – Other provisions

1. This agreement is subject to Indian Law. Place of performance and exclusive jurisdiction is the Registered Office of the Principal, i.e. Bhubaneswar. The arbitration/conciliation clause provided in the main tender document/contract shall not be applicable for any issue/dispute arising under Integrity pact.
2. Changes and supplements as well as termination notices, if any, need to be made in writing. Side agreements have not been made.
3. Should one or several of the provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
4. All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Tender/Contract



and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Pact will have precedence over the Tender/Contract documents with regard to any of the provisions covered under this Pact.



(For & on Behalf of Principal)

(Office Seal)

(For & on Behalf of Bidder/Contractor)

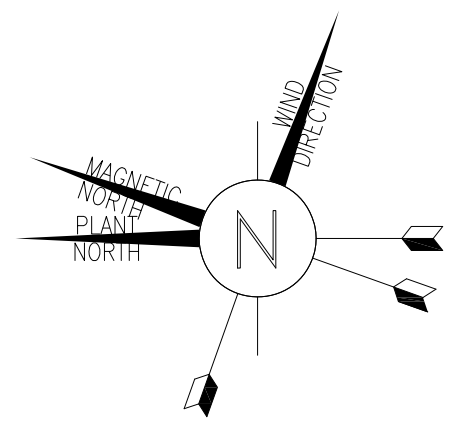
(Office Seal)

Place _____
Date _____

Witness 1:
(Sign, Name & Address)
[FOR PRINCIPAL]

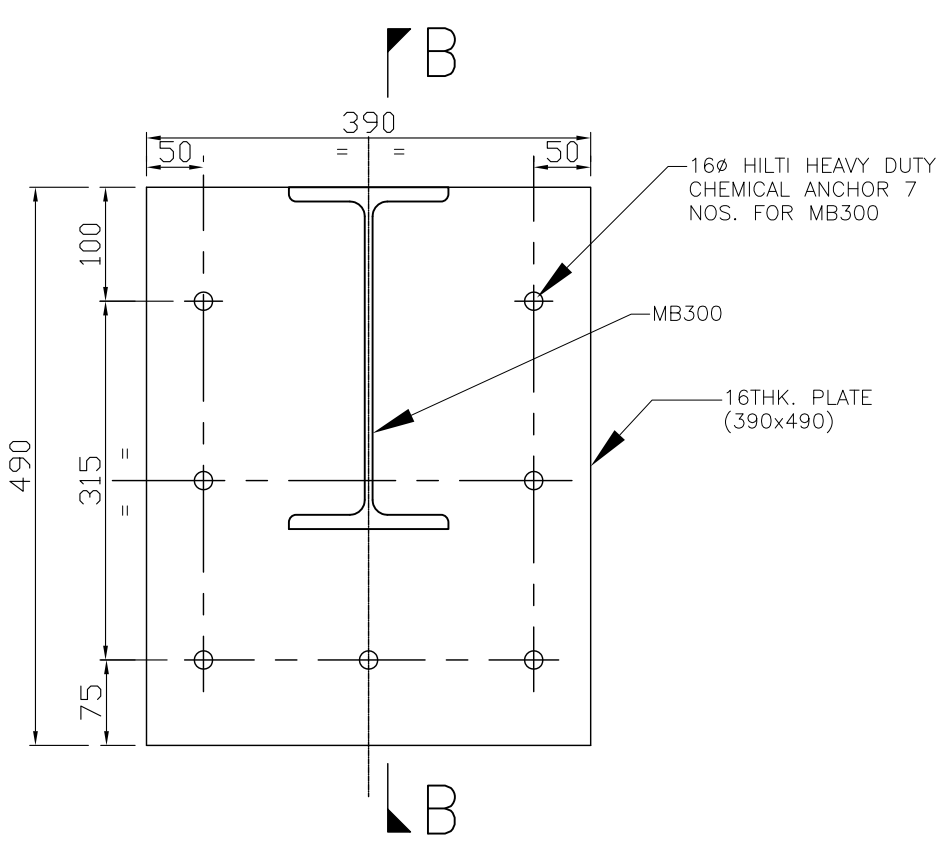
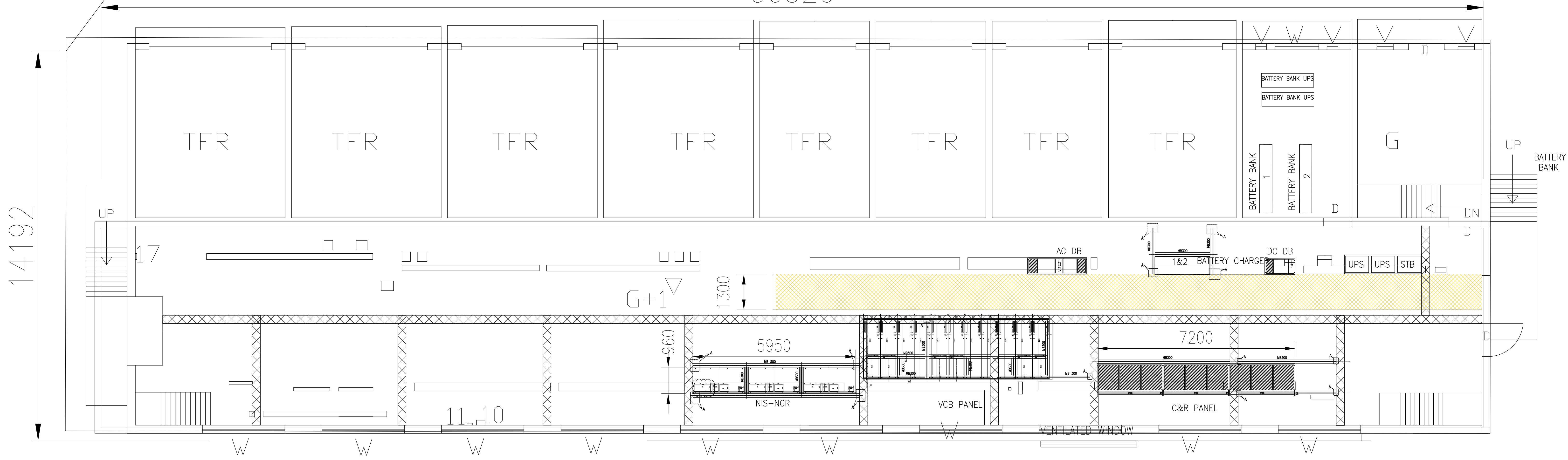
Geogam
SULA DEOGAM, MGR. (CAP)
TALCHER FERTILIZERS LIMITED,
TALCHER, DIST. ANGU, ODISHA-759106

Witness 2:
(Sign, Name & Address)
[FOR BIDDER / CONTRACTOR]

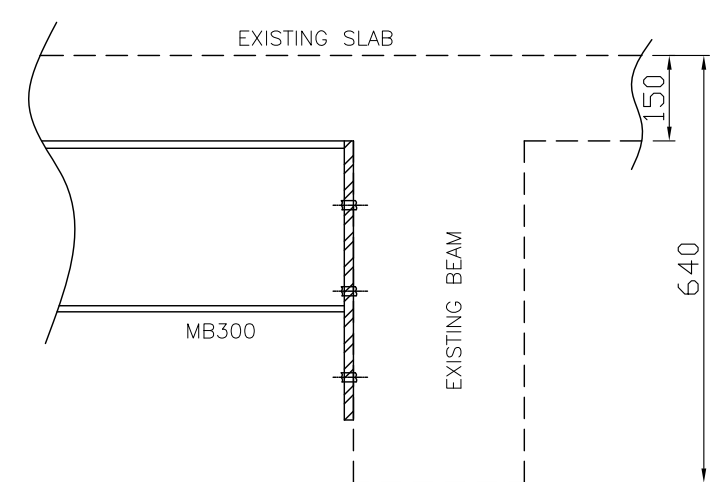


N= 809.665
W= 692.329

EXISTING BUILDING
PANEL ROOM
50320



DETAIL -A
TYPICAL DETAIL OF CONNECTION WITH
NEW/EXISTING CONCRETE COLUMN FOR MB300



SECTION B-B

S.NO	REFERENCE DWG.	DRAWING NO.
1	LAYOUT PLAN FOR (3X2000 KVA/11 KV ACOUSTIC SETS)	JL/PCN/FDN-001
2	OVERALL PLOT PLAN	PC183-0000-0001
3	GA & RCC DETAIL OF FOUNDATION FOR 2000 KVA/11KV ACOUSTIC SET (RAD COOLED)	PC183-1000-0250
4	CABLE TRENCH LAYOUT PLAN FOR (3X2000KVA/11KV ACOUSTIC DG SETS)	JL/PCN/LP-004

SITE ENGINEER TO FIELD VERIFY LOCATING DIMENSIONS & TOS ELEVATIONS OF PROPOSED STRUCTURE PRIOR TO FABRICATION. ANY MODIFICATIONS/ADJUSTMENTS DUE TO SITE CONSTRAINTS, IF ANY, TO BE INTIMATED TO DESIGN ENGINEER FOR ANY SUITABLE MODIFICATION.

LEGEND

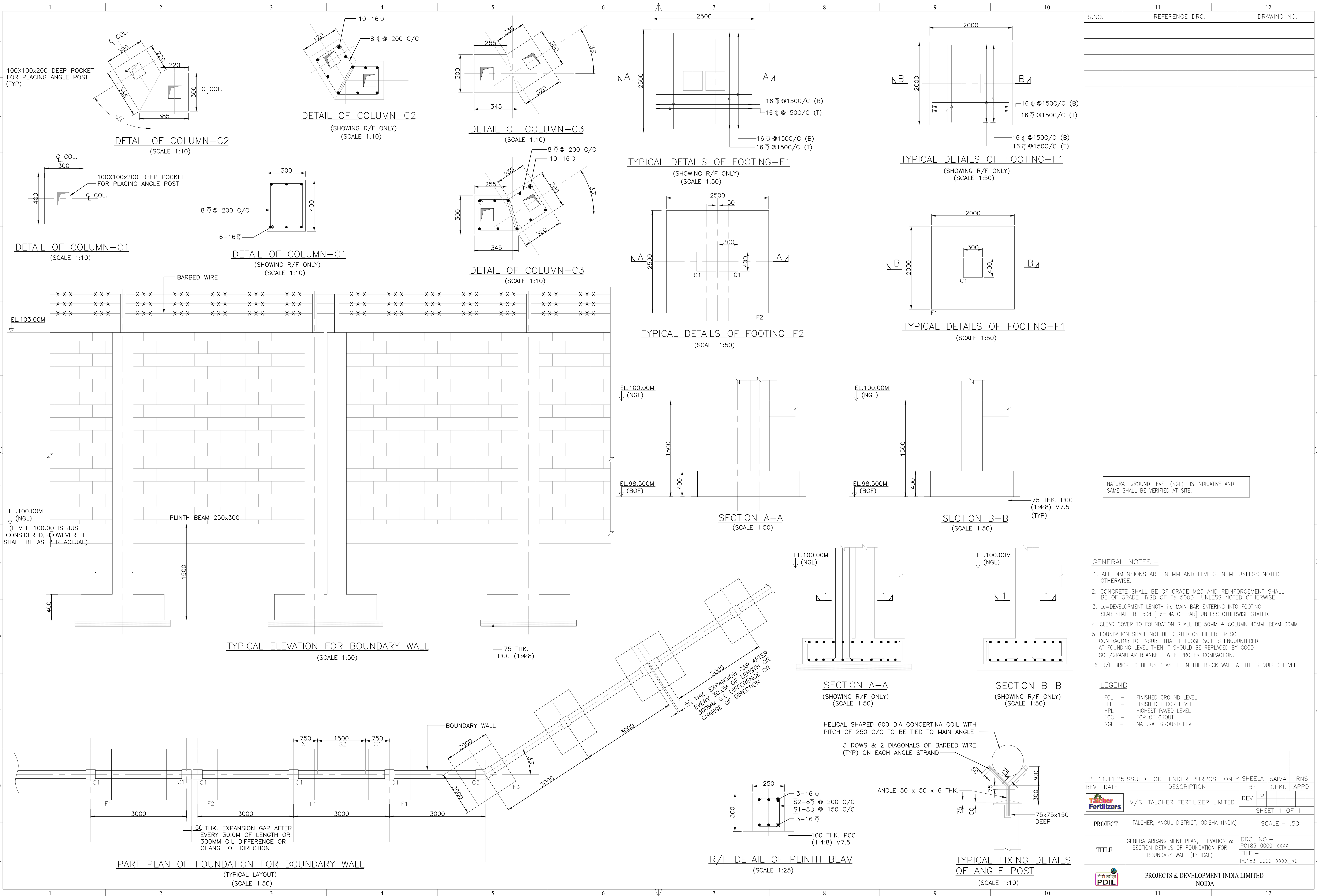
- FGL - FINISHED GROUND LEVEL
- FFL - FINISHED FLOOR LEVEL
- HPL - HIGHEST PAVED LEVEL
- TOG - TOP OF GROUT
- TOS - TOP OF STEEL

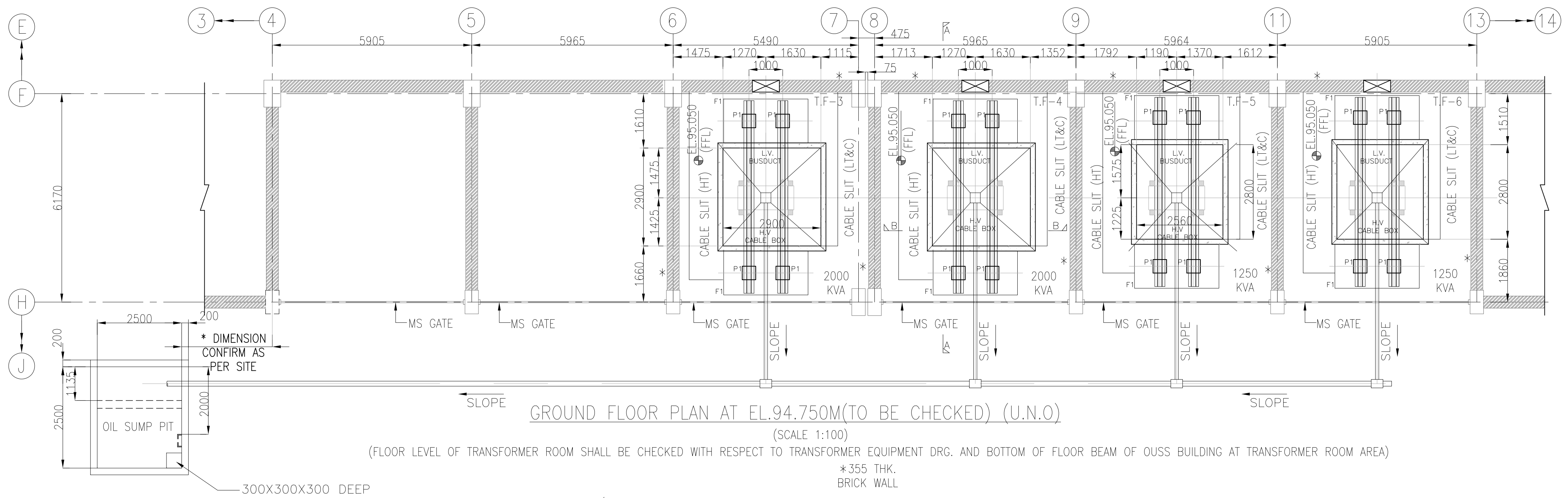
GENERAL NOTES:

- ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN M UNLESS OTHERWISE NOTED.
- REFERENCE FGL.100.000M CORRESPONDS TO EL.94.000M
- MIN. GRADE OF CONCRETE SHALL BE USED M-30.
- REINFORCED Φ MARKED SHALL BE HIGH YIELD STRENGTH DEFORMED BARS CONFIRMING TO IS:1786 WITH CHARACTERISTIC STRENGTH OF 500N/Sq.MM (Fe500D)
- MINIMUM NOMINAL COVER TO MAIN REINFORCEMENT FOR DIFFERENT MEMBER SHALL BE AS UNDER UNLESS OTHERWISE STATED.
FOUNDATION : 50 MM
COLUMN : 40 MM
- REFERENCE BENCH MARK ($\oplus$) POINTS IS W.R.T GLOBAL CO-ORDINATED HAVING N-2312910.151 & E-308680.833 (GRID CO-ORDINATES N-000.00M, E-000.0M)
- SUPPORTS SHOULD BE RESTED ON PROPERLY COMPACTED SOIL.
- INCASE THE FOUNDATION COLLIDES WITH DRAINS OR ANY OTHER EXISTING STRUCTURE, IT SHALL BE INFORMED TO THE CIVIL DESIGN DEPARTMENT.
- MINIMUM DEVELOPMENT LENGTH OF BARS SHALL BE 50 TIMES DIA OF BARS.

FOR TENDER PURPOSE ONLY

P	29.10.25	FOR TENDER PURPOSE ONLY	AK	AT	RNS
REV	DATE	DESCRIPTION	BY	CHKD	APPD.
		M/S. TALCHER FERTILIZER LIMITED	REV.	P	
PROJECT		INTEGRATED COAL BASED FERTILIZER AND CHEMICAL COMPLEX			
TITLE		STRENGTHENING OF EXISTING BUIDLING FOR EDG PANEL ROOM.			
		PROJECTS & DEVELOPMENT INDIA LIMITED NOIDA			



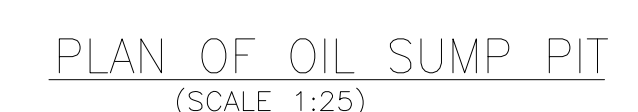


(SCALE 1:100)

(FLOOR LEVEL OF TRANSFORMER ROOM SHALL BE CHECKED WITH RESPECT TO TRANSFORMER EQUIPMENT DRG. AND BOTTOM OF FLOOR BEAM OF OUSS BUILDING AT TRANSFORMER ROOM AREA)

*355 THK.
BRICK WALL

(SECTIONS ARE MARKED FOR TRANSFORMER LOCATED AT GRID 8 & 9, SIMILAR SECTION MARKING & DETAILS SHALL BE FOLLOWED WRT LOCATING DIMENSION FOR OTHER TRANSFORMER)



<u>LEGENDS:-</u>	
FGL	- FINISHED GROUND LEVEL
TOG	- TOP OF GROUT
TOB	- TOP OF BEAM
LB	- LANDING BEAM

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM & LEVELS IN METRE UNLESS OTHERWISE STATED AND THE DRAWING SHOULD NOT BE SCALED, ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED.
2. FOR ALL OTHER NOTES REFER DWG. NO. PC183-1000-0226

[illegible]



ANNEXURE-I to Section-VI

TECHNICAL SPECIFICATION FOR AUTOMATIC BOOM BARRIER

Automatic Boom Barrier with mounting accessories

Supply, Installation , testing and commissioning of Boom barrier (4 to 6 M) with photo cell and loop cable for each Boom Barrier along with remote control . The boom barrier shall have swing off technology once hit by a vehicle to protect the boom from damage. The boom barrier shall use electromechanical mechanism and shall not use hydraulic technology. Complete with native TCP/IP inbuilt for remote monitoring, configuration and diagnostics. The core body of the machine excluding boom shall be of Stainless steel and power coated to RAL desired RAL colour requirements with CE approved. (Approved Makes: Dorma Kaba, Automatic Systems, Gunnebo)

Sl. No.	Parameter	Specification (Requirement)
Specifications for Boom Barriers. Below are the bare minimum specification for Boom barriers.		
1	Item	Automatic Boom Barrier.
2	Type	Motorized
3	Mounting	Outdoor.
4	Width of per passage	Max upto 6 mtrs, including swing off feature to protect boom and provide alarm output in case of crash.
5	Boom material and construction	Boom shall be aluminum Highly stable aluminum alloy, housing finished with white powdered coating and red/orange reflector strips
6	Dimension of single boom	Height: between 800 & 880mm from floor level, Arm : Oval (75 x 40mm minimum) / Round (diameter 75mm minimum) with 1mm thickness
7	Indicative items	LED lights and Reflective strips.
9	Movement	The boom shall be fully horizontal on full closing and fully vertical (90 Deg) on full opening.
10	Control management	Microprocessor based control with TCP/IP connection and web based configuration and diagnostics.
11	Operation	Shall be controlled by Access Controller.
12	Operation Opening time	Opening time minimum 1.5 sec
		Closing time minimum 1.8 sec

		It should be possible to change the opening closing speed by user
13	Self-supported	Each boom shall be self-supported without the requirement of fixed resting arm upto 4/6m length of the boom.
14	Auto operation with access controller	The barrier will be opened upon verification & authentication via access controller.
		After opening, the barrier will be closed after a configurable time (0 - 30 Sec) automatically , subject to being free of obstacles detected by sensors as mentioned below.
15	Operation (Manual)	Manual operation: Manual switch (Key lockable manual switch (for permanent opening) shall be provided near to the security personal for opening/ closing of the barrier.
16	Sensors	2 channel loop detector and 2 Photoelectric cells shall be provided for safety. It should be possible to configure each sensor as a safety device or a required combination of safety & opening / closing. The boom shall auto reverse in case of detection of an obstacle by the sensors within 200ms
17	Safety	Built-in mechanical release to open the barrier in any circumstances.
		Power failure: During power failure the barrier shall be rested at the current position or will be free to open as per site configuration.
		Auto Position mechanism (analog sensor / encoder) shall be provided for ensuring accurate detection of position of the barrier.
18	Housing	All housing and internal parts must have rust & corrosion free metals/ alloys of high strength with suitable epoxy coating as applicable.
19	Approved	Approved Makes : Dorma Kaba , Gunnebo, Automatic Systems

ANNEXURE-II to Section-VI

TECHNICAL SPECIFICATION FOR FLAP/ SWING BARRIER

Flap/ Swing Barriers

Supply, Installation, testing and commissioning of Swing Barriers Bidirectional swing door barriers With SS 304 Finish body and 8 mm thick glass top suitable to install a smart card reader along with a QR code reader , Glass / Light weight alluminium extract metal obstacles with 900 mm waist height . The motor shall be BLDC motor. The swing gates shall have minimum 16 sensors for detecting tailgating. MCBF of 10 Million Cycles minimum, CE approved, Normal Lane 600 mm width. Complete with native TCP/IP inbuilt for remote monitoring, configuration and diagnostics. CE approved

(Approved Makes / Model: Dorma Kaba --Argus 60, Automatic Systems – First lane, Gunnebo - SpeedStile FL)

Face Reader with mounting accessories:

- 1) Supply, Installation, testing and commissioning of Face reader with inbuilt capacity of 500000 users, within built controller supporting face, smart card (HID mifare and QR code (Make Suprema, Idemia, Invixium)
- 2) Supply, Installation, testing and commissioning of Access Control, Time attendance and Visitor management software (Make Suprema, Idemia, Invixium) TCP/IP connectivity (Lot).
- 3) Cables for Access Control systems, Turnstile and Face readers in Conduits (Lot)

Specification Requirement	
Specifications for Swing gates or Flap barriers. Below are the bare minimum specifications for Swing gates or Flap barriers.	
1	Flap Barrier: Shall be robust and stable RoHS zinc plated steel frame for better corrosion resistance
2	The design of the gate arrays should be such that the user uses the integrated reader placed on the right-hand side while passing through the gate.
3	The gate of Swing type should be with material of enough strength for use in mass transit system.
4	If the barrier is forced open, no damage shall happen to gate components and gate should automatically restore to normal. An alarm should be generated during such forced opening.

5	There shall not be any sharp edge in the gate, which can hurt user while passing through. In case of emergency there should be provision for continuous opening of the gates to facilitate exit of personnel.
6	Emergency switch should be provided so as to facilitate easy exit of personnel.
7	Flap to generate an acoustic alarm for each unauthorized attempt, It follows the users' progression through the lane and helps ensure their safety during opening/closing of the obstacles. The new detection algorithms offer best in class performance for detecting tailgating and other types of fraud under the flap wings.
8	There shall be selectively illuminated Lane Indicator sign on both ends of each gate. The display shall be illuminated whenever the gate is intended for use in the direction shown.
9	Material to be used: The housing shall be AISI 304L stainless steel
10	Retractable Flap wing: should be 10 mm thick transparent toughen glass with rubber safety edge for the panels.
11	Single phase 110 VAC (5A)-240 VAC (3A) (+/- 10%) - 50/60 Hz + Ground.
12	Card readers should be integrated with the flap barrier housing, for entry/exit.
13	The swing barrier / flap barrier shall have a native TCP/IP port for remote monitoring , configuration , for fault diagnostics and provide an interface to third part systems like FAS / DCS/ PLC / BMS for central monitoring and control
14	Channel/Passage Width should be in the range of 550- 600mm, Passage Blocking Height should be 900 ~1000 MM
15	Pass Speed (Minimum): 60 Person/ Min with use of smart cards and minimum 30 person/ min with use of Biometric Finger or Face readers
16	Should be capable of operating in Indoor conditions
17	Operating Temperature: up to 50 Degree Celsius.
18	Relative Humidity: 95%
19	MCBF:10 Million Cycles
20	Power Supply: 240 VAC
21	Same model shall be capable of expanding into number of lanes.
22	Approvals: CE

23	Flap Barrier controller should be able to store the authorize pulse for simultaneous multiple entry or exit. Minimum 4 such pulses should be stored in the memory of controller.
24	Flap barrier should allow entry or exit of the person on wheel chair.
25	Flap barrier should allow person with briefcase, shawl or trolley without any tailgating alarm

Specifications for Facial Recognition Readers (FR Reader) : Below are the bare minimum specifications for FR readers

1	The FR readers shall work on the principle of 3D imaging for detecting and recognising the face of a person.
2	The FR reader shall recognise a person face in less than or equal to 2 secs and a person can be recognised between 0.3 mts to 1 meter
3	The FR reader shall work with different card technologies such as 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV31), FeliCa, iCLASS SE/SR/Seos
4	The FR readers shall support and comply to TCP/IP , Wifi , POE (IEEE802.3), NFC , BLE , RS 485 , Weigand Input and Output , USB , 1 Relay output , RSTP
5	The Processor used for the FR reader shall have minimum CPU of 1.5 Ghz Quad Core with a memory of 32 GB flash + 4 GB RAM .
6	The FR Reader shall have a IPS colour display not less than 5 inches
7	The FR readers shall support multiple reader technologies such a Facial recognition + Card + Pin + QR + Mobile credentials
8	The ingress protection required for the reader shall be minimum IP 65 with an impact resistance of minimum IK06
9	The FR readers shall support a user capacity of face (1 : 1) 100000 , Face (1:N) 50,000 , Card 100000 and PIN 100000 as a minimum .
10	The FR reader shall support anti spoofing functionality for additional security.
11	The FR readers will be certified to BIS and UL 294 as a minimum.
12	The FR readers shall work as a standalone reader cum controller over TCP /IP or as an input reader connected though Weigand protocol to an external IP Access Controller as mentioned in the specifications . Both should be possible.
13	Approved Makes : Suprema , Idemia, Invixium

Access Control Workstation		
Sr No	Specification	Description
1	Category	Commercial/ Business series OEM desktops
2	Processor	Intel Core i7-12500 (12th Generation)

3	Chipset	B660 or Higher
4	RAM	32 GB DDR4 3200 Mhz non ECC (Expandable to 64 GB) or higher
5	SSD	512 GB
6	SSD Type	M.2 or above
7	Hard Disk	1 TB SATA Hard Drive (7200 rpm)
8	Ports	2*USB 3.0, 2*USB 2.0, Microphone (3.5mm), Headphone (3.5mm)
9	Speakers	Built-in (Internal speaker) / external speaker capable of reproducing any audio/ music.
10	Other Ports	Ethernet (RJ45), Line-in (3.5 mm), Line out(3.5mm), HDMI.
11	Cabinet	Tower (13.1 to 26 Litres)
12	Power Supply	180 Watts or higher
13	Monitor	19.5" or higher LED monitor with minimum resolution of 1280x720
14	Keyboard	USB Keyboard
15	Mouse	USB, 2 button optical scroll mouse
16	Operating System	Windows 11 Professional 64 bit.
17	Approved Makes	HP / Dell / Lenovo

Access Control Software & Time Attendance		
Sr No	Specification	Description
1	Users	Access Control software shall support a minimum 10000 users (employee , contractor , Visitors)
2	Authority Levels	Shall have at least 3 levels of authentication for user groups
3	Support to various technologies	The access Control software shall support various card technologies such as HID iclass , Mifare , HID Mifare , Desfire etc
4	Time and Attendance management	Time and Attendance management is required for 1000 employees
5	Visitor Management Software	Required – QR based visitor management software is required
12	Approved Makes	Suprema / Orgitech / Tyco – CEM / Idemia / Invixium

ANNEXURE-III to Section-VI**TECHNICAL SPECIFICATION FOR MOTORIZED SINGLE LEAF SLIDING GATES****Motorized Single Leaf Sliding Gates**

Supply, Installation, testing and commissioning of Motorized Single Leaf Sliding Gates Clear Opening: 7000 mm, Overall length: 8600 mm, Clear Height: 2450 mm, Gate made of Mild Steel with two coat of epoxy primer by Spray. Heavy Duty Gate Motor (Motor Capacity-1800-2000 KG) with Hardened Rack and Pinion Set. PLC & VFD Based Control Panel, Three Station Push Button. Pair of Photocells with Mountings for Safety (Weather Proof). Flashing Beacon Light. Remote Control with Long Range Connectivity.

Sr No	Specification	Description
1	Controller for speed control	PLC and VFD based Control Panel
2	Opening	Clear Opening: 5000 ~ 7000
3	Length	Overall length: 1600 ~ 8600 mm
4	Height	Clear Height: 2450 mm
5	Third Party Integration	BMS/ PLC Interface
6	Material and painting	Mild Steel with two coat of epoxy primer by Spray
7	Motor Capacity	Heavy Duty Gate Motor (Motor Capacity-1800-2000 KG) with Hardened Rack and Pinion Set
8	Manual control	Three Station Push Button
9	Sensors	Pair of Photocells with Mountings for safety Sensors
10	Flashers	Flashing Beacon Light.
11	Remote	Remote Control with Long Range Connectivity
12	Approved Makes	Frontier Pits / Cova Gates / Innovative