

Design Timelines Policy and DMS

Jun 2013

Objective and key features of Design Timelines Policy and Document Management System (DMS)



Objective

1. Ensure design deliverables by respective consultants are provided as per agreed schedule
2. Ensure coordination among various stakeholders in the design process so that final design delivery timelines are met
3. Design to be released to Procurement/CM in complete packages only
4. Provide a platform for storing final designs for projects on a common platform

Key features

1. All final FDD and VFC packages to be stored on DMS
2. FDD packages to be regarded as complete only after budget compliance check.
3. Design and Cost management jointly responsible for completeness and budget compliance of FDD packages
4. VFC packages to be released to CM only as complete packages
5. CM team to review and provide feedback on completeness of VFC packages on DMS.

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    c) Major Changes Policy
    d) External Consultant Policy
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Design Process Overview



Key Aspects of Design Process

- Every project shall be organized into plants. FDD and VFC packages to be delivered shall be plant-specific *(plant definition explained in detail in next section)*
- Design deliverables would be finalized in form of pre-defined packages and all delivery timelines shall be at the level of these pre-defined packages i.e. no timelines or credit for partial completion or completion of specific components of these packages
- Design delivery schedule (DDS) shall detail out the timelines for delivery of final approved design packages for each plant (as per the Design timelines policy and after agreement with relevant external consultants)
- Consultant deliverables shall not considered timely and complete unless explicitly approved in DMS by
  - Design and Cost management team for FDD packages
  - Design for VFC packages (CM can review and provide feedback on VFC packages)
- Only final approved design packages shall need to be stored on DMS. A Pre-determined folder structure for storing FDD and VFC packages in a structured manner.

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Plant Definition Policy



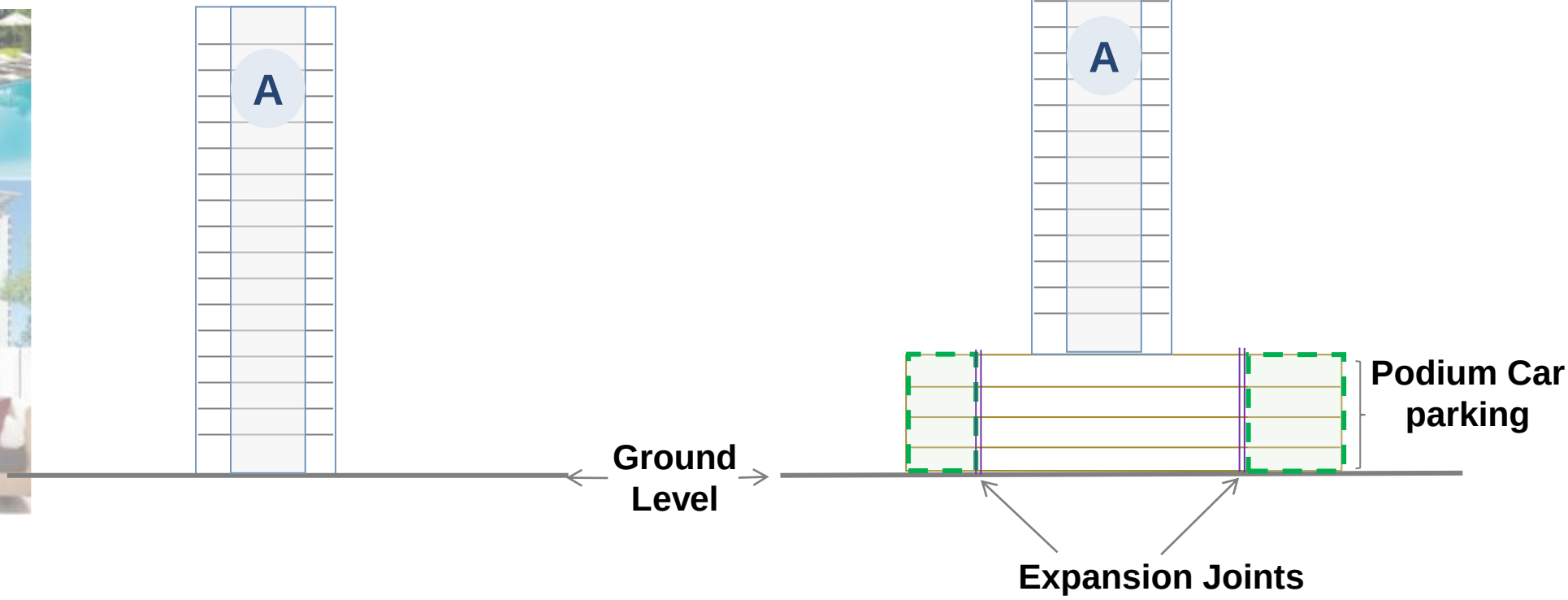
To ensure that costs are budgeted and tracked in a manner which is reflective of the sequencing of works at site, budgets for any project shall be broken into following separate plants:

- Each usable wing will be a separate plant. This includes all areas which fall within the building line, irrespective of their usage.
- Any Key Common Area outside building line or Parking Area outside building line which has a construction budget => 5 cr. (2011 figures, to be inflated by 10% in 2012 and thereafter 25% every leap year) is defined as a separate Plant.
- For the overall project, Infrastructure is defined as one Plant (viz. all items not forming part of a. or b.) .

Note: Any area outside the building line attached to the wing physically (up to expansion joint) and having construction budget < 5 cr can be combined with the budget of a., b. or c., as is practical for the purposes of budgeting and tracking.

Illustrative examples for defining plants in various project conditions (1/2)

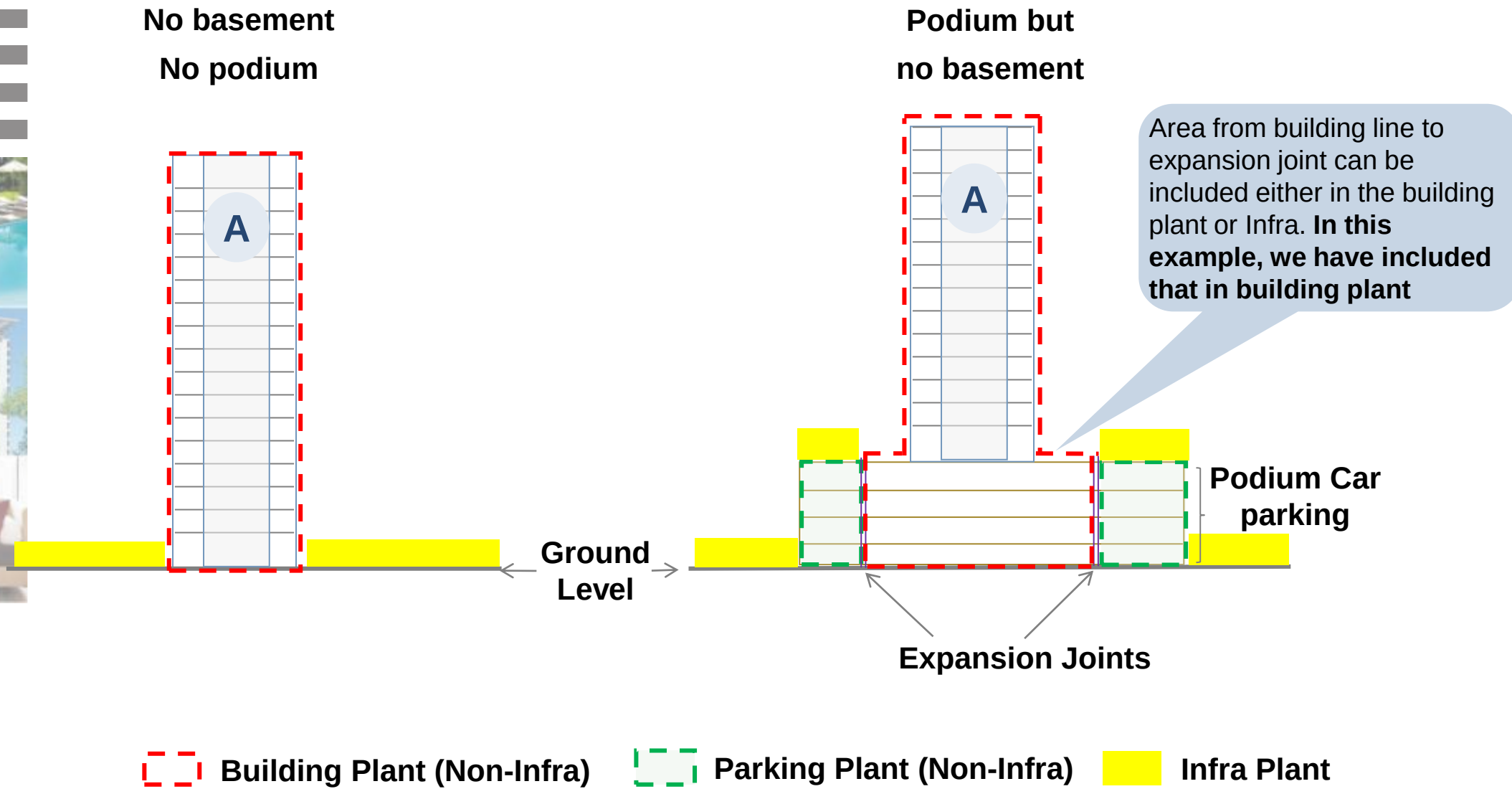




Building Plant (Non-Infra) Parking Plant (Non-Infra) Infra Plant

Illustrative examples for defining plants in various project conditions (1/2)

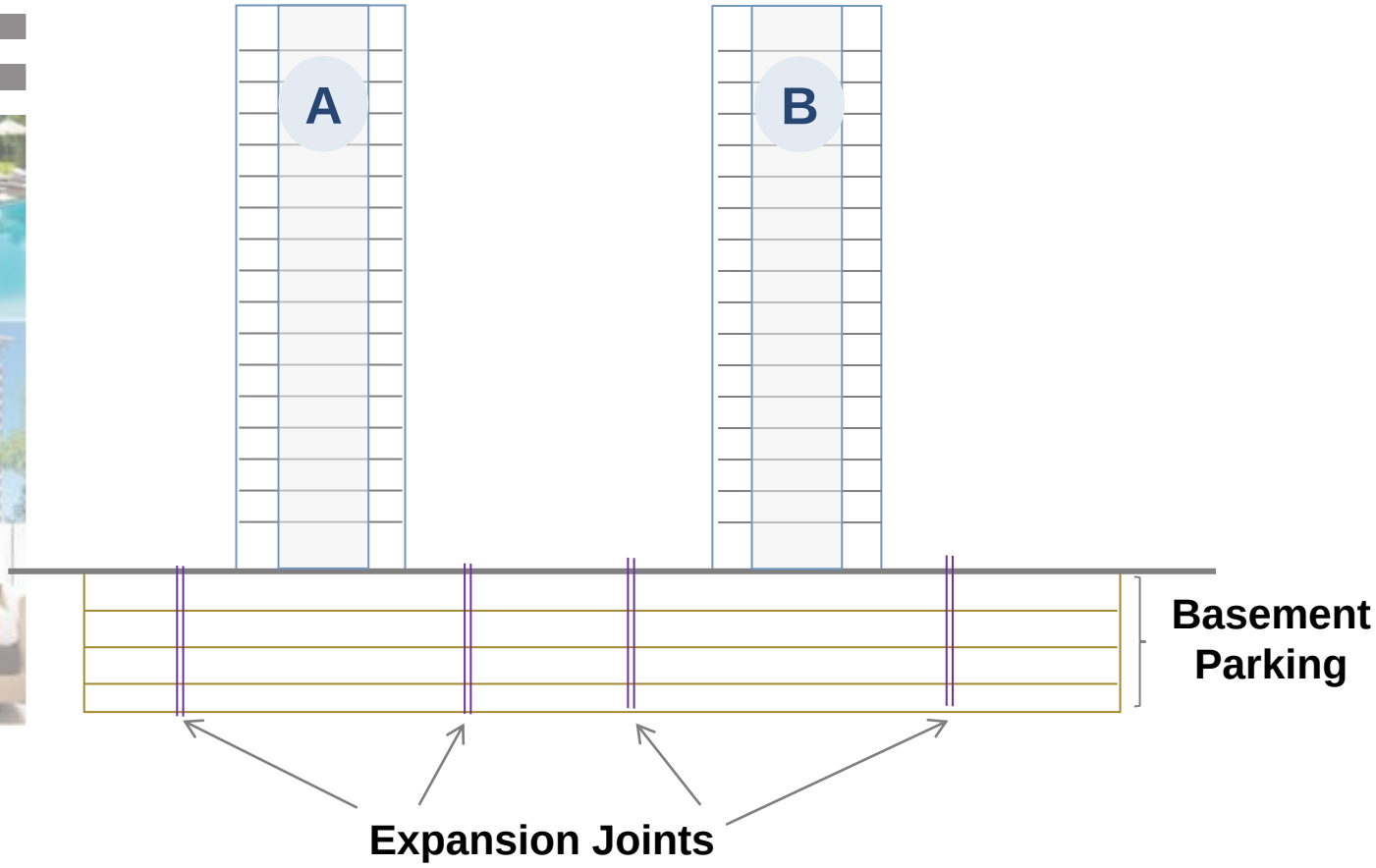




Illustrative examples for defining plants in various project conditions (2/2)



Multiple towers with basement parking

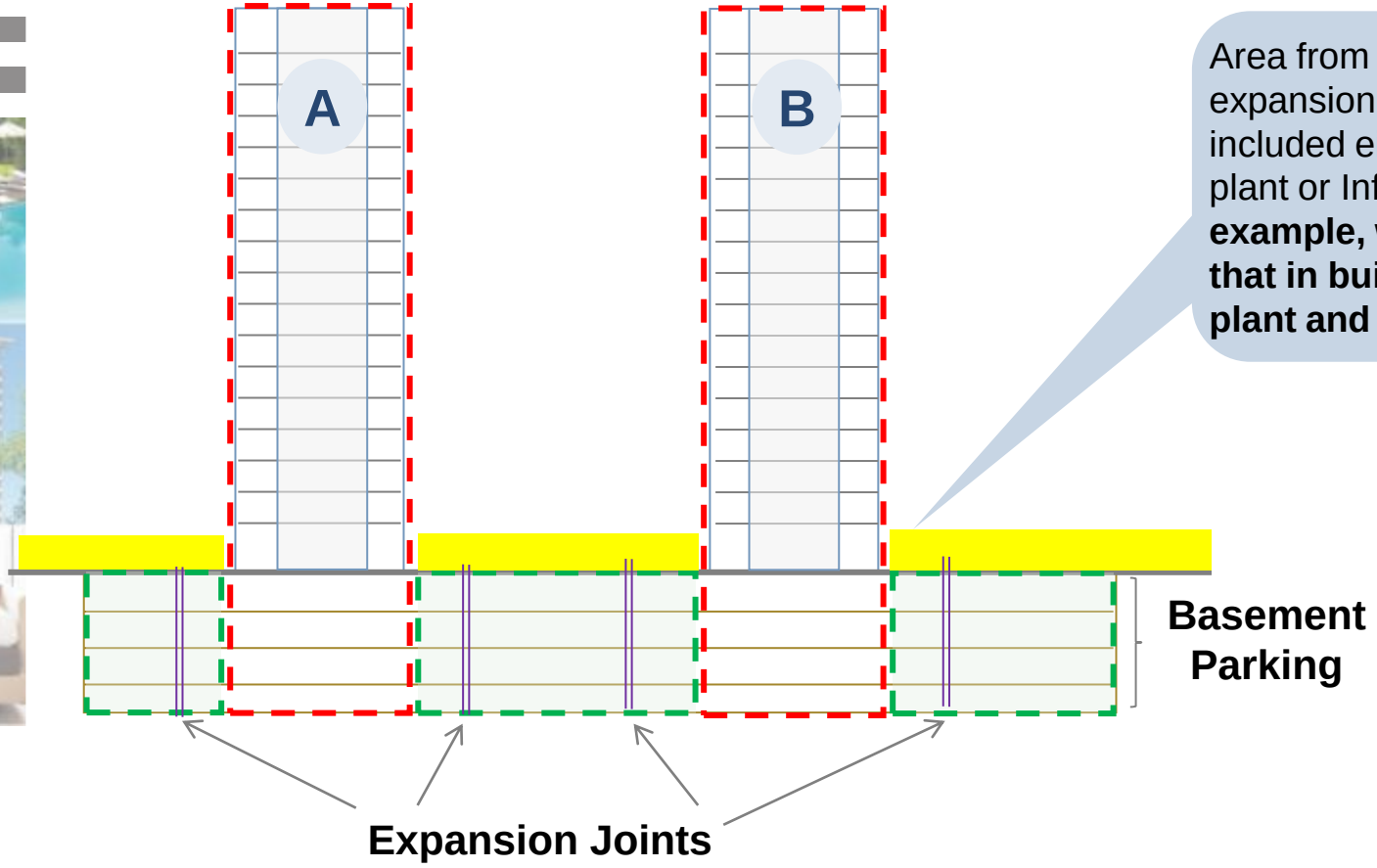


Building Plant (Non-Infra) **Parking Plant (Non-Infra)** **Infra Plant**

Illustrative examples for defining plants in various project conditions (2/2)



Multiple towers with basement parking



Area from building line to expansion joint can be included either in the building plant or Infra. **In this example, we have included that in building (parking) plant and Infra**

Building Plant (Non-Infra) **Parking Plant (Non-Infra)** **Infra Plant**

“Phasing” of Infra plant on a project



- For a project, Infrastructure is defined as one plant.
- However, for large and very large projects wherein we intend to deliver the project in phases, an infra plant can be “phased” into two or more separate infra plants only if their delivery timelines are more than 18 months apart.
- Infra plants during phasing shall need to be decided so as to ensure that such 'phased' plants which are to be completed prior in sequence are not dependent on the 'phased' plants which will be completed thereafter.
- Each “phased” infra plant shall act be an independent plant with its own well-defined design packages and timelines for delivery of the same.

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Overall Design Process Flow



A. DDS finalization

- Project Start
- Concept Design Finalization
- Creation of Plants
- Design delivery schedule for each plant uploaded in DMS

B. FDD workflow

- Final approved FDD package uploaded on DMS and self-certified by design and CMD
- Design approval for completeness and quality and CMD approval for budget compliance
- Delivery of a FDD package by consultant for a plant

C. VFC workflow

- Delivery of VFC package by consultant
- Design review and finalization
- Final VFC package uploaded on DMS and self-certified by Design
- Review by CM team (Issues classified as major/minor)

Activities in DMS Offline Activities

Design Delivery Timelines for Non-Infra (Building) plants



Delivery schedule timelines: In weeks from completion of Concept Design or Design Start Date, whichever is later

Height above ground →	< 30 m	30-70 m	70 - 150 m	150 m+
Design Package/Building Type	**Low Rise**	**Mid Rise**	**High Rise**	**Super High Rise**
Excavation VFC	6	8	12	14
Civil FDD	8	12	18	20
Civil sub structure VFC	10	14	22	24
Civil 50% superstructure VFC (100% for < 30 m)	14	18	28	30
Interior design concept	14	18	28	30
Facade FDD *	22	26	34	40
Services FDD^	22	28	36	38
Civil 100% superstructure VFC	NA	29	40	42
Finishing FDD#	28	37	48	50
Finishing VFC#	36	46	56	58
Services Construction Documents Approval	44	52	64	70
Façade Construction Documents Approval	40	46	72	82
Fitout of key common areas within building line FDD	42	52	66	68
Fitout of key common areas within building line VFC	50	60	74	76

^ Add 4 weeks for office/retail building, which shall also be added to the due date of the related shop drawings/VFC.

* includes windows and external painting. Add 4 weeks for office/retail building, which shall also be added to the due date of the related shop drawings/VFC.

Add 8 weeks if the project is done by a branded designer.

3 weeks/level below ground are to be added to all deliverables after Civil Substructure VFC, if the structure has 1 or more basements

Design Delivery Timelines for Non-Infra (Building) plants: **Important Notes**



Concept ID	– Concept ID package should include electrical layouts, lighting, and plumbing fixture locations since this is the basis for Services FDD package
FDD	– All FDD timelines are **inclusive of** 2 week Lodha Design Review Period and 4 week (2 weeks for Civil FDD) Lodha Cost Management review period – All tender details/drawings shall be part of the respective FDD package
VFC	– All VFC timelines are **inclusive of** 1 week Lodha Design review period – The deliverables of the Civil sub-structure VFC package may be broken into upto 3 subsets (listed below) by Planning (based on agreement with Design) and each of the 3 deliverables subsets shall be tracked separately: - Foundations/Piling/Rafts - Upto level below ground - Balance Civil sub-structure
Construction Documents (includes Shop Drawings)	– Target dates for construction documents (includes shop drawings) may move earlier if mutually agreed between Contractor, Lodha CM and Lodha Design at Contract Kick-off meeting. – Refer to 'Construction Document Submission & Approval Process' policy for more details

All timelines refer to the outer limit for submission of all parts of the package - sub-packages can be delivered earlier.

Design Delivery Timelines for Infra plants

Delivery schedule timelines (in weeks from start date): Start Date is the date on which land details are available with Lodha Design team along with survey

Project BUA →	< 2 L sft	2-8 L sft	8-25 L sft	25+ L sft
Design Package/Building Type	**Small**	**Medium**	**Large**	**Very Large**
Concept Design	6	7	10	14
Schematic Design for Infra elements	18	19	22	26
Roads+ FDD	42	48	56	56
External Services+ FDD	42	48	56	56
Landscape+ FDD	50	56	64	64
Roads+ VFC	48	54	62	62
External Services+ VFC	48	54	62	62
Landscape+ VFC	58	64	72	72
Minor Building Works FDD	56	62	70	70
Minor Building Works VFC	64	70	78	78



- For concept drawings, the timelines are **inclusive of** Lodha review time of 1 week for small and medium projects and 2 weeks for large and very large projects
- For FDD drawings, this **includes** a 2 week Lodha Design Review Period and 4 week Lodha Cost Management review period.
- For VFC drawings, it **includes** a 1 week Lodha Design review period.

Multi-level folder structure for proper classification and storing of Final and approved design packages has been derived



Project and Phase…. — New Cuffe Parade – Phase I

Plant — As per Plant definition policy – Can be infra type or Non-Infra type

- Elisium
- Dioro
- Evoq
- Tower 4

Design Stage…

- Concept ID
- FDD
- VFC
- Civil tender
- Shop Drawings

Package… — All design timelines are at this level

- Civil
- Services
- Facade
- Finishing
- Fitout of Key Common Areas

Trade… — Self-certification of delivered packages is at this level by respective design trade owners

- Structure
- Interior Design
- Landscape

Headers… — Applicable only for VFC packages and services FDD package

Until DMS phase II is implemented, the process of certifying trade/package completion shall be carried out offline through email



A. Mail format in which respective trade owners/ CMD will communicate certification of a package to Planning and Strategy team:

a) For **certification of trade folders of FDD/ VFC packages by Trade owners**, email should be sent:

i. From: Trade owner
ii.To: Planning Head and relevant members of planning team, CMD (Project Lead only)
iii.CC to: Strategy team, members of own trade team working on the project, all other trade teams (trade team members and owners to be pre-defined on each project, HOD- Design

b) For **certification of FDD packages for budget compliance,** CMD project Lead shall do a "Reply all" to the FDD package completion mail ((as mentioned in 2. above)) from the last trade owner in the package who has certified his trade folder as complete. Email should be sent:

i. From: Trade owner
ii.To: All members in "To" field above
iii.CC to: All members in "CC" field above

B. Package Completion tracker shall be maintained and updated in Common shared drive by Planning team at the end of each day to reflect the status of various packages as communicated by respective design/ CMD teams. This file shall be editable only by Planning team and read-only for all other project team members. Package completion tracker file shall mention the date and time of last update

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Any change is delivery timelines on account of a Major change shall need to follow a Change Request process



a. Any changes to the project post completion of Concept Design shall be classified as Major or Minor based on Lodha Major Change Policy (see next slide)

b. Lodha shall make payment of design rework costs associated with Major changes separately on actual cost basis (derived on basis of what % of overall work was needed to be redone, not a time based rate).

c. Major changes can push out timelines for each linked package. The quantum of impact on timelines will need to be agreed between Lodha Project Architect and the External Consultant within 2 weeks of the request being made.

d. No additional fees and no change in timelines shall be applicable for minor changes.

Major Change Policy



Following changes, if made after the approval of concept design, shall be classified as a Major change for a given plant:

1. Change in the no. of levels of any building exceeding 2 levels.
2. Change in the user of a saleable building or part thereof (>10% of the BUA of the building).
3. Change in the footprint of the building by > +/- 5% (in terms of BUA).
4. For Infra Package - Addition of a new plant to the layout
5. Classification of any other modification as a major change shall require approval of HOD-Design OR Director-Design

Any item classified as a major change shall impact the target dates of the linked drawing packages by upto 8 weeks. The major change and the list of packages affected (FDD/VFC) shall be agreed **in writing/online by the HOD-Design and the Project Architect (external and internal)**, within 2 weeks of such major change request being made.

Today's agenda



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What does External Consultant Policy define and govern?



- Timelines for Design deliverables at a plant level – used as targets for QB
- Working model with external consultants
  - Bonus/penalty mechanism for timely delivery by external consultants
  - Performance review and feedback mechanism
- Definition of FDD and VFC packages
- Plant definition and how phasing needs to be done on large projects

Minor delivery timeline adjustments shall be allowed subject to outer time limits



- Lodha standard timelines would already be a part of the consultant's contract and therefore should not attract any major objections from the consultants
- If the consultants still do have concerns or suggestions about the target DDS, the Project Architect (with approval of Lodha Planning) should try and accommodate them by making minor adjustments to the target DDS without pushing out the delivery dates significantly
- **<u>If absolutely necessary to achieve closure</u>**, Lodha Planning can modify the schedule using the following policy for each trade. The sum of the changes requested for all packages cumulatively cannot be more than the number of weeks given below:

Height above ground	< 30 m	30-70 m	70 - 150 m	150 m+
Max Permissible Change in number of weeks (cumulative) requested by	**Low Rise**	**Mid Rise**	**High Rise**	**Super High Rise**
Architecture	4	6	6	8
Structure	2	3	3	4
MEP	2	3	3	4

<u>Note</u>: If a package date is agreed to be changed, the linked package dates will get updated automatically by Lodha Planning and such increase will not be counted multiple times in calculating the max. permissible change

We are simultaneously rolling out external consultant policy to relevant design consultants on a project-wise basis

Current Implementation Status



This working model is already under implementation phase and being rolled out to all consultants on a project in one go.

- Already implemented at
  - Venezia
  - Splendora
- Implementation currently underway at Meridien

Next phase implementation

Project Name	Building Name	Remarks
Lodha Place	Queen Tower	Excluding PCF
Altamount Road	--	Excluding Hadi Teherani
BlueMoon	Tower 1,2,3A,3B	Excluding WOHA
	Basement	Excluding WOHA
NCP	Commercial Tower	All Consultants
	Basement 1A	All Consultants
	Towers 7,8,11	All Consultants
Lodha Splendora	MMRDA Building	All Consultants
	Resi Buildings	All Consultants
	MLCP	All Consultants
Casa Royale	Grande	All Consultants
	MMRDA Building	All Consultants
Lodha Venezia	Tenant Building	All Consultants
Lodha Meridian	Merdian B	All Consultants
	Merdian C	All Consultants
	Meridien D and E	All Consultants
Wagle Estate	Ithink A&B	All Consultants

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So, what does this process change mean for Design ?

Role of Design team in different DMS stages:



DDS Finalization

- Share target DDS for each individual plant with external consultants to finalize delivery timelines pursuant to design timeline policy
- Define plants and, if required, phasing of Infra plants, together with CMD
- During the course of project, any major change request to be raised in DMS by Project Architect

FDD Workflow

- Verify the completeness of Package received from ECs and inform CMD
- Inform EC(s) about issues raised by CMD, if any
- Upload the package on DMS
- Design Project Trade Owners to certify their respective trade portions of the package as complete on DMS

VFC Workflow

- Verify the VFC drawings and upload the final drawings on DMS
- Trade owners to certify completion of headers for their respective trades
- Design Controller to review the CM comments , if any, and approve/reject
- Trade owners to communicate approved CM comments to ECs and resolve the issues raised by CM team

So, what does this process change mean for Planning and Cost Management?



Planning

1. Owner of the Design Delivery Schedule (DDS)
2. Responsible for developing a target DDS whenever a new project is created
3. Responsible for developing plant level DDS for each plant once the same has been agreed with external consultants
4. Responsible for any change in DDS on account of major change policy

Cost Management

1. Responsible for defining plants in a project in alignment with Plant definition policy and creation of same in DMS
2. Jointly responsible with Design for approving budget compliance of FDD packages delivered by consultants

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DMS system shall be implemented in two phases



Phase I: Basic functionalities provided in DMS

a) Plant creation based on attributes

b) System creation of folder structure based on plant attributes

c) Upload of drawings

d) Download of packages or individual drawings

Phase II: All functionalities

a) Design Delivery Schedule (DDS) uploading and tracking of completed packages against DDS

b) Online self-certification by trade owners and CMD Project leads for FDD

c) VFC package approval flow including CM team comments on VFCs

d) Other functionalities: Search, Notifications etc.

For Lodha Internal Circulation Only

DMS Implementation Plan



Workstream	Activities	Responsible	Start Date	End Date
A.	**DMS IT implementation - Basic Functionality**	Strategy, IT	5-Apr-13	13-May-13
B.	**DMS IT implementation – Full Functionality**	Strategy, IT	24-May-13	22-Jul-13
C.	**DDS preparation by Planning**	Planning	18-Apr-13	26-Apr-13
D.	**Offline Plant Creation by CMD team***	CMD	24-Apr-13	9-May-13
E.	**DMS Roll out - Phase I (NCP and Splendora)**	Strategy, Design, CMD	14-May-13	19-May-13
F.	**DMS Roll out - Phase II (Most remaining Projects)**	Strategy, Design, CMD, CM	24-May-13	15-Jul-13
G.	**Deployment of Full DMS functionality**	Strategy, Design, CMD, CM	23-Jul-13	10-Aug-13

* Excluding Infra plants in projects where phasing of Infra plants is required. These shall be created in DDS schedule finalized for the same before the project is ported to DMS

Introduction to new DMS functionality (basic)



DMS Activities	To be done by	Online/ Offline
User Creation in DMS	DMS Admin	To be performed in DMS (functionality already available)
Invite new user to a project	DMS Admin based on request from operational teams	
Create plants in a project	CMD Project Lead	
Upload completed packages in DMS	Respective Trade teams	
Certification of completion of trade/ package in DMS	Respective trade owners, CMD lead	To be performed offline until DMS full functionality is implemented in July
Design delivery schedule to be maintained	Planning team	
Major change request to be raised by Project Architect	Project Architect	
Procurement team to access tender documents in completed FDD packages	Procurement team	
CM team to provide comments on completed VFC packages	CM project Lead	Activity not applicable until DMS full functionality is implemented in July

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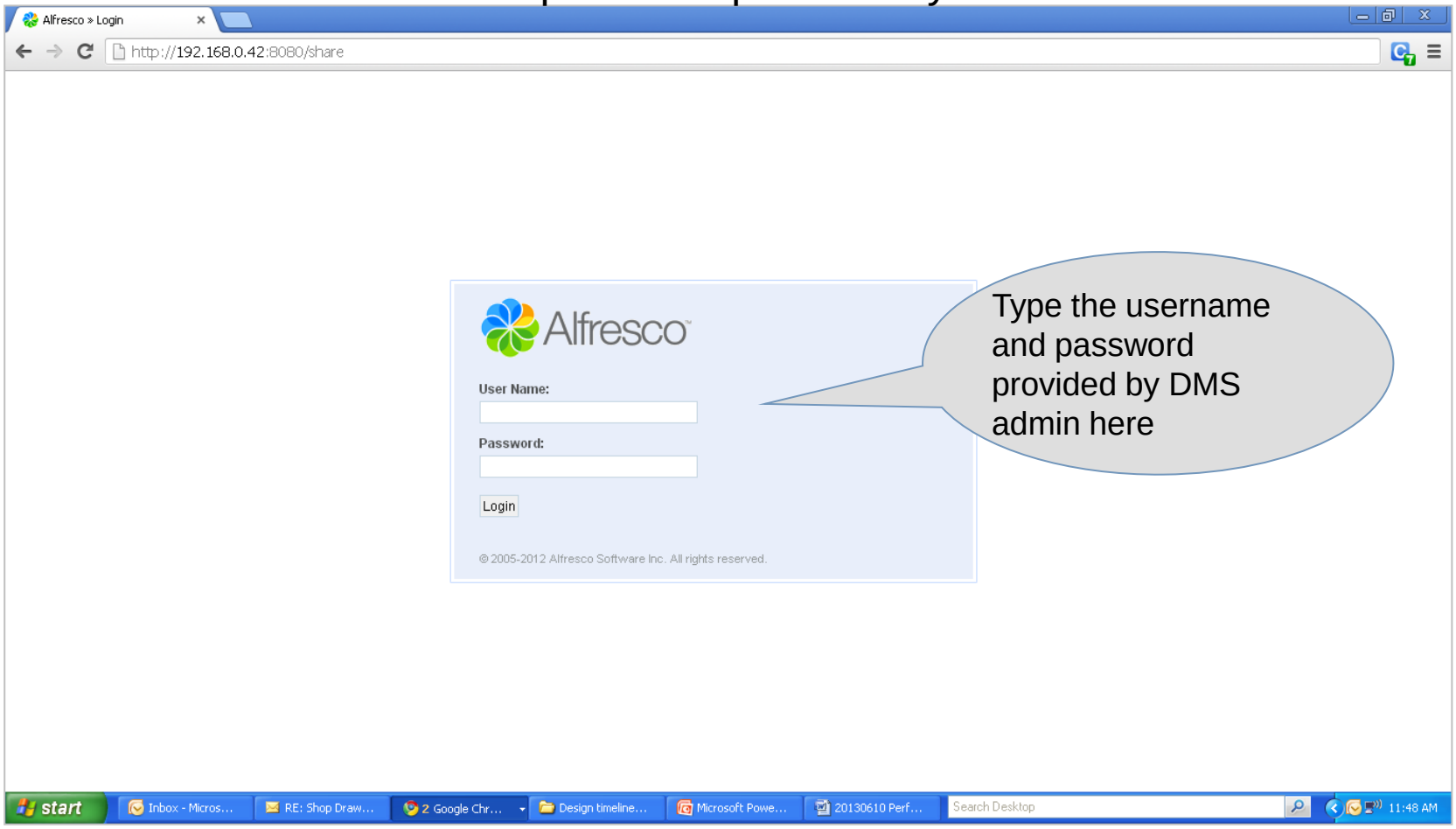
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Shall be updated after DMS Phase II roll-out

How to access DMS? (1/4)

Step 1: Type http://192.168.0.42:8080/share in the address bar of any web browser (Internet explorer, google chrome, opera, Mozilla firefox) that you use

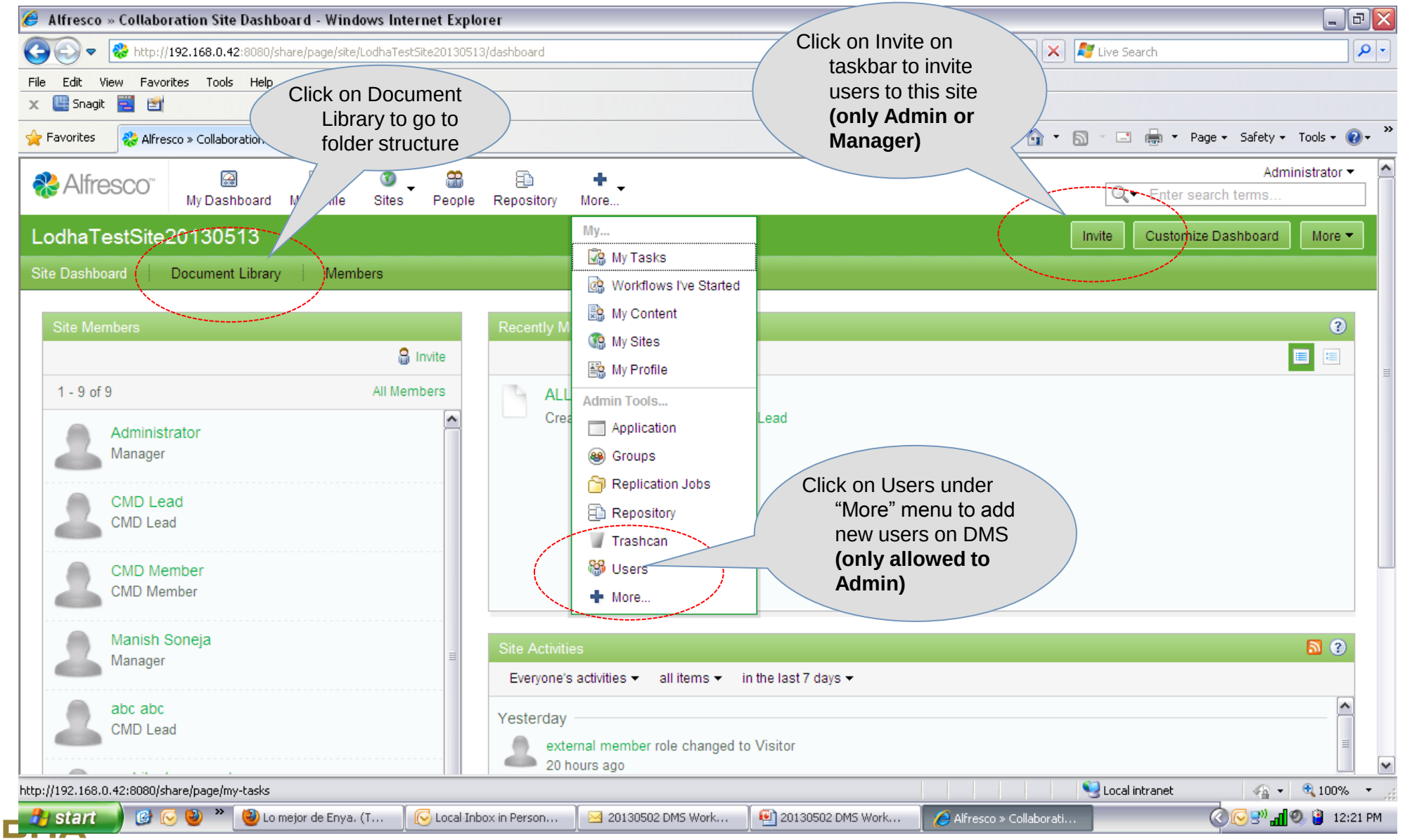
Step 2: Enter the DMS username and password provided by DMS admin



For any issues with DMS access, please write to ankur.priyadarshan@lodhagroup.com with a CC to prashant.katiyar@lodhagroup.com

Shall be updated after DMS Phase II roll-out

DMS Basic Functionality Snapshots (2/4)



Plant creation in DMS by Cost management



Plant Creation in DMS

CMD will define the plants in DMS in accordance with the Plant Definition policy. A plant can be configured by selecting its attributes as defined below:

1. Plant Name: As per nomenclature defined in Plant definition policy
2. Plant Type: Infra, Non-infra

If plant type is Non-infra, following additional attributes need to be specified:

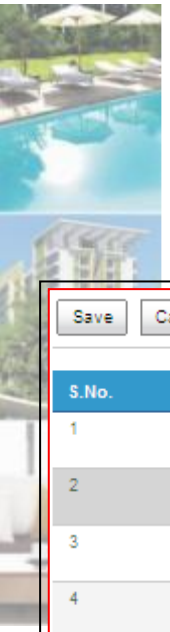
3. Building type: residential, parking, clubhouse, commercial, retail, hospital, school
4. Building Height: <30m, 30-70m, 70-150m, 150m+

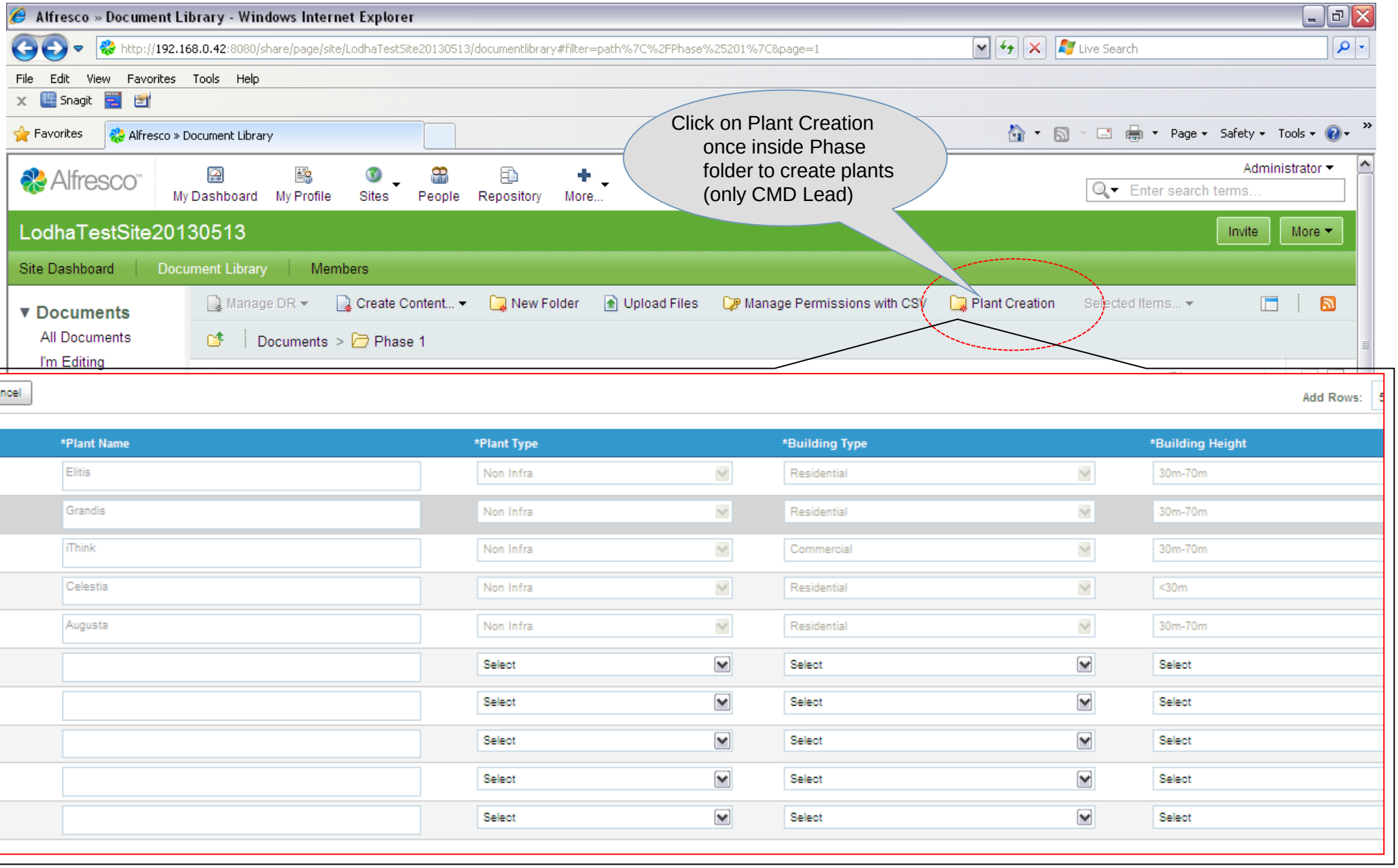
Access rights for CMD team

- CMD Project Lead - shall have rights to create plants in the project, self-certify budget compliance of completed FDD packages and view, download drawings
- CMD Project member – Shall have the rights to only view and download the drawings across various packages in the project

Shall be updated after DMS Phase II roll-out

DMS Basic Functionality Snapshots (3/4)

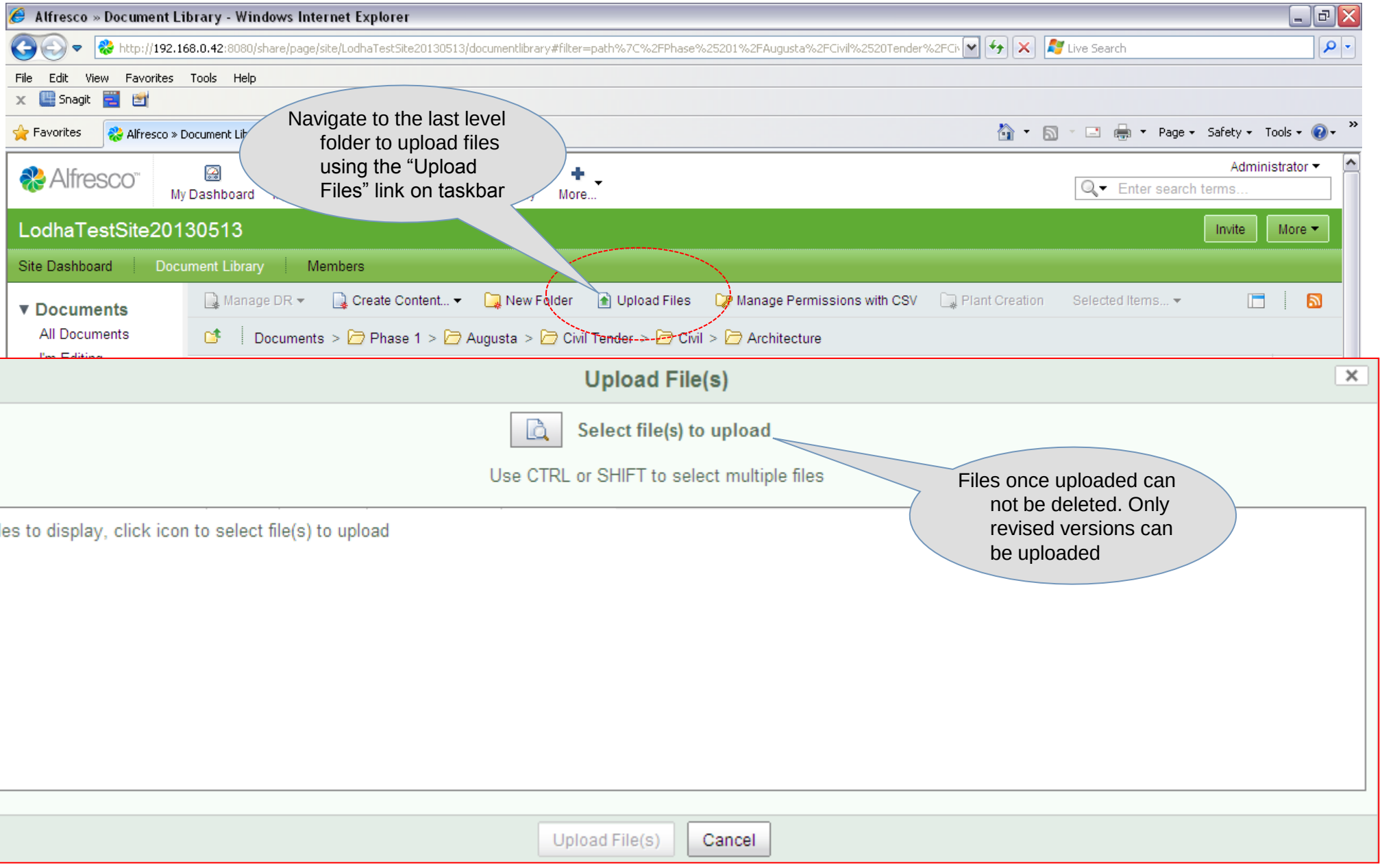




S.No.	*Plant Name	*Plant Type	*Building Type	*Building Height
1	Elitis	Non Infra	Residential	30m-70m
2	Grandis	Non Infra	Residential	30m-70m
3	iThink	Non Infra	Commercial	30m-70m
4	Celestia	Non Infra	Residential	<30m
5	Augusta	Non Infra	Residential	30m-70m
6		Select	Select	Select
7		Select	Select	Select
8		Select	Select	Select
9		Select	Select	Select
10		Select	Select	Select

Shall be updated after DMS Phase II roll-out

DMS Basic Functionality Snapshots (4/4)



Any issues faced with respect to using DMS functionality can be reported to strategy team



1. Who can report the issue

Department	Authorized person
Design	HOD-Design, Trade Owners
CMD	HOD-CMD, CMD Project Lead
Planning	HOD-Planning, Planning Project Lead

2. How should the issue be reported: email to be sent mentioning the issue in detail
   i. To: Prashant.katiyar@lodhagroup.com, Ankur.priyadarshan@lodhagroup.com
   ii. With a CC to: Members of all trade teams incl. owners, planning and CMD project lead
3. Requests for adding new users need to be sent to DMS Admin by respective trade owners or CMD Lead or CM Lead

This issue reporting mechanism shall be available until DMS phase II is implemented and stabilized

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Annexure A: Approach used for Design Delivery Schedule for already existing projects



- Planning team shall prepare Design delivery schedules for each plant within the project as per the DMS timelines policy
- In the schedule, the delivery timeline for various packages shall be decided by adding the same time duration as envisaged in the DMS timelines policy with respect to a reference timeline
- The reference timeline shall be decided as follows:
  - For plants wherein civil construction has not commenced, existing policy timelines shall be applied i.e. concept design closure date shall be the reference timeline
  - For plants where civil construction is
    - at substructure stage, delivery timeline of Civil substructure VFC shall be used as reference timeline
    - below 50% superstructure stage, delivery timeline for Civil 50% superstructure VFC shall be the reference timeline
    - above 50% superstructure stage, delivery timeline for Civil 100% superstructure VFC shall be the reference timeline
  - For plants where civil structure has been completed, all packages would need to be finalized and delivered within this quarter, i.e. by 30 June 2013
  - After applying rules a-c above, if the delivery timeline for any package is before 1 Apr 2013, then the package shall need to be delivered within this quarter i.e. by 30 June 2013