

Audit Unit Development & Construction Division

Experience Sharing Session with Building Contractors



QUALITY & WORKMANSHIP





QUALITY & WORKMANSHIP

Housekeeping

Insitu Concrete

Formwork

Reinforcement

Precast Facade Units

Components

Finishings



QUALITY & WORKMANSHIP

Ironmongery

Masonry

Matelwork

Waterproofing

Sanitary Fittings

Plumbing & Drainage

External & Landscape Works

Slope Treatment Works



HOUSEKEEPING





Site Housekeeping

Materials stocked onto roof waterproof membrane



Area of completed waterproofing



Housekeeping on Site

Materials stocked at main access





Housekeeping on Site

Debris inside flat





Housekeeping on Site

Poor storage manner





Housekeeping on Site

Poor storage manner/ material & waste together





Housekeeping on Site

Rubbish and timber planks stacked at staircase escape route





Housekeeping on Site

Improper storage of construction material on access route





Housekeeping on Site

Improper storage of construction material on access route





Housekeeping on Site

Water & rubbish accumulated at cable trench





Housekeeping on Site

Residue left on floor after high speed cutting may cause rust stains if not moved at once





Housekeeping on Site

Lift shaft edge not regularly cleaned





INSITU CONCRETE





Beam Soffit Formwork

Steel props either missing, or dismantled and re-propped





Re-propping & Early Striking of Formwork NOT allowed





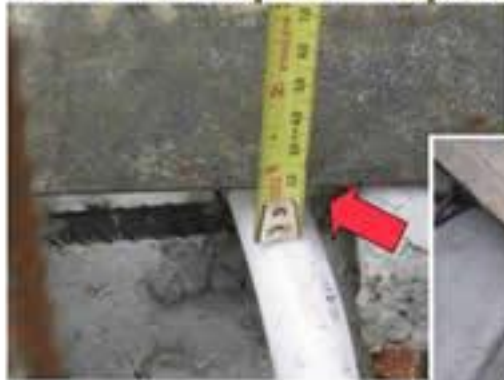
Concrete Spacers

NOT adequate spacing between formwork





Concrete Cover to conduits NOT adequate spacing between formwork





Concrete Defects

Stepped joint



105

[DEI-105(4)]



Concrete Defects

Distorted window opening



107

[CON 2.W1020.4]



Scaffolding Ties

NO method statement to ensure nominal cover be achieved



[CON 2. W270.4]



Quality of Concrete Retaining Wall

Rough and damaged tie bolt holes



11/12/2007

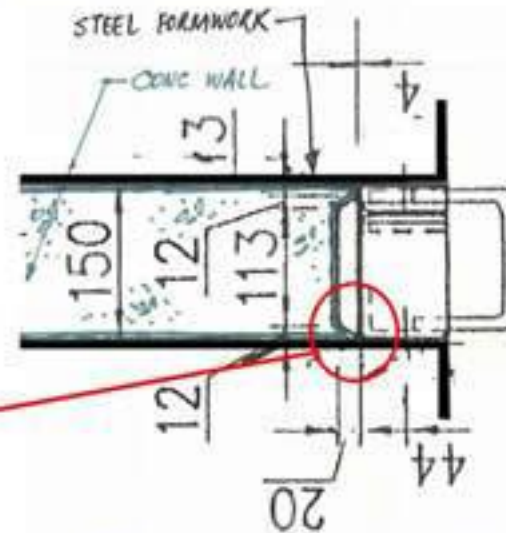


FORMWORK





Wall Corners at the Insitu Window Jamb Damaged during removal of formwork



Sharp corners at wall edge



Junction between Formwork and PCF NOT sealed tightly and grout leakage occurred





Tie Bolts of Formwork

NOT securely tied against two rows of railing





Tie Bolts of Formwork Spacing exceeded





Pipe Sleeves at Formwork

Inadequate length induced leakage of concrete



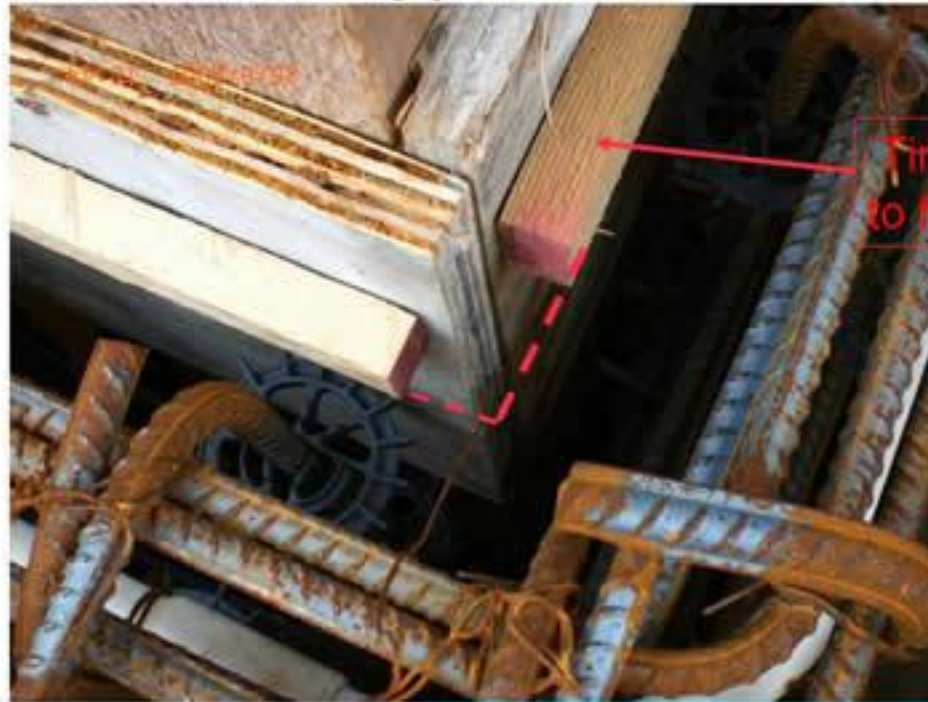


Supports of scaffolds for Formwork NOT sit on firm / solid ground





Chase for Waterproofing at Formwork NOT continuously provided



Timber strip
to form chase



Steel Nails for Fixing Formwork

Embedded in concrete may lead to future rusting





Steel Nails for Fixing Formwork Embedded in concrete / corridor wall may lead to future rusting





Steel Nails for Fixing Formwork Embedded in concrete / roof water tank may lead to future rusting





Steel Nails for Fixing Formwork

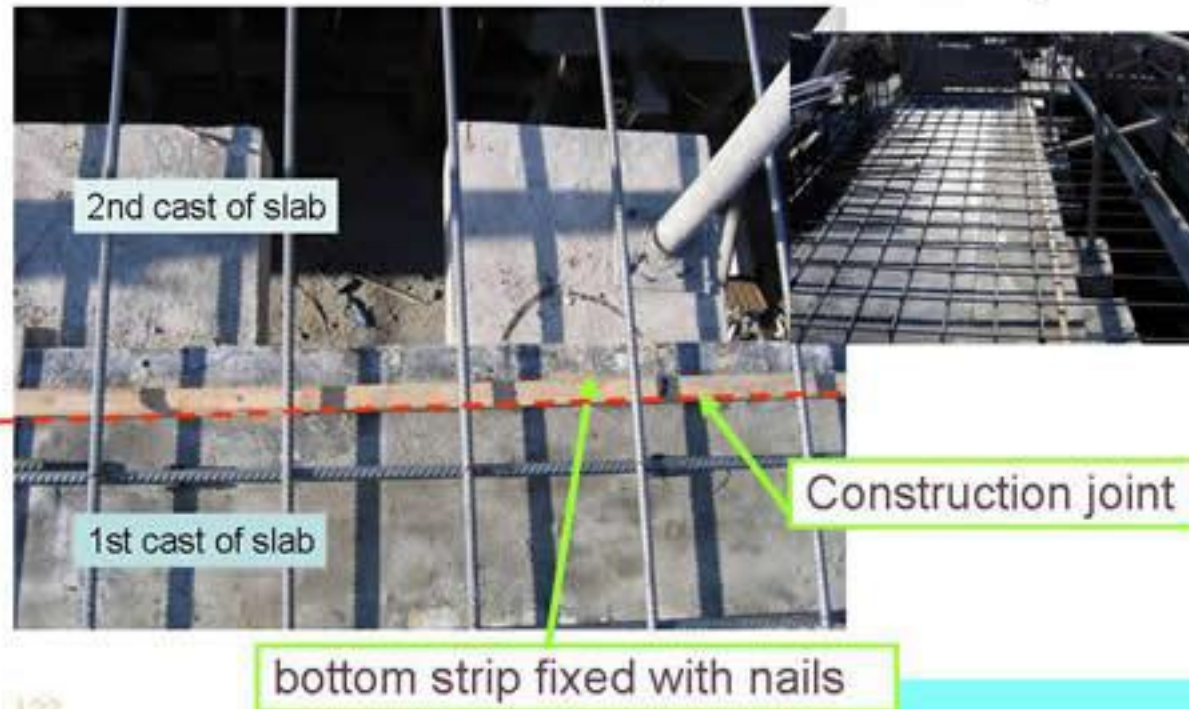
Embedded in concrete / lift lobby slab construction joint





Steel Nails for Fixing Formwork

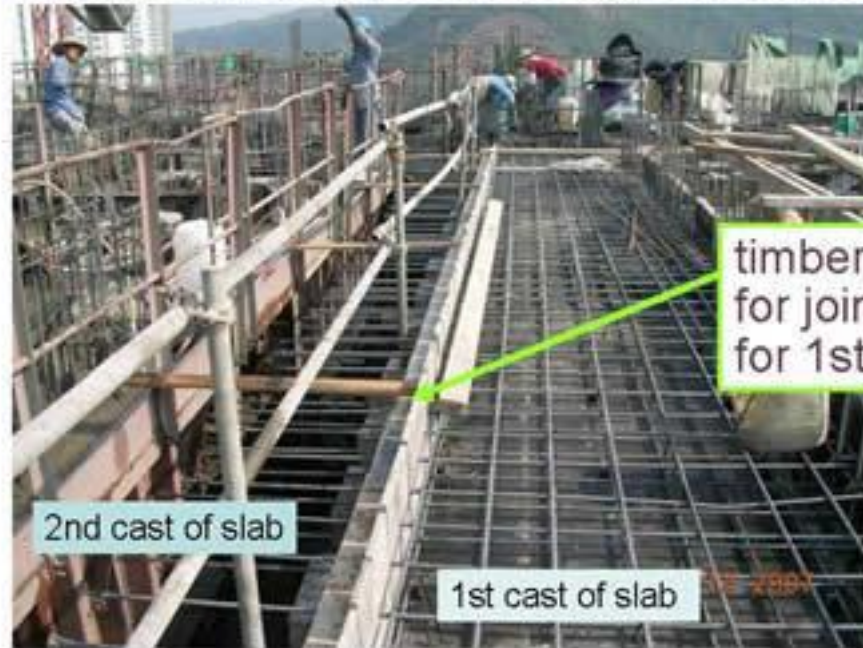
Embedded in concrete / lift lobby slab construction joint





Steel Nails for Fixing Formwork

Embedded in concrete / lift lobby slab construction joint





Steel Nails for Fixing Formwork

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Steel Nails for Fixing Formwork

Embedded in concrete / lift lobby slab construction joint

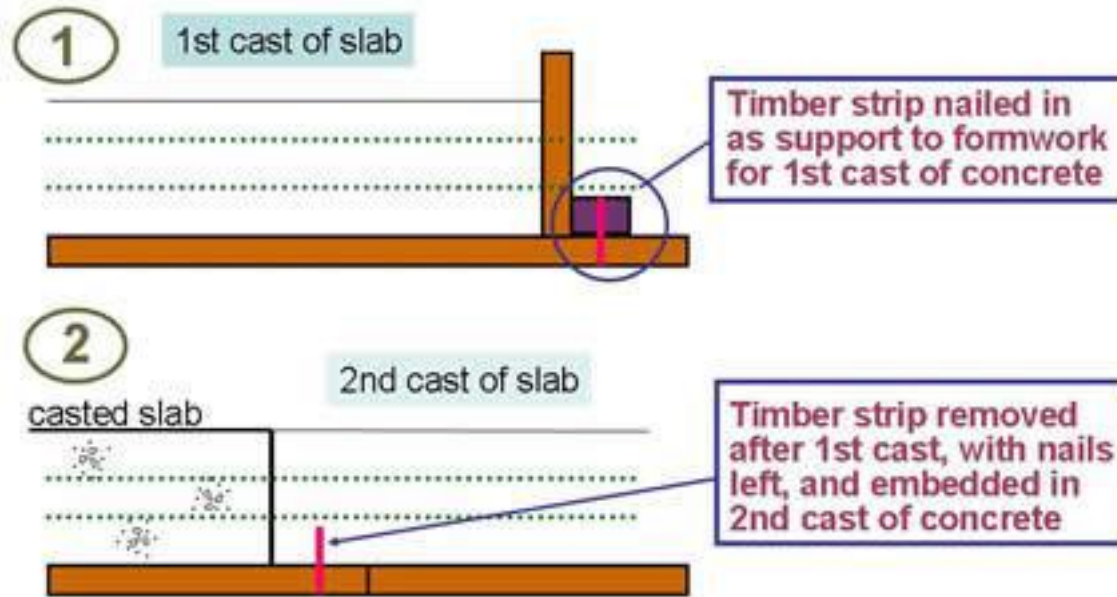


timber strip
and nails for joint
removed after
1st cast



Steel Nails for Fixing Formwork

Sequence of work – casting of in-situ floor slab





Steels contaminated by Mould Oil

Fixing of steel started while mould oil still wet



Also slippery to workers

Wrong timing of work



Plywood for Formwork Deteriorated and damaged





REINFORCEMENT

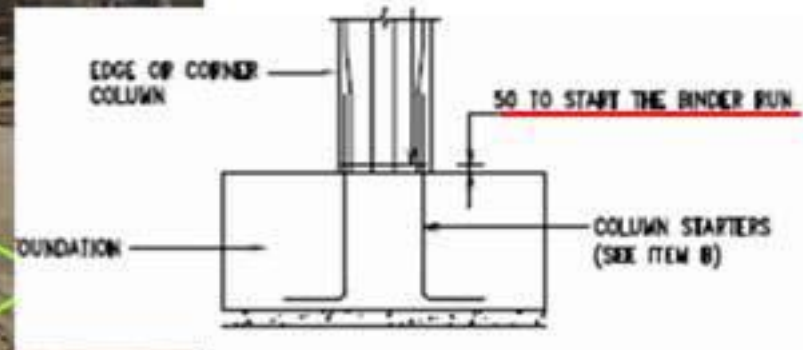




Spacing of Binder at Column



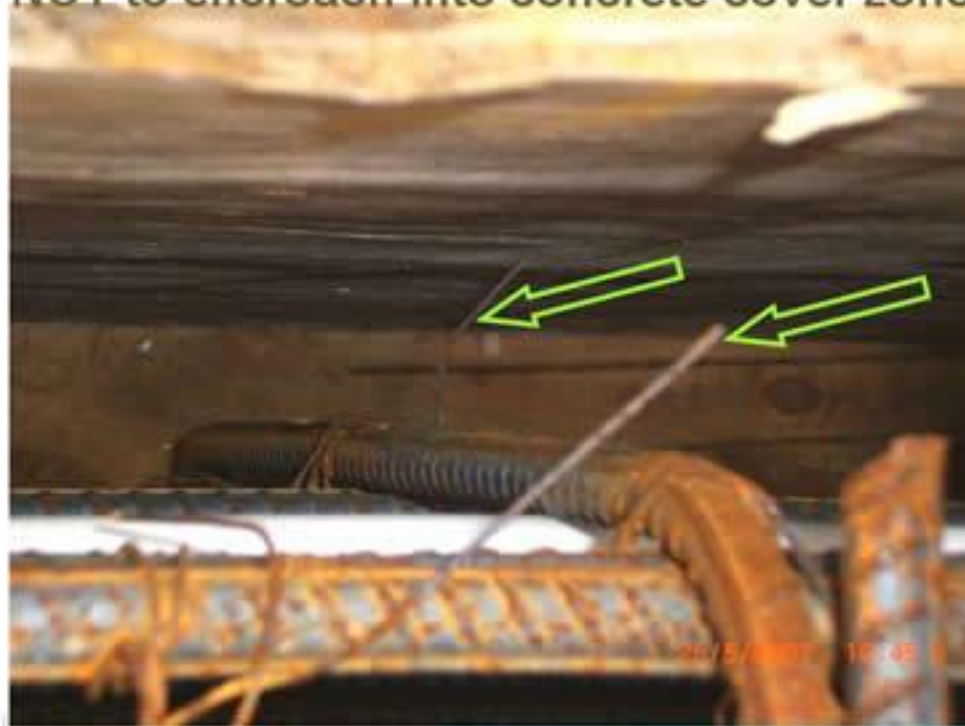
First binder exceeds 50mm above structural level



[Standard General Details]



Steel Tying Wires for Reinforcement NOT to encroach into concrete cover zone



03/24/2008 11:05



Cover to Reinforcement To be controlled properly





Stockpile of Reinforcement Not properly stored at the storage areas



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[CON3.W010.4]



Stockpile of Reinforcement Not properly stored at the storage areas





Control for Use of Reinforcement **NOT** locked by chain before test results



[DEI-506 (2d)]



Reinforcement Identification

Brown colour used too close to the original colour of the reinforcement





PRECAST FACADE UNITS





Chipped Precast Facade Units





COMPONENTS





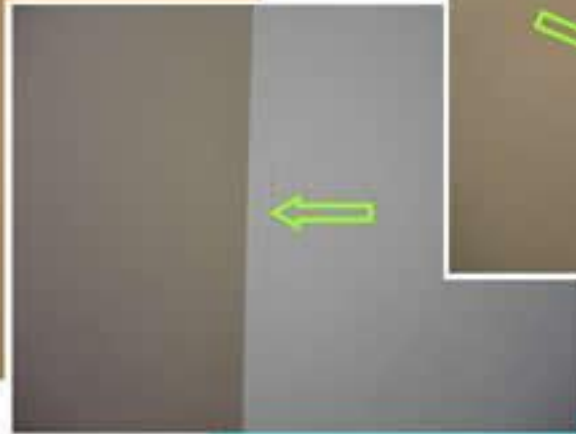
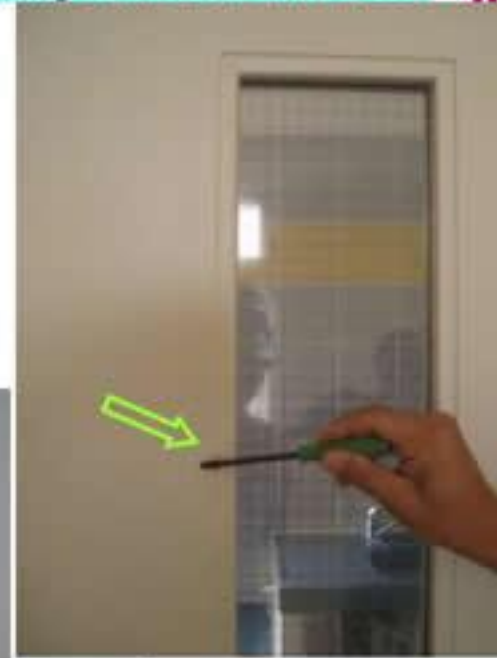
Installation of Fire Door Set

Gap exceeds 4mm at bottom between kerb





Timber Doorset Cracks at door lipping





Drain Hole at Aluminium Window Frame

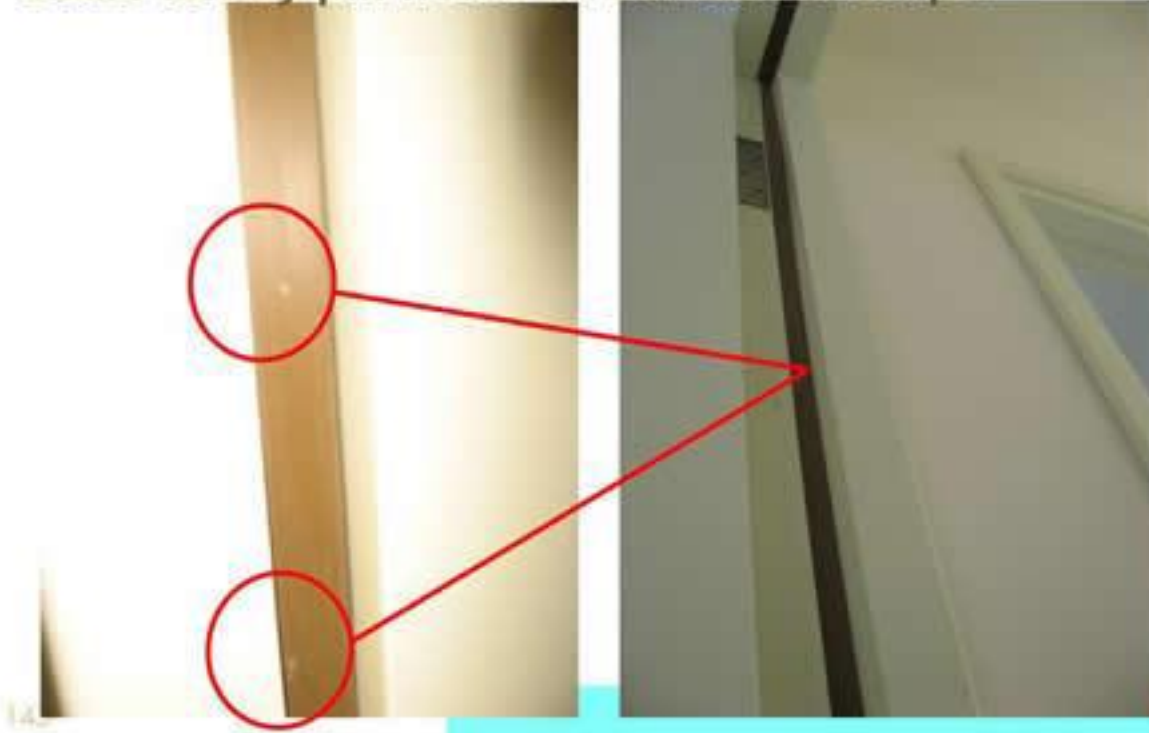
Too close to the Allen lock
may lead to water seepage through the lock





Intumescent Strip at Fire Door

Scars left by pin holes on surface of strips





FINISHINGS





Spacer for Wall Tile Laying

NOT to use carton paper, cannot remove completely





Spacer for Wall Tile Laying

NOT to use carton paper, cannot remove completely





Expansion Joint

Covered up
by wall tiles





Covering Up of Expansion Joint Filled with C/S rendering at exposed portion





Improper Sealing at Top of Wall Tiles At kitchen / bathroom walls





IRONMONGERY





Bathroom Folding Door

Door lock bracket fixed
by screws to plastic
frame



NOT rigid, easy to
become loose and
fall off



Door lock bracket fixed
to timber stud onto door
architrave



Bathroom Folding Door Turning knob too small



Catch not
securely fixed





Door Guard at Entrance Door

Insufficient **clearance** between interlocking parts may accidentally lock the door when leaving the flat.
Tenant will be locked out



Video Demonstration





Door Guard at Entrance Door Different models



Maximum swing
slightly over 90°



Can swing flat
Against architrave



MASONRY





Panel Wall

Width of joint exceeded
designed tolerance



Loose material
found inside the
joint during cover up



Joint not fully
grouted during
construction



Panel Wall

NOT properly stored





Cramps for Door Sub-frames

Offset with adjacent cramp to increase rigidity





Concrete Block Wall Improper joints at corner





METALWORK





Fixing of Steel Door Plates

Excessive long bolts used





WATERPROOFING





Waterproof Membrane at Roof Damaged by fixing screws for electrical conduit / box





Waterproof Membrane at Roof

Tie bolt holes and sleeves at skirting level of roof parapet wall have risk of water seepage

