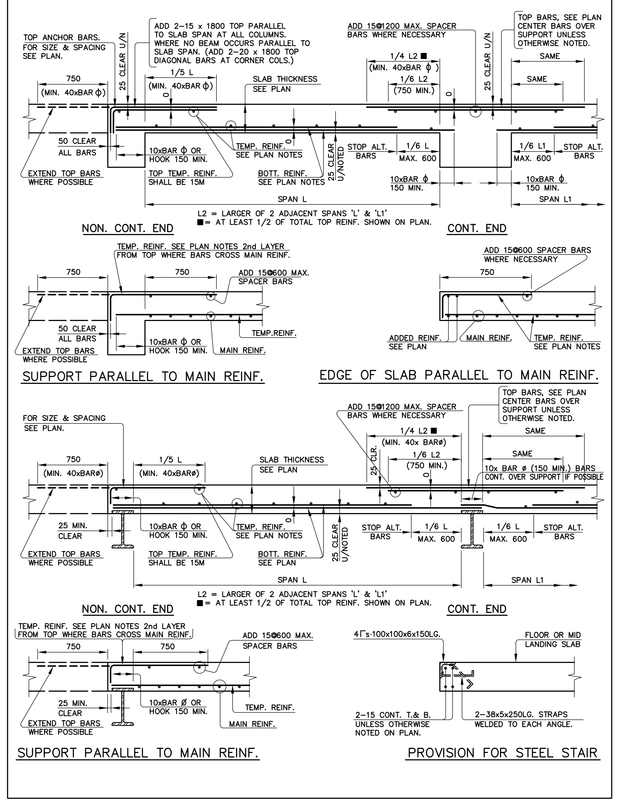
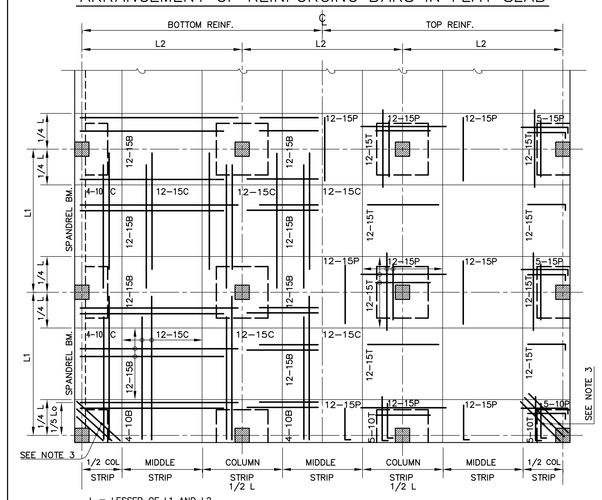
500 TYPICAL ONEWAY SLAB DETAILS



501 TYPICAL FLAT SLAB (PLAN)

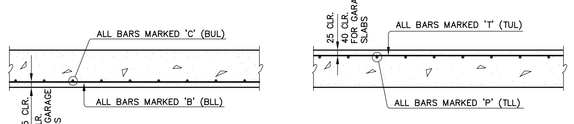
ARRANGEMENT OF REINFORCING BARS IN FLAT SLAB



L = LESSER OF L1 AND L2
Lo = LARGER OF L1 AND L2

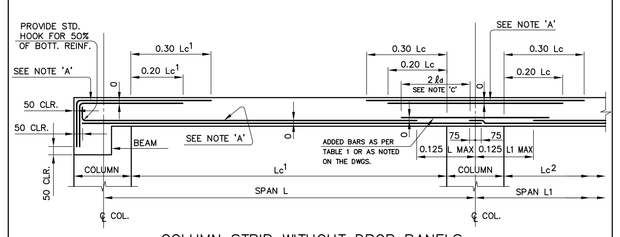
NOTES:

1. BARS MARKED 'T' & 'B' SHALL BE PLACED IN THE TOP UPPER LAYER AND BOTTOM LOWER LAYER RESPECTIVELY.
2. BARS MARKED 'P' & 'C' SHALL BE PLACED IN THE TOP LOWER LAYER AND BOTTOM UPPER LAYER RESPECTIVELY WHEN INTERSECTING WITH 'T' OR 'B' BARS. WHERE THERE IS NO INTERFERENCE, BARS MARKED 'P' SHALL BE PLACED IN THE TOP UPPER LAYER.
3. SPECIAL REINFORCING SHALL BE PROVIDED WHEN SHOWN ON PLAN ONLY.



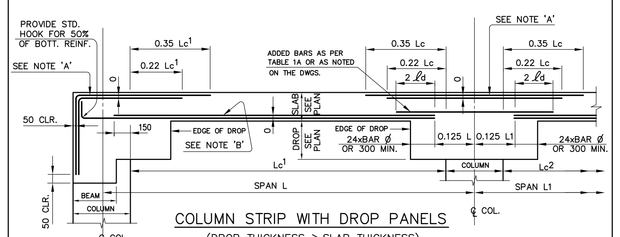
TYPICAL CONCRETE COVER ON BARS IN FLAT SLAB

502 TYPICAL FLAT PLATE & FLAT SLAB DETAILS



COLUMN STRIP WITHOUT DROP PANELS

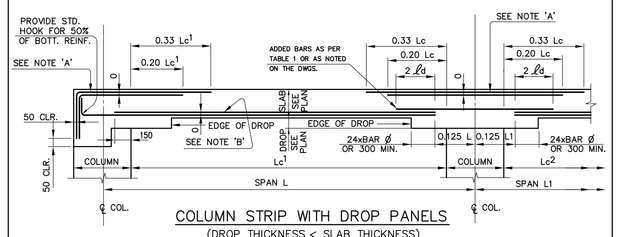
Lc = LONGER OF ADJACENT CLEAR SPAN Lℓ OR Lc² .



COLUMN STRIP WITH DROP PANELS

(DROP THICKNESS ⩾ SLAB THICKNESS)

Lc = LONGER OF ADJACENT CLEAR SPAN Lℓ OR Lc² .



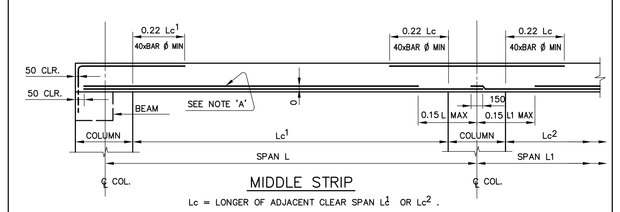
COLUMN STRIP WITH DROP PANELS

(DROP THICKNESS < SLAB THICKNESS)

Lc = LONGER OF ADJACENT CLEAR SPAN Lℓ OR Lc² .

NOTE

1. OVER INTERIOR COLUMNS, AT LEAST 1/3 OF THE TOP BARS IN THE COLUMN STRIP SHALL BE PLACED IN A BAND WIDTH EQUAL TO THE WIDTH OF THE COLUMN PLUS 3 TIMES THE THE SLAB THICKNESS, CENTERED OVER THE COLUMN AND THE SPACING OF THESE BARS SHALL NOT EXCEED 1.5 TIMES THE SLAB THICKNESS OR 250 MIN.
2. OVER EXTERIOR COLUMNS ALL OF THE TOP BARS IN THE COLUMN STRIP SHALL BE PLACED IN A BAND WIDTH AS PER NOTE 1, CENTERED OVER THE COLUMN.



MIDDLE STRIP

Lc = LONGER OF ADJACENT CLEAR SPAN Lℓ OR Lc² .

NOTE 'A': ALTERNATE LONG AND SHORT BARS, HALF OR MORE OF BARS IN EACH STRIP TO BE LONG BARS.

NOTE 'B': FOR BARS NOT TERMINATING IN DROP PANELS, USE LENGTHS SHOWN FOR PANELS WITHOUT DROPS.

NOTE 'C': PROVIDE OVERLAP OF ADDED REINF. AND MAIN BOTTOM REINF. BY 2x MINIMUM STRAIGHT TENSION DEVELOPMENT LENGTH. SEE TABLE 5 ON TD107.

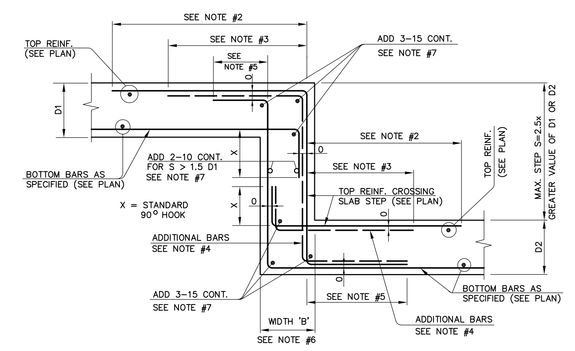
TABLE No. 1
FOR ADDED REINFORCEMENT AT COLUMNS

SLAB THICKNESS in mm	ADDED REINFORCEMENT
160	2–15
180	2–20
200	2–20
220	2–20
240	2–20
260	3–20
280	3–20
300	2–25
320	2–25
340	4–20

TABLE No. 1A
FOR ADDED REINFORCEMENT AT COLUMNS

SLAB THICKNESS in mm	ADDED REINFORCEMENT
160	2–20
180	2–20
200	2–20
220	2–20
240	2–25
260	2–25
280	2–25
300	4–20
320	4–20
340	4–20

503 TYPICAL DETAILS OF STEPPED SLABS-CASE 1



STEPPED SLAB – MAXIMUM STEP S=2.5 x (D_1 or D_2)

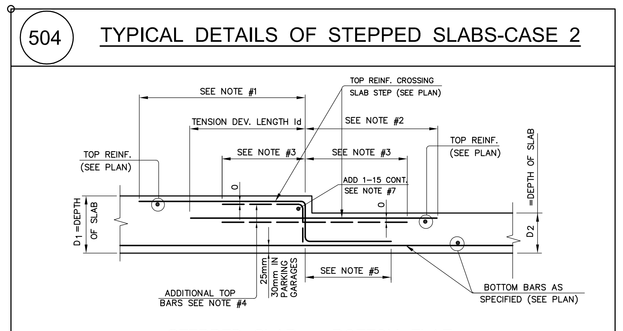
STEPPED SLAB NOTES:

1. FOR SPECIFIED CONTINUOUS TOP REINFORCING CROSSING THE SLAB STEP, PROVIDE TENSION SPLICE CLASS 'B' OR LENGTH INDICATED ON PLAN, WHICHEVER IS GREATER.
2. EXTEND SPECIFIED TOP REINFORCING, CROSSING THE SLAB STEP BY LENGTH INDICATED ON PLAN, OR BY LENGTH OF TENSION DEVELOPMENT LENGTH 'Id', WHICHEVER IS GREATER.
3. PROVIDE 'COMPRESSION LAP SPLICE' AS INDICATED.
4. PROVIDE ADDITIONAL BARS WHERE NO TOP REINFORCING IS SPECIFIED (SEE PLAN) CROSSING SLAB STEP. THE SIZE AND SPACING OF ADDITIONAL BARS SHALL BE AS FOLLOWS.

SLAB THICKNESS D_2	ADDITIONAL BARS
UP TO 230 mm	10 @ 400 mm
250 mm TO 300 mm	10 @ 360 mm
SLABS THICKER THAN 300 mm	AREA OF STEEL SHALL BE EQUAL TO 0.001 x CONC. CROSS SECTION AREA (PER METRE WIDTH)

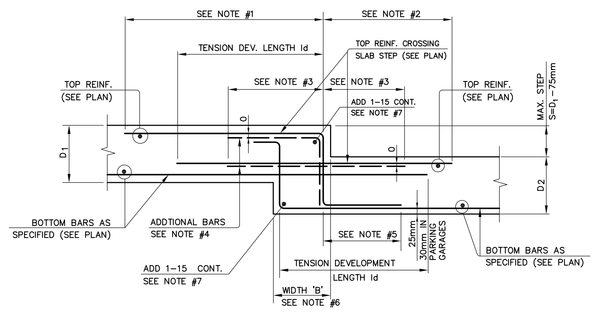
5. PROVIDE FULL TENSION DEVELOPMENT LENGTH 'Id', MEASURED FROM ADDED T&B CONTINUOUS BARS AS INDICATED.
6. WIDTH OF SLAB STEP SHALL BE THE GREATER OF THE FOLLOWING VALUES: D1, D2, OR 300mm.
7. PROVIDE TENSION LAP SPLICE CLASS 'B' FOR ALL HORIZONTAL BARS IN STEPPED PORTION OF SLAB.

504 TYPICAL DETAILS OF STEPPED SLABS-CASE 2



STEPPED SLAB – BOTTOM FLAT

$D_2 < D_1$



STEPPED SLAB – MAXIMUM STEP S=D1 –75mm

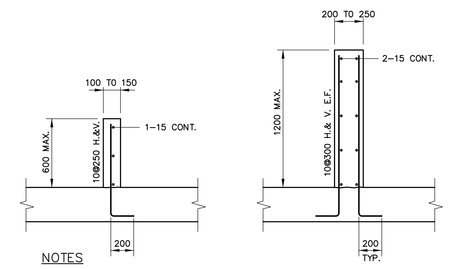
STEPPED SLAB NOTES:

1. EXTEND SPECIFIED TOP REINFORCING, CROSSING THE SLAB STEP, BY LENGTH INDICATED ON PLAN, OR BY LENGTH OF TENSION SPLICE CLASS 'B', WHICHEVER IS GREATER.
2. EXTEND SPECIFIED TOP REINFORCING, CROSSING THE SLAB STEP, BY LENGTH INDICATED ON PLAN, OR BY LENGTH OF TENSION DEVELOPMENT LENGTH 'Id', WHICHEVER IS GREATER.
3. PROVIDE COMPRESSION LAP SPLICE.
4. PROVIDE ADDITIONAL BARS WHERE NO TOP REINFORCING IS SPECIFIED (SEE PLAN) CROSSING SLAB STEP. THE SIZE AND SPACING OF ADDITIONAL BARS SHALL BE AS FOLLOWS.

SLAB THICKNESS D_2	ADDITIONAL TOP BARS
UP TO 230 mm	10 @ 400 mm
250 mm TO 300 mm	10 @ 360 mm
SLABS THICKER THAN 300 mm	AREA OF STEEL SHALL BE EQUAL TO 0.001 x CONC. CROSS SECTION AREA (PER METRE WIDTH)

5. PROVIDE FULL TENSION DEVELOPMENT LENGTH 'Id', MEASURED FROM ADDED CONTINUOUS BAR.
6. WIDTH OF SLAB STEP SHALL BE THE GREATER OF THE FOLLOWING VALUES: D1, D2, OR 300mm.
7. PROVIDE TENSION LAP SPLICE CLASS 'B' FOR ALL HORIZONTAL BARS IN STEP PORTION OF SLAB.

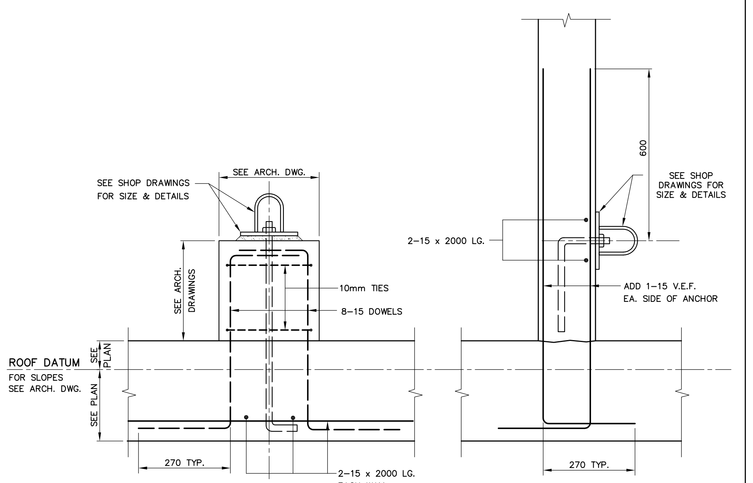
505 TYPICAL CONCRETE CURB DETAILS



NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF CURBS.
2. PROVIDE CONTROL JOINTS @ 4500 c/c. MAXIMUM AND EXPANSION JOINTS @ 9000 c/c. MAXIMUM UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS. SEE TYPICAL DETAILS FOR CONTROL AND EXPANSION JOINT DETAILS.

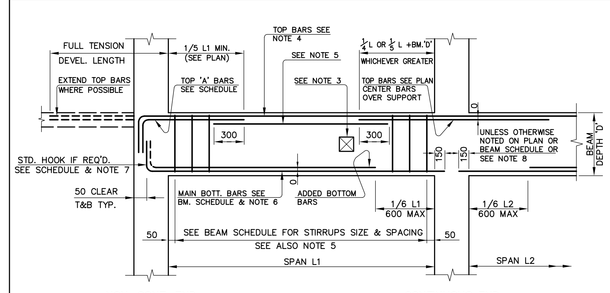
506 TYPICAL WINDOW WASHING ANCHOR DETAIL



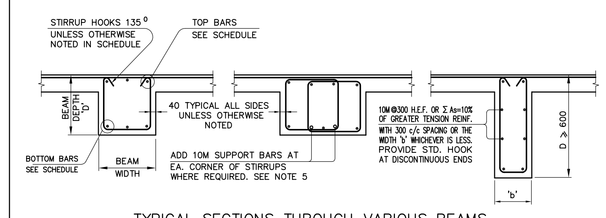
TYPICAL WINDOW WASHING ANCHOR DETAIL

FOR LOCATIONS REFER TO SHOP DRAWINGS.

600 TYPICAL BEAMS DETAILS



ELEVATION



TYPICAL SECTIONS THROUGH VARIOUS BEAMS

NOTES:

1. BEAMS SHALL BE CAST MONOLITHICALLY FOR THE TOTAL DEPTH OF THE BEAMS.
2. L=LARGER OF ADJACENT SPANS L1 OR L2.
3. OPENINGS THROUGH BEAMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AND ADDED REINF. DETAILS.
4. TOP CONT. BARS TO BE SPLICED WITH STD. COMPRESSION LAP SPLICES, IN SPANDREL BEAMS, TOP CONT. BARS TO BE SPLICED WITH TENSION SPLICE CLASS 'B' AT CENTRE OF SPAN, UNLESS OTHERWISE NOTED IN BEAM SCHEDULE.
5. PROVIDE 10M BARS AT EACH CORNER OF EACH STIRRUP WHERE REQUIRED.
6. MAIN BOTTOM BARS OF SPANDREL BEAMS SHALL BE EXTENDED FOR FULL DEVELOPMENT LENGTH INTO SUPPORTS.
7. UNLESS OTHERWISE NOTED IN BM. SCHEDULE PROVIDE STD. HOOK FOR 50% OF BOTT. BARS (MIN. 2 BARS) AT NON-CONTINUOUS ENDS OF BEAMS.
8. PROVIDE BASIC TENSION LAP SPLICES CLASS 'B' FOR BOTT. BARS INDICATED THUS ▲ IN BEAM SCHEDULE.
9. FOR TENSION FLANGES PLACE A PORTION OF THE LONGITUDINAL REINFORCING, (SEE BEAM SCHEDULE) IN THE ADJACENT SLAB FLANGE, IN A WIDTH EQUAL TO THE LEAST OF 1/20 OF THE BEAM SPAN, 6 TIMES THE SLAB THICKNESS FOR SPANDREL BEAMS, 12 TIMES THE SLAB THICKNESS FOR OTHER BEAMS OR 1/2 THE CLEAR DISTANCE TO THE NEXT BEAM.
10. WHEN LONGITUDINAL REINFORCING IS PLACED IN TWO OR MORE LAYERS, THE BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE THE BARS IN THE LOWER LAYER WITH THE CLEAR DISTANCE BETWEEN THE LAYERS BEING NOT LESS THAN 1.4 TIMES THE LARGER BAR'S DIAMETER NOR 1.4 TIMES THE NOMINAL MAXIMUM SIZE OF THE COARSE AGGREGATE.

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P.F. AST 13015 PROVINCE OF ONTARIO

FIRST FLOOR ELEV. 93.60m

no.	issued / revised	date:
1	ISSUED FOR PERMIT	2014-05-30
2	RE ISSUED FOR PERMIT	2014-07-10
3	ISSUED FOR FORMING TENDER	2014-08-27
4	CONSTRUCTION REVIEW	2014-10-15
5	RE ISSUED FOR PERMIT	2015-01-27
6	ISSUED FOR CONSTRUCTION	2015-03-16
7	UPDATED - IFC	2015-04-20
8	UPDATED - IFC	2015-05-21

ALEXANDRA PARK - BLOCK 11
TORONTO, ONTARIO

project no: 13015
scale: AS NOTED
drawn by: H.W.
reviewed by: H.P.
date started: MARCH 2014

TYPICAL DETAILS

S-003