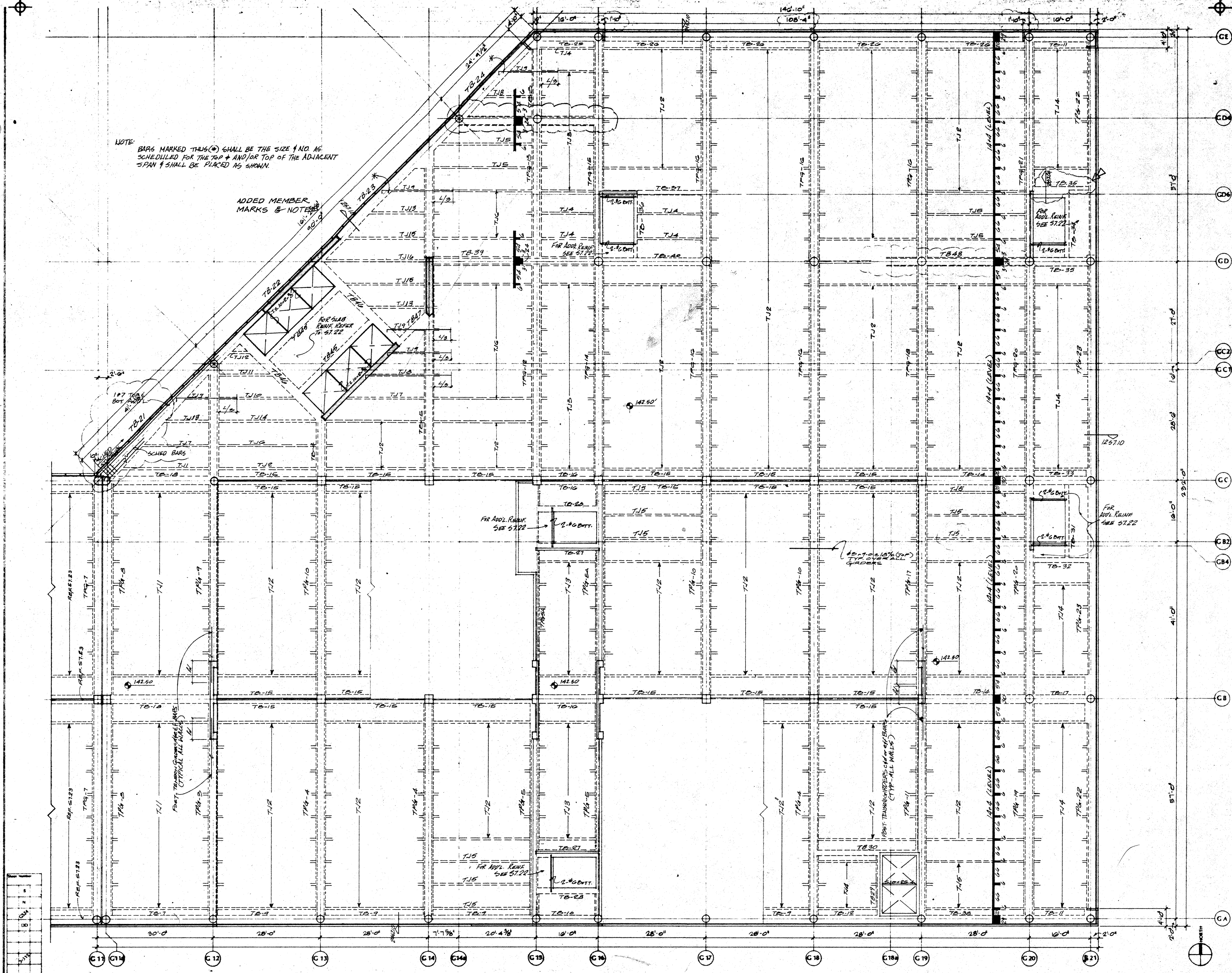


NOTE: BARS MARKED WITH (\*) SHALL BE THE SIZE & NO. AS SCHEDULED FOR THE TOP & AND/OR TOP OF THE ADJACENT SPAN & SHALL BE PLACED AS SHOWN.

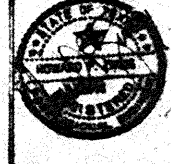
ADDED MEMBER MARKS & NOTES



CONCRETE  
REINFORCING  
STEEL

MARATHON OIL TOWER  
HOUSTON TEXAS

ISSUED FOR PERMIT  
19 OCT. 81



S7.24

GARAGE -

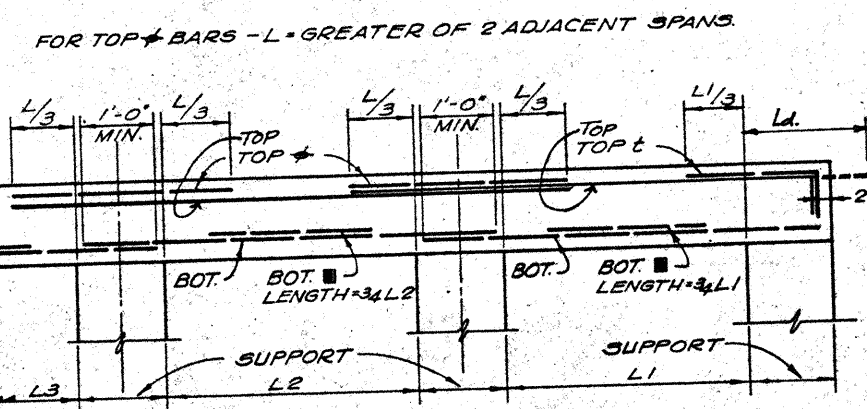
1





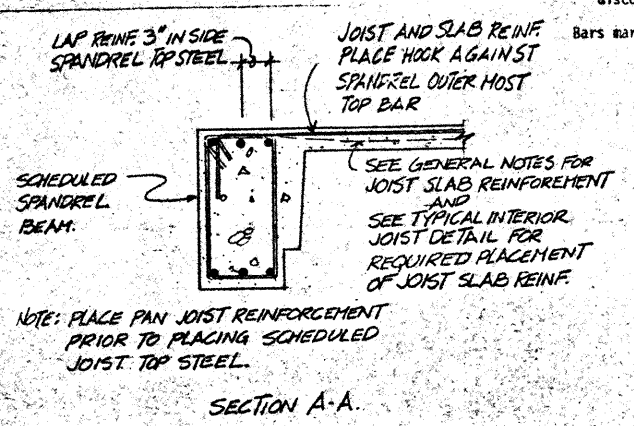
POST-TENSIONED CONCRETE NOTES:

FORCES SHOWN ARE EFFECTIVE AFTER ALL LOSSES.  
TENDONS REQUIRED TO PROVIDE THE EXTRA FORCE SCHEDULED FOR END SPANS ARE TO BE ANCHORED AT THE QUARTER POINT OF ADJACENT SPAN.  
ALL TENDONS SHALL HAVE PARABOLIC DRAPE.  
C.G.T. IS THE SCHEDULED CENTER OF GRAVITY OF THE TENDONS MEASURED FROM THE MEMBER SOFFIT. SEE TYPICAL TENDON PROFILES.  
FOR MIDDLE C.G.T. NOTED THIS "4.10 AT 23.50, THE C.G.T. IS LOCATED 23.50 FEET FROM THE EXTERIOR FACE OF THE EXTERIOR SUPPORT AT 4.10 INCHES ABOVE THE MEMBER SOFFIT.  
ALL TENDONS SHALL BE UNGRADED.  
PRESTRESSING SHALL CONFORM TO THE STANDARDS FOR THE A.C.I. BUILDING CODE 318, LATEST EDITION.  
TENDONS FOR PRESTRESSING SHALL CONFORM TO THE APPLICABLE ASTM SPECIFICATION A416 OR A421 AND SHALL BE 270K GRADE WITH A MINIMUM ULTIMATE STRENGTH OF 270,000 P.S.I. AND A YIELD STRENGTH OF 240,000 P.S.I.  
CONSTRUCTION JOINTS IN POST-TENSIONED MEMBERS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. QUARTER-POINT LOCATIONS ARE PREFERRED. SEE TYPICAL DETAIL.  
THE STRENGTH OF CONCRETE AT TRANSFER,  $f'_{ct}$ , SHALL BE ADEQUATE FOR THE REQUIREMENTS OF THE ANCHORAGES. THE MINIMUM STRENGTH AT TRANSFER SHALL BE 0.75  $f'_{c}$ .

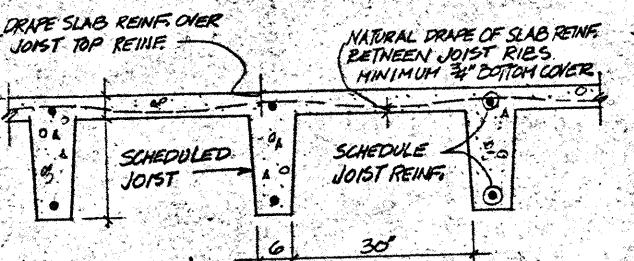


ELEVATION

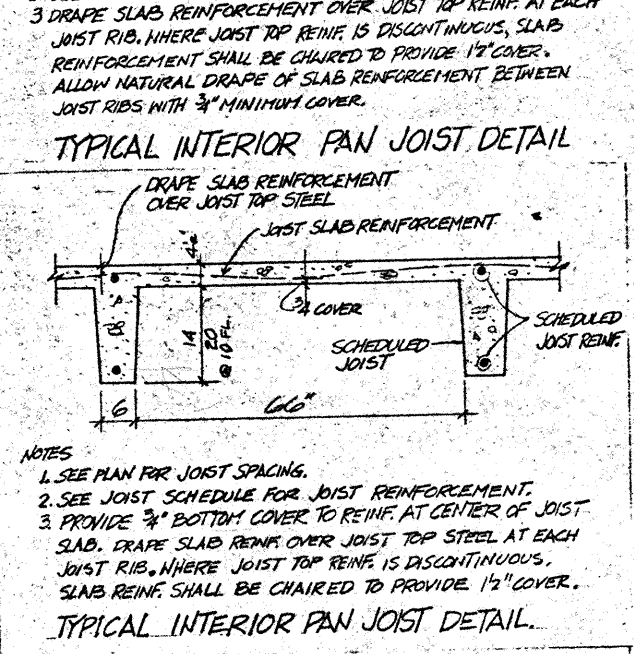
Bars marked thus: top shall be placed in top of slab centered over interior support. If continuous at both ends, total bars, or bars at the indicated spacing, shall be centered over each support.  
Bars marked thus: top shall be placed in top of beam, joist or slab at discontinuous end. If discontinuous at both ends, half of bars shall be placed in the top at each end.  
Bars marked thus: bot shall be placed in bottom of beam, joist or slab and centered in the span.



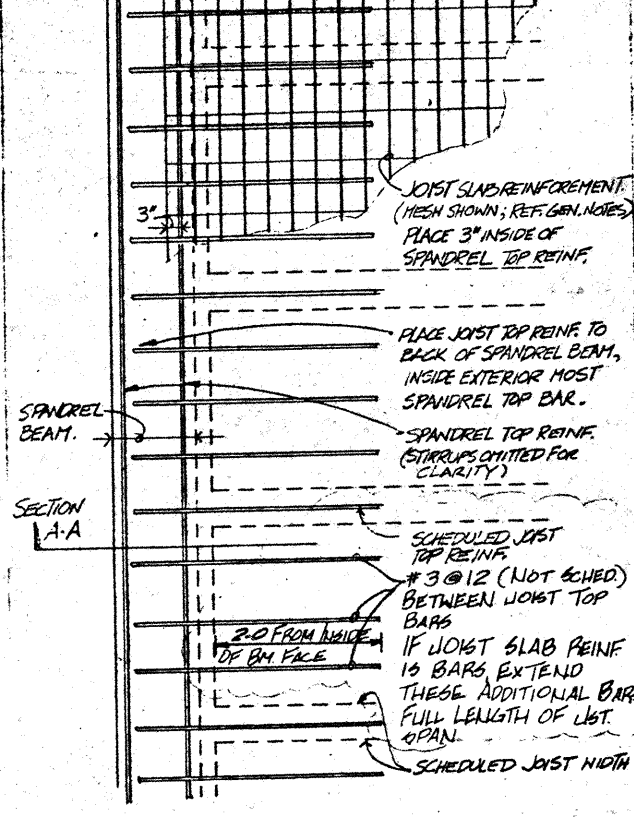
TYPICAL PAN JOIST DETAIL AT SPANDREL BEAM



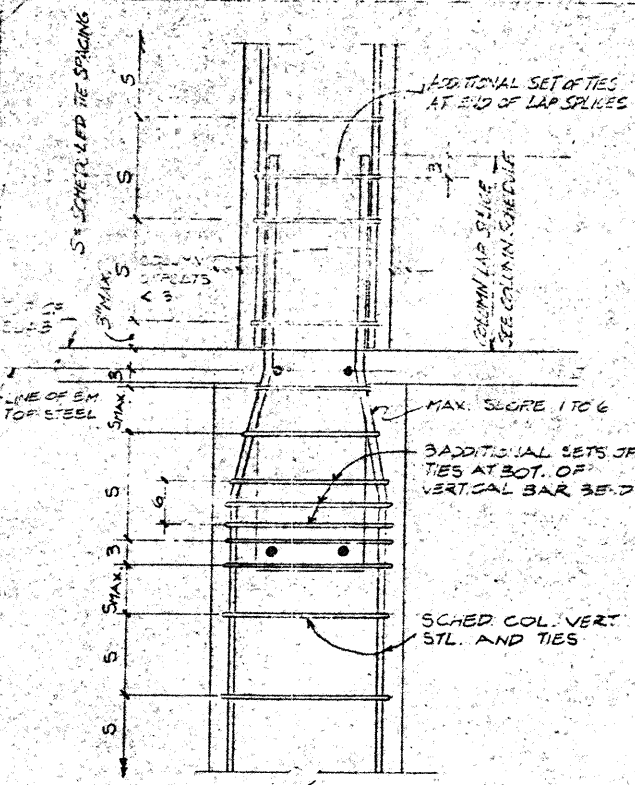
TYPICAL INTERIOR PAN JOIST DETAIL



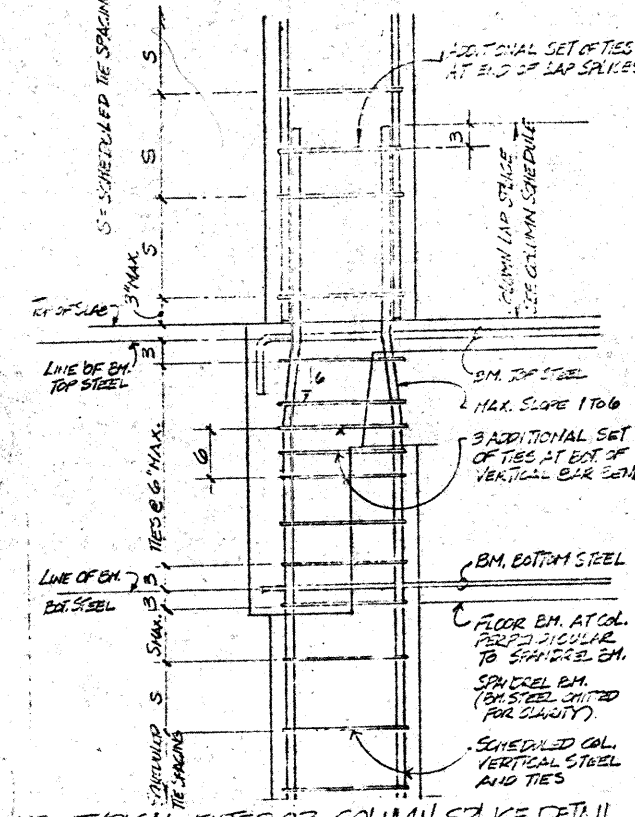
TYPICAL INTERIOR PAN JOIST DETAIL



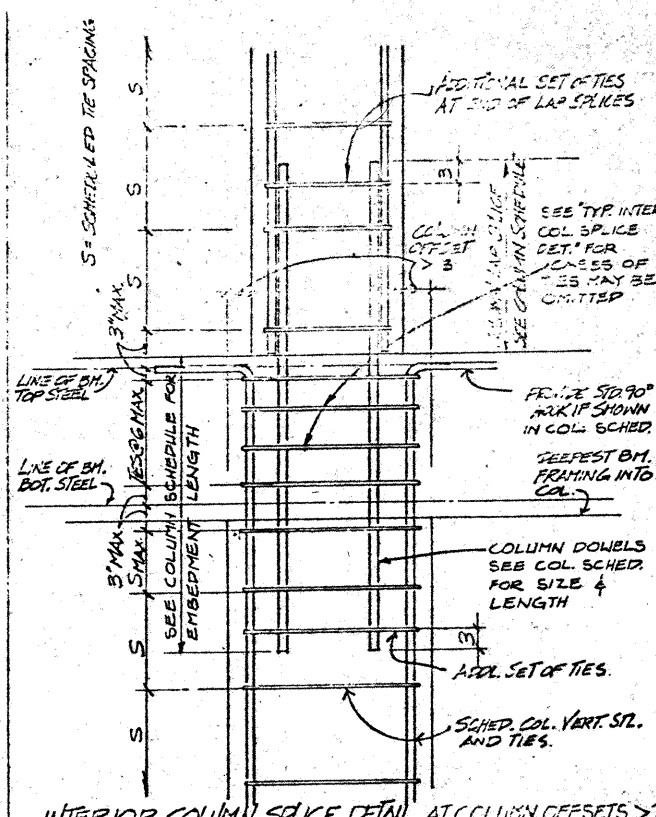
TYPICAL PAN JOIST PLAN AT SPANDREL BEAM AND INTERIOR EDGE BEAMS



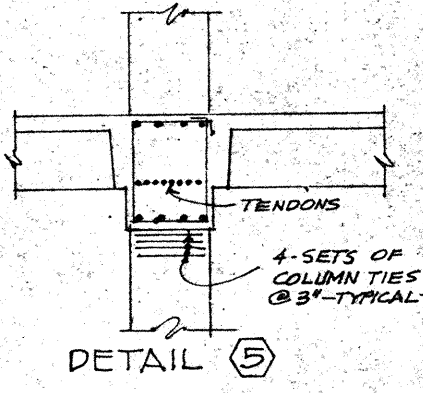
INTERIOR COLUMN SPICE DETAIL AT COLUMN OFFSETS < 3' (OFFSETS BOTH SIDES) COLUMN SPICE AT FLOOR LINE BEAM AND SLAB FLOOR SYSTEM



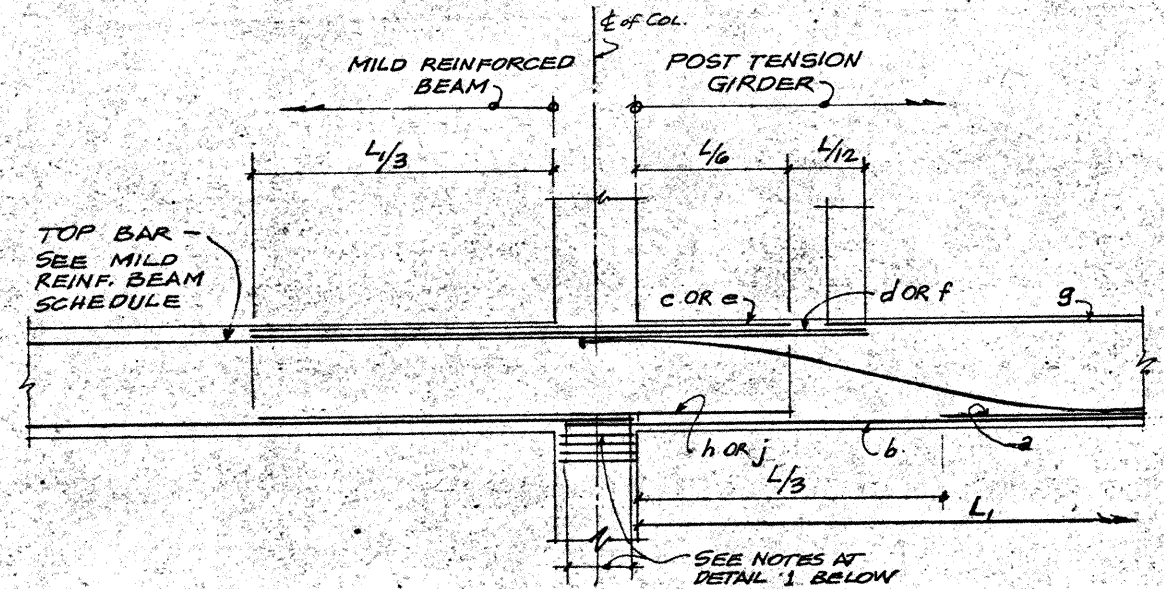
TYPICAL EXTERIOR COLUMN SPICE DETAIL COLUMN SPICE AT FLOOR LINE BEAM AND SLAB FLOOR SYSTEM



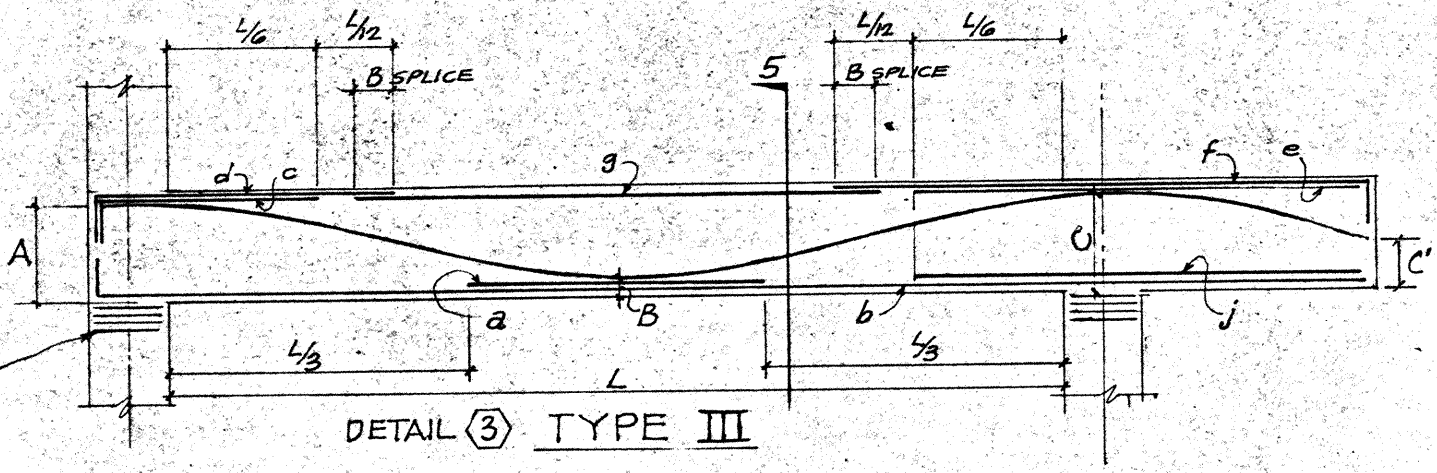
INTERIOR COLUMN SPICE DETAIL AT COLUMN OFFSETS > 3' (OFF SET BOTH SIDES) COLUMN SPICE AT FLOOR LINE BEAM AND SLAB FLOOR SYSTEM



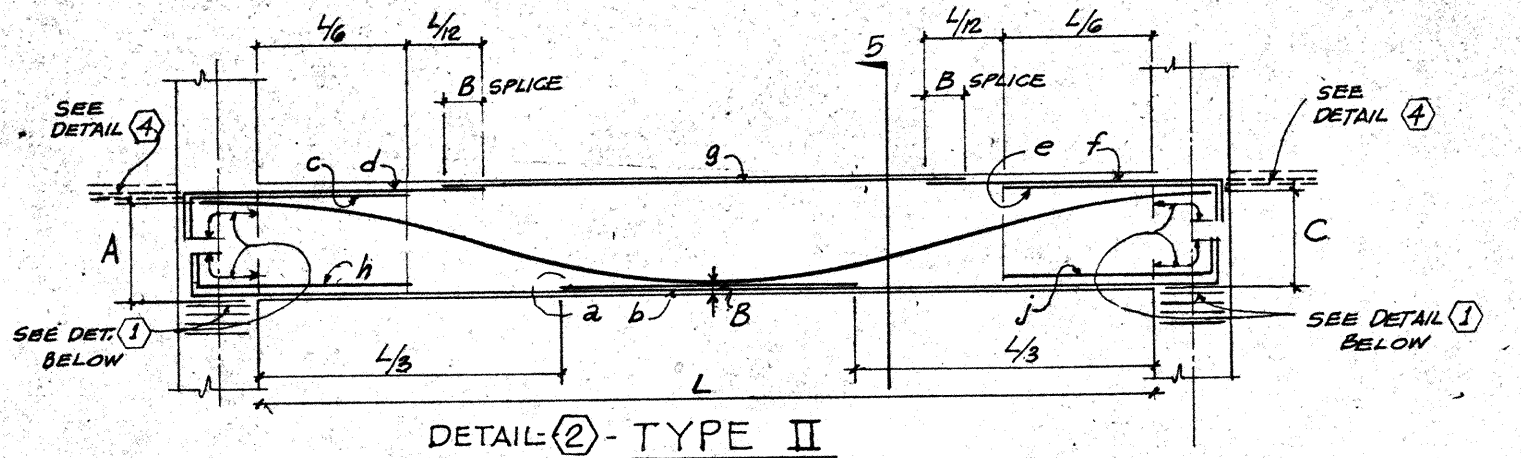
DETAIL 5



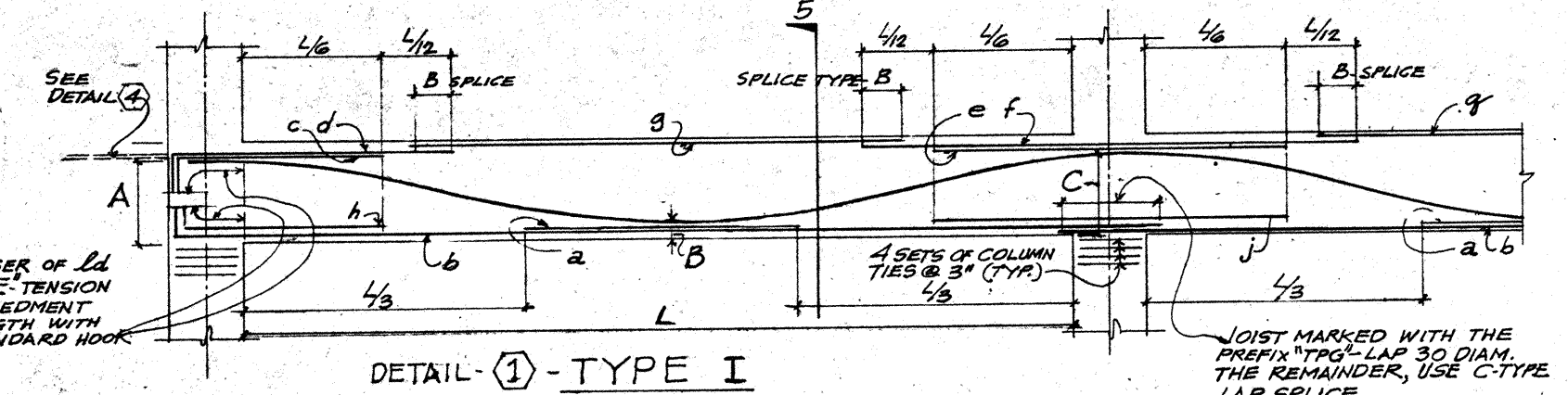
DETAIL 4 POST-TENSION & MILD REINFORCED BEAM AT COMMON SUPPORT



DETAIL 3 TYPE III



DETAIL 2 TYPE II



DETAIL 1 TYPE I

NOTE: IF GIRDER IS CONTINUOUS @ BOTH ENDS HALF OF BARS (c & f) SHALL BE CENTERED OVER EACH SUPPORT.

JOIST MARKED WITH THE PREFIX "TPG" - LAP 30 DIAM. THE REMAINDER, USE C-TYPE LAP SPICE.





SCHEDULE'S table with columns: MARK, SIZE, W, D, TOP, TOP L, TOP R, BOT, NO, SIZE, TYPE, SPACING, EA, END. Contains reinforcement data for levels 10J1 through 10J18.

SCHEDULE'S table with columns: MARK, SIZE, W, D, TOP, TOP L, TOP R, BOT, NO, SIZE, TYPE, SPACING, EA, END. Contains reinforcement data for levels 10B1 through 10B36.

SCHEDULE'S table with columns: MARK, SIZE, W, D, TOP, TOP L, TOP R, BOT, NO, SIZE, TYPE, SPACING, EA, END. Contains reinforcement data for levels 10A1 through 10A30.

SCHEDULE'S table with columns: MARK, SIZE, W, D, TOP, TOP L, TOP R, BOT, NO, SIZE, TYPE, SPACING, EA, END. Contains reinforcement data for levels TB1 through TB33.



THE WORK OF THE OFFICE OF PIERCE FENNER SMITH & LEXINGTON ALEXANDER

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713-773-1777

Project Number  
1137

Draw Sheet

Revision

MARATHON OIL TOWER  
HOUSTON TEXAS

ISSUED FOR PERMIT  
19 OCT. 81

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Table with columns: ORDER REINFORCING SCHEDULE, ORDER PRESTRESS SCHEDULE, GIRDER REINFORCING SCHEDULE, GIRDER PRESTRESS SCHEDULE. Includes sub-headers for REINFORCING TYPE, STIRRUPS, SECTION PROPERTIES, and STAIRLIPS. Rows contain detailed specifications for various structural elements.

NOTE: FOR ALL POST-TENSIONED GIRDERS, TOTAL DEPTH IN EXCESS OF 30" PROVIDE #4 @ 12" O.C. AT EA. FACE