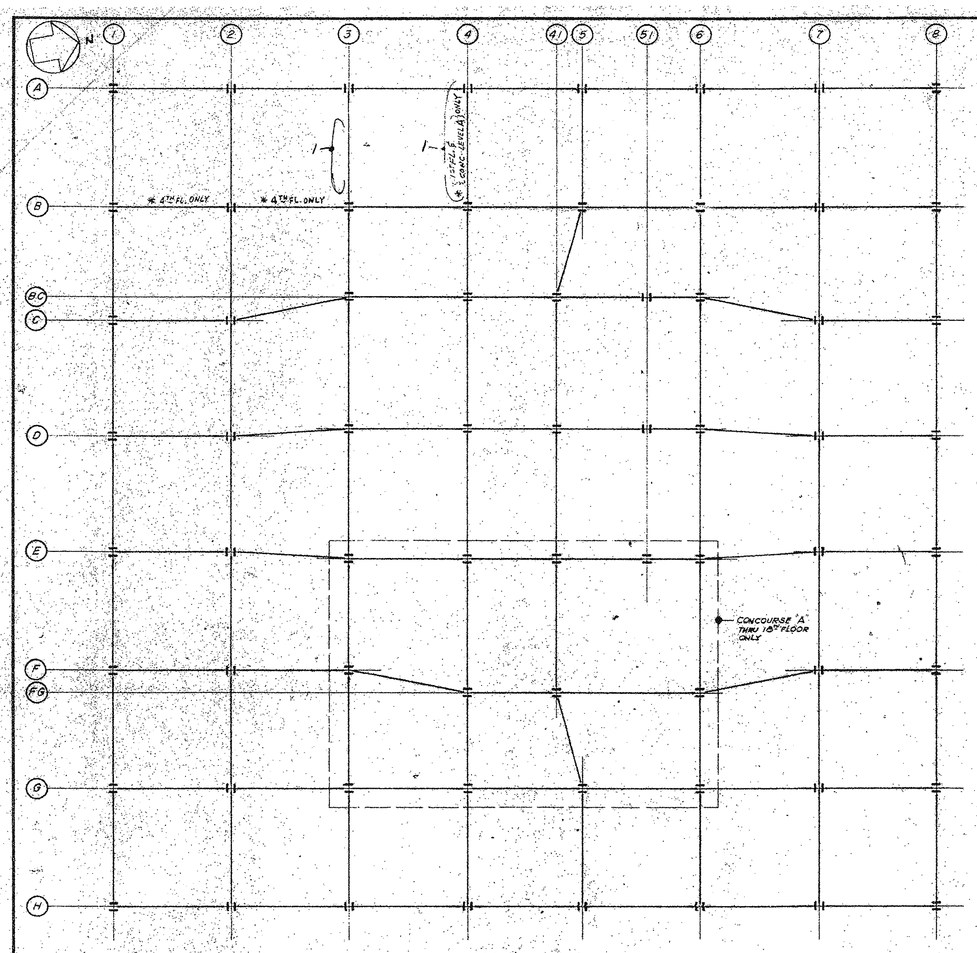
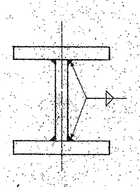


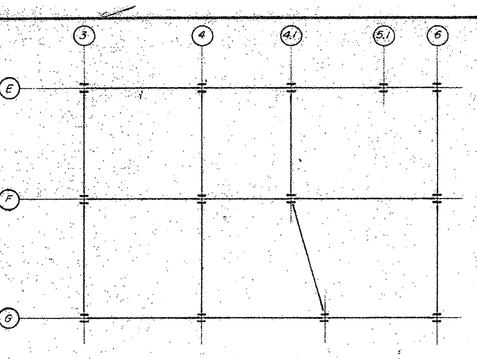
WIND MOMENT CONNECTION KEY PLAN

1. ALL COL. TO COL. BEAMS SHOWN TO HAVE MOMENT CONNS ON ALL FLOORS WHERE FRAMING OCCURS (CONCOURSE 'A' THRU MAIN ROOF)
2. MOMENT CONNECTIONS AT COLS. B-5.1, E-5.1, F-5 & F-5.1 TO EXTEND NOT FURTHER THAN 2'-5" FROM ℄ COLUMN.
3. BEAMS MARKED THUS * NOT TO HAVE MOMENT CONNECTIONS AT FLOORS LISTED ABOVE

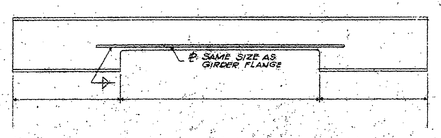


TYP. WIND GIRDER DETAIL

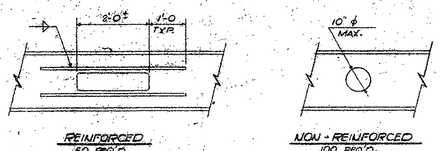
WIND GIRDER SCHEDULE		
GIRDER No.	SIZES FLANGE	WEB
WG - 1	10½×1¼	39½×1
WG - 2	10½×1½	39×1
WG - 3	10½×1⅞	38½×1
WG - 4	10½×2	38×1
WG - 5	10½×2¼	37½×1



PART PLAN
19TH FL. THRU MAIN ROOF



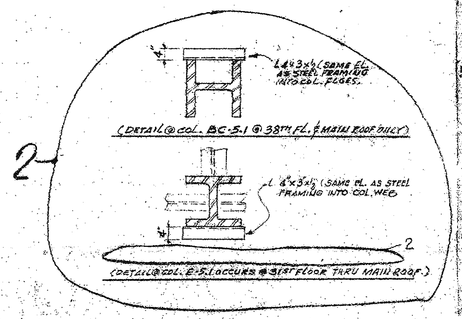
TYPICAL CUT WIND GIRDER DETAIL
50 REQ'D.

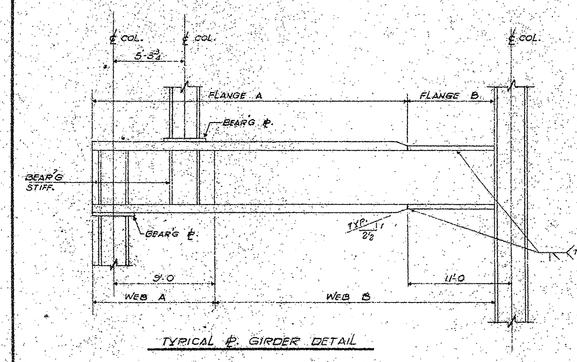


REINFORCED
50 REQ'D.

NON-REINFORCED
100 REQ'D.

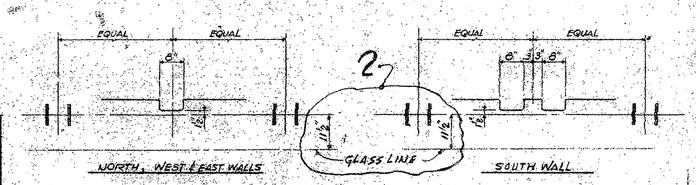
TYPICAL WEB CUTS





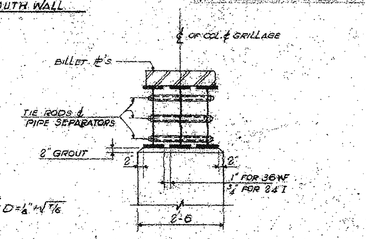
TYPICAL ℄ GIRDER DETAIL

PLATE GIRDER SCHEDULE				
GIRDER No.	WEB ℄ A	WEB ℄ B	FLANGE ℄ A	FLANGE ℄ B
19PG 1	42"×⅜	42"×⅜	20"×3	20"×1½
19PG 2	41½"×⅞	41½"×⅞	20"×3½	20"×1¾
19PG 3	40½"×⅞	40½"×⅞	20"×3½	20"×2

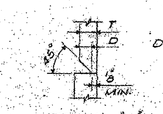


TYPICAL SPANDREL BEAM CUTS

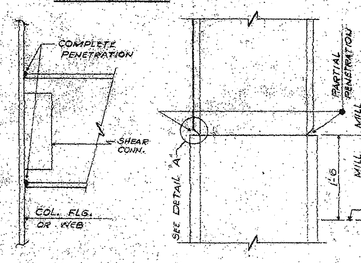
1. CUT TOP FLANGE ONLY.
2. CUTS OCCUR AT ALL SPANDREL BEAMS AT ODD NUMBERED FLOORS ONLY - 7TH THRU 17TH FL. INCL. AND EVEN FLOORS 18TH THRU 34TH INCL.
3. NO REINF. REQ'D.



GRILLAGE DETAIL

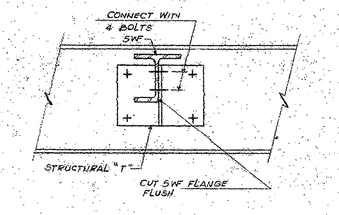


DETAIL 'A'



TYPICAL WIND COLUM. DETAIL

TYPICAL COL. SPLICE



TYPICAL DETAIL FOR ELEVATOR GUIDE RAIL SUPPORT

NOTE: CONNECTION ANGLE TO RUN DOWN TO BOTTOM FLANGE OF BEAM AT ALL WIND TRUSSES. MAXIMUM BOLT SPACING 72" VERTICALLY.

NOTE:
SPLICE FOR COLUMNS TO 9E 10D & 10DE AT 17TH FLOOR TO OCCUR 4'-0 ABOVE FINISHED FLR. SPLICE PLATES TO BE INSIDE COLUMN FLANGES.

LOW BUILDING COLUMN SCHEDULE

NOTE: COLS MARKED THUS ✱ TO BE ASTM 588 - GR.50

	9A	9AB	9B	9C	9D	9E	9.1F	9.3FG	9G	9GH	10AB	10B	10C	10D	10DE	10F	10G	10GH	11AB	11B	11C	11D	12A	12B	12C	12D	12E	12F	12G	12GH
PLAZA 2nd. FLOOR																														
1st. FLOOR 21'-0			10WF60 153	10WF49 332	10WF112 339	10WF112 331	10WF100 335	10WF72 225	10WF60 230	10WF60 120	10WF60 228	10 WF 89 332	✱ 10 WF 100 328	✱ 10 WF 112 328	✱ 10 WF 112 ✱ 378	10 WF 112 (10WF112) 388	10WF112	14WF100 720	14WF84 382	10 WF 89 350	10 WF 112 439	✱ 10WF100 320	✱ 10WF100 218	✱ 10WF100 218	✱ 10WF112 438	10WF60 181	10WF60 62	✱ 10WF112 ✱ 438	10WF60 112	10WF60 148	10WF60 68	✱ 10WF112 435
CONCOURSE 'A' 15'-9	8"		14 WF 142	14 WF 150	14 WF 246	14 WF 287	14 WF 287																							
CONCOURSE 'B' 16'-7	14 WF 87 385		14 WF 142 170	14 WF 150 745	14 WF 246 1110	14 WF 287 1452	14 WF 287 1235																							
FILLETS (FIRST DIM. PARALLEL TO COL. WEB)	17"-16"×½	—	21"-19"×¼	21"-20"×¼	27"-23"×⅜	30"-27"×⅜	28"-25"×⅜	—	—	—	19"-16"×¼	23"×20"×½	25"×22"×¾	24"×22"×⅜	24"×21"×½	—	—	—	26"×24"×¼	22"×20"×¼	21"-19"×⅜	20"×17"×⅜	22"×19"×¼	22"×20"×¼	22"×20"×¼	—	—	—	—	—
	9A	9AB	9B	9C	9D	9E	9.1F	9.3FG	9G	9GH	10AB	10B	10C	10D	10DE	10F	10G	10GH	11AB	11B	11C	11D	12A	12B	12C	12D	12E	12F	12G	12GH

FEMA USER OF DWG. RELEASED FOR ORDERING & DETAILING 1-20-72
RELEASED FOR ORDERING & DETAILING 10-19-71

GENERAL STEEL NOTES:

1. Calculated stresses used for structural steel are in accordance with Sect. C26-1005.1, C26-1005.3 of the New York City Building Code. Steel shall be A36-60 steel, and where specifically called for, A-588.
2. AISC Specifications for design, fabrication and erection of structural steel for buildings adopted Feb, 1969 shall apply, except as modified by the notes, schedules and details shown on the structural drawings, or by any more restrictive requirements of the New York City Building Code.
3. All shop connections shall be welded.
4. All column splices, connections of beams to columns or within 3'-0" of columns, connections of beams carrying machinery loads or column loads and all truss connections shall be field welded. All other connections may be field bolted except where specifically shown otherwise on the structural drawings. High strength bolting may be substituted.
5. All ends of columns at splices and at other bearing connections shall be milled to complete true bearing.
6. Milled stiffeners shall be provided under all column concentrations and over all columns.
7. Where web plates are called for, they shall be welded to flanges of beams and at both sides.
8. Provide flange reinforcement where top or bottom cuts are called for and web plate reinforcement where holes and slots are called for.
9. Provide field welding at all cantilevers; keep ends of all cantilevered beams up 1/8". High strength bolting may be used as an alternate.
10. Steel contractor shall refer to the structural steel and welding specifications for detailed requirements for materials, procedures and inspection.
11. The use of the cutting torch in the field will not be permitted.
12. All welding to be done by welders licensed by the Building Superintendent in Accordance with Sect. C26-1005.3(b)(1)&(2) of the New York City Building Code, and the rules and regulations of the Board of Standards and Appeals.
13. Live loads of columns have been reduced in accordance with Sect. C26-903.2, C26-903.3 of the New York City Building Code.
14. All bolted or riveted substitutions shall be submitted to the engineer for approval.
15. The frame shall be carried up true and plumb, and temporary bracing shall be introduced wherever necessary to take care of all loads to which the structure may be subjected, including equipment and the operation of same. Such bracing shall be the responsibility of the steel contractor and shall be left in place as long as required for safety.

ALTERNATE MOMENT CONNECTIONS: FOR BIDDING ONLY

ALTERNATE 1

A plate butt welded to the column and fillet welded to the beam may be substituted for the moment connections shown on this drawing.

1. Area of plate shall equal 100% of area of beam flanges. (Average)
2. Fillet weld shall equal strength of net area of plate.

ALTERNATE 2

A plate butt welded to the column and riveted or bolted to the beam may be substituted for the moment connections shown on this drawing.

1. Net area of plate shall equal 100% of beam flange area. (Average)
2. Rivets or bolts shall equal strength of net area of plate.

ALTERNATE 3

A "T" high-strength bolted or riveted to column and beam flanges may be substituted for the moment connections shown on this drawing.

1. All pieces and connectors shall equal 80% of area of beam flange. (Average)

NOTES:

1. Stiffeners shall be required for column flanges in the case of welding to the column where local stresses exceed the allowable stress. The method of calculating this condition shall be based on AISC publication "Welded Interior Beam to Column Connections".
2. Web reinforcing of column for shear and bending shall be required for all columns where the shear and/or bending stresses are exceeded locally at the moment connections. This requirement is for both welded and riveted connections.
3. Where cover plated columns are used, additional rivets or other methods shall be used at moment connections to assure that the forces are transferred to the entire column area, if necessary.
4. Alternate column sections will be permitted if the alternate is at least equal in area, moment of inertia and section modulus about all axes to the column section shown on the plans. Such alternate columns shall be substantially of the same overall dimensions as those shown. Slight variation within architectural limitation will be approved by the engineer upon submission.
5. Alternate column splices will be considered and approved if they follow accepted standards such as those shown in the AISC Manual.
6. All beams and girders not having a moment connection shall be provided with flexible shear connections equal in value to the loads shown in the AISC safe load tables plus 50%. This provision may be reduced only where specifically permitted by the engineer.
7. All beams and girders having moment connections shall be provided with shear connections at least equal to the wind shear plus 1.10 times the gravity shear. Provision for upward shear shall be made for those cases where the wind shear exceeds the design dead load shear.
8. Where beams are butt welded directly to columns, such welding shall be completed prior to making up shear connections.

REVISIONS		
NO.	DATE	DESCRIPTION
1	12-20-72	REVISED WWF SIZES, FEB. AC CIRCLED ◇1
2	6-26-72	REVISED DETAIL @ COL. BC-5.1 & E-5.1 & REVISED TYPICAL SPANDREL BEAM CUT DET. ALL AS CIRCLED ◇2

ISSUED TO	NO.	DATE	PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

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345 PARK AVENUE N.Y. N.Y. 10022

STEEL DETAILS, LOW BUILDING COLUMN SCHEDULE & NOTES

PROJECT NUMBER 7101

DRAWING NUMBER S-30

DATE

SCALE