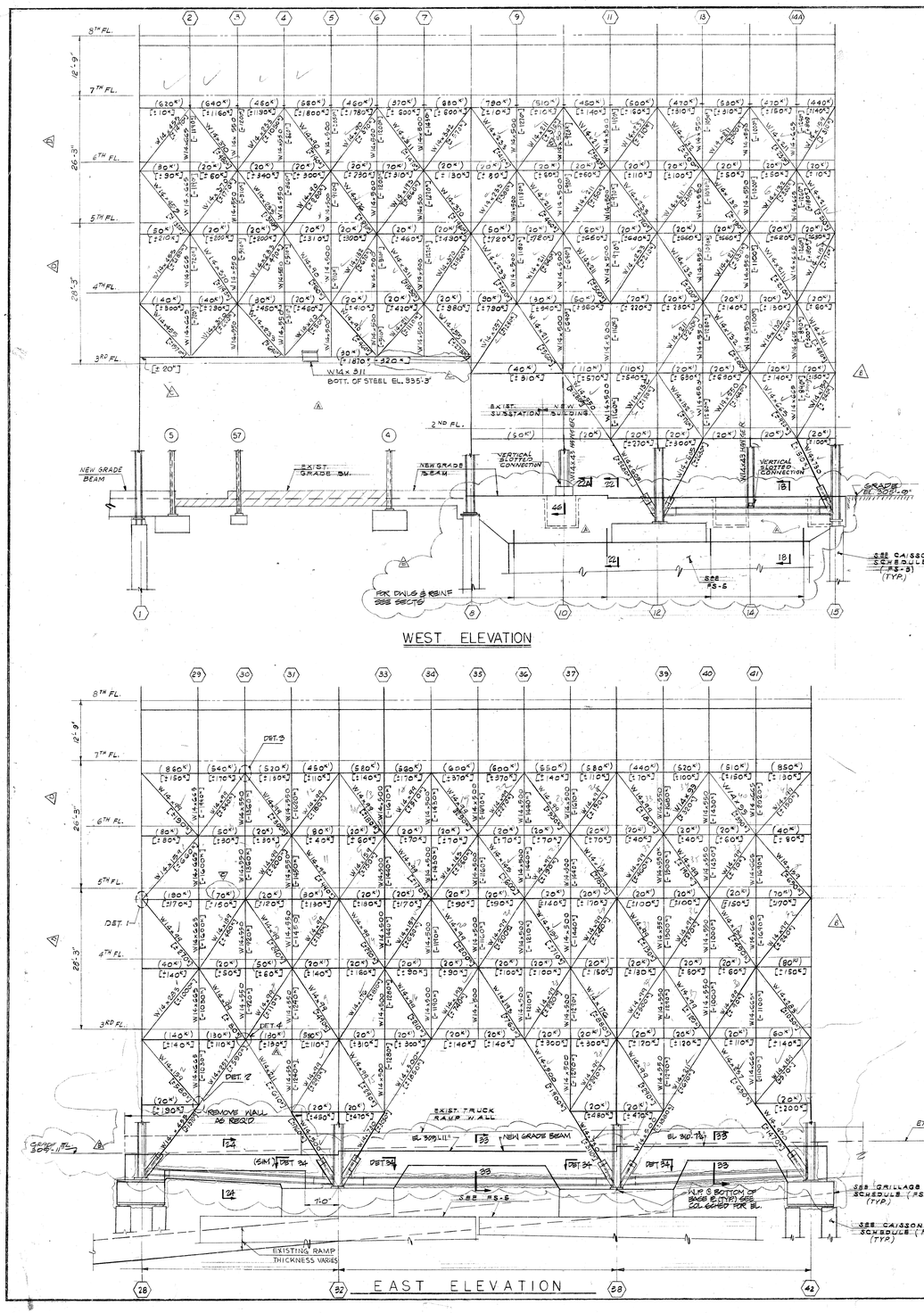
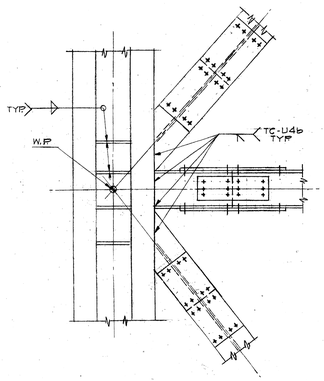
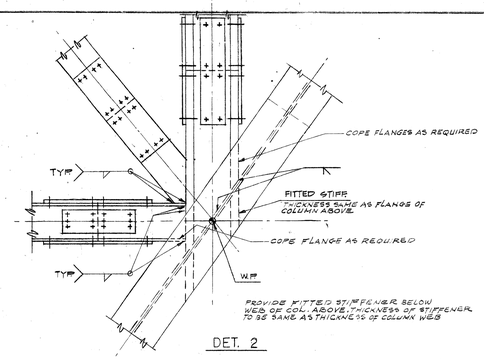


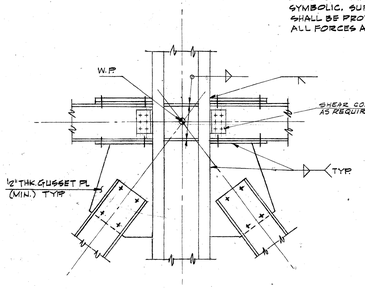


DET. 1

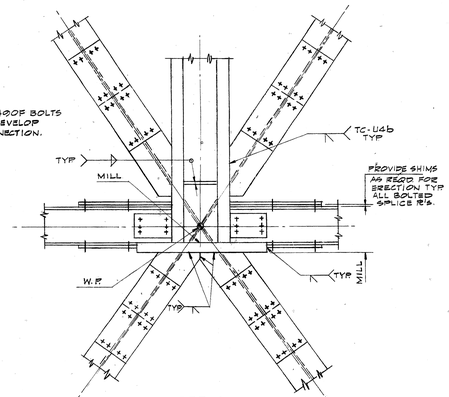


DET. 2

NOTE:
ALL BOLTS SHOWN ARE SYMBOLIC. SUFFICIENT A490F BOLTS SHALL BE PROVIDED TO DEVELOP ALL FORCES AT EACH CONNECTION.



DET. 3



DET. 4

NOTES
1. FOR INFORMATION NOT SHOWN SEE PLANS AND COLUMN SCHEDULE.
2. TENSION AND COMPRESSION FORCES ARE SHOWN [+···] FOR BRACING MEMBERS.
3. WIDE FLANGE BRACING MEMBERS MAY BE SUBSTITUTED BY DOUBLE CHANNELS OR DOUBLE T's PROVIDED EQUIVALENT STRENGTH REQUIREMENTS ARE MET. OVERALL WIDTH & DEPTH OF SUBSTITUTE MEMBERS SHALL NOT EXCEED THE SIZES OF MEMBERS SHOWN
4. END MOMENTS ARE SHOWN (····)

STEEL DECK NOTES:

1) STEEL DECK SHALL CONFORM TO THE CURRENT SPECIFICATIONS FOR THE DESIGN OF LIGHT GAUGE COLD FORMED STEEL STRUCTURAL MEMBERS PER THE AISI.
2) DECK SHALL BE ANCHORED BY WELDING THROUGH THE BOTTOM OF THE RIB TO STRUCTURAL STEEL AT MAXIMUM SPACINGS OF 12" WITH MINIMUM BEARING OR END LAP OF 2".
3) OPENINGS IN DECK SHALL BE TREATED AS FOLLOWS:
   a) FOR HOLES 6" OR LESS, PERPENDICULAR TO SPAN, NO REINFORCING REQUIRED.
   b) FOR HOLES OVER 6", BUT NOT MORE THAN 12", PROVIDE ONE 14 GAUGE REINFORCING PLATE 24" x 24" AND WELD IN PLACE.
   c) ALL OTHER OPENINGS TO BE FRAMED AS SHOWN ON PLAN.

SUPERSTRUCTURE CONCRETE NOTES:

1) ALL CONCRETE OVER METAL DECK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS U-O-N.
2) ALL CONCRETE IS TO COMPLY WITH ALL REQUIREMENTS OF CURRENT ACI CODE AND ALL OTHER RELEVANT SECTIONS OF THE NEW YORK CITY BUILDING CODE.
   a) PRELIMINARY TESTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND THE PORT AUTHORITY FOR REVIEW. NO CONCRETE SHALL BE PLACED BEFORE SUCH REVIEW HAS BEEN COMPLETED.
   b) LABORATORY TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND THE PORT AUTHORITY.

STRUCTURAL STEEL NOTES:

1) STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE. ALL STEEL TO BE ASTM A572 HAVING A MINIMUM YIELD POINT OF 50,000 PSI AND ASTM A-36 AS NOTED ON DRAWINGS.
2) AISC SPECIFICATIONS FOR "DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL" - LATEST EDITION SHALL APPLY, EXCEPT AS MODIFIED BY THE NOTES, SCHEDULES AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS OR ANY RESTRICTIVE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.
3) 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 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.
4) ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS.
5) ALL WELDED CONNECTIONS SHALL CONFORM TO THE NEW YORK CITY BUILDING CODE AND AWS D.1. PROVISIONS SHALL BE MADE FOR FIELD INSPECTION AND TESTING OF WELDS. ALL SHOP WELDS SHALL BE TESTED BY ANY OF THE APPROVED METHODS AND SHALL BE CERTIFIED.
6) ALL BOLT STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, LATEST EDITION: HIGH STRENGTH BOLTS A-325F; UNFINISHED BOLTS A-307. A
7) ALL BOLTS SHALL BE 1"ø DIAMETER ON HOLES 13/16"ø DIAMETER UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
8) ALL SHOP CONNECTIONS SHALL BE HIGH STRENGTH BOLTED OR WELDED.
9) ALL COLUMN SPLICES, CONNECTIONS OF BEAMS TO COLUMNS, OR CONNECTIONS WITHIN 3 FEET OF COLUMN CONNECTIONS OF BEAMS CARRYING MACHINE LOADS SHALL BE HIGH STRENGTH BOLTED IN FIELD. OTHER FIELD CONNECTIONS MAY USE UNFINISHED BOLTS EXCEPT WHERE SPECIFICALLY SHOWN OTHERWISE IN STRUCTURAL DRAWINGS.
10) IN ADDITION TO MOMENT CONNECTIONS, PROVIDE AISC STANDARD SHEAR CONNECTIONS FOR ALL GRAVITY AND WIND LOADS.
   A) CONNECTIONS FOR ALL BEAMS MUST BE GOOD FOR REACTIONS FIGURED FROM AISC "ALLOWABLE UNIFORM LOADS" TABLE UNLESS OTHERWISE NOTED ON THE DRAWINGS. A
   B) WHEN USING REACTIONS FROM AISC "ALLOWABLE UNIFORM LOADS" TABLE FOR BEAMS WITH SHEAR STUDS VALUE FROM TABLE MUST BE INCREASED BY 50%. A
11) ALL SHEAR CONNECTORS SHALL BE 1"ø HEADED STUDS 5" LONG U.O.N. ON DRAWINGS.
12) ALL ENDS OF COLUMNS AT SPLICES AND AT OTHER BEARING CONNECTIONS SHALL BE MILLED TO COMPLETE TRUE BEARING.
13) MILLED STIFFENERS SHALL BE PROVIDED UNDER ALL COLUMN CONNECTIONS AND OVER ALL COLUMNS.
14) PROVISIONS SHALL BE MADE FOR CONNECTIONS OF OTHER TRADES INCLUDING CUTTING AND PUNCHING OF STRUCTURAL MEMBERS, WHERE REQUIRED BY THE DRAWINGS OR FOR WHICH INFORMATION IS FURNISHED PRIOR TO FABRICATION.
15) THE USE OF CUTTING TORCH IN THE FIELD WILL NOT BE PERMITTED.
16) WELDING ELECTRODES SHALL CONFORM TO E70xx ELECTRODES.
17) CONTRACTOR SHALL PROVIDE STIFFENERS PER SECTION 1-15-5 OF AISC SPECIFICATIONS REGARDING THE NEED FOR COLUMN STIFFENERS U-O-N.
18) ALL WELDERS TO BE LICENSED IN NEW YORK CITY.
19) ALL STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF PAINT AFTER FABRICATION AND CLEANING, EXCEPT ON FIELD WELD AREAS, CONTACT SURFACES AND SURFACES TO BE ENCASED IN CONCRETE OR TO BE SPRAY FIREPROOFED. PREPARE FOR PAINTING IN ACCORDANCE WITH SSPC-SP3.

A	RELEASED TO FRANKEL STEEL 11/30/84
A	ADDED GIRDER INFORMATION ON FORCES 12-24-84
A	ADDED FORCES AS CIRCLED 1-31-85
	ISSUED TO PORT AUTHORITY 1-15-86

DATE	REVISIONS
7-23-85	REVISED AS CIRCLED
A 9-10-85	ISSUED TO PORT AUTHORITY
8-7-84	ISSUED FOR FOUNDATION STEEL CONSTRUCTION ONLY
7-7-84	ISSUED FOR FOUNDATION STEEL BID ONLY

EAST-WEST WIND BRACING ELEVATIONS

7 WORLD TRADE CENTER
47 STORY OFFICE BUILDING
BOUNDED BY
VESEY STREET AND BARCLAY STREET
WASHINGTON STREET AND WEST BROADWAY
NEW YORK NEW YORK

EMERY ROTH & SONS P.C.
ARCHITECTS
845 THIRD AVENUE NEW YORK, N.Y. 10022

THE OFFICE OF
IRWIN G. CANTOR P.C.
STRUCTURAL ENGINEERS
919 THIRD AVENUE NEW YORK, N.Y. 10022

SYSKA & HENNESSY
ENGINEERS
11 WEST 42ND STREET NEW YORK, N.Y. 10036

DATE: SCALE:

DWG. S-20