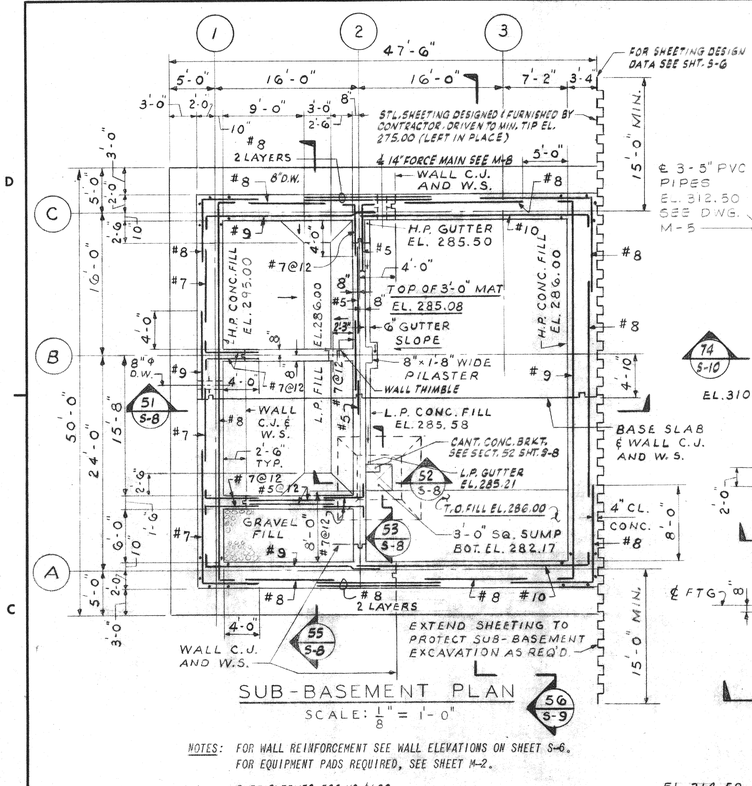
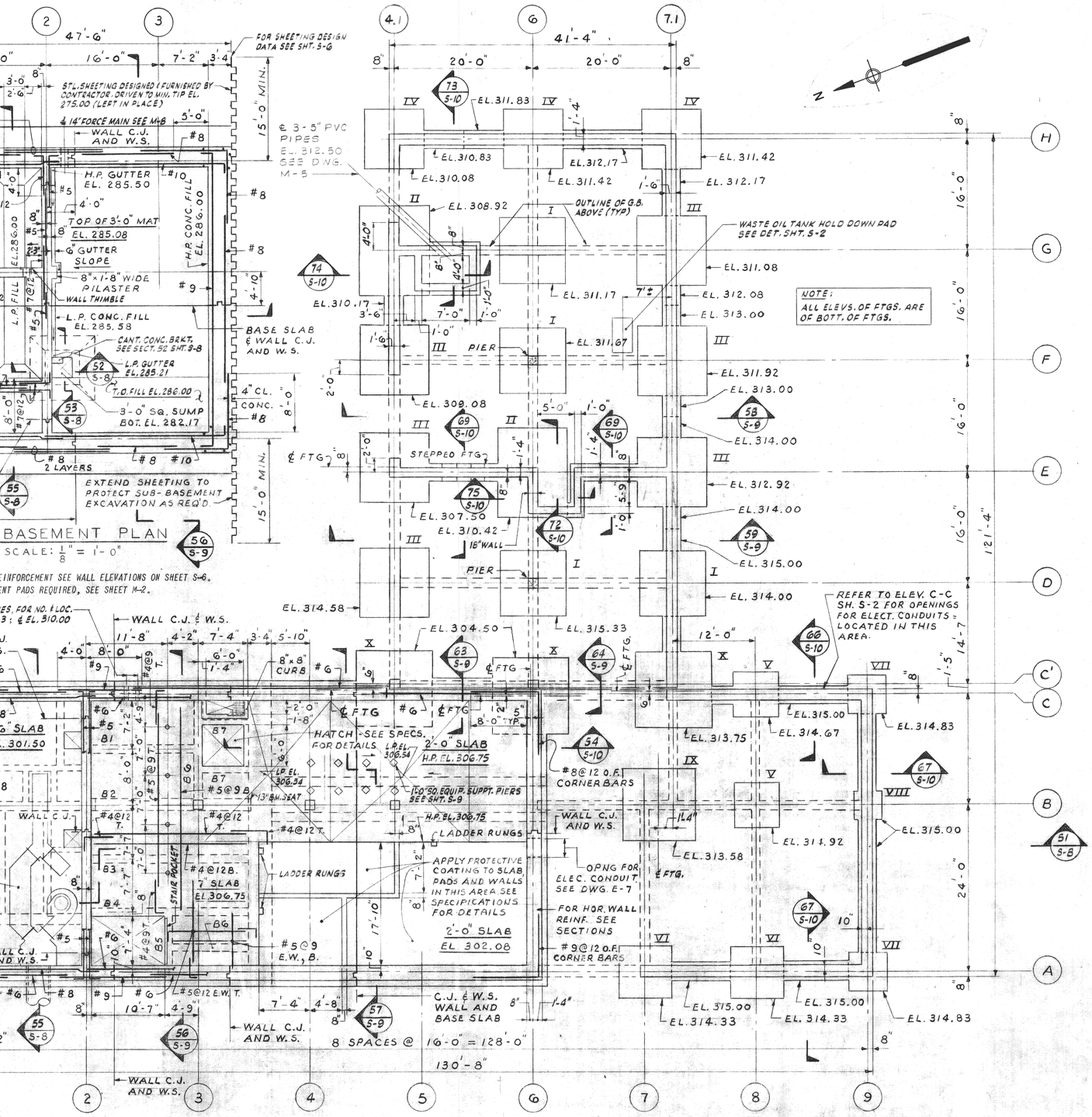
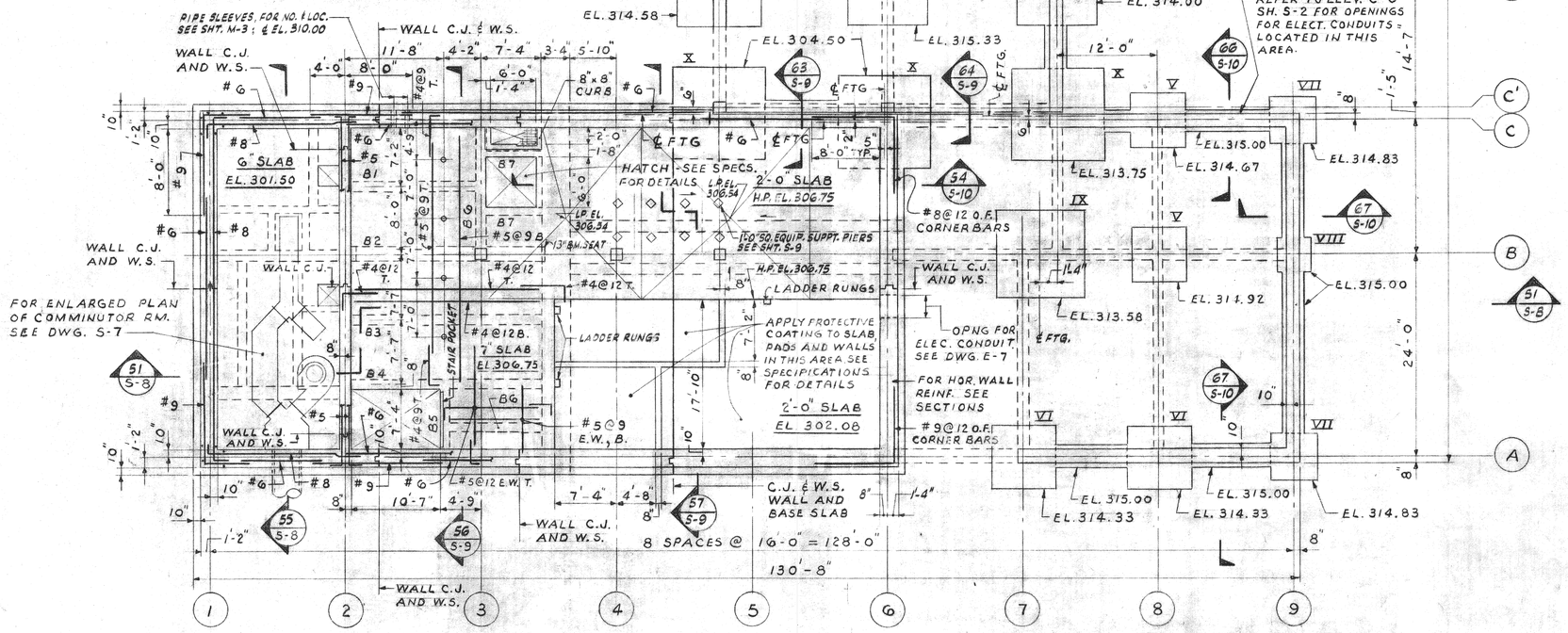


NOTES: FOR WALL REINFORCEMENT SEE WALL ELEVATIONS ON SHEET S-6.
FOR EQUIPMENT PADS REQUIRED, SEE SHEET M-2.





BASEMENT & FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

NOTES: BASEMENT FLOOR DESIGN LL= 200 PSF
FOR EQUIPMENT PADS REQUIRED SEE SHEET M-3.

STRUCTURAL NOTES

GENERAL

1. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL STRUCTURES AGAINST FLOTATION DAMAGE DURING CONSTRUCTION.
2. REFER TO ARCHITECTURAL, MECHANICAL (PROCESS PIPING, PLUMBING, HEATING, VENTILATING, AND AIR CONDITIONING), AND ELECTRICAL DRAWINGS FOR SLEEVES, OPENINGS AND EMBEDDED ITEMS.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ANCHOR BOLTS, CAST-IN-PLACE AND DRILLED INSERTS, GROUT, CONCRETE PADS AND REINFORCING STEEL REQUIRED FOR THE PROPER INSTALLATION OF ALL EQUIPMENT.
4. THE CONTRACTOR SHALL PROVIDE ALL OPENINGS REQUIRED FOR THE PURCHASED EQUIPMENT.
5. WATERSTOPS SHALL BE PROVIDED IN ALL WALL AND SLAB CONSTRUCTION AND EXPANSION JOINTS EXCEPT THOSE IN THE OPERATIONS BUILDING ABOVE ELEVATION 317.00'.

FOUNDATION NOTES

1. FOUNDATION DESIGNS ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF:
   a. 3 TONS PER SQUARE FOOT UNDER ALL SETTLING AND AERATION TANKS EXCEPT UNDER GALLERIES WHICH ARE ON PILES.
   b. 2 TONS PER SQUARE FOOT UNDER AERATED GRIT CHAMBER AND SUB-BASEMENT OF OPERATIONS BUILDING.
   c. 11/2 TONS PER SQUARE FOOT UNDER OPERATIONS BUILDING EXCEPT SUB-BASEMENT.
   d. 1 TON PER SQUARE FOOT UNDER CHLORINE CONTACT TANK.
2. PERCENT COMPACTION SHALL BE DEFINED AS THE RATIO OF THE FIELD DRY DENSITY AS DETERMINED BY A.S.T.M. D-1556-64 TO THE MAXIMUM DRY DENSITY DETERMINED BY A.S.T.M. D-1557-70.
3. ALL BACKFILL UNDER STRUCTURAL SLABS AND FOOTINGS SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY.
4. ALL EMBANKMENTS AND BACKFILL SHALL BE COMPACTED TO 90 PERCENT UNLESS OTHERWISE STATED ON THE DRAWINGS.
5. THE CONTRACTOR SHALL NOT BACKFILL AGAINST WALLS LATERALLY SUPPORTED BY A FLOOR SLAB UNLESS TEMPORARY SUPPORT IS PROVIDED. BACKFILL AGAINST CANTILEVER WALLS SHALL NOT BE PLACED UNTIL THE CONCRETE HAS GAINED ITS 28 DAY STRENGTH.

CONCRETE CONSTRUCTION

1. CONCRETE CONSTRUCTION AND REINFORCING BAR DETAILS SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-71) WITH SUPPLEMENTS ISSUED THROUGH 1975.
2. CONCRETE, EXCEPT CONCRETE FILL, SHALL BE CLASS C, HAVING A MINIMUM COMPRESSIVE STRENGTH OF 4000 POUNDS PER SQUARE INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
3. CONCRETE FILL SHALL BE CLASS B CONCRETE.
4. REINFORCING SHALL BE GRADE 60, CONFORMING TO A.S.T.M. A615-75.
5. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A185-73. LAP TWO SQUARES AT ALL SPLICES AND TIE AT 3 FOOT CENTERS.
6. CONCRETE FILL 2-INCHES OR MORE THICK SHALL HAVE WELDED WIRE FABRIC PLACED APPROXIMATELY 1 1/2-INCHES FROM THE EXPOSED SURFACE. MINIMUM SIZES SHALL BE:
   a. FOR FILL WITH AVERAGE THICKNESS OF 4 INCHES OR LESS 6 x 6-W1.4 x W1.4.
   b. FOR FILL WITH AVERAGE THICKNESS GREATER THAN 4-INCHES- 6 x 6-W4.0 x W4.0 UNLESS OTHERWISE NOTED.
7. PROVIDE BAR SUPPORTS, SPACERS AND ACCESSORIES RECOMMENDED IN THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315-74)". ALL ACCESSORIES SUCH AS SLAB BOLSTERS AND BEAM AND SLAB CHAIRS IN CONTACT WITH EXPOSED SURFACES SHALL BE STAINLESS STEEL.
8. UNLESS OTHERWISE INDICATED, CONTINUOUS REINFORCEMENT SHALL BE LAPPED 40 BAR DIAMETERS FOR NO. 11 BARS OR SMALLER. SPLICES OF ADJACENT BARS SHALL BE STAGGERED SO THAT NO MORE THAN 3/4 OF THE BARS ARE LAP SPLICED WITHIN A REQUIRED LAP LENGTH.
9. LAP CONTINUOUS TOP BARS AT THE CENTER OF A SPAN; LAP CONTINUOUS BOTTOM BARS AT A SUPPORT.
10. VERTICAL REINFORCEMENT IN COLUMN SPLICES SHALL BE LAPPED A MINIMUM OF 30 BAR DIAMETERS.
11. FOR CONCRETE BEAMS AND GIRDERS DEEPER THAN 25 INCHES, THE CONTRACTOR SHALL PROVIDE CONTINUOUS NO.5 TIE BARS AT NO MORE THAN 12-INCHES ON CENTERS ON EACH FACE UNLESS OTHER DETAILS ARE INDICATED IN THE BEAM SCHEDULE.
12. UNLESS OTHERWISE INDICATED, MAIN REINFORCING STEEL SHALL BE PLACED AND MAINTAINED AT THE MINIMUM CLEAR DISTANCES FROM SURFACE OF CONCRETE AS SHOWN IN THE STANDARD DETAILS. TIES, STIRRUPS, AND SPACER BARS, NO. 4 AND SMALLER, ARE NOT CONSIDERED TO BE MAIN REINFORCING STEEL AND MAY PROJECT INTO THE MINIMUM CLEAR DISTANCES GIVEN. (SEE DETAIL 3-3.1)
13. THE CONTRACTOR SHALL PROVIDE EXTRA BARS ALONG EACH SIDE OF OPENINGS AS SHOWN IN DETAIL 3-3.12.1 AND 3-3.12.2 OR AS SHOWN ON THE DRAWINGS.
14. THE USE OF CONSTRUCTION JOINTS NOT INDICATED SHALL BE APPROVED BY THE ENGINEER.
15. ALL CONCRETE WALLS, SLABS, AND BEAMS SHALL BE BUILT SO AS TO MINIMIZE THE EFFECTS OF SHRINKAGE, PREFERABLY BY SKIPPING SECTIONS THAT ARE TO BE PLACED UNTIL THE EARLIER PLACED CONCRETE HAS CURED FOR 72 HOURS. (FOR MOIST CURING REQUIREMENTS SEE SPECIFICATIONS.).
16. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED NO FURTHER APART THAN 24 FEET. VERTICAL JOINTS WILL NOT BE PERMITTED IN CIRCULAR TANKS.
17. CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MIDDLE OF THE SPANS OF SLABS, BEAMS OR GIRDERS. IF A BEAM INTERSECTS A GIRDER AT THIS POINT THE JOINT IN THE GIRDER SHALL BE OFFSET A DISTANCE EQUAL TO TWICE THE WIDTH OF THE BEAM. IN THIS CASE, PROVISION SHALL BE MADE FOR SHEAR BY THE USE OF INCLINED REINFORCEMENT. (SEE DETAIL 3-3.1)
18. CONCRETE SHALL NOT BE PLACED IN BEAMS, GIRDERS, OR SLABS UNTIL THE CONCRETE IN THE SUPPORTING COLUMNS OR WALLS HAS OBTAINED ITS INITIAL SET. (2 HOURS MINIMUM.)
19. SLABS AND BEAMS SHALL BE CAST MONOLITHICALLY UNLESS SHOWN OTHERWISE.
20. EXPOSED EDGES OF CONCRETE ELEMENTS SUCH AS COLUMNS, PILASTERS, BEAMS, CURBS AND EQUIPMENT PADS SHALL HAVE 3/4-INCH CHAMFER.

ALUMINUM CONSTRUCTION

1. STRUCTURAL ALUMINUM SHALL BE ALLOY 6061-T6 AND SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE LATEST "SPECIFICATIONS FOR STRUCTURES OF ALUMINUM ALLOY 6061-T6" PUBLISHED BY A.S.C.E.
2. FIELD CONNECTIONS, UNLESS OTHERWISE NOTED SPECIFICALLY, SHALL BE MADE WITH STAINLESS STEEL BOLTS.
3. ALUMINUM IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ASPHALTIC PAINT.

FOR STRUCTURAL STEEL NOTES SEE SHEET S-11...

RECORD DRAWING

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
				REVISIONS

DRAWN BY: R. Gough
DEPT. CHECK: Daniel J. Bonneau
PROJ. CHECK: R. J. Marshall

MICHAEL EUGENE GRILLI No. 3620 REGISTERED PROFESSIONAL ENGINEER

ARTHUR R. MICHELSON JR. 1259 REGISTERED PROFESSIONAL ENGINEER

M&E METCALF & EDDY, INC. / ENGINEERS
BOSTON / NEW YORK / PALO ALTO / CHICAGO

REG. PROF. ENGR. R.I. NO. 1290 — DATE 6-27-77
REG. PROF. ENGR. R.I. NO. 3620 — DATE 6-27-77

SCALE: AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TOWN OF BURRILLVILLE, RHODE ISLAND
BOARD OF SEWER COMMISSIONERS
WASTEWATER TREATMENT FACILITIES
OPERATIONS BUILDING
SUB-BASEMENT, BASEMENT AND FOUNDATION PLANS AND GENERAL NOTES
STRUCTURAL

JOB 4862
FILE NO. W-68080-1
SHEET S-1

MAKEPEACE P-1457