MUNICIPALITY OF METROPOLITAN SEATTLE
KING COUNTY, WASHINGTON

SEWAGE DISPOSAL PROJECT
CONTRACT NO. 62-8

AS CONSTRUCTED DRAWINGS

W210B EAST MARGINAL WAY PUMPING STATION

BIDS RECEIVED	12-13-62
CONTRACT AWARDED	12-21-62
NOTICE TO PROCEED	1-28-63
CONTRACT COMPLETED	12-30-63
WORK ACCEPTED	1-16-64
RESOLUTION NO.	363
FINAL CONTRACT COST	$ 192,080.40
CONTRACTOR	AUSTIN CONSTRUCTION COMPANY

METROPOLITAN ENGINEERS
410 WEST HARRISON
SEATTLE 99, WASHINGTON

KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN

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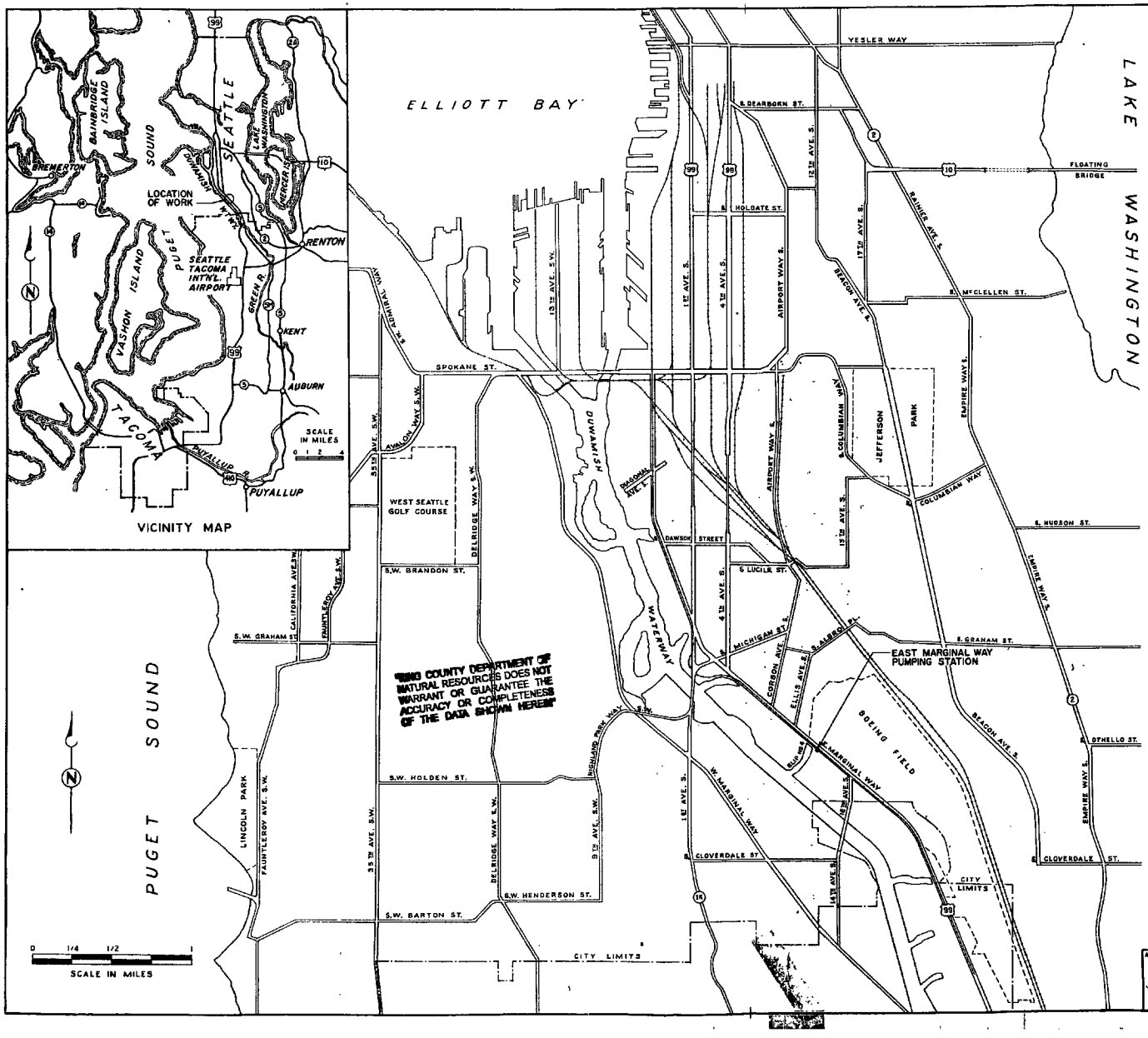
KCSlip4 62077
SEA430248



"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

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HALF-SIZE DRAWING

10612 AS CONSTRUCTED
DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT

EAST MARGINAL WAY PUMPING STATION
LOCATION MAPS AND
INDEX OF DRAWINGS

DAVID H. CALDWELL STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

METROPOLITAN ENGINEERS
BROWN AND CALDWELL, HILL AND HIGMAN, CARRY AND KRAMER, R.W. BECK AND ASSOCIATES

APPROVED: D.H. Caldwell, For Metropolitan Engineers; Howard Mueller, For Municipality of Metropolitan Seattle

DESIGNED MHV-WRU; DRAWN WWU; CHECKED WRU; SUBMITTED W.R.M.C.

RECOMMENDED Warren R. McC, Project Engineer, Metropolitan Engineers; APPROVED Frank J. Hermann, Chief Engineer, Metropolitan Engineers

DATE AUG 1962 | FILE NUMBER W210B | SHEET NUMBER 1 of 32 | DRAWING NUMBER G1

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ELECTRICAL SYMBOLS FOR DIAGRAMS

(Columns: SINGLE LINE, CONTROL WIRING)

- INDICATING LIGHT: R - RED, A - AMBER, G - GREEN, W - WHITE, B - BLUE
- MOTOR, NO. INSIDE CIRCLE INDICATES HORSEPOWER, NO. OUTSIDE INDICATES REFERENCE NO.
- HEATER, NO. INSIDE SQUARE INDICATES KILOWATTS, NO. OUTSIDE INDICATES REFERENCE NO.
- SWITCH, AS NOTED ON PLAN
- SWITCH, LETTERS INDICATE: AF - AIR FLOW SWITCH, PE - PNEUMATIC ELECTRIC SWITCH, FS - FLOAT SWITCH, CS - CENTRIFUGAL SWITCH, PS - PRESSURE SWITCH, TS - TEMPERATURE SWITCH
- LIMIT SWITCH
- THERMOSTAT
- DISCONNECT SWITCH
- THERMAL DISCONNECT SWITCH (MOTORS)
- TOGGLE SWITCH
- PUSHBUTTON, LOCKOUT STOP
- PUSHBUTTON, START (NO. DESIGNATING LETTER) LETTER ADJACENT INDICATES: O - OPEN, C - CLOSE, F - FAST, S - SLOW, R - RAISE, L - LOWER, T - TEST, FWD - FORWARD, REV - REVERSE, SP - STOP
- SELECTOR SWITCH, POSITIONS AS INDICATED
- SELECTOR SWITCH, HAND-OFF-AUTO
- SELECTOR SWITCH, TEST-AUTO (SPRING RETURN TO AUTO)
- MAGNETIC CONTACTOR COIL
- NORMALLY OPEN CONTACT (LETTER INDICATES OPERATING COIL)
- NORMALLY CLOSED CONTACT (LETTER INDICATES OPERATING COIL)
- CONTACTOR WITH OVERLOAD HEATER
- OVERLOAD CONTACT
- FUSE
- FUSE WITH BLOWN FUSE INDICATING DEVICE
- CIRCUIT BREAKER (RATING AND NUMBER OF POLES INDICATED)
- TRANSFORMER
- GROUND CONNECTION
- RELAY COIL, LETTER INSIDE INDICATES: CR - CONTROL RELAY, TM - TIMER, TD - TIME DELAY, SS - STEP SWITCH, SV - SOLENOID VALVE, UV - UNDER VOLTAGE, NO. INDICATES REFERENCE NO.
- CONDUCTORS NOT CONNECTED
- CONDUCTORS CONNECTED
- WIRE TAPED FOR FUTURE CONNECTION
- MATING CONTACTS (DRAWOUT EQUIPMENT)
- MECHANICAL CONNECTION
- METER, LETTER INDICATES: A - AMMETER, W - WATTMETER, PF - POWER FACTOR METER, V - VOLTMETER, H - HOUR METER, WH - WATTHOUR METER, T - TACHOMETER
- RHEOSTAT
- POTENTIOMETER
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- CAPACITOR
- BATTERY
- DRY RECTIFIER
- SPECIAL PURPOSE RECEPTACLE

NOTE: 1. ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED CONDITION. (POSITION ASSUMED WHEN REMOVED FROM CIRCUIT.)

2. ONE LINE DIAGRAMS FOR HIGH VOLTAGE SWITCHGEAR SHALL USE ASA STANDARD SYMBOLS AND ABBREVIATIONS EXCEPT FOR TRANSFORMER SYMBOLS.

GENERAL SYMBOLS

- NATURAL GROUND
- CONCRETE
- PRECAST CONCRETE
- MORTAR, GROUT OR PLASTER
- CONCRETE BLOCK
- BRICK
- GRATING ⟷ SPAN
- CHECKER PLATE
- RIGID INSULATION
- STEEL
- ALUMINUM
- PVC WATER STOP
- RUBBER
- CENTER LINE OR CITY LIMITS
- PROPERTY LINE OR COUNTY LINE
- OUTLINE OF EXISTING INSTALLATION
- PIPE LINE DESIGNATION AND SIZE (— SD 12" —)
- ROUND OR DIAMETER (Ø)
- CENTER LINE
- ANGLE
- AT
- PROPERTY LINE
- PLATE
- FIRE HYDRANT
- HANDRAILING
- VALVE
- WATER METER BOX
- SOIL BORING AND DESIGNATION (B-12)
- UTILITY POLE (TELEPHONE OR ELECTRICAL) (UP)
- GUY WIRE
- CURB AND GUTTER
- NEW A.C. PAVEMENT
- EXISTING ASPHALT PAVEMENT
- FENCE
- PERMANENT BENCH MARK OR SURVEY MONUMENT
- HOISTING HOOK
- HOSE RACK
- WELDING SYMBOLS: USE AMER. WELDING SOC. STDS. SEE A.I.S.C. MANUAL, PG. 342

ABBREVIATIONS

A	AERATION AIR
AA	AGITATION AIR
AC	ASPHALTIC CONCRETE
ACP	ASBESTOS CEMENT PIPE
ARCH	ARCHITECTURAL
B	SOIL BORING - NUMBER
BF	BLIND FLANGE
BOD	BIOCHEMICAL OXYGEN DEMAND
CCP	CONCRETE CYLINDER PIPE
CCSP	CEMENT LINED AND COATED STEEL PIPE
CFH	CUBIC FEET PER HOUR
CL	CHLORINE
CMP	CORRUGATED METAL PIPE
CMPA	ASBESTOS PROTECTED CORRUGATED METAL PIPE
CO_2	CARBON DIOXIDE
CREJ	CORRUGATED RUBBER EXPANSION JOINT
CS	CHLORINE SOLUTION
CSL	CIRCULATED SLUDGE
CU	COPPER
C1	DOMESTIC COLD WATER
C2	NO. 2 COLD WATER
C3	PLANT EFFLUENT
C4	IRRIGATION WATER
DEC	DECREASING
DG	DOOR GRILLE
DH	DOMESTIC HOT WATER FLOW
DHR	DOMESTIC HOT WATER RETURN
DSL	DIGESTED SLUDGE
DN	DOWN
DR	DRAINAGE
DT	DRIP TRAP
DWF	DRY WEATHER FLOW
EFF	EFFLUENT
EF	EACH FACE
EW	EACH WAY
EX	EXTRA
FA	FRESH AIR
FB	FLAT BAR
FCO	FLOOR CLEANOUT
FF	FAR FACE
FM	FORCE MAIN
FMH	FLEXIBLE METAL HOSE
FPC	FLEXIBLE PIPE COUPLING
FPC-T	FLEXIBLE PIPE COUPLING TO TAKE TENSION
FS	FLOAT SWITCH
FUT	FUTURE
GBV	GLOBE VALVE
GPD	GALLONS PER DAY
GRDR	GRINDER
GT	GRIT
GV	GATE VALVE
H/A	HAND-AUTO
HD	HEAVY DUTY
HDOT	HEAVY DUTY OIL TIGHT
HOA	HAND-OFF-AUTO
HPSG	HIGH PRESSURE SEWAGE GAS
HRF	HEAT RESERVOIR FLOW
HRM	HOUR METER
HRR	HEAT RESERVOIR RETURN
HV	HOSE VALVE
HW	HIGH WATER
H & V	HEATING & VENTILATING
IA	INSTRUMENT AIR
IAC	INTERLOCKED ARMORED CABLE
IE	INVERT ELEVATION
IF	INSIDE FACE
INF	INFLUENT
JWF	ENGINE JACKET WATER FLOW
JWR	ENGINE JACKET WATER RETURN
LFBR	LINEAR FEET BASEBOARD RADIATION
LPG	LIQUIFIED PETROLEUM GAS
LPSG	LOW PRESSURE SEWAGE GAS
LOS	LOCKOUT STOP
LW	LOW WATER
MAG AMPL	MAGNETIC AMPLIFIER
MBH	THOUSAND BTU'S PER HOUR
MCC	MOTOR CONTROL CENTER
MG/L	MILLIGRAMS PER LITER
ML	MILLILITER
MPG	MEDIUM PRESSURE GAS
MV	MUD VALVE
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NRS	NON RISING STEM
PA	PREAERATION AIR
P/C	PLAIN CONCRETE (NO REINF)
PCP	PLAIN CONCRETE PIPE
PG	PRESSURE GAGE
PK	PEAK
PL	PILOT LIGHT
PLY	PLYWOOD
PRV	PRESSURE REGULATING VALVE
PS	PRESSURE SWITCH
PSIG	POUNDS PER SQUARE INCH-GAGE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
R	RISER
RA	RETURN AIR
R/C	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RE-STL	REINFORCING STEEL
RSL	RAW SLUDGE
RWL	RAIN WATER LEADER
S	SANITARY SEWER
SA	PLANT SERVICE AIR
SC	SCUM
SCF	STEAM CLEAN FLOW
SCR	STEAM CLEAN RINSE
SD	SPLITTER DAMPER
SD	STORM DRAIN
SD	SOFT DRAWN
SG	SEWAGE GAS
SL	SLUDGE
SLOS	START-LOCKOUT STOP
SN	SUPERNATANT
SPW	SPRAY WATER
SS	SELECTOR SWITCH
SSK	SERVICE SINK
ST	LOW PRESSURE STEAM
STR	STRONG
SV	SOLENOID VALVE
T	TREAD OF STAIR
T/A	TEST-AUTO
T & B	TOP & BOTTOM
TLOS	TEST LOCKOUT STOP
TM	TEMPERATURE METER
TMR	TIMER
TPG	TOPPING
TP	TEST PIT
TS	TEMPERATURE SWITCH
TV	THERMOSTATIC VALVE
UG	UNDERGROUND
UP	UTILITY POLE
VAC	VOLTS ALTERNATING CURRENT
VAR	VOLT AMPERES REACTIVE
VCP	VITRIFIED CLAY PIPE
VDC	VOLTS DIRECT CURRENT
VR	VOLTAGE REGULATOR
VTR	VENT THROUGH ROOF
WC	WATER COLUMN
WCO	WALL CLEAN OUT
WF	WIDE FLANGE
WPJ	WEAKENED PLANE JOINT
WS	WATER SURFACE
WSTP	WATER STOP
WWF	WELDED WIRE FABRIC
WWF	WET WEATHER FLOW

NOTE: ADDITIONAL ABBREVIATIONS CONFORM TO ASA STANDARD ABBREVIATIONS Z32.13.

HALF-SIZE

MECHANICAL SYMBOLS

- GATE VALVE
- GLOBE VALVE
- NEEDLE VALVE
- PLUG VALVE
- CHECK VALVE
- PRESSURE REGULATING VALVE
- SOLENOID VALVE
- AUTOMATIC AIR VENT
- DIAPHRAGM OPERATED VALVE
- HOSE VALVE ON RISER
- FLUSHING COCK
- DIAPHRAGM VALVE (SAUNDERS TYPE)
- RELIEF VALVE
- FIRE EXTINGUISHER
- FPC
- TEMP. REGULATING VALVE
- AIR TURNING VANES IN DUCT
- FPC-T
- DIRECTION OF FLOW
- SERVICE CONNECTION
- UNION
- STRAINER
- REDUCER OR INCREASER
- ROOM THERMOSTAT
- SUPPLY DUCT
- EXHAUST DUCT
- EXHAUST GRILLE (SIZE / CFM)
- SUPPLY GRILLE (SIZE / CFM)
- EXPANSION JOINT
- PIPE LINE ANCHOR

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DAVID H. CALDWELL · STATE OF WASHINGTON · REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL SYMBOLS FOR DRAWINGS

- LIGHTING FIXTURE, WALL MOUNTED, CAPITAL LETTER INDICATES FIXTURE TYPE, LOWER CASE LETTER IDENTIFIES SWITCH, NUMBER INDICATES CIRCUIT
- LIGHTING FIXTURE, CEILING MOUNTED
- LIGHTING FIXTURE, POLE MOUNTED
- LIGHTING FIXTURE, FLUORESCENT
- LIGHTING FIXTURE, FLOOD
- DUPLEX RECEPTACLE, GROUNDING TYPE
- SPECIAL PURPOSE ONE PHASE RECEPTACLE (USE NOTED ON PLAN)
- SPECIAL PURPOSE 3 PHASE RECEPTACLE (USE NOTED ON PLAN)
- CLOCK
- FLOOR OUTLET
- S_b SINGLE POLE SWITCH, LOWER CASE LETTER IDENTIFIES SWITCH
- S_{2b} TWO POLE SWITCH, LOWER CASE LETTER IDENTIFIES SWITCH
- S_{3b} THREE WAY SWITCH, LOWER CASE LETTER IDENTIFIES SWITCH
- S_M MOTOR THERMAL SWITCH
- S_P SWITCH WITH PILOT
- JUNCTION BOX
- JUNCTION TEE
- THERMOSTAT
- CENTRIFUGAL SWITCH
- FLOAT SWITCH
- LIMIT SWITCH
- PRESSURE SWITCH
- TEMPERATURE SWITCH
- DISCONNECT SWITCH
- CONTROL STATION (FIELD)
- RELAY
- SOLENOID VALVE
- MOTOR (OR DRAW TO SCALE) NO. INDICATES REF. NO.
- HEATER (OR DRAW TO SCALE) NO. INDICATES REF. NO.
- MICROPHONE
- INTERCOMMUNICATION TELEPHONE
- COMMERCIAL TELEPHONE
- PUBLIC ADDRESS SPEAKER
- HORN
- BUZZER
- BELL
- TEL. JACK, SOUND POWERED
- INSTRUMENT OR CONTROL PANEL (FIELD)
- TERMINAL CABINET
- TELEPHONE CABINET
- POWER PANEL
- LIGHTING PANEL
- EXPOSED CONDUIT
- CONCEALED CONDUIT, FLOOR OR WALL
- CONCEALED CONDUIT, CEILING
- CONDUIT BENT DOWN OR AWAY
- CONDUIT BENT UP OR TOWARD
- CONDUIT SEAL
- A-1,2,3 EXPOSED CONDUIT, HOME RUN, EXAMPLE: 4 CONDUCTORS, TO PANEL 'A', CIRCUITS 1, 2 AND 3
- E ADJACENT TO ANY SYMBOL INDICATES ESSENTIAL SERVICES, EQUIPMENT, OR DEVICE
- WP ADJACENT TO ANY SYMBOL INDICATES WEATHERPROOF
- XP ADJACENT TO ANY SYMBOL INDICATES EXPLOSION PROOF
- MH OR HH MANHOLE OR HANDHOLE (SITE PLANS)

AS CONSTRUCTED

DATE APRIL 2, 1964

10613

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT

EAST MARGINAL WAY PUMPING STATION

ABBREVIATIONS AND SYMBOLS

METROPOLITAN ENGINEERS
BROWN AND CALDWELL · HILL AND INGMAN · CAREY AND KRAMER · R W BECK AND ASSOCIATES

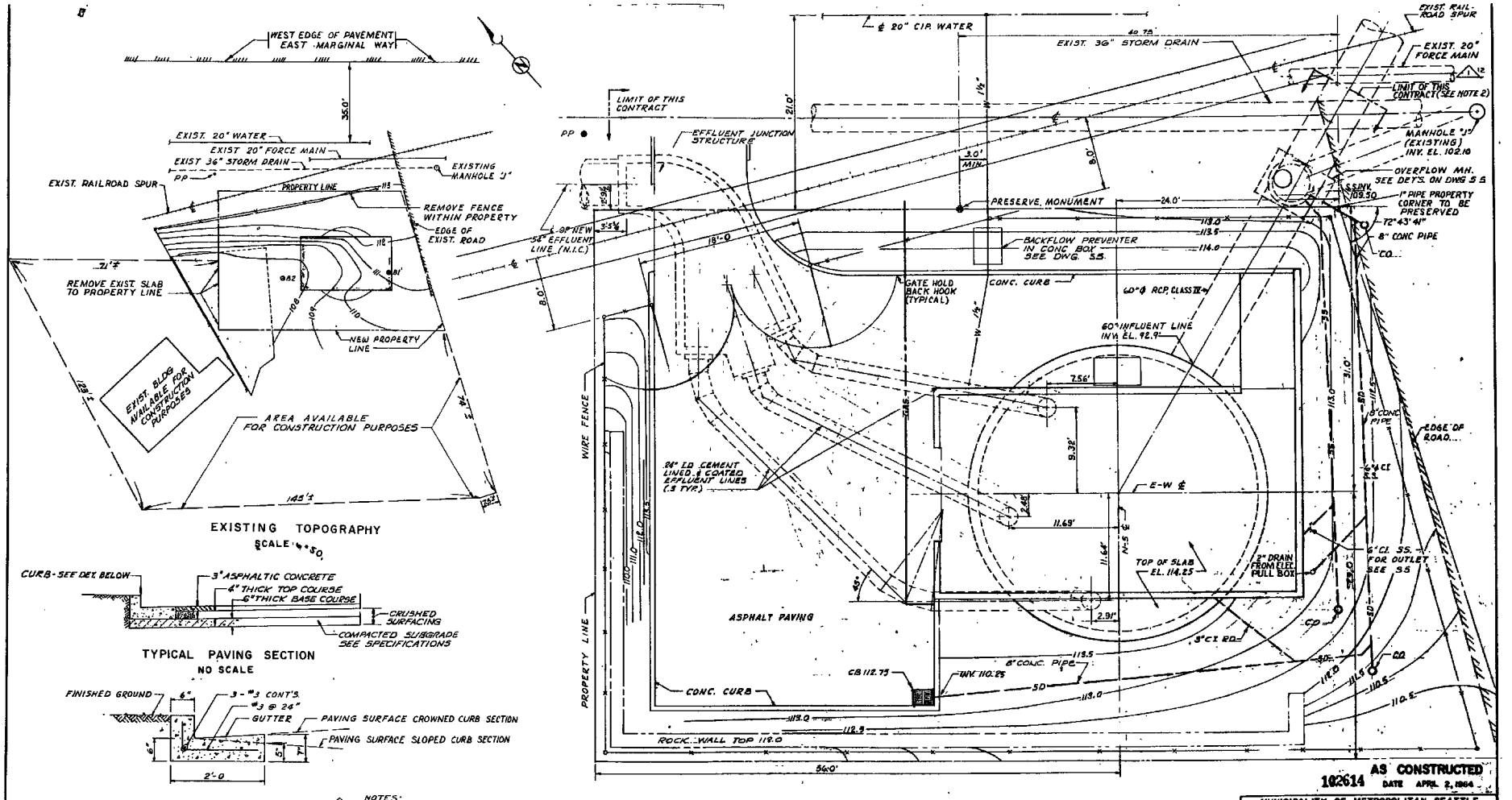
DESIGNED WRO · DRAWN AB & FW · CHECKED [illegible] · SUBMITTED [illegible]

APPROVED (signatures) For Metropolitan Engineers · For Municipality of Metropolitan Seattle

DATE AUG 1962 · FILE NUMBER W210B · SHEET 2 OF 32 · DRAWING NUMBER G2

KCSlip4 62079

SEA430250



NOTES:
1. TANKS, USED EQUIPTMENT AND SIMILAR MOVABLE ITEMS WILL BE REMOVED FROM THE CONSTRUCTION AREA BY OTHERS
2. 60 INCH INFLUENT SEWER EAST OF OVERFLOW MANHOLE WILL BE CONSTRUCTED BY OTHERS.

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

HALF-SIZE

AS CONSTRUCTED
102614 DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
EXISTING TOPOGRAPHY, SITE LAYOUT, GRADING AND OUTSIDE PIPING – PAVING DETAILS

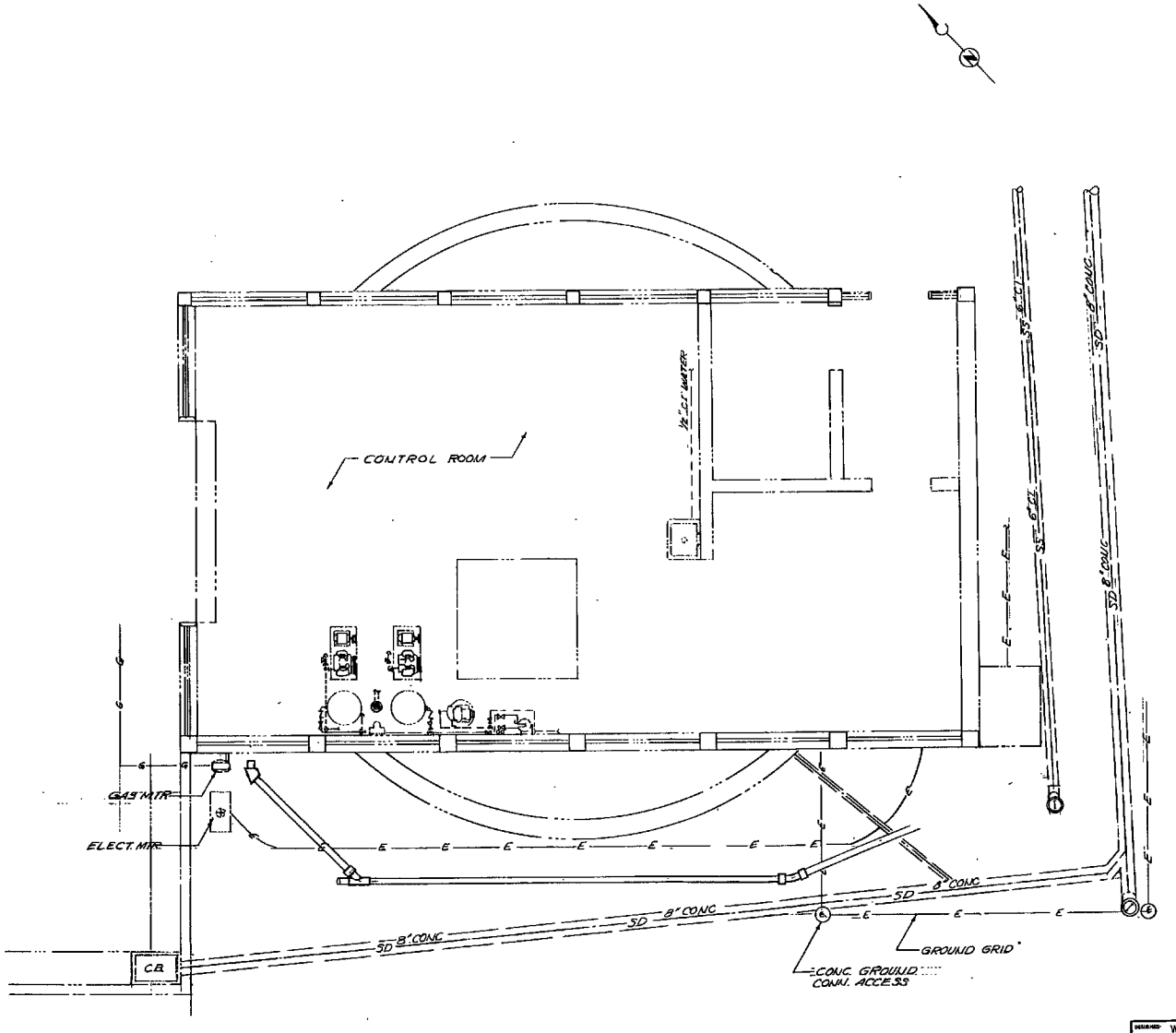
METROPOLITAN ENGINEERS
BROWN AND CALDWELL, HILL AND INGMAN, CAREY AND KRAMER, R.W. BECK AND ASSOCIATES

DESIGNED MHY - WRU
DRAWN WD
CHECKED MHY
SUBMITTED
APPROVED
For Metropolitan Engineers
For Municipality of Metropolitan Seattle

DATE	FILE NUMBER	SHEET NUMBER	DRAWING NUMBER
AUG 1962	W2108	3 of 32	G3

KCSlip4 62080

SEA430251



"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

HALF-SIZE DRAWING

101156

DESIGNED: WVY	MUNICIPALITY OF METROPOLITAN SEATTLE		DATE: JUNE 1974
DRAWN: JA	WEST POINT SYSTEM	EAST MARGINAL WAY PUMPING STATION	FILE NO. 7477
RECOMMENDED: Dir. Engr. & Water Quality		SANITARY FACILITIES	DRAWING NO. G1
APPROVED: Executive Director			SHEET 1 OF 1

KCSlip4 62081

SEA430252

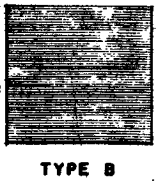
ROOM FINISH SCHEDULE

AREA	ROOM	FLOOR	BASE	DADO	WALLS MATERIALS	WALLS PAINT	CEILINGS TYPE	CEILINGS MATERIALS	CEILINGS PAINT	CEILINGS HEIGHT	REMARKS
100	ENTRY	CEMENT TOPPING	NIL.	NIL	CERAMIC MOSAIC TILE	NO	CONC. SLAB	CONCRETE	YES	11'-8"	CEILING HEIGHTS TO INSIDE OF CONC SLAB FROM STRUCTURAL SLAB
101	STAIRWELL	CEMENT TOPPING	NIL.	NIL	EXP. CONC. BLK. / EXP. CONC	YES	CONC. SLAB	CONCRETE	YES	11'-8"	
102	CONTROL RM	CEMENT TOPPING	NIL	NIL	EXP. CONC. BLK. / EXP. CONC	YES	CONC. SLAB	CONCRETE	YES	11'-8"	
103	MOTOR RM	CEMENT TOPPING	NIL.	PAINT	EXP. CONC.	YES	CONC. SLAB	CONCRETE	YES	10'-8"	
104	PUMP RM	CEMENT TOPPING	NIL.	PAINT	EXP. CONC.	YES	CONC. SLAB	CONCRETE	YES	11'-3"	
105	SCREEN RM	CEMENT TOPPING	NIL.	PAINT	EXP. CONC.	YES	CONC. SLAB	CONCRETE	YES	13'-1"	

DOOR SCHEDULE

NO.	LOCATION	TYPE	WIDTH	HEIGHT	THICK.	MATERIAL	GLASS	THRESH.	FRAME	FINISH	HARDWARE A	B	C	D	E	F	G	REMARKS
1	100	C	3'-0"	7'-9"	1¾"	HOLLOW METAL	NIL	ALUMINUM	ALUM.	LUR	CYLINDERS ONLY							ALL DOOR SIZES TO BE VERIFIED ON JOB SITE PRIOR TO INSTALLATION
2	101	A	3'-0"	7'-7"	1¾"	HOLLOW METAL	NIL	NIL	STEEL	BH	O	O	O		O	O		
3	100	A	3'-0"	7'-7"	1¾"	HOLLOW METAL	NIL	NIL	STEEL	BH	O	O	O		O	O		
4	102	B	10'-0"	9'-7½"	—	ALUMINUM	—	—	ALUM.	—	SUPPLIED BY DOOR MANUFACTURER							SIZE REFERS TO OPENING ONLY

TYPE A
HOLLOW METAL – STEEL

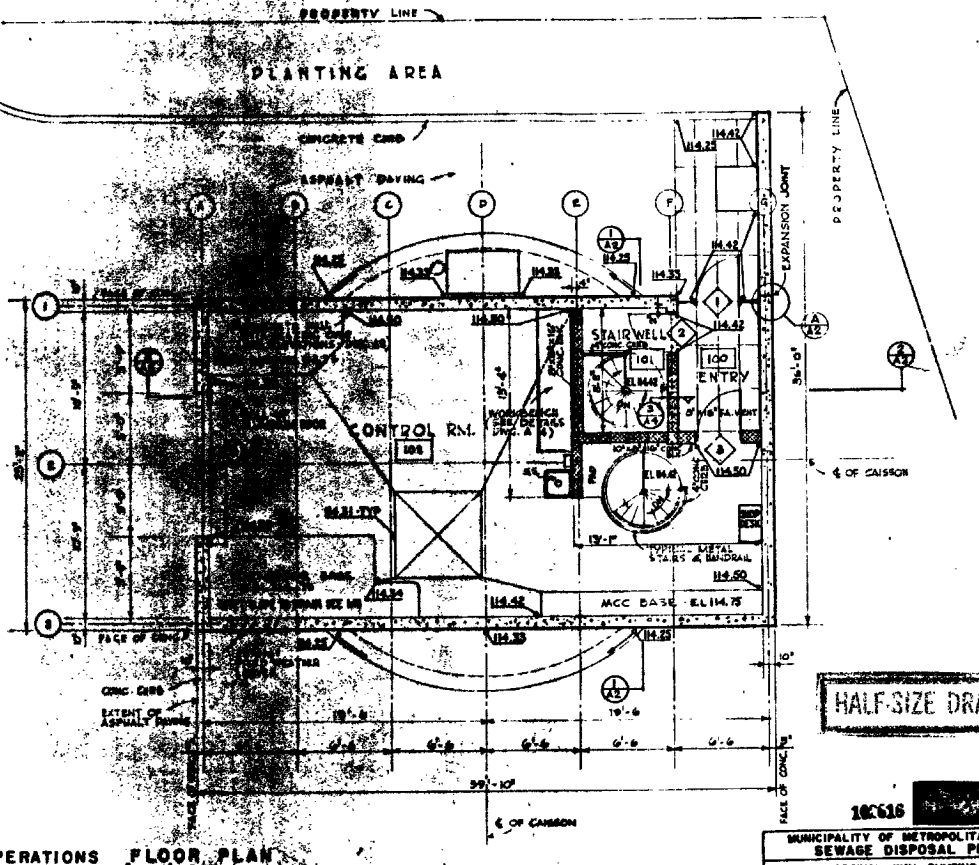


TYPE B

TYPE C
HOLLOW METAL – ALUMINUM

HARDWARE

A. BUTTS
B. LOCKSETS
C. CLOSER-CONCEALED
D. CLOSER-EXPOSED
E. DOOR STOP
F. KICKPLATE
G. THRESHOLD



OPERATIONS FLOOR PLAN
SCALE 1/4" = 1'-0"

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

HALF-SIZE DRAWING

10C616 [redacted]

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
OPERATIONS FLOOR PLAN
DOOR AND ROOM FINISH SCHEDULE

METROPOLITAN ENGINEERS
DAVID M. CALDWELL — CHIEF ENGINEER
HILL AND HANSEN — S.W. ROSS AND ASSOCIATES

DATE AUG 1962 | W210B | SCALE 1/4" = 1'-0" | A1

KCSlip4 62082

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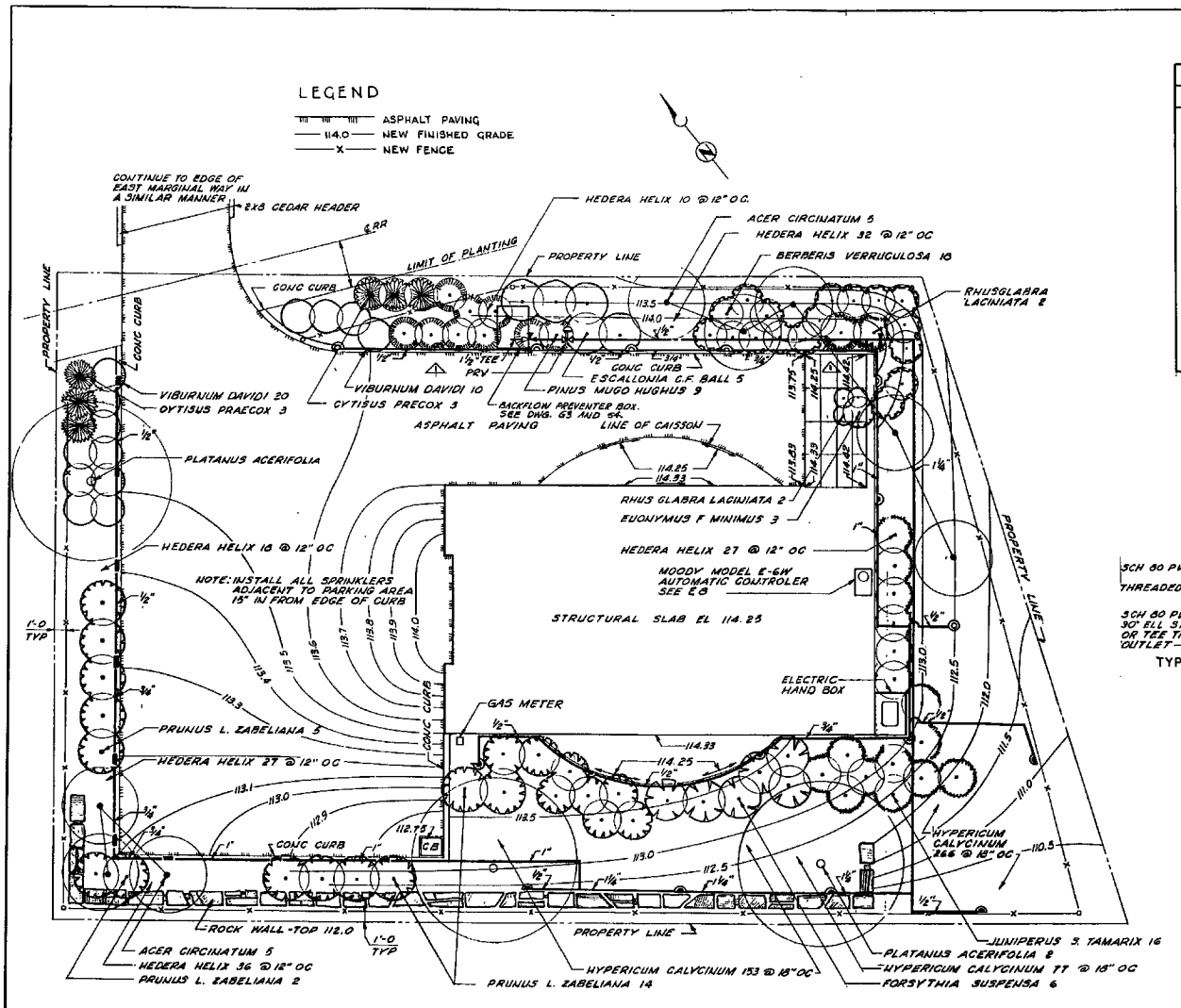
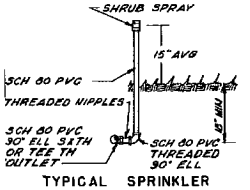


LANDSCAPE LAYOUT
SCALE 1" = 5'

PLANT LIST				
BOTANICAL NAME	COMMON NAME	QUAN.	SIZE	REMARKS
ACER CIRCINATUM	VINE MAPLE	8	10-12'	CLUMPS
VIBURNUM DAVIDI	DAVID VIBURNUM	30	15-18"	
BERBERIS VERRUCULOSA	WARTY BARBERRY	18	15-18"	
CYTISUS PRAECOX	MOONLIGHT BROOM	6	18-24"	
ESCALLONIA C.F. BALL	HYBRID ESCALLONIA	5	24-30"	BUSHY
EUONYMUS F. MINIMUS	DWARF WINTERCREEPER E.	3	12-15"	
FATSIA JAPONICA	JAPANESE FATSIA	1	24-30"	
FORSYTHIA SUSPENSA	GOLDEN BELLS	6	18-24"	
HEDERA HELIX	ENGLISH IVY	150		ROOTED CUT.
HYPERICUM CALYCINUM	AARONSBEARD ST. JOHNSWORT	396	2 YR.	PEAT POTS
JUNIPERUS S. TAMARIX	TAMARIX JUNIPER	16	18-24'	
PINUS MUGO MUGHUS	MUGHO SWISS MOUNTAIN PINE	9	18-24"	
PLATANUS ACERIFOLIA	LONDON PLANETREE	3	12-14'	
PRUNUS L. ZABELIANA	ZABELS LAUREL	21	24-30"	
RHUS GLABRA LACINIATA	CUTLEAF SMOOTH SUMAC	2	30-36"	

SPRINKLER LEGEND	
SYMBOL	DESCRIPTION
	BUCKNER 403 HS SHRUB SPRAY
	BUCKNER 403 QS SHRUB SPRAY
	BUCKNER 403 HUS SHRUB SPRAY
	BUCKNER 403 QUS SHRUB SPRAY
	BUCKNER 400 STDA STRIP SPRAY
	BUCKNER 402 BUBBLE HEAD
	BUCKNER 403 3/4" U.S. SHRUB SPRAY
	BUCKNER 403 FUS SHRUB SPRAY
	MOODY #6125 AUTOMATIC VALVE W/ H.L. GEE #305 VACUUM BREAKER
	1-1/2" STOP AND WASTE VALVE
	GALV. STEEL SCH. 40
	PVC PLASTIC PIPE TYPE II, SCH. 40



TYPICAL SPRINKLER INSTALLATION
NO SCALE

OPERATIONAL DATA

I. INSTALL ADEQUATE DRAINS TO DRAIN SYSTEM.
II. INSTALL SYSTEM ACCORDING TO LOCAL PLUMBING CODE.
III. INSTALL ALL PIPE TO A MINIMUM DEPTH OF 18".
IV. INSTALL SHRUB SPRAY HEADS ON RISERS HIGHER THAN SURROUNDING SHRUBS.

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

AS CONSTRUCTED
10:615 DATE APRIL 2, 1964

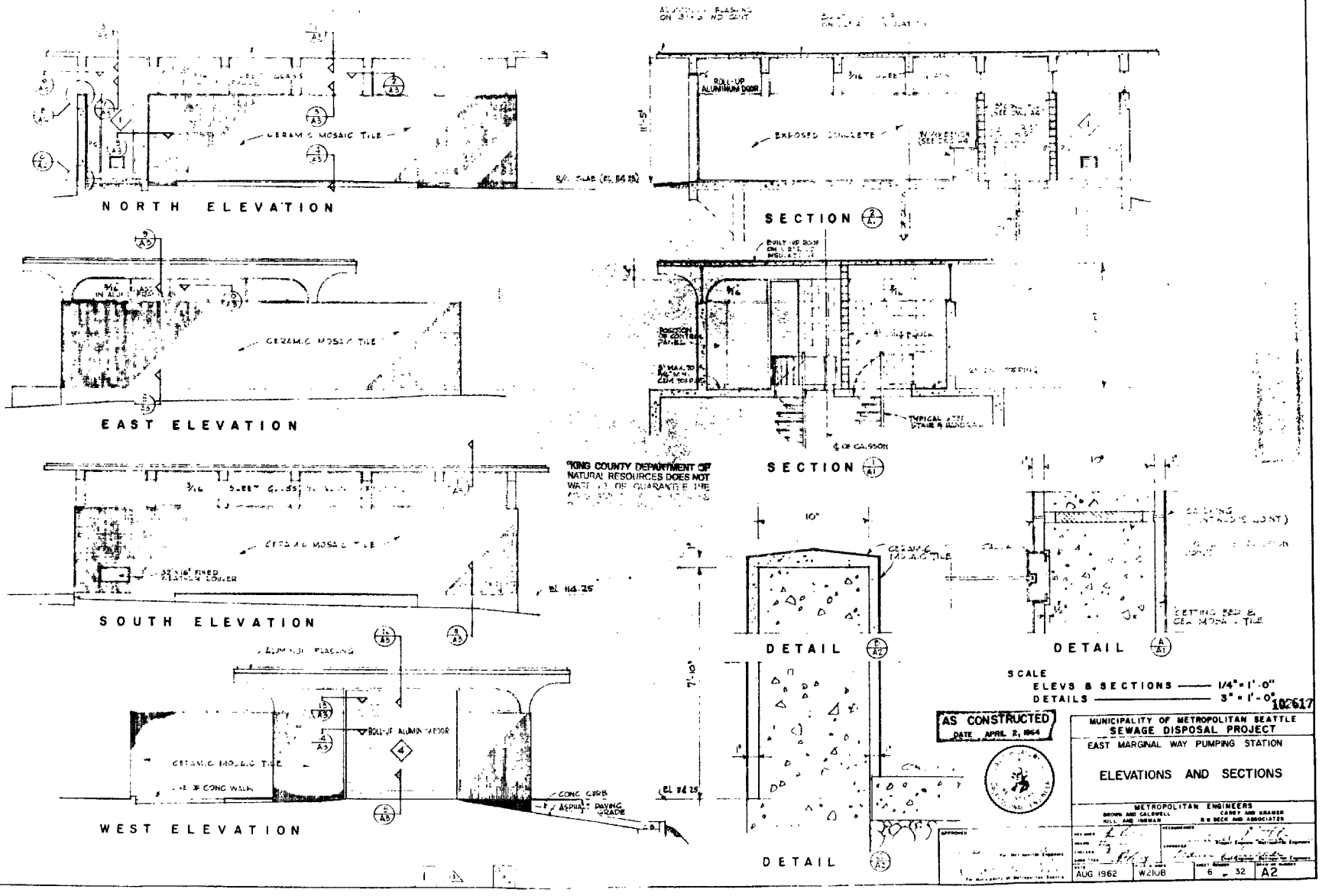
MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
REVISED LANDSCAPE LAYOUT

METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND INGMAN — A.W. BECK AND ASSOCIATES

APPROVED: For Metropolitan Engineers — For Municipality of Metropolitan Seattle
DESIGNED: W.T. & D.H.
DRAWN: W.T. & D.H.
CHECKED: W.H.
SUBMITTED:
RECOMMENDED: Project Engineer - Metropolitan Engineers
APPROVED: Chief Engineer - Metropolitan Engineers
DATE: OCT. 4, 1963
CSD NUMBER: W 310 B
SHEET NUMBER: 1 of 1
DRAWING NUMBER: G4A

KCSlip4 62083

SEA430254



"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE

KCSlip4 62084

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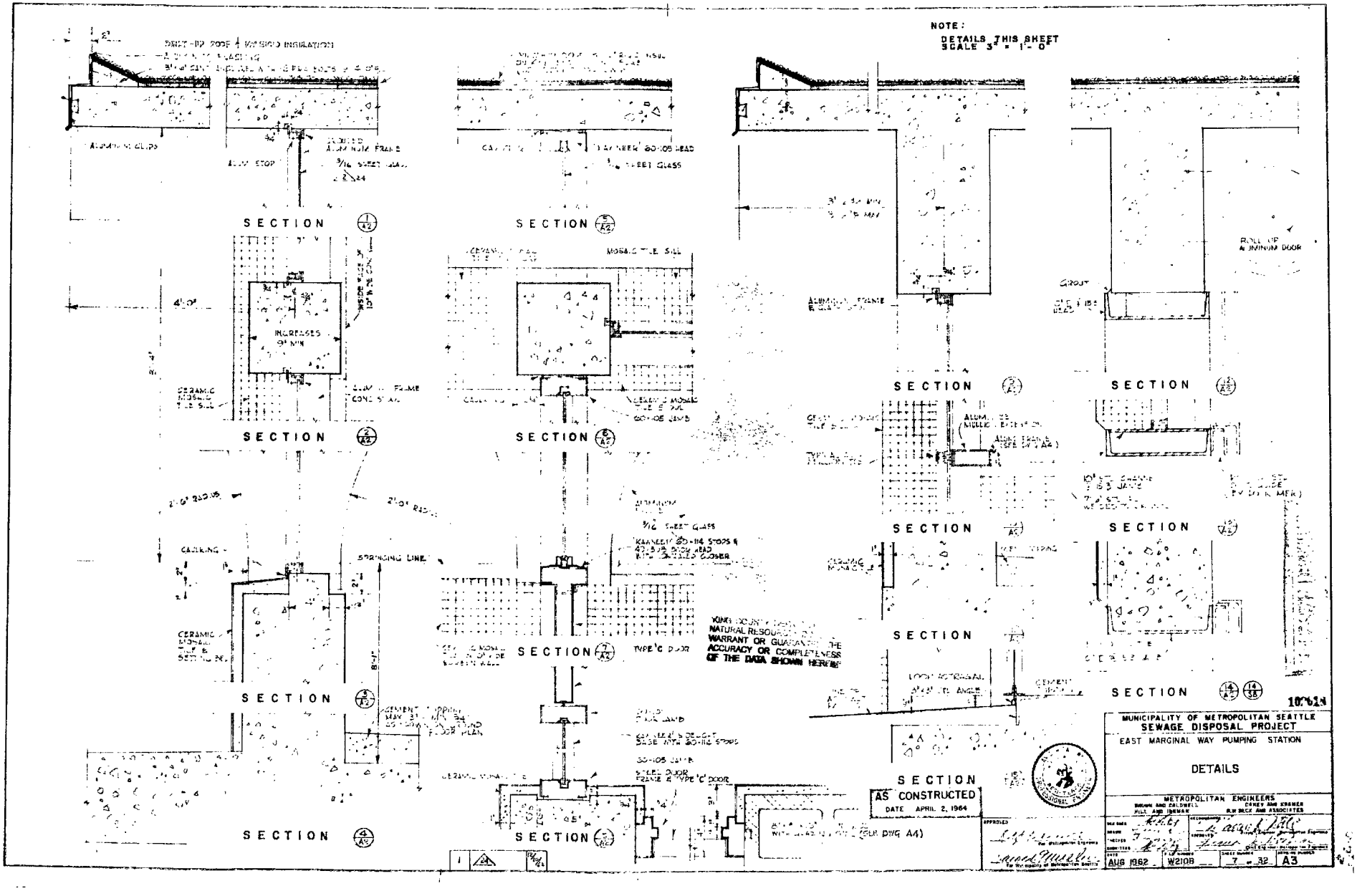

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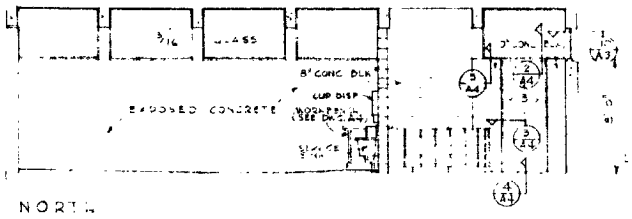
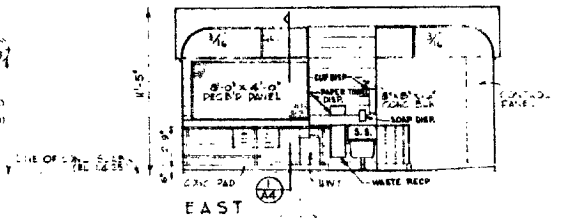
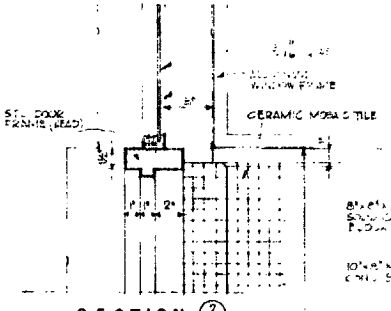
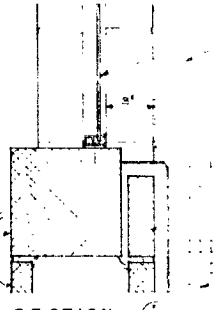




CONTROL ROOM ELEVATIONS 102
SCALE 1/4" = 1'-0"



SECTION 2/A4



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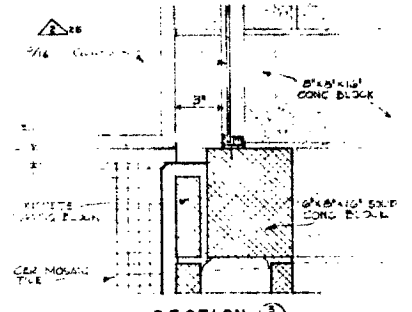

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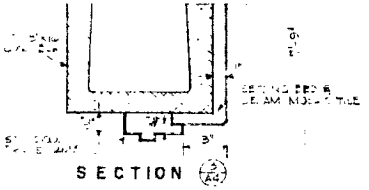

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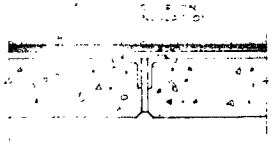
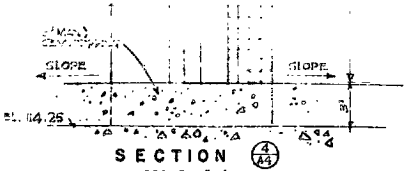


TYPICAL ROOF SLAB
CONNECTION JOINT
SCALE 3" = 1'-0"



SECTION 4/A4
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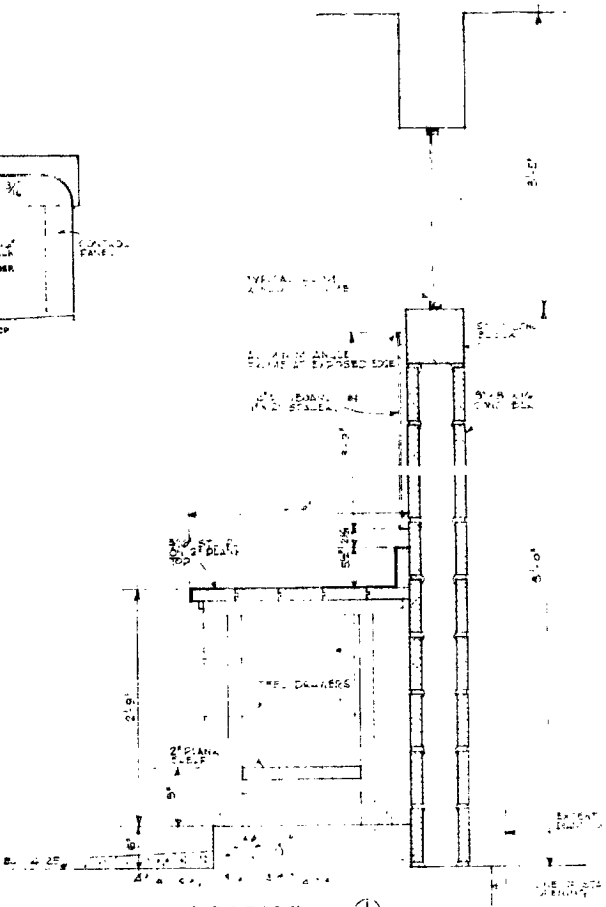


SECTION 1/A4
SCALE 1 1/2"=1'-0"

AS CONSTRUCTED
DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION

ROOM ELEVATIONS AND DETAILS

METROPOLITAN ENGINEERS
CARNEY AND KRAMER
BROWN AND CALDWELL
HILL AND DRAKE
S.W. BECK AND ASSOCIATES

DANIEL A. FAIRBANK REGISTERED PROFESSIONAL ENGINEER

DATE AUG 1962	F.S.D. NUMBER W210B	SHEET NUMBER 8 - 32	DWG NO. A4

KCSlip4 62086

SEA430257

GENERAL STRUCTURAL NOTES

GENERAL

G1 SCOPE. THE NOTES AND DETAILS ON THIS SHEET ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.

G2 APPLICABLE SPECIFICATIONS AND CODES. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE UNIFORM BUILDING CODE EXCEPT WHERE OTHER APPLICABLE CODES OR THE FOLLOWING NOTES ARE MORE RESTRICTIVE.

G3 ALTERNATIVE DESIGNS. THE STRUCTURAL SYSTEMS AND DETAILS ON THESE PLANS ARE THE PRIORITY DESIGN; HOWEVER, ALTERNATIVE SYSTEMS AND DETAILS MAY BE USED IF THE CONTRACTOR SUBMITS PLANS WITH SUBSTANTIATING CALCULATIONS AND TEST DATA THAT ARE ACCEPTED BY THE ENGINEER.

G4 DIMENSIONS. STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

G5 PROVISIONS FOR EQUIPMENT. MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DRAWINGS, SHALL BE PROVIDED FOR PRIOR TO CASTING CONCRETE.

G6 CONSTRUCTION LOADS. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES; DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND BALANCING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR.

G7 DRAINAGE SURFACES. WHERE SURFACES ARE TO BE SLOPED FOR DRAINAGE THEY SHALL BE GRADED AT ⅛" PER FOOT UTILIZING A TOPPING, AS DETAILED ON THE ARCHITECTURAL DRAWINGS.

G8 FLOOR DRAINS. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SIZES. DETAILS ARE SHOWN IN THE TYPICAL DETAILS.

STRUCTURAL

S1 DESIGN CODE. DESIGN IS IN ACCORDANCE WITH THE LATEST EDITION OF THE UNIFORM BUILDING CODE EXCEPT WHERE OTHER APPLICABLE CODES OR THE FOLLOWING NOTES ARE MORE RESTRICTIVE.

S2 DESIGN LIVE LOADS.

A. FLOOR AREAS:
- (1) OPERATING FLOORS (FLOORS ON WHICH MACHINERY MAY BE DISASSEMBLED) - 150 PSF
- (2) ENGINE ROOM - 250 PSF
- (3) SIDE WALKS - 250 PSF
- (4) UNLOADING AREAS - 6¾ TON TRUCK OR 100 PSF
- (5) OTHER AREAS - 100 PSF

B. GRATINGS, CHECKERED PLATES, AND HATCHES - SAME LOADING AS ADJACENT FLOOR AREAS.

C. STAIRS - 100 PSF

D. ROOF - 25 PSF

E. WIND - 15 PSF

F. CRANE SYSTEM - IN ACCORDANCE WITH AISC SECT. 10 (C) & (D)

G. SEISMIC LOADING - ZONE III

S3 LIVE LOAD SIGNS. LIVE LOAD SIGNS SHALL BE PROVIDED IN AREAS WHERE THE LIVE LOADS HAVE BEEN SPECIFICALLY NOTED ON THE DRAWINGS. SIGNS SHALL BE AS REQUIRED IN THE SPECIFICATIONS.

S4 CONSTRUCTION JOINTS. LOCATIONS OF ALL CONSTRUCTION JOINTS SHALL HAVE THE APPROVAL OF THE ENGINEER. IN WATERTIGHT STRUCTURES, PVC WATERSTOPS SHALL BE PROVIDED IN THE CONSTRUCTION JOINTS. CONSTRUCTION JOINTS SHALL BE AS DETAILED ON THE DRAWINGS.

STEEL

S51 CODES AND SPECIFICATIONS. STEEL CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS AND STANDARDS AS CONTAINED IN THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.

S52 MATERIAL. ALL STRUCTURAL SHAPES, BARS, PLATES, AND SHEETS INDICATED ON THE DRAWINGS SHALL BE STEEL MEETING ASTM A-7 SPECIFICATIONS.

S53 WELDING. ALL WELDING SHALL CONFORM TO A.W.S. CODE FOR ARC AND GAS WELDING IN BLDG. CONSTRUCTION.

S54 ENCASED STEEL. STEEL COMPLETELY ENCASED IN CONCRETE SHALL NOT BE GALVANIZED OR PAINTED AND SHALL HAVE A CLEAN SURFACE FOR BONDING CONCRETE WHEN IT IS CAST.

S55 PAINTING. STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS.

ALUMINUM

A1 SPECIFICATIONS AND CODES. ALUMINUM CONSTRUCTION SHALL BE IN ACCORDANCE WITH ASCE'S SPECIFICATIONS FOR STRUCTURES OF ALUMINUM ALLOY 6061-T6

CONCRETE

C1 APPLICABLE CODE. CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE (ACI-318).

C2 RE-STL DETAILS. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI-315 LATEST EDITION.

C3 DESIGN STRESSES.

A. CONCRETE, 3,000 PSI ULTIMATE COMPRESSIVE STRESS AT 28 DAYS.

B. REINFORCING STEEL
- (1) TENSION DUE TO FLEXURE, INTERMEDIATE GRADE - 40,000 PSI
- (2) COLUMN REINFORCING, INTERMEDIATE GRADE - 16,000 PSI
- (3) COLUMN REINFORCING, HARD GRADE - 20,000 PSI

C4 CONCRETE COVER. CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS WITH MINIMUM COVER OF ONE BAR DIAMETER.

A. CONCRETE CAST AGAINST GROUND - 3"

B. CONCRETE TO BE IN CONTACT WITH SEWAGE - 1½"

C. CONCRETE ON EXTERIOR FACE OF EXTERIOR WALL - 2"

D. CONCRETE TO BE IN CONTACT WITH GROUND, WEATHER, OR CLEAN WATER.
- (1) AT BARS GREATER THAN #6 - 2"
- (2) AT BARS #6 OR LESS - 1½"

E. CONCRETE NOT TO BE EXPOSED TO GROUND, WEATHER, OR CLEAN WATER.
- (1) BEAMS AND COLUMNS - 1½"
- (2) SLABS, JOISTS, AND WALLS - ¾"

C5 MINIMUM REINFORCEMENT. CONCRETE CONSTRUCTION WILL BE REINFORCED CONCRETE EXCEPT WHERE PLAIN CONCRETE (P/C) IS CALLED OUT ON THE DRAWINGS, IN WHICH CASE NO REINFORCEMENT SHALL BE USED. CONCRETE THAT IS NOT DESIGNATED P/C AND HAS NO REINFORCEMENT INDICATED SHALL BE REINFORCED PER ACI 318 AND THE FOLLOWING SCHEDULE.

STEEL FOR REINFORCED CONCRETE WALLS

WALL THICKNESS	REINFORCEMENT EACH WAY SIZE	SPACING	LOCATION
6"	#6	12"	BOT &
8"	4	10"	BOT &
10"	6	16"	BOT
12"	8	18"	BOT
14"	5	17"	BOT
16"	5	16"	BOT
18"	5	15"	BOT

C6 DOWELS. REINFORCING BARS USED AS DOWELS SHALL BE THE SAME SIZE AND SPACING AS BARS WITH WHICH THEY ARE LAPPED.

C7 BAR SPLICES. VERTICAL REINFORCING BAR SPLICES IN COLUMNS SHALL BE AT LEAST 20 BAR DIAMETER LAP; ALL OTHER BAR SPLICES SHALL BE LAPPED AT LEAST 30 BAR DIAMETERS. THE LENGTH OF LAP SPLICE OF BARS OF DIFFERENT DIAMETER SHALL BE BASED ON THE LARGER DIAMETER. BAR SPLICES MAY ALSO BE MADE BY WELDING IN ACCORDANCE WITH THE DETAILS FOR RE-STL SPLICE AND WITH SPECIFICATIONS.

C8 RESTRICTED BAR ANCHORAGE. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOKS.

C9 STANDARD HOOKS. BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF ACI FOR HOOKS.

C10 BENT UP TRUSS BARS. BENT UP TRUSS BARS IN REINFORCED CONCRETE SHALL BE BENT THROUGH AN ANGLE OF 45°.

C11 SLOPING SLABS. MONOLITHIC SLABS WITH TOPS THAT ARE SLOPED SHALL HAVE BOTTOMS SLOPED THE SAME AMOUNT, MAINTAINING A UNIFORM SLAB THICKNESS.

C12 GROUND SUPPORTED SLABS. CONCRETE SLABS SUPPORTED BY GROUND SHALL BE 6" THICK REINFORCED WITH 6 x 6 - 10/10 WWF AT MID-DEPTH OF SLAB AND DOWELLED ALONG THE EDGE OF SLAB TO ALL ADJACENT WALLS, COLUMNS, AND FOUNDATIONS WITH #5 @ 18" THAT LAP 1'-8" WITH WWF AND EXTEND INTO WALLS, COLUMNS, AND FOUNDATIONS AT LEAST 4'; IF SLAB IS DESIGNATED AS "FLOATING SLAB" ON DRAWINGS, OMIT DOWELS AND SUBSTITUTE ½" THICK PREMOLDED JOINT FILLER TO ISOLATE THE SLAB FROM CONTACT WITH THE STRUCTURE ALONG ITS PERIMETER.

C13 CHAMFERS. EXCEPT AS OTHERWISE REQUIRED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE ¾" CHAMFERS. RE-ENTRANT CORNERS SHALL NOT HAVE FILLETS.

C14 ANCHOR BOLTS. USE OF ANCHOR BOLTS SHALL BE GOVERNED BY THE FOLLOWING TABLE:

BOLT DIAMETER	½"	⅝"	¾"	⅞"	1"	1⅛"	1¼"
MIN. EMBEDMENT IN STRUCTURAL CONC.	4"	4"	5"	6"	7"	8"	9"
ALLOWABLE SHEAR	750#	1000#	1500#	2000#	2500#	3000#	3500#

ALL BOLTS SHALL BE HOT DIPPED GALVANIZED UNLESS OTHERWISE NOTED. EMBEDMENT LENGTH FOR BOLTS IN TENSION SHALL BE DETERMINED BY THE ENGINEER.

C15 FUTURE CONSTRUCTION. WHERE DRAWINGS INDICATE "PROVIDE FOR FUTURE CONSTRUCTION", THE STRUCTURE SHALL TERMINATE WITH THE TYPICAL CONSTRUCTION JOINTS AS DETAILED. REINFORCING BARS RUNNING IN THE DIRECTION OF FUTURE CONSTRUCTION, INCLUDING THOSE BENT OFF AT THE FACE OF THE STRUCTURE WHERE IT IS TO BE EXTENDED IN THE FUTURE, SHALL BE DOWELED AS SHOWN ON THE TYPICAL DETAIL DRAWING. WALLS AND SLABS SHALL HAVE DOWELS PLACED SO AS TO MAINTAIN THE SAME DISTANCE FROM THE CENTER OF THE DOWEL TO THE SURFACE OF THE WALL OR SLAB AS THE CORRESPONDING DISTANCE REQUIRED FOR THE REINFORCING BAR WITH WHICH THE DOWELS ARE LAPPED.

KING COUNTY ASSUMES NO RESPONSIBILITY FOR NATURAL RESOURCES CODES NOR WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREON

10-620 AS CONSTRUCTED
DATE APRIL 2, 1964

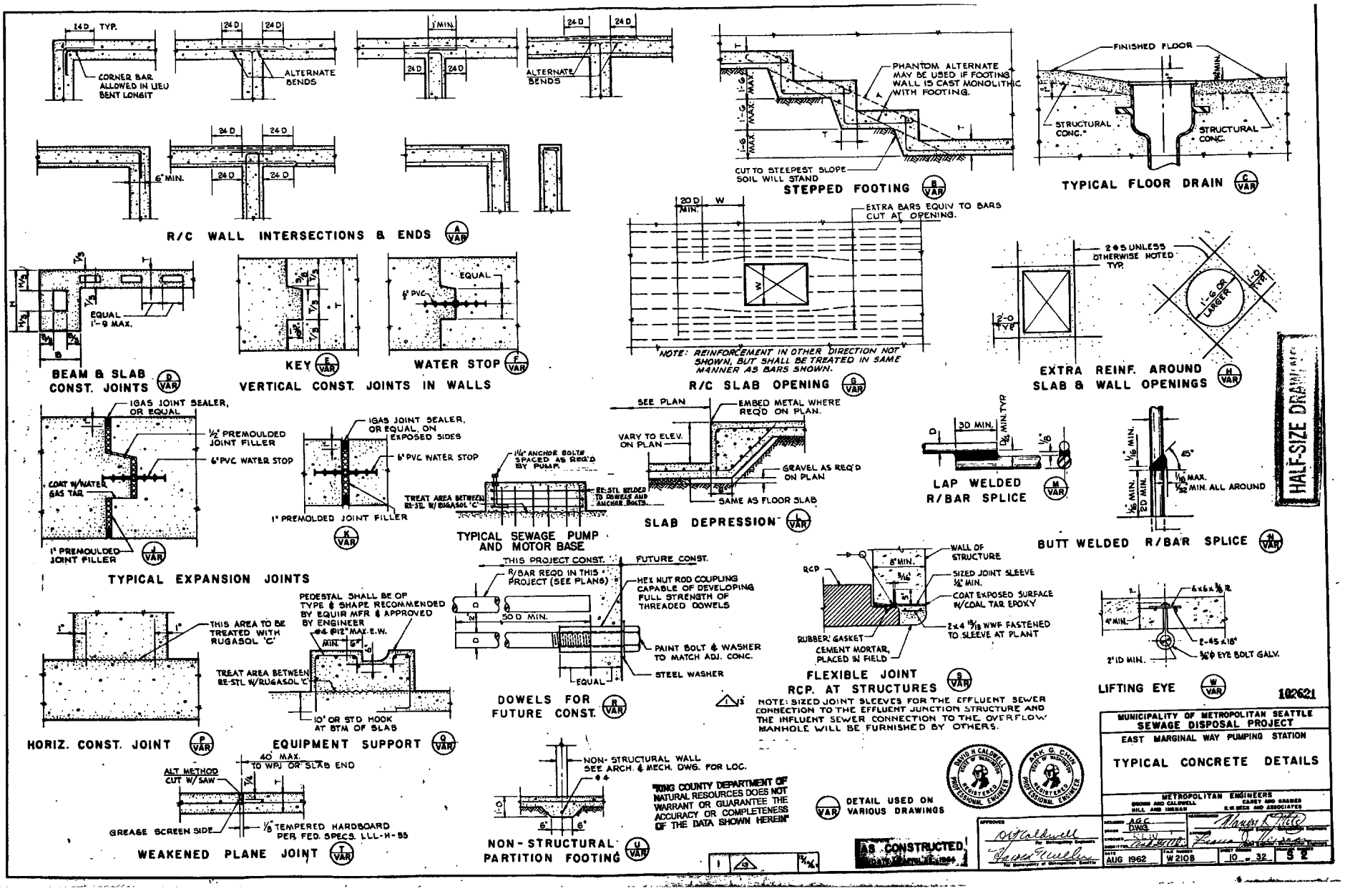
MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
GENERAL STRUCTURAL NOTES
WATERPROOF HATCH

METROPOLITAN ENGINEERS
GROVER AND CALDWELL — CAREY AND BRAMER
HILL AND INGRAM — B.H. DECK AND ASSOCIATES

DESIGNED A.G.C. DRAWN K.K. CHECKED K.H.W. SUBMITTED
APPROVED — For Metropolitan Engineers — For Municipality of Metropolitan Seattle
DATE AUG 1962 | FILE NUMBER W2108 | SHEET 2 OF 32 | SCALE NONE

DAVID H. CALDWELL — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
ARTHUR G. CHASE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

KCSlip4 62087
SEA430258



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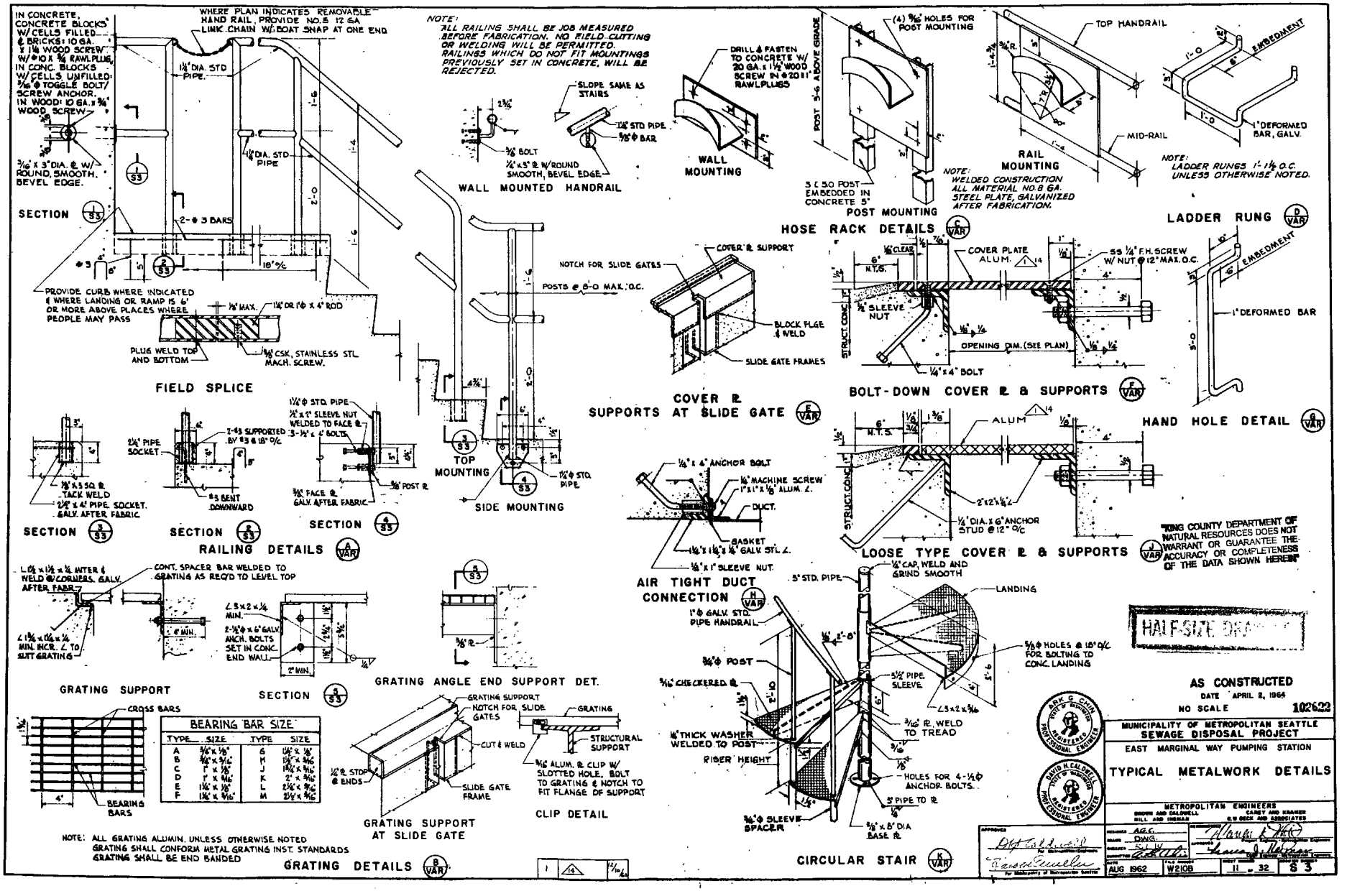

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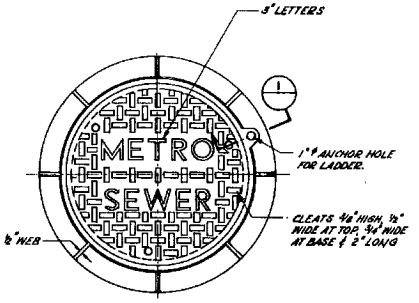
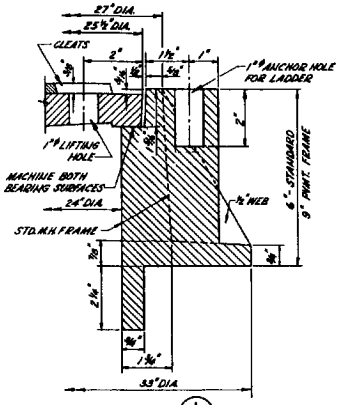


METRO STANDARD MANHOLE FRAME AND COVER
SCALE: 1½" = 1'-0



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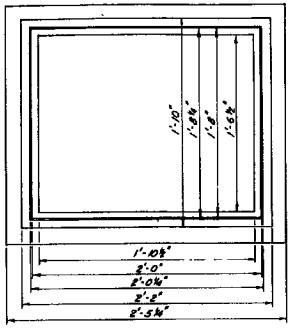
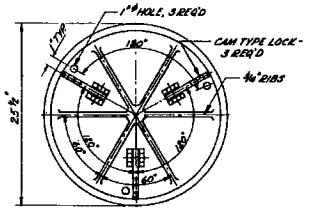
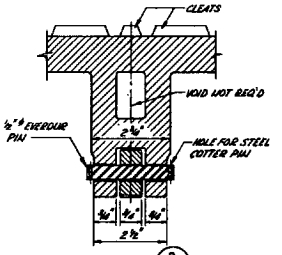




PLAN
UNDERSIDE OF STANDARD COVER
SCALE: 1½" = 1'-0



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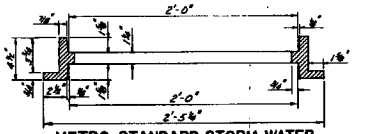
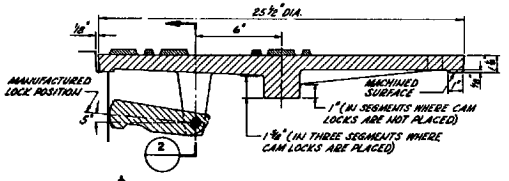
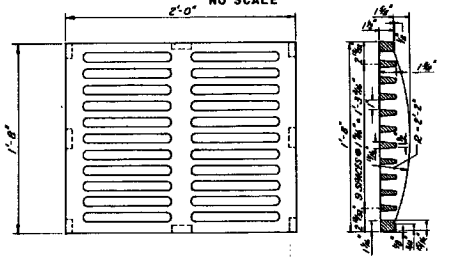
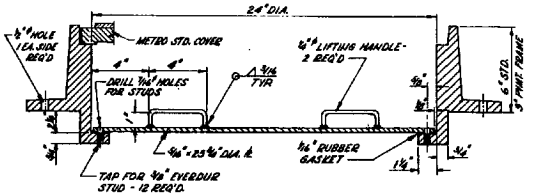


METRO STANDARD STORM WATER INLET FRAME (TYPE I & II INLETS)
NO SCALE



℄ SECTION THROUGH STANDARD COVER
SCALE: 3" = 1'-0

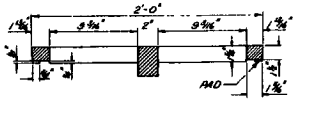




METRO STANDARD MANHOLE FRAME AND COVER
PRESSURE TYPE
SCALE: 3" = 1'-0

NOTES

1. CASTINGS SHALL BE CAST STEEL A.S.T.M. DESIGNATION A-27, GRADE 70-36 OR NODULAR IRON A.S.T.M. DESIGNATION A-339, GRADE 60-45-10
2. STEEL COMPONENTS SHALL BE STRUCTURAL GRADE A.S.T.M. DESIGNATION A-7
3. FABRICATION & WORKMANSHIP SHALL BE IN ACCORDANCE WITH A.I.S.C. "SPEC. FOR FABRICATION & ERECTION"
4. WELDING SHALL CONFORM TO "CODE FOR ARC WELDING IN BUILDING CONSTRUCTION", SECTION 4, WORKMANSHIP, AMERICAN WELDING SOCIETY SPECS.
5. ALL FABRICATED STEEL ITEMS SHALL BE GALVANIZED PER A.S.T.M. DESIGNATION A-123 & A-386 AFTER COMPLETE ASSEMBLY & FABRICATION.
6. 6" STD. FRAMES SHALL BE USED EXCEPT PRNT. FRAME SHALL BE 3" HIGH & PRESS. FRAME SHALL BE PRESSURE TYPE. ALL COVERS SHALL BE STANDARD TYPE AS SHOWN.



METRO STANDARD STORM WATER INLET GRATING (TYPE I & II INLETS)
NO SCALE

KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN

HALF-SIZE

AS CONSTRUCTED
DATE APRIL 2, 1964

10C623

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION

GRATINGS, FRAMES AND COVERS

METROPOLITAN ENGINEERS
GROVER AND CALDWELL — CAREY AND BRANDER
HILL AND INGMAN — R.W. BECK AND ASSOCIATES

DESIGNED	E.G.G.		
DRAWN	R.A.M.		
CHECKED	A.G.C.		
SUBMITTED			
DATE	AUG 1962	FILE NUMBER W210B	SHEET NUMBER 12 - 32

APPROVED: For Metropolitan Engineers — For Municipality of Metropolitan Seattle

DESIGNED BY: Chief Engineer, Metropolitan Engineers

APPROVED: Director, Metropolitan Engineers

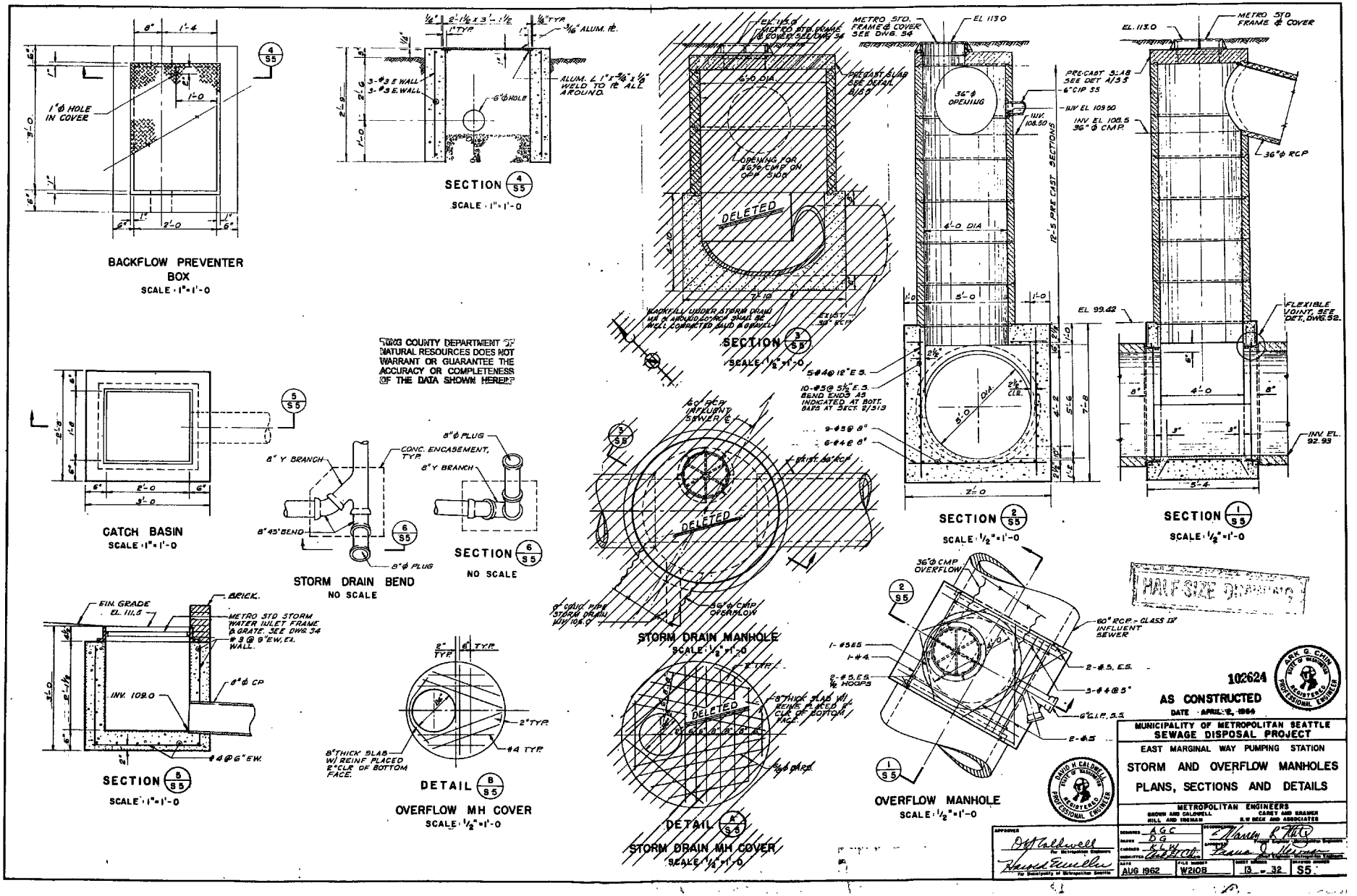
DRAWING NUMBER S4

ARK G. CAIN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

DAVID H. CALDWELL — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

KCSlip4 62090

SEA430261



KCSlip4 62091

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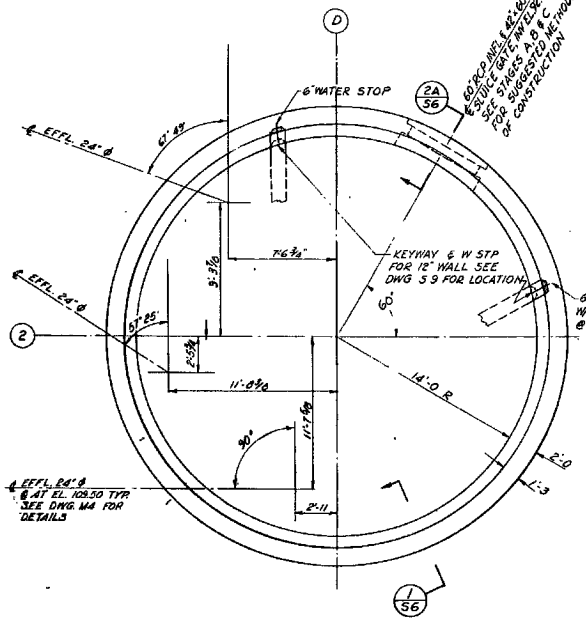
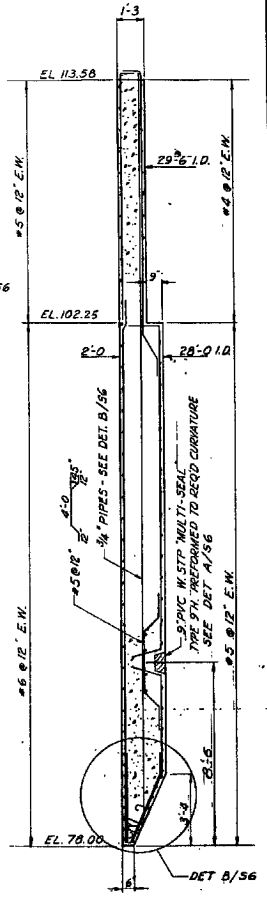


PLAN
SCALE: 1/4" = 1'-0



SECTION 1/S6
TYPICAL CAISSON SECTION
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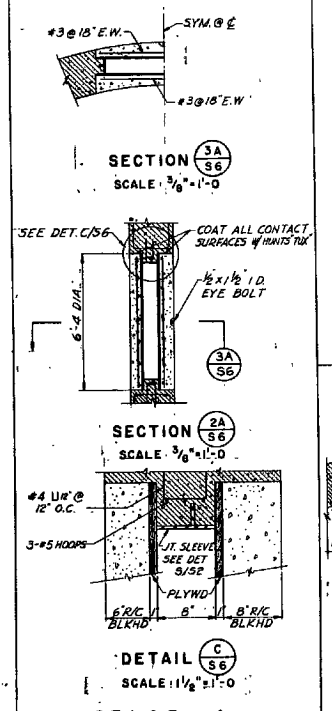


SECTION 3A/S6
SCALE: 3/8" = 1'-0

SECTION 2A/S6
SCALE: 3/8" = 1'-0

DETAIL C/S6
SCALE: 1 1/8" = 1'-0

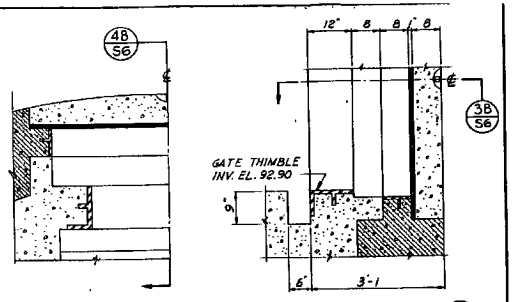
STAGE A

SUGGESTED METHODS OF CONSTRUCTION FOR 60" DIA. INFLUENT CONNECTION.

STAGE A - R/C BULKHEADS IN POSITIONS DURING SINKING OF CAISSON.

STAGE B - INSTALLATION OF 42" x 60" SLUICE GATE AFTER PLACEMENT OF CAISSON SEAL.

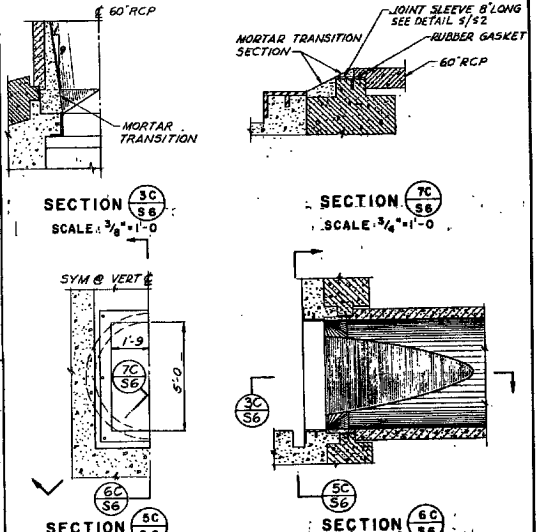
STAGE C - INSTALLATION OF 60" RCP & PLACEMENT OF MORTAR TRANSITIONS.



PLAN - SECTION 3B/S6
SCALE: 3/4" = 1'-0

VERT. - SECTION 4B/S6
SCALE: 3/4" = 1'-0

STAGE B

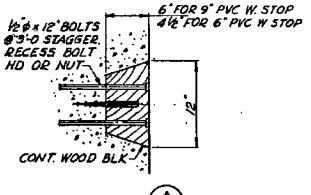


SECTION 3C/S6
SCALE: 3/8" = 1'-0

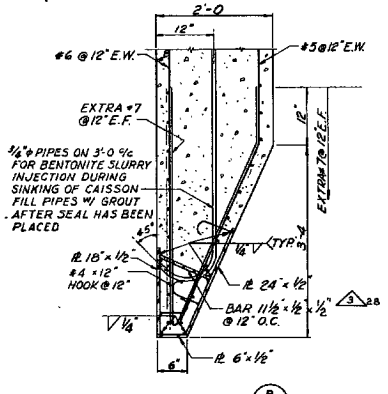
SECTION 7C/S6
SCALE: 3/4" = 1'-0

SECTION 6C/S6
SCALE: 3/8" = 1'-0

STAGE C



DETAIL A/S6
WATERSTOP
SCALE: 1 1/2" = 1'-0



DETAIL B/S6
CAISSON SHOE
SCALE: 1" = 1'-0

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

HALF-SIZE DRAWING

AS CONSTRUCTED
DATE APRIL 2, 1964

MARK C. CHIN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

DAVID W. CALDWELL STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

APPROVED: For Metropolitan Engineers / For Municipality of Metropolitan Seattle

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
CAISSON
PLAN, SECTIONS AND DETAILS

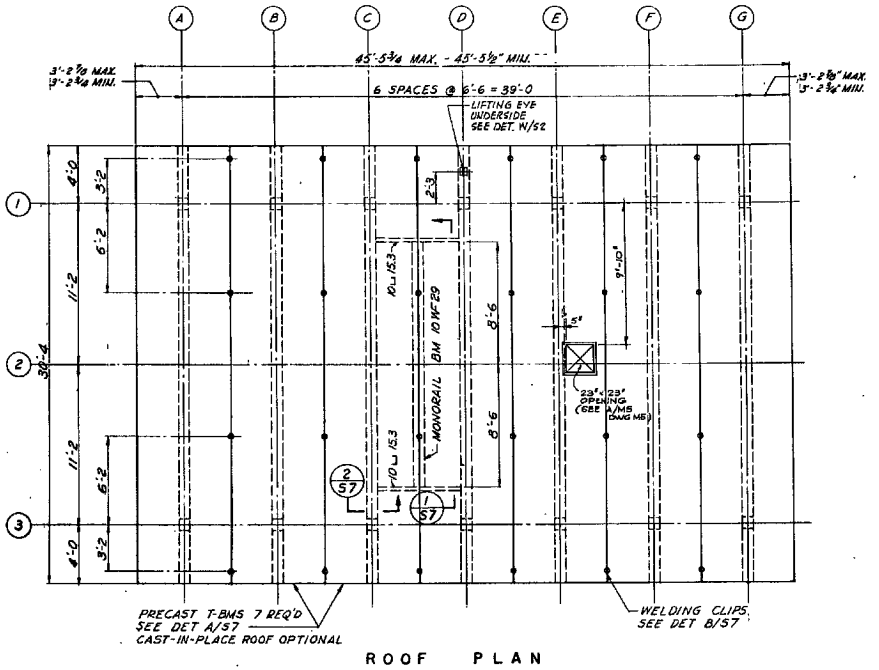
METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND INGRAM — S.W. BECK AND ASSOCIATES

DESIGNED AGC
DRAWN GS
CHECKED GLW
SUBMITTED
DATE AUG 1962
FILE NUMBER W2109
SHEET NUMBER 14 of 32
DRAWING NUMBER S6

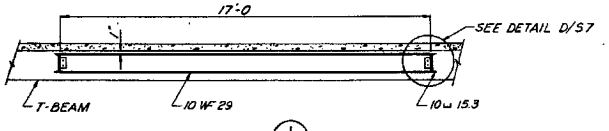
102625

KCSlip4 62092

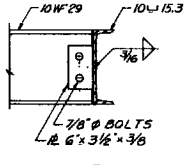
SEA430263



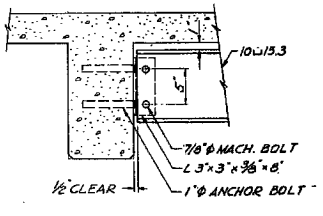
ROOF PLAN
SCALE: 1/4"=1'-0



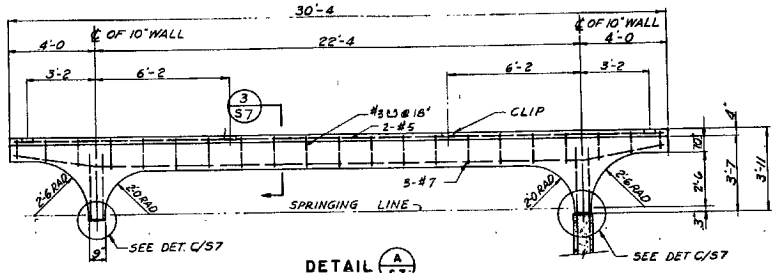
SECTION 1/S7
ELEVATION OF MONORAIL BEAM
SCALE: 3/8"=1'-0



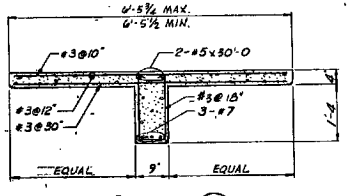
DETAIL D/S7
SCALE: 1½"=1'-0



SECTION 2/S7
SCALE: 1½"=1'-0



DETAIL A/S7
TYPICAL BEAM
SCALE: 3/8"=1'-0



SECTION 3/S7
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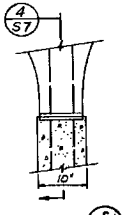
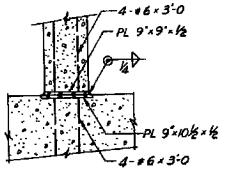


DETAIL C/S7
SCALE: 1"=1'-0



SECTION 4/S7
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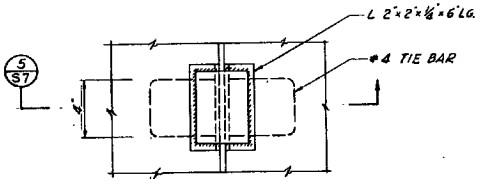
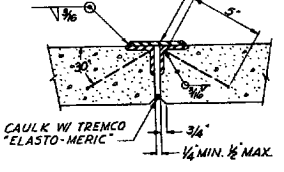


DETAIL B/S7
PLAN OF WELDING CLIP
SCALE: 3"=1'-0



SECTION 5/S7
SCALE: 3"=1'-0

HALF-SIZE DRAWING

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

AS CONSTRUCTED
102626 DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT

EAST MARGINAL WAY PUMPING STATION

ROOF

PLAN, SECTIONS AND DETAILS

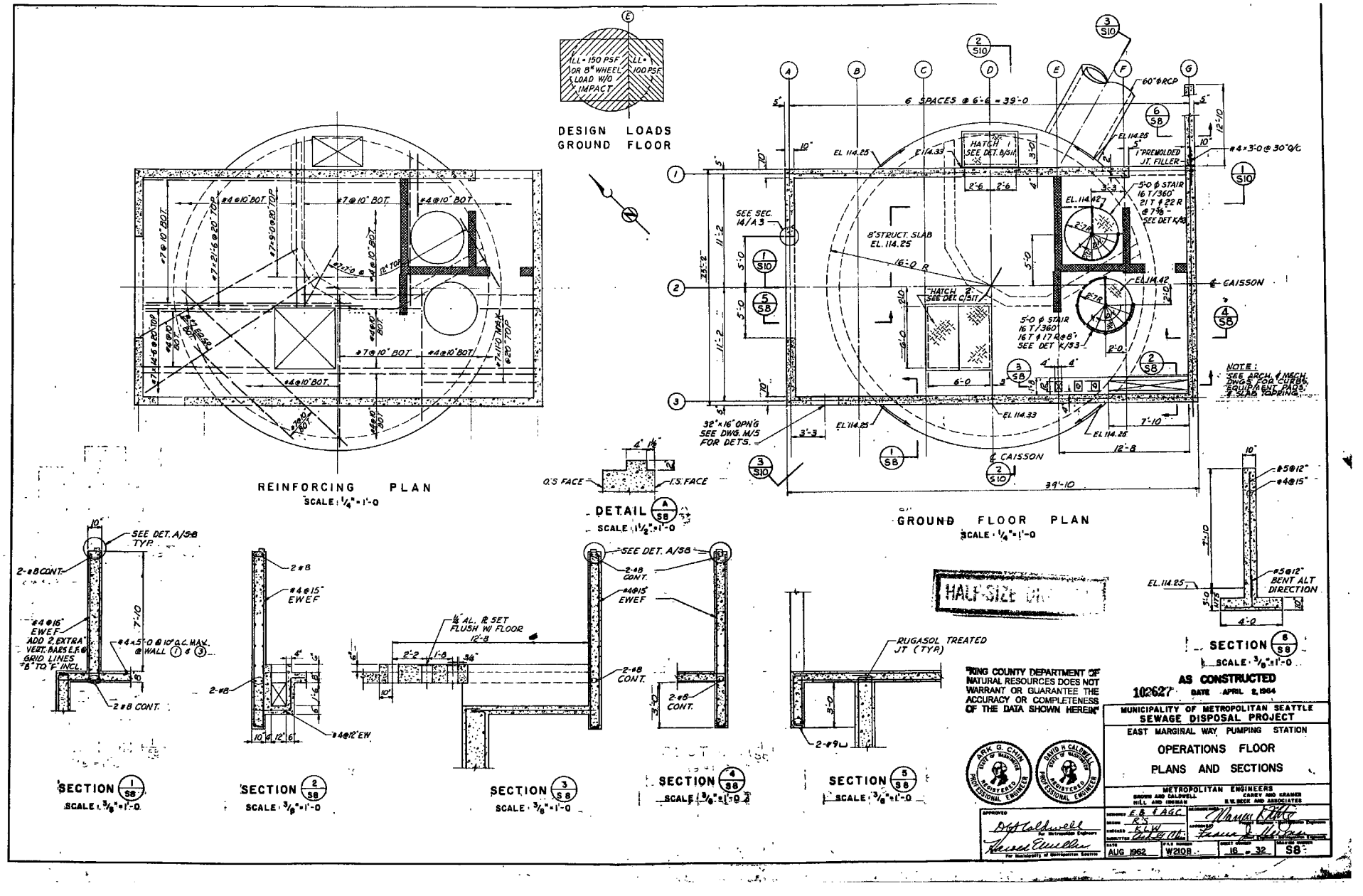
METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND INGRAM — R.W. BECK AND ASSOCIATES

APPROVED: For Metropolitan Engineers — For Municipality of Metropolitan Seattle

DESIGNED E.B. — DRAWN R.S. — ENGINEER — SUBMITTED — DATE AUG 1962 — FILE NUMBER W2108 — SHEET NUMBER 15 OF 32 — DRAWING NUMBER S7

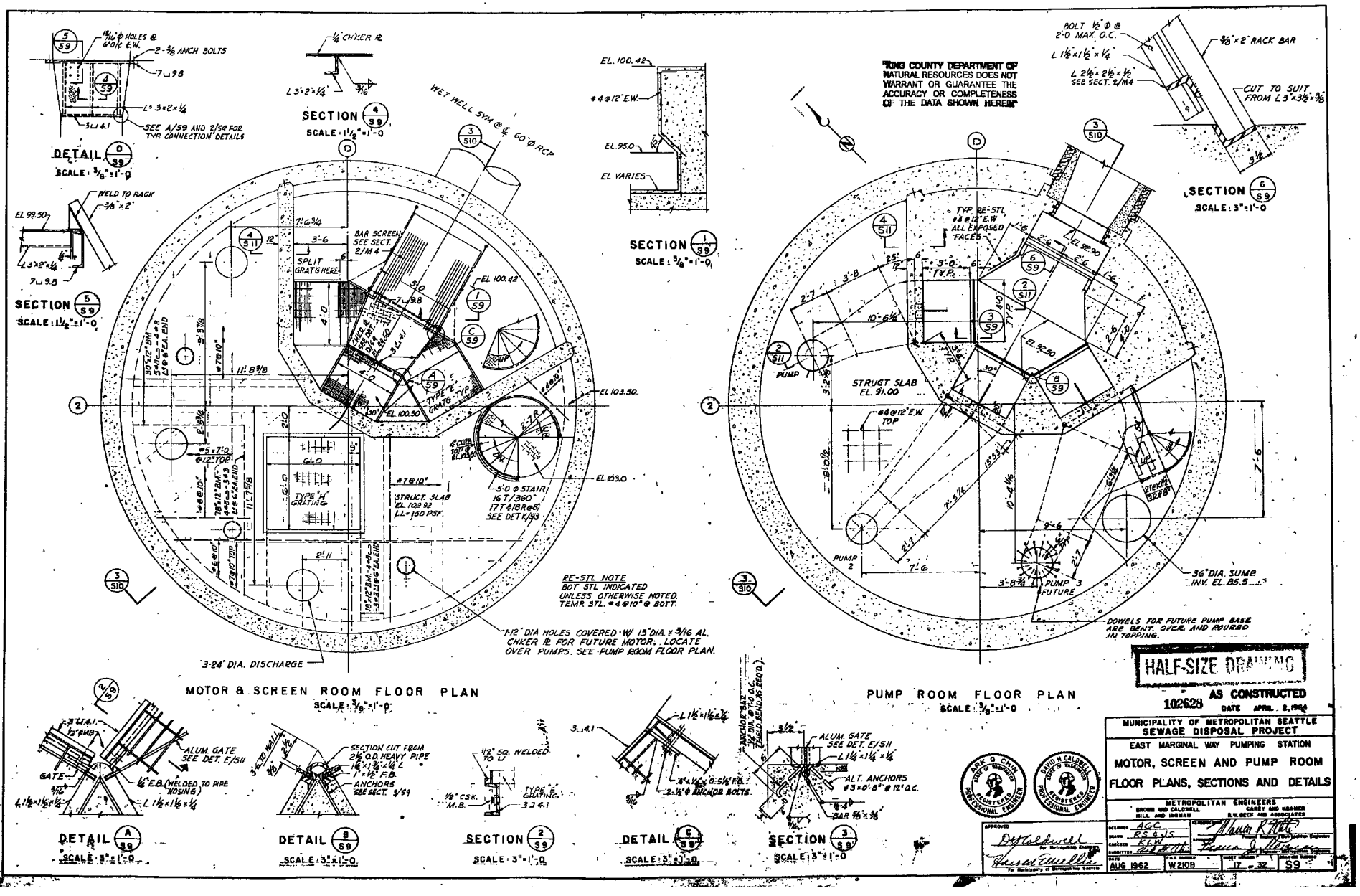
KCSlip4 62093

SEA430264



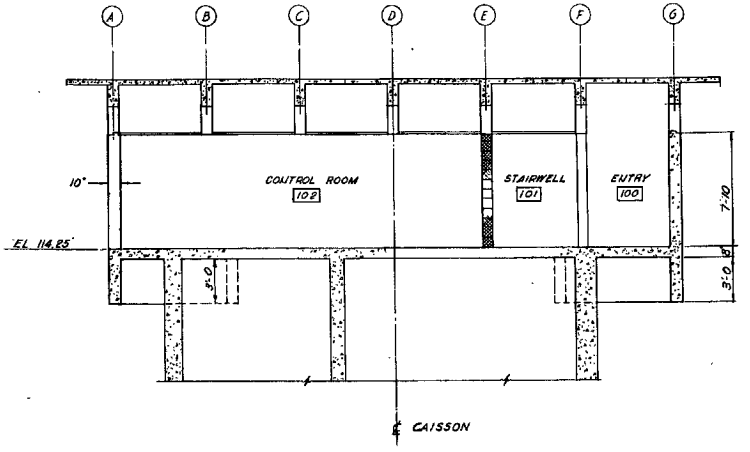
KCSlip4 62094

SEA430265



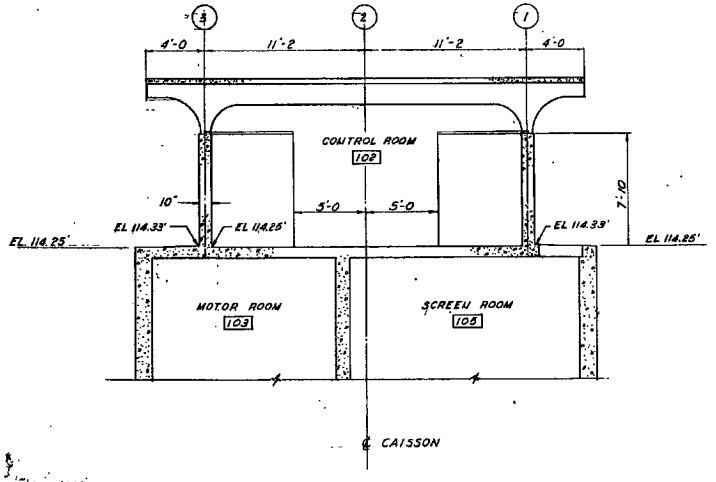
KCSlip4 62095

SEA430266



SECTION 1/S8

SCALE: 1/4" = 1'-0



SECTION 2/S8

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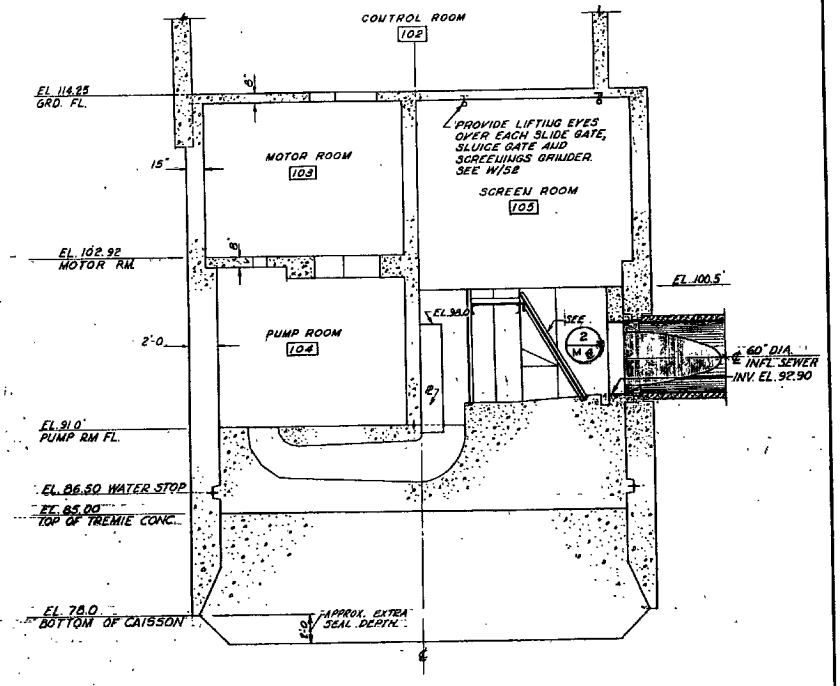


SECTION 3/S8 3/S8

SCALE: 1/4" = 1'-0

HALF-SIZE DRAWING

AS CONSTRUCTED

102630 DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT

EAST MARGINAL WAY PUMPING STATION

SECTIONS

METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND INGHAM — R.W. BECK AND ASSOCIATES

ARK G. CHIN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

DAVID H. CALDWELL — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

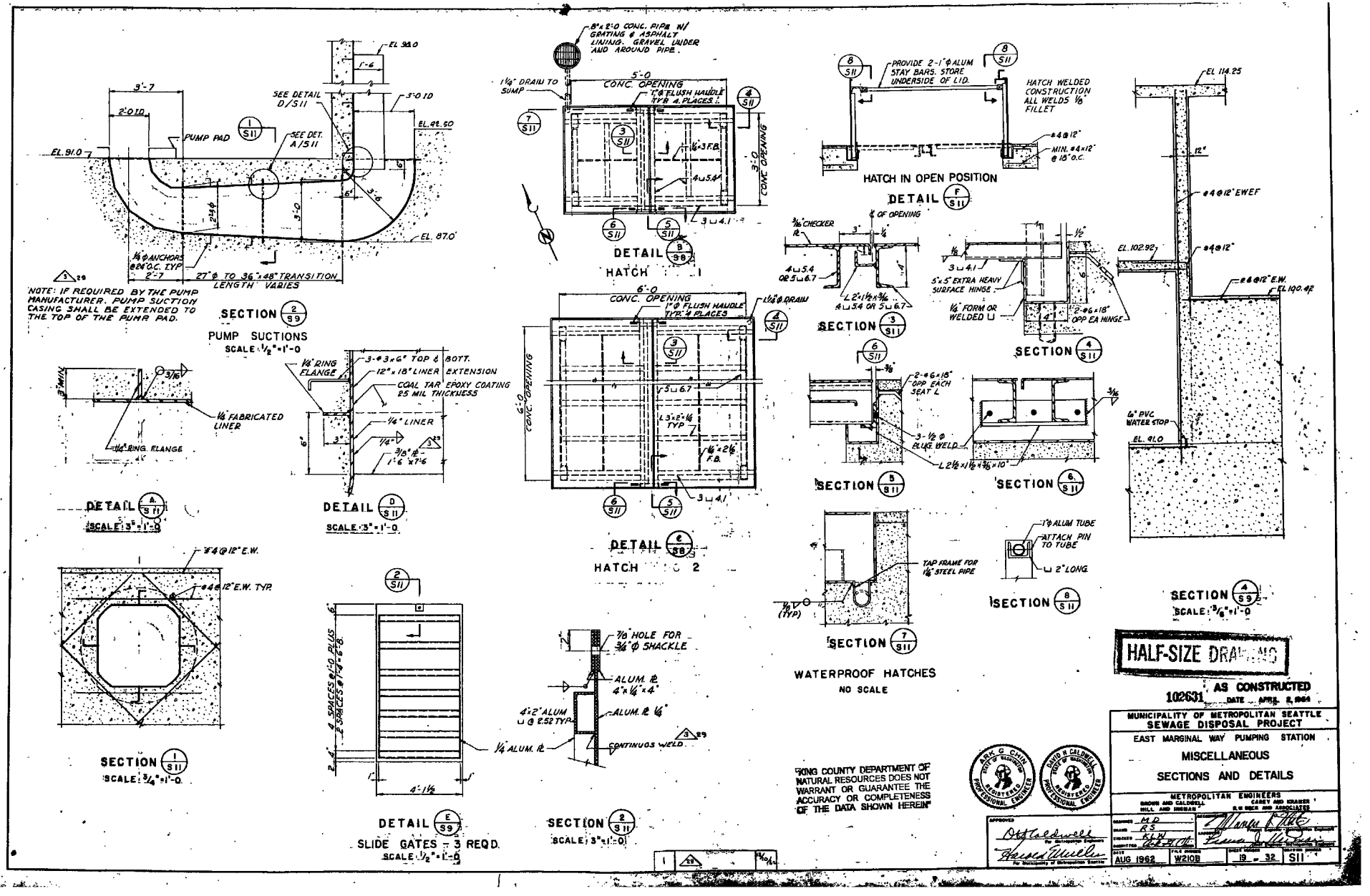
APPROVED: D. H. Caldwell, For Metropolitan Engineers; Harold E. Wheeler, For Municipality of Metropolitan Seattle

DESIGNED AGC
DRAWN RS
CHECKED KLW
SUBMITTED Carl G. Chin
DATE AUG 1962
FILE NUMBER W210B
SHEET NUMBER 18 OF 32
DRAWING NUMBER S10

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

KCSlip4 62096

SEA430267



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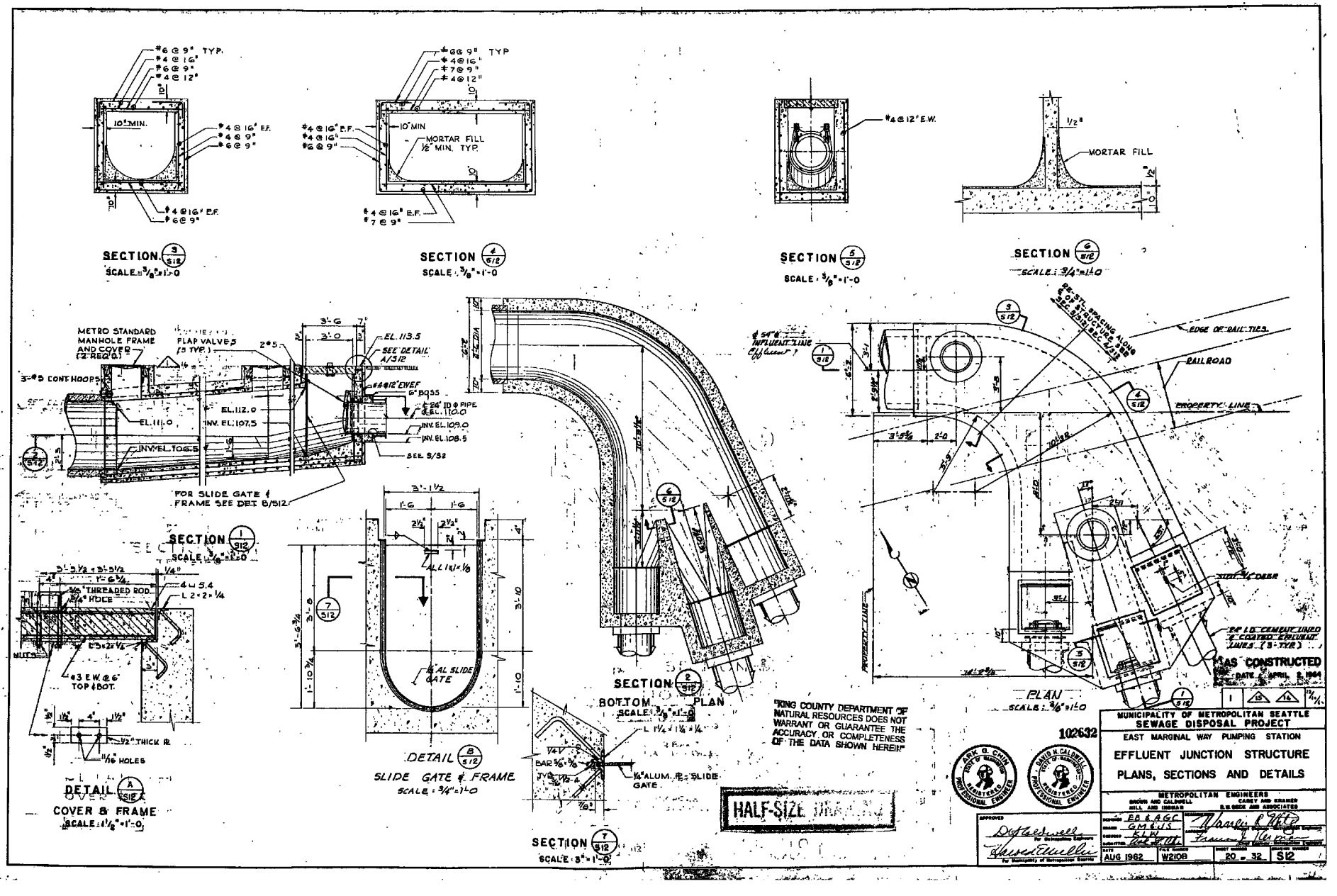

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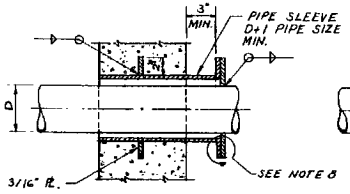
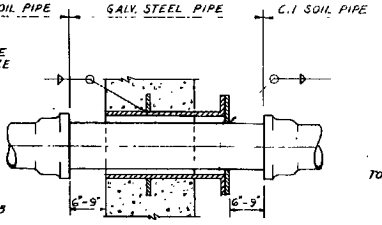
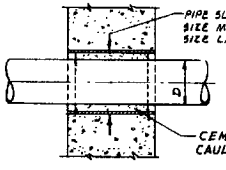


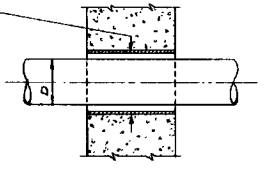
DETAIL A
FOR WALLS, FLOORS & CEILINGS



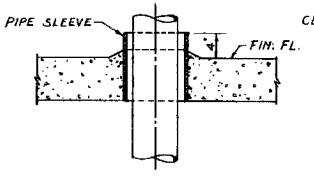
DETAIL B
FOR WALLS, FLOORS & CEILINGS



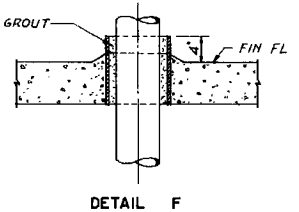
DETAIL C
FOR WALLS



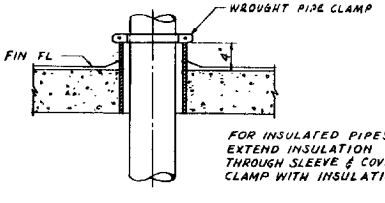
DETAIL D
FOR WALLS



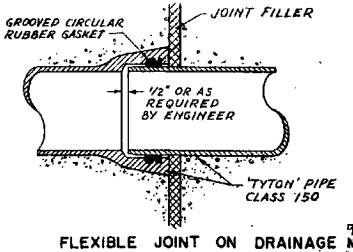
DETAIL E
FOR INTERMEDIATE FLOORS



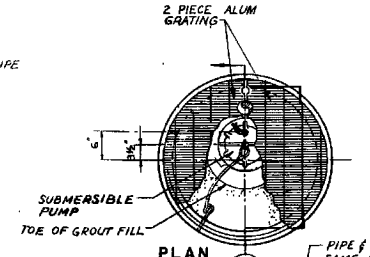
DETAIL F
FOR INTERMEDIATE FLOORS



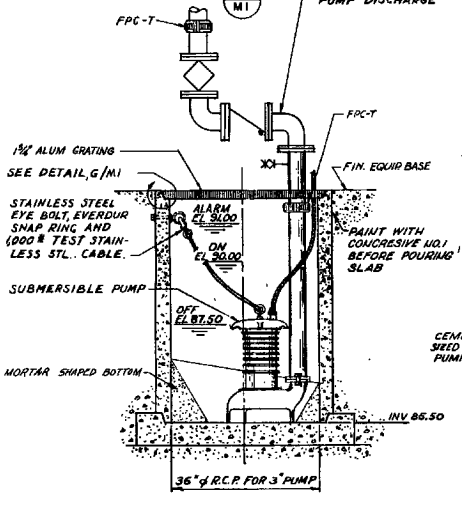
PIPE THROUGH FLOOR SUPPORT DETAIL



FLEXIBLE JOINT ON DRAINAGE LINES AT STRUCTURAL JOINTS

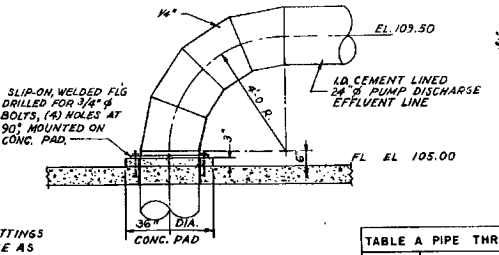


PLAN (1/M1)

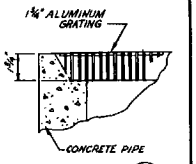


SECTION (1/M1)
NO SCALE

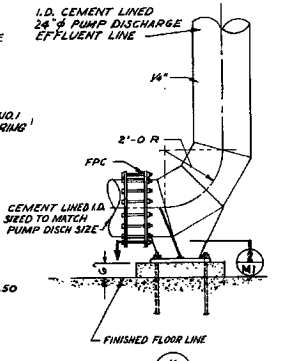
SINGLE SUMP



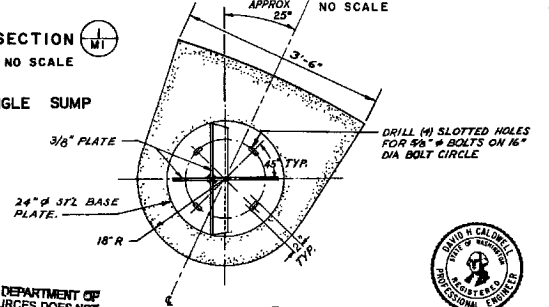
DETAIL (J/M1)
NO SCALE



DETAIL (G/M1)
NO SCALE



DETAIL (K/M1)
NO SCALE



SECTION (2/M1)
NO SCALE

TABLE A PIPE THROUGH WALL DETAILS				
TYPE	CONDITION		DETAIL	
			STL. PIPE	CAST IRON
I	TANK	TANK BELOW WS	A OR C SEE NOTES	B
II	TANK	TANK ABOVE WS	D	D
III	PASSAGE	TANK BELOW WS	A	B
IV	PASSAGE	TANK ABOVE WS	C	C
V	PASSAGE	PASSAGE	C, D, E OR F SEE NOTE 6	C, D, E OR F SEE NOTE 6
VI	PASSAGE	OUTSIDE WALL	C	C
VII	PASSAGE	ROOF	AS SHOWN	

NOTES:

1.— WHERE PIPES PASS THROUGH CONCRETE WALLS, FLOORS OR CEILINGS, THE METHOD USED SHALL CONFORM TO TABLE A. EXCEPT WHERE SPECIAL DETAILS ARE SHOWN.
2.— IN TABLE A "TANK" SHALL MEAN ANY PART OF THE STRUCTURE CONTAINING LIQUID OR IN CONTACT WITH THE GROUND.
3.— IN TABLE A "PASSAGE" SHALL MEAN ANY ENCLOSED AIR SPACE IN WHICH PIPES RUN.
4.— IN TABLE A "WATER SURFACE (WS)" SHALL MEAN ELEVATION 9 INCHES ABOVE WATER SURFACE INDICATED ON THE DRAWINGS
5.— ALL STEEL SLEEVES SHALL BE GALVANIZED AFTER FABRICATION GALVO-WELD ALL FIELD WELDED JOINTS.
6.— IN TYPE V DETAIL C OR F SHALL BE USED WHEN ONE SIDE CONTAINS EXPLOSION PROOF EQUIPMENT, WHERE FLOODING IS POSSIBLE, OR WHERE NOTED
7.— FOR DETAILS C, D, E OR F HOLES MAY BE FORMED BY STEEL PIPE EXCEPT WHEN EXPOSED TO THE WEATHER.
8.— FLANGE BOLT CIRCLES SHALL CONFORM IN SIZE AND SPACING TO A.S.A. CLASS 125
9. —⊶ INDICATES 1" PLUG VALVES WITH FEMALE HOSE CONNECTION

HALF-SIZE DRAWING

AS CONSTRUCTED
10633 DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT

EAST MARGINAL WAY PUMPING STATION
TYPICAL PIPING AND SUMP PUMP DETAILS

METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND INMAN — R.W. BECK AND ASSOCIATES

DESIGNED G.L.J. - MHY
DRAWN DKG - FHK
CHECKED RFW - MHY
SUBMITTED
DATE AUG 1962
S.L.D. NUMBER W2108
SHEET NUMBER 21 OF 32
DRAWING NUMBER M1

APPROVED
For Metropolitan Engineers
For Municipality of Metropolitan Seattle

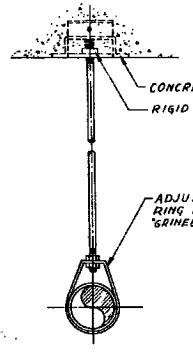
RECOMMENDED
APPROVED
Project Engineer
Metropolitan Engineers
Chief Engineer
Metropolitan Engineers

DAVID W. CALDWELL
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

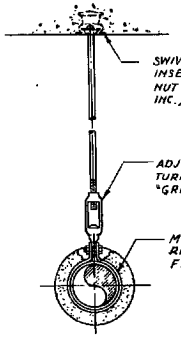
"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

KCSlip4 62099

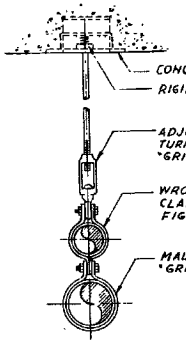
SEA430270



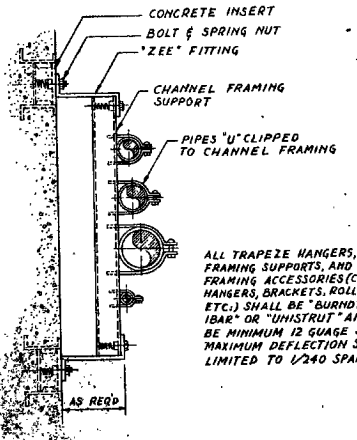
TYPE I
SINGLE PIPE HANGER
UNINSULATED PIPE



TYPE II
SINGLE PIPE HANGER
INSULATED PIPE

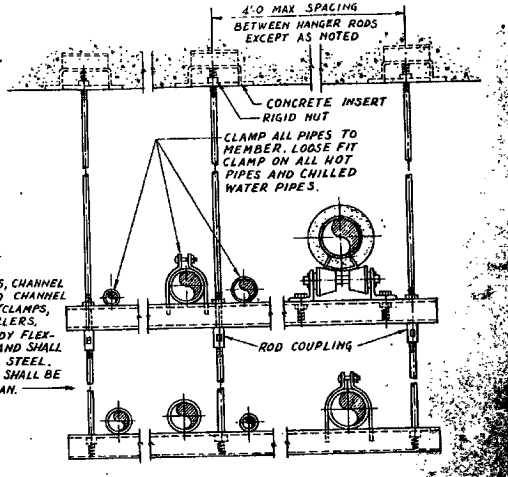


TYPE III
MULTIPLE PIPE HANGER
UNINSULATED PIPE

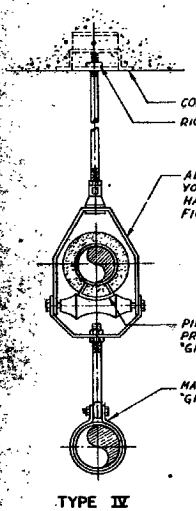


TYPICAL WALL BRACKET

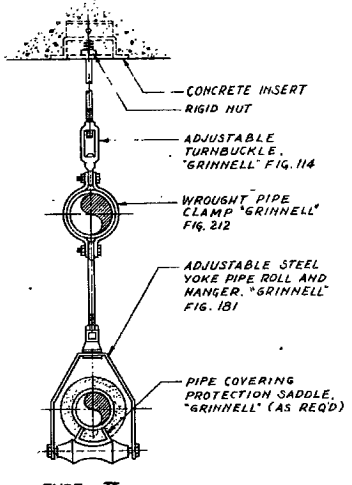
ALL TRAPEZE HANGERS, CHANNEL FRAMING SUPPORTS, AND CHANNEL FRAMING ACCESSORIES (CLAMPS, HANGERS, BRACKETS, ROLLERS, ETC.) SHALL BE "BURNDY FLEX-IBAR" OR "UNISTRUT" AND SHALL BE MINIMUM 12 GUAGE STEEL. MAXIMUM DEFLECTION SHALL BE LIMITED TO 1/240 SPAN.



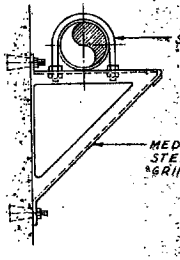
TRAPEZE PIPE HANGER



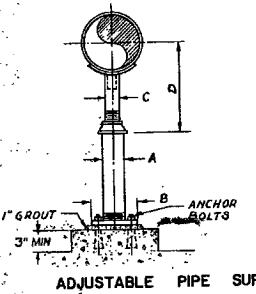
TYPE IV
MULTIPLE PIPE HANGER
TOP PIPE INSULATED



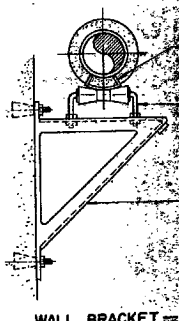
TYPE V
MULTIPLE PIPE HANGER
BOTTOM PIPE INSULATED



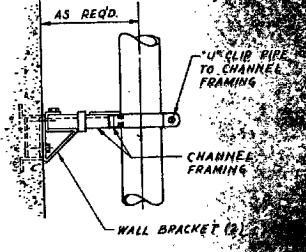
WALL BRACKET — UNINSULATED PIPE



ADJUSTABLE PIPE SUPPORT



WALL BRACKET — INSULATED PIPE



VERTICAL PIPE BRACKET

ADJUSTABLE PIPE SADDLE SUPPORT SCHEDULE DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN.	D MAX.
2 1/2	2 1/2	9	1 1/2	8	13
3	"	"	"	8 1/4	13 1/4
4	"	"	"	9 1/8	14 1/8
5	"	"	"	9 5/8	14 5/8
6	3	9	2 1/2	10 1/4	15 1/4
8	"	"	"	11 1/4	16 1/4
10	"	"	"	12 3/8	17 3/8
12	"	"	"	13 3/8	18 3/8

SCHEDULE — PIPE HANGER RODS & SPACING				
PIPE SIZE INCHES	ROD SIZE INCHES	MAX. SPACING FEET STEEL PIPE	COPPER TUBING	CAST IRON PIPE
1" & SMALLER	3/8"	6	5	—
1 1/4" TO 2"	3/8"	10	8	5
2 1/2" TO 3 1/2"	1/2"	10	8	5
4" TO 5"	5/8"	10	—	5
6"	3/4"	10	—	5
8" & LARGER	7/8"	10	—	5

NOTE:
WHERE NO REFERENCE TO PIPE HANGERS OR SUPPORTS IS GIVEN ON THE DRAWINGS, THE CONTRACTOR SHALL USE THE APPROPRIATE HANGER OR SUPPORT AT THE SPACING GIVEN AS SHOWN ON THIS DRAWING.

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

HALF-SIZE DRAWING

102634 AS CONSTRUCTED
DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
PIPE HANGER AND SUPPORT DETAILS

METROPOLITAN ENGINEERS
BROWN AND CALDWELL
HILL AND INGHAM
CORNY AND ROBERTS
R.W. BECK AND ASSOCIATES

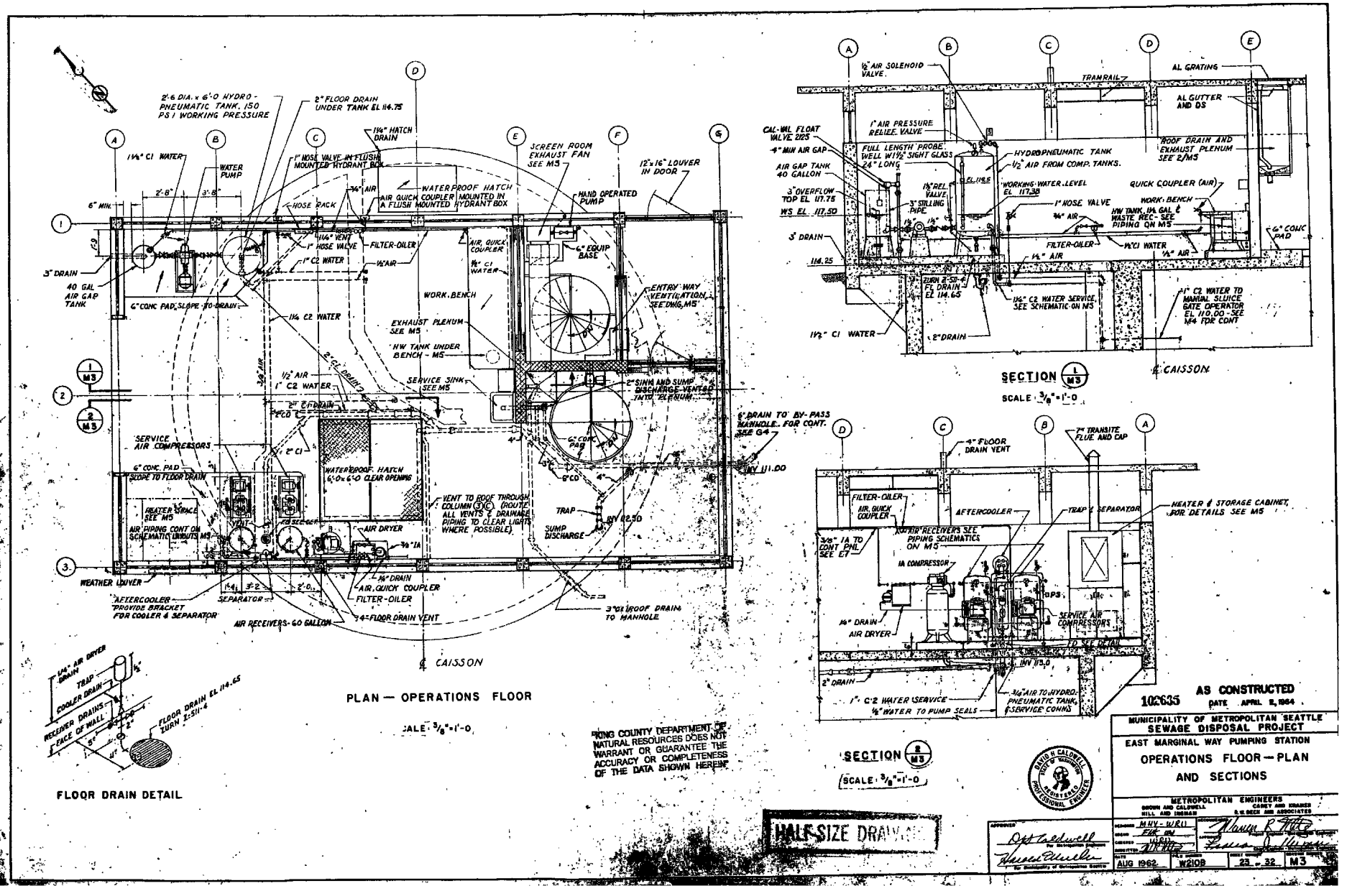
DESIGNED FK
DRAWN FK
CHECKED GH
SUBMITTED
DATE AUG 1962
FILE NUMBER W2108
SHEET NUMBER 22 OF 32
DRAWING NUMBER M 2

APPROVED
For Metropolitan Engineers
For Municipality of Metropolitan Seattle

DAVID H. CALDWELL STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

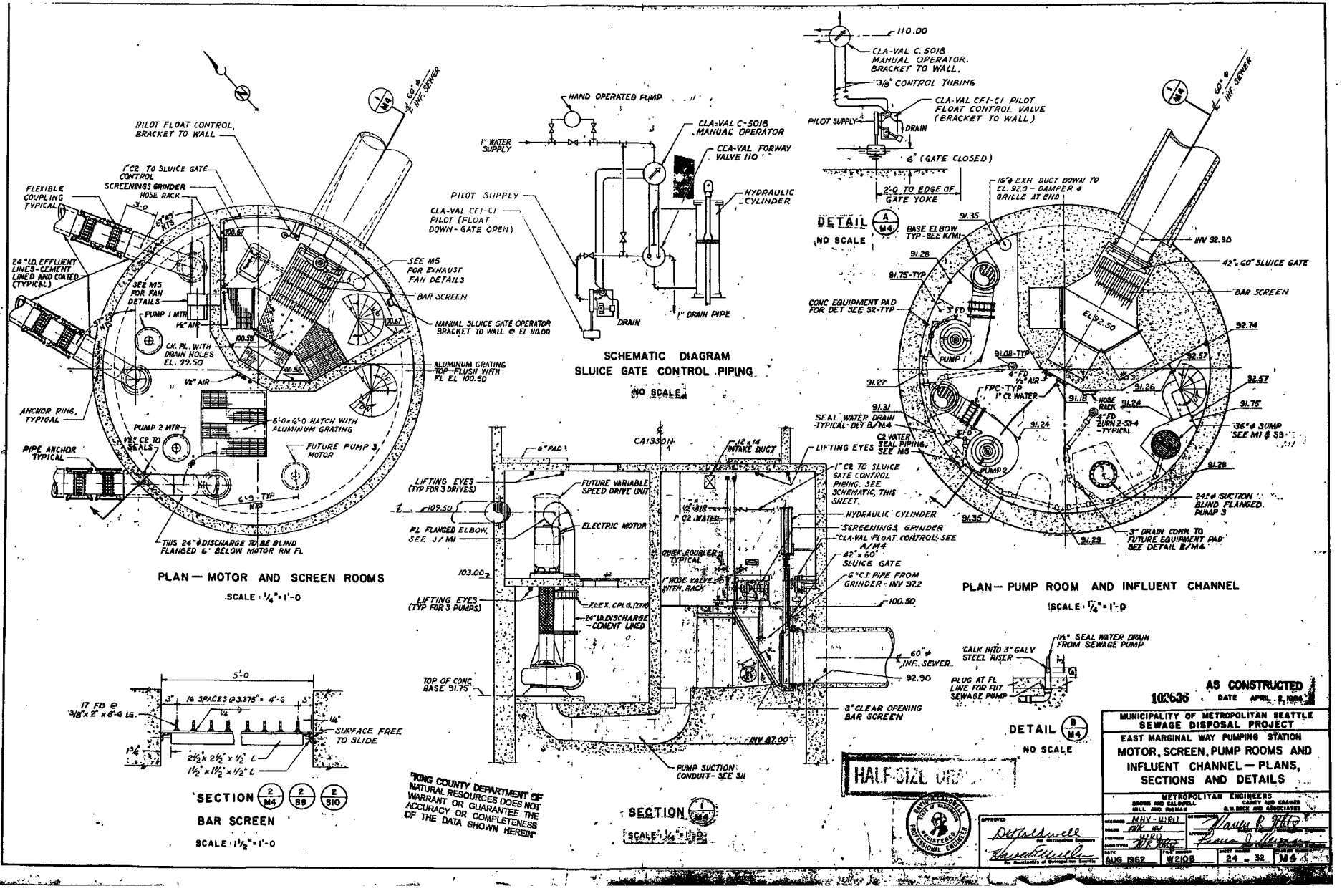
KCSlip4 62100

SEA430271



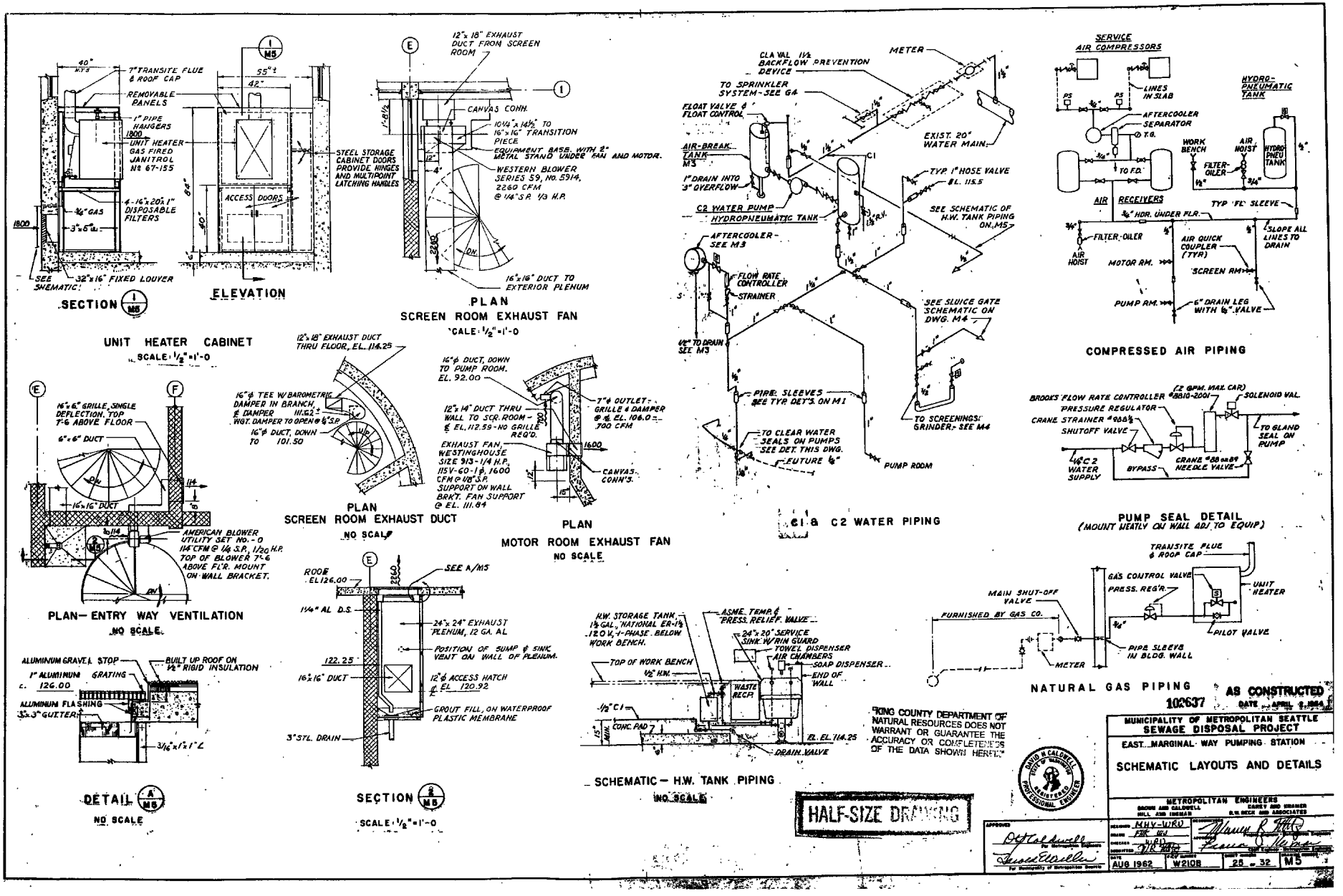
KCSlip4 62101

SEA430272



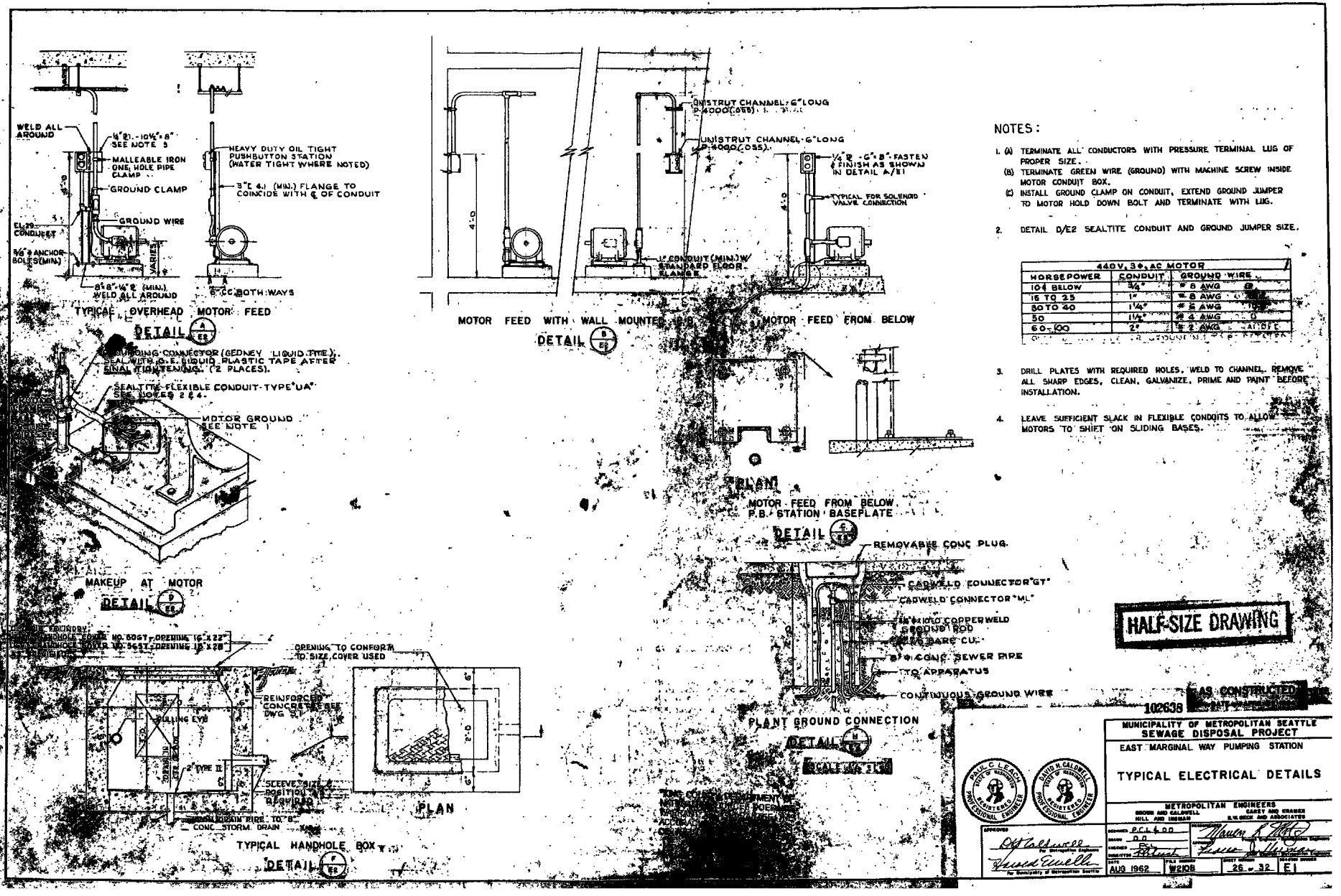
KCSlip4 62102

SEA430273



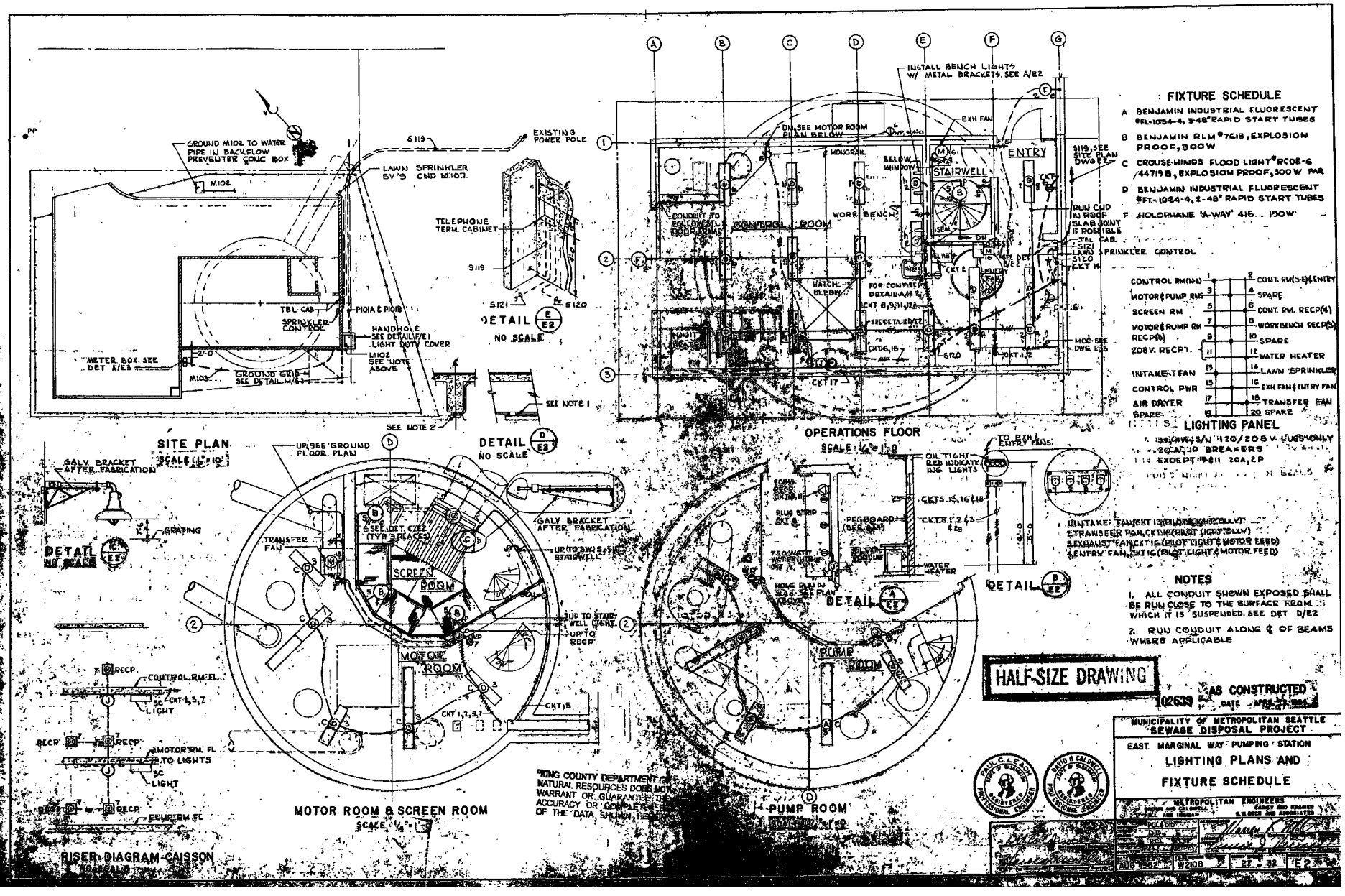
KCSlip4 62103

SEA430274



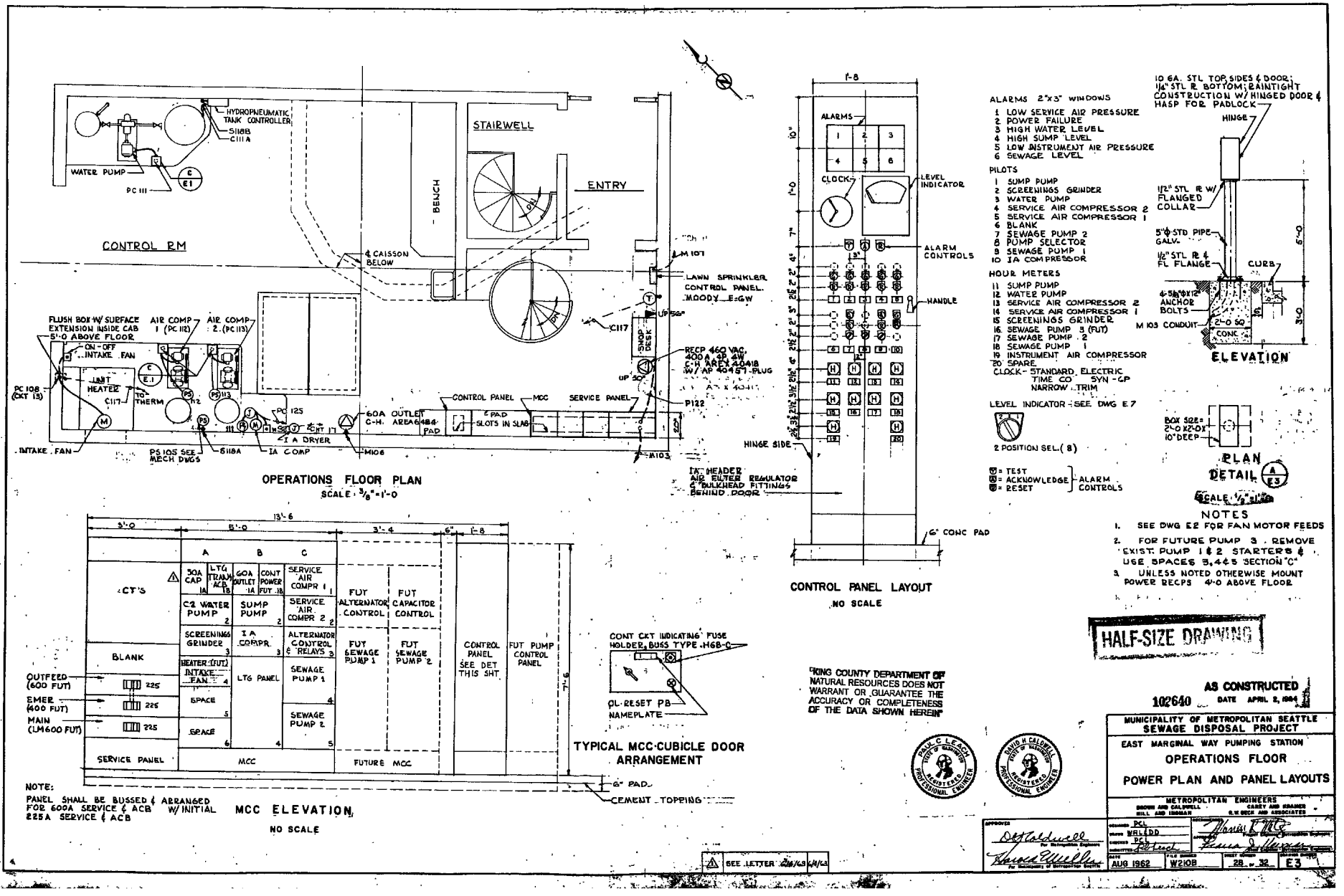
KCSlip4 62104

SEA430275



KCSlip4 62105

SEA430276



ALARMS 2"x3" WINDOWS

1 LOW SERVICE AIR PRESSURE
2 POWER FAILURE
3 HIGH WATER LEVEL
4 HIGH SUMP LEVEL
5 LOW INSTRUMENT AIR PRESSURE
6 SEWAGE LEVEL

PILOTS

1 SUMP PUMP
2 SCREENINGS GRINDER
3 WATER PUMP
4 SERVICE AIR COMPRESSOR 2
5 SERVICE AIR COMPRESSOR 1
6 BLANK
7 SEWAGE PUMP 2
8 PUMP SELECTOR
9 SEWAGE PUMP 1
10 IA COMPRESSOR

HOUR METERS

11 SUMP PUMP
12 WATER PUMP
13 SERVICE AIR COMPRESSOR 2
14 SERVICE AIR COMPRESSOR 1
15 SCREENINGS GRINDER
16 SEWAGE PUMP 3 (FUT)
17 SEWAGE PUMP 2
18 SEWAGE PUMP 1
19 INSTRUMENT AIR COMPRESSOR
20 SPARE

CLOCK - STANDARD ELECTRIC TIME CO. SYN-GP NARROW TRIM

LEVEL INDICATOR - SEE DWG E7

2 POSITION SEL. (8)

= TEST
= ACKNOWLEDGE
= RESET
} ALARM CONTROLS

NOTES

1. SEE DWG E2 FOR FAN MOTOR FEEDS
2. FOR FUTURE PUMP 3 - REMOVE EXIST. PUMP 1 & 2 STARTERS & USE SPACES 3,4 & 5 SECTION "C"
3. UNLESS NOTED OTHERWISE MOUNT POWER RECPS 4'-0 ABOVE FLOOR

NOTE:
PANEL SHALL BE BUSSED & ARRANGED FOR 600A SERVICE & ACB W/ INITIAL 225A SERVICE & ACB

TYPICAL MCC CUBICLE DOOR ARRANGEMENT

KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN

HALF-SIZE DRAWING

AS CONSTRUCTED
102640 DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
OPERATIONS FLOOR
POWER PLAN AND PANEL LAYOUTS

METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND INGRAM — R.W. BECK AND ASSOCIATES

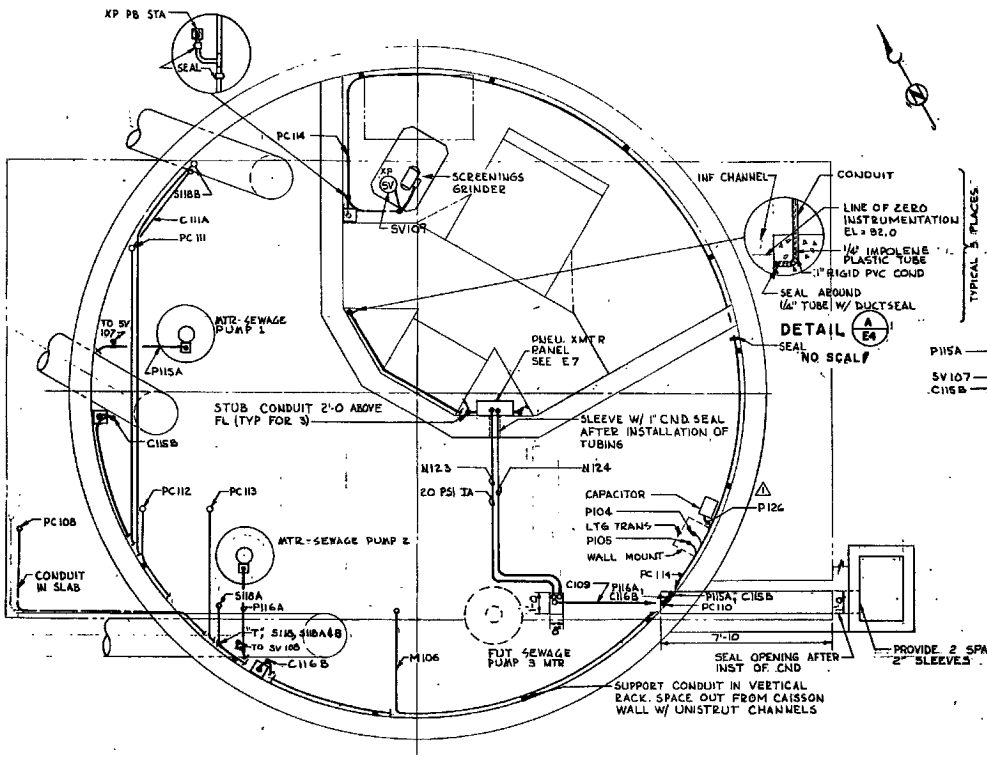
DESIGNED PCL
DRAWN WALLDD
CHECKED PCL
SUBMITTED
DATE AUG 1962
FILE CODE W210B
SHEET NUMBER 28 of 32
DRAWING NUMBER E3

APPROVED
For Metropolitan Engineers
For Municipality of Metropolitan Seattle

SEE LETTER 2/8/63 4/8/63

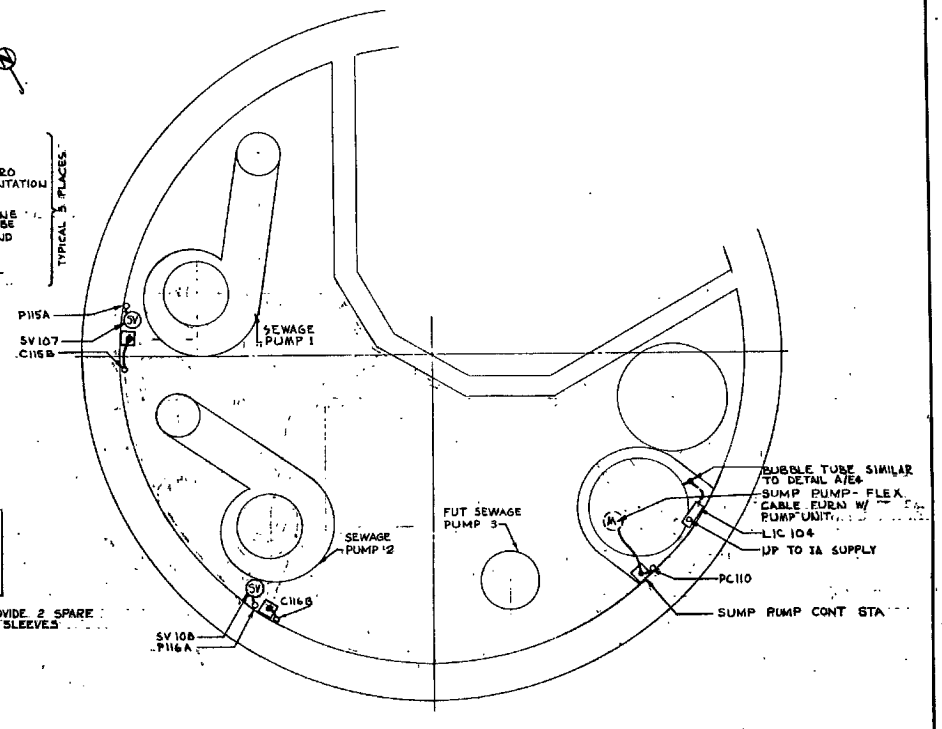
KCSlip4 62106

SEA430277



MOTOR ROOM & SCREEN ROOM

SCALE: 3/8"=1'-0



PUMP ROOM

SCALE: 3/8"=1'-0

HALF-SIZE DRAWING

"KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN"

102641 AS CONSTRUCTED DATE APRIL 2, 1964

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
MOTOR, SCREEN AND PUMP ROOM
POWER PLANS

PAUL C. LEACH, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER

DAVID H. CALDWELL, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER

METROPOLITAN ENGINEERS
BROWN AND CALDWELL, HILL AND INGMAN, CAREY AND KRAMER, R.W. BECK AND ASSOCIATES

APPROVED: D.H. Caldwell, For Metropolitan Engineers; Howard E. Wells, For Municipality of Metropolitan Seattle

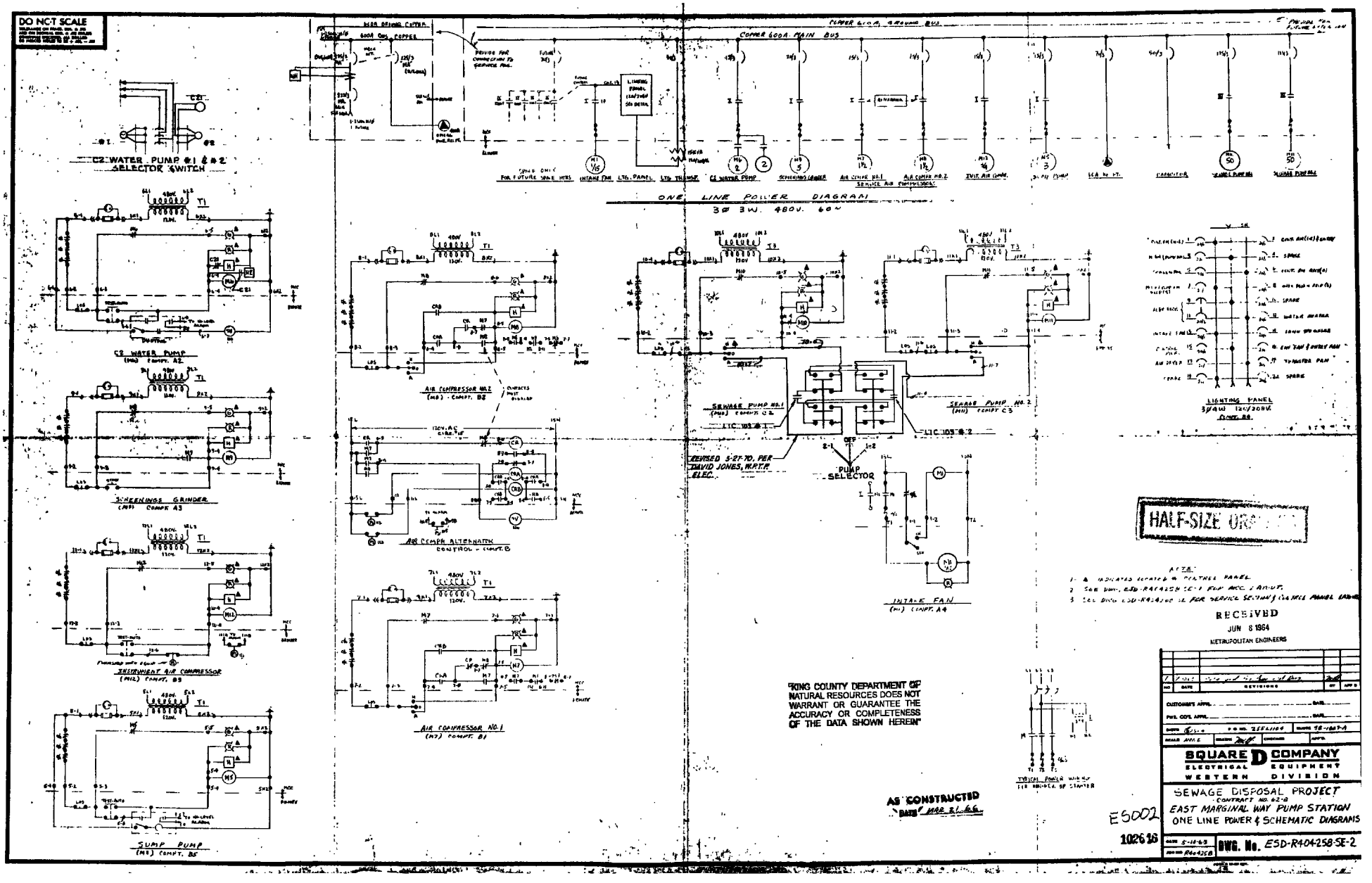
DRAWN: PCL; DD & WRL; CHECKED: PCL; SUBMITTED: [signature]

DATE: AUG 1962; FILE NUMBER: W2108; SHEET NUMBER: 29 - 32; DRAWING NUMBER: E4

SEE LETTER 6/4/63 6/4/63

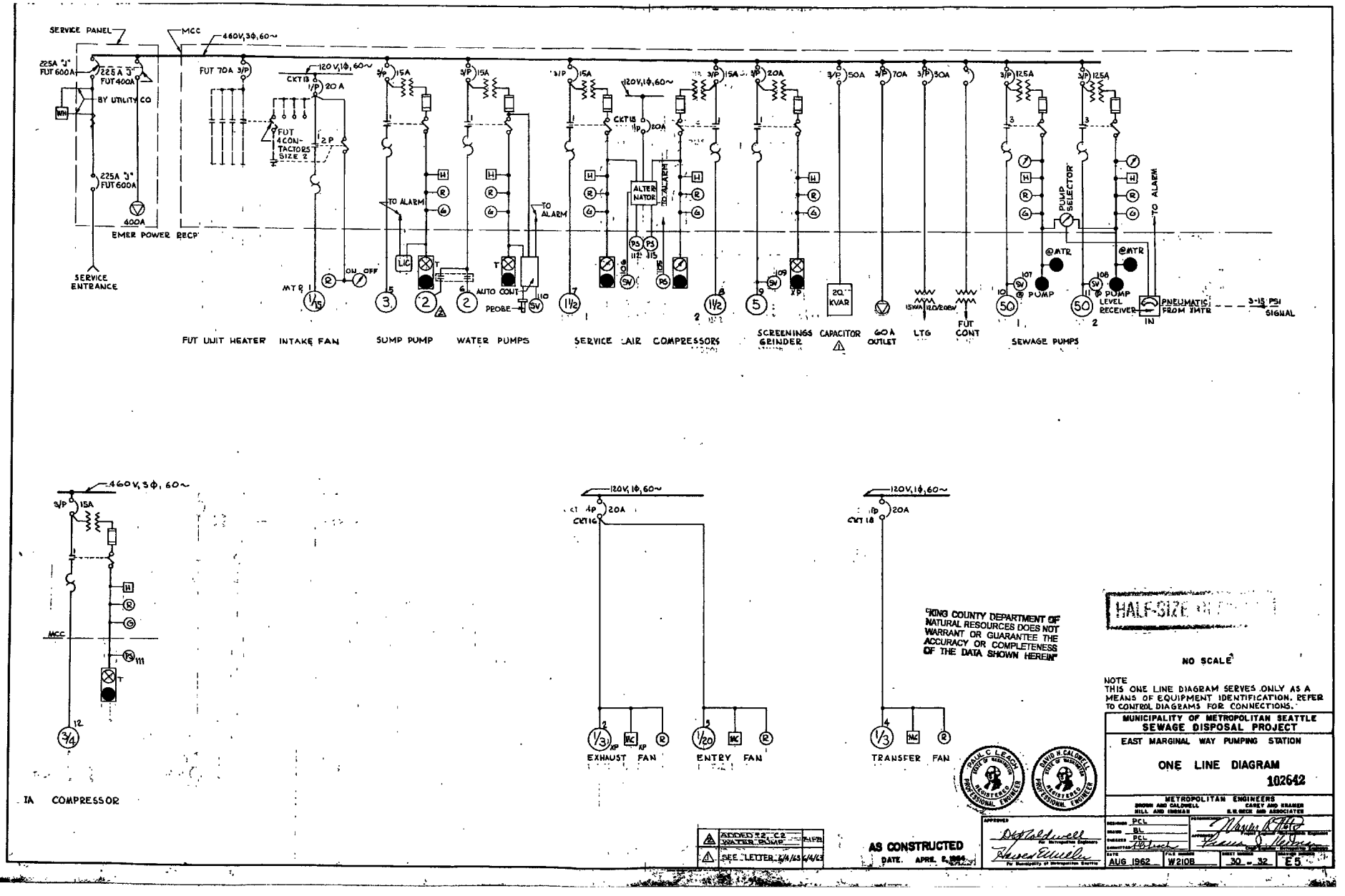
KCSlip4 62107

SEA430278



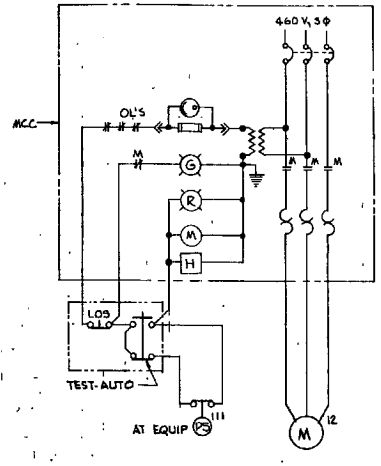
KCSlip4 62108

SEA430279

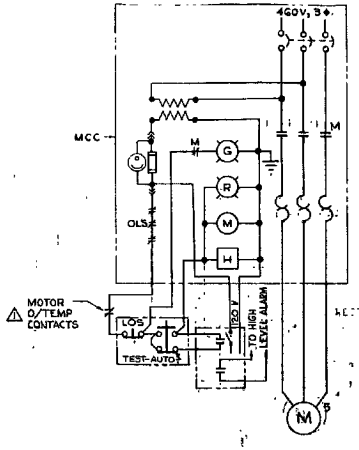


KCSlip4 62109

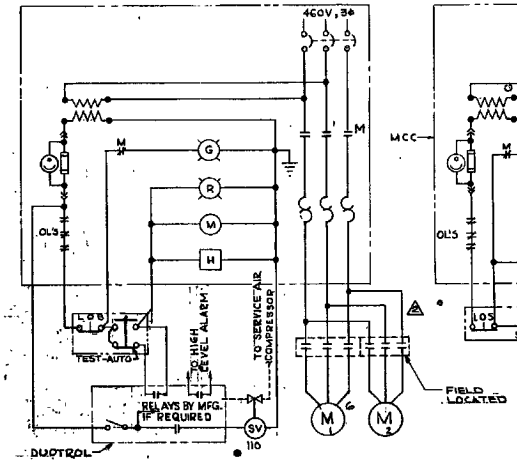
SEA430280



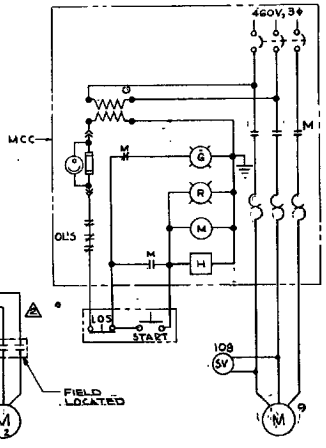
INSTRUMENT AIR COMPRESSOR



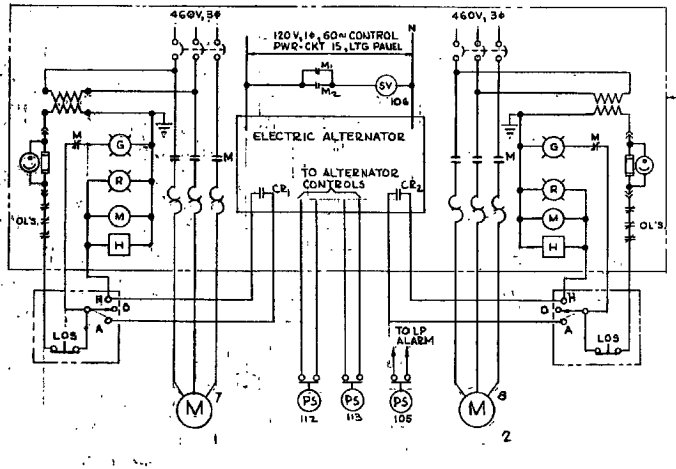
SUMP PUMP



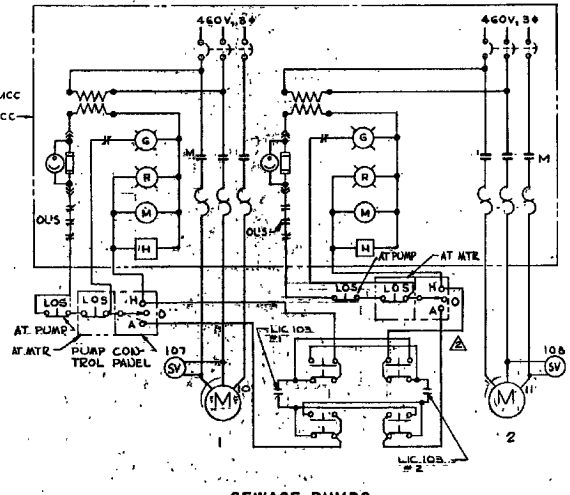
C2 WATER PUMP



SCREENINGS GRINDER



SERVICE AIR COMPRESSORS



SEWAGE PUMPS

KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN

HALF SIZE DRAWING

NO SCALE

MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT

EAST MARGINAL WAY PUMPING STATION

CONTROL DIAGRAMS

102643

METROPOLITAN ENGINEERS
BROWN AND CALDWELL — COREY AND KRAMER
HILL AND INGHAM — B.E. BECK AND ASSOCIATES

PAUL C. LEACH, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER

DAVID H. CALDWELL, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER

ADD #2 C2 WATER PUMP	7/16/63
SEE LETTER 6/4/63	6/4/63

AS CONSTRUCTED
DATE APRIL 2, 1964

APPROVED: For Metropolitan Engineers — For Municipality of Metropolitan Seattle

DESIGNED DCL
DRAWN DD
CHECKED
ASSISTED

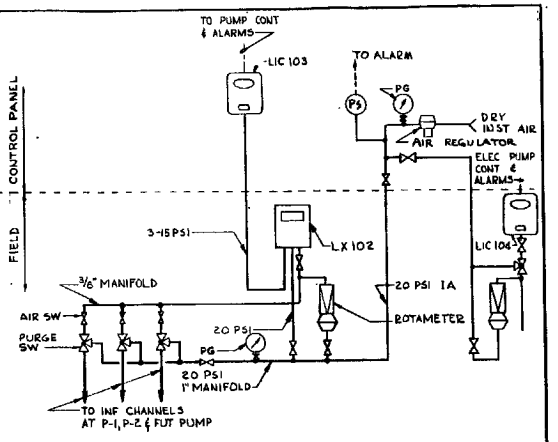
DATE AUG 1962 | FILE NUMBER W210B | SHEET NUMBER 31 - 32 | DRAWING NUMBER E6

KCSlip4 62110

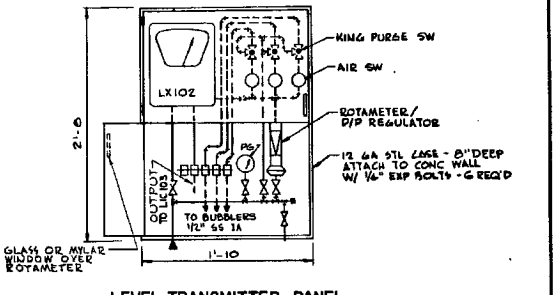
SEA430281

CONDUIT AND CABLE SCHEDULE

CONDUIT OR CABLE	FROM	TO	H.P.	VOLTS	WIRE SIZE	WIRE NO.	CONDUIT SIZE (INCHES)	SECTION IN MCC	NOTES
P101A	SERVICE HEAD @ UP	SERVICE PANEL	—	460	12 STL	1	3	—	UNDERGROUND SERVICE – WIRING BY SCL
P101B	SERVICE HEAD @ UP	SERVICE PANEL			12/STL	1	3		INSTALL PULL WIRE FOR FUT PARALLEL FEED
M102	SERVICE PANEL	EXTERNAL GROUND	—	—	2/0	1	—	—	CONDUCTOR TO GROUND GRID - EXTEND TO WATER SYSTEM
M103	SERVICE PANEL	METER BOX	—	—	10	10	1¼	—	
P104	MCC	LIGHTING TRANS	15 KVA	440	10	3	¾	A-18	
P105	LIGHTING TRANS	LIGHTING PANELBOARD	—	120/208	6	4	1¼	B-4	
M106	MCC	60 AMP OUTLET	—	440	4	6	1¼	B-1A	
M107	SPRINKLER CONT PNL	SPRINKLER S.V'S	—	L.V.	4	14	3/4	—	FEED 2 TURFCO 6125 SV'S
PC108	MCC	FUTURE HEATER AND INTAKE FAN	—	—	5	12	1½	A-4	CKT 15
C109	MCC	PUMP CONTROL PANEL		—	12	—	2½	—	INTERCONNECTIONS AS REQUIRED
PC110	MCC	SUMP PUMP	3	440	12	4	1¼	B-2	"T" CONDUIT TO PB STA & LIC. FEED MOTOR W 4/C #14 SO PORT CABLE
		CONTROL & ALARM	—	120	12	7			
PC111	MCC	C2 WATER PUMP	2	440	12	4	1¼	A-2	
		CONTROL	—	120	12	5			
C111A	"T" BELOW CONT STA	HYDROPNEUMATIC CONTROLLER		120	12	4	3/4		
PC112	MCC	SERVICE AIR COMPRESSOR	1½	440	12	4	1¼	C-1	
		CONTROL	—	120	12	7			
PC113	MCC	SERVICE AIR COMPRESSOR	1½	440	12	4	1¼	C-2	
		CONTROL	—	120	12	7			
PC114	MCC	SCREENINGS GRINDER	5	440	12	4	1	A-3	
		CONTROL	—	120	12	3			
P115A	MCC	SEWAGE PUMP 1	50	440	2	4	2	C-4	
C115B		CONTROL	—	120	12	5	¾		
P116A	MCC	SEWAGE PUMP 2	50	440	2	4	2	C-5	
C116B		CONTROL	—	120	12	5	¾		
C117	THERMOSTAT	HEATER OUTLET BOX	—	120	12	5	¾	—	FUT CONT'S FOR 4 STAGE ELEC HTR - USE 2 WIRES NOW.
S118	CONTROL PANEL	"T"	—	—	12	4	1		
S118A	"T"	PS @ AIR RECEIVERS	—	—	12	2	¾		
S118B	"T"	PS @ HYDROPNEUMATIC TANK	—	—	12	2	¾		
S119	UTILITY POLE	TELEPHONE CABINET	—	—	1	#12 STL	1¼		
S120	TEL CAB	TEL OUTLET & CONTROL PANEL		—	1	#12 STL	¾		
S121	TEL CAB	GROUND		—	—	—	¾		
P122	SERVICE PANEL	EMERGENCY POWER RECP		460	500MCM	3	4		SEE ONE LINE DIAG, DWG E5
					2/0	1			
N123	CONTROL PANEL	ROTAMETER & LEVEL XMTR	—	—	—	—	3/8" SCH 40	—	STAINLESS STEEL
N124	LEVEL XMTR	CONTROL PANEL	—	—	—	—	1/4	—	PVC JACKETED COPPER
PC125	MCC	IA COMPRESSOR	3/4	440	12	7	1¼	B 3	
P125	MCC	CAPACITOR	3/4	440	8	3	1	A1-A	



INSTRUMENT AIR DIAGRAM



LEVEL TRANSMITTER PANEL
NO SCALE

INSTRUMENTS

INSTRUMENT AIR REGULATOR
CONOFLOW MODEL H-10 W/ 2" PG

ROTAMETER & D/P REGULATOR
BROOKS ROTAMETER "SHO-RATE 50" MODEL
No 8800 W/CONSTANT PRESS DIFF RELAY &
TUBE # 2-65A; RANGE 0.2 TO 2 CFH

LX102 LEVEL XMTR
FOXBORO MODEL M/44, INDICATING, 0-8FT
RANGE CU-NI-MN DIAPHRAGM ELEMENT

LIC 103 LEVEL INDICATOR-CONTROLLER
FOXBORO MODEL 41 INDICATING CONTROLLER
W/ CONTACTS FOR CONTROL OF PUMPS & ALARMS

LIC104 LEVEL INDICATOR-CONTROLLER
FOXBORO M45 INDICATING CONTROLLER W/
CONTACTS FOR CONTROL OF PUMP & ALARM

PS 105 PLANT AIR LOW PRESSURE
SIRCO MODEL 201; RANGE 20-200 PSI

SV106 AFTERCOOLER SV, 120V, (BY MECH)

SV 107 SEWAGE PUMP 1 WATER SEAL SV, 440V, (BY MECH)

SV108 SEWAGE PUMP 2 WATER SEAL SV, 440V, (BY MECH)

SV109 SCREENINGS GRINDER WATER SEAL SV, 440V, (BY MECH) XP

SV110 AIR ADMISSION SV, 120V, (FURNISH W/ DOOTROL
SEE ELEC SPECIFICATIONS)

PS111 INSTRUMENT AIR PRESSURE
SIRCO MODEL 201; RANGE 2-30 PSI

PS 112 SERVICE AIR COMPR 1 CONTROL
SIRCO MODEL 201; RANGE 20-200 PSI
PS 113 SERVICE AIR COMPR 2 CONTROL
SIRCO MODEL 201; RANGE 20-200 PSI.

CONDUIT CODING SYSTEM

PC UTILIZATION POWER & CONTROL
P UTILIZATION POWER
C UTILIZATION CONTROL
S SIGNAL
M MISCELLANEOUS
N INSTRUMENTATION - PNEUMATIC

EACH PRINCIPAL CONDUIT OR CABLE GROUP IS DESIGNATED W/ A PREFIX LETTER & A 3 DIGIT SERIALLY NUMBERED GROUP LTG CONDUIT IS NOT LISTED

KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREON

SEE LETTER 6/4/63	6/4/63

AS CONSTRUCTED
DATE APRIL 2, 1964

102614

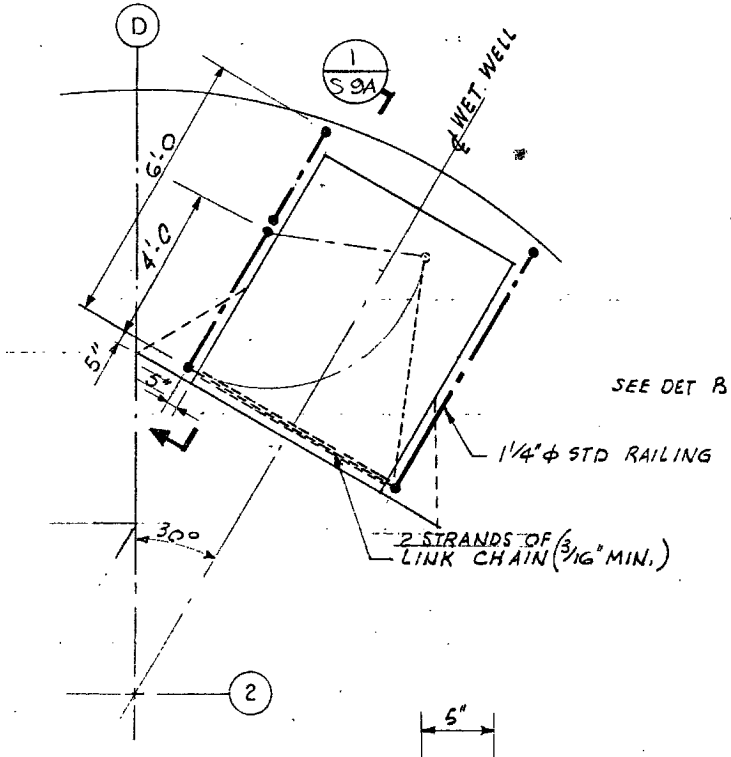
MUNICIPALITY OF METROPOLITAN SEATTLE
SEWAGE DISPOSAL PROJECT
EAST MARGINAL WAY PUMPING STATION
CONDUIT AND CABLE SCHEDULE
INSTRUMENT DIAGRAMS

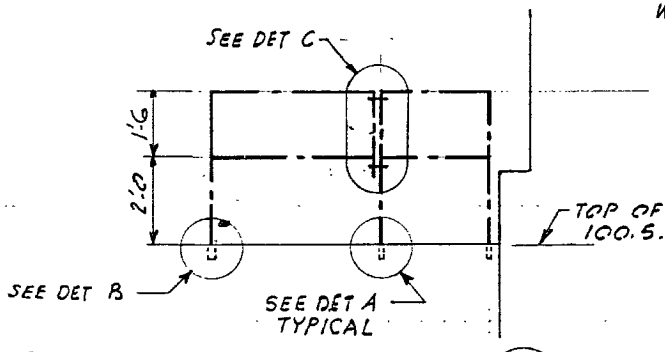
METROPOLITAN ENGINEERS
BROWN AND CALDWELL — CAREY AND KRAMER
HILL AND URBAN — B.V. BECK AND ASSOCIATES

DESIGNED PC & BL
DRAWN BL
CHECKED PC
SUBMITTED

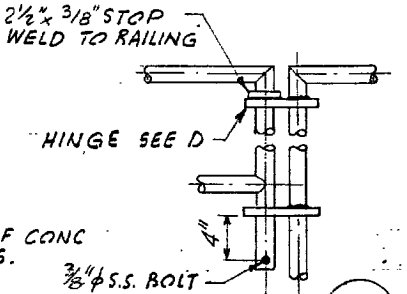
DATE AUG 1962 | FILE NUMBER W2108 | SHEET NUMBER 32 OF 32 | DRAWING NUMBER E7

KCSlip4 62111
SEA430282

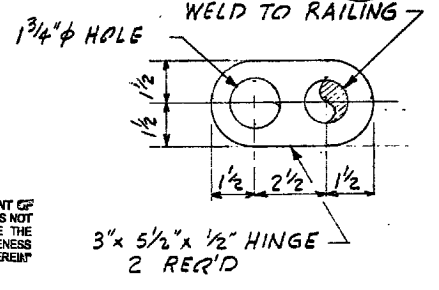




SECTION 1 / S 9A
3/8" = 1'-0

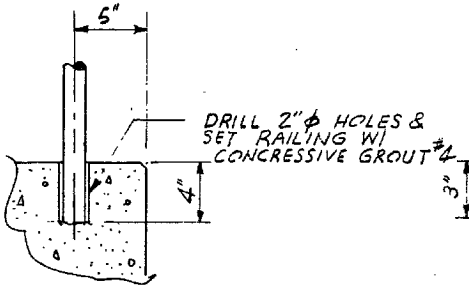


DETAIL C / S 9A
1½" = 1'-0

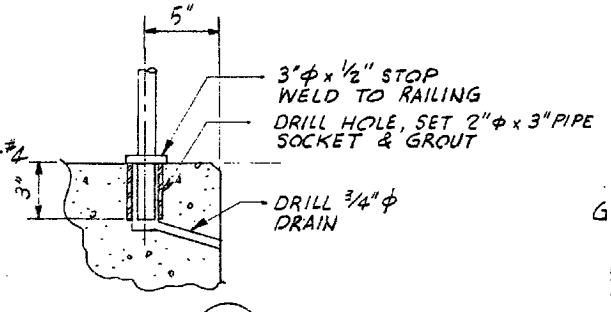


DETAIL D / S 9A
3" = 1'-0

KING COUNTY DEPARTMENT OF NATURAL RESOURCES DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE DATA SHOWN HEREIN



DETAIL A / S 9A
1½" = 1'-0



DETAIL B / S 9A
1½" = 1'-0

GALV. AFTER FAB.

HALF-SIZE

102629

DWG S9A

DATE	BY	CHECKED	APPROVED	JOB NO.		TITLE	SHEET NO.
10-28-63	WG	WRO	AGC	W 310 B	METROPOLITAN ENGINEERS SEATTLE, WASHINGTON	EAST MARGINAL WAY PUPING STATION WETWELL RAILING	1

KCSlip4 62112

SEA430283