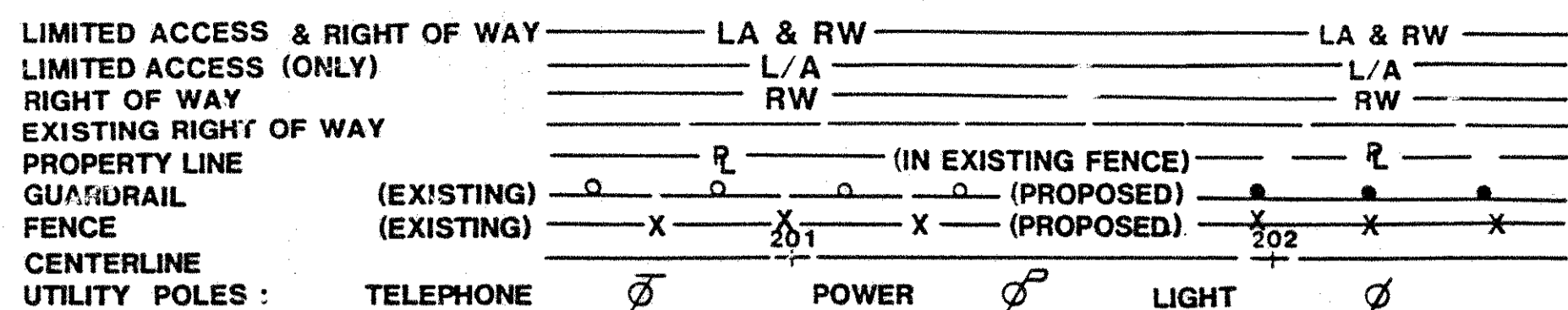


CONVENTIONAL SIGNS:



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

AUGLAIZE COUNTY		OHIO
AUG-33-6.82		FHWA REGION 5
REST AREA	SAFETY REST AREA	FEDERAL PROJECT
F - 11(92)		

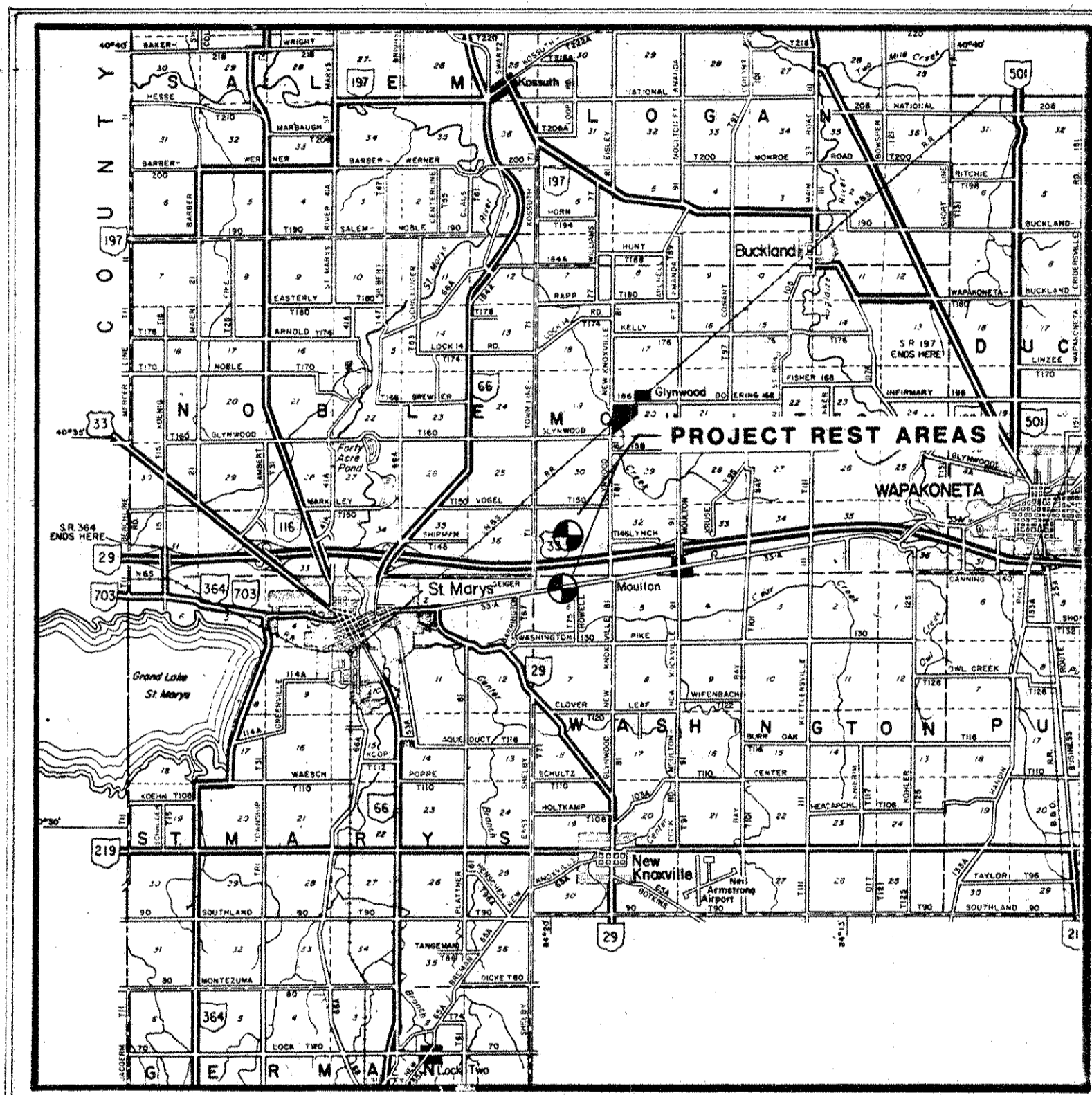
1/80

AUG - 33 - 6.82
SAFETY REST AREA

AUGLAIZE COUNTY - MOULTON TOWNSHIP

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LOCATION MAP :

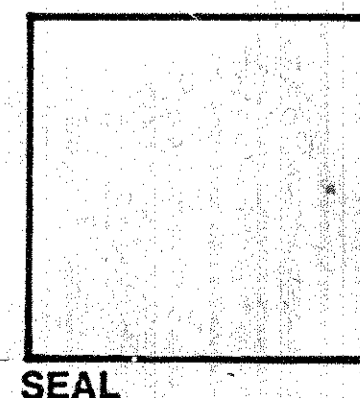
SCALE IN MILES
STATE AND FEDERAL ROUTES
OTHER ROADS
PORTION TO BE IMPROVED

LINE DATA :

NET LENGTH OF PROJECT = 0.00 LN. FT. OR 0.00 MILE
 BEGIN WORK 362+00
 END WORK 405+00
 TOTAL NET LENGTH OF WORK = 4300 LN. FT. OR 0.814 MILE

PLAN PREPARED BY:

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN SERVICES
ROADSIDE DEVELOPMENT SECTION
COLUMBUS, OHIO



PROJECT: AUG-33-6.82

DATE OF LETTING: _____, 19____ CONTRACT NO. _____

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
BP-6	6-1-65	HL-9	3-22-77		
BP-7	12-6-76	HL-10	12-28-84		
BP-12	7-7-81	HL-11	6-1-79	MC-4	7-26-76
BP-5	1-11-85	HL-12	12-28-84		
MH-1	12-18-84	HL-15	12-28-84	MH-3	12-18-84
CB-2-2A1B	5-1-79	HL-16	12-28-84		
MC-2	7-7-81				
F-1	11-10-83	HW-D	6-1-65		
F-4	11-10-83				
		LA-1	6-1-79		
		LA-2	6-1-79		
HL-1	12-28-84				
HL-2	7-27-73				
HL-3	12-28-84				
HL-8	1-21-76				

SUPPLEMENTAL SPECIFICATIONS	
SPECIAL SPECIFICATIONS FOR REST AREAS 30 OCT '87	
814	1-1-69
824	10-8-82

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway freeway by action of the Director of Transportation in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1987 SPECIFICATIONS :

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway except for the affected Rest Area, and that provisions for maintenance and safety of traffic will be set forth in these plans and estimate.

APPROVED Richard Anderson
DATE 3/31/87 ENGINEER, DESIGN SERVICES

APPROVED St. Kenneth Cobello, P.E.
DATE 4/22/87 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED Walter H. Kaulle
DATE 6-25-87 CHIEF ENGINEER, PLANNING AND DESIGN

APPROVED Walter J. Smith
DATE 6-25-87 DIRECTOR OF TRANSPORTATION

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ADMINISTRATOR	DATE

PROJECT GENERAL DESCRIPTION

THE REHABILITATION OF TWO REST AREA FACILITIES IN AUGLAIZE COUNTY (AUG-33-6.82) SHALL INCLUDE TWO MOTORIST SERVICES BUILDINGS (MSB-4), A 8,000 GALLON WASTEWATER TREATMENT SYSTEM, STORM DRAINAGE, UTILITIES, SIDEWALKS, SERVICE DRIVES, PICNIC TABLES, CHARCOAL GRILLS, LANDSCAPING AND LIFT STATION.

OTHER PROJECTS

A ROADWAY PROJECT MAY BE UNDER CONSTRUCTION WITHIN THE WORK LIMITS OF THIS PROJECT AT THE SAME TIME. IF THIS DOES OCCUR, THE CONTRACTOR FOR THIS PROJECT SHALL MEET WITH THE CONTRACTOR OF THE REST AREA PROJECT AND COORDINATE BOTH PROJECTS TO ELIMINATE ANY CONFLICTS THAT COULD DELAY THE COMPLETION OF EITHER PROJECT.

BENCH MARK AND BASE LINE

A BENCH MARK AND BASE LINE WILL BE ESTABLISHED BY ODOT PERSONNEL.

CLOSURE OF REST AREAS TO THE PUBLIC

REST AREAS SHALL BE CLOSED TO THE TRAVELING PUBLIC FOR THE TOTAL TIME PERIOD OF CONSTRUCTION.

ITEM 619 - FIELD OFFICE

THE GENERAL CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 400 SQUARE FEET OF FLOOR SPACE. PAYMENT SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 619 FIELD OFFICE.

ITEM 106.06 - STORAGE OF MATERIALS AND EQUIPMENT

ALL MATERIALS, EQUIPMENT AND VEHICLES SHALL BE STORED WITHIN THE CONFINES OF THE PARKING LOTS AT THE DIRECTION OF THE ENGINEER.

ITEM 614 - TRAFFIC MAINTENANCE

THE GENERAL CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS (SIGNS, BARRIERS, ETC.) FOR CONTROL OF TRAFFIC DURING CONSTRUCTION AS SHOWN ON SHEET NO. 10.

THE CONTRACTOR SHALL FURNISH, PLACE AND SUBSEQUENTLY REMOVE THE BARRIER AS WELL AS FURNISH, ERECT AND SUBSEQUENTLY REMOVE ALL SIGNS AND OTHER TRAFFIC CONTROL DEVICES NECESSARY TO CLOSE THE REST AREAS. ANY TEMPORARY REARRANGEMENT OR ALTERATION OF THE TRAFFIC CONTROL DEVICES THAT MAY BECOME NECESSARY FOR THE CONTRACTOR TO FACILITATE THE OPERATIONS SHALL BE DONE BY THE CONTRACTOR. HOWEVER, NO TRAFFIC CONTROL DEVICES SHALL BE REARRANGED OR ALTERED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. AT THE CONCLUSION OF THE TEMPORARY OPERATION, THE CONTRACTOR SHALL REPLACE THE TRAFFIC CONTROL DEVICES TO THEIR ORIGINAL POSITION AND CONDITION.

UNDERGROUND UTILITY LINES

CALL TWO (2) WORKING DAYS BEFORE YOU DIG: 1-800-362-2764 TOLL FREE, OHIO UTILITIES PROTECTION SERVICE. NON-MEMBERS MUST BE CALLED DIRECTLY.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.04 ORC.

UTILITY OWNERS

1. POWER COMPANY
MIDWEST ELECTRIC, INC.
RT. 33-A, BOX 10
ST. MARYS, OHIO 45885
2. TELEPHONE COMPANY
GENERAL TELEPHONE COMPANY
GRAND LAKE ROAD
CELINA, OHIO

ITEM 625 - POWER SERVICE, AS PER PLAN

THE ELECTRICAL CONTRACTOR SHALL CONTACT THE POWER COMPANY AND ARRANGE FOR THEM TO PROVIDE AND INSTALL THE SERVICE POLE, PRIMARY ELECTRIC CABLES, TRANSFORMER AND METERING EQUIPMENT AT THE LOCATIONS SHOWN IN THE PLANS AND MAKE CONNECTIONS AT THE SERVICE POLE, TRANSFORMER AND METERING EQUIPMENT TO ESTABLISH THE PERMANENT ELECTRICAL POWER SERVICE FOR THE EXCLUSIVE USE OF THE STATE'S FACILITIES BEING CONSTRUCTED BY THIS CONTRACT.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR COMPENSATING THE POWER COMPANY FOR THE ESTABLISHMENT OF THE SERVICE AND FOR ANY ENERGY USED BETWEEN THE ESTABLISHMENT OF THE SERVICE AND FINAL ACCEPTANCE BY THE STATE.

PAYMENT SHALL BE MADE PER EACH ITEM 625 "POWER SERVICE, AS PER PLAN" FOR EACH REST AREA IN WHICH POWER SERVICE IS PROVIDED.

ITEM SPECIAL - TELEPHONE SERVICE

THE ELECTRICAL TELEPHONE CONTRACTOR SHALL CONTACT THE TELEPHONE COMPANY AND ARRANGE FOR THE INSTALLATION OF TELEPHONE SERVICE AND TELEPHONE EQUIPMENT AT THE LOCATIONS SHOWN IN THE PLANS.

AT LEAST ONE OF THE TWO PUBLIC TELEPHONE STATIONS IN THE MOTORIST SERVICES BUILDING SHALL BE ARRANGED FOR ACCESS BY HANDICAPPED PERSONS, AND SHALL BE EQUIPPED TO ALLOW ACCESS TO THE TELEPHONE COMPANY OPERATOR WITHOUT DEPOSITING ANY FORM OF PAYMENT.

THE TELEPHONE IN THE STORAGE UNIT SHALL BE EQUIPPED TO RECEIVE INCOMING CALLS AND NOT ALLOW OUTGOING CALLS TO BE CHARGED TO THE STORAGE UNIT PHONE, BUT ALLOW THE STORAGE UNIT PHONE TO BE USED TO CONTACT THE OPERATOR AT NO CHARGE, OR TO PAY FOR DIRECT DIALED OUTGOING CALLS AT THE TIME THE CALL IS PLACED.

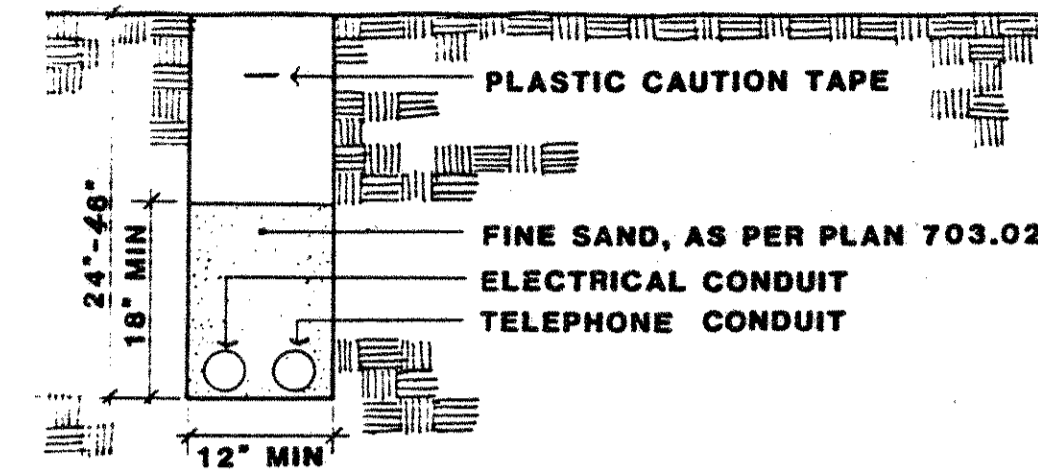
THE CONTRACTOR SHALL COMPENSATE THE TELEPHONE COMPANY AS REQUIRED. EQUIPMENT PROVIDED BY THE TELEPHONE COMPANY SHALL REMAIN THE PROPERTY OF THE TELEPHONE COMPANY.

PAYMENT SHALL BE MADE PER EACH ITEM SPECIAL "TELEPHONE SERVICE" FOR EACH REST AREA FOR WHICH TELEPHONE SERVICE IS ARRANGED AND INSTALLED.

ITEM SPECIAL - PLASTIC CAUTION TAPE

PLASTIC CAUTION TAPE, AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR THE MOTORIST SERVICES BUILDING, SHALL BE INSTALLED ABOVE THE PRIMARY ELECTRIC CABLE UP TO THE TRANSFORMER PAD. VERTICAL TAPE LOCATION IS DETAILED ON THIS SHEET.

FEET TRENCH DETAIL:



UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD CONSTRUCTION DRAWING HL 10 FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ESTIMATED QUANTITY OF 780 LINEAR FEET OF ITEM 603, 4" CONDUIT TYPE E" IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 452 - 7" PLAIN CONCRETE PAVEMENT, AS PER PLAN

SUBGRADE UNDER SERVICE DRIVES AND CURB RAMPS SHALL BE COMPACTED TO A DEPTH OF SIX INCHES (6") AS DESCRIBED IN 203.13. JOINTS SHALL BE PLACED AT MAXIMUM TEN FOOT (10') INTERVALS AND CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING EP-6. THE COST OF JOINTS, GRADING, EXCAVATION AND COMPACTION SHALL BE INCLUDED IN ITEM 452 - 7" PLAIN CONCRETE PAVEMENT, AS PER PLAN.

ITEM 608, 4" CONCRETE WALK, AS PER PLAN

ITEM 304, AGGREGATE BASE SHALL BE PLACED UNDER ALL AREAS OF 4" CONCRETE WALKS, AS PER PLAN. THE AGGREGATE WILL BE INCLUDED IN THE BID FOR ITEM 608, 4" CONCRETE WALK, AS PER PLAN.

EXCAVATION FOR FOUR INCHES (4") OF AGGREGATE BASE SHALL BE INCLUDED IN THE LUMP-SUM PRICE BID FOR ITEM 203, EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION.

EMBANKMENT FOR WALK AREAS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 203, EMBANKMENT.

CONCRETE SLABS

DETAIL PLACEMENT OF WOOD BENCHES AND SLABS PICNIC TABLES AND SLABS, WASTE RECEPTACLE SLABS AND SLEEVES, CHARCOAL GRILLS AND SERVING TABLES (WITH SLABS) SHALL BE AS DIRECTED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST. COST FOR EACH ITEM AND SLAB SHALL BE INCLUDED IN EACH ITEM SPECIAL AS DESCRIBED AND DETAILED ON THE FOLLOWING SHEETS: 13, 17, 19 & 23.

TREE PROTECTION

NO WORK WILL BE PERMITTED WHERE TREES, SHRUBS OR UTILITIES ARE PRESENT WITHIN THE WORK LIMITS OF THE REST AREA PROJECT PRIOR TO STAKING BY THE GENERAL CONTRACTOR OR THE LIMITS OF ALL REST AREA BUILDINGS, SERVICE DRIVES, SIDEWALKS, GRADING WORK AND EXISTING AND PROPOSED UTILITY LINES.

THE METHOD FOR MARKING TREES AND SHRUBS TO BE SALVAGED, PROTECTED OR REMOVED WILL BE ESTABLISHED BY THE ENGINEER, DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST AND THE GENERAL CONTRACTOR PRIOR TO WORK AROUND ANY EXISTING TREES, SHRUBS AND UTILITY LINES.

TREE AND ROOT SYSTEM PROTECTION USING SNOW FENCE SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS INDICATED ON THE PLAN AND AS DIRECTED BY THE ENGINEER. TREE ROOT AREAS EQUAL TO 24" OUTSIDE THE BRANCH SPREAD SHALL BE PROTECTED AS PER STANDARD DRAWING LA-1.

ONLY PNEUMATIC TIRED EQUIPMENT SHALL BE USED WITHIN THE REST AREAS OUTSIDE THE PARKING LOTS. CARE SHALL BE TAKEN BY THE VARIOUS CONTRACTORS NOT TO OPERATE EQUIPMENT OR OTHER VEHICLES WHEN THE GROUND IS WET OR SOFT IN ORDER TO AVOID DEEP RUTTING, SOIL COMPACTION AND OTHER DESTRUCTION OF TREE ROOT SYSTEMS.

TREES TO BE SALVAGED THAT ARE DAMAGED AT ANY TIME DURING THE CONTRACT SHALL BE REPAIRED OR REPLACED (AT THE CONTRACTOR'S EXPENSE) AS DETERMINED BY THE ENGINEER AFTER CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST. DAMAGED TREES THAT CAN BE REPAIRED SHALL BE PRUNED AND THE DAMAGE REPAIRED WITH PAINT OR WOUND DRESSING AS PER 663.14. REPLACEMENT SHALL BE, IN QUANTITY AND QUALITY, SUFFICIENT TO COMPENSATE FOR SIZES OR TREES LOST. THE WORK SHALL BE COMPLETED AS PER 665 WITH TREES OF THE SIZE AND VARIETY, AS DIRECTED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST.

APPROVED EQUAL MANUFACTURERS OR COMPANIES

IT IS INTENDED, THAT IN THOSE LOCATIONS THROUGHOUT THE PLANS AND SPECIAL SPECIFICATIONS WHERE MANUFACTURING COMPANIES OR SOURCES OF MATERIALS ARE LISTED, THE CONTRACTORS MAY UTILIZE OTHER MANUFACTURING COMPANIES OR SOURCES OF MATERIALS PROVIDED THE INTENT OF THE PLANS AND SPECIAL SPECIFICATIONS ARE FOLLOWED.

THE ACCEPTANCE OF THE CONTRACTORS PROPOSED ALTERNATIVES WILL BE DETERMINED BY THE SUBMISSION AND APPROVAL OF THE CONTRACTORS SHOP DRAWINGS OR MATERIAL SELECTIONS.

ESTIMATED QUANTITIES AND BID ITEMS

THE ESTIMATED QUANTITIES OF THE VARIOUS SPECIFIC AND SPECIAL ITEMS LISTED THROUGHOUT THESE PLANS ARE APPROXIMATE. THESE QUANTITIES ARE SUBSEQUENTLY INCLUDED IN THE FOUR (4) BID ITEMS LISTED ON THE GENERAL SUMMARY SHEET AND IN OTHER CONTRACT DOCUMENTS.

MISCELLANEOUS

FOR ADDITIONAL NOTES, PAY ITEMS AND DESCRIPTIONS, SEE VARIOUS SPECIALTY ITEM SHEETS THROUGHOUT THE PLANS.

EXISTING SHELTER HOUSES

THE EXISTING SHELTER HOUSES SHALL REMAIN UNDISTURBED AND SHALL BECOME A FEATURE OF THE REDESIGNED FACILITIES.

ITEM SPECIAL - WELL CLEANING

BEFORE PUMPS ARE INSTALLED AT THE EXISTING WELLS, THE CONTRACTOR SHALL SURGE THE WATER AND CLEAN THE WELL BY FAST BAILING. USE OF A SWAB OR OTHER METHODS APPROVED BY THE ENGINEER.

AFTER COMPLETION OF CLEANING, THE TOTAL DEPTH OF EACH WELL SHALL BE AS INDICATED IN THE PLANS AND THE FOLLOWING DATA SHALL BE FURNISHED TO THE ENGINEER:

1. FIELD RATE (BAILING OR PUMPING) IN GALLONS PER MINUTE.
2. DEPTH OF STATIC WATER LEVEL
3. DEPTH OF DRAW DOWN

THE CONTRACTOR SHALL PROVIDE, WITHIN 24 HOURS AFTER COMPLETION OF THE WELL CLEANING, THE REQUIRED WATER SAMPLES FROM EACH WELL TO THE ENGINEER FOR SUBMISSION TO THE DEPARTMENT OF HEALTH.

PAYMENT FOR THIS ITEM WILL BE AT THE LUMP SUM CONTRACT BID PRICE FOR ITEM SPECIAL - WELL CLEANING, WHICH SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK.

ITEM 202 - STRUCTURES REMOVED

THIS WORK SHALL CONSIST OF THE REMOVAL OF EXISTING STRUCTURES (BUILDINGS), APPURTENANCES, FOUNDATIONS, CONCRETE SLABS AND WALKS IN CONFORMANCE WITH THE PROVISIONS OF SECTION 202.

ITEM 202 - WASTEWATER TREATMENT SYSTEM REMOVAL, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF THE EXISTING WASTEWATER TREATMENT SYSTEM (WWTs) WHICH INCLUDES AN AERATION TANK, CLARIFIER, AERATION CHAMBER, TRASH TRAP AND RELATED PIPING.

THE GENERAL CONTRACTOR SHALL, THREE (3) WEEKS IN ADVANCE OF THE DATE HE INTENDS TO REMOVE THE WWTs, MEET WITH ODOT DISTRICT PERSONNEL TO DETERMINE WHICH COMPONENTS OF THE WWTs WILL BE REMOVED BY THE CONTRACTOR AND TURNED OVER TO ODOT FOR FUTURE USE. ALL CONCRETE PADS ENCOUNTERED SHALL BE REMOVED IN ACCORDANCE WITH 202.05. PRIOR TO THE REMOVAL AND DISPOSAL OF THE WWTs THE CONTRACTOR SHALL HAVE THE WASTE WITHIN THE WWTs REMOVED BY A LICENSED WASTE TANK TRUCK OPERATING AGENCY.

AS SOON AS THE REMOVAL AND DISPOSAL WORK HAS BEEN OTHERWISE COMPLETED AND APPROVED BY THE ENGINEER BACKFILLING PROCEDURES SHALL BE PERFORMED AS DESCRIBED IN ITEM 202 AND ITEM 203. IN THOSE CASES WHERE THE WWTs ARE ARE NOT TO BE USED FOR THE PLACEMENT OF A NEW WWTs OR LIFT STATION THE UPPERMOST TWO (2) INCHES OF BACKFILL SHALL BE TOPSOIL AS PER ITEM 653. THE ENTIRE AREA OF CONSTRUCTION WILL THEN BE SEEDED AND MULCHED USING THE URBAN MIXTURE AS DESCRIBED IN ITEM 659. THE FINAL GRADE OF BACKFILL SHALL BE SUCH AS TO CREATE A NEAT, WELL DRAINED APPEARANCE AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTY.

THE COST FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 202 - WASTEWATER TREATMENT SYSTEM REMOVAL, AS PER PLAN.

ITEM 661 - PERENNIALS

ALL PERENNIALS SHALL BE NURSERY GROWN FOR A MINIMUM PERIOD OF ONE YEAR, WELL DEVELOPED, HEALTHY, FREE FROM INSECTS AND DISEASES, AND POSSESS A NORMAL UNBROKEN ROOT SYSTEM.

IF CERTAIN VARIETIES OR CULTIVARS OF THE PERENNIALS AS SPECIFIED ON THE PLANS ARE UNAVAILABLE, THE CONTRACTOR SHALL BE PERMITTED TO SUBSTITUTE UNDER THE FOLLOWING CONDITIONS:

1. THE FLOWER COLOR SHALL BE THE SAME AS SPECIFIED.
2. THE PLANT SPECIES SHALL REMAIN THE SAME, ONLY THE VARIETY OR CULTIVAR MAY CHANGE.
3. THE SUBSTITUTED CULTIVAR SHALL BE ABLE TO SURVIVE IN THE HARDINESS ZONE 5.

PERENNIALS SHALL BE PLANTED TWELVE (12) INCHES ON CENTER IN A MANNER THAT CONFORMS AS MUCH AS POSSIBLE TO THE PLANS.

PAYMENT SHALL BE MADE PER EACH ITEM 661 - PERENNIALS.

ITEM SPECIAL - BOULDERS

APPROXIMATELY 25 BOULDERS SHALL BE SUPPLIED AND DELIVERED TO THE PROJECT SITE BY THE GENERAL CONTRACTOR. THE BOULDERS SUPPLIED SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:

1. BOULDERS SHALL WEIGH A MINIMUM OF 700 POUNDS EACH.
2. BOULDERS SHALL BE IN THEIR "NATURAL" FORM (NO CUT STONE OR QUARRIED STONE SHALL BE PERMITTED).
3. GRANITE BOULDERS SHALL BE SELECTED WHERE POSSIBLE, BUT OTHER BOULDERS OF SIMILAR COMPOSITION ARE ALLOWABLE IF APPROVED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT HORTICULTURIST.

NOTE: NO BOULDERS COMPOSED OF SHALE, LOOSELY COMPACTED SANDSTONE OR OTHER HIGHLY ERODIBLE FORMATIONS SHALL BE PERMITTED.

PLACEMENT OF BOULDERS WITHIN THE PLANTING BEDS SHALL CONFORM TO THE PLANS AS CLOSELY AS POSSIBLE. BOULDERS SHALL BE BURIED TO A DEPTH OF APPROXIMATELY ONE THIRD (1/3) OF TOTAL HEIGHT BELOW THE FINAL SOIL GRADE. NO BOULDERS SHALL BE OVER THREE FEET (3') IN HEIGHT ABOVE FINISH GRADE.

COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL - BOULDERS

ITEM 201 - CLEARING AND GRUBBING

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION IS INDICATED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST.

THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM SPECIAL - SNOW FENCE - TREE PROTECTION

SNOW FENCE SHALL CONSIST OF WOOD PICKETS 1/2" X 1 1/2" X 4'-0" NOMINAL SIZE, PAINTED RED AND WOVEN WITH FIVE (5) DOUBLE STRANDS OF 12 GAUGE STEEL WIRE, SPACED APPROXIMATELY TWO INCHES (2") APART OR APPROVED EQUAL.

THE FENCE SHALL BE SUPPORTED BY STEEL OR WOOD POSTS OF ADEQUATE SIZE AND SPACING. USED FENCE AND POSTS IN GOOD CONDITION MAY BE USED AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF SNOW FENCE FURNISHED, ERRECTED AND SUBSEQUENTLY REMOVED.

ITEM SPECIAL - WOOD STEPPING POSTS

THIS ITEM SHALL CONSIST OF ALL MATERIALS, LABOR AND EQUIPMENT NEEDED TO PERFORM ALL WORK NECESSARY TO COMPLETE THE CONSTRUCTION OF ONE STEPPING POST GROUP.

WOOD POSTS 4 TO 8 FOOT IN LENGTH WITH A MINIMUM CROSS SECTION DIMENSION OF 4" X 8" SHALL BE EMBEDDED VERTICALLY IN THE GROUND TO A DEPTH OF APPROXIMATELY 42-INCHES IN THE APPROXIMATE PATTERN AS SHOWN ON THE PLANS. THE WOOD POSTS SHALL BE PRESSURE PRESERVATIVELY TREATED WITH A NON TOXIC FORMULA SUITABLE FOR USE ON PLAYGROUND EQUIPMENT, SUCH AS NIEDOX-10 OR APPROVED EQUAL. POSTS TREATED WITH CHROMATED COPPER ARSENIC (CCA) OR CREOSOTE WILL NOT BE ACCEPTABLE.

THE SOIL AROUND EACH POST SHALL BE COMPACTED SO THAT THEY WILL REMAIN IN A VERTICAL POSITION. THE SOIL IN THE ENTIRE BED SHALL THEN BE COVERED WITH A MINIMUM OF 12-INCHES OF CLEAN SAND AND 4-INCHES OF CYPRESS BARK MULCH. THE FINISHED GRADE OF THE MULCH WILL BE APPROXIMATELY THE SAME ELEVATION AS THE SURROUNDING CURB. (SEE DETAIL BELOW)

ESTIMATED QUANTITIES TO COMPLETE THIS ITEM:

- 30 - WOOD POSTS 8 X 8 X 4'
- 60 - WOOD POSTS 8 X 8 X 6'
- 30 - WOOD POSTS 8 X 8 X 8'
- 12 CY - CLEAN SAND
- 4 CY - CYPRESS MULCH

THE COST OF ALL THE ABOVE, INCLUDING EXCAVATION SHALL BE INCLUDED IN THE LUMP PRICE BID FOR "ITEM SPECIAL - WOOD STEPPING POSTS.

ITEM - SPECIAL - COLD WATER SERVICE TO WASTEWATER TREATMENT SYSTEM

THIS ITEM SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT AND EXECUTING ALL EXCAVATION AND BACKFILLING NECESSARY TO RUN A 3/4 INCH, TYPE K, COPPER WATER LINE FROM A POINT 5 FOOT OUTSIDE THE MOTORIST SERVICE BUILDING, TO A 3/4-INCH FROST PROOF HYDRANT WITH HOSE BIB, AS LOCATED ON THE PLANS.

THE HYDRANT SHALL BE A "MURDOCK" EPA APPROVED HYDRANT MODEL NO. E10 BFH FOR 3/4-INCH HOSE CONNECTION, WITH 48-INCH DEPTH OF BURY. THE HYDRANT SHALL BE VANDAL RESISTANT ALL-METAL CONSTRUCTION, NON-POLLUTABLE, ANTI-SIPHONAGE FROM ANY UNDERGROUND SOURCE WITH PERMANENTLY ATTACHED VACUUM BREAKER ATTACHED TO HOSE OUTLET, ANTI-FREEZING, HAND WHEEL CONTROL WITH GALVANIZED STEEL RISER PIPE AND BLACK STEEL PIPE CASING; THESE SHALL INCLUDE EPA ANTI-FREEZING, ANTI-POLLUTING CONVERSION KIT FOR 3/4-INCH HYDRANT. THESE SHALL BE INSTALLED AT THE SEWAGE TREATMENT PLANT AS SHOWN ON THE DRAWINGS. IN LIEU OF THE ABOVE SPECIFIED "MURDOCK" HYDRANT, WADE W8640 MAY BE USED, SUBJECT TO THE ENGINEER'S APPROVAL. INSTALLATION SHALL MEET STATE HEALTH DEPARTMENT AND EPA CODE REQUIREMENTS.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL-COLD WATER SERVICE TO WASTEWATER TREATMENT SYSTEM.

ITEM SPECIAL - STACKING CHAIR

THE GENERAL CONTRACTOR SHALL PROVIDE THREE (3) STACKING CHAIRS PER MOTORIST SERVICES BUILDING IN ROOM 105, UTILITY ROOM. CHAIRS SHALL HAVE A POLYPROPYLENE BACK AND SEAT WITH CHROME FINISHED STEEL FOD FRAME AS MANUFACTURED BY KRUEGAR, MODEL NO. M3/BENI - C/WP IN COLOR PL/YGS TAN VALUE 3; STEELCASE MODEL NO. 472-410 IN COLOR BROWN VALUE 2 OR APPROVED EQUAL.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER EACH ITEM SPECIAL STACKING CHAIR.

ITEM SPECIAL - FOLDING LEG TABLE

THE GENERAL CONTRACTOR SHALL FURNISH ONE (1) FOLDING LEG TABLE PER MOTORIST SERVICES BUILDING IN ROOM 105, UTILITY ROOM. TABLE SHALL BE 26" X 36" X 29" WITH LAMINATED TOP VINYL EDGE, AND TAN OF CHROME FINISHED BASE W/FOLDING LEGS AS MANUFACTURED BY KRUEGAR, PINNACLE SERIES NO. H3-5 WITH TOP COLOR 917 TIDAL SAND; GENERAL FIREPROOFING, 500 SERIES T363GSP TOP TABLE IN COLOR, REG SMOKE WITH BASE W8-19B OR APPROVED EQUAL.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER EACH ITEM SPECIAL FOLDING LEG TABLE.

ITEM SPECIAL - WOOD BENCH

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING WOOD BENCHES AS SHOWN ON THE PLANS.

BENCHES SHALL BE CONSTRUCTED OF CLEAR-OF-HEART CENTER, KILN DRIED CYPRESS, DOUGLAS FIR OR PURPLE HEART. APPROXIMATELY 72-INCHES LONG BY 18-INCHES WIDE, SEAT PLANKS SET ON EDGE, SURFACE MOUNTED WITH GALVANIZED VANDAL PROOF FASTENERS AS PER MANUFACTURER'S RECOMMENDATIONS AND APPROVAL OF THE ENGINEER.

BENCHES SHOWN ON THE PLANS WHICH ARE TO BE PLACED ON THE GRAVEL PATHS SHALL BE INSTALLED WITH FOOTERS AS IN THE DETAIL BELOW. FOOTERS SHALL CONSIST OF 2' 4" X 6" GALVANIZED BENCH POSTS SET IN 12-INCHES OF CLASS C CONCRETE WITH 3-INCHES OF 310 AGGREGATE SUBBASE.

ALL OTHER BENCHES SHALL BE SECURELY ATTACHED TO THE EXISTING PAVEMENT WITH GALVANIZED VANDAL PROOF FASTENERS IN THE LOCATIONS SHOWN IN THE PLANS.

BENCHES SHALL BE MANUFACTURED BY THE FOLLOWING COMPANIES OR APPROVED EQUAL:

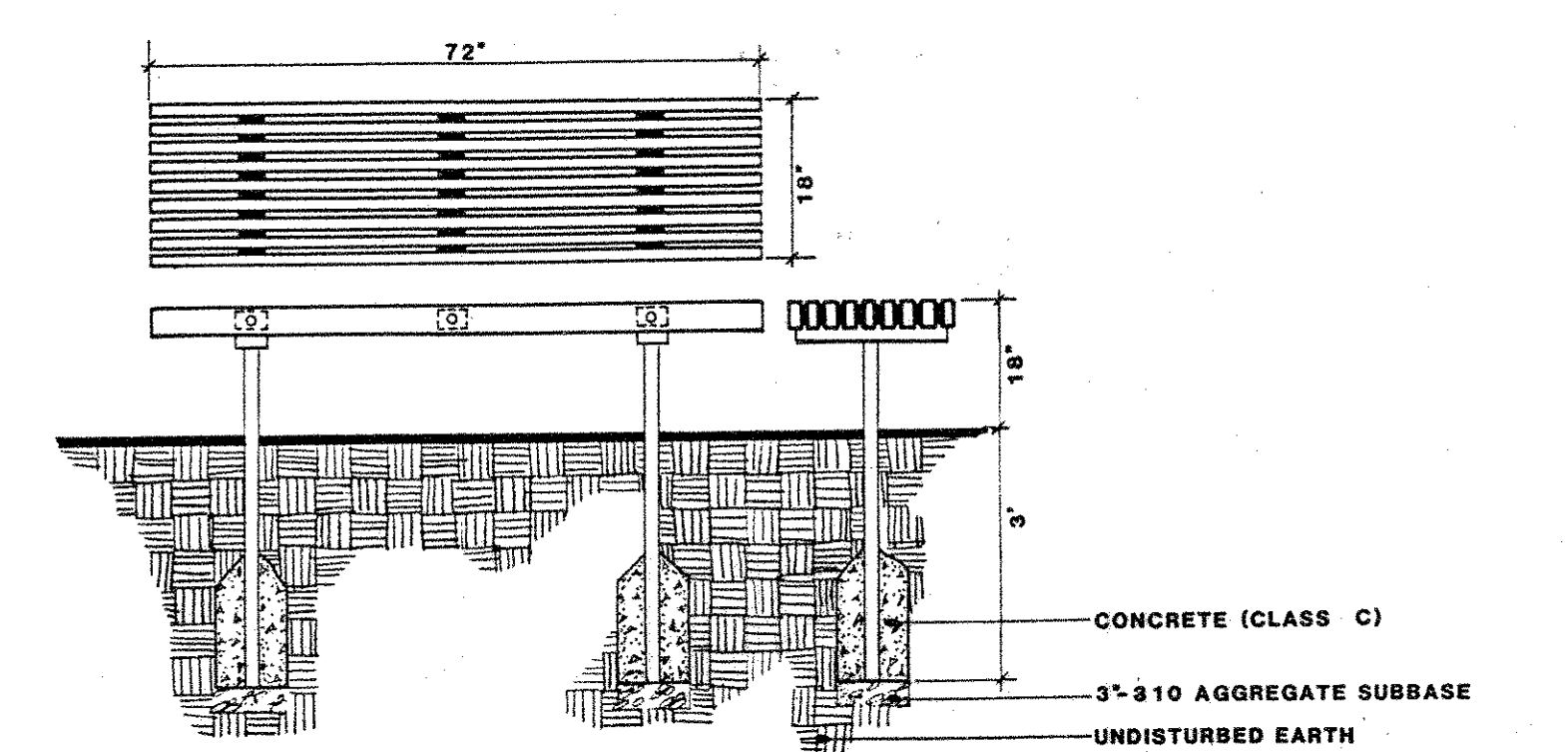
"MACOTTA"	MB 7220
"VAUGHAN & ASSOCIATES"	F17003F
"SITECRAFT"	BKF

THE WOOD BENCH AND FOOTER MAY BE BID TOGETHER OR SEPARATELY AS FOLLOWS:

ITEM SPECIAL - WOOD BENCH AND FOOTER
ITEM SPECIAL - WOOD BENCH

THE COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE PRICE BID TO COMPLETE EACH ITEM SPECIAL - WOOD BENCH AND FOOTER OR ITEM SPECIAL - WOOD BENCH AS REQUIRED.

WOOD BENCH AND FOOTER DETAIL



AREA LIGHTING

THIS PROJECT WILL CONVERT THE EXISTING AREA LIGHTING CIRCUITS FROM MERCURY VAPOR SOURCES TO HIGH PRESSURE SODIUM SOURCES. IN ADDITION THE EXISTING CIRCUITS WILL BE CONVERTED FROM 480 VOLT OPERATION TO 240 VOLT OPERATION. THIS WILL BE ACCOMPLISHED BY REPLACING THE LUMINAIRES AND CHANGING THE CURRENTLY GROUNDED NEUTRAL CONDUCTOR OF THE EXISTING R80 CIRCUIT INTO THE SECOND LINE CONDUCTOR REQUIRED FOR THE 240 VOLT CIRCUIT.

TO CHANGE THE LIGHT SOURCE, THE CONTRACTOR WILL BE PAID UNDER ITEM 202 REMOVE EXISTING LUMINAIR FOR THE REMOVAL OF EACH EXISTING LUMINAIR SPECIFIED IN THE PLANS. THE CONTRACTOR WILL BE PAID UNDER THE APPROPRIATE LUMINAIR BID ITEMS CONTAINED IN THE PLANS FOR EACH NEW LUMINAIR INSTALLED AT THE LOCATIONS SPECIFIED.

TO CHANGE THE OPERATING VOLTAGE OF THE CIRCUIT, THE CONTRACTOR WILL BE PAID FOR UNDER ITEM 625 CONNECTOR KIT TYPE II, AS PER PLAN FOR EACH CONNECTOR KIT INSTALLED IN THE BASE OF AN EXISTING AREA LIGHTING SUPPORT POLE. THE REMOVAL OF THE EXISTING UNFUSED TYPE III CONNECTOR AND THE EXISTING JUMPER CONNECTING THE EXISTING NEUTRAL CONDUCTOR TO GROUND SHALL BE INCIDENTAL TO THE INSTALLATION OF THE NEW FUSED TYPE II CONNECTOR KIT. THE POLE SHALL REMAIN CONNECTED TO THE GROUND WIRE AND GROUND ROD.

ITEM 625.07 - 713.11 LUMINARIES

STYLE B LUMINARIES SHALL HAVE SINGLE RATED 240 VOLT, 200 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M400, CROUSE HINDS OVM, ITT AMERICAN 400 OR EQUAL APPROVED BY THE ENGINEER.

POST TOP LUMINARIES SHALL HAVE SINGLE RATED 100 WATT 240 VOLT BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC WESTINGHOUSE, ITT AMERICAN ELECTRIC OR EQUAL APPROVED BY THE ENGINEER.

ITEM 625 - HIGH VOLTAGE TEST

A HIGH VOLTAGE TEST, AS DESCRIBED IN ITEM 625.72 SHALL BE PERFORMED ON ALL ROADWAY AND PICNIC AREA LIGHTING CIRCUITS ONLY.

ITEM 202 - LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LUMINAIRE AND STORING IT ON THE PROJECT SITE FOR REMOVAL BY STATE FORCES.

PAYMENT WILL BE MADE FOR EACH ITEM 202 "LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN".

ITEM 202 - LIGHT POLE FOUNDATION REMOVED, AS PER PLAN

THIS ITEM OF WORK WILL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF ONE FOOT BELOW FINISHED GRADE, BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA.

PAYMENT WILL BE MADE FOR EACH ITEM 202 "LIGHT POLE FOUNDATION REMOVED, AS PER PLAN".

ITEM 202 - LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN

THE ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE INCLUDING THE BRACKET ARM(S) AND TRANSFORMER BASE (IF USED). THE EXISTING WIRING SHALL BE REMOVED FROM THE POLE AND BRACKET ARM AND DISPOSED OF. THE POLE, BRACKET ARM(S) AND TRANSFORMER BASE SHALL BE SEPARATED AND STORED ON THE SITE FOR REMOVAL BY STATE FORCES.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 "LIGHT POLE REMOVED FOR STORAGE".

ITEM 655 - SEEDING AND RENOVATING EXISTING SOD, AS PER PLAN

THIS ITEM SHALL CONSIST OF RENOVATING THE EXISTING SOD AND SEEDING ALL AREAS OF THE REST AREA DISTURBED BY CONSTRUCTION OPERATIONS. THE WORK SHALL CONSIST OF ROTOVATING AND RAKING; FURNISHING AND SPREADING TOP SOIL, FERTILIZER, GRASS SEED AND MULCH; AND ROLLING AND FINISHING THE AREAS INDICATED OR AS DIRECTED BY THE ENGINEER.

THE GRASS SEED MIXTURE SHALL BE SOWN ON THE PREPARED SEED BED AT THE RATE OF THREE POUNDS PER 1,000 SQUARE FEET, AS PER ITEM 659.

THE QUANTITIES FOR ITEMS 655-SEEDING, RENOVATING EXISTING SOD AND COMMERCIAL FERTILIZER SHOWN IN THE PLANS REPRESENT THE ESTIMATED QUANTITIES OF MATERIALS NEEDED TO RENOVATE THE TURF GRASS OVER THE ENTIRE REST AREA. THESE MATERIALS ARE TO BE USED AT THE DISCRETION OF THE PROJECT ENGINEER IN CONSULTATION WITH THE DISTRICT HORTICULTURIST OR LANDSCAPE ARCHITECT.

PAYMENT FOR ALL THE ABOVE WILL BE MADE FOR THE ACTUAL AMOUNT APPLIED AT CONTRACT UNIT PRICE PER SQUARE YARD FOR ITEM 655-SEEDING AND RENOVATING EXISTING SOD, AS PER PLAN, AND AS PER TON OF ITEM 655-COMMERCIAL FERTILIZER.

ITEM SPECIAL - COLD WATER SERVICE TO BOX HYDRANT

THIS ITEM SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT AND EXECUTING ALL EXCAVATION AND BACKFILLING NECESSARY TO INSTALL A 1.5 INCH, TYPE "K", HARD COPPER WATER LINE AND A FLUSH BOX HYDRANT WITH WATTS NO. 8 VACUUM BREAKER AND KEY AS SHOWN ON THE PLANS.

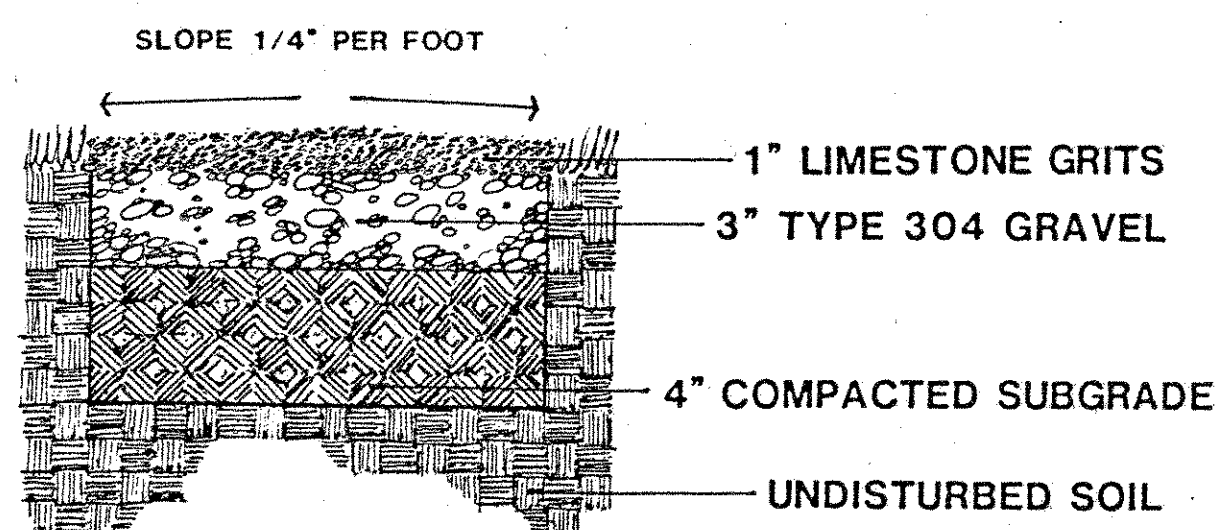
THE FLUSH BOX HYDRANT SHALL BE A "MURDOCK", MODEL NO. V477 - WITH A 3/4-INCH HOSE CONNECTION, BRONZE BOX AND LID. THE HYDRANT SHALL BE ANTI-FREEZING WITH 48-INCH DEPTH OF BURY. APPROVED EQUAL HYDRANTS SHALL BE SMITH, MODEL 5810 OR WADE, MODEL W-8609-L4-89-2.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE PER LINEAL FOOT FOR ITEM SPECIAL - COLD WATER SERVICE TO BOX HYDRANT.

ITEM SPECIAL - GRAVEL PATH

THIS ITEM SHALL CONSIST OF PROVIDING A FOUR (4) FOOT WIDE GRAVEL PATH AS SHOWN ON THE PLANS AND DETAILED BELOW. FOUR (4) INCHES OF EXISTING TOPSOIL WILL BE EXCAVATED AND THE SUB-GRADE SHALL BE COMPACTED TO DEPTH OF FOUR (4) INCHES AS DESCRIBED IN ITEM 203. EXCAVATION WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 203, EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION. EMBANKMENT FOR THE PATH AREA SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 203 EMBANKMENT. PAYMENT FOR THE GRAVEL AND ITS PLACEMENT SHALL BE MADE BY THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL - GRAVEL PATH.

4" GRAVEL PATH DETAIL



ITEM SPECIAL, 6" CAST IRON SOIL PIPE (SV) W/FLEXIBLE JOINTS

THE CONTRACTOR SHALL FURNISH AND INSTALL 6" CAST IRON SOIL PIPE W/FLEXIBLE JOINTS IN ITEM 603, CLASS "C" BEDDING AS SHOWN IN THE PLANS.

THE PIPE SHALL CONFORM TO ASTM-A151P-301-78 WITH NEOPRENE GASKETS AS PER ASTM-C-564-

THE COMPLETE SEWER LINE SHALL BE TESTED AS DESCRIBED IN THE SEWER LINE LEAKAGE TEST NOTE.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT OF "ITEM SPECIAL, 6" CAST IRON SOIL PIPE W/FLEXIBLE JOINTS" INSTALLED, INCLUDING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, EXCAVATION & BACKFILLING, INCIDENTALS AND TESTING NECESSARY TO COMPLETE THIS ITEM OF WORK.

SEWERLINE LEAKAGE TEST

THE CONTRACTOR SHALL PERFORM A LEAKAGE TEST BY THE LOW PRESSURE AIR TEST METHOD OR, WHEN REQUIRED, BY THE INFILTRATION/EXFILTRATION METHOD AS DESCRIBED BELOW.

1. LOW PRESSURE AIR TEST SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MANHOLES FOR THE ENTIRE LENGTH OF THE COMPLETED SEWERLINE. ALL PIPE OUTLETS MUST BE PLUGGED IN THE SECTION BEING TESTED WITH SUITABLE TEST PLUGS. ONE OF THE PLUGS USED AT A MANHOLE MUST BE TAPPED AND EQUIPPED FOR AN AIR COMPRESSOR. AIR SHALL BE SUPPLIED SLOWLY TO THE TEST SECTION UNTIL THE INTERNAL PRESSURE REACHES APPROXIMATELY FOUR (4) P.S.I.. AT LEAST TWO MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 P.S.I. THE AIR SUPPLY SHALL BE DISCONNECTED AND TIMING SHALL BEGIN WITH A STOP WATCH. THE STOP WATCH SHALL BE ALLOWED TO RUN UNTIL THE PRESSURE HAS DROPPED 1.0 P.S.I.. IF THE TIME SHOWN ON THE STOP WATCH IS GREATER THAN THE SPECIFIED MINIMUM TIME AS SHOWN ON CHART BELOW, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE TEST.

PIPE DIAMETER IN INCHES	MINUTES
4	2.0
6	3.0
8	4.0
10	5.0
12	5.5
15	7.5
18	8.5
21	10.0
24	11.5

IF A SEWERLINE IS BELOW EXISTING GROUNDWATER LEVEL, THE INTERNAL PRESSURE SHALL BE INCREASED BY THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE. THE AIR PRESSURE SHALL BE INCREASED .433 P.S.I. FOR EACH FOOT THE GROUNDWATER LEVEL IS ABOVE THE INVERT OF THE PIPE. THE INTERNAL AIR PRESSURES SHOULD NEVER EXCEED 5.0 P.S.I..

IF THE PREVAILING GROUND WATER IS MORE THAN TWO FEET ABOVE THE INVERT OF THE SEWERLINE, THE INFILTRATION/EXFILTRATION TEST SHOULD BE USED.

2. INFILTRATION AND EXFILTRATION TEST IF THE SEWERLINE REQUIRES TESTING FOR LEAKAGE BY THE INFILTRATION/EXFILTRATION TEST METHOD, THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE 200 GAL./INCH OF DIAMETER OF PIPE/MILE/DAY AND THE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM-C969-82.

PAYMENT FOR TESTING OF THE SEWERLINE SHALL BE INCLUDED IN THE COST OF INSTALLATION OF THE SEWERLINE.

CALC. BY: _____ DATE: _____ CHKD. BY: _____ DATE: _____	AUGLAIZE COUNTY	OHIO	4 80
	AUG-33-6.82	FHWA REGION 5	
	REST AREA		

ITEM SPECIAL - CHARCOAL GRILL AND SERVING TABLE REMOVED

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING CHARCOAL GRILL AND SERVING TABLE. THE GALVANIZED PIPE SUPPORT POSTS SHALL BE LEFT INTACT. AFTER THE CHARCOAL GRILL AND SERVING TABLE ARE REMOVED THEY WILL BE TURNED OVER TO ODOT DISTRICT MAINTENANCE PERSONNEL.

ALL OF THE ABOVE SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH "ITEM SPECIAL - CHARCOAL GRILL AND SERVING TABLE REMOVED".

ITEM SPECIAL, 2" FORCE MAIN

THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL 2" MECHANICAL JOINT DUCTILE IRON PIPE AND MECHANICAL JOINT CAST IRON FITTINGS, COMPLETE WITH JOINT ACCESSORIES (GLANDS, BOLTS, NUTS, FLEXIBLE NEOPRENE GASKETS AND SPECIAL RETAINERS AND ETC., AS REQUIRED) FOR THE SANITARY SEWER LINE FORCE MAIN AS SHOWN IN PLANS.

THE 2" SANITARY SEWER FORCE MAIN MECHANICAL JOINT DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA C111/A21.11 AND ANSI/AWWA C111/A21.51 STANDARDS, ANSI THICKNESS CLASS A53, COMPLETE WITH JOINT ACCESSORIES.

THE 2" SANITARY SEWER FORCE MAIN MECHANICAL JOINT CAST IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C110/A21.10 AND ANSI/AWWA C111/A21.11 STANDARDS, COMPLETE WITH JOINT ACCESSORIES.

THE GENERAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY TO EXCAVATE AND BACKFILL FOR INSTALLATION OF THE 2" SANITARY SEWER FORCE MAIN, INCLUDING PUMPING AND DEWATERING. EXCAVATION AND BACKFILL SHALL CONFORM TO CMS 603, DISPOSAL OF EXCAVATED MATERIAL SHALL CONFORM TO CMS 203.05, AGGREGATE BACKFILL SHALL CONFORM TO CMS 703.05, OMITTING THE USE OF AIR-COOLED SLAG. 100% PASSING - CLASS C BEDDING, FOREIGN MATTER SUCH AS ROCK, CINDERS, LUMBER, ETC., SHALL NOT BE ALLOWED IN BACKFILL.

THE GENERAL CONTRACTOR SHALL FURNISH ALL LABOR MATERIALS, TOOLS AND EQUIPMENT NECESSARY TO INSTALL CMS499 CLASS C CONCRETE THRUST BLOCKS AS REQUIRED AND DETAILED IN THE PLAN, ON THE 2" SANITARY FORCE MAIN, INCLUDING EXCAVATION & BACKFILLING, FABRICATING FORMS AND REMOVAL OF FORMS.

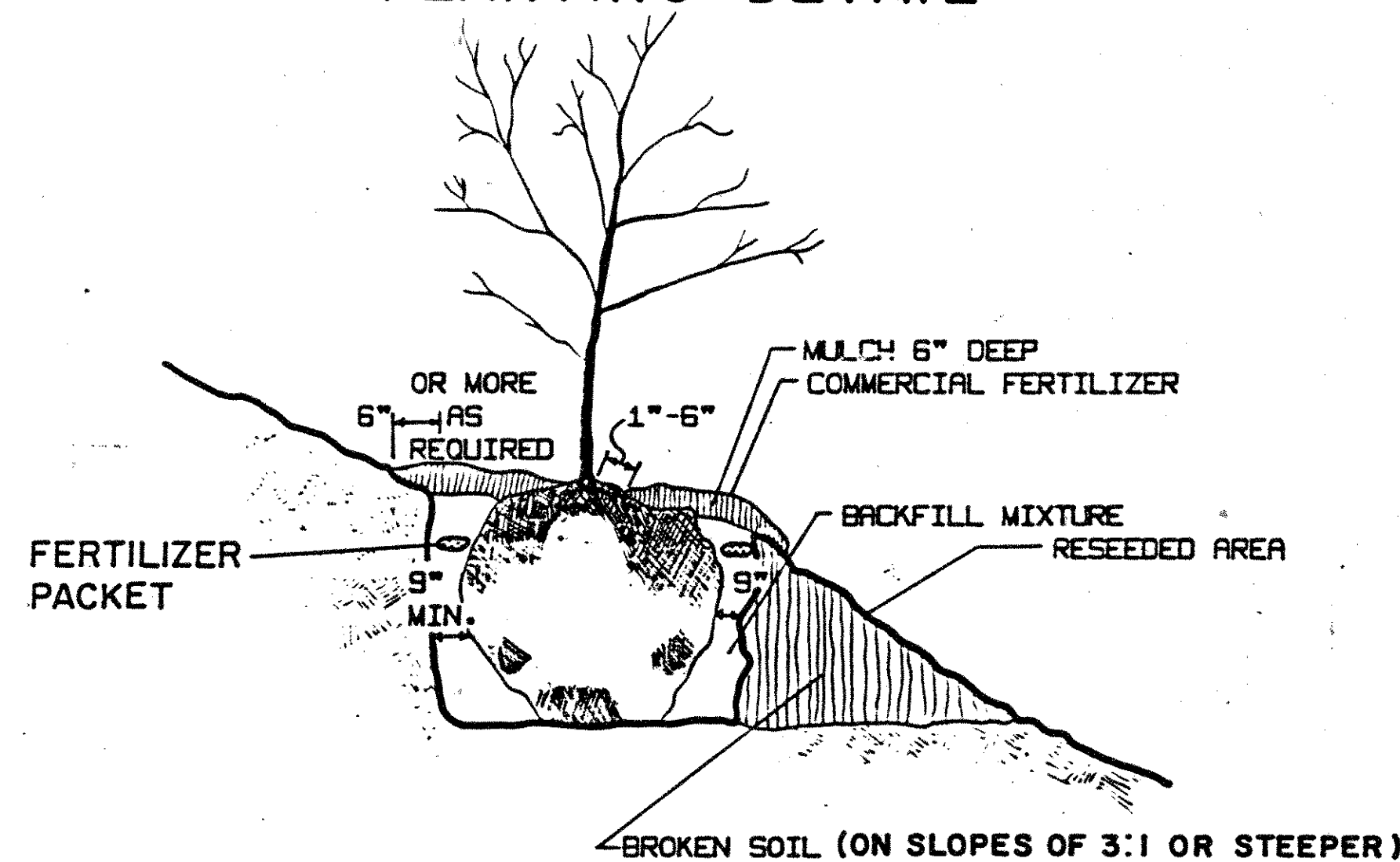
THE COMPLETE SANITARY FORCE MAIN SHALL BE TESTED BY THE GENERAL CONTRACTOR AS DESCRIBED IN THE SEWER LINE LEAKAGE TEST NOTE IN THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT OF "ITEM SPECIAL, 2" FORCE MAIN" INSTALLED. THIS SHALL INCLUDE ALL OF THE ABOVE, INCLUDING LABOR, MATERIALS, TOOLS, EQUIPMENT, PIPE, FITTINGS, EXCAVATION, BACKFILLING THRUST BLOCKS, AND TESTING NECESSARY TO COMPLETE THIS ITEM OF WORK.

ITEM 713.14 LAMPS
HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", WESTINGHOUSE "CERAMALUX", SYLVANIA "LUMALUX" OR EQUAL APPROVED BY THE ENGINEER. 200-WATT LAMPS SHALL BE ANSI CODE S66MN-200.

GENERAL NOTES

PLANTING DETAIL



THE TOP OF THE ROOT BALL SHALL BE 2 INCH ABOVE THE NORMAL GROUND LINE IN AVERAGE SOILS, 3 INCHES IN HEAVY CLAY SOILS AND 6 INCHES WHERE IMPERMEABILITY IS ENCOUNTERED.

ON SLOPES WHERE HEAVY CLAY AND IMPERMEABLE SOILS ARE PRESENT THE DOWN HILL SIDE OF THE POCKET HOLE SHALL BE BROKEN OR LOOSENED AND RETURNED TO ITS NATURAL GRADE TO PROVIDE DRAINAGE FOR THE HOLE.

PLANTING HOLE AND BED PREPARATION

AND GROUND COVER

AFTER THE LAYOUT IS APPROVED BY THE ENGINEER, SHRUB BEDS SHALL BE CULTIVATED TO A MINIMUM DEPTH OF SIX (6) INCHES BY A PLOW, HARROW OR DISC, OR OTHER METHOD APPROVED BY THE ENGINEER. THE CULTIVATION SHALL TAKE PLACE AS FAR IN ADVANCE OF THE PLANTING OPERATION AS POSSIBLE. WHERE SHRUBS ARE SHOWN, INDIVIDUAL HOLES SHALL BE DUG ON CENTERS AS SHOWN ON THE PLANS. THESE HOLES SHALL ALLOW FOR A MINIMUM OF NINE (9) INCHES OF BACKFILL MIXTURE AROUND THE SIDES OF THE BALLS. THE BOTTOM OF THE HOLE SHALL BE NO DEEPER THAN THE BALL TO BE PLANTED. THE MATERIAL REMOVED FROM THE HOLES SHALL BE TAKEN FROM THE PROJECT IF IT IS FOUND TO BE UNACCEPTABLE FOR USE AS BACKFILL AS DETERMINED BY THE ENGINEER. THE PLANT SHALL THEN BE SET AND THE HOLE FILLED WITH BACKFILL MIXTURE, AND THE PLANTING OPERATION PERFORMED AS SPECIFIED IN ITEMS 662.17 AND 662.18. ALL EXCESS DIRT SHALL BE REMOVED FROM THE SITE.

EXISTING TREES AND SHRUBS SHALL TAKE PRIORITY OVER PROPOSED PLANTINGS. THE LOCATIONS OF THE PROPOSED TREES AND SHRUBS ARE APPROXIMATE AND MAY BE REARRANGED AT THE DIRECTION OF THE ENGINEER WHEN OBSTRUCTIONS ARE ENCOUNTERED.

IF AN AUGER IS USED IN DIGGING POCKET HOLES AND POLISHED (SHINY) SIDES OCCUR IN CLAY OR HEAVY SOILS, THE USE OF SUCH AN AUGER SHALL BE DISCONTINUED AND THE HOLES SHALL BE DUG WITH A BACKHOE OR ANOTHER APPROVED METHOD.

BACKFILL NO. 1 - THE BACKFILL MIXTURE USED TO FILL POCKET HOLES IN LIGHT AND MEDIUM SOILS (SAND & AVERAGE) SHALL CONSIST BY VOLUME OF: 2 PARTS *SOIL CONDITIONER, 2 PARTS COMPRESSED SPHAGNUM PEAT OR 3 PARTS SEDGE PEAT, AND 2 PARTS APPROVED TOPSOIL.

BACKFILL NO. 2 - THE BACKFILL MIXTURE USED TO FILL POCKET HOLES IN HEAVY SOILS (CLAY & SHALE) SHALL CONSIST BY VOLUME OF: 1 PART *SOIL CONDITIONER, 1 PART COMPRESSED SPHAGNUM PEAT OR 2 PARTS SEDGE PEAT, AND 2 PARTS APPROVED TOPSOIL.

INCORPORATE THOROUGHLY INTO THE BACKFILL MIXTURES 5 LBS. OF COMMERCIAL FERTILIZER (0-20-20) PER CUBIC YARD. THE ENGINEER, AFTER CONSULTATION WITH THE LANDSCAPE ARCHITECT, SHALL DETERMINE THE LOCATIONS WHERE THE BACKFILL MIXTURES SHALL BE USED.

SCHEDULING

ALL DIGGING AND PLANTING OF DECIDUOUS PLANTS SHALL BE DONE AFTER OCTOBER 1, AND BEFORE JUNE 1. EVERGREENS SHALL BE DUG AND PLANTED AFTER MARCH 15, AND BEFORE JUNE 1.

ITEMS 662 & 663

ALL TREES AND SHRUBS SHALL BE SPECIMEN (NO. 1 GRADE) PLANTS WITH GROWTH AND BRANCHING HABIT TYPICAL OF THE SPECIES SPECIFIED. NO PARK GRADE (NO. 2 OR 3 GRADE) PLANTS WILL BE ACCEPTED.

FERTILIZER

FOUR OUNCE (8 YEAR) COMMERCIAL FERTILIZER PACKETS USED IN PLANTING OPERATION SHALL BE DELIVERED DRY IN ORIGINAL, UNOPENED CONTAINERS. FERTILIZER ANALYSIS SHALL BE 16% NITROGEN, 8% PHOSPHORIC ACID AND 16% POTASH. FERTILIZER SHALL BE OF A SLOW RELEASE TYPE IN A POLYETHYLENE PERFORATED PACKET WITH MICROPORE HOLES.

THE PACKETS SHALL BE PLACED 6 TO 8 INCHES DEEP AND EVENLY SPACED AROUND THE PERIMETER OF THE PLANTING HOLE, ADJACENT TO THE BALL OR ROOT MASS BUT NOT IN DIRECT CONTACT WITH THE ROOTS. THE PACKETS SHALL NOT BE CUT, RIPPED OR DAMAGED.

EACH SHRUB OR TREE SHALL BE FERTILIZED ACCORDING TO THE FOLLOWING SCHEDULE:

SHRUBS 1'-2'	2 PACKETS
SHRUBS 2'-3'	2 PACKETS
SHRUBS 3'-4'	3 PACKETS
TREES 5'-6'	3 PACKETS
TREES 6'-8'	4 PACKETS
TREES 1½"-2" CAL.	2 PACKETS
TREES 2"-2½" CAL.	3 PACKETS
TREES 2½"-3" CAL.	4 PACKETS
TREES 3"-3½" CAL.	5 PACKETS

IF IT BECOMES NECESSARY TO REMOVE AND REPLACE MISSING, DEAD OR UNHEALTHY PLANTS, ALL OLD PACKETS SHALL BE REPLACED WITH NEW PACKETS.

THE FOUR OUNCE 16-8-16 FERTILIZER PACKETS SHALL BE DESIGNATED BY THE MANUFACTURER TO BE EFFECTIVE FOR EIGHT YEARS. PACKETS SUCH AS "EESY GROW"(SPECIALTY FERTILIZER, INC. BOX 355, SUFFERN, N.Y. 10901: (914) 357-7722), "THE UNIQUE FEEDER" (UNIQUE FERTILIZER, INC. P.O. BOX 99, DEPTFORD, N.J. 08096:(609) 848-4444) OR APPROVED EQUAL.

ITEM 661.21 WATERING

WATER SHALL BE FURNISHED BY THE CONTRACTOR AND ALL PLANT MATERIAL SHALL BE WATERED THOROUGHLY AT THE TIME OF PLANTING REGARDLESS OF AMPLE MOISTURE CONTENT OF THE SURROUNDING SOIL. SUSPENSION OF WATERING OPERATIONS BECAUSE OF RAINFALL WILL BE DETERMINED BY THE ENGINEER IN CONSULTATION WITH THE LANDSCAPE ARCHITECT. AN AVERAGE OF ONE INCH OF RAINFALL PER WEEK SHALL BE CONSIDERED ADEQUATE. DETERMINATION OF RAINFALL SHALL BE BASED UPON THE USE OF A RAIN GAUGE APPROVED BY THE PROJECT ENGINEER.

MULCH

MULCH SHALL BE AS PER ITEM 661.04 WITH THE FOLLOWING EXCEPTIONS: WOOD SHAVINGS OR PEAT MOSS OR CORN COBS SHALL NOT BE USED AS A TOP MULCH. WOOD CHIPS SHALL BE AGED (STOCKPILED) AT LEAST 6 MONTHS PRIOR TO PLACEMENT AROUND PLANTS. MULCH SHALL BE SIX INCHES LOOSE MEASUREMENT *AFTER MULCHING. COMMERCIAL FERTILIZER (12-12-12) SHALL BE APPLIED AS SPECIFIED IN ITEM 662.18. *GROUND COVER BEDS SHALL BE MULCHED AS PER 661.23.

PRUNING

ALL PLANTS SHALL BE PRUNED WITHIN SEVEN DAYS AFTER PLANTING. THE PRUNING SHALL BE DONE ACCORDING TO SELECTED TYPICAL PLANTS OF EACH SPECIES PRUNED AND USED AS A SAMPLE AS DIRECTED BY THE ENGINEER.

ANY CANDLE GROWTH ON NEEDLE EVERGREENS WHICH EXCEED 3 INCHES AT PLANTING TIME SHALL BE CUT BACK TO THAT LENGTH IMMEDIATELY.

STORAGE AREAS

PLANT

THE CONTRACTOR MAY STORE MATERIALS AND EQUIPMENT 30 FEET FROM PAVEMENT, BEHIND GUARDRAIL AND WITHIN OR ADJACENT TO THE PROJECT LIMITS BY OBTAINING OFFICIAL PERMISSION OF THE ENGINEER. NO PEDESTRIAN OR VEHICULAR TRAFFIC MAY BE IMPEDED NOR HAZARDOUS CONDITION CREATED AS A RESULT OF SUCH STORAGE.

THE STORAGE OF ALL DUG PLANTS SHALL CONFORM TO 661.14 WHETHER WITHIN THE PROJECT LIMITS, ADJACENT THERETO, OR AT SOME OTHER LOCATION. THESE AREAS SHALL BE DESIGNATED PRIOR TO ACTUAL PLANT STORAGE AND SHALL BE OPEN TO INSPECTION UPON REQUEST OF THE ENGINEER.

STAKING MATERIALS

ALL TREES SHALL BE STAKED AS SHOWN IN THE STANDARD DRAWING LA-2. STAKING OF SMALL ORNAMENTAL TREES SHALL BE SIMILAR TO THAT OF EVERGREENS. ALL DECIDUOUS TREE TRUNKS ARE TO BE TREATED WITH LINDANE SPRAY BEFORE WRAPPING.

CALC BY _____ DATE _____
CHKD BY HWB DATE 6-30-88

FHW REGION	STATE	PROJECT
5	OHIO	AUGLAIZE COUNTY AUG-33-6.82 SAFETY REST AREA

5
90

PLANTING PERIOD OF ESTABLISHMENT

BEFORE FINAL INSPECTION, ALL PLANTINGS SHALL BE IN PLACE AND UNDER THE CARE OF THE CONTRACTOR FOR A PERIOD OF ESTABLISHMENT. THIS PERIOD SHALL BEGIN IMMEDIATELY UPON COMPLETION OF THE PLANTING OPERATION FOR ANY PLANT OR SPECIES GROUP AND CONTINUE UNTIL OCTOBER 1. IN NO CASE SHALL IT BE LESS THAN ONE GROWING SEASON, JUNE 1 TO OCTOBER 1.

DURING THIS PERIOD OF ESTABLISHMENT, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW SUCH HORTICULTURAL PRACTICES AS REQUIRED TO ASSURE THE VIGOR AND GROWTH OF THE TRANSPLANTED MATERIAL. THIS CARE SHALL INCLUDE WATERING, REMULCHING, RESTAKING, GUYING AND CULTIVATING. THERE SHALL BE A MINIMUM OF TWO WEEDING AND MOWING (BED EDGES, AROUND TREES AND GUY STAKES) PROGRAMS OF SUCH INTENSITY AS TO COMPLETELY RID THE PLANTED AND MULCHED AREAS OF WEEDS AND GRASSES. THE FIRST PROGRAM SHALL BEGIN ON OR ABOUT JUNE 15 AND THE OTHER APPROXIMATELY 8 WEEKS LATER.

EACH PLANT SHALL HAVE SUFFICIENT WATER TO KEEP IT IN A HEALTHY, GROWING CONDITION. IF LOCAL WEATHER CONDITIONS WARRANT, THE ENGINEER MAY REQUIRE WEEKLY WATERING. WHEN WATERING IS REQUIRED, A SCHEDULE FOR WATERING EACH PLANT SHALL BE SUPPLIED TO AND APPROVED BY THE ENGINEER. THE WATER SHALL BE APPLIED IN SUCH A MANNER AS TO SATURATE THE ROOT AND MULCHED AREA OF EACH PLANT WITHOUT CAUSING RUNOFF (SEE WATERING TABLE). IN CASE OF FALL PLANTINGS, THESE WATERINGS SHALL CONTINUE UNTIL SOIL FREEZE-UP AND RECOMMENCE AFTER THE SPRING THAW UNLESS OTHERWISE DIRECTED.

ON OR ABOUT SEPTEMBER 15, THE ENGINEER SHALL INSPECT THE PLANTING AND SUPPLY THE CONTRACTOR WITH A LISTING OF THOSE PLANTS HAVING DIED, DIED BACK BEYOND NORMAL PRUNING LINES OR ARE MISSING FROM THE PLANTING. THE CONTRACTOR SHALL MAKE THE REPLANTING AS REQUIRED AND IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE ORIGINAL MATERIAL. THESE REPLACEMENTS ARE NOT SUBJECT TO THE PERIOD OF ESTABLISHMENT. HOWEVER, PLANTS PLANTED INITIALLY IN THE FALL WHICH HAVE DIED BEFORE THE SPRING PLANTING SEASON SHALL BE REPLACED IMMEDIATELY AND ARE SUBJECT TO THE ESTABLISHMENT PERIOD.

AFTER REPLACEMENTS HAVE BEEN PLANTED, THE FINAL INSPECTION SHALL BE MADE AND THE ACTUAL COUNT OF LIVE PLANTS OF EACH VARIETY AND SPECIES LISTED FOR PAYMENT.

WATERING TABLE

SHRUBS 1'-2' SIZE	2 GALLON PER PLANT
SHRUBS 2'-3' SIZE	4 GALLONS PER PLANT
SHRUBS 4'-5' SIZE	7 GALLONS PER PLANT
TREES 5'-6' SIZE	10 GALLONS PER PLANT
TREES 1-1/4" - 1-1/2" CAL.	15 GALLONS PER PLANT
TREES 1-1/2" - 2" CAL.	20 GALLONS PER PLANT
TREES 2"-3" CAL.	25 GALLONS PER PLANT
TREES 3"-4" CAL.	30 GALLONS PER PLANT

THE METHOD OF MEASUREMENT FOR SUMMER WATERING SHALL BE BY APPROVED METERING FROM TANKS OR BY INDIVIDUALLY MEASURED CONTAINERS TO EACH PLANT TO BE WATERED. PAYMENT FOR PLANTING PERIOD OF ESTABLISHMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS 661, 662 AND 663.

*SOIL CONDITIONER

A SOIL CONDITIONER SUCH AS "HAYDITE", "PERLITE" OR AN APPROVED EQUAL SHALL BE USED. THE PARTICLE SIZE GRADATION OF THE SOIL CONDITIONER SHALL BE AT LEAST 80% PASSING A NO. 6 SIEVE AND NOT MORE THAN 5% PASSING A NO. 50 SIEVE.

HERBICIDES

THE MONTH PRIOR TO CULTIVATION AND PLANTING ALL SHRUB BEDS WILL BE TREATED WITH ROUNDUP BRAND HERBICIDE OR AN APPROVED EQUAL. AFTER PLANTING AND FERTILIZING HAVE BEEN COMPLETED AND APPROVED, THE SHRUB BEDS WILL BE TREATED WITH SURFLAN BRAND HERBICIDE OR AN APPROVED EQUAL. THE PATIO AND METHOD OF APPLICATION SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S PRODUCT LABEL AND CONSISTENT WITH CURRENT PRACTICES FOR ROADSIDE MANAGEMENT. THIS WORK SHALL BE ACCOMPLISHED UNDER THE DIRECT SUPERVISION OF A PESTICIDE APPLICATOR LICENSED BY THE STATE OF OHIO.

TOPSOIL TESTING

TOPSOIL FAILING CURRENT TEST STANDARDS MAY BE ALTERED, UPON APPROVAL OF THE ENGINEER, BY ADDING APPROVED CONDITIONERS TO CORRECT THE DEFICIENCIES. TOPSOIL SHALL BE FREE OF JOHNSON GRASS AND CONFORM TO ITEM 663 AS DETERMINED BY THE ENGINEER.

GENERAL SUMMARY

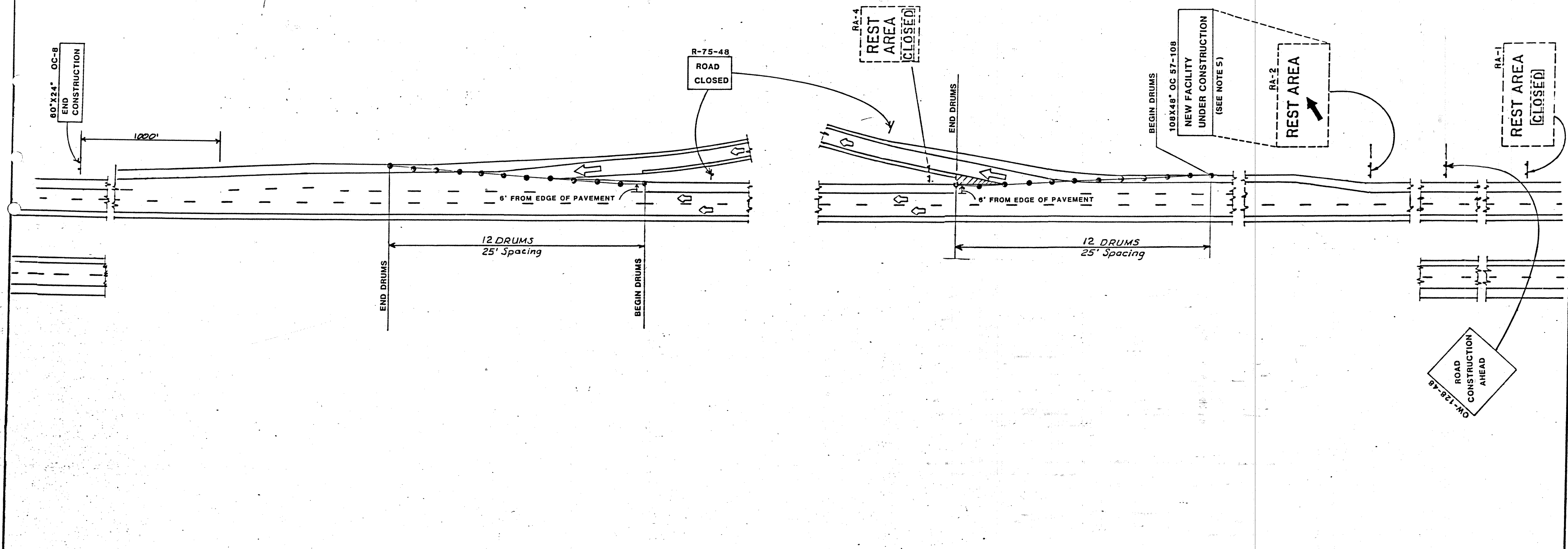
ITEM	SHEET NUMBER																	ITEM	QUANT.	UNIT	DESCRIPTION	
	3	11	12	13	14	15	17	18	19	20	21	22	23	24	25	26	27					28
																						GENERAL CONTRACT
				1					1											2	EACH	MOTORIST SERVICES BUILDING (EXCEPT ELECTRICAL, PLUMBING, HEATING AND VENTILATING)
															1					1	EACH	COMPLETE WASTEWATER TREATMENT SYSTEM W/F.M. CLARIFIER (EXCEPT ELECTRICAL WORK) 10,000 GALLON
				11					10											21	EACH	WASTE RECEPTACLE SLEEVE
				3					4											7	EACH	WASTE RECEPTACLE SLAB
				4,080					3,150											7,230	S.F.	GRAVEL PATH
				2																2	EACH	8' WOOD BENCH AND FOOTER
				5					5											10	EACH	8' WOOD BENCH
								4					4							8	EACH	CHARCOAL GRILL AND SERVICE TABLE REMOVED
								4					4							8	EACH	CHARCOAL GRILL AND SERVING TABLE
															780					780	L.F.	6" CAST IRON SOIL PIPE (SV) W/FLEXIBLE JOINTS
															1195					1195	L.F.	2" FORCE MAIN
															1					1	EACH	LIFT STATION & VALVE BOX ASSEMBLY (EXCEPT ELECTRICAL)
								19						6						25	EACH	BOULDERS
								LUMP						LUMP						LUMP		WOOD STEPPING POSTS
								12					12							24	EACH	PICNIC TABLE
								2					2							4	EACH	PICNIC TABLE AND SLAB
	3																			3	EACH	STACKING CHAIR *
	1	12130																		12130	L.F.	SNOW FENCE - TREE PROTECTION
						1					1									1	EACH	FOLDING LEG TABLE *
																				2	EACH	WATER RESERVOIR TANK (EXCEPT PLUMBING & ELECTRICAL)
						LUMP														201	LUMP	CLEARING AND GRUBBING
															56.5					56.5	L.F.	PIPE ABANDONED
						5														5	EACH	MANHOLE ABANDONED
						LUMP														202	LUMP	STRUCTURES REMOVED
						5975														5,975	SQFT.	WALK REMOVED
						825														825	L.F.	CURB REMOVED
						400														400	L.F.	FENCE REMOVED
						LUMP														202	LUMP	WASTEWATER TREATMENT SYSTEM REMOVED, AS PER PLAN
						2														2	EACH	UNDERGROUND STORAGE TANK REMOVED
						LUMP			LUMP						LUMP					203	LUMP	EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION
									LUMP						LUMP					203	LUMP	EMBANKMENT
																				301	CUYD.	BITUMINOUS AGGREGATE BASE, AC-20
									385											304	CUYD.	AGGREGATE BASE
									290											404	CUYD.	ASPHALT CONCRETE - AC20
									100											200	CUYD.	ASPHALT CONCRETE - AC20

GENERAL SUMMARY

ITEM	SHEET NUMBER																		ITEM	QUANT	UNIT	(GENERAL CONTRACT CONTINUED)	DESCRIPTION		
	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28						29	
		175						240							240					452	655	SQYD	7" PLAIN CONCRETE PAVEMENT, AS PER PLAN		
			0.5'						0.5'											601	1	CU.YD	ROCK CHANNEL PROTECTION, TYPE C W/FILTER		
			1.						1.											602	2	CU.YD	CONCRETE MASONRY (STD. HW-D, MODIFIED AS PER PLAN)		
		530							325											603	855	L.F.	6" CONDUIT TYPE C		
														6						604	6	EACH	MANHOLE, STANDARD NO. 3 W/FLAT TOP		
			2																	604	2	EACH	CATCH BASIN, STANDARD NO.2-2-B		
														56						607	56	L.F.	FENCE, TYPE CL, 60"		
														530						607	530	L.F.	FENCE, TYPE CL, 72", AS PER PLAN		
														2						607	2	EACH	GATE, TYPE CL, 72" X 12", AS PER PLAN		
														16						608	16	L.F.	CONCRETE STEPS, STANDARD TYPE B		
		5500						6775												608	12,275	SQFT	4" CONCRETE WALK, AS PER PLAN		
		2						2												608	4	EACH	CURB RAMP, STANDARD TYPE 1, MODIFIED AS PER PLAN		
		384						385												609	769	L.F.	CONCRETE CURB, STANDARD TYPE 6		
		35						38												609	73	L.F.	CONCRETE CURB, STANDARD TYPE 3-A		
							47225							30900						655	86,125	SQ.YD	SEEDING AND RENOVATING EXISTING SOD, AS PER PLAN		
							4.25							3.5						655	7.75	TON	COMMERCIAL FERTILIZER		
							850							975						660	1825	SQYD	SODDING		
																							BOTANICAL NAME - COMMON NAME	SIZE	CONDITION
							387							340						661	727	EACH	PERENNIALS: HEMEROCALLUS SPECIES-DAYLILLY-ORANGE 4"		POT
							5							4						662	9	EACH	CORNUS STOLONIFERA 'ISANTI' - REDTWIG DOGWOOD	24"-36" HEIGHT	B & B
							49							45						662	94	EACH	DEUTZIA GRACILIS - SLENDER DEUTZIA	24"-36" HEIGHT	CONT.
							10							10						662	20	EACH	FOTHERGILLA GARDENII - DWARF FOTHERGILLA	18"-24" HEIGHT	CONT.
							22							22						662	44	EACH	JUNIPERUS HORIZONTALIS 'BLUE RUG' - CREEPING JUNIPER	15" - 24" SPREAD	CONT.
							5							1						662	6	EACH	KALMIA LATIFOLIA 'MYRTIFOLIA' - MOUNTAIN LAUREL	24"-36" HEIGHT	CONT.
							24							25						662	49	EACH	TAXUS MEDIA 'EVERLOW' - EVERLOW JAPANESE YEW	24"-36" HEIGHT	B & B
							32							23						662	55	EACH	VIBURNUM CARLESII - KOREANSPICE VIBURNUM	24"-36" HEIGHT	B & B
							1													662	1	EACH	VIBURNUM PRUNIFOLIUM - BLACKHAW VIBURNUM	3'-4' HEIGHT	CONT.
							13	1					10	4						663	28	EACH	ACER RUBRUM - RED MAPLE	2.5"-4" CALIPER	B & B
								3						1						663	4	EACH	AMELANCHIER LAEVIS - ALLEGHANY SERVICEBERRY	6'-8' HEIGHT	B & B
								11						7						663	18	EACH	CORNUS KOUSA 'MILKY WAY' - KOUSA DOGWOOD	6'-8' HEIGHT	B & B
													8							663	8	EACH	FAGUS GRANDIFOLIA - AMERICAN BEECH	2"-2 1/2" CALIPER	B & B
														2						663	2	EACH	FRAXINUS PENNSYLVANICA 'MARSHALL' - MARSHALLS GREEN ASH	2 1/2"-3" CALIPER	B & B
							13							9						663	22	EACH	MALUS 'SNOWDRIFT' - SNOWDRIFT CRABAPPLE	1 1/2"-2" CALIPER	B & B
							13							7						663	20	EACH	PICEA ABIES - NORWAY SPRUCE	6'-8' HEIGHT	B & B
							12						5	3						663	20	EACH	PINUS NIGRA - AUSTRIAN PINE	6'-8' HEIGHT	B & B
							12													663	12	EACH	PINUS STROBUS - E. WHITE PINE	6'-8' HEIGHT	B & B

GENERAL SUMMARY

ITEM	SHEET NUMBER				ITEM	QUANT	UNIT	DESCRIPTION
	15	16	21	22				
							(ELECTRICAL CONTRACT CONTINUED)	
	1135		1735		SPEC	2870	L.F.	PLASTIC CAUTION TAPE
	380		380		603	760	L.F.	4" CONDUIT TYPE E (PULL BOX UNDERDRAIN)
	1		1		625	2	EACH	POWER SERVICE, AS PER PLAN
			425		625	425	L.F.	TRENCH, 48", AS PER PLAN
	1430		1310		625	2740	L.F.	TRENCH, 24", AS PER PLAN
			425		625	425	L.F.	4" CONDUIT, 713.04
	625		25		625	650	L.F.	3" CONDUIT, 713.04
			70		625	70	L.F.	3" CONDUIT, 713.04, JACKED
	1165		1360		625	2525	L.F.	2" CONDUIT, 713.04
	600		685		625	1285	L.F.	1" CONDUIT, 713.04
	19		19		625	38	EACH	PULL BOX, 24" CONCRETE 713.08
	250		36		625	286	L.F.	500 MCM UL TYPE, 600 VOLT SEC. FEEDER CABLE
	670		1545		625	2225	L.F.	1/C NO. 4 DISTRIBUTION CABLE, AWG., 5000 VOLT
	1365				625	1365	L.F.	1/C NO. 4/0 AWG, 600 VOLT DISTRIBUTION CABLE
	120				625	120	L.F.	NO. 10 AWG, POLE AND BRACKET CABLE
	4240		665		625	4905	L.F.	1/2 NO. 12, AWG., 600 VOLT DISTRIBUTION CABLE
	195		225		625	420	L.F.	1/C NO. 10 RHH, RHW 600 VOLT CONDUCTORS
	19		18		202	37	EACH	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN
	7		5		625	12	EACH	LUMINAIRE, POST TOP TYPE V, 100 WATT HPS 240 VOLT 713.11
			7		625	7	EACH	LUMINAIRE TYPE II STYLE B, 200 WATT HPS 240 VOLT 713.11
	13		6		625	19	EACH	LUMINAIRE TYPE III STYLE B, 200 WATT HPS 240 VOLT 713.11
	420		510		625	930	L.F.	NO. 6 RHH, RHW 600 VOLT CONDUCTORS
	2				625	2	EACH	LIGHT POLE DESIGN TON 20
	1				625	1	EACH	LIGHT POLE DESIGN AT 15B, 41.7' POLE
	2				625	2	EACH	LIGHT POLE FOUNDATION, 24" X 6'
	1				625	1	EACH	LIGHT POLE FOUNDATION, 24" X 8'
	640				625	640	L.F.	1 1/2" DUCT CABLE W/3 NO. 4 AWG. 5000 VOLT CONDUCTORS
	3				625	3	EACH	CABLE SPLICING KIT
	4		1		625	5	EACH	GROUND ROD
	24		18		625	42	EACH	CONNECTOR KIT TYPE II, AS PER PLAN
					624	LUMP		MOBILIZATION
					625	LUMP		HIGH VOLTAGE TEST
	1				202	1	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN
	1				202	1	EACH	LIGHT POLE FOUNDATION REMOVED, AS PER PLAN
								TOTAL ELECTRICAL CONTRACT



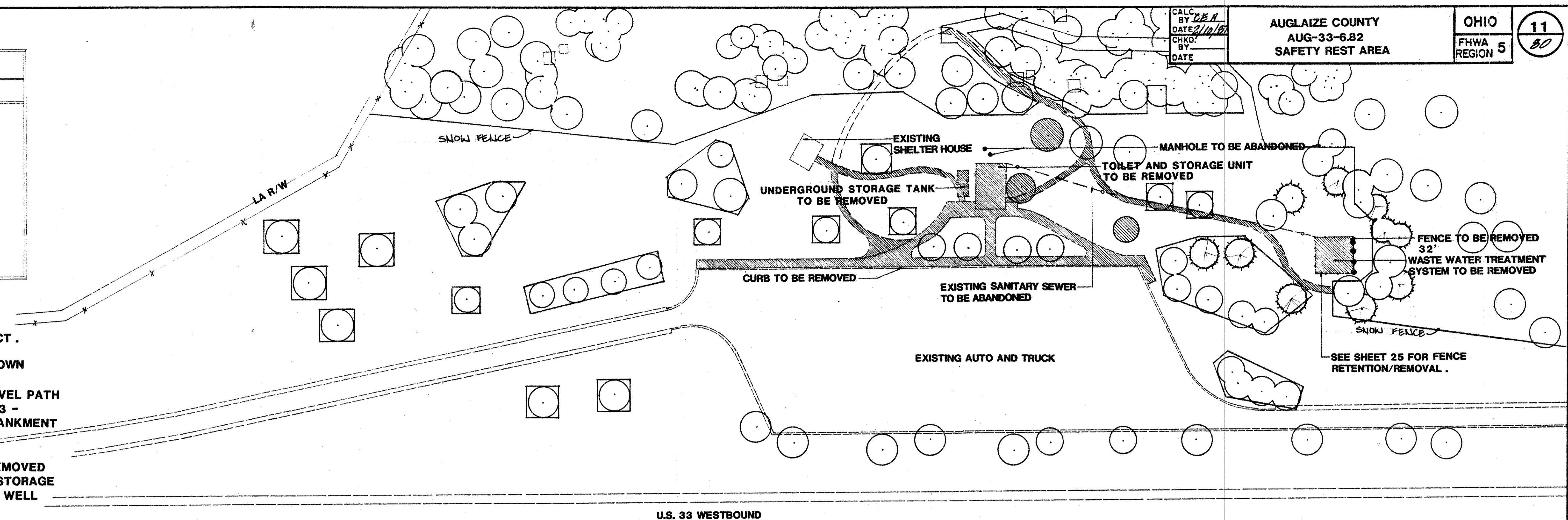
NOTES:

- REST AREA SIGNS RA-1 AND RA-4 SHALL HAVE THE ACTION MESSAGE COVERED BY AN OVERLAY BEARING THE LEGEND "CLOSED". THIS PANEL SHALL HAVE A BLACK LEGEND ON A REFLECTORIZED ORANGE BACKGROUND. THE OVERLAY FOR THE RA-1 SIGN SHALL BE 8'x1 1/2'. THE OVERLAY FOR THE RA-4 SIGN SHALL BE 4'x1 1/2'.
- SUPPLEMENTAL PANELS LOCATED UNDER MAINLINE REST AREA SIGNS SHALL BE REMOVED OR COVERED WHEN THE REST AREA IS CLOSED. (EXAMPLE: TELEPHONE, TOURIST INFO, HANDICAPPED SYMBOL SIGN).
- Drums, in accordance with O.D.O.T. C.F.M. Specs. Item 614 (614.03) and the Ohio Manual, shall be used to close the Accel. and Decel. lanes during construction of this project. The placement of the drums shall be as shown above and/or at the direction of the Engineer. The drums and any replacement drums shall be included in the price bid for Item 614 Maintaining Traffic.
WHEN REQUESTED BY THE ENGINEER, THE CONTRACTOR SHALL REPOSITION AND/OR REPLACE DISLOCATED OR DAMAGED DRUMS.
- WHERE REST AREA RAMP LIGHTING EXISTS, IT SHALL BE MAINTAINED IN PROPER CONDITION TO PROVIDE OPTIMUM ILLUMINATION.
- Rest area signs (RA-2 or RA-3) shall be temporarily changed by either of the following methods:
 - Remove the existing sign for safe storage; mount a temporary extru-sheet sign on the existing supports; maintain the temporary sign during the period of closure; upon reopening of the rest area the temporary sign shall be removed and the original sign re-erected.
 - Mount a temporary overlay onto the existing sign (see 630.04 for overlay requirements), and maintain it in place for the duration of the closure; upon reopening of the rest area, remove the overlay. The temporary extru-sheet sign or overlay shall provide black legend on a reflectORIZED orange background.
- BASIS OF PAYMENT SHALL BE AT THE GENERAL CONTRACT BID PRICE, LUMP SUM FOR MAINTENANCE OF TRAFFIC AND SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR TEMPORARY SIGNS OVERLAY OR COVERED.

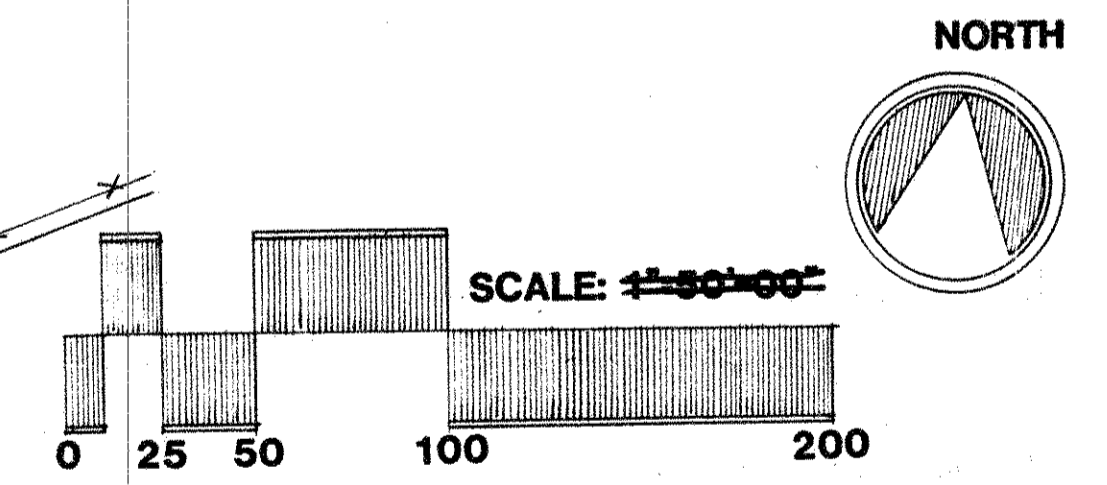
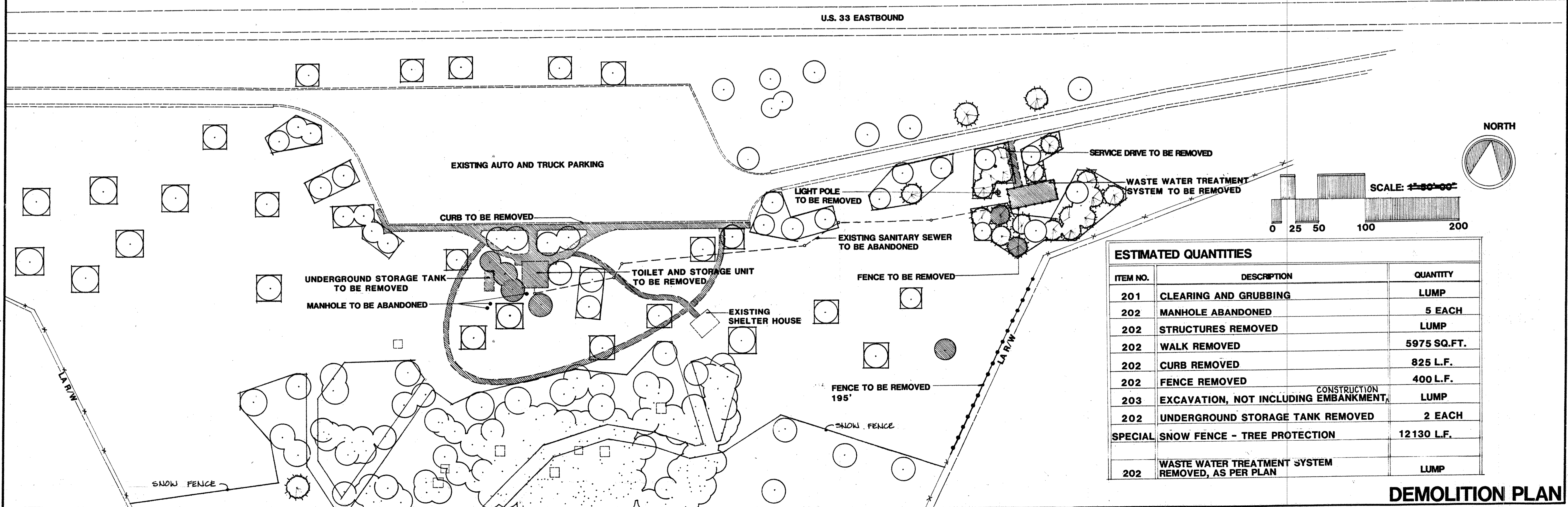
LEGEND:

KEY	DESCRIPTION
	ITEMS TO BE REMOVED
	SNOW FENCE-TREE PROTECTION
	FENCE TO BE REMOVED
	MANHOLE ABANDONED

- NOTE:**
- PICNIC TABLES REMOVED BY DISTRICT.
 - SPECIAL CARE SHOULD BE TAKEN BY CONTRACTOR TO PROTECT TREES SHOWN TO REMAIN ON THIS SHEET.
 - REMOVAL OF SERVICE DRIVE AND GRAVEL PATH IS TO BE REMOVED UNDER ITEM 203 - EXCAVATION, NOT INCLUDING EMBANKMENT
 - SEE SHEET 22 FOR LIGHT POLE REMOVAL QUANTITIES.
 - WATER WELL PUMPS ARE TO BE REMOVED UNDER ITEM 202 - UNDERGROUND STORAGE TANK. CONTRACTOR IS TO RETURN WELL WATER PUMPS TO DISTRICT.



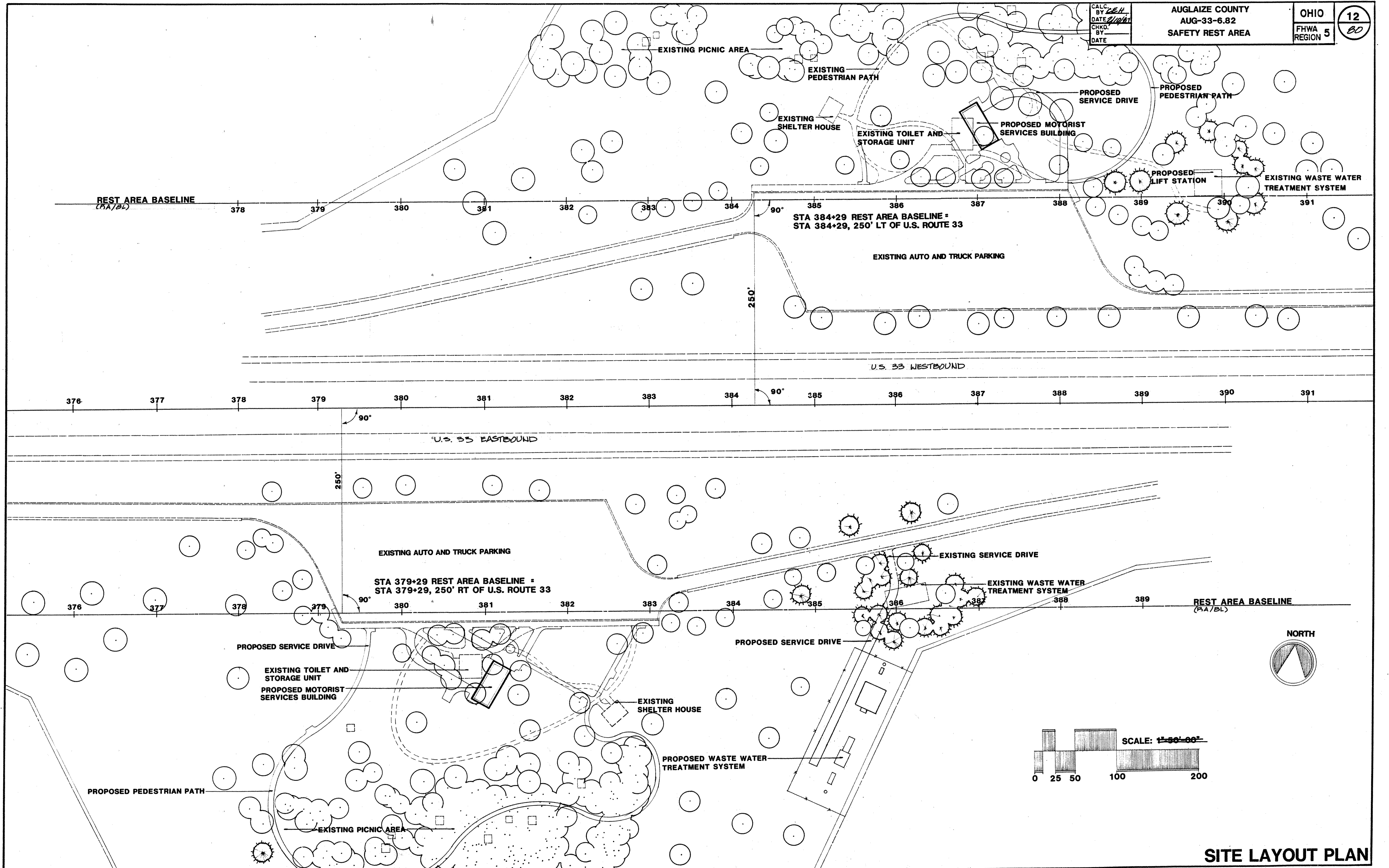
376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391



ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY
201	CLEARING AND GRUBBING	LUMP
202	MANHOLE ABANDONED	5 EACH
202	STRUCTURES REMOVED	LUMP
202	WALK REMOVED	5975 SQ.FT.
202	CURB REMOVED	825 L.F.
202	FENCE REMOVED	400 L.F.
203	EXCAVATION, NOT INCLUDING EMBANKMENT, CONSTRUCTION	LUMP
202	UNDERGROUND STORAGE TANK REMOVED	2 EACH
SPECIAL	SNOW FENCE - TREE PROTECTION	12130 L.F.
202	WASTE WATER TREATMENT SYSTEM REMOVED, AS PER PLAN	LUMP

DEMOLITION PLAN



SITE LAYOUT PLAN

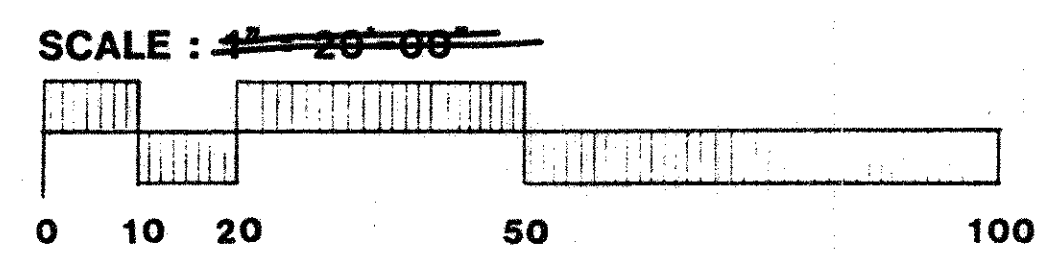
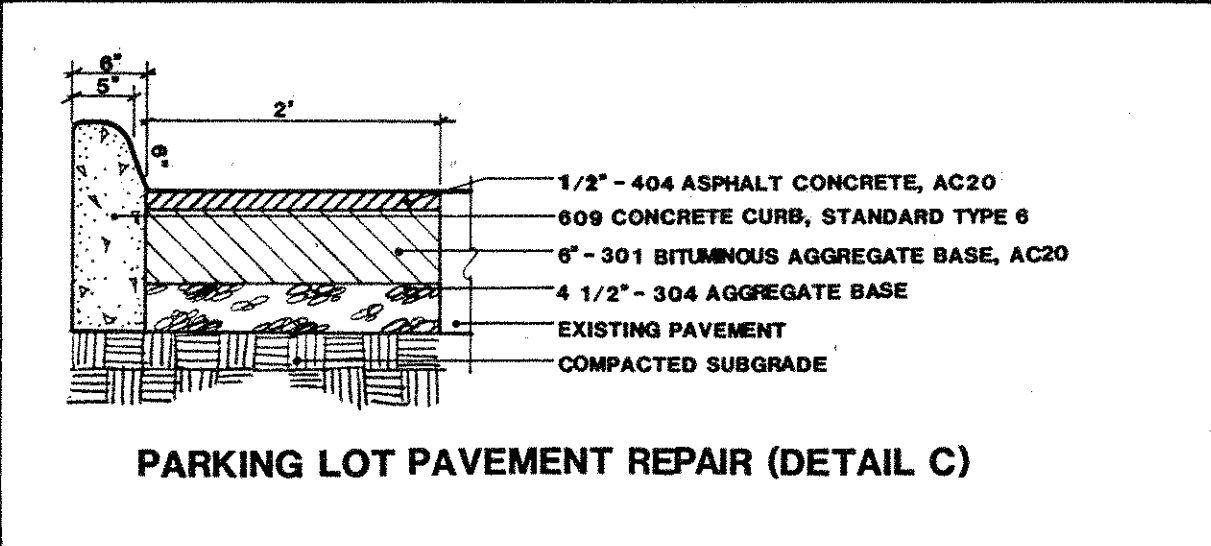
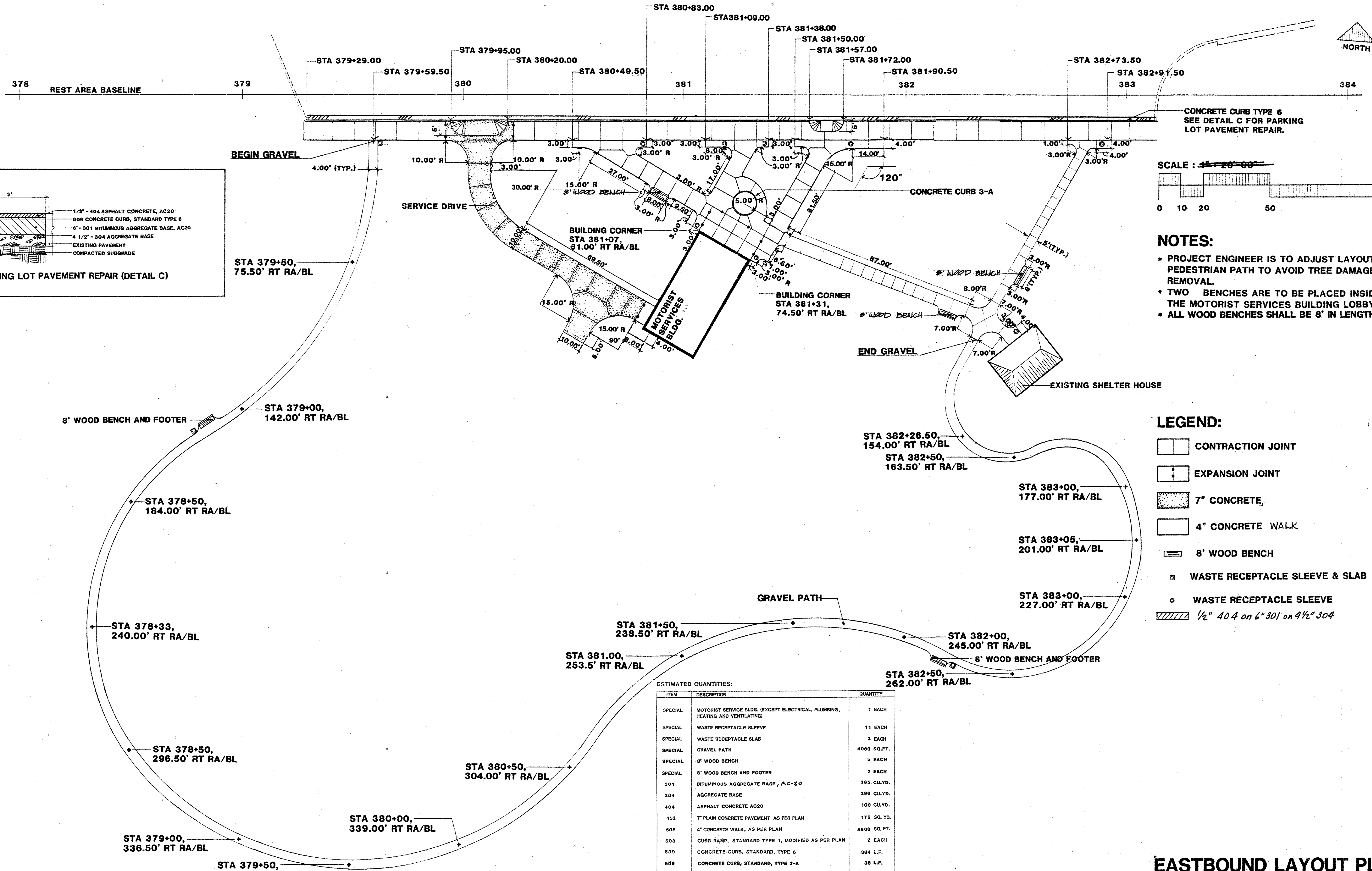
CALC. BY: LEL
 DATE: 8/10/82
 CHKD. BY:
 DATE:

AUGLAIZE COUNTY
 AUG-33-6.82
 SAFETY REST AREA

OHIO
 FHWA REGION 5

13
 80

EXISTING AUTO AND TRUCK PARKING



- NOTES:**
- * PROJECT ENGINEER IS TO ADJUST LAYOUT OF PEDESTRIAN PATH TO AVOID TREE DAMAGE OR REMOVAL.
 - * TWO BENCHES ARE TO BE PLACED INSIDE THE MOTORIST SERVICES BUILDING LOBBY.
 - * ALL WOOD BENCHES SHALL BE 8' IN LENGTH.

- LEGEND:**
- CONTRACTION JOINT
 - EXPANSION JOINT
 - 7" CONCRETE
 - 4" CONCRETE WALK
 - 8' WOOD BENCH
 - WASTE RECEPTACLE SLEEVE & SLAB
 - WASTE RECEPTACLE SLEEVE
 - 1/2" 404 on 6" 301 on 4 1/2" 304

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
SPECIAL	MOTORIST SERVICE BLDG. (EXCEPT ELECTRICAL, PLUMBING, HEATING AND VENTILATING)	1 EACH
SPECIAL	WASTE RECEPTACLE SLEEVE	11 EACH
SPECIAL	WASTE RECEPTACLE SLAB	3 EACH
SPECIAL	GRAVEL PATH	4080 SQ.FT.
SPECIAL	8' WOOD BENCH	5 EACH
SPECIAL	8' WOOD BENCH AND FOOTER	2 EACH
301	BITUMINOUS AGGREGATE BASE, AC-20	385 CU.YD.
304	AGGREGATE BASE	290 CU.YD.
404	ASPHALT CONCRETE AC20	100 CU.YD.
452	7" PLAIN CONCRETE PAVEMENT AS PER PLAN	175 SQ. YD.
608	4" CONCRETE WALK, AS PER PLAN	5500 SQ. FT.
608	CURB RAMP, STANDARD TYPE 1, MODIFIED AS PER PLAN	2 EACH
609	CONCRETE CURB, STANDARD, TYPE 6	384 L.F.
609	CONCRETE CURB, STANDARD, TYPE 3-A	38 L.F.

EASTBOUND LAYOUT PLAN

CALC. BY: CEH
 DATE: 7/10/82
 CHKD. BY:
 DATE:

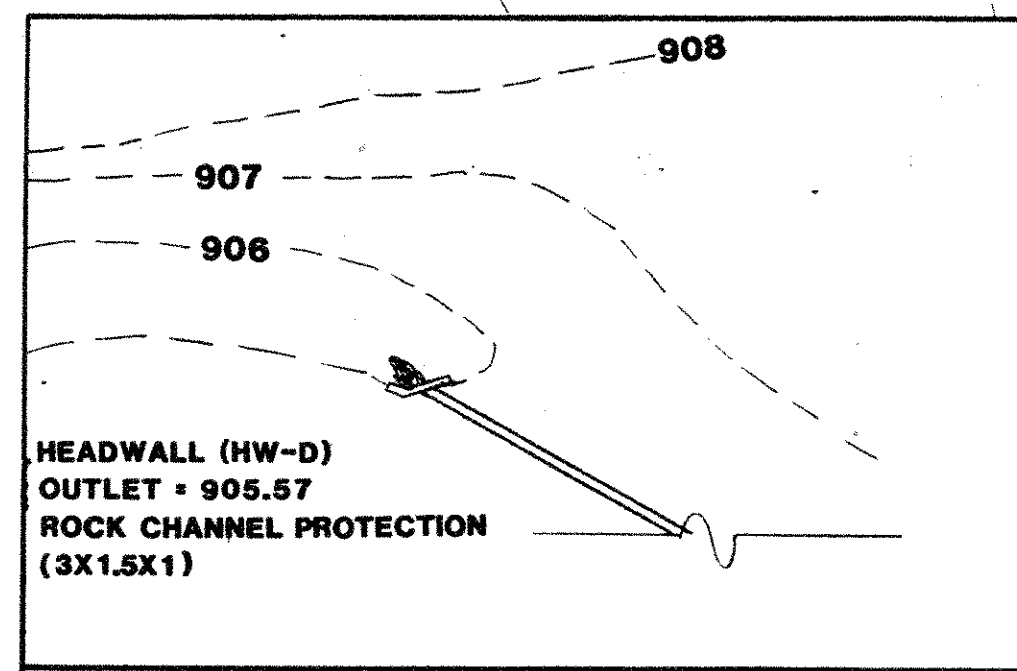
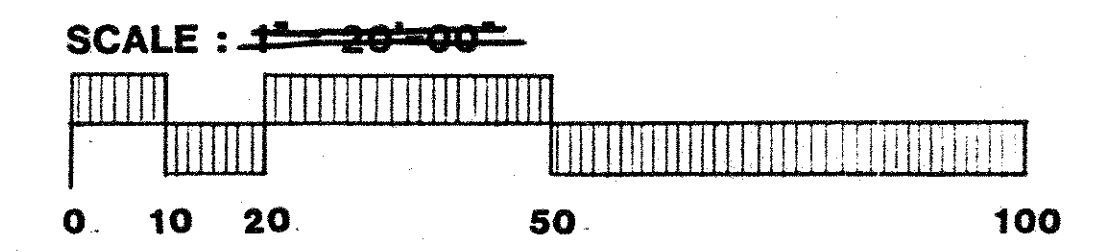
AUGLAIZE COUNTY
 AUG-33-6.82
 SAFETY REST AREA

OHIO
 FHWA REGION 5

14
 20

FOR CONTINUATION OF THE 6" STORM SEWER SEE DETAIL BELOW

378 REST AREA BASELINE 379 380 381 382 383 384



LEGEND:

- TC TOP OF CURB
- BC BOTTOM OF CURB
- HP HIGH POINT
- LP LOW POINT
- 908 --- EXISTING CONTOUR
- 909 --- PROPOSED CONTOUR
- SS STORM SEWER

NOTES:

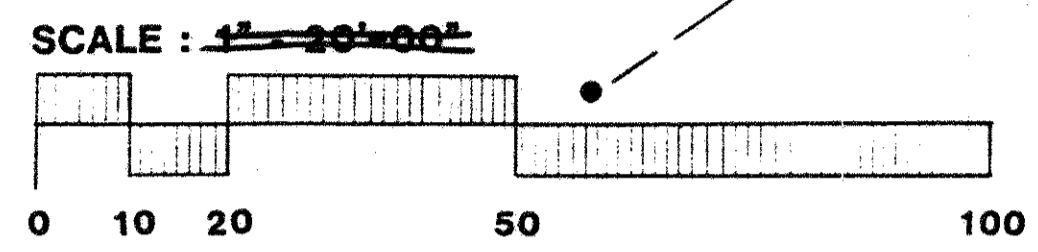
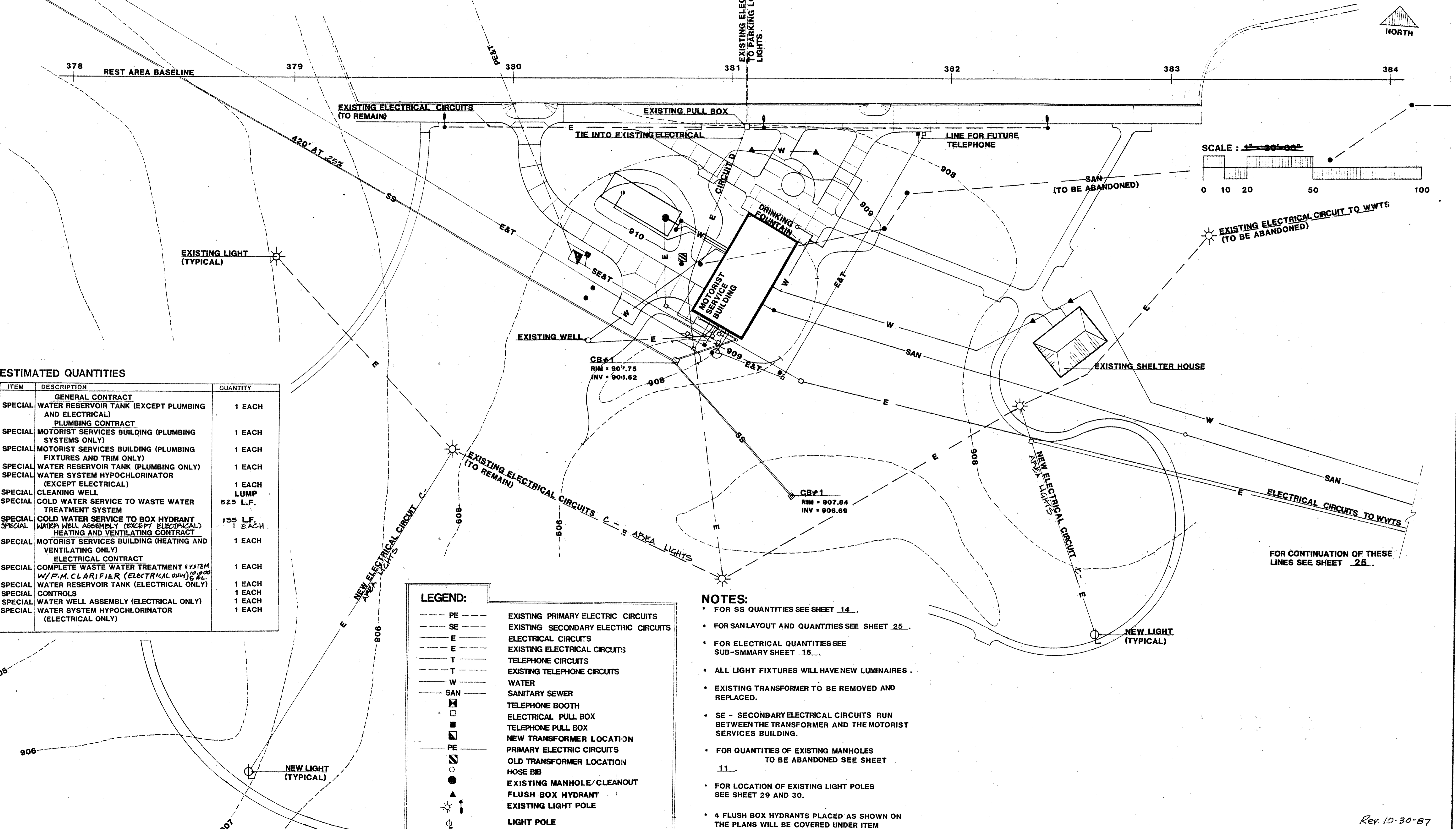
- ALL WALKS SHALL HAVE A 2% CROSS SLOPE UNLESS OTHERWISE NOTED OR AS ADVISED BY PROJECT ENGINEER.
- HEADWALL (HW-D) IS CONSTRUCTED OF CONCRETE MASONRY AND IS MODIFIED TO ACCEPT THE 6" PIPE.

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
203	EXCAVATION NOT INCLUDING EMBANKMENT	LUMP
203	EMBANKMENT	LUMP
601	ROCK CHANNEL PROTECTION, TYPE C W/FILTER	0.16 CU.YD.
603	6" CONDUIT, TYPE C	530 LF.
602	CONCRETE MASONRY (HW-D), MODIFIED AS PER PLAN	1 CU.YD.
604	CATCH BASIN, STANDARD 2-2-B	2 EACH

EASTBOUND GRADING PLAN

JACKED UNDER PAVEMENT FOR CONTINUATION OF E&T CIRCUITS TO DRIVE-UP PHONE SEE LIGHTING PLAN, SHEET 29.



ESTIMATED QUANTITIES

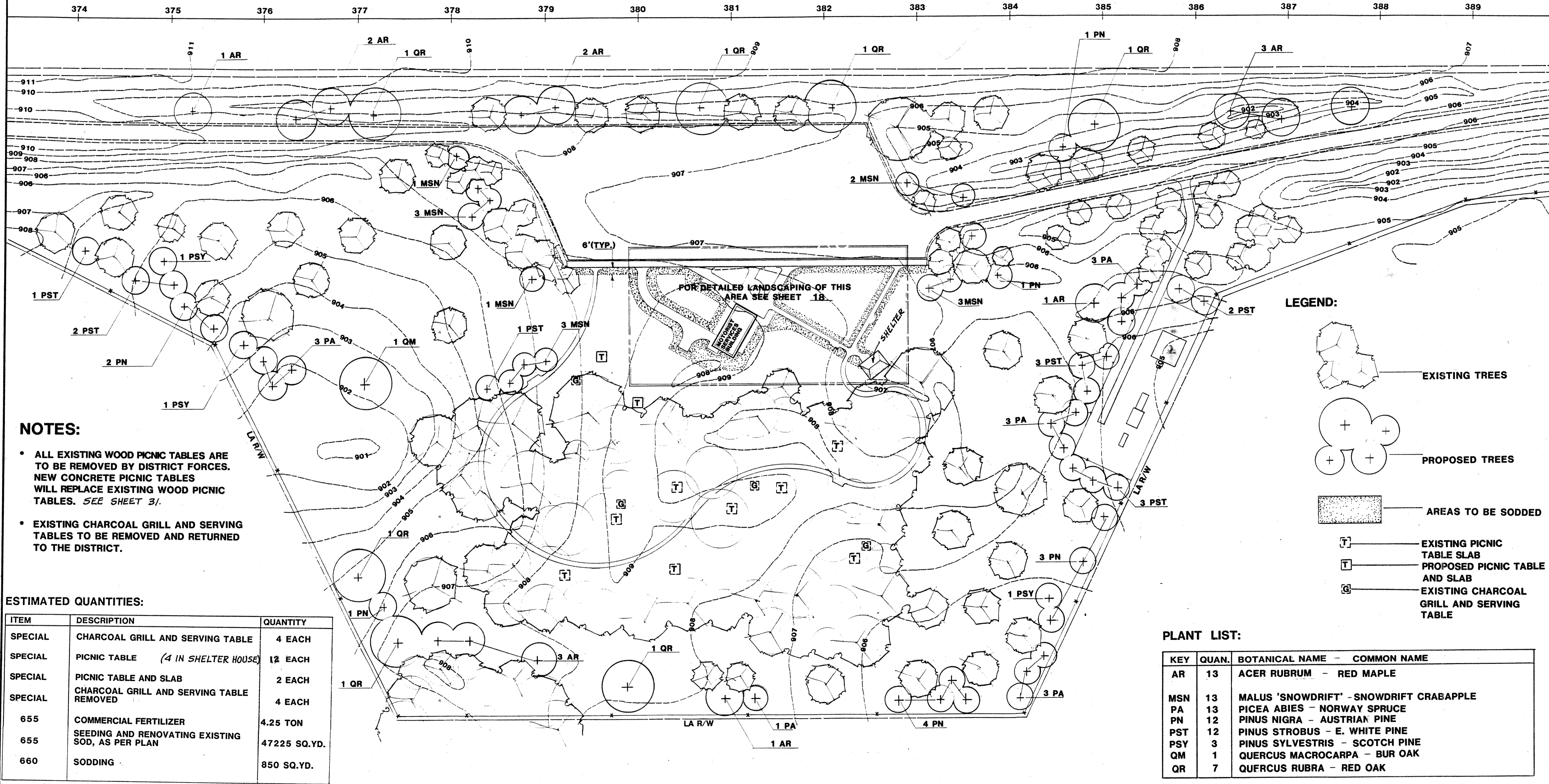
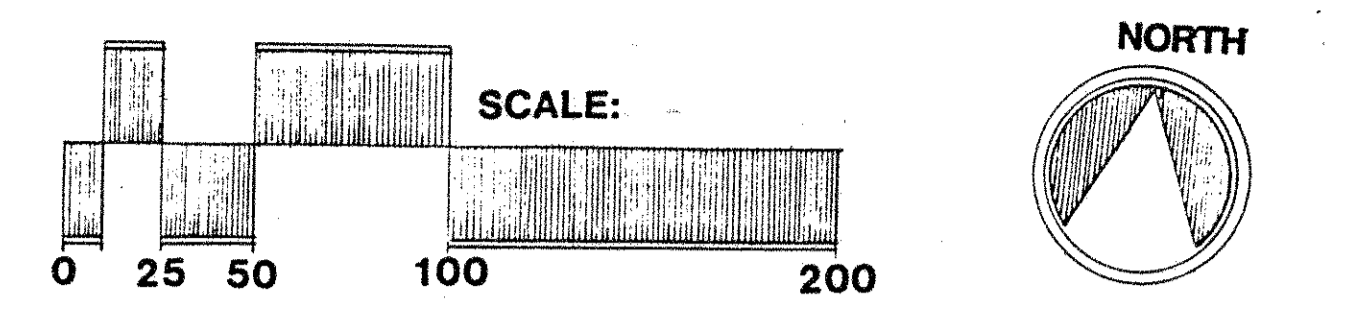
ITEM	DESCRIPTION	QUANTITY
SPECIAL	GENERAL CONTRACT	
SPECIAL	WATER RESERVOIR TANK (EXCEPT PLUMBING AND ELECTRICAL)	1 EACH
SPECIAL	PLUMBING CONTRACT	
SPECIAL	MOTORIST SERVICES BUILDING (PLUMBING SYSTEMS ONLY)	1 EACH
SPECIAL	MOTORIST SERVICES BUILDING (PLUMBING FIXTURES AND TRIM ONLY)	1 EACH
SPECIAL	WATER RESERVOIR TANK (PLUMBING ONLY)	1 EACH
SPECIAL	WATER SYSTEM HYPOCHLORINATOR (EXCEPT ELECTRICAL)	1 EACH
SPECIAL	CLEANING WELL	LUMP
SPECIAL	COLD WATER SERVICE TO WASTE WATER TREATMENT SYSTEM	52.5 L.F.
SPECIAL	COLD WATER SERVICE TO BOX HYDRANT	155 L.F.
SPECIAL	WATER WELL ASSEMBLY (EXCEPT ELECTRICAL)	1 EACH
SPECIAL	HEATING AND VENTILATING CONTRACT	
SPECIAL	MOTORIST SERVICES BUILDING (HEATING AND VENTILATING ONLY)	1 EACH
SPECIAL	ELECTRICAL CONTRACT	
SPECIAL	COMPLETE WASTE WATER TREATMENT SYSTEM W/P.M. CLARIFIER (ELECTRICAL ONLY)	1 EACH
SPECIAL	WATER RESERVOIR TANK (ELECTRICAL ONLY)	1 EACH
SPECIAL	CONTROLS	1 EACH
SPECIAL	WATER WELL ASSEMBLY (ELECTRICAL ONLY)	1 EACH
SPECIAL	WATER SYSTEM HYPOCHLORINATOR (ELECTRICAL ONLY)	1 EACH

LEGEND:

---	PE	EXISTING PRIMARY ELECTRIC CIRCUITS
---	SE	EXISTING SECONDARY ELECTRIC CIRCUITS
---	E	ELECTRICAL CIRCUITS
---	E	EXISTING ELECTRICAL CIRCUITS
---	T	TELEPHONE CIRCUITS
---	T	EXISTING TELEPHONE CIRCUITS
---	W	WATER
---	SAN	SANITARY SEWER
□		TELEPHONE BOOTH
□		ELECTRICAL PULL BOX
□		TELEPHONE PULL BOX
■		NEW TRANSFORMER LOCATION
■		PRIMARY ELECTRIC CIRCUITS
■		OLD TRANSFORMER LOCATION
○		HOSE BIB
○		EXISTING MANHOLE/CLEANOUT
○		FLUSH BOX HYDRANT
○		EXISTING LIGHT POLE
○		LIGHT POLE
○		EXISTING SAN

- NOTES:**
- FOR SS QUANTITIES SEE SHEET 14.
 - FOR SAN LAYOUT AND QUANTITIES SEE SHEET 25.
 - FOR ELECTRICAL QUANTITIES SEE SUB-SMMARY SHEET 16.
 - ALL LIGHT FIXTURES WILL HAVE NEW LUMINAIRES.
 - EXISTING TRANSFORMER TO BE REMOVED AND REPLACED.
 - SE - SECONDARY ELECTRICAL CIRCUITS RUN BETWEEN THE TRANSFORMER AND THE MOTORIST SERVICES BUILDING.
 - FOR QUANTITIES OF EXISTING MANHOLES TO BE ABANDONED SEE SHEET 11.
 - FOR LOCATION OF EXISTING LIGHT POLES SEE SHEET 29 AND 30.
 - 4 FLUSH BOX HYDRANTS PLACED AS SHOWN ON THE PLANS WILL BE COVERED UNDER ITEM SPECIAL - COLD WATER SERVICE TO BOX HYDRANT.

Rev 10-30-87



NOTES:

- * ALL EXISTING WOOD PICNIC TABLES ARE TO BE REMOVED BY DISTRICT FORCES. NEW CONCRETE PICNIC TABLES WILL REPLACE EXISTING WOOD PICNIC TABLES. SEE SHEET 31.
- * EXISTING CHARCOAL GRILL AND SERVING TABLES TO BE REMOVED AND RETURNED TO THE DISTRICT.

ESTIMATED QUANTITIES:

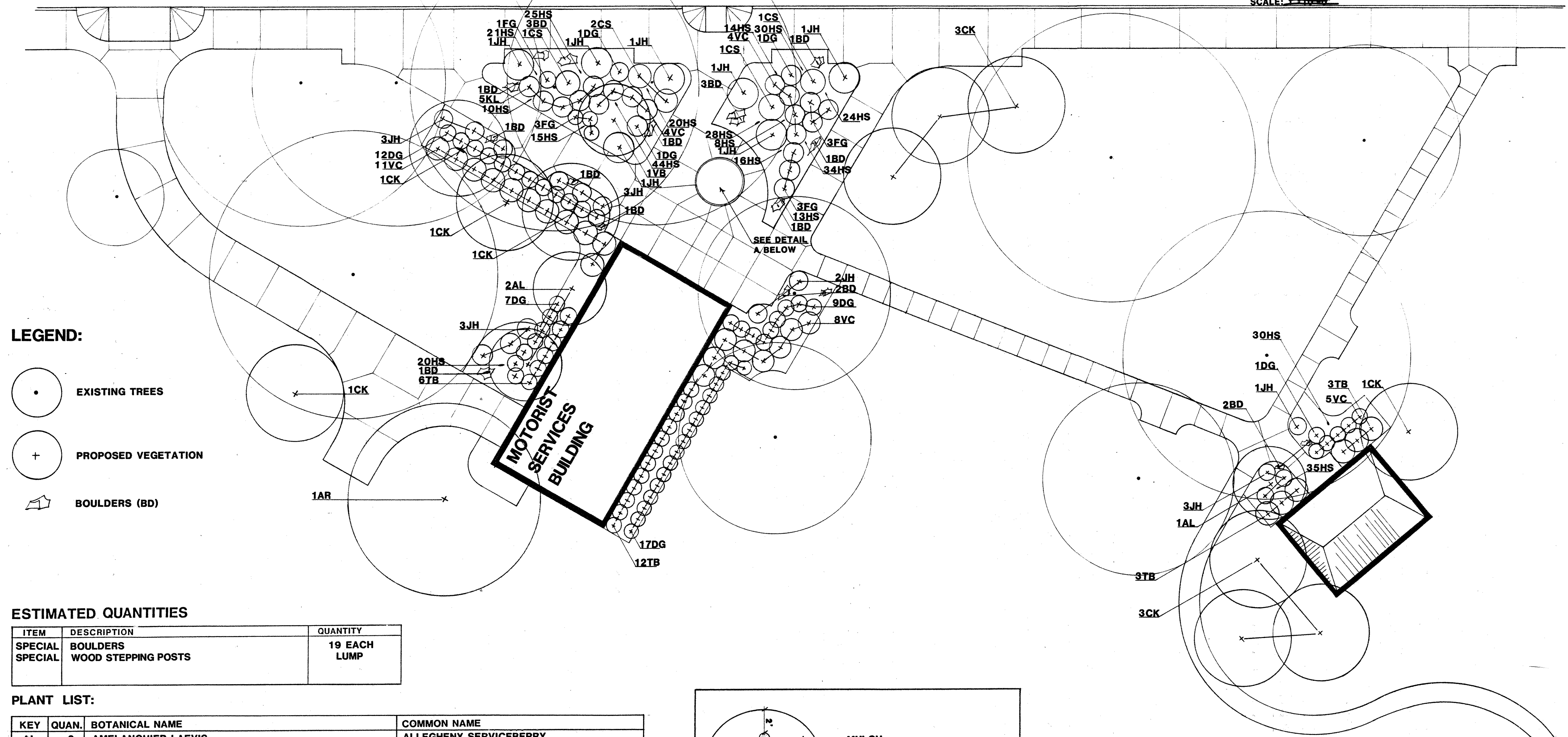
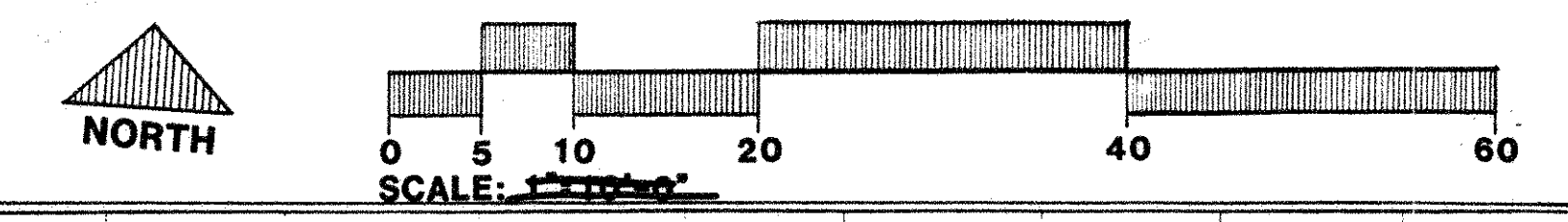
ITEM	DESCRIPTION	QUANTITY
SPECIAL	CHARCOAL GRILL AND SERVING TABLE	4 EACH
SPECIAL	PICNIC TABLE (4 IN SHELTER HOUSE)	12 EACH
SPECIAL	PICNIC TABLE AND SLAB	2 EACH
SPECIAL	CHARCOAL GRILL AND SERVING TABLE REMOVED	4 EACH
655	COMMERCIAL FERTILIZER	4.25 TON
655	SEEDING AND RENOVATING EXISTING SOD, AS PER PLAN	47225 SQ.YD.
660	SODDING	850 SQ.YD.

LEGEND:

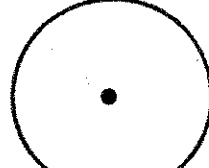
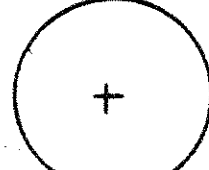

- EXISTING TREES
- PROPOSED TREES
- AREAS TO BE SODDED
- EXISTING PICNIC TABLE SLAB
- PROPOSED PICNIC TABLE AND SLAB
- EXISTING CHARCOAL GRILL AND SERVING TABLE

PLANT LIST:

KEY	QUAN.	BOTANICAL NAME - COMMON NAME
AR	13	ACER RUBRUM - RED MAPLE
MSN	13	MALUS 'SNOWDRIFT' - SNOWDRIFT CRABAPPLE
PA	13	PICEA ABIES - NORWAY SPRUCE
PN	12	PINUS NIGRA - AUSTRIAN PINE
PST	12	PINUS STROBUS - E. WHITE PINE
PSY	3	PINUS SYLVESTRIS - SCOTCH PINE
QM	1	QUERCUS MACROCARPA - BUR OAK
QR	7	QUERCUS RUBRA - RED OAK



LEGEND:

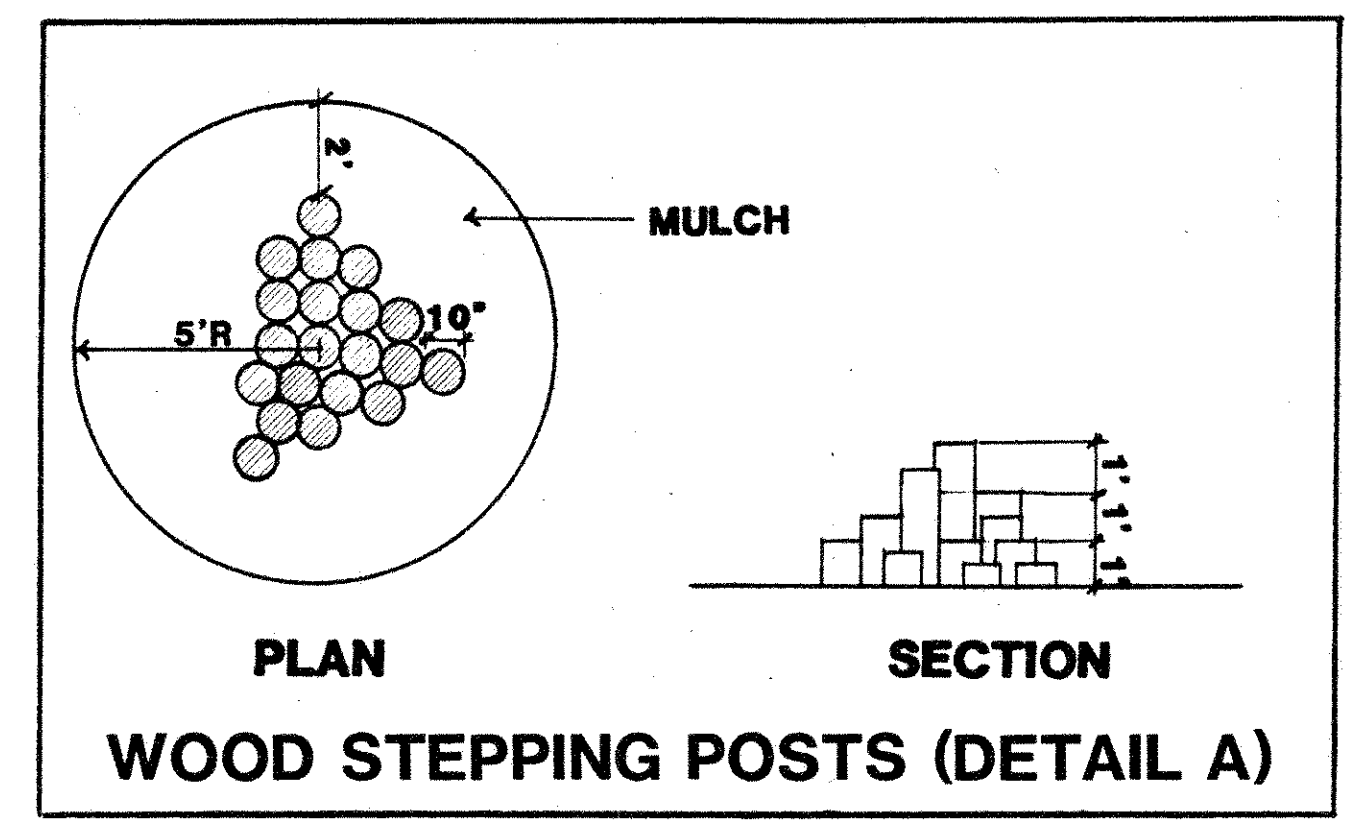
-  EXISTING TREES
-  PROPOSED VEGETATION
-  BOULDERS (BD)

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY
SPECIAL	BOULDERS	19 EACH
SPECIAL	WOOD STEPPING POSTS	LUMP

PLANT LIST:

KEY	QUAN.	BOTANICAL NAME	COMMON NAME
AL	3	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY
AR	1	ACER RUBRUM	RED MAPLE
CK	11	CORNUS KOUSA 'MILKY WAY'	KOUSA DOGWOOD
CS	5	CORNUS STOLONIFERA 'ISANTI'	REDTWIG DOGWOOD
DG	49	DEUTZIA GRACILIS	SLENDER DEUTZIA
FG	10	FOTHERGILLA GARDENII	DWARF FOTHERGILLA
HS	387	PERENNIALS: HEMEROCALLIS SPECIES	DAYLILLY - ORANGE
JH	22	JUNIPERUS HORIZONTALIS 'BLUE RUG'	CREeping JUNIPER
KL	5	KALMIA LATIFOLIA 'MYRTIFOLIA'	MOUNTAIN LAUREL
TB	24	TAXUS BACCATA 'EVERLOW'	ENGLISH YEW
VB	1	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
VC	32	VIBURNUM CARLESII	KOREANSPICE VIBURNUM



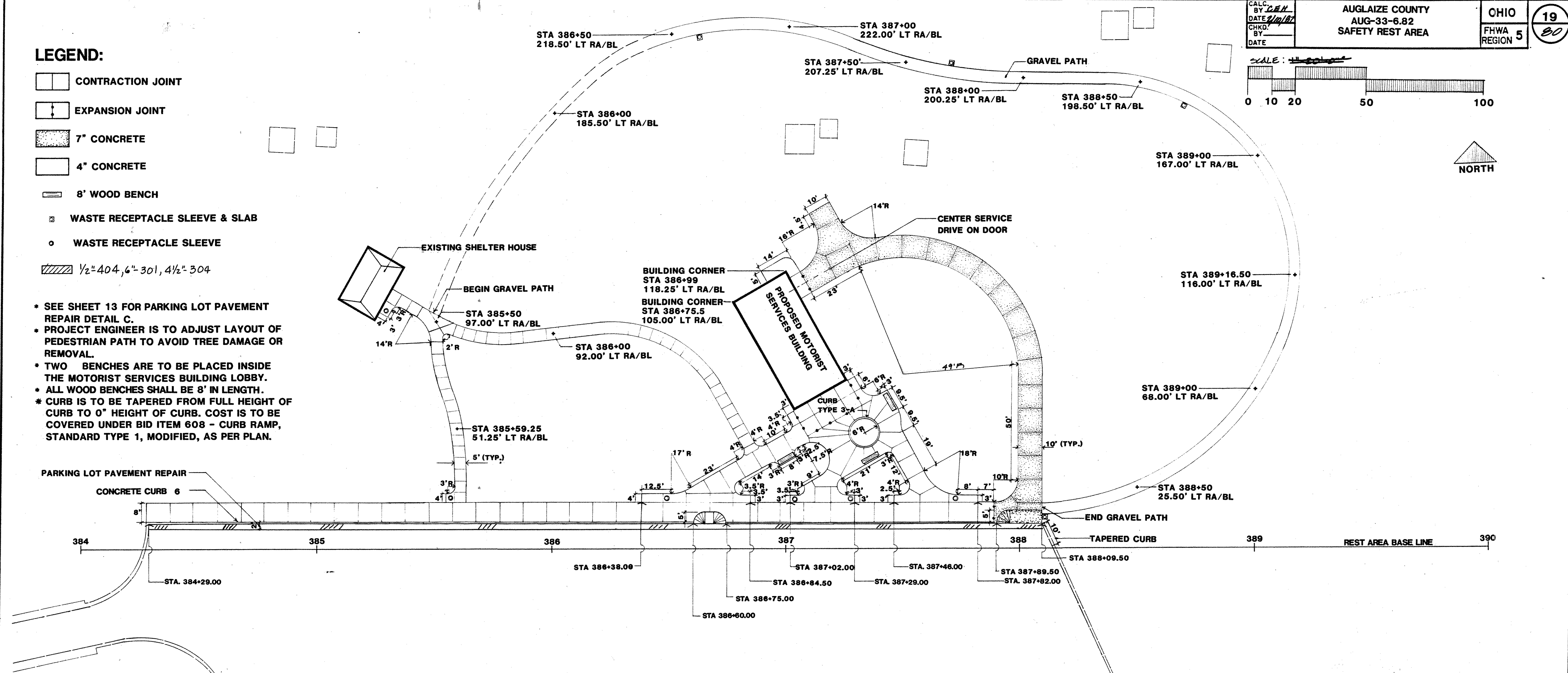
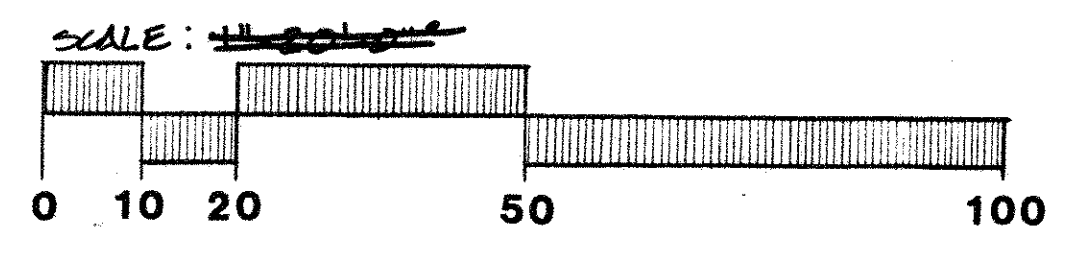
NOTES:

* FOR SITE LANDSCAPING SEE SHEET 17.

LEGEND:

- CONTRACTION JOINT
- EXPANSION JOINT
- 7" CONCRETE
- 4" CONCRETE
- 8' WOOD BENCH
- WASTE RECEPTACLE SLEEVE & SLAB
- WASTE RECEPTACLE SLEEVE
- 1/2" 404, 6" 301, 4 1/2" 304

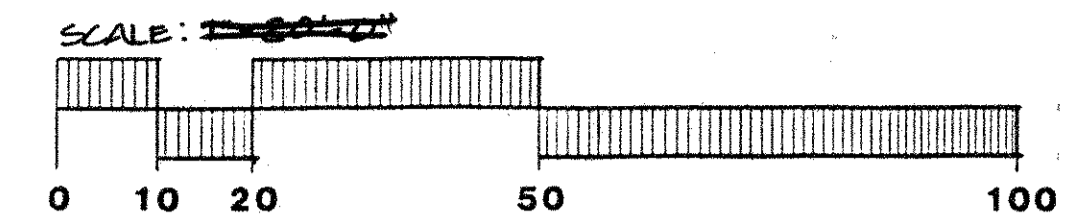
- * SEE SHEET 13 FOR PARKING LOT PAVEMENT REPAIR DETAIL C.
- * PROJECT ENGINEER IS TO ADJUST LAYOUT OF PEDESTRIAN PATH TO AVOID TREE DAMAGE OR REMOVAL.
- * TWO BENCHES ARE TO BE PLACED INSIDE THE MOTORIST SERVICES BUILDING LOBBY.
- * ALL WOOD BENCHES SHALL BE 8' IN LENGTH.
- * CURB IS TO BE TAPERED FROM FULL HEIGHT OF CURB TO 0" HEIGHT OF CURB. COST IS TO BE COVERED UNDER BID ITEM 608 - CURB RAMP, STANDARD TYPE 1, MODIFIED, AS PER PLAN.



ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
SPECIAL	MOTORIST SERVICE BLDG. (EXCEPT ELECTRICAL, PLUMBING, HEATING AND VENTILATING)	1 EACH
SPECIAL	WASTE RECEPTACLE SLEEVE	10 EACH
SPECIAL	WASTE RECEPTACLE SLAB	4 EACH
SPECIAL	GRAVEL PATH	3150 SQ.FT.
SPECIAL	8' WOOD BENCH	5 EACH
301	BITUMINOUS AGGREGATE BASE, A.C. 20	385 CU.YD.
304	AGGREGATE BASE	290 CU.YD.
404	ASPHALT CONCRETE AC20	100 CU.YD.
452	7" PLAIN CONCRETE PAVEMENT AS PER PLAN	240 SQ. YD.
608	4" CONCRETE WALK, AS PER PLAN	6775 SQ. FT.
608	CURB RAMP, STANDARD TYPE 1, MODIFIED AS PER PLAN	2 EACH
609	CONCRETE CURB, STANDARD, TYPE 6	385 L.F.
609	CONCRETE CURB, STANDARD, TYPE 3-A	38 L.F.

EXISTING AUTO AND TRUCK PARKING

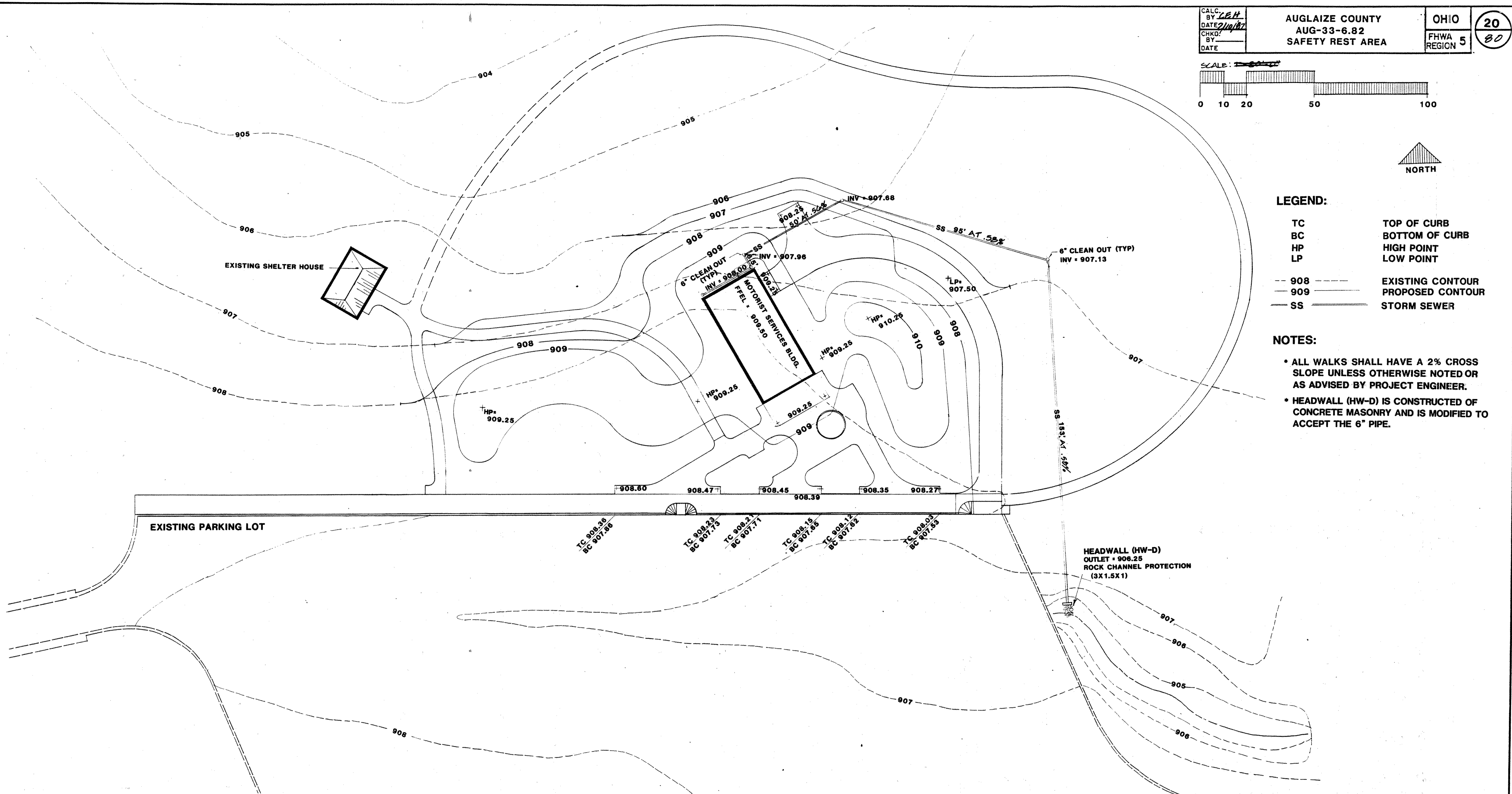


LEGEND:

- | | |
|-----------|------------------|
| TC | TOP OF CURB |
| BC | BOTTOM OF CURB |
| HP | HIGH POINT |
| LP | LOW POINT |
| - - - 908 | EXISTING CONTOUR |
| - - - 909 | PROPOSED CONTOUR |
| - - - SS | STORM SEWER |

NOTES:

- ALL WALKS SHALL HAVE A 2% CROSS SLOPE UNLESS OTHERWISE NOTED OR AS ADVISED BY PROJECT ENGINEER.
- HEADWALL (HW-D) IS CONSTRUCTED OF CONCRETE MASONRY AND IS MODIFIED TO ACCEPT THE 6" PIPE.

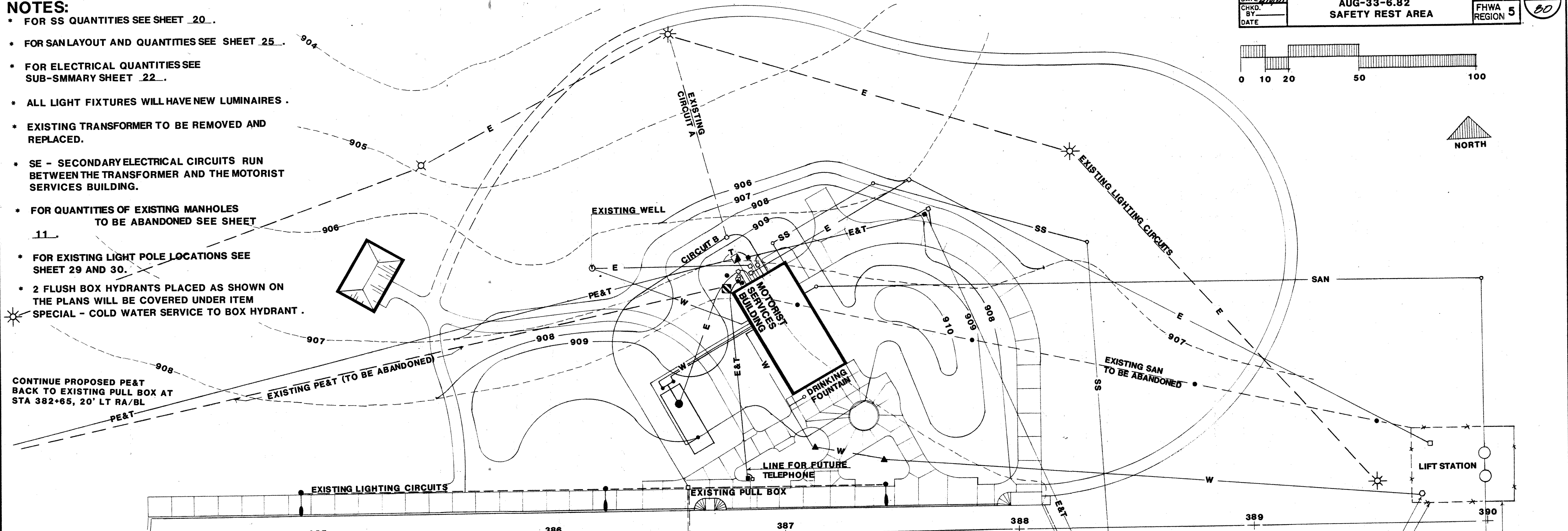
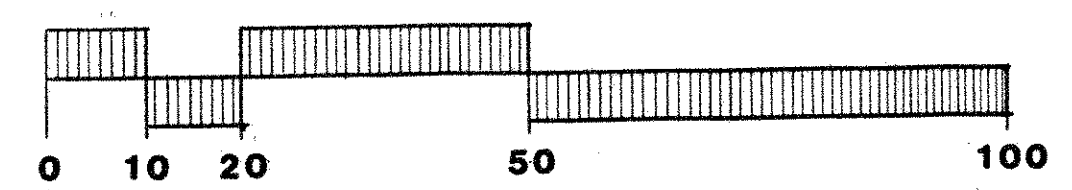


ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY *
203	EMBANKMENT	LUMP
203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	LUMP
601	ROCK CHANNEL PROTECTION TYPE C W/FILTER	0.16 CU.YD.
603	6" CONDUIT, TYPE C	325 L.F.
602	CONCRETE MASONRY (HW-D, MODIFIED AS PER PLAN)	1 CU.YD.

NOTES:

- * FOR SS QUANTITIES SEE SHEET 20.
- * FOR SAN LAYOUT AND QUANTITIES SEE SHEET 25.
- * FOR ELECTRICAL QUANTITIES SEE SUB-SMMARY SHEET 22.
- * ALL LIGHT FIXTURES WILL HAVE NEW LUMINAIRES.
- * EXISTING TRANSFORMER TO BE REMOVED AND REPLACED.
- * SE - SECONDARY ELECTRICAL CIRCUITS RUN BETWEEN THE TRANSFORMER AND THE MOTORIST SERVICES BUILDING.
- * FOR QUANTITIES OF EXISTING MANHOLES TO BE ABANDONED SEE SHEET 11.
- * FOR EXISTING LIGHT POLE LOCATIONS SEE SHEET 29 AND 30.
- * 2 FLUSH BOX HYDRANTS PLACED AS SHOWN ON THE PLANS WILL BE COVERED UNDER ITEM SPECIAL - COLD WATER SERVICE TO BOX HYDRANT.



CONTINUE PROPOSED PE&T BACK TO EXISTING PULL BOX AT STA 382+65, 20' LT RA/BL

REST AREA BASELINE

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
SPECIAL	WATER RESERVOIR TANK (EXCEPT PLUMBING AND ELECTRICAL)	1 EACH
PLUMBING CONTRACT		
SPECIAL	MOTORIST SERVICES BUILDING (PLUMBING SYSTEMS ONLY)	1 EACH
SPECIAL	MOTORIST SERVICES BUILDING (PLUMBING FIXTURES AND TRIM ONLY)	1 EACH
SPECIAL	WATER RESERVOIR TANK (PLUMBING ONLY)	1 EACH
SPECIAL	WATER SYSTEM HYPOCHLORINATOR (EXCEPT ELECTRICAL)	1 EACH
SPECIAL	CLEANING WELL	LUMP
SPECIAL	COLD WATER SERVICE TO BOX HYDRANT	325 L.F.
SPECIAL	WATER WELL ASSEMBLY (EXCEPT ELECTRICAL)	1 EACH
HEATING AND VENTILATING CONTRACT		
SPECIAL	MOTORIST SERVICES BUILDING (HEATING AND VENTILATING ONLY)	1 EACH
ELECTRICAL CONTRACT		
SPECIAL	COMPLETE (ELECTRICAL ONLY)	1 EACH
SPECIAL	WATER RESERVOIR TANK (ELECTRICAL ONLY)	1 EACH
SPECIAL	CONTROLS	1 EACH
SPECIAL	WATER WELL ASSEMBLY (ELECTRICAL ONLY)	1 EACH
SPECIAL	WATER SYSTEM HYPOCHLORINATOR (ELECTRICAL ONLY)	1 EACH

LEGEND:

---	PE	EXISTING PRIMARY ELECTRIC CIRCUITS
---	SE	EXISTING SECONDARY ELECTRIC CIRCUITS
---	E	ELECTRICAL CIRCUITS
---	E	EXISTING ELECTRICAL CIRCUITS
---	T	TELEPHONE CIRCUITS
---	T	EXISTING TELEPHONE CIRCUITS
---	W	WATER
---	SAN	SANITARY SEWER
□	☒	TELEPHONE BOOTH
□	□	ELECTRICAL PULL BOX
□	□	TELEPHONE PULL BOX
□	□	NEW TRANSFORMER LOCATION
---	PE	PRIMARY ELECTRIC CIRCUITS
○	○	OLD TRANSFORMER LOCATION
○	○	HOSE BIB
●	●	EXISTING MANHOLE/CLEANOUT
▲	▲	FLUSH BOX HYDRANT
☼	☼	EXISTING LIGHT POLE
---	SAN	EXISTING SANITARY SEWER

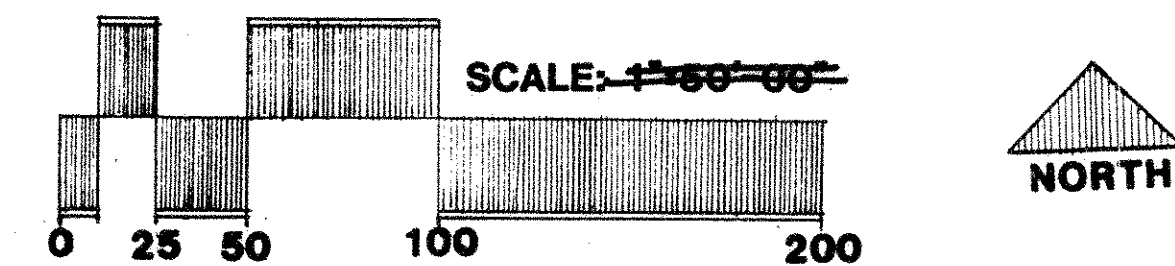
WESTBOUND UTILITY PLAN

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
SPECIAL	CHARCOAL GRILL AND SERVING TABLE	4 EACH
SPECIAL	PICNIC TABLE (4 IN SHELTER HSE)	12 EACH
SPECIAL	PICNIC TABLE AND SLAB	2 EACH
SPECIAL	CHARCOAL GRILL AND SERVING TABLE REMOVED	4 EACH
655	COMMERCIAL FERTILIZER	3.5 TON
655	SEEDING AND RENOVATING EXISTING SOD, AS PER PLAN	38900 SQ.YD.
660	SODDING	975 SQ.YD.

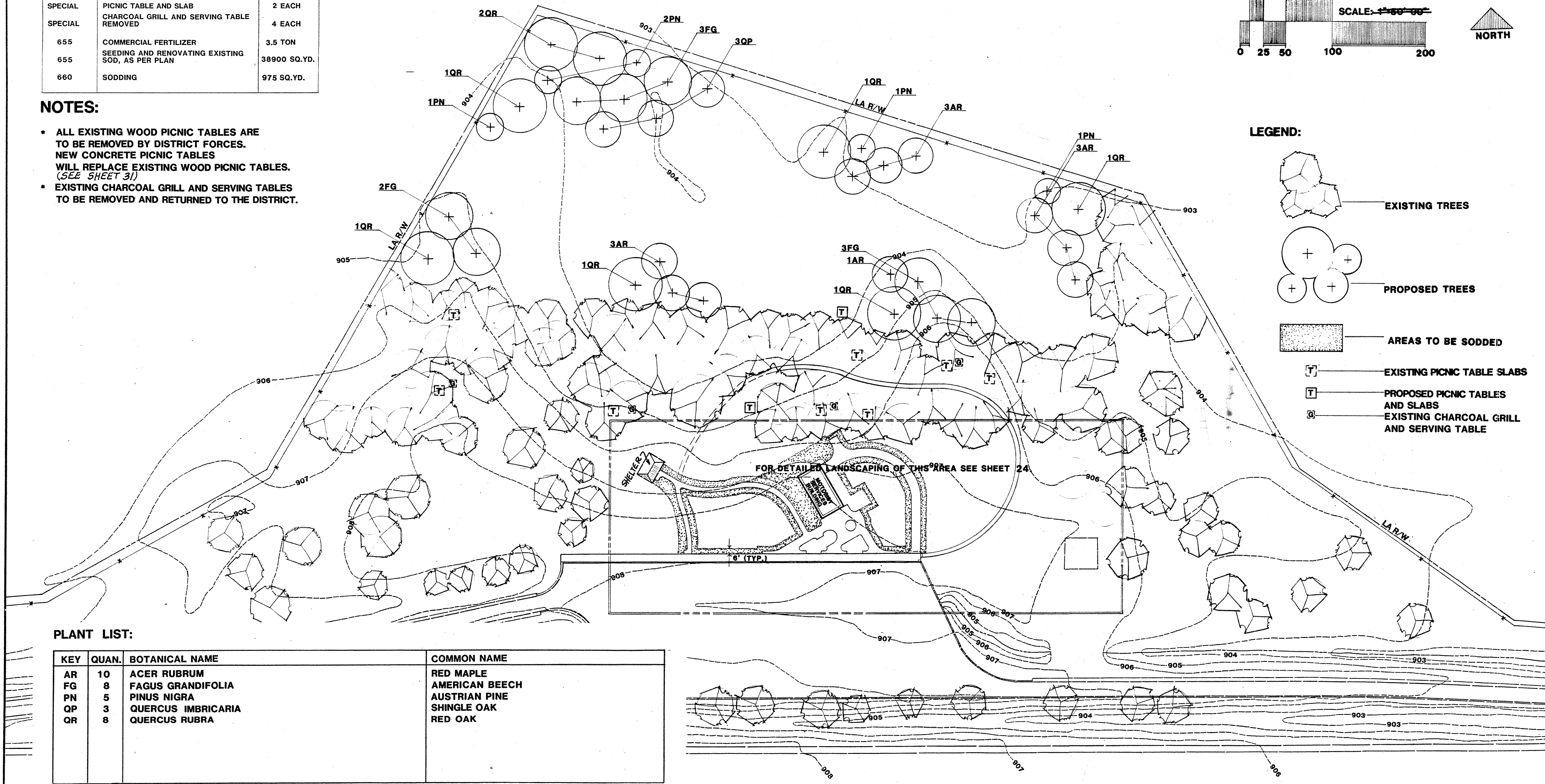
NOTES:

- * ALL EXISTING WOOD PICNIC TABLES ARE TO BE REMOVED BY DISTRICT FORCES. NEW CONCRETE PICNIC TABLES WILL REPLACE EXISTING WOOD PICNIC TABLES. (SEE SHEET 31)
- * EXISTING CHARCOAL GRILL AND SERVING TABLES TO BE REMOVED AND RETURNED TO THE DISTRICT.



LEGEND:

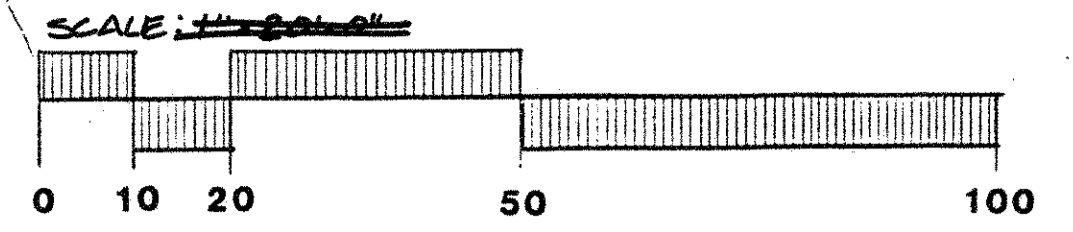
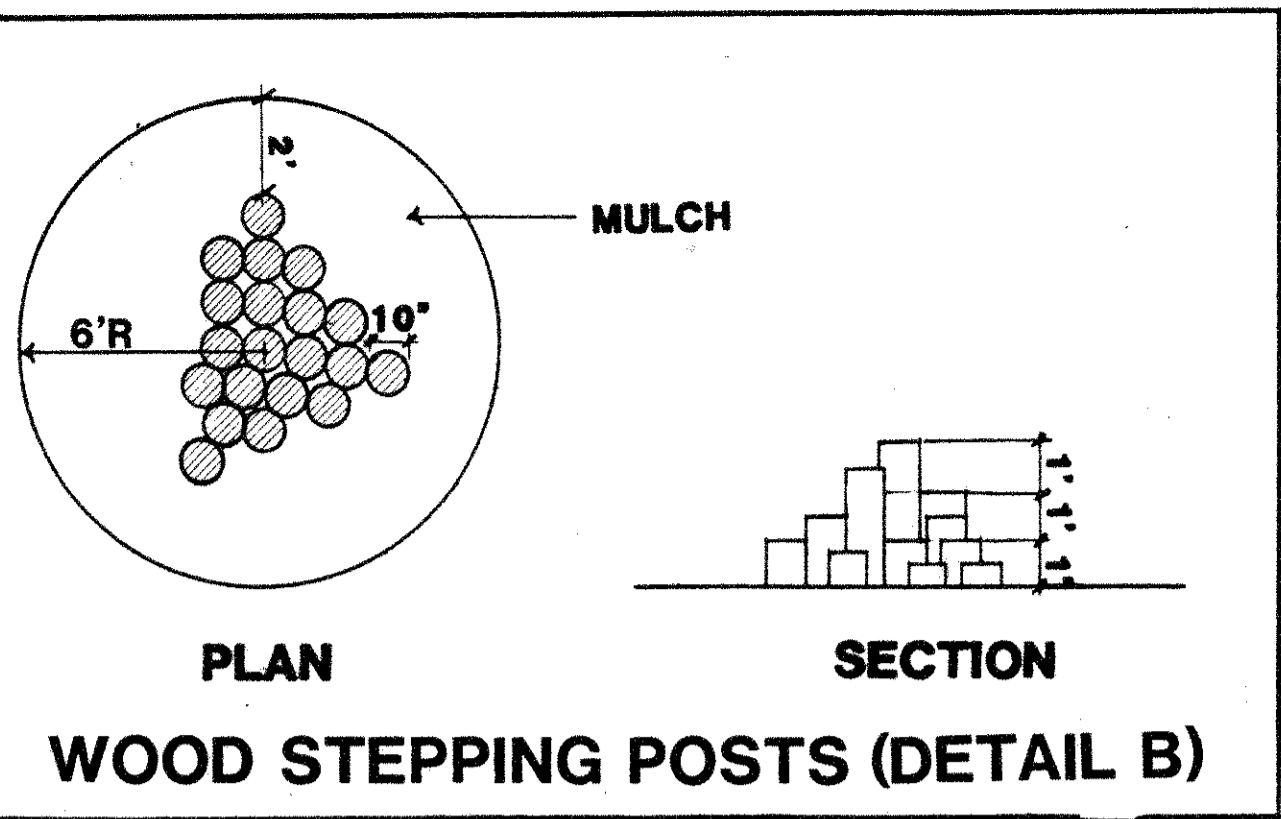
- EXISTING TREES
- PROPOSED TREES
- AREAS TO BE SODDED
- EXISTING PICNIC TABLE SLABS
- PROPOSED PICNIC TABLES AND SLABS
- EXISTING CHARCOAL GRILL AND SERVING TABLE



PLANT LIST:

KEY	QUAN.	BOTANICAL NAME	COMMON NAME
AR	10	ACER RUBRUM	RED MAPLE
FG	8	FAGUS GRANDIFOLIA	AMERICAN BEECH
PN	5	PINUS NIGRA	AUSTRIAN PINE
QP	3	QUERCUS IMBRICARIA	SHINGLE OAK
QR	8	QUERCUS RUBRA	RED OAK

379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394



- LEGEND:**
- EXISTING TREES
 - PROPOSED VEGETATION
 - BOULDERS (BD)

ESTIMATED QUANTITIES

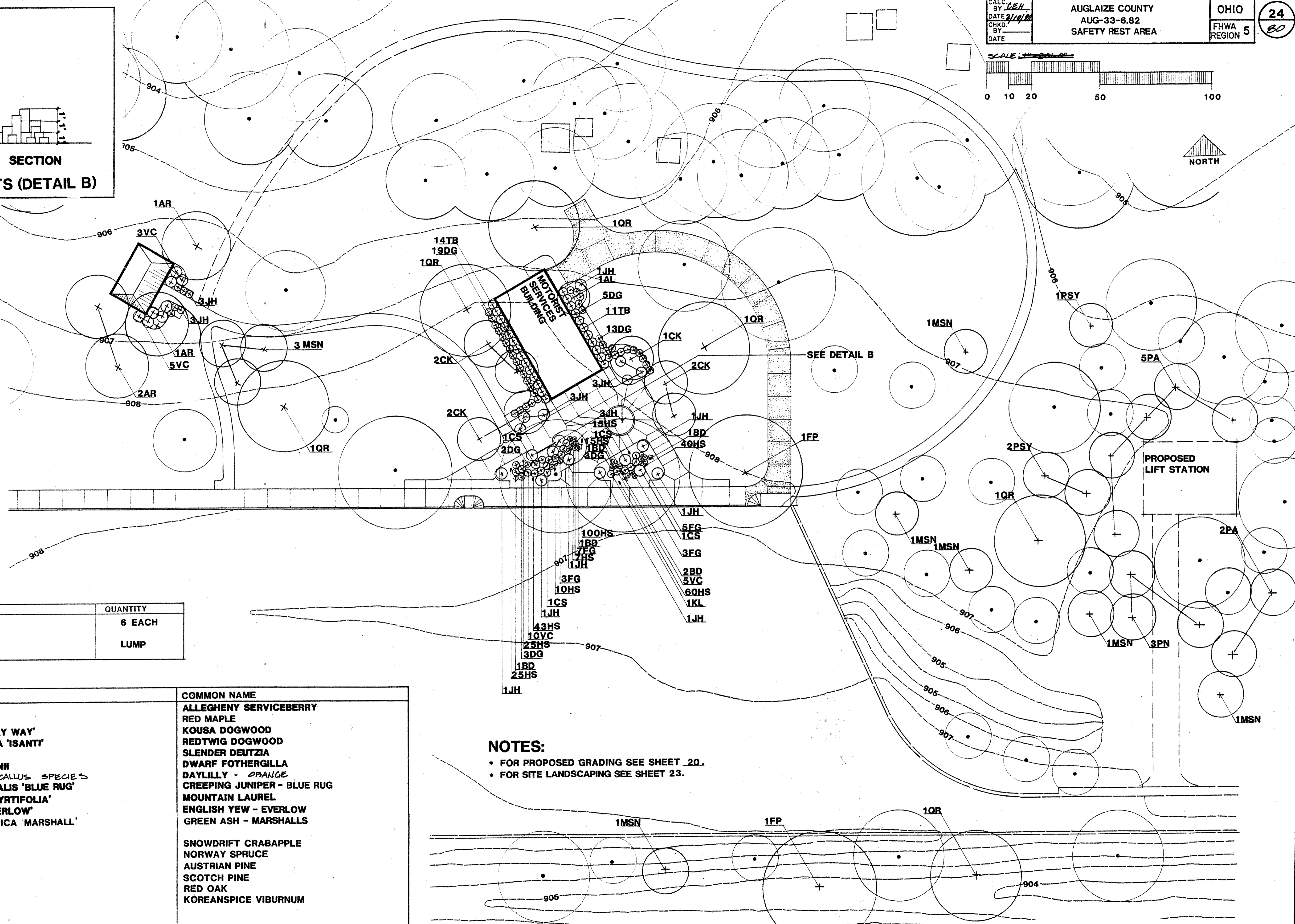
ITEM	DESCRIPTION	QUANTITY
SPECIAL	BOULDERS	6 EACH
SPECIAL	WOOD STEPPING POSTS	LUMP

PLANT LIST:

KEY	QUAN.	BOTANICAL NAME	COMMON NAME
AL	1	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY
AR	4	ACER RUBRUM	RED MAPLE
CK	7	CORNUS KOUSA 'MILKY WAY'	KOUSA DOGWOOD
CS	4	CORNUS STOLONIFERA 'ISANTI'	REDTWIG DOGWOOD
DG	45	DEUTZIA GRACILIS	SLENDER DEUTZIA
FG	18	FOTHERGILLA GARDENII	DWARF FOTHERGILLA
HS	340	PERENNIALS: HEMEROCALLUS SPECIES	DAYLILLY - ORANGE
JH	22	JUNIPERUS HORIZONTALIS 'BLUE RUG'	CREeping JUNIPER - BLUE RUG
KL	1	KALMIA LATIFOLIA 'MYRTIFOLIA'	MOUNTAIN LAUREL
TB	25	TAXUS BACCATA 'EVERLOW'	ENGLISH YEW - EVERLOW
FP	2	FRAXINUS PENNSYLVANICA 'MARSHALL'	GREEN ASH - MARSHALLS
MSN	9	MALUS 'SNOWDRIFT'	SNOWDRIFT CRABAPPLE
PA	7	PICEA ABIES	NORWAY SPRUCE
PN	3	PINUS NIGRA	AUSTRIAN PINE
PSY	3	PINUS SYLVESTRUS	SCOTCH PINE
QR	6	QUERCUS RUBRA	RED OAK
VC	23	VIBURNUM CARLESII	KOREANSPICE VIBURNUM

NOTES:

- * FOR PROPOSED GRADING SEE SHEET 20.
- * FOR SITE LANDSCAPING SEE SHEET 23.

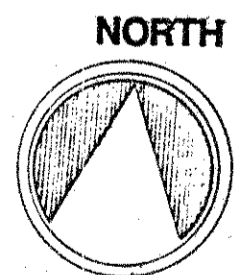
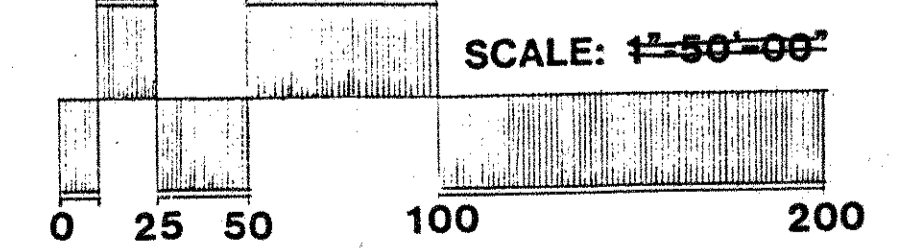
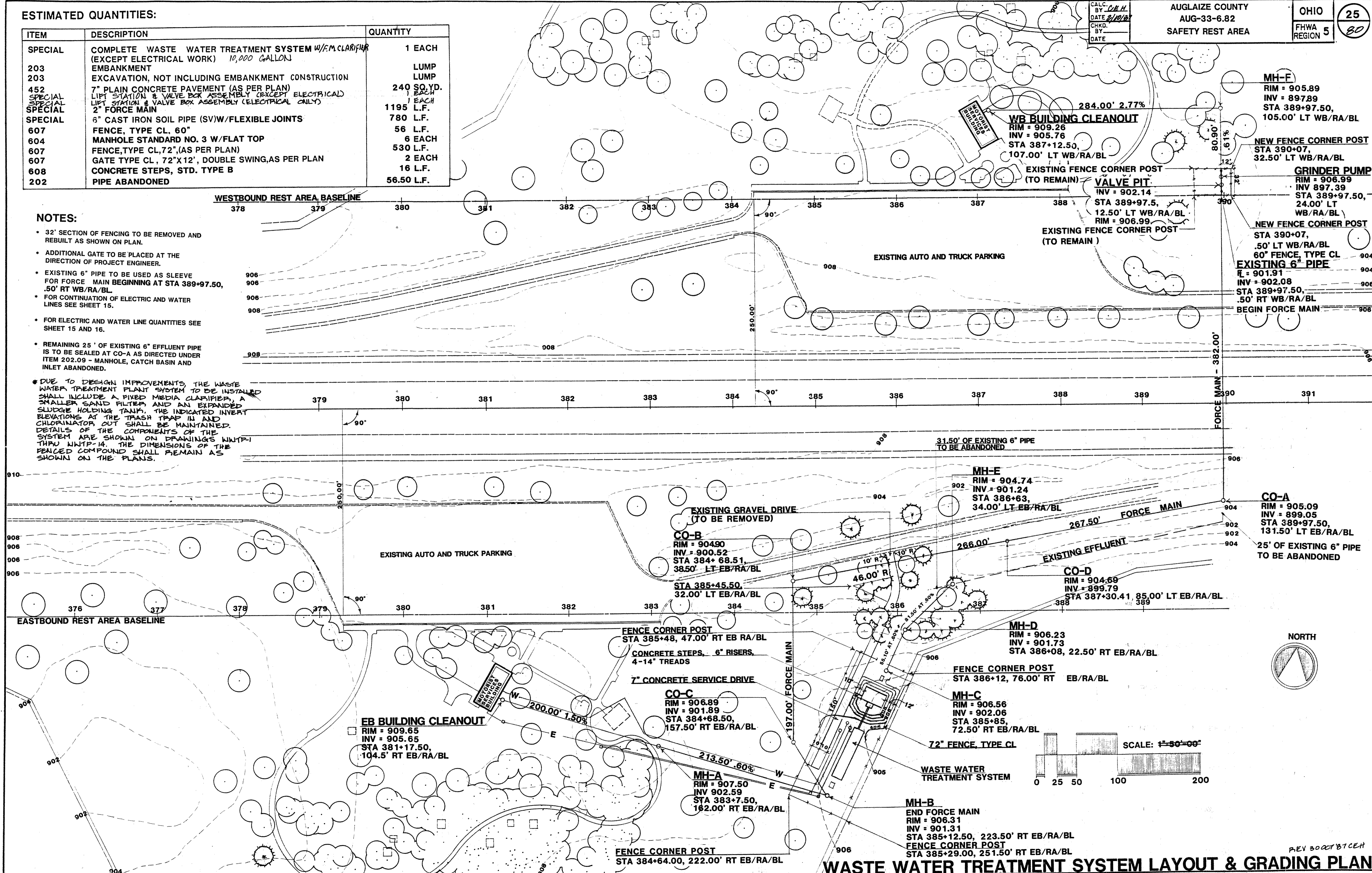


ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
SPECIAL	COMPLETE WASTE WATER TREATMENT SYSTEM W/F.M. CLARIFIER (EXCEPT ELECTRICAL WORK) 10,000 GALLON	1 EACH
203	EMBANKMENT	LUMP
203	EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION	LUMP
452	7" PLAIN CONCRETE PAVEMENT (AS PER PLAN)	240 SQ. YD.
SPECIAL	LIFT STATION & VALVE BOX ASSEMBLY (EXCEPT ELECTRICAL)	1 EACH
SPECIAL	LIFT STATION & VALVE BOX ASSEMBLY (ELECTRICAL ONLY)	1 EACH
SPECIAL	2" FORCE MAIN	1195 L.F.
SPECIAL	6" CAST IRON SOIL PIPE (SV)/W/FLEXIBLE JOINTS	780 L.F.
607	FENCE, TYPE CL, 60"	56 L.F.
604	MANHOLE STANDARD NO. 3 W/FLAT TOP	6 EACH
607	FENCE, TYPE CL, 72", (AS PER PLAN)	530 L.F.
607	GATE TYPE CL, 72" X 12", DOUBLE SWING, AS PER PLAN	2 EACH
608	CONCRETE STEPS, STD. TYPE B	16 L.F.
202	PIPE ABANDONED	56.50 L.F.

NOTES:

- 32' SECTION OF FENCING TO BE REMOVED AND REBUILT AS SHOWN ON PLAN.
- ADDITIONAL GATE TO BE PLACED AT THE DIRECTION OF PROJECT ENGINEER.
- EXISTING 6" PIPE TO BE USED AS SLEEVE FOR FORCE MAIN BEGINNING AT STA 389+97.50, .50' RT WB/RA/BL.
- FOR CONTINUATION OF ELECTRIC AND WATER LINES SEE SHEET 15.
- FOR ELECTRIC AND WATER LINE QUANTITIES SEE SHEET 15 AND 16.
- REMAINING 25' OF EXISTING 6" EFFLUENT PIPE IS TO BE SEALED AT CO-A AS DIRECTED UNDER ITEM 202.09 - MANHOLE, CATCH BASIN AND INLET ABANDONED.
- DUE TO DESIGN IMPROVEMENTS THE WASTE WATER TREATMENT SYSTEM TO BE INSTALLED SHALL INCLUDE A FIBED MEDIA CLARIFIER, A SMALLER SAND FILTER, AND AN EXPANDED SLUDGE HOLDING TANK. THE INDICATED INVERT ELEVATIONS AT THE TRASH TRAP IN AND CHLORINATOR OUT SHALL BE MAINTAINED. DETAILS OF THE COMPONENTS OF THE SYSTEM ARE SHOWN ON DRAWINGS WWT-1 THRU WWT-14. THE DIMENSIONS OF THE FENCED COMPOUND SHALL REMAIN AS SHOWN ON THE PLANS.



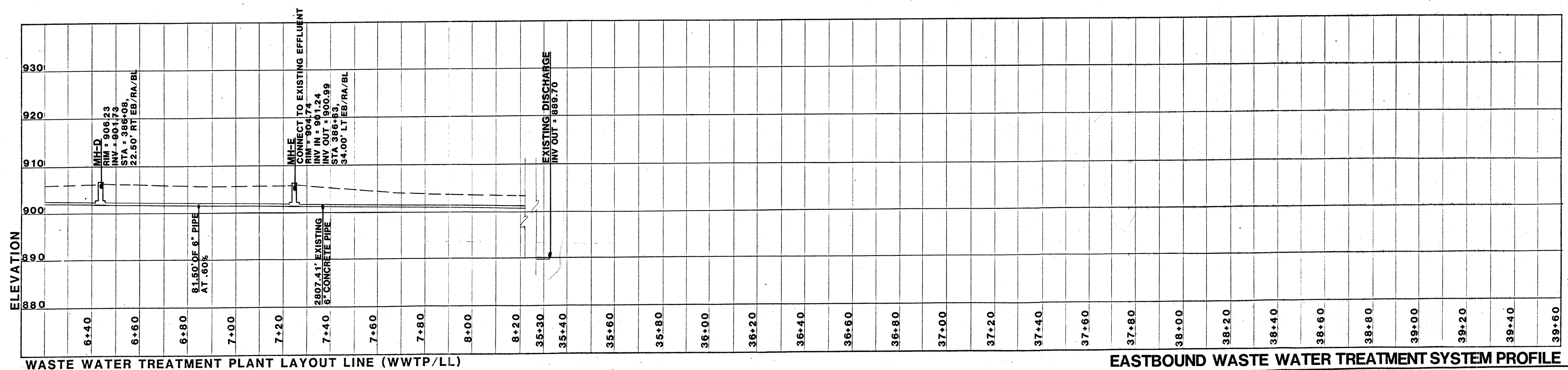
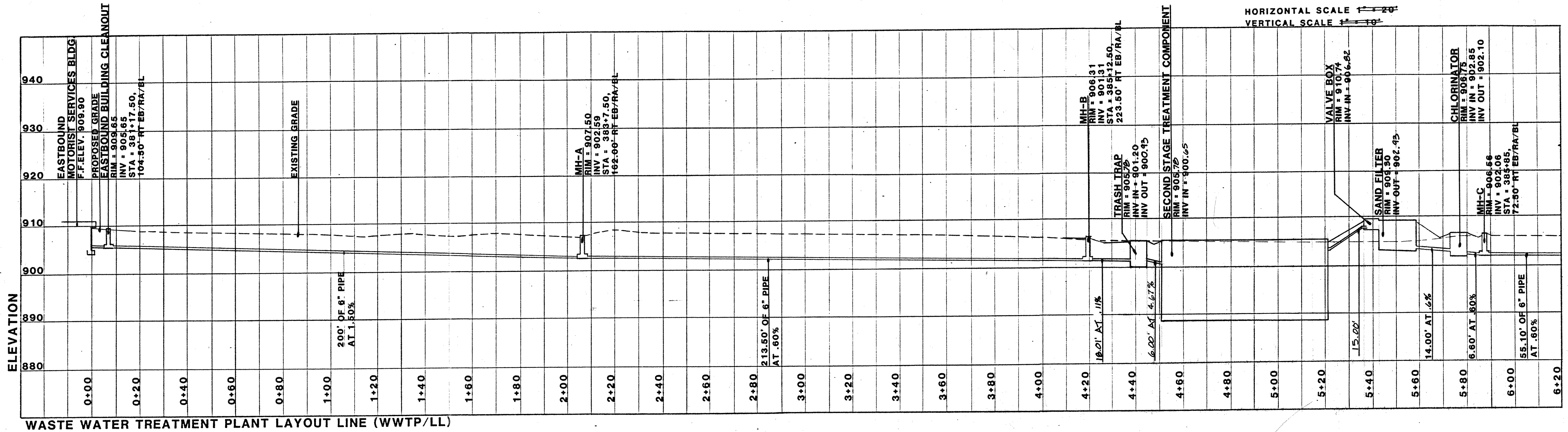
WASTE WATER TREATMENT SYSTEM LAYOUT & GRADING PLAN

REV 30 OCT '11 CEH

NOTES:

- FINISH GRADE IS 6" BELOW RIM ELEVATIONS OF ALL TREATMENT PLANT COMPONENTS.
- FOR LAYOUT AND GRADING OF TREATMENT PLANT SEE SHEET
- UNLESS OTHERWISE NOTED ALL MANHOLES ARE ODOT STANDARD NO.3 MANHOLES.

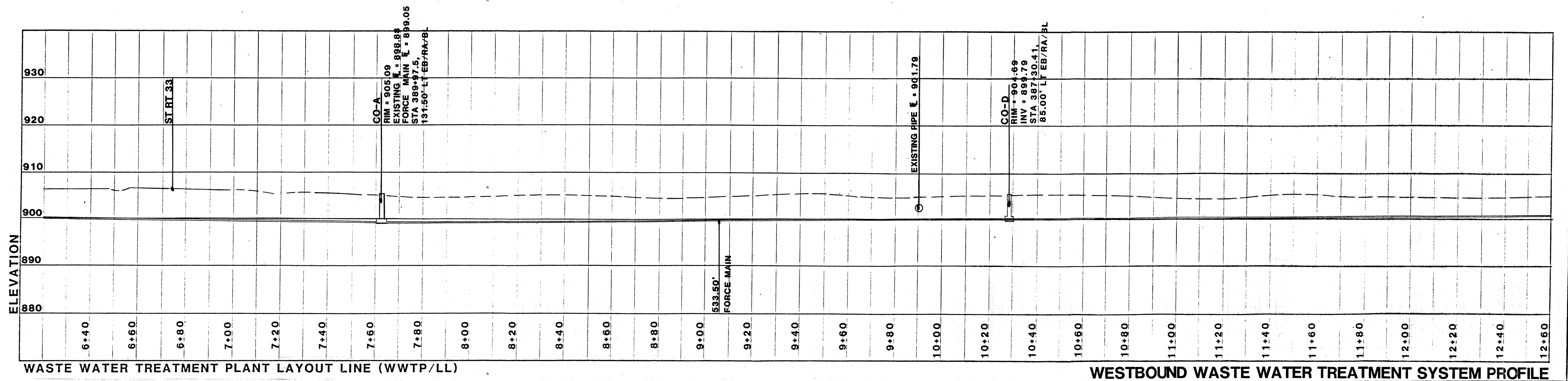
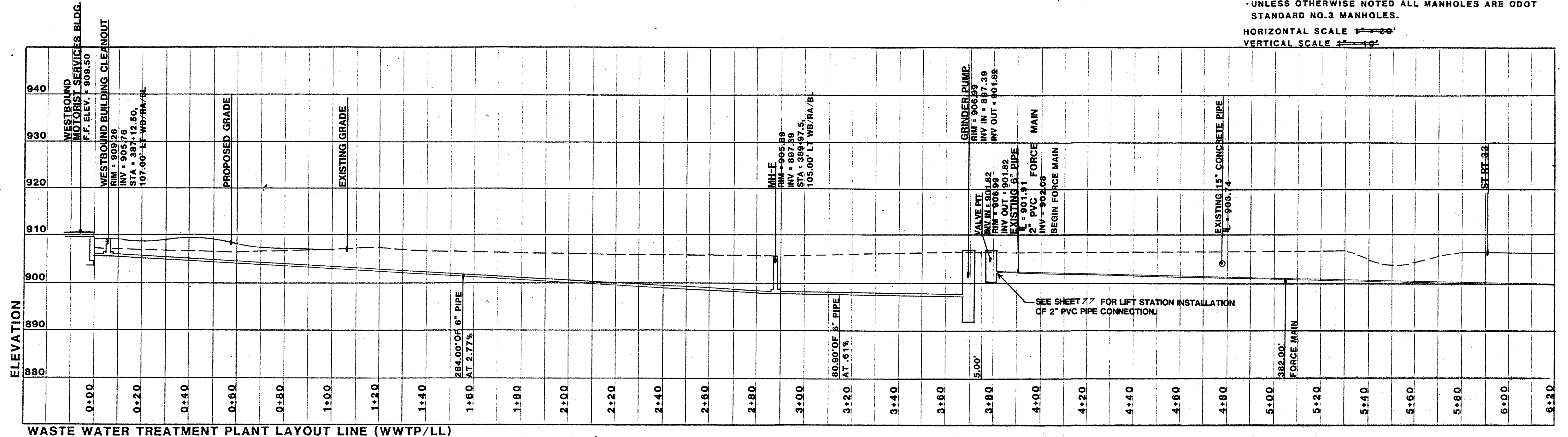
HORIZONTAL SCALE 1" = 20'
 VERTICAL SCALE 1" = 10'



REV 3002' BY CEH

- NOTES:**
- FINISH GRADE IS 6" BELOW RIM ELEVATIONS OF ALL TREATMENT PLANT COMPONENTS.
 - FOR LAYOUT AND GRADING OF TREATMENT PLANT SEE SHEET
 - UNLESS OTHERWISE NOTED ALL MANHOLES ARE ODOT STANDARD NO.3 MANHOLES.

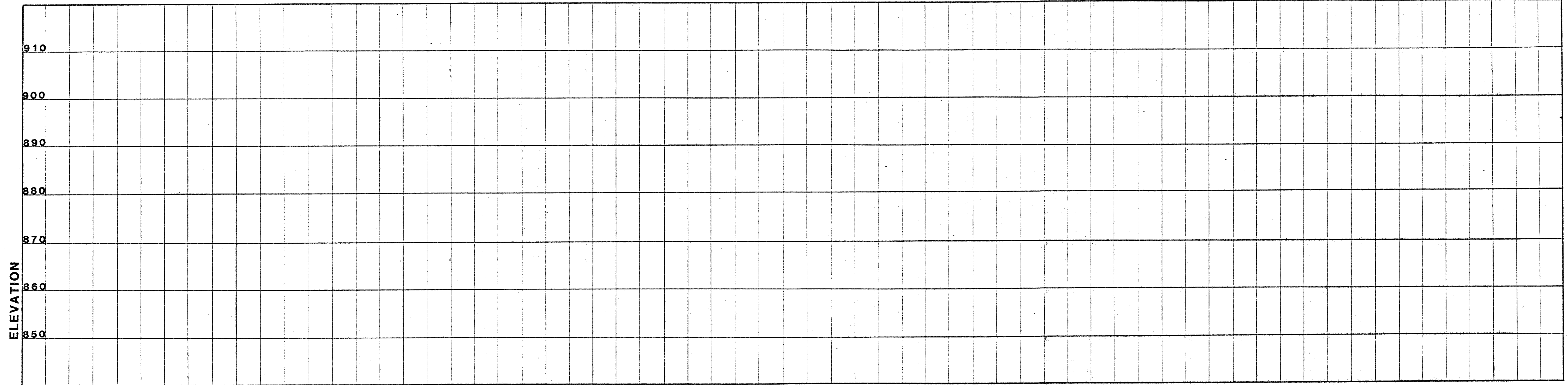
HORIZONTAL SCALE 1" = 20'
 VERTICAL SCALE 1" = 10'



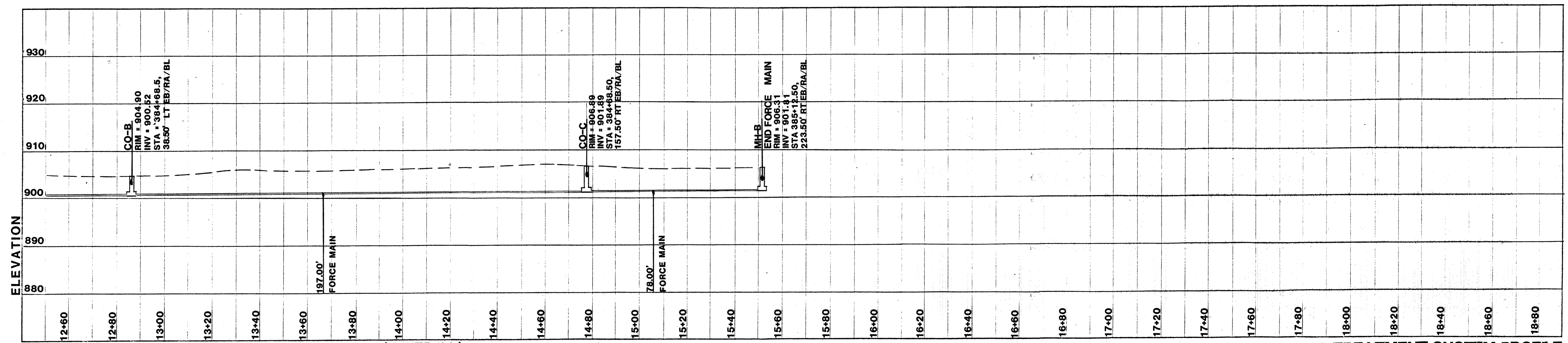
NOTES:

- FINISH GRADE IS 6" BELOW RIM ELEVATIONS OF ALL TREATMENT PLANT COMPONENTS.
- FOR LAYOUT AND GRADING OF TREATMENT PLANT SEE SHEET .
- UNLESS OTHERWISE NOTED ALL MANHOLES ARE ODOT STANDARD NO.3 MANHOLES.

HORIZONTAL SCALE ~~1"=20'~~
 VERTICAL SCALE ~~1"=10'~~



WASTE WATER TREATMENT PLANT LAYOUT LINE (WWTP/LL)



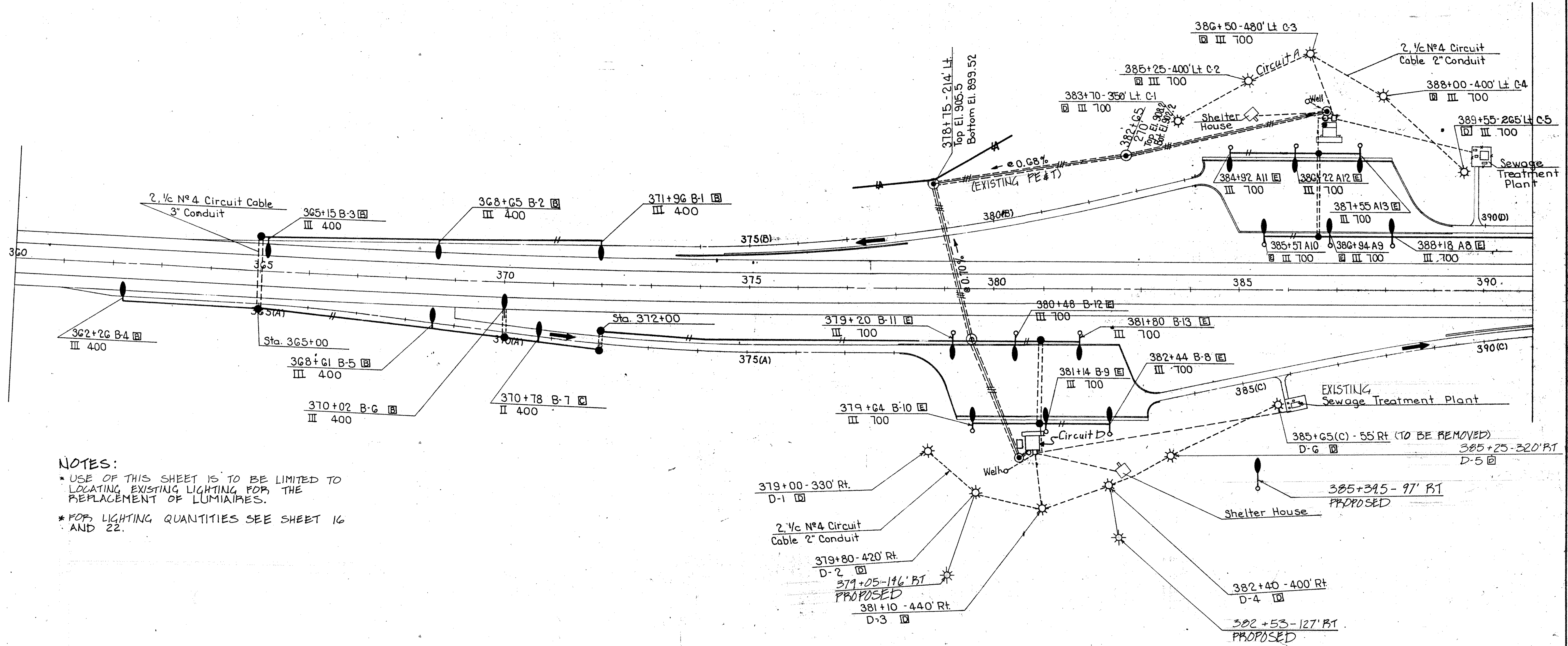
WASTE WATER TREATMENT PLANT LAYOUT LINE (WWTP/LL)

WESTBOUND WASTE WATER TREATMENT SYSTEM PROFILE

ROADSIDE REST AREA STA. 360+00 TO STA. 391+00 LIGHTING PLAN

FED. RD. DIVISION	STATE	PROJECT	29 80
2	OHIO		

AUGLAIZE COUNTY
AUG 33-6.82



NOTES:
 * USE OF THIS SHEET IS TO BE LIMITED TO LOCATING EXISTING LIGHTING FOR THE REPLACEMENT OF LUMINAIRES.
 * FOR LIGHTING QUANTITIES SEE SHEET 16 AND 22.

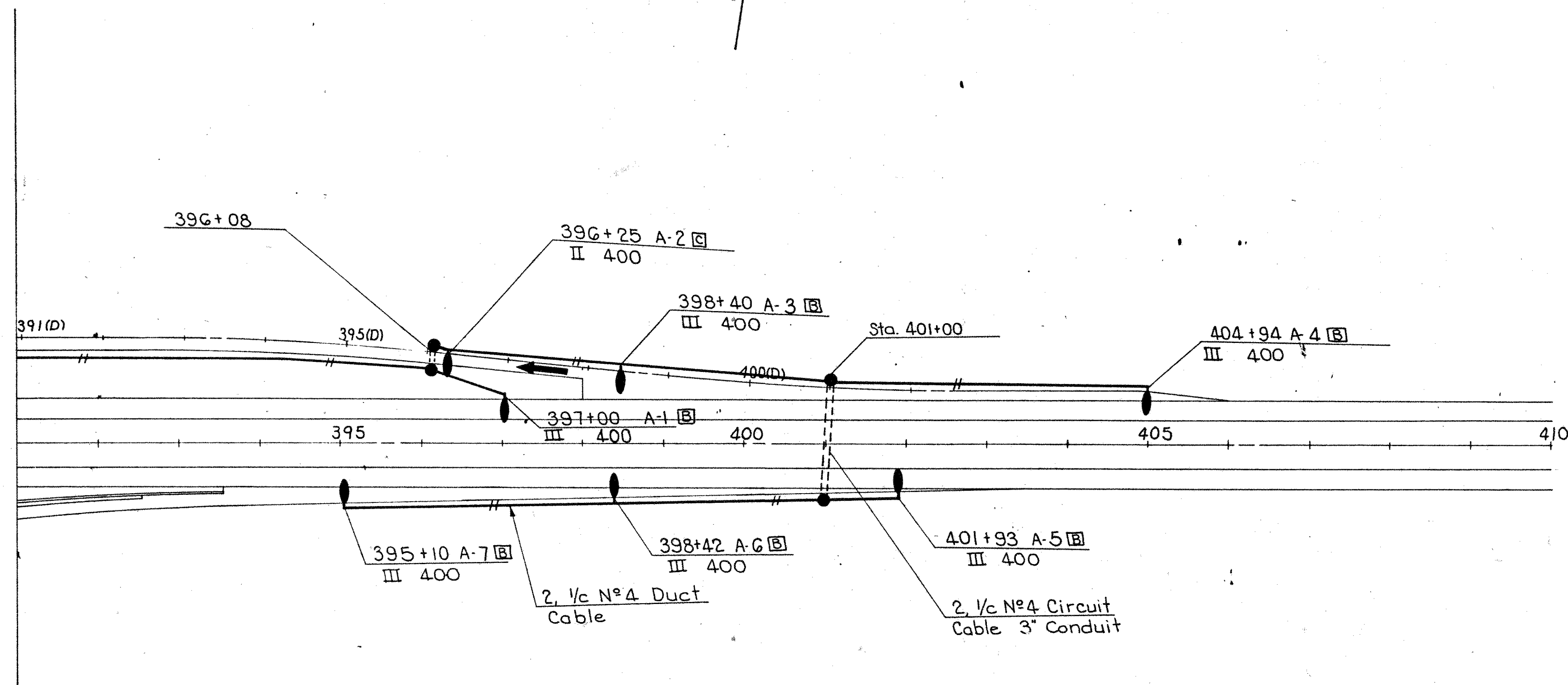
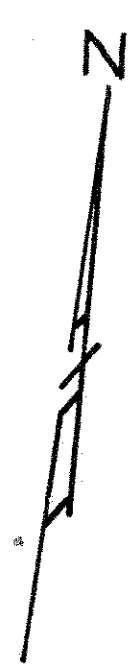
KEY	
STATION	CIRCUIT & POLE NO.
362+26 B-4 III 400	Base & Bracket & Base Reference
IES PATTERN WATTAGE	

ROADSIDE REST AREA STA. 391+00 TO STA. 410+00 LIGHTING PLAN

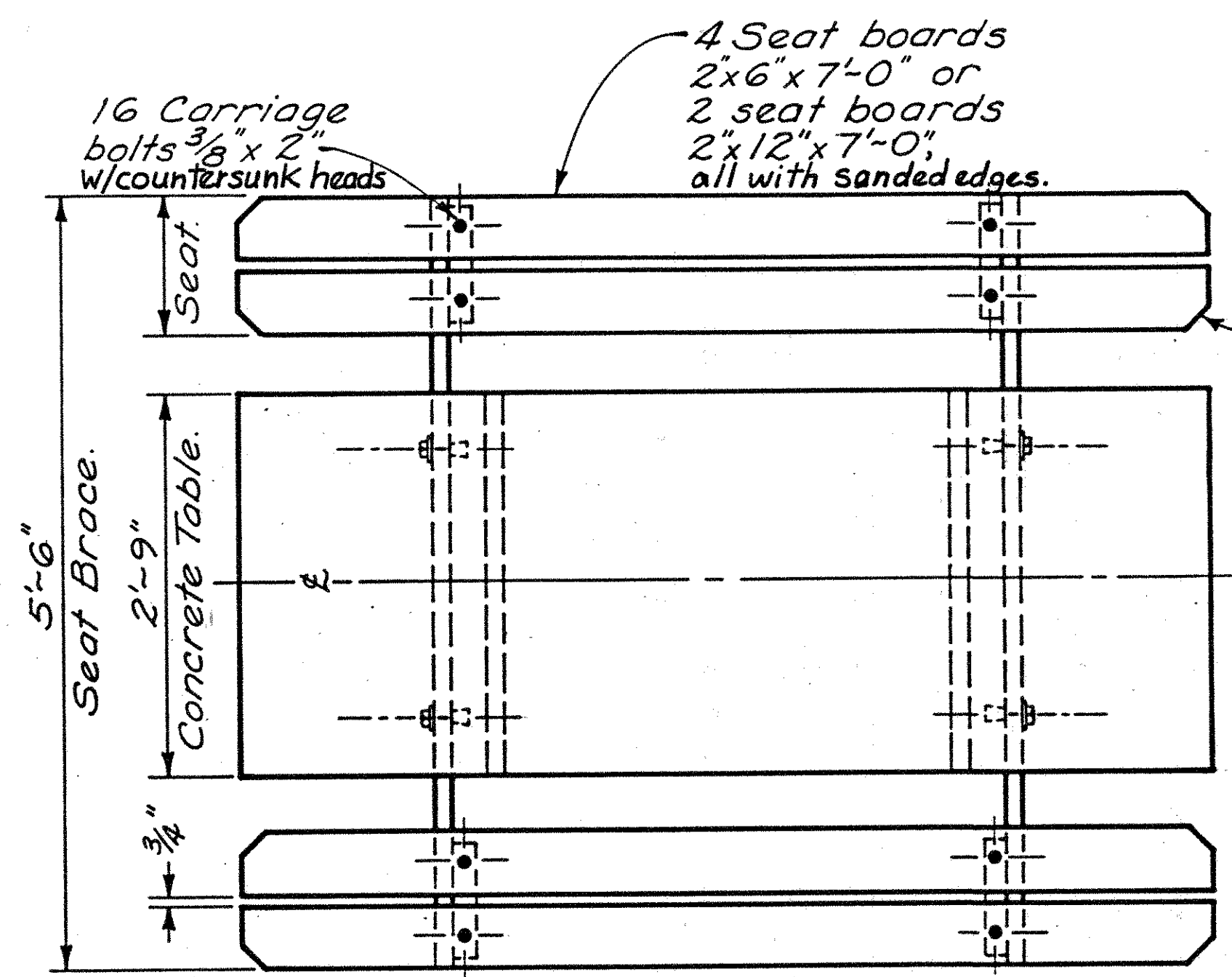
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

30
80

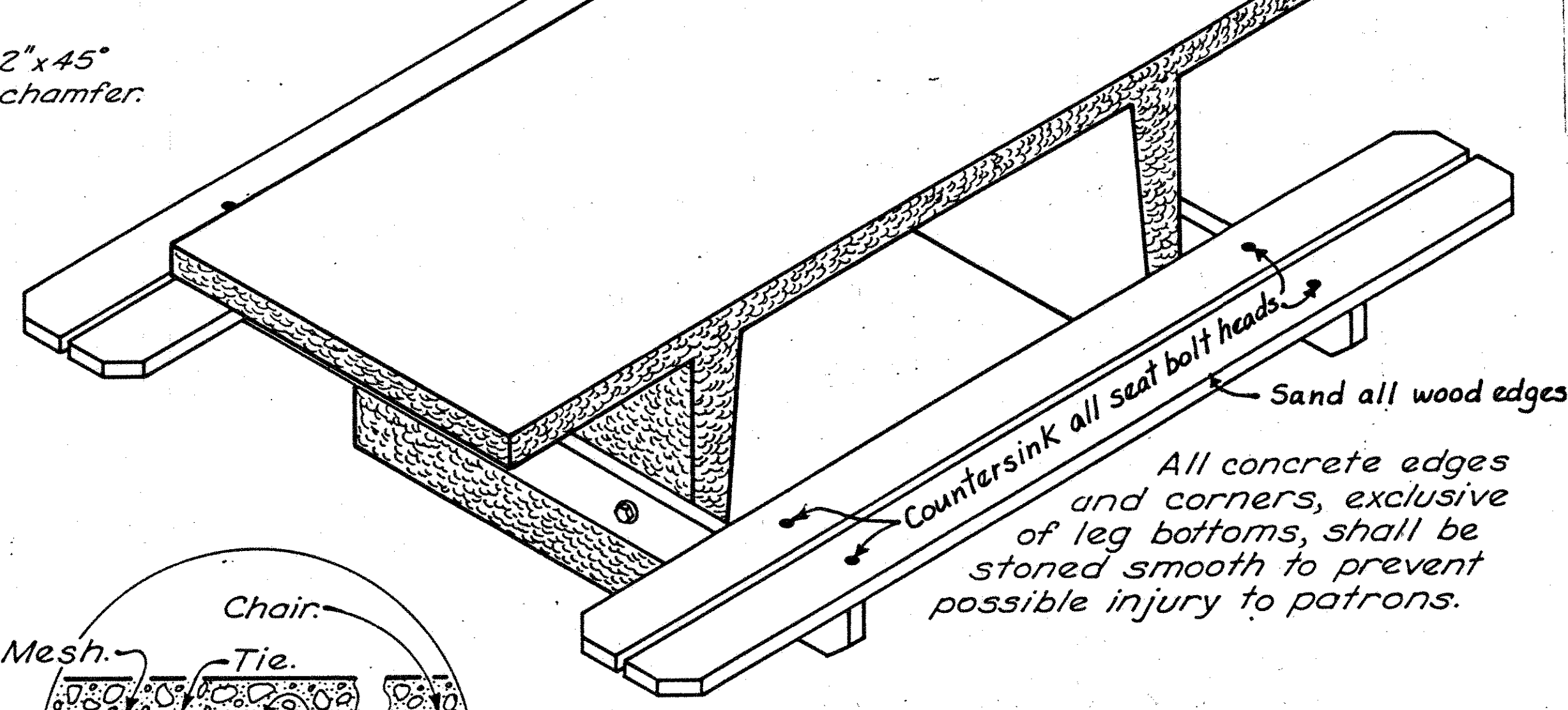
AUGLAIZE COUNTY
AUG 33-6.82



- ### SYMBOLS
- 700 Watt Mercury Luminaires I.E.S. Type III.
 - 400 Watt Mercury Luminaires I.E.S. Type II & III.
 - ⊛ 250 Watt Mercury Post Top Luminaires I.E.S. Type V
 - 18" Pullbox
 - Pad Mounted Transformer.
 - 24" Pullbox
 - ==== 3" Conduit
 - 1" & 2" Conduit
 - Duct Cable 600 Volt
 - Primary Cable 15,000 Volt (Furnished by Power Co.)
 - ⊙ Service Pole
 - ⊙ Manholes



Edges of table top and legs, and outer surface of legs shall be exposed aggregate (textured surface). All other concrete surfaces shall be smooth in accordance with 511.15.



- All bolts, nuts, washers, lockwashers and seat angles shall be galvanized. Each hex bolt shall have one wide washer and one lockwasher at the head end.
- Reinforcing steel for table shall be:
 TOP - 4 each No. 4 x 6'-10" rebars longitudinally with 4 each No. 4 x 2'-7" rebars welded transversely. Place 2'x2'-W0.7xW0.7 galv. wire mesh across rebars and tie to rebars.
 LEGS - 4 each No. 4 x 2'-3 1/2" rebars (2 per leg) welded at right angles to the top rebar frame. Place 6x6-W1.4xW1.4 galv. wire mesh on the insides of the leg rebars, bend the top 6" under the top rebar frame and tie to all rebars.
- Table top and aggregate surfaces shall have two coats of sealer such as the Euclid Chemical Co's Rez-Seal, the Thoro System's Thoroglaze, Sonneborn KNS309, or approved equal.
- Lumber shall be S4S Std., KD., No.1 common or better Southern Yellow Pine or Douglas Fir, 7/11.26, treated with CCA (chromated copper arsenate) conforming to AASHTO M 133, Type A, B or C (see 712.06). Alternate shall be CCA-C (Osmose K-33 Sunwood).
- Method of measurement - Picnic table and slab may be bid together or separately as follows:
 Item Special - Picnic table and slab.
 Item Special - Picnic table.
 Item Special - Picnic table without seats.
 Item Special - Concrete slab for picnic table.
- Payment for each of the above items shall include excavation and backfill; furnishing, hauling and placing all materials; and all labor, equipment, tools and incidentals necessary to complete these items, as required for each item. The number of units to be paid for shall be the number completed and accepted under the item specified.
- Weight: Concrete table only - approx. 1265 lbs. Table shall be precast concrete and meet the requirements of 706.13 with 6 ± 2% air void content in the hardened concrete.

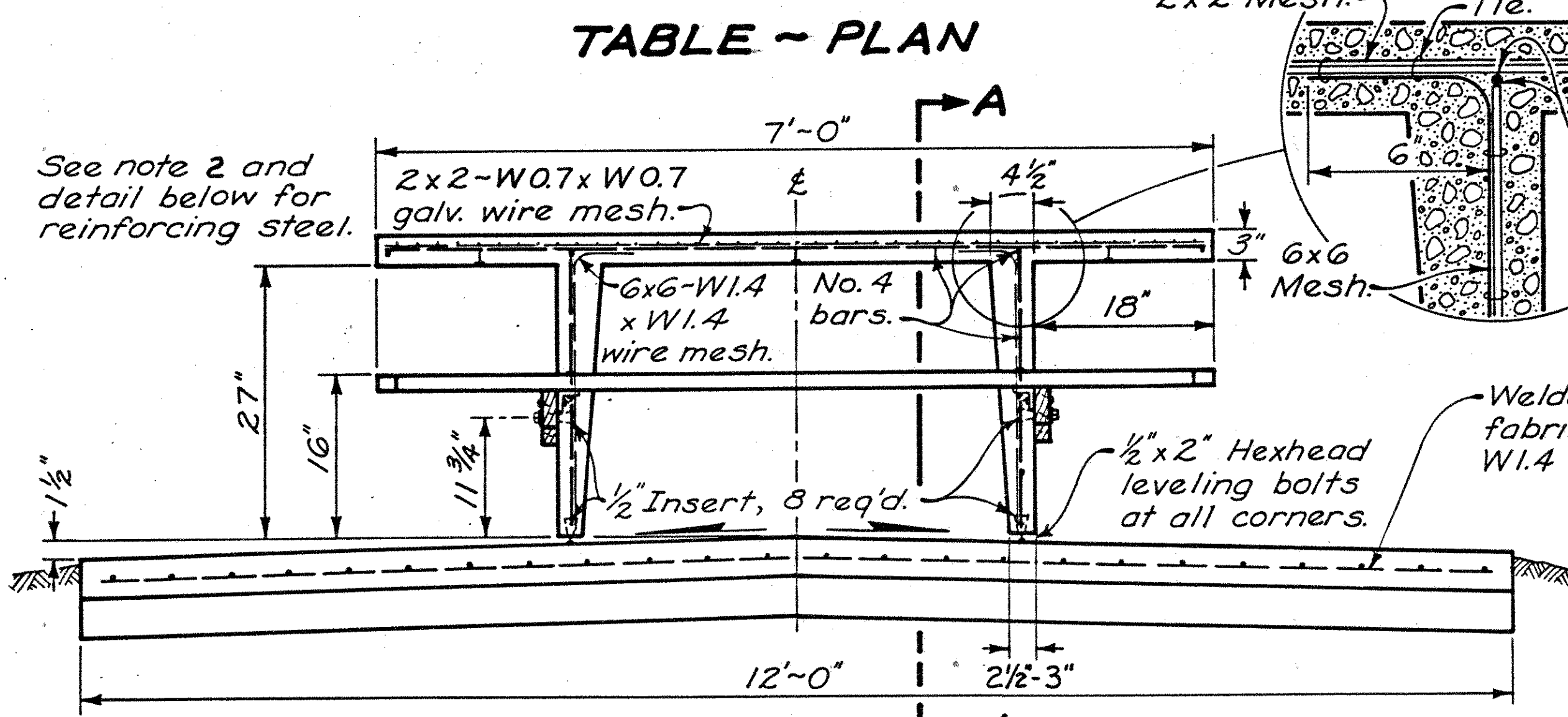
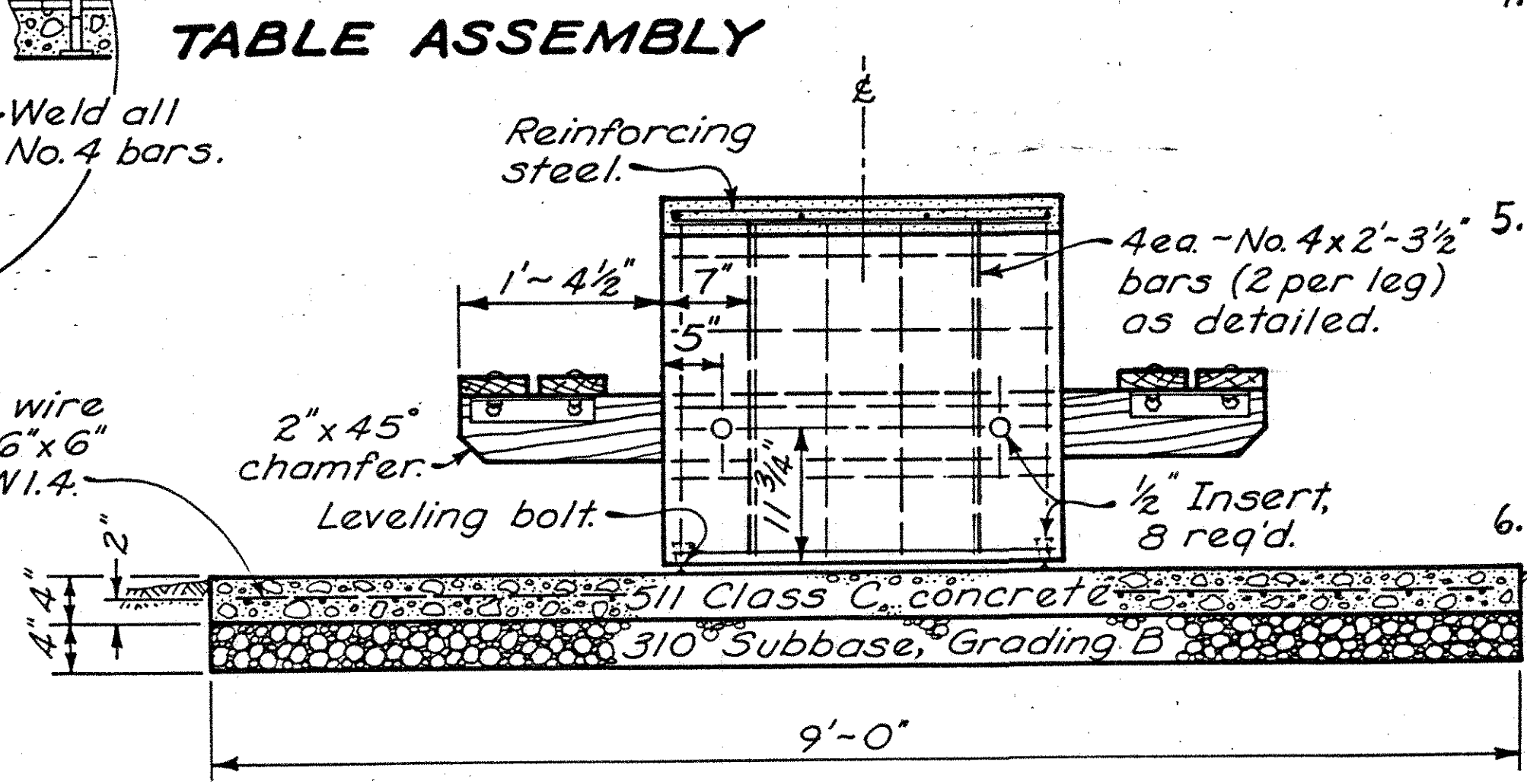


TABLE & SLAB - ELEVATION



SECTION A-A

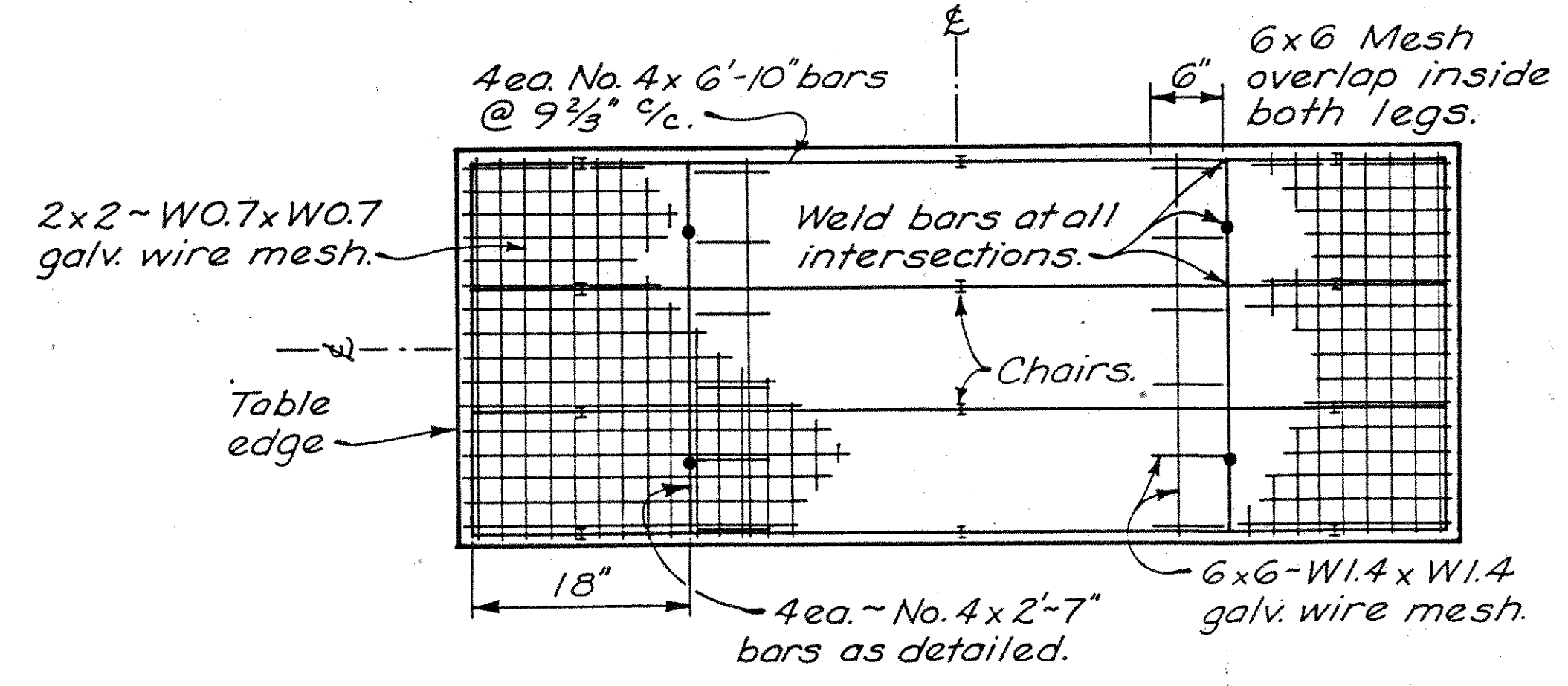
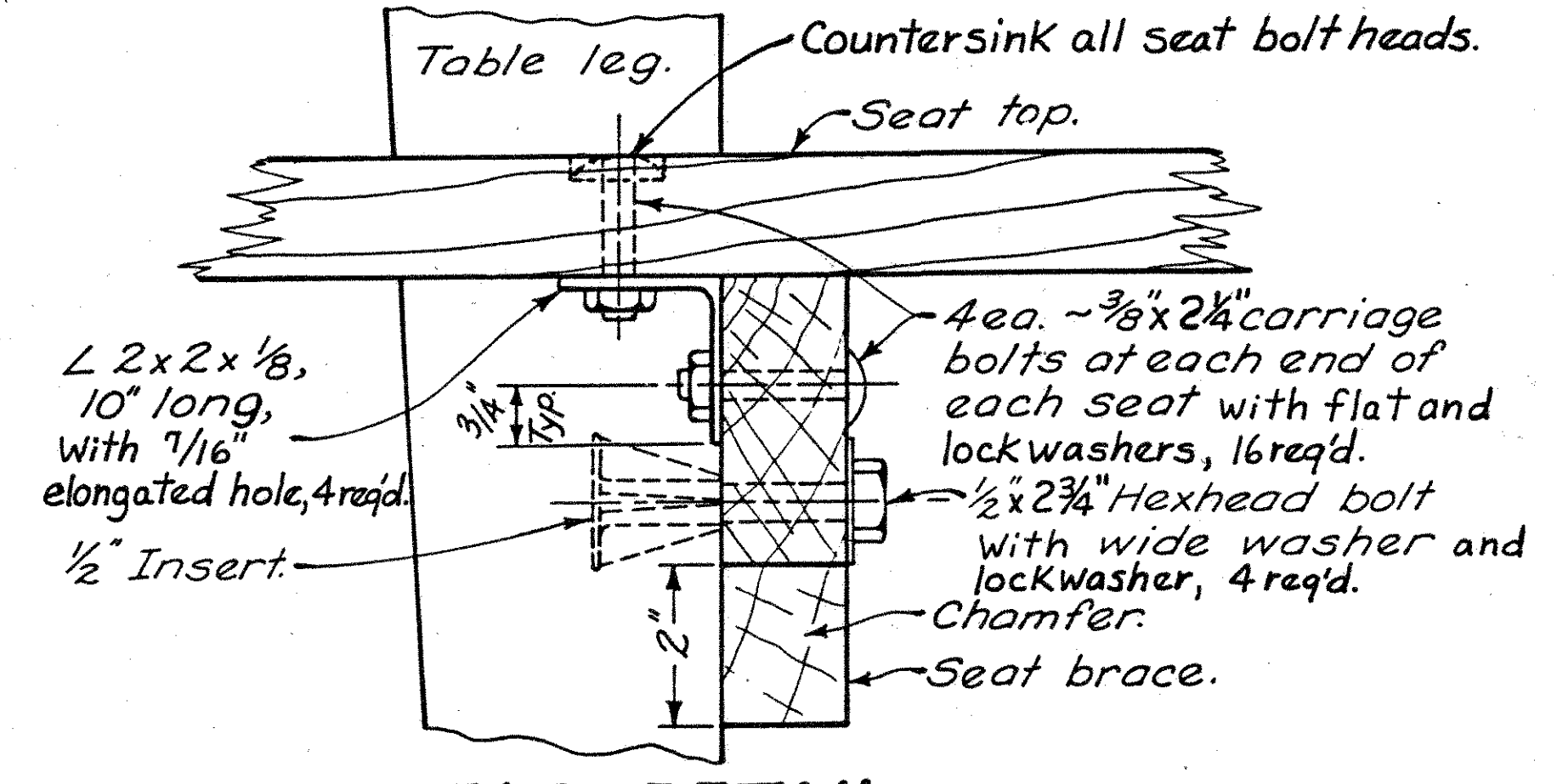
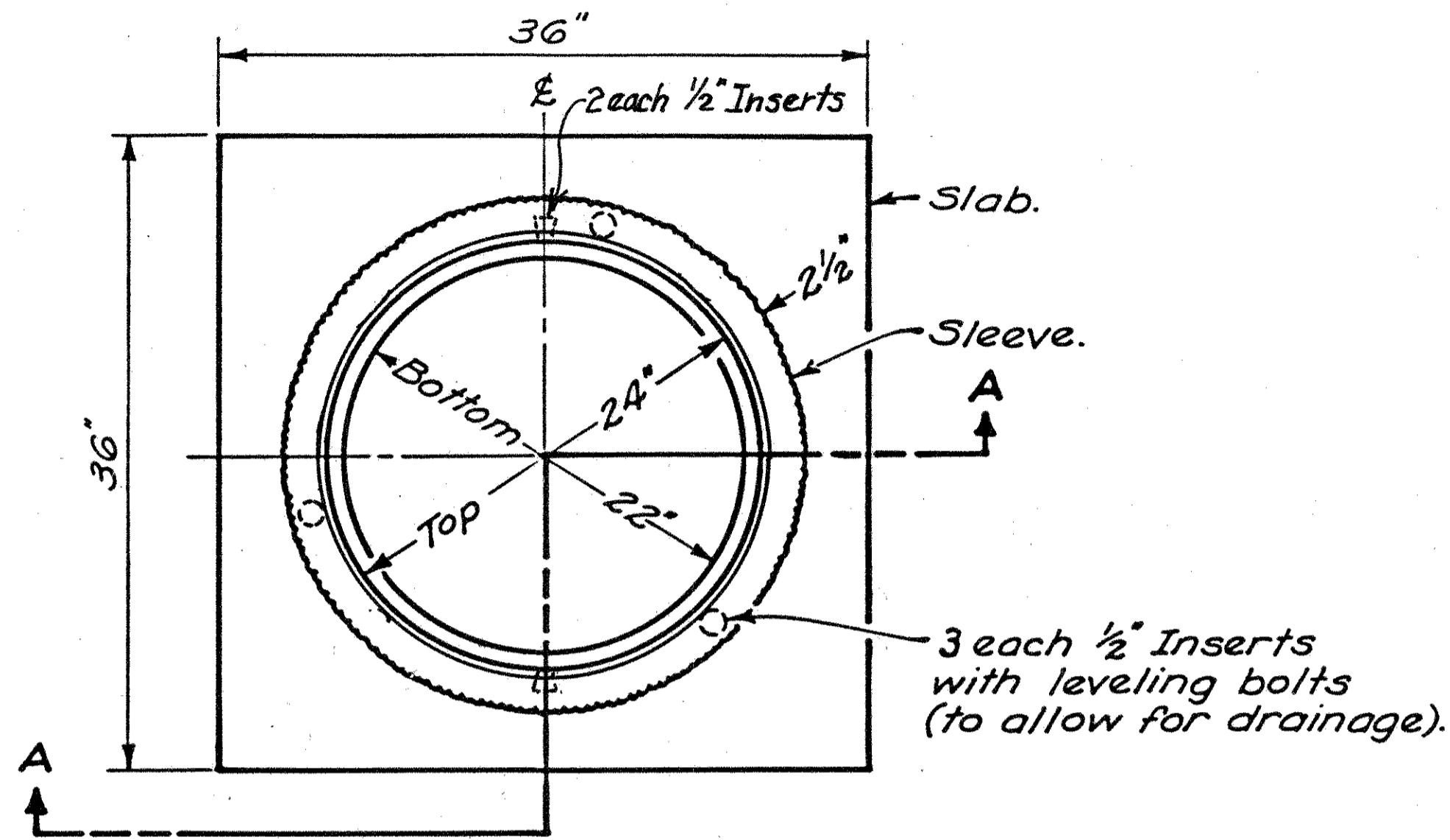


TABLE TOP - STEEL DETAIL

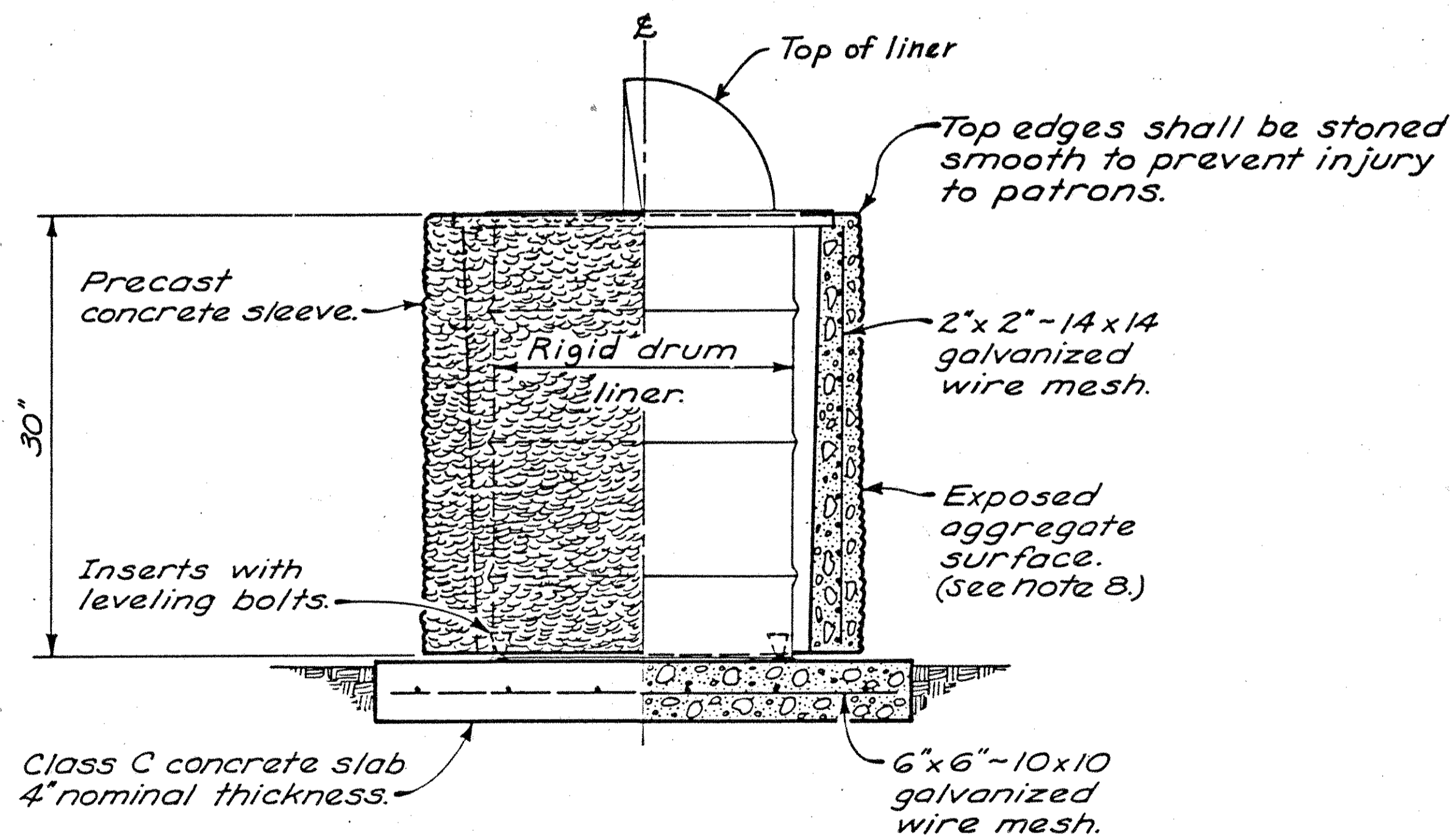


SEAT DETAIL

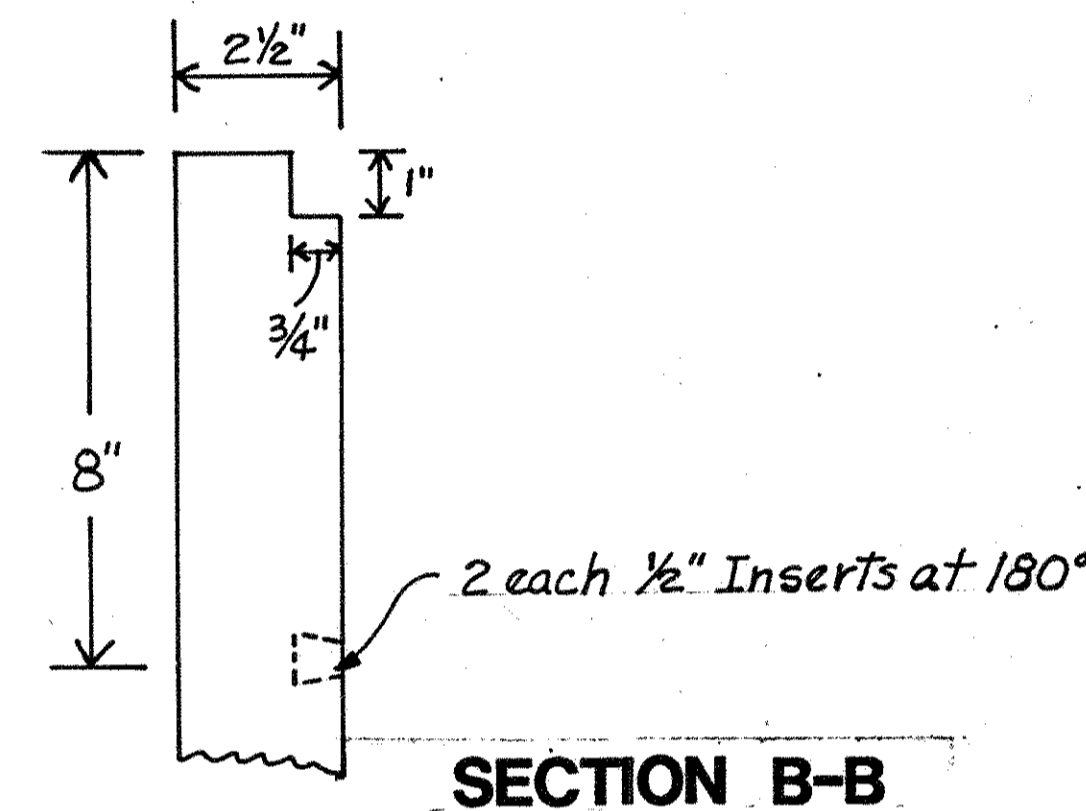
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
LANDSCAPING	DATE 2-2-81 9-1-85
PICNIC TABLE	



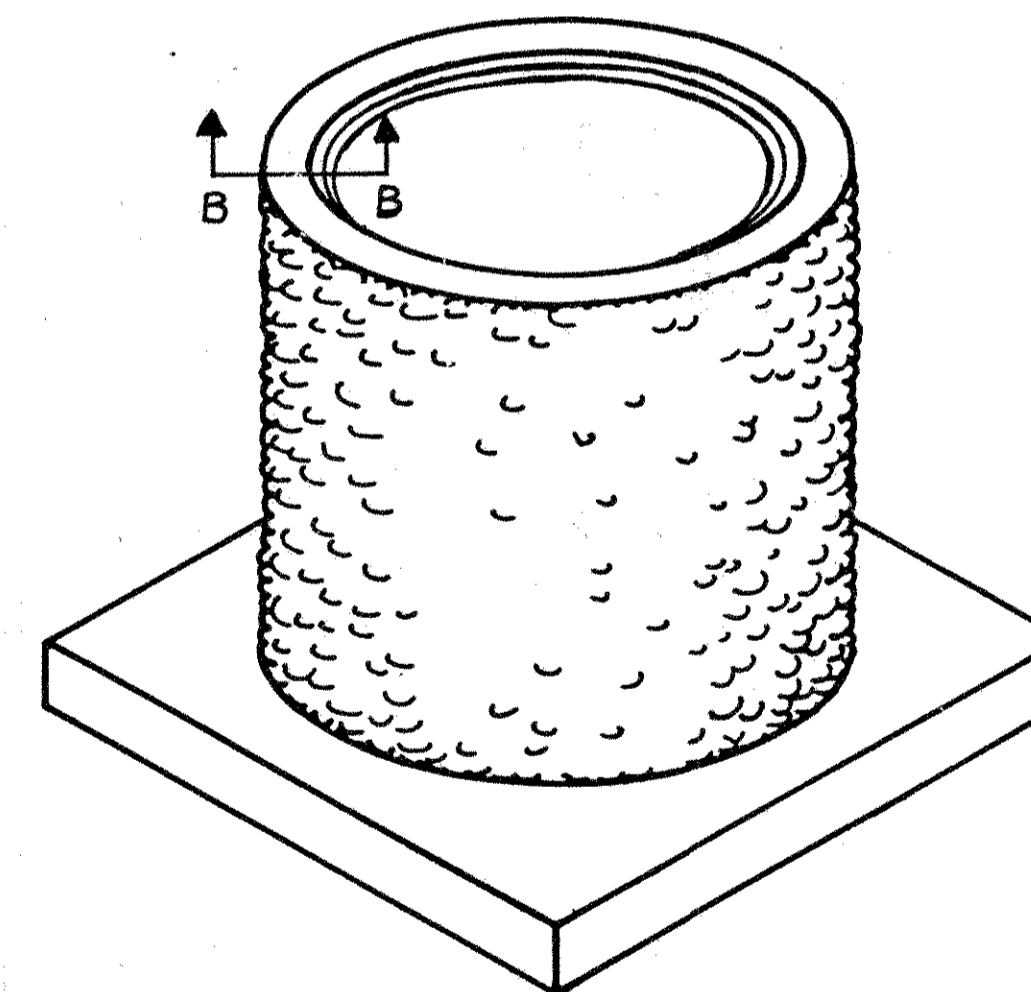
PLAN VIEW



SECTION A-A



SECTION B-B



SLEEVE & SLAB

- Leveling bolts shall be 1/2" x 2" electro-galv. hex-head bolts.
- The top edge of sleeve and its aggregate surface shall have two coats of sealer such as the Euclid Chemical Co.'s Rez-Seal, the Thoro System's Thoroglaze, Textured Coatings of America, Inc.'s Rainstopper Clear or Approved Equal.
- Method of measurement - Sleeve and slab shall be bid as:
Item Special - Waste receptacle sleeve.
Item Special - Waste receptacle slab.
- Payment shall include all excavation and back-fill; furnishing, hauling and placing all materials; and all labor, equipment, tools and incidentals necessary to complete these items as required. The number of units paid for shall be the number completed and accepted under the item specified.
- When the interior of the sleeve is tapered from 24" I.D. at the top to 22" I.D. at the base (as detailed) the approximate weight of sleeve is 638 pounds. The sleeve may also be formed with a uniform 2 1/2" thickness and a 24" I.D. The approximate weight of this unit is 542 pounds.
- The slab weighs approximately 450 pounds.
- Concrete volume:
Tapered sleeve 4.25 Cu. Ft. or 0.157 Cu. Yd.
Uniform sleeve 3.61 Cu. Ft. or 0.134 Cu. Yd.
Slab 3.00 Cu. Ft. or .111 Cu. Yd.
- The Engineer may require a sample of the exposed, washed round riverbed gravel, or crushed limestone, aggregate finish for approval prior to fabrication. All aggregate shall be free of pyrite.
- Each sleeve shall be equipped with a durable polyethylene gray, dome top with plated captive chain and a gray, 32gal. rigid polyethylene liner with molded handles. The material shall be made of pure virgin resin without fillers or regrind materials. It shall be crack resistant with ultraviolet inhibitor.
- Precast concrete waste receptacle sleeve shall meet the requirements of 706.13 with 6 ± 2% air void content in the hardened concrete.

BUREAU OF DESIGN SERVICES	
DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
LANDSCAPING	DATE
WASTE RECEPTACLE SLEEVE	10-16-81
	12-22-82
	9-1-85
	1-13-86
	7-1-86

NOTES

MATERIALS: Lumber shall be S4S Std, KD, No. 1 common or better, Southern Yellow Pine or Douglas Fir, 711.26. It shall be treated with CCA (chromated copper arsenate) conforming to AASHTO M 133, Types A, B or C (see 712.06).

Pipe and pipe fittings shall meet the requirements of 707.08 and 711.02.

Screws shall meet the requirements of 711.09.

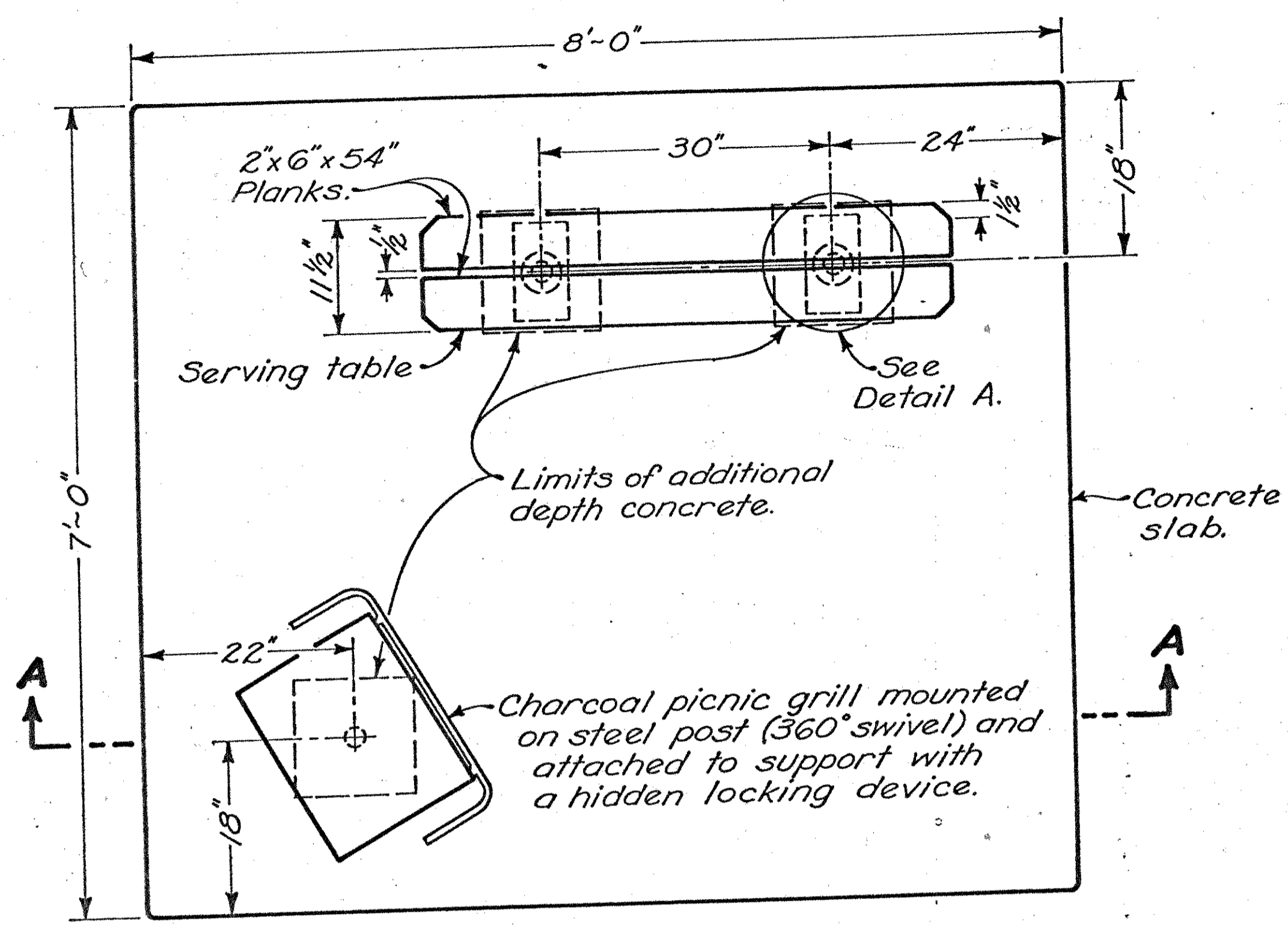
CHARCOAL GRILL shall be the same as the one shown hereon, or an approved equal. Detailed descriptive literature must be submitted for approval by ODOT.

METHOD OF MEASUREMENT: THE CHARCOAL GRILL AND SERVING TABLE AND CONCRETE SLAB MAY BE BID TOGETHER OR SEPARATELY AS FOLLOWS:

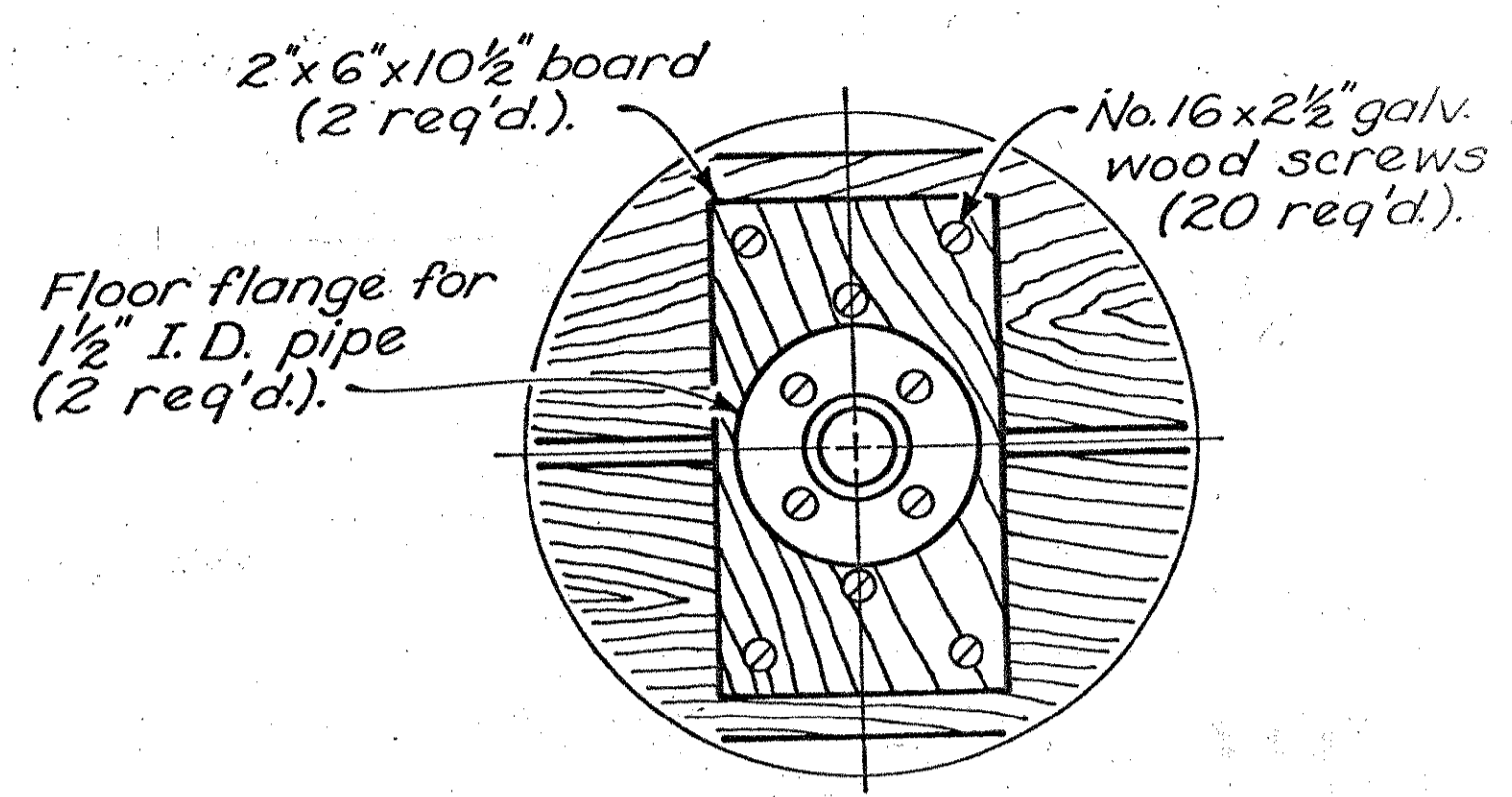
- ITEM SPECIAL - CHARCOAL GRILL, SERVING TABLE AND CONCRETE SLAB
- ITEM SPECIAL - CHARCOAL GRILL AND SERVING TABLE
- ITEM SPECIAL - CONCRETE SLAB FOR CHARCOAL GRILL AND SERVING TABLE

BASIS OF PAYMENT: EACH OF THE ABOVE ITEMS SHALL INCLUDE EXCAVATION AND BACKFILL; FURNISHING, HAULING AND PLACING ALL MATERIALS; AND ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THESE ITEMS AS REQUIRED FOR EACH ITEM.

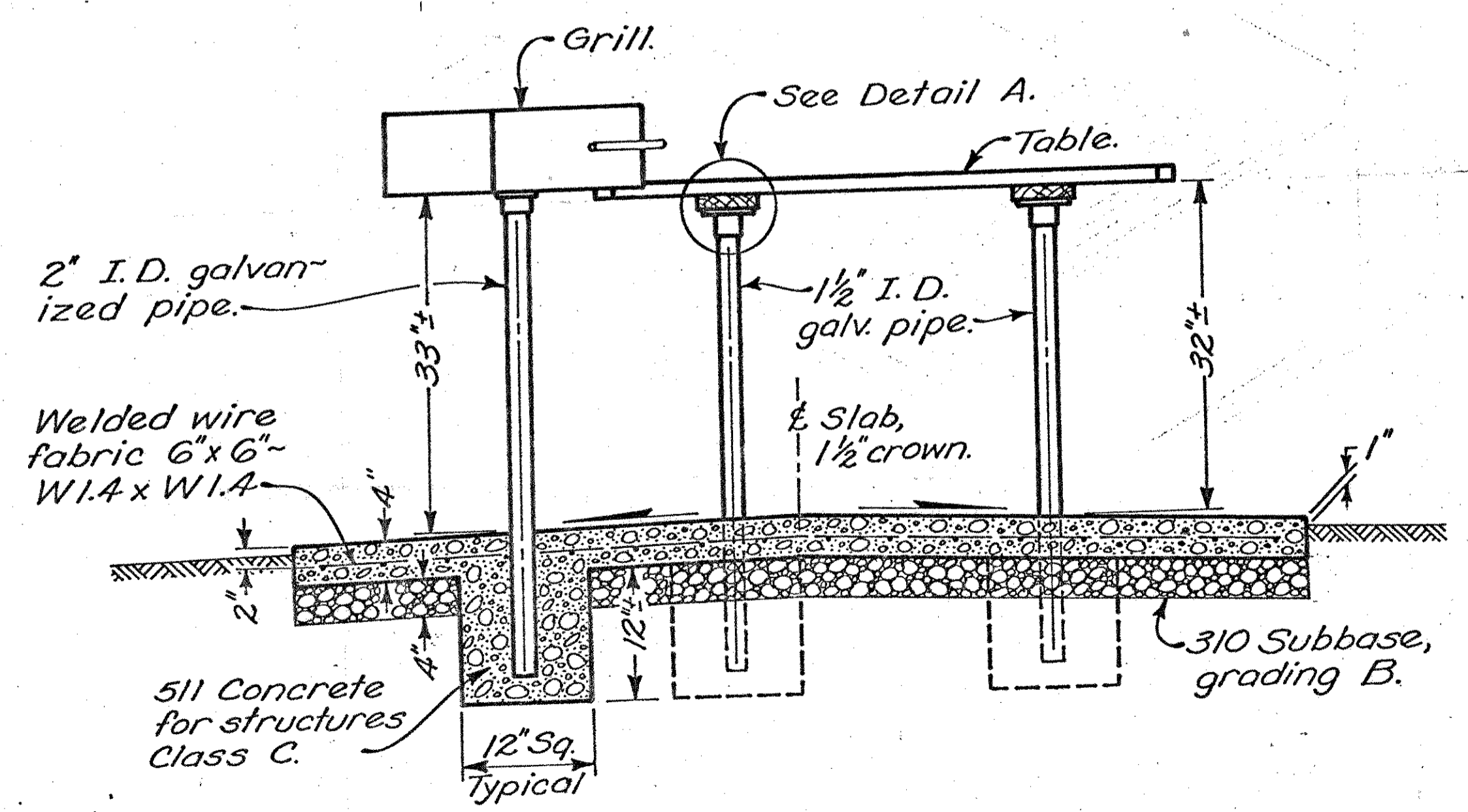
THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER COMPLETED AND ACCEPTED UNDER THE ITEM SPECIFIED.



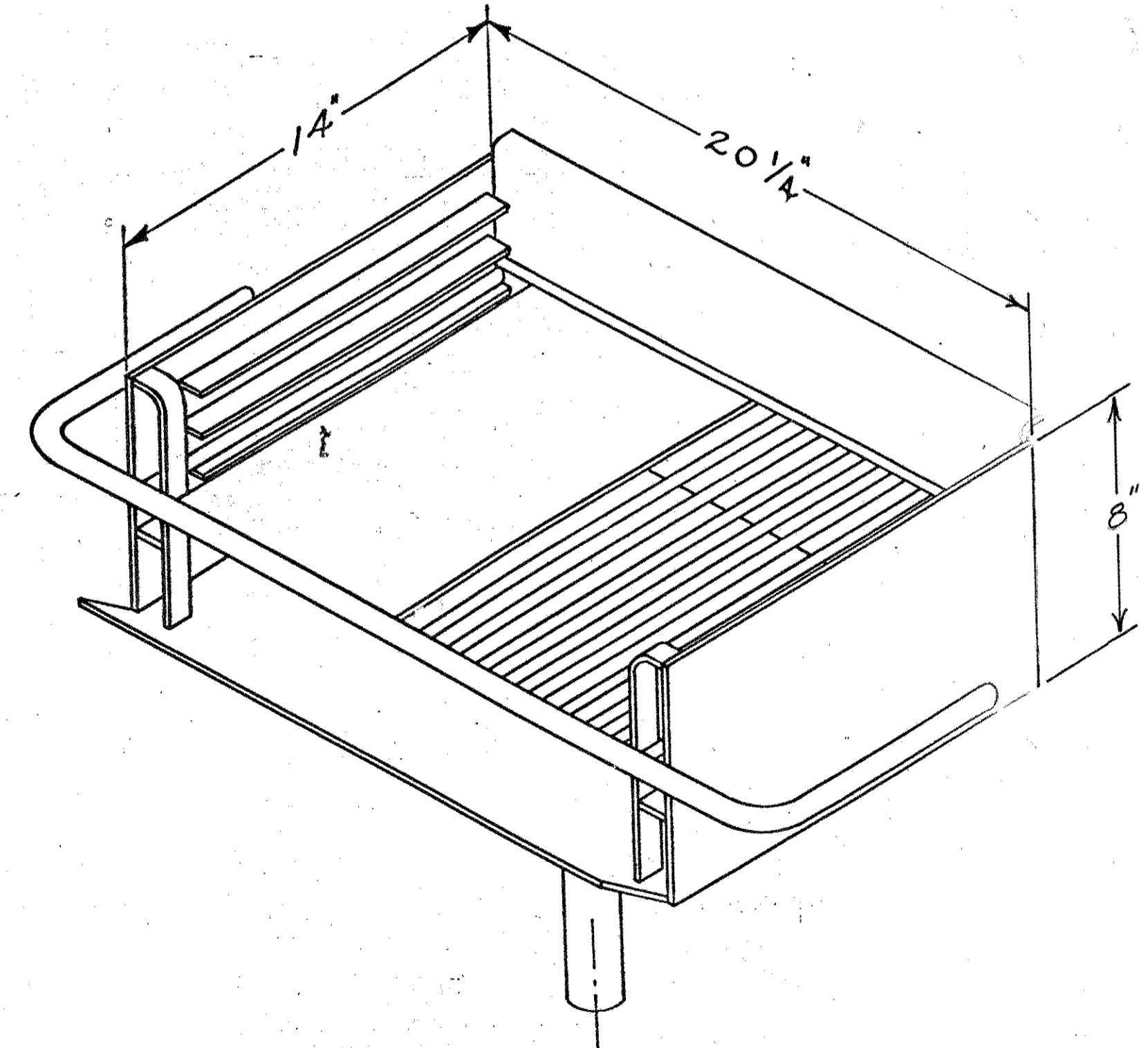
PLAN VIEW



**DETAIL A
UNDERSIDE OF TABLE TOP**

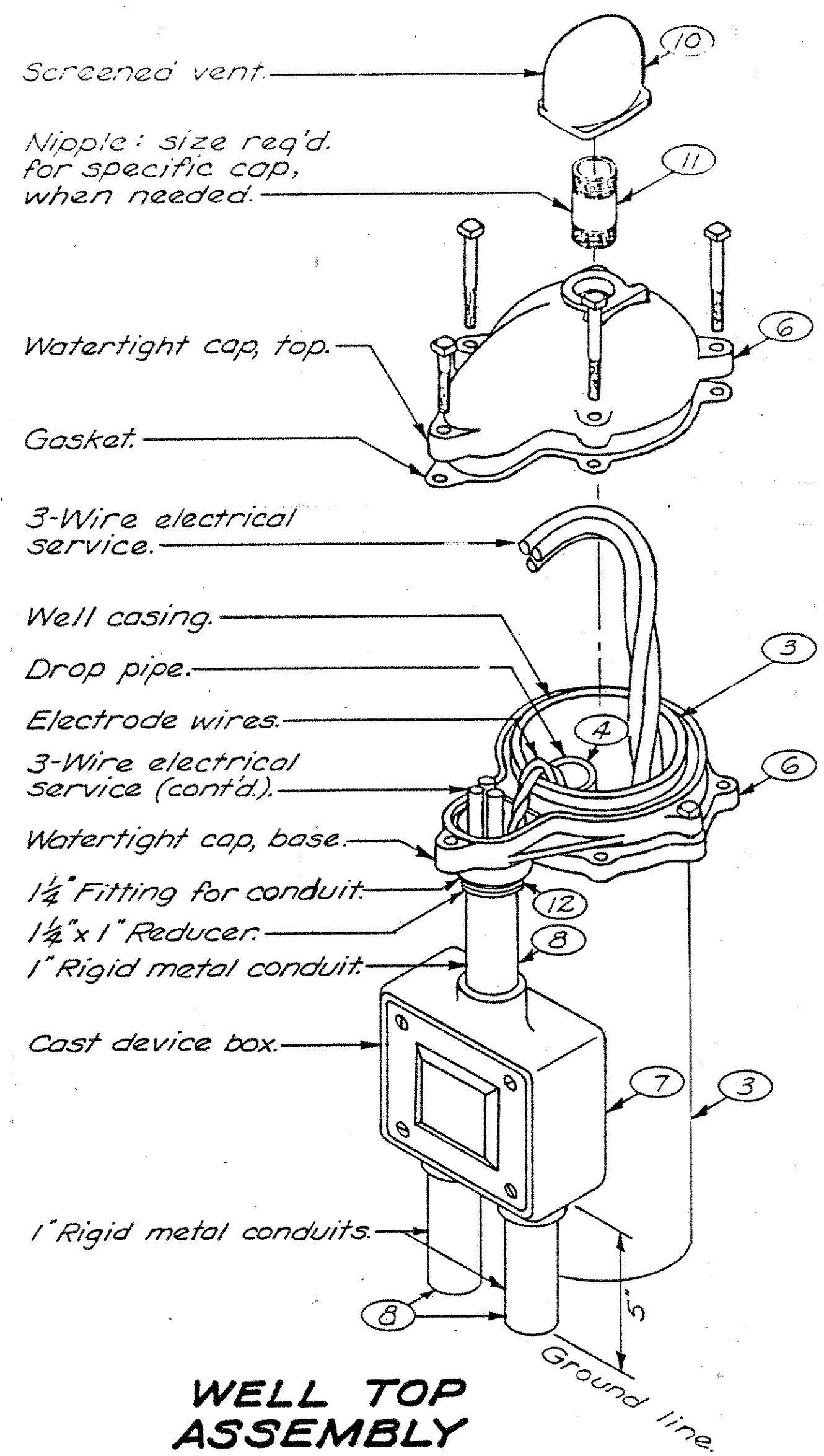


SECTION A-A

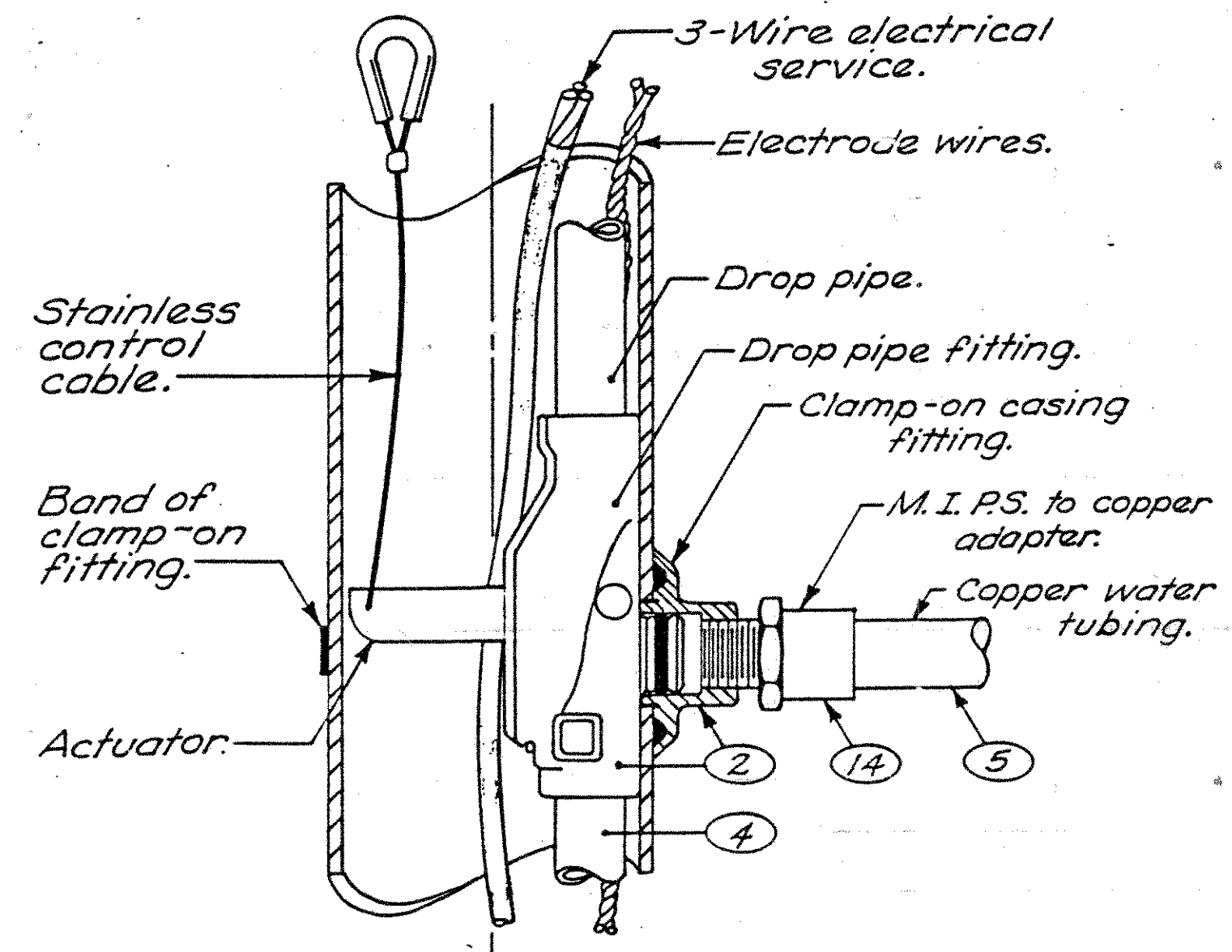


CHARCOAL GRILL

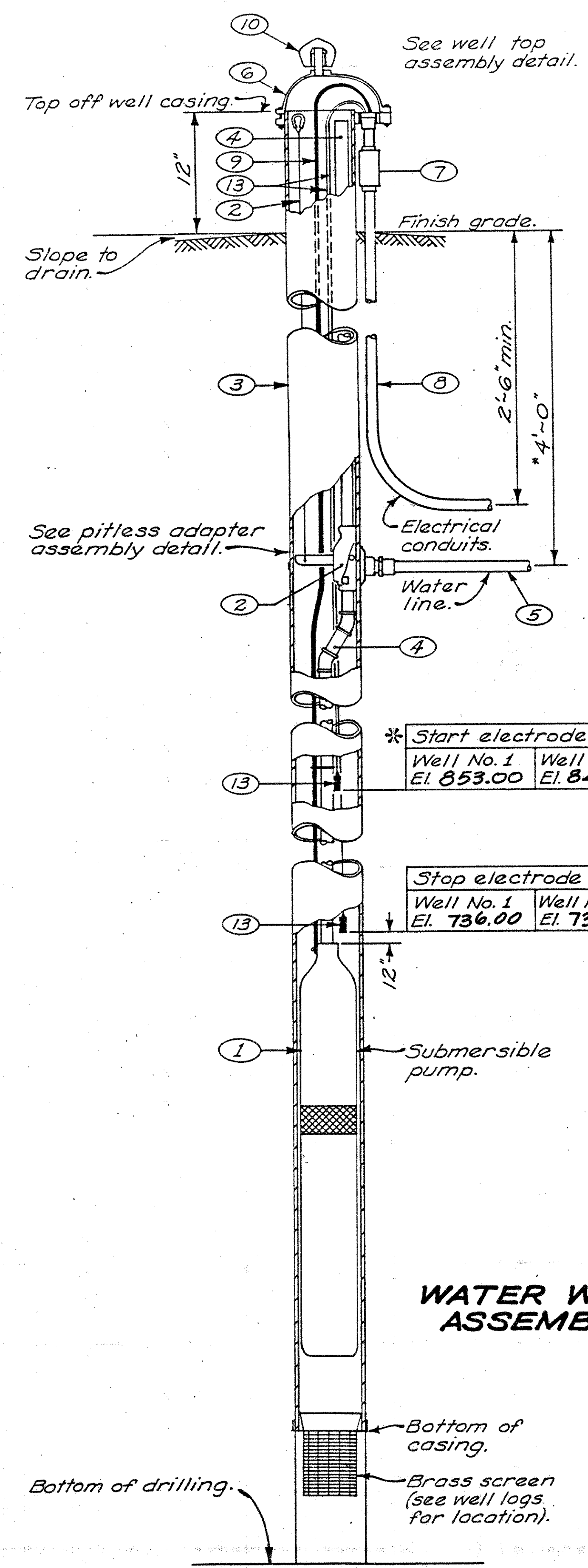
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
LANDSCAPING	DATE 6-1-79
CHARCOAL GRILL & SERVING TABLE	
APPROVED	Engineer of Design Services



WELL TOP ASSEMBLY



PITLESS ADAPTER ASSEMBLY



* Start electrode	
Well No. 1	Well No. 2
EI. 853.00	EI. 842.50

Stop electrode	
Well No. 1	Well No. 2
EI. 736.00	EI. 733.00

WATER WELL ASSEMBLY

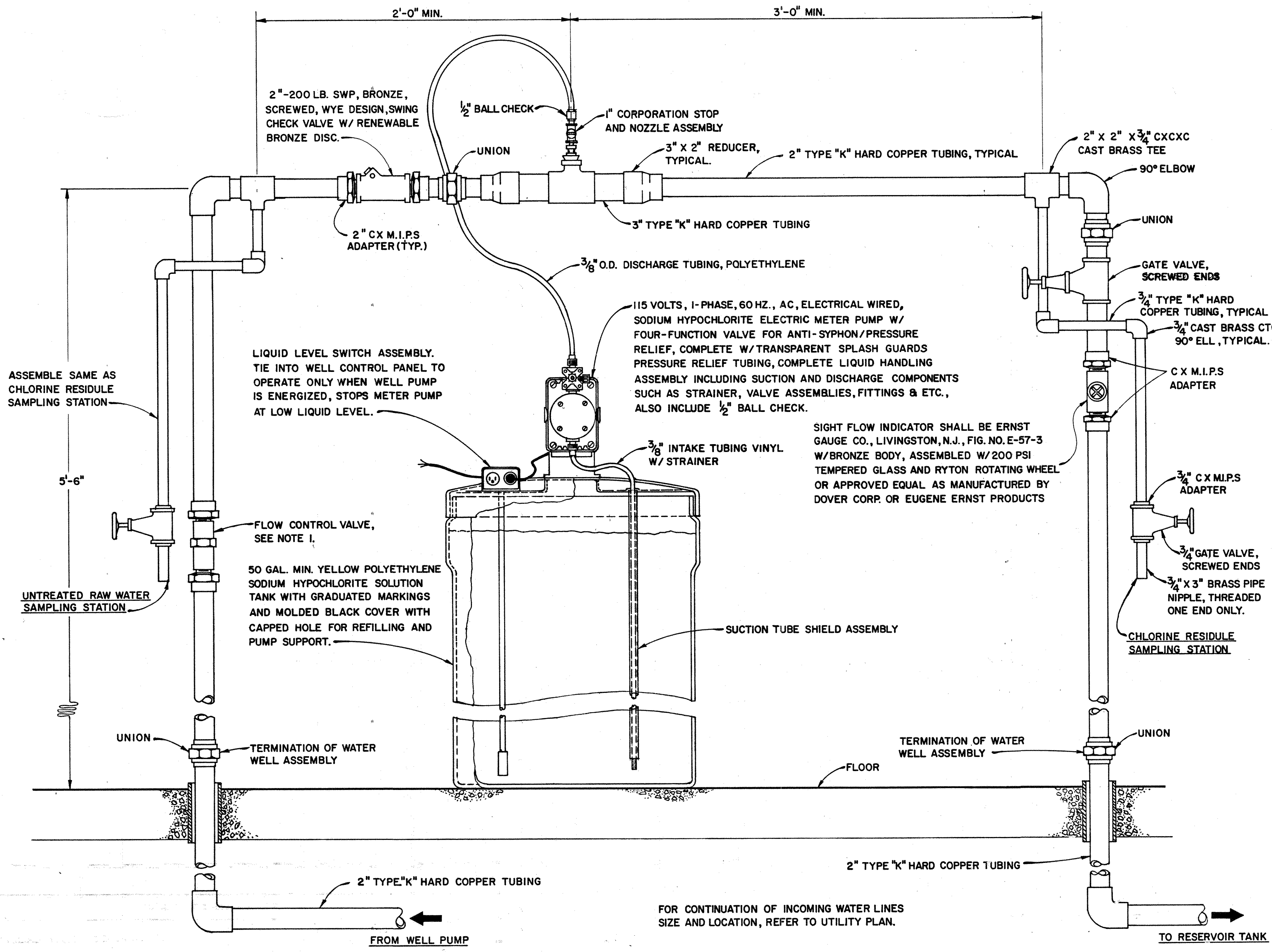
WELL LOGS		
WELL No. 1		
East bound Rest Area No. —		
Sta. 380 + 34.00, 1195 ft. R.T. of B		
Field rate 20 GPM., by bail (X)/pump()		
Casing length 184.5 ft.		
Strata at full depth Gray Limestone		
Recommended sieve size —		
Item	Elevation	Depth in feet below original grade
Top of casing	911.50	
Original grade	—	
Finish grade	909.00	
Static water level *	854.00	55
Drawdown		
Bottom of casing	757.00	
Brass screen	Top	
	Bottom	
Total drilled depth	731.00	178
WELL No. 2		
West bound Rest Area No. —		
Sta. 386 + 34.00, 114 ft. Lt. of B		
Field rate 20 GPM., by bail (X)/pump()		
Casing length 162 ft.		
Strata at full depth Gray Limestone		
Recommended sieve size —		
Item	Elevation	Depth in feet below original grade
Top of casing	908.50	
Original grade	—	
Finish grade	906.50	
Static water level *	853.50	53
Drawdown		
Bottom of casing	746.50	
Brass screen	Top	
	Bottom	
Total drilled depth	728.50	178

* If actual static water level is not as indicated, the start electrodes are to be set 5'-0" below measured level.

NOTES

- SUBMERSIBLE PUMP SHALL BE R.E. MYERS CO., NO. SJ72-JT11P OR APPROVED EQUAL BY CRANE CO, DEMING DIVISION; TAIT MFG. OR RAPIDAYTON. PUMP SHALL BE 3/4 H.P., 230 VOLTS, SINGLE PHASE, 60 HZ., AND HAVE A 3-WIRE MOTOR. EACH WELL PUMP INSTALLATION SHALL BE EQUIPPED WITH A LIGHTNING ARRESTOR, SUCH AS F.E. MYERS CO., NO. 12149 A10; GENERAL ELECTRIC CO., NO. 9L15BCC003 OR APPROVED EQUAL. CONNECT GROUND TO WELL CASING.
- WELL PUMPS NOT HAVING A CAPACITOR (3/4 H.P. & LARGER MOTOR) SHALL BE PROVIDED WITH A MAGNETIC ACROSS-THE-LINE STARTER AND SHALL BE INCLUDED IN THE CIRCUITRY OF THE WIRING DIAGRAM.
- PITLESS ADAPTER ASSEMBLY WITH CLAMP-ON DISCHARGE FITTING BY BAKER MFG. CO., MONITOR DIVISION, NO. 5PL-6-1-U-C4 (FOR 1" DROP PIPE) OR NO. 8PL-6-1.2-U-C4 (FOR 1-1/4" DROP PIPE); OR APPROVED EQUAL BY DICKEN MFG. CO.; DUPLEX MFG. CO. OR WILLIAMS PRODUCT CO.
- SIX INCH I.D. (6-5/8" O.D.) WELL CASING, ASTM A 53, GRADE B, STANDARD WEIGHT, SCHEDULE 40, GALVANIZED SEAMLESS STEEL PIPE AS PER 707.11.
- 1/4" INCH I.D. DROP PIPE, ASTM A 53, GRADE B, STANDARD WEIGHT, SCHEDULE 40, GALVANIZED SEAMLESS STEEL PIPE AS PER 707.11.
- 2" INCH (NOMINAL SIZE) TYPE "K" HARD DRAWN COPPER WATER TUBING PRESSURE LINE CONFORMING TO ASTM B 88. RUN IN 20 FOOT LENGTHS TO HYPO-CHLORINATOR IN BUILDING, THEN EXTEND TO RESERVOIR TANK IN LIKE MANNER. (SEE DRAWINGS RRA-8 AND RRA-9).
- WATER-TIGHT CAP FOR 6" WELL CASING BY BAKER MFG. CO., MONITOR DIVISION NO. 6W; OR APPROVED EQUAL BY DICKEN MFG. CO.; DUPLEX MFG. CO. OR WILLIAMS PRODUCT CO.
- CAST DEVICE BOX WITH FULL-FACE NEOPRENE GASKET AND BLANK COVER BY APPLETON ELECTRIC CO., NO. FDCC-1-100; OR APPROVED EQUAL BY KILLARK ELECTRIC MFG. CO., CROUSE-HINES CO., KONDU CORP. OR ADALET MFG. CO.
- ONE INCH DIAMETER RIGID FERROUS METAL ELECTRICAL CONDUITS PER 713.04.
- THREE-WIRE ELECTRICAL SERVICE.
- SCREENED WELL VENT TO MATCH CAP CHOSEN FROM NOTE 6 ABOVE.
- NIPPLE, ASTM A 53, GRADE B, STANDARD WEIGHT, SCHEDULE 40, GALVANIZED SEAMLESS STEEL PIPE AS PER 707.11; IF REQUIRED FOR SPECIFIC CAP USED.
- REDUCER (OF SIZE REQ'D.), IF NEEDED FOR FERROUS METAL ELECTRICAL CONDUITS AS PER 713.04.
- ELECTRODES SHALL BE B/W CONTROLLER CORP., TYPE E-1P-SHIELDED, OR APPROVED EQUAL.
- CAST BRASS MALE IRON PIPE SIZE TO COPPER ADAPTER AS PER ASTM B 16.18.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
WATER WELL ASSEMBLY	DATE 9/2/82 *2-12-86
RRA-7	
APPROVED <i>E. J. Schaff</i> Engr. of Design Services	

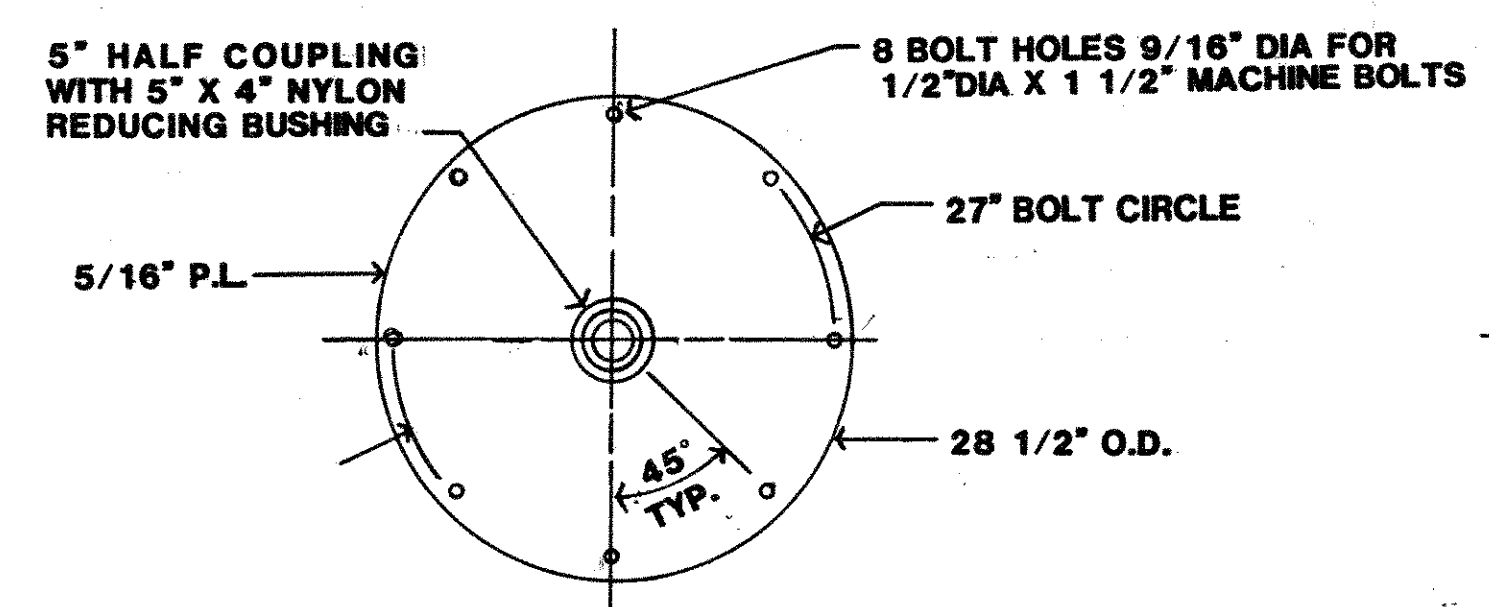


NOTES

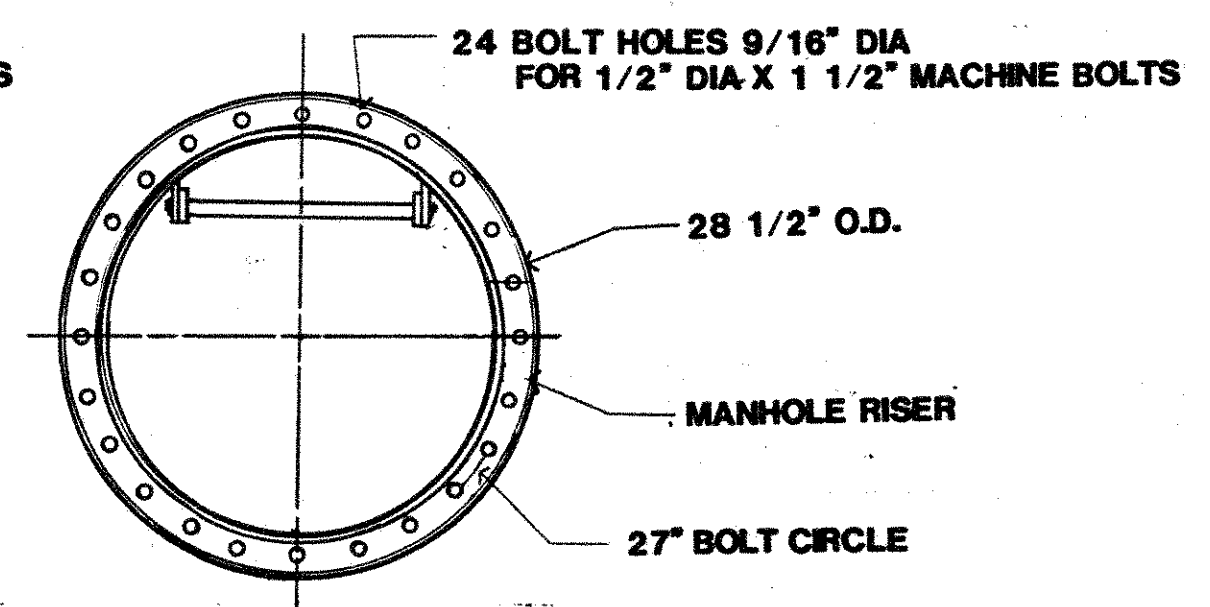
- EAST BOUND REST AREA - INSTALL A DOLE VALVE CO. FLOW CONTROL VALVE NO. 56X WITH 15 G.P.M. FLOW, 1" F.N.P.T. INLET AND OUTLET, FOR GENERAL USE, NICKEL PLATED.
WEST BOUND REST AREA - INSTALL A DOLE VALVE CO. FLOW CONTROL VALVE NO. 136X WITH 15 G.P.M. FLOW, 1" F.N.P.T., FOR GENERAL USE, NICKEL PLATE.
APPROVED EQUAL SHALL BE AS MANUFACTURED BY GRISWOLD CONTROLS OR AN APPROVED EQUAL.
- ONLY 5 1/4% OR 15% UNDILUTED LIQUID, SODIUM HYPOCHLORITE SOLUTION SHALL BE USED IN THIS SYSTEM. THE SYSTEM MUST BE MAINTAINED AT A MINIMUM OF 1/3 FULL OR COMPLETELY FILLED (17 TO 50 GALLONS) TO FUNCTION PROPERLY.
- THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL 50 GALLONS OF UNDILUTED SODIUM HYPOCHLORITE SOLUTION AND REGULATE METER AND TEST FOR REQUIRED CHLORINE RESIDUE PER ENGINEERS APPROVAL.
- THE SODIUM HYPOCHLORITE CHLORINATOR SYSTEM IS BASED ON ALL EQUIPMENT AND APPURTENANCES AS SPECIFIED AND/OR SHOWN ON PLANS, AS MANUFACTURED BY LIQUID METRONIC INCORPORATED. LIKE EQUIPMENT AND APPURTENANCES AS MANUFACTURED BY HVC COMPANY OF CINCINNATI (PROMINENT PUMP UNIT) OR APPROVED EQUAL MAY BE SUBMITTED, SUBJECT TO ENGINEERS APPROVAL.
- M.I.P.S. X C. ADAPTER SHALL BE ADJACENT TO ALL VALVES, UNIONS AND SPECIAL DEVICES.

FOR CONTINUATION OF INCOMING WATER LINES SIZE AND LOCATION, REFER TO UTILITY PLAN.

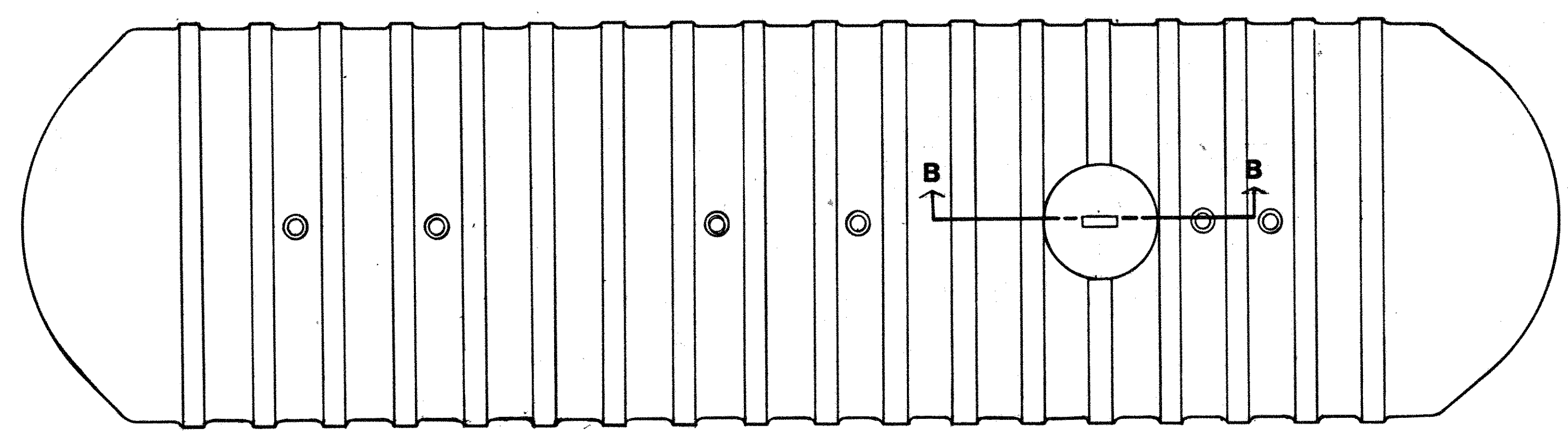
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADWAY DEVELOPMENT	DATE
WATER SYSTEM HYPOCHLORINATOR	8-14-84
RRR-8	
APPROVED <i>[Signature]</i> Engr. of Design Services	



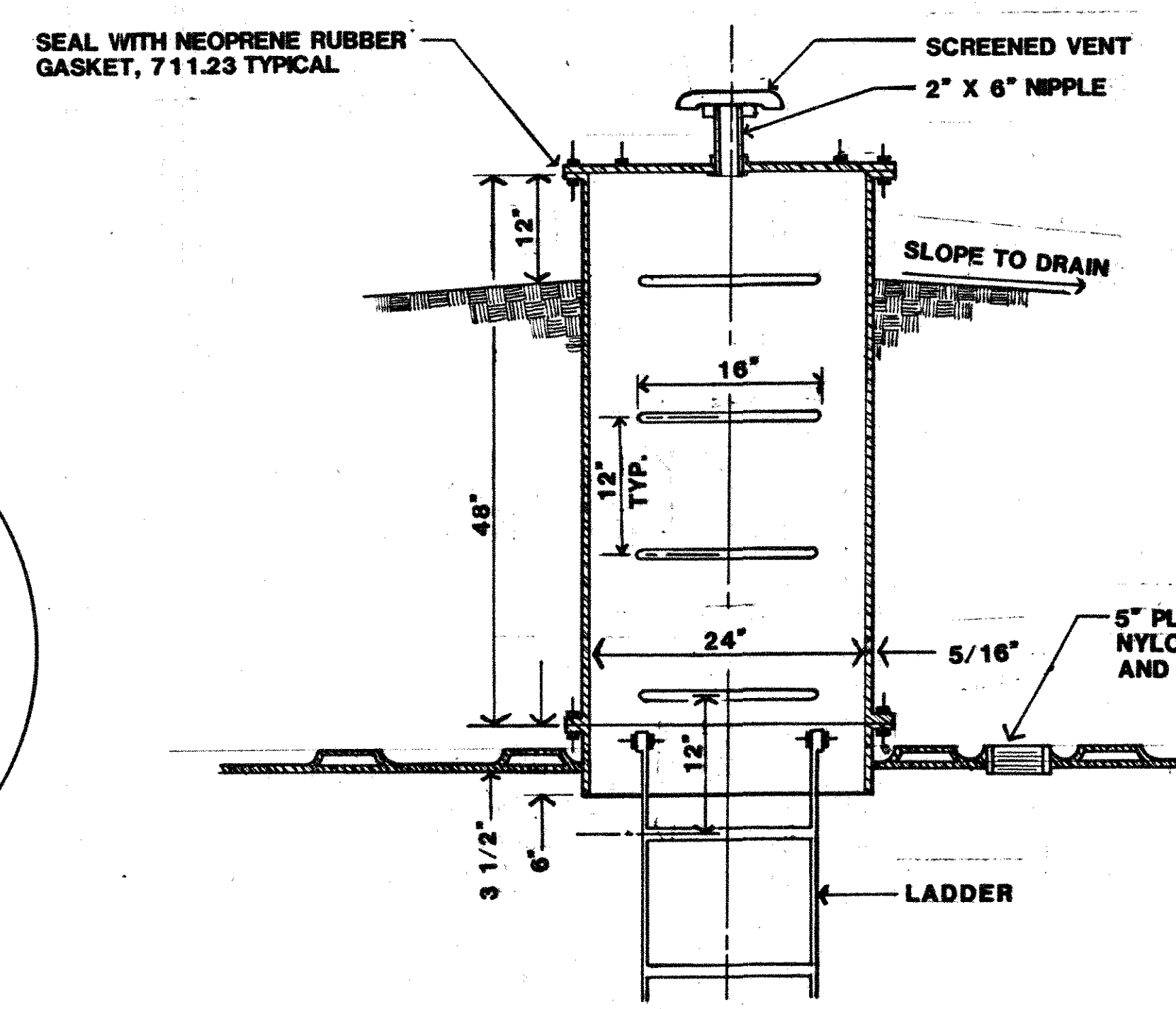
MANHOLE COVER



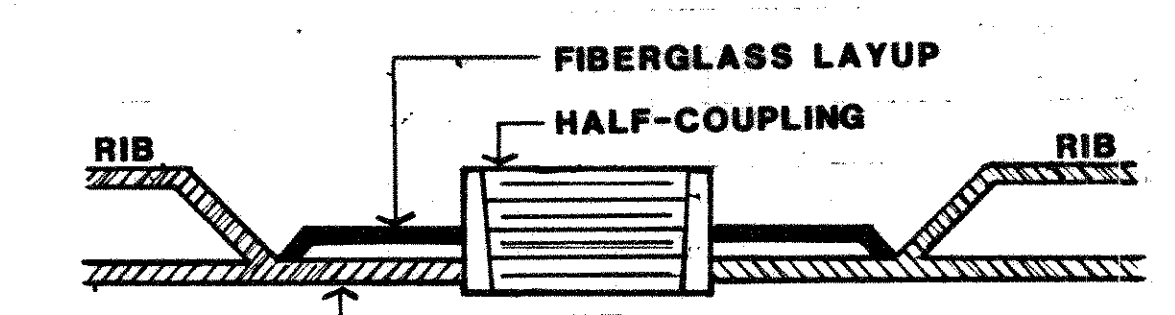
MANHOLE NECK RING



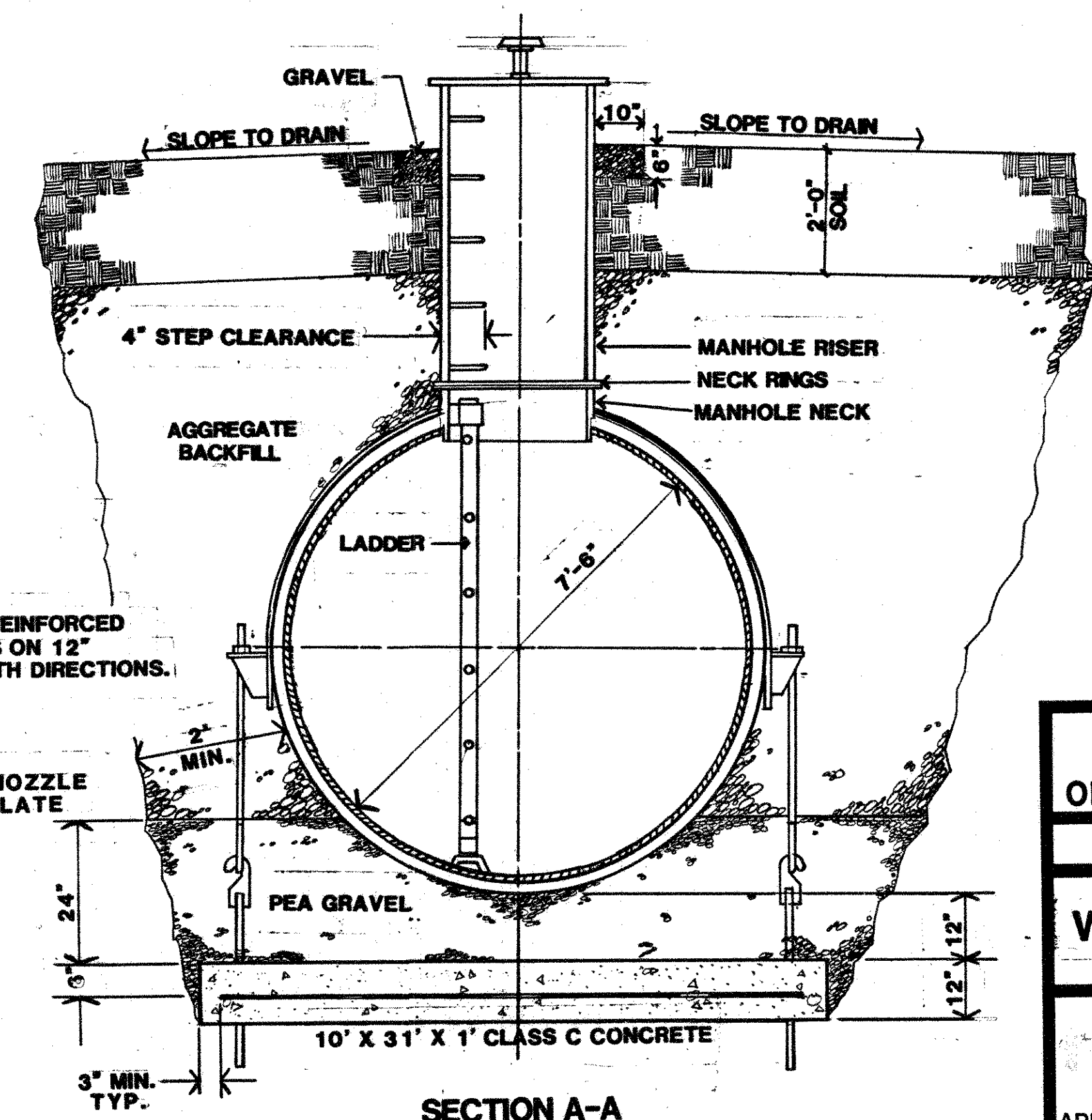
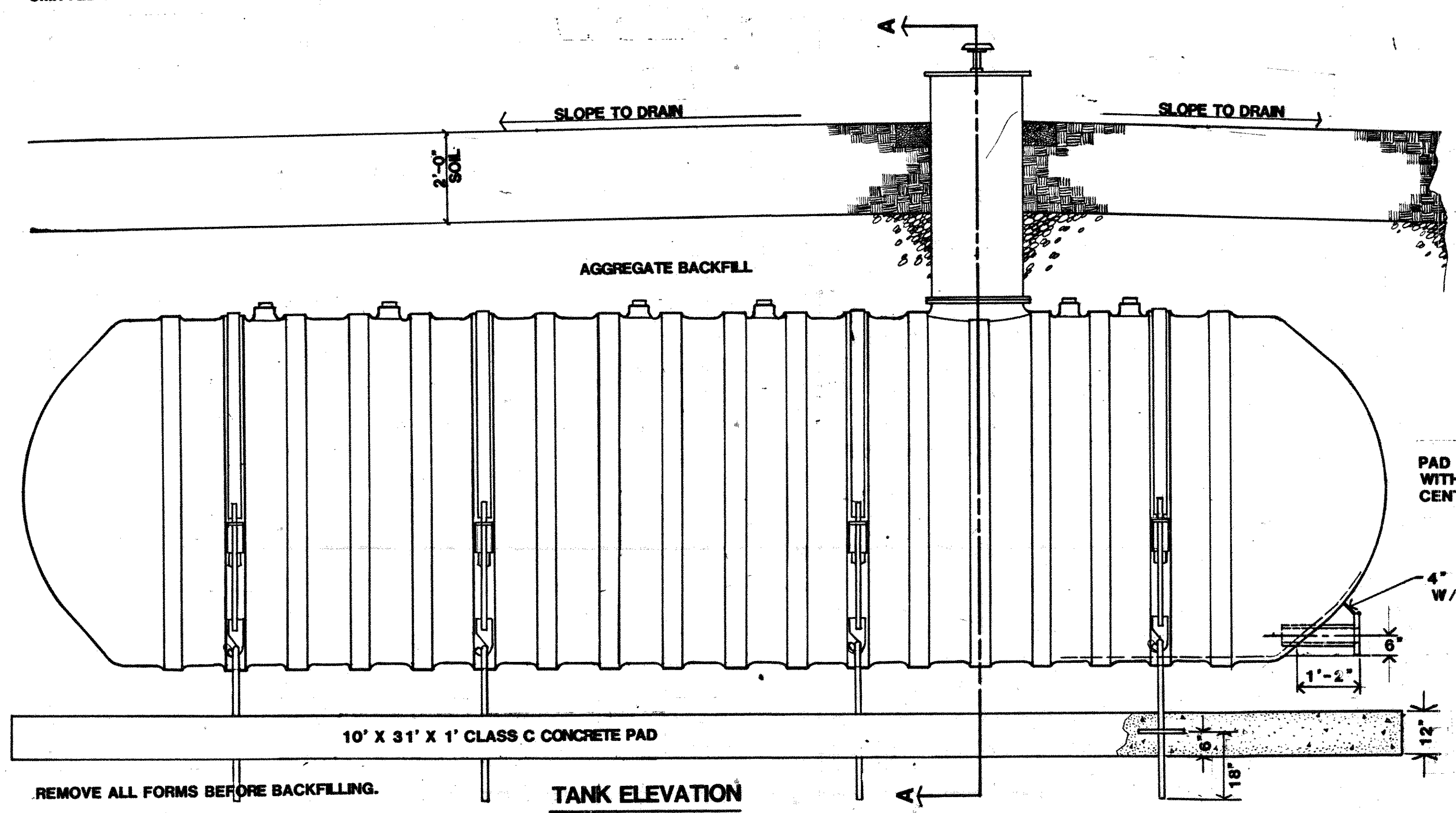
GUY CABLES, CONCRETE PAD AND TRENCH DETAILS ARE OMITTED FROM THIS VIEW.



SECTION B-B



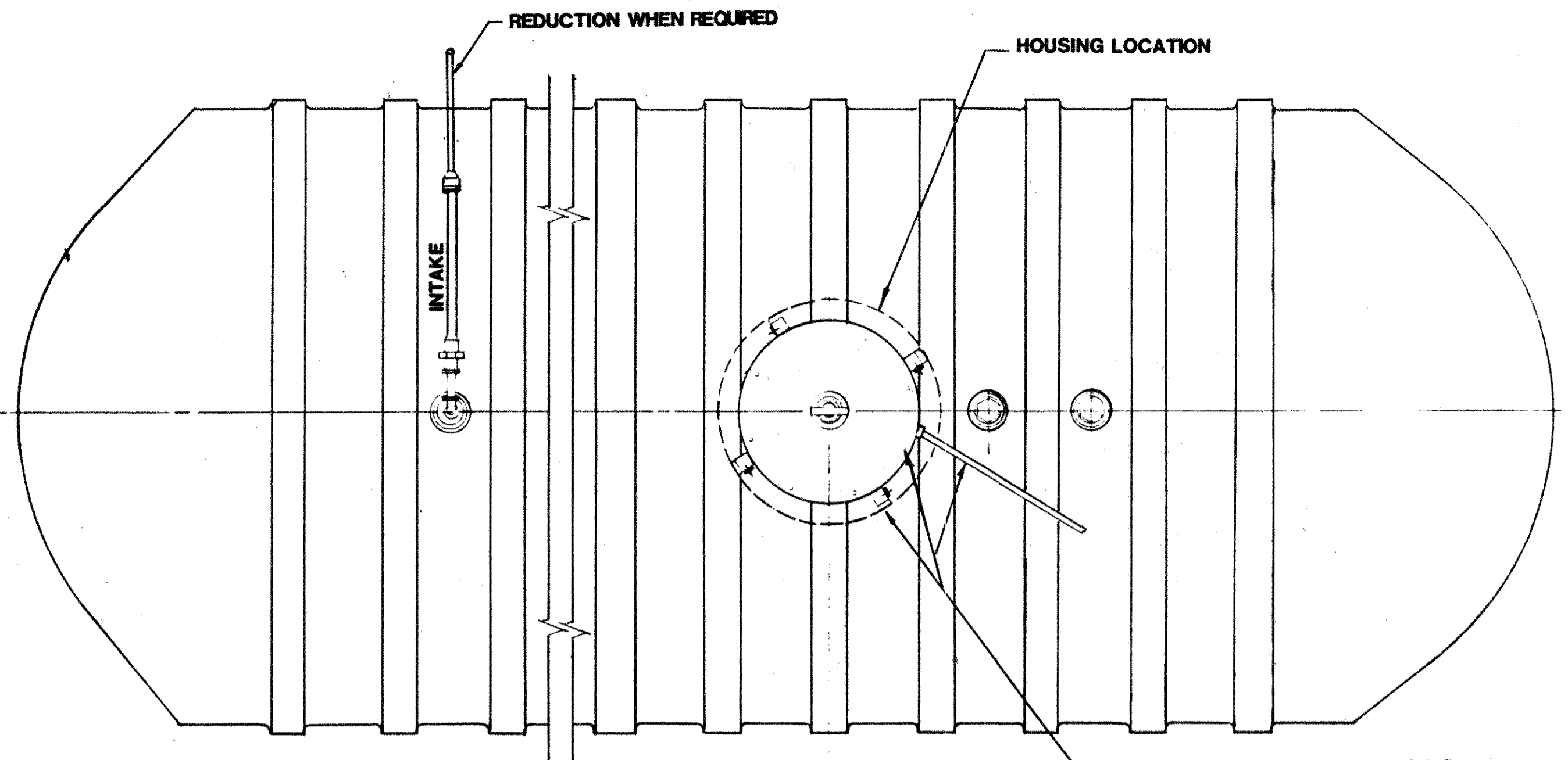
COUPLING DETAIL



SECTION A-A

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE
WATER RESERVOIR TANK	
RRA-9B SHEET 1 OF 2	
APPROVED	Engr. of Design Services

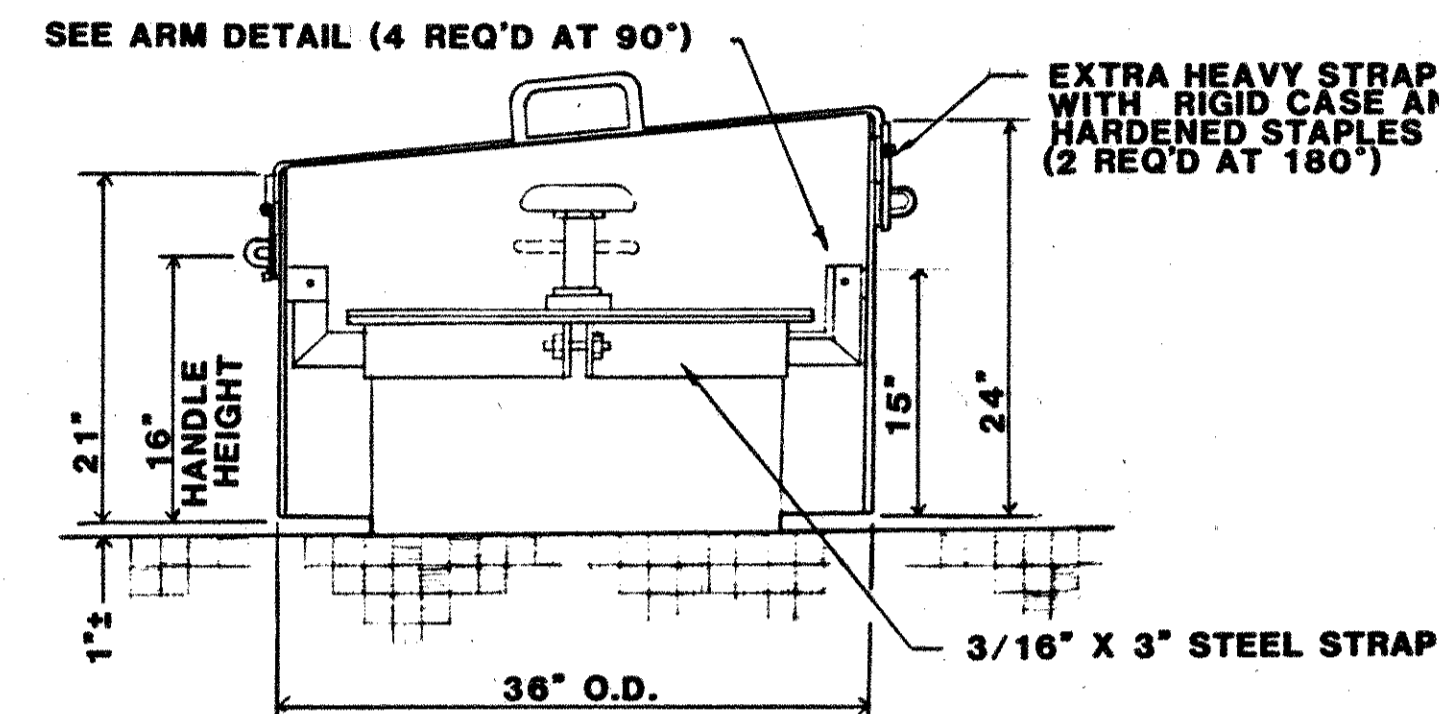
MANHOLE HOUSING DETAILS



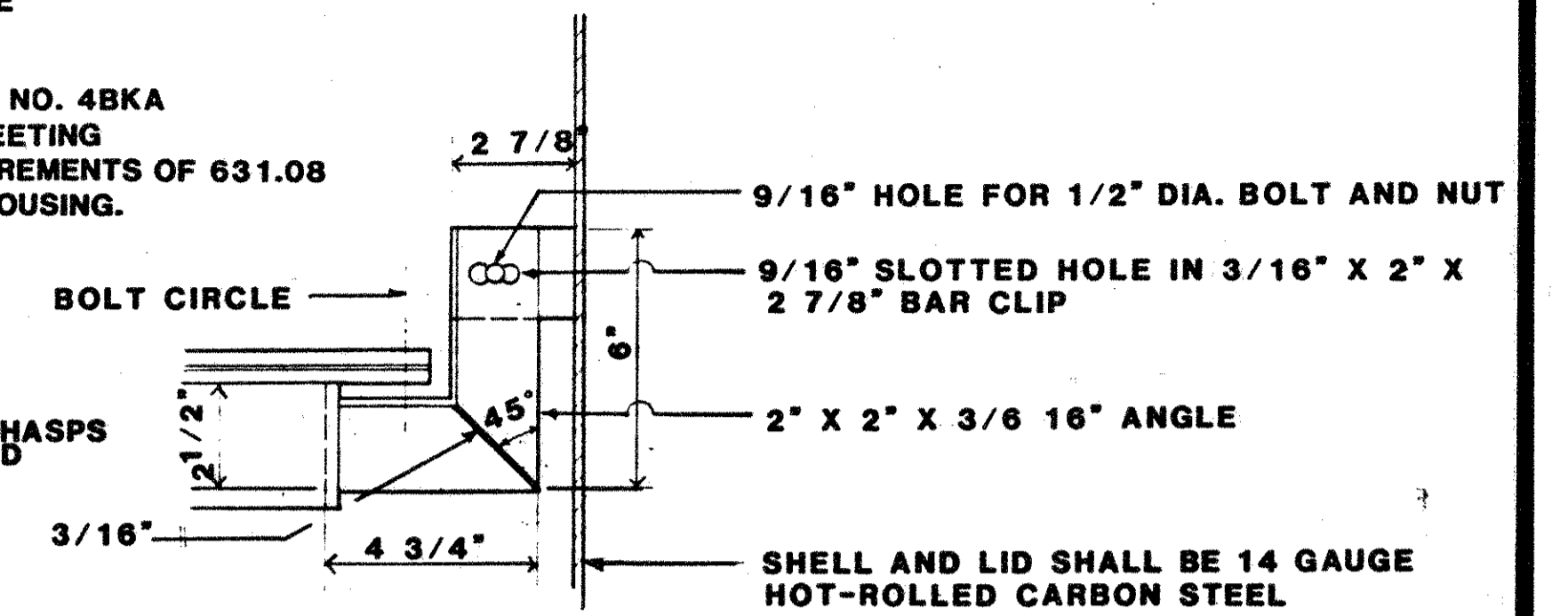
PLUMBING AND ELECTRIC PLAN

OFFSET COVER BOLTS, ELECTRIC ASSEMBLY AND SUPPORT ARMS FOR MANHOLE HOUSING.

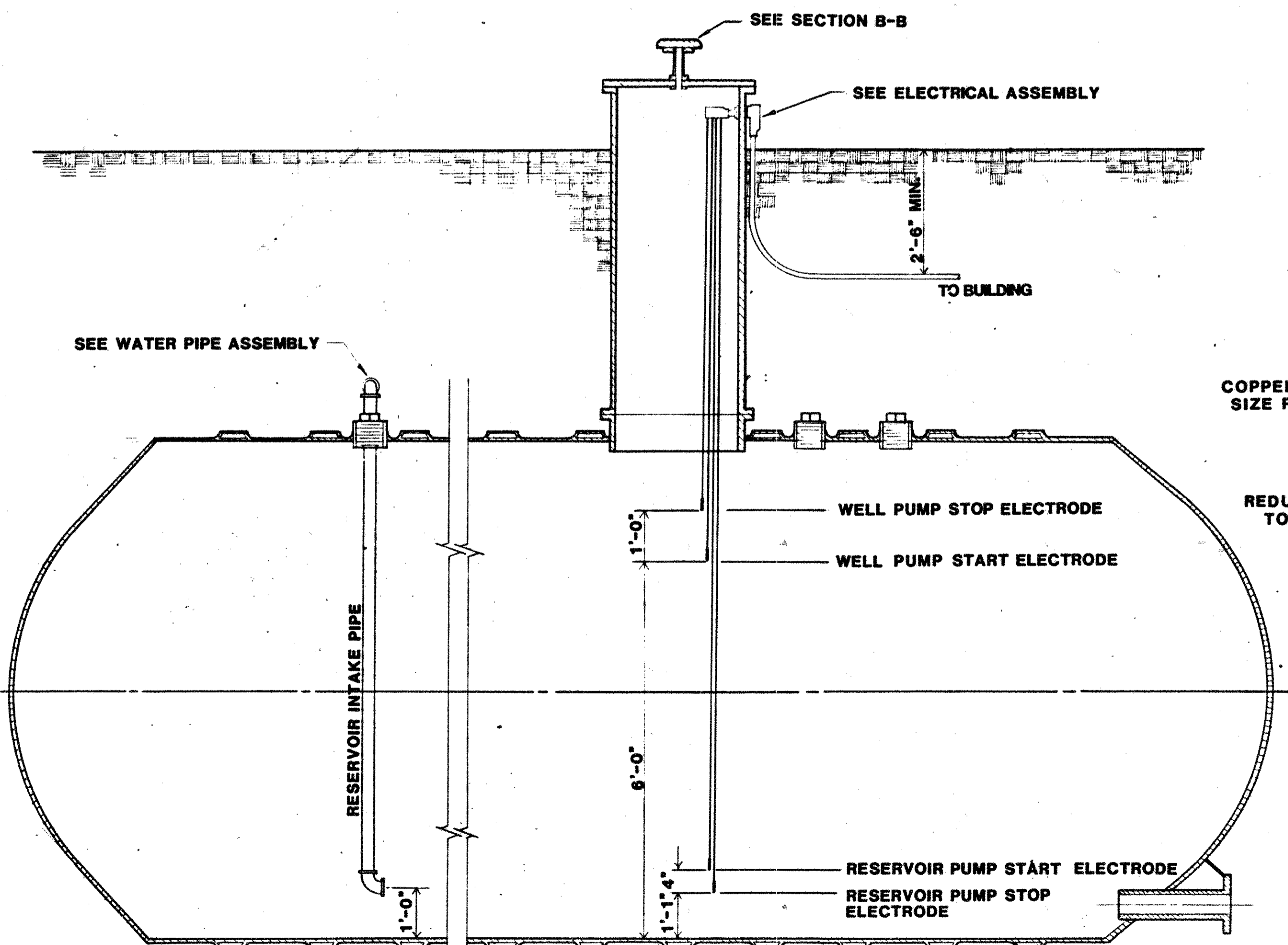
- WELDS: ARMS, BARS CLIPS, HANDLES, HASPS AND STAPLES SHALL BE FILLET WELDED ALL AROUND.
- SHELL AND LID SHALL BE COATED INSIDE AND OUTSIDE WITH RED OXIDE PRIMER (708.19) AND GREEN FINISH PAINT (708.19).
- ARMS SHALL BE COVERED BY THE SAME OUTSIDE COATING REQUIRED ON THE MANHOLE AND MANHOLE COVER.
- TWO PADLOCKS EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660 AND MEETING THE CORROSION AND KEYING REQUIREMENTS OF 631.08 SHALL BE FURNISHED WITH EACH HOUSING.



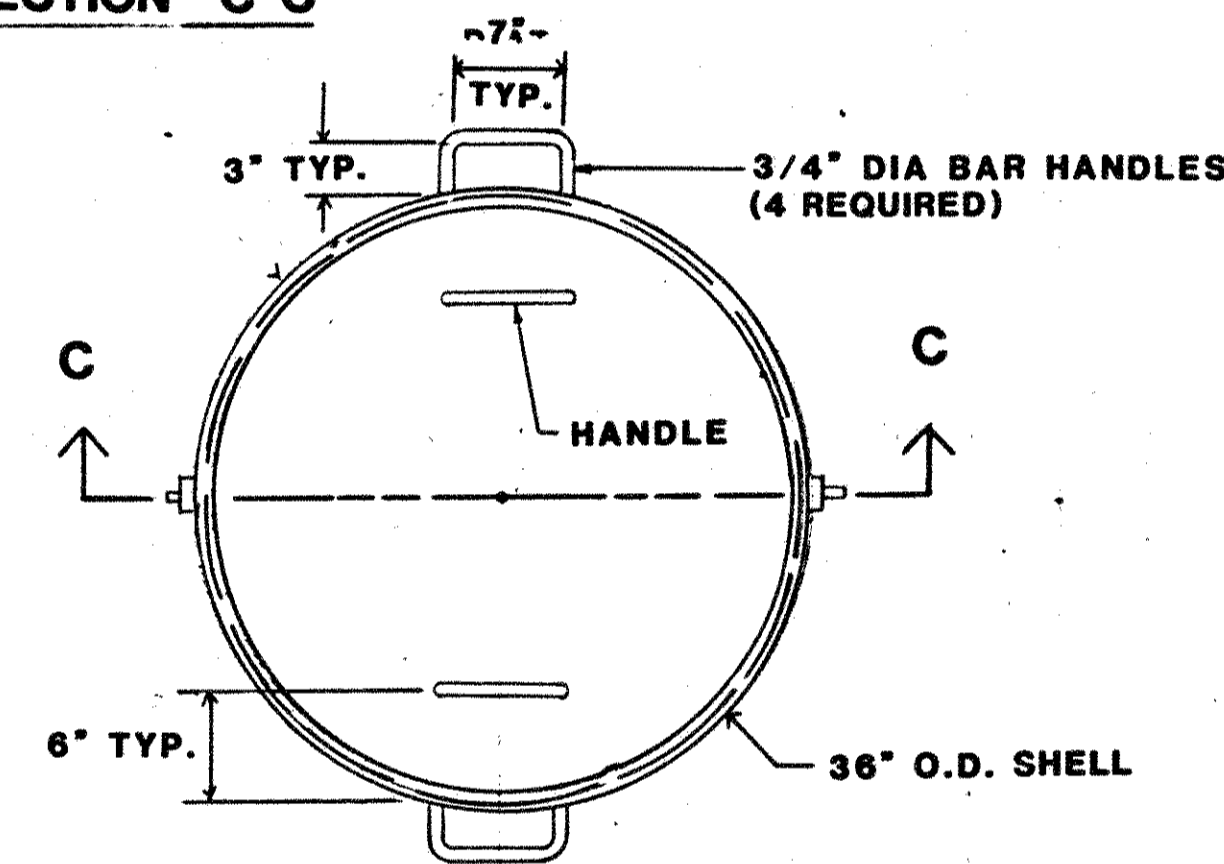
SECTION C-C



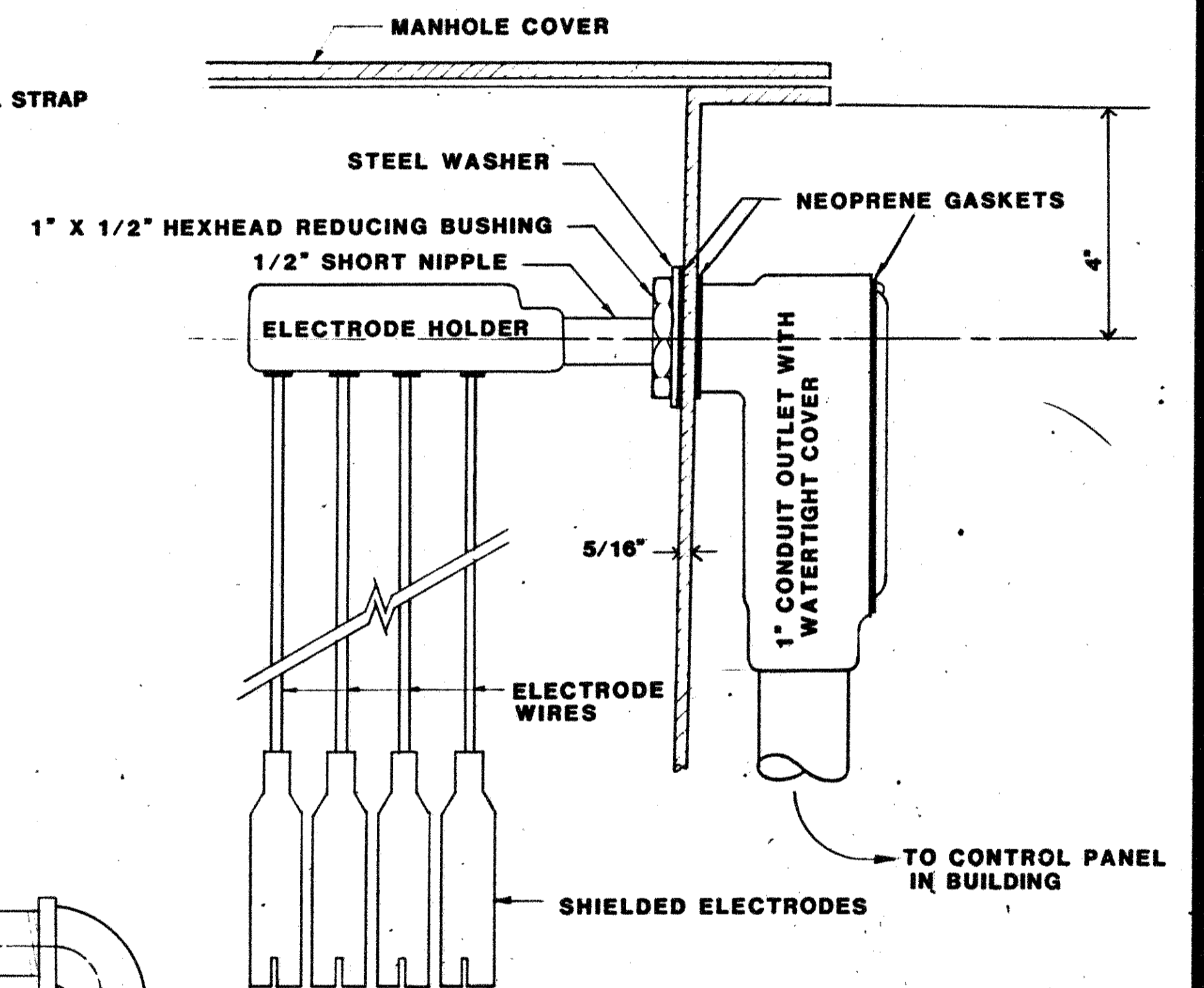
ARM DETAIL



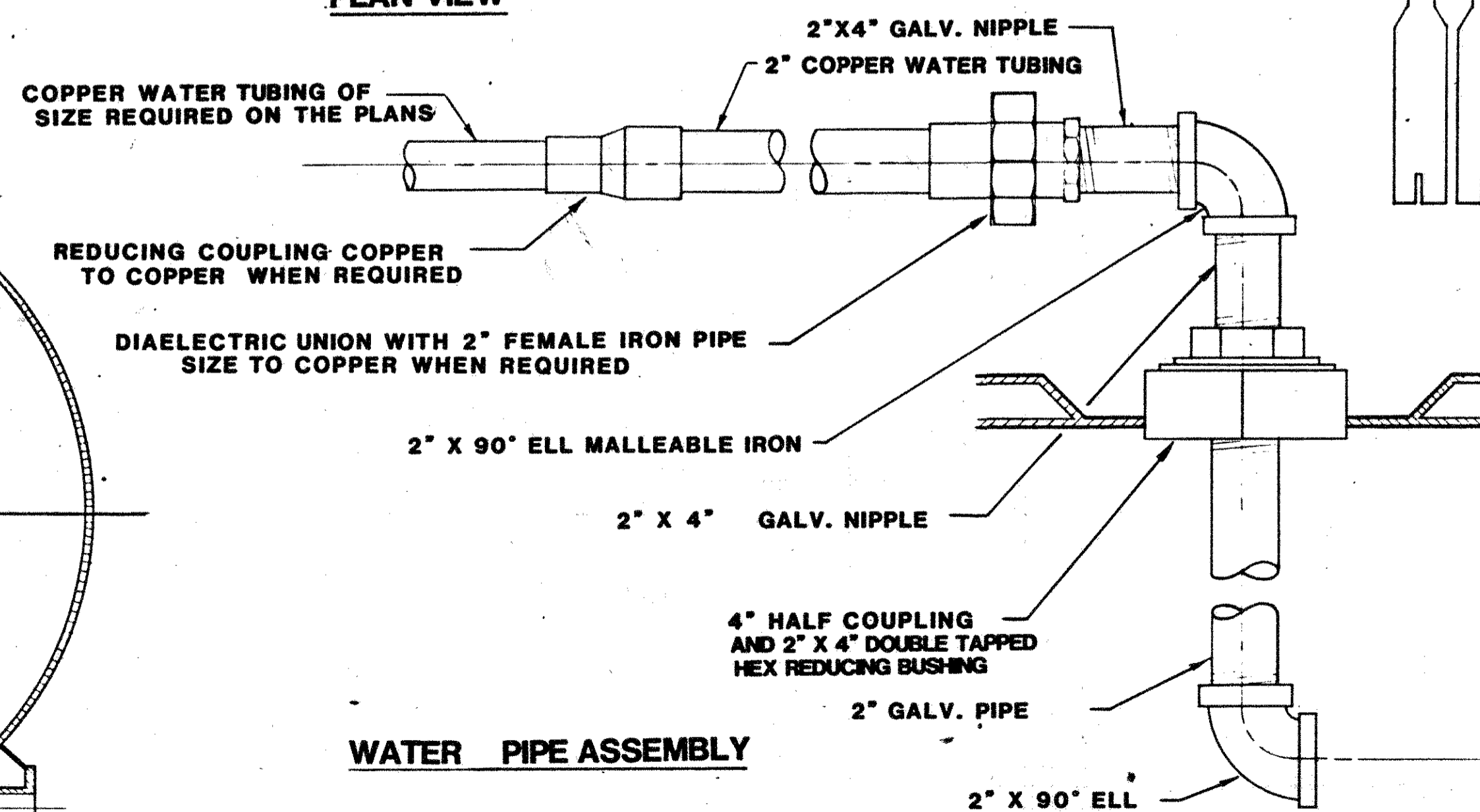
PLUMBING AND ELECTRICAL SECTION



PLAN VIEW

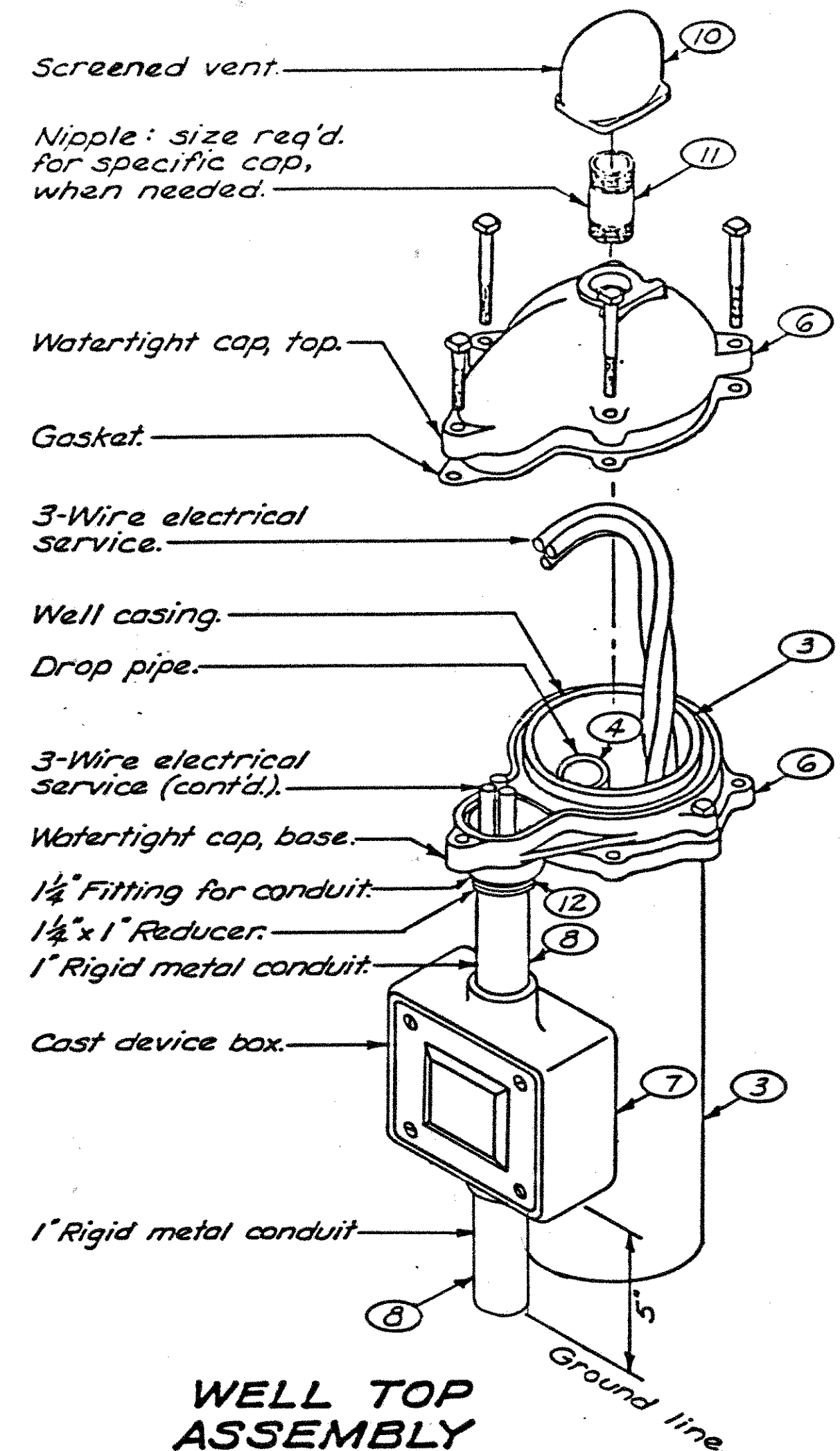


ELECTRICAL ASSEMBLY

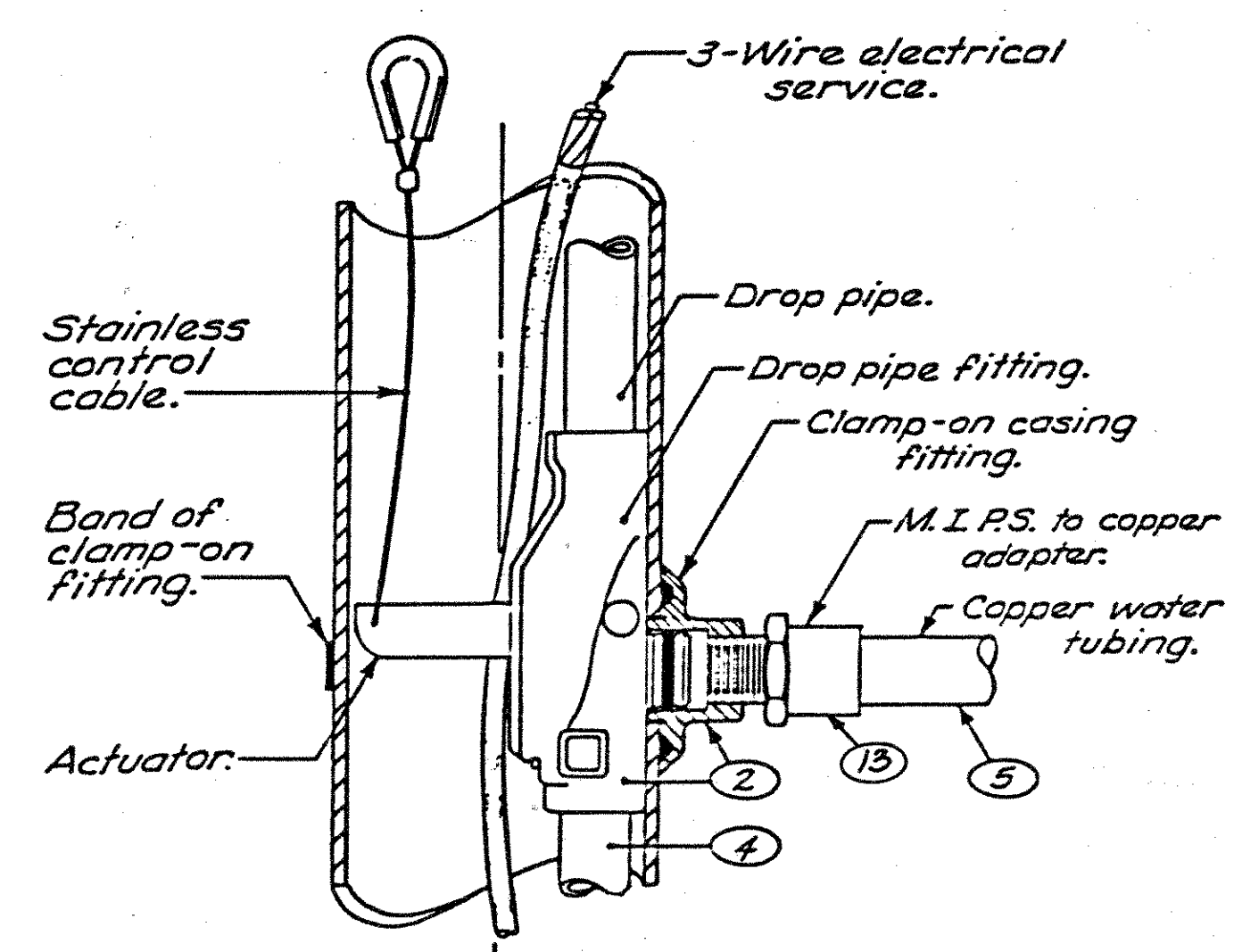


WATER PIPE ASSEMBLY

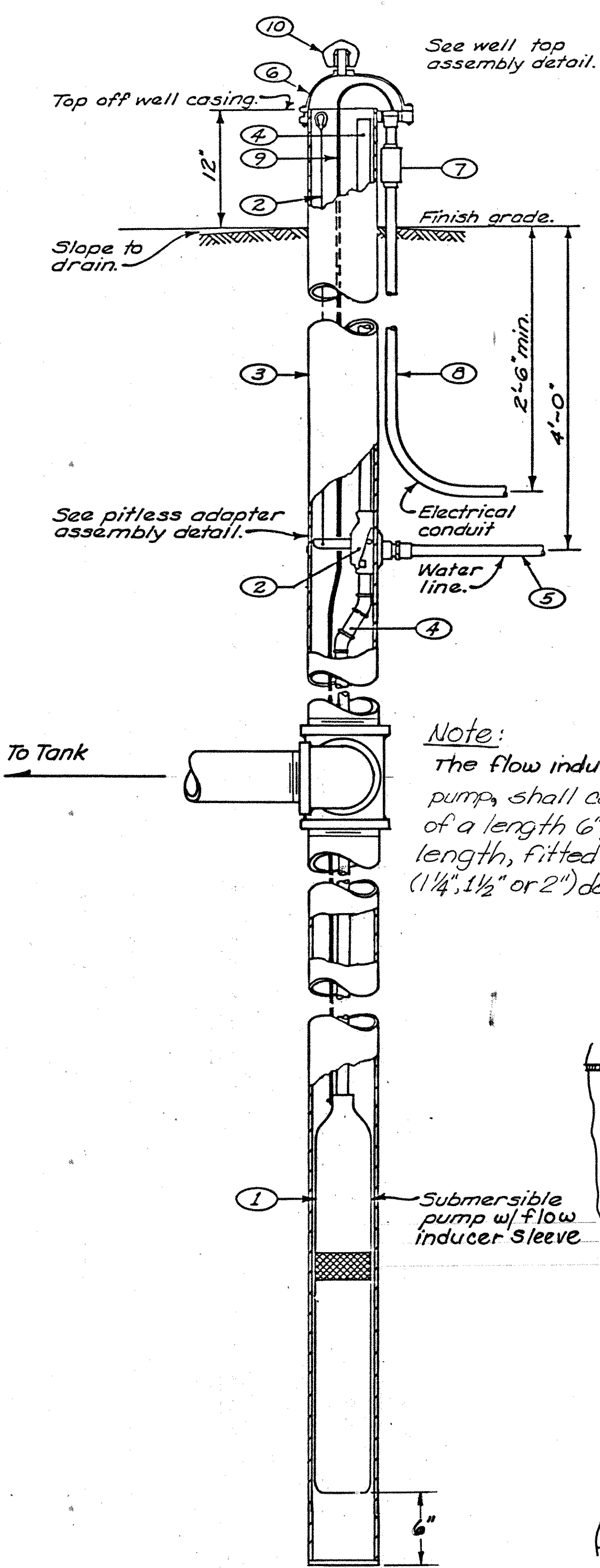
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE
WATER RESERVOIR TANK	
RRA-9C SHEET 2 OF 2	
APPROVED	Engr. of Design Services



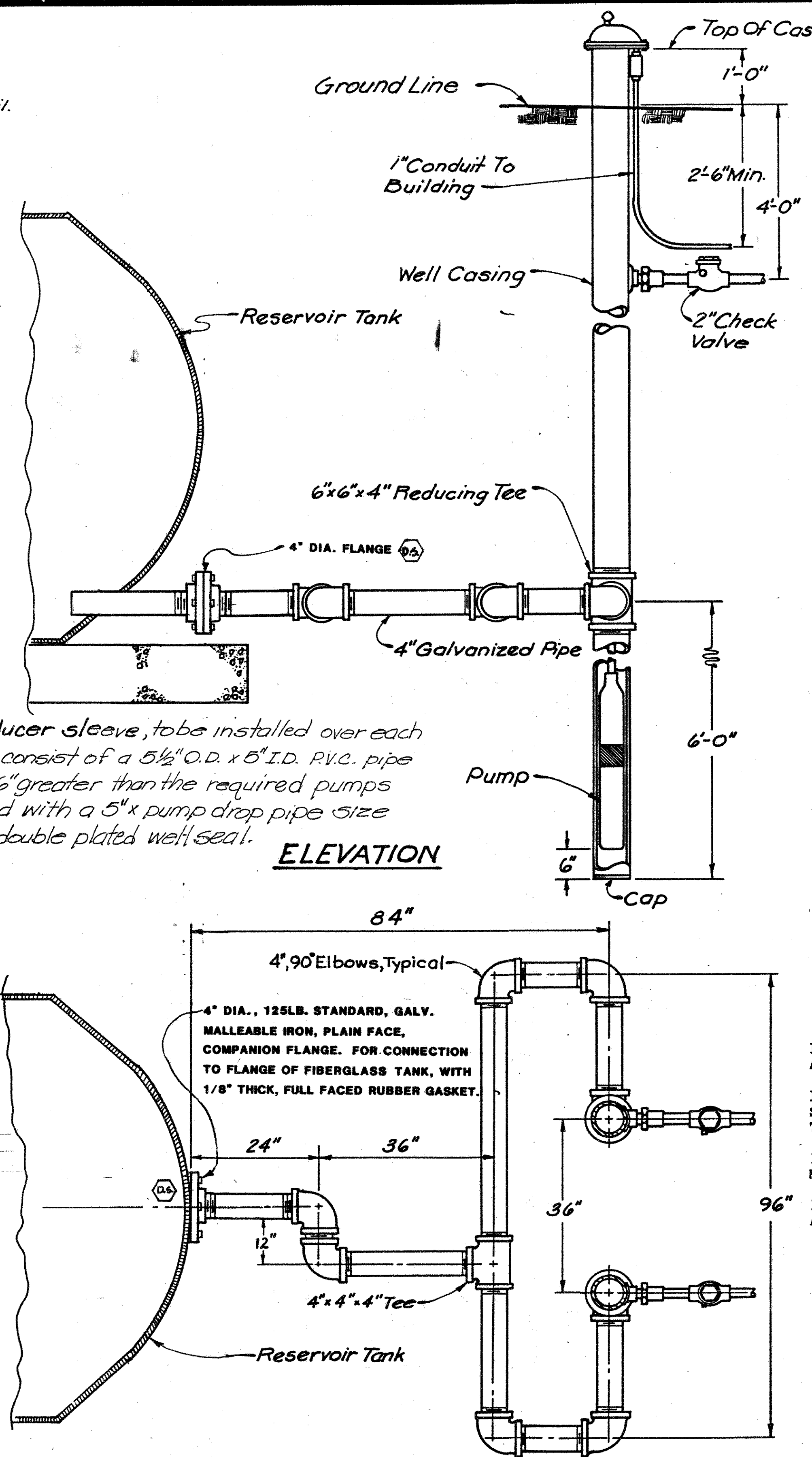
WELL TOP ASSEMBLY



PITLESS ADAPTER ASSEMBLY



ELEVATION

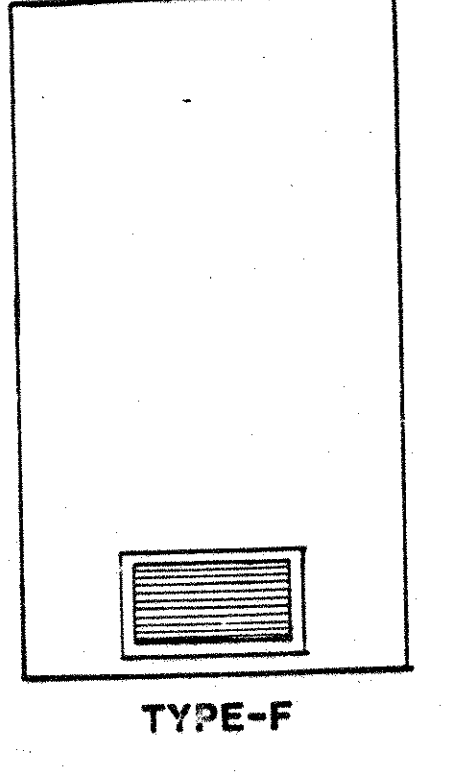
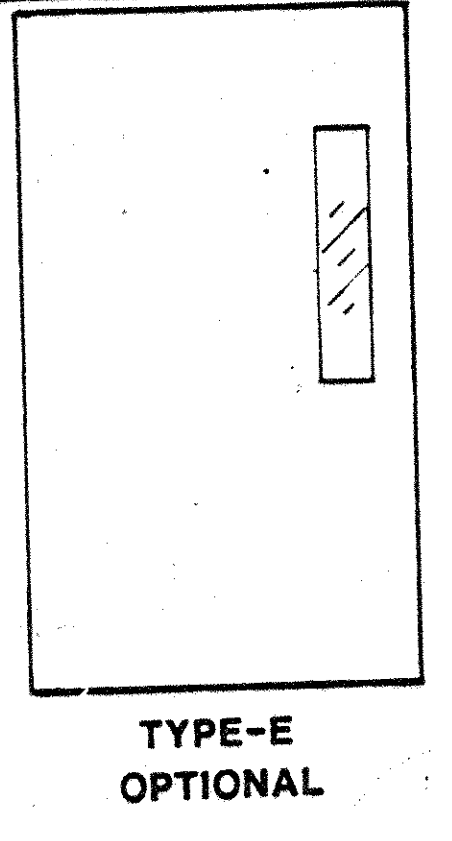
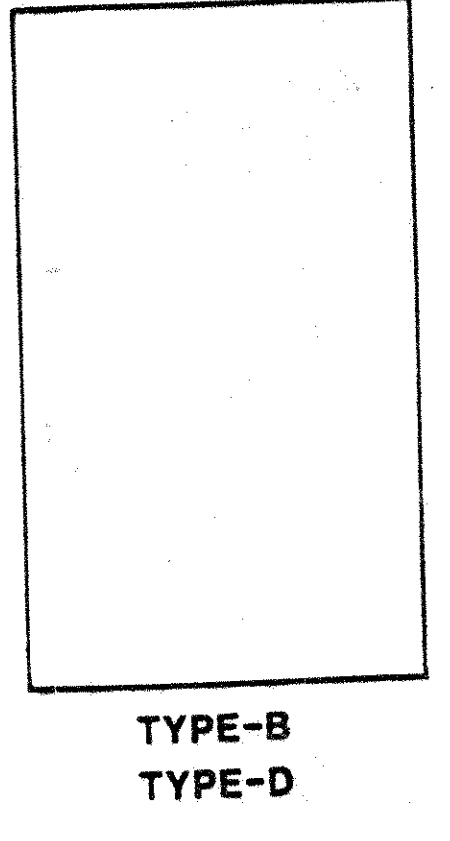
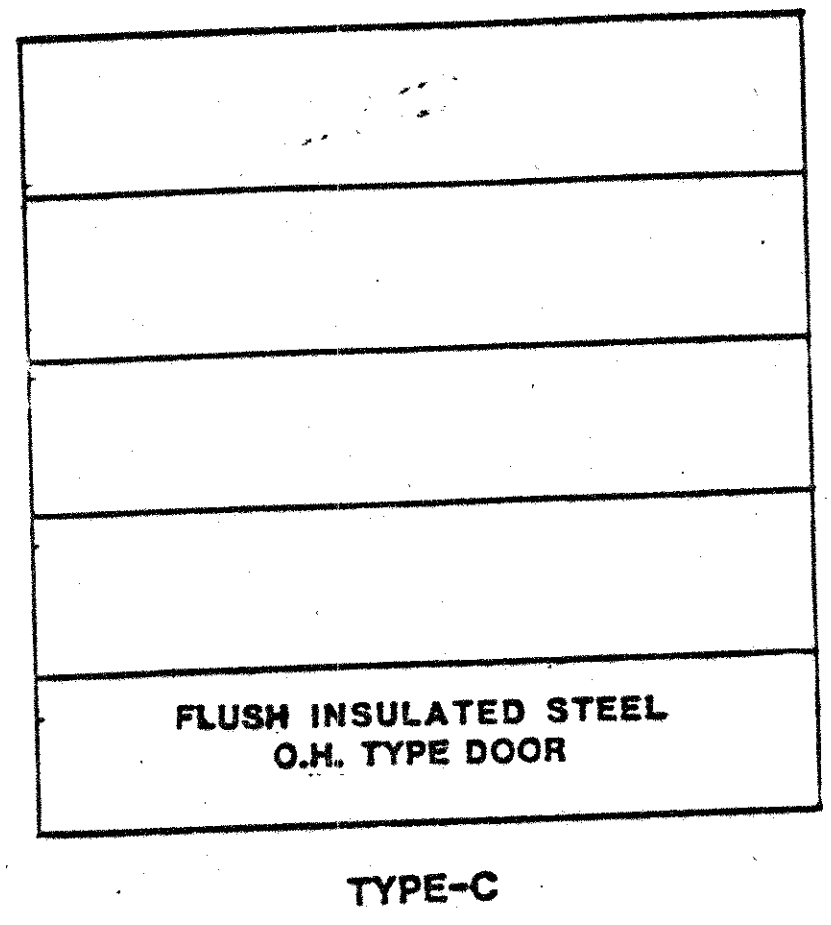
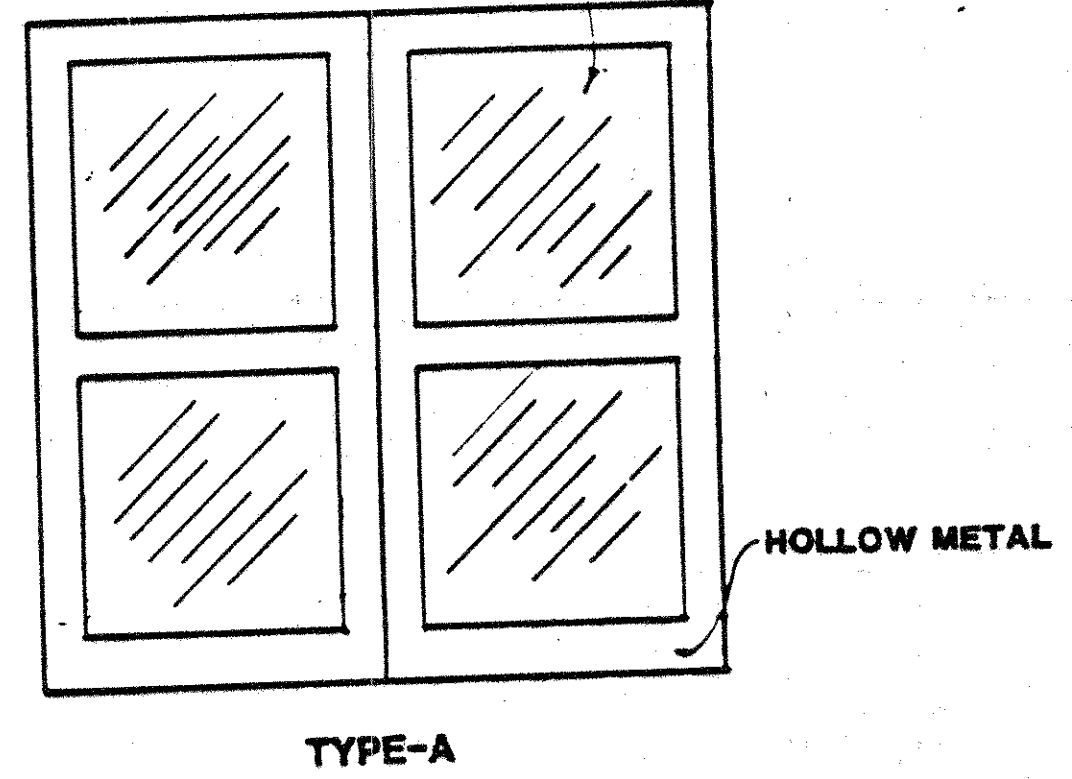
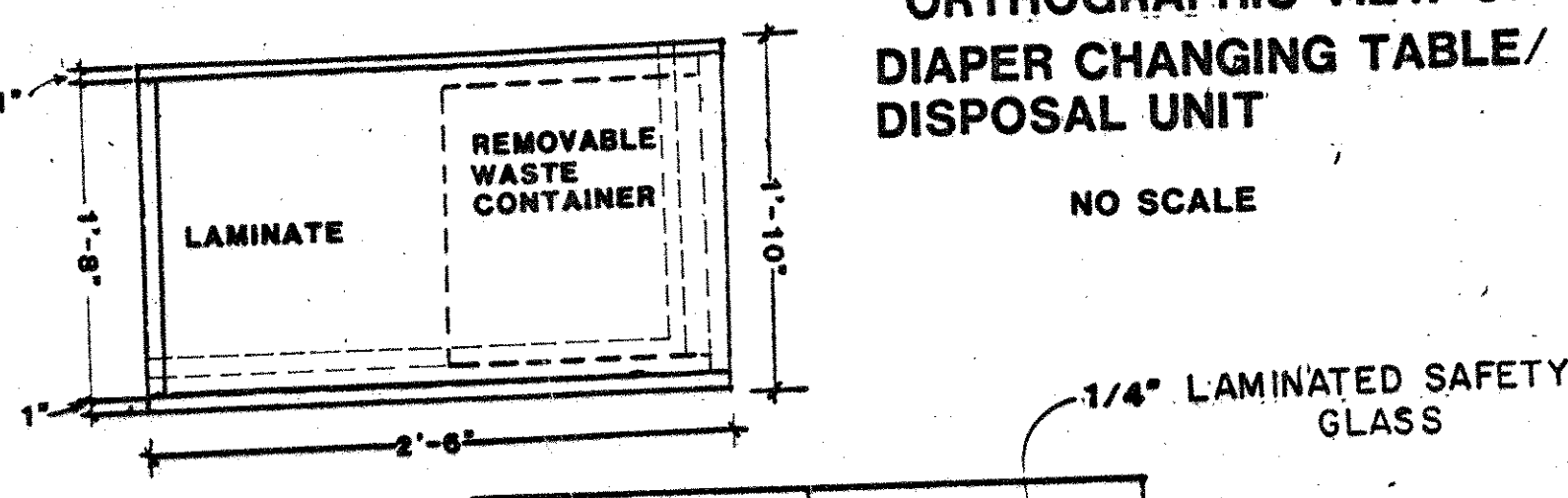
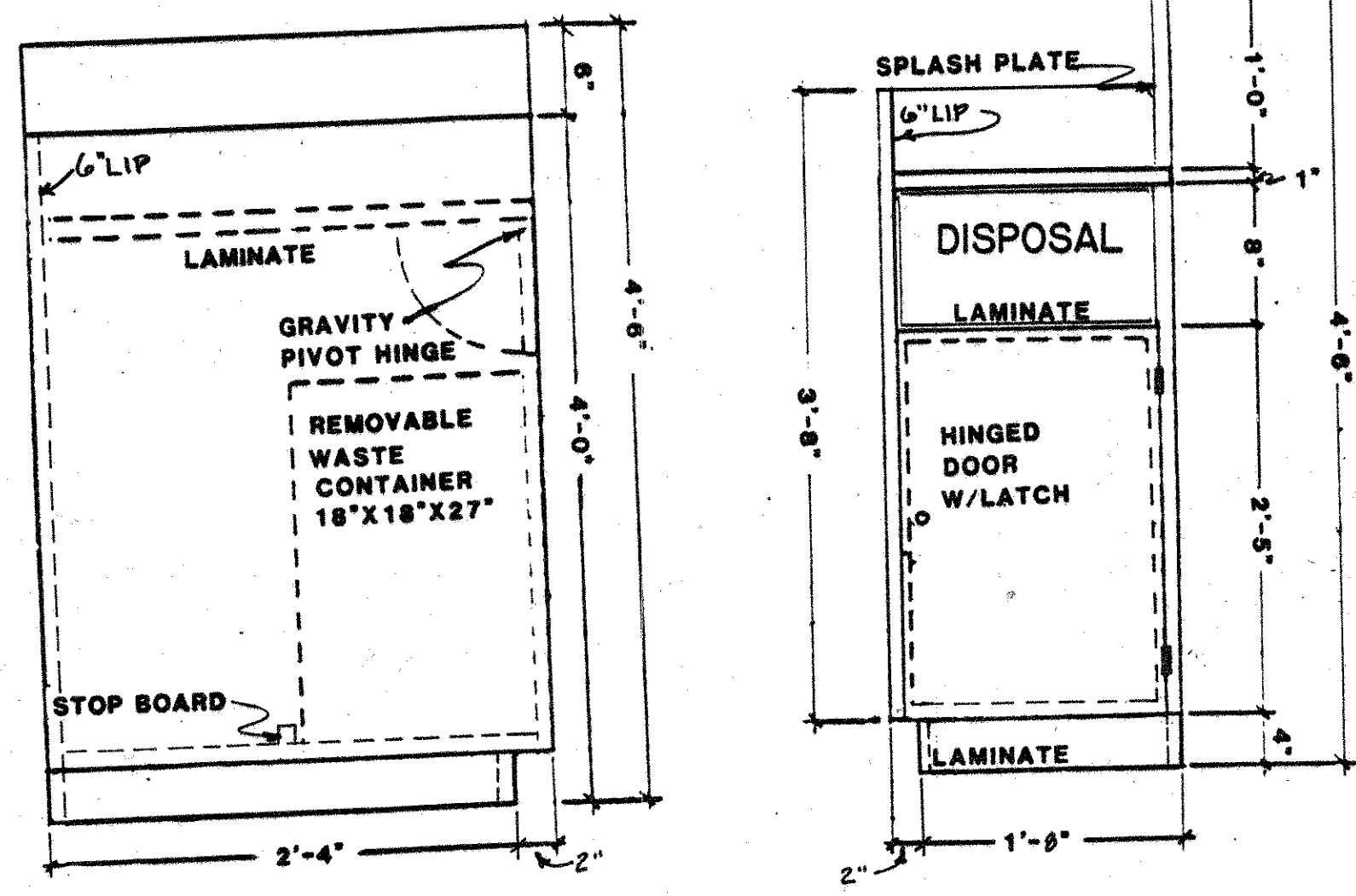
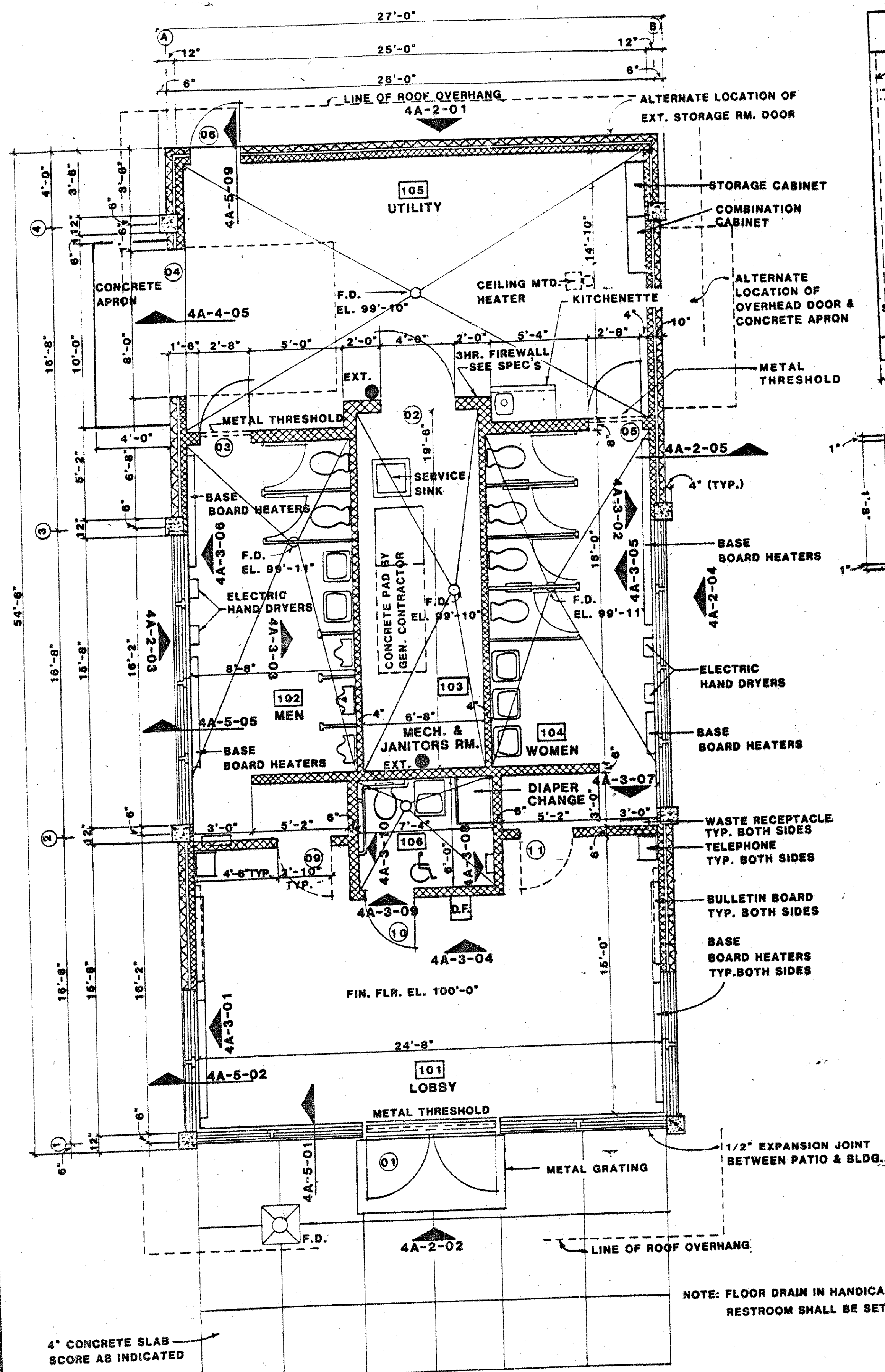


PLAN

NOTES

- SUBMERSIBLE PUMP (2 REQ'D. PER REST AREA) SHALL BE F. E. MYERS COMPANY MODEL #SJF3021J3050 OR APPROVED EQUAL BY CRANE COMPANY, DEMING DIVISION, TATE AND RAPIDAYTON, PUMP SHALL BE 3 H.P., 230V, SINGLE PHASE, 60HZ, AND HAVE 3-WIRE MOTOR. THE MOTOR SHALL BE PROVIDED WITH A MAGNETIC ACROSS-THE-LINE STARTER AND SHALL BE INCLUDED IN THE CIRCUITRY OF THE WIRING DIAGRAM.
- EACH PUMP INSTALLATION SHALL BE EQUIPPED WITH A LIGHTING ARRESTOR, SUCH AS F.E. MYERS COMPANY, NO. 12149A10; GENERAL ELECTRIC COMPANY, NO. 9L15BCC003 OR APPROVED EQUAL. GROUND SHALL BE CONNECTED TO CASING.
- PITLESS ADAPTER ASSEMBLY WITH COMPRESSION SEAL FITTING BY BAKER MFG. CO., MONITOR DIVISION, NO. 4PS-67BN-S4-C4 (FOR 2" DROP PIPE) OR APPROVED EQUAL BY DICKEN MFG. CO.; DUPLEX MFG. CO. OR WILLIAMS PRODUCT COMPANY.
- SIX INCH I.D. (6-5/8" O.D.) WELL CASING, ASTM A 53, GRADE B, STANDARD WEIGHT, SCHEDULE 40, GALVANIZED SEAMLESS STEEL PIPE AS PER 707.11.
- 2 I.D. DROP PIPE, ASTM A 53, GRADE B, STANDARD WEIGHT, SCHEDULE 40, GALVANIZED SEAMLESS STEEL PIPE AS PER 707.11. INCREASES AS REQUIRED.
- 2 INCH (NOMINAL SIZE) TYPE "K" HARD DRAWN COPPER WATER TUBING PRESSURE LINE CONFORMING TO ASTM B88, RUN IN 20 FOOT LENGTHS TO HYDROPNEUMATIC PRESSURE TANK IN BUILDING.
- WATER-TIGHT CAP FOR 6" WELL CASING BY BAKER MFG. CO., MONITOR DIVISION NO. 6W; OR APPROVED EQUAL BY DICKEN MFG. CO.; DUPLEX MFG. CO. OR WILLIAMS PRODUCT CO..
- CAST DEVICE BOX WITH FULL-FACE NEOPRENE GASKET AND BLANK COVER BY APPLETON ELECTRIC CO., NO. FDCC-1-100; OR APPROVED EQUAL BY KILLARK ELECTRIC MFG. CO., CROUSE-HINES CO., KODU CORP. OR ADALET MFG. CO..
- 1 INCH DIAMETER RIGID FERROUS METAL ELECTRICAL CONDUIT PER 713.04.
- THREE-WIRE ELECTRICAL SERVICE.
- SCREENED WELL VENT TO MATCH CHOSEN FROM NOTE 6 ABOVE.
- NIPPLE, ASTM A 53, GRADE B, STANDARD WEIGHT, SCHEDULE 40, GALVANIZED SEAMLESS STEEL PIPE AS PER 707.11; IF REQUIRED FOR SPECIFIC CAP USED.
- REDUCER (OF SIZE REQ'D), IF NEEDED FOR FERROUS METAL ELECTRICAL CONDUIT AS PER 713.04.
- CAST BRASS MALE IRON PIPE SIZE TO COPPER ADAPTER AS PER ASTM B 16.18.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 3/8/84
RESERVOIR PUMP DETAILS	
RRA-10	
APPROVED _____	Engr. of Design Services



ROOM FINISH SCHEDULE							
ROOM NO.	NAME	FLOOR	BASE	WALLS	CEILING	HT.	REMARKS
101	LOBBY	QUARRY TILE	* COVE BLOCK	GLAZED BLOCK	CONC. PAINTED	9'-0"	
102	MEN	QUARRY TILE	* COVE BLOCK	GLAZED BLOCK	CONC. PAINTED	9'-0"	
103	MECH. & JANITOR	CONCRETE		GLAZED BLOCK	CONC. PAINTED	9'-0"	
104	WOMEN	QUARRY TILE	* COVE BLOCK	GLAZED BLOCK	CONC. PAINTED	9'-0"	
105	UTILITY	CONCRETE		CONC. BLOCK	CONC. PAINTED	9'-0"	
106		QUARRY TILE	* COVE BLOCK	GLAZED BLOCK	CONC. PAINTED	9'-0"	

*RECESSED

DOOR SCHEDULE				
DOOR NO.	TYPE	SIZE	HRDWR.	REMARKS
01	A	PR-3'-6"X7'-0"X1 3/4"	A	CENTER STILE (MIN. 4" HIGH)
02	B	4'-0"X6'-8"X1 3/4"	C	U.L."A" LABEL, 3-HOUR RE.
03	B	2'-8"X6'-8"X1 3/4"	B	U.L."A" LABEL, 3-HOUR RE.
04	C	8'-2"X8'-1"	D	5 SECTION
05	B	2'-8"X6'-8"X1 3/4"	B	U.L."A" LABEL, 3-HOUR RE.
06	D	2'-10" X6'-8"X1 3/4"	E	EXTERIOR/INSULATED
09	E	2'-10"X6'-8"X1 3/4"	F	OPTIONAL DOOR W/WIRE GLASS VISION PANEL
10	F	2'-10"X6'-8"X1 3/4"	G	24"X12" LOUVER
11	E	2'-10"X6'-8"X1 3/4"	F	OPTIONAL DOOR W/WIRE GLASS VISION PANEL

BUILDING USE AND OCCUPANCY INFORMATION

FIRST FLOOR USE GROUP.....B
 FIRE GRADING HOURS.....2
 OCCUPANCY LOAD.....49
 FLOOR LIVE LOAD.....100P.S.F.

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES
 DIVISION OF HIGHWAYS
 OHIO DEPARTMENT OF TRANSPORTATION

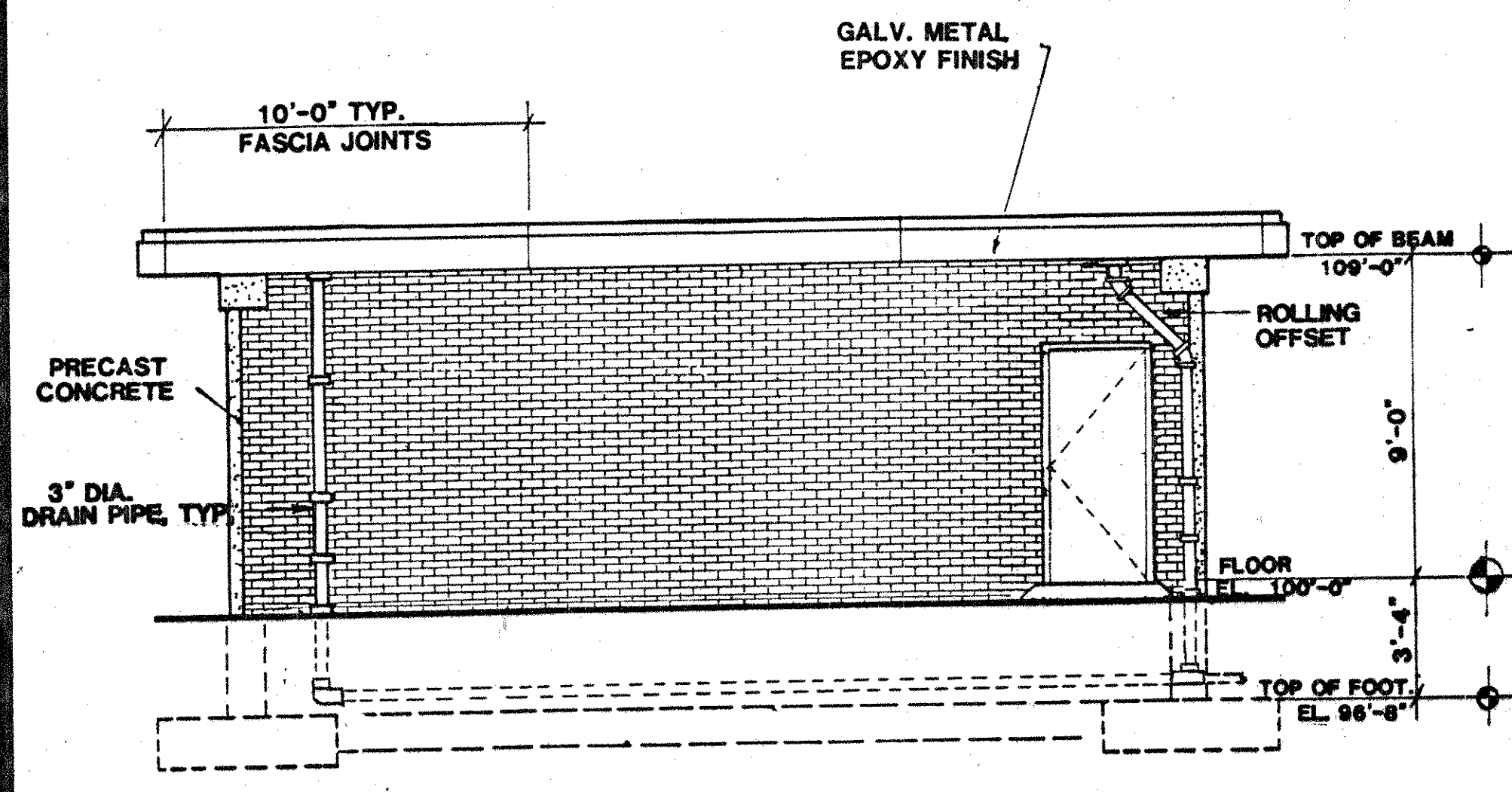
ROADSIDE DEVELOPMENT

MSB-4
FLOOR PLAN & SCHEDULES

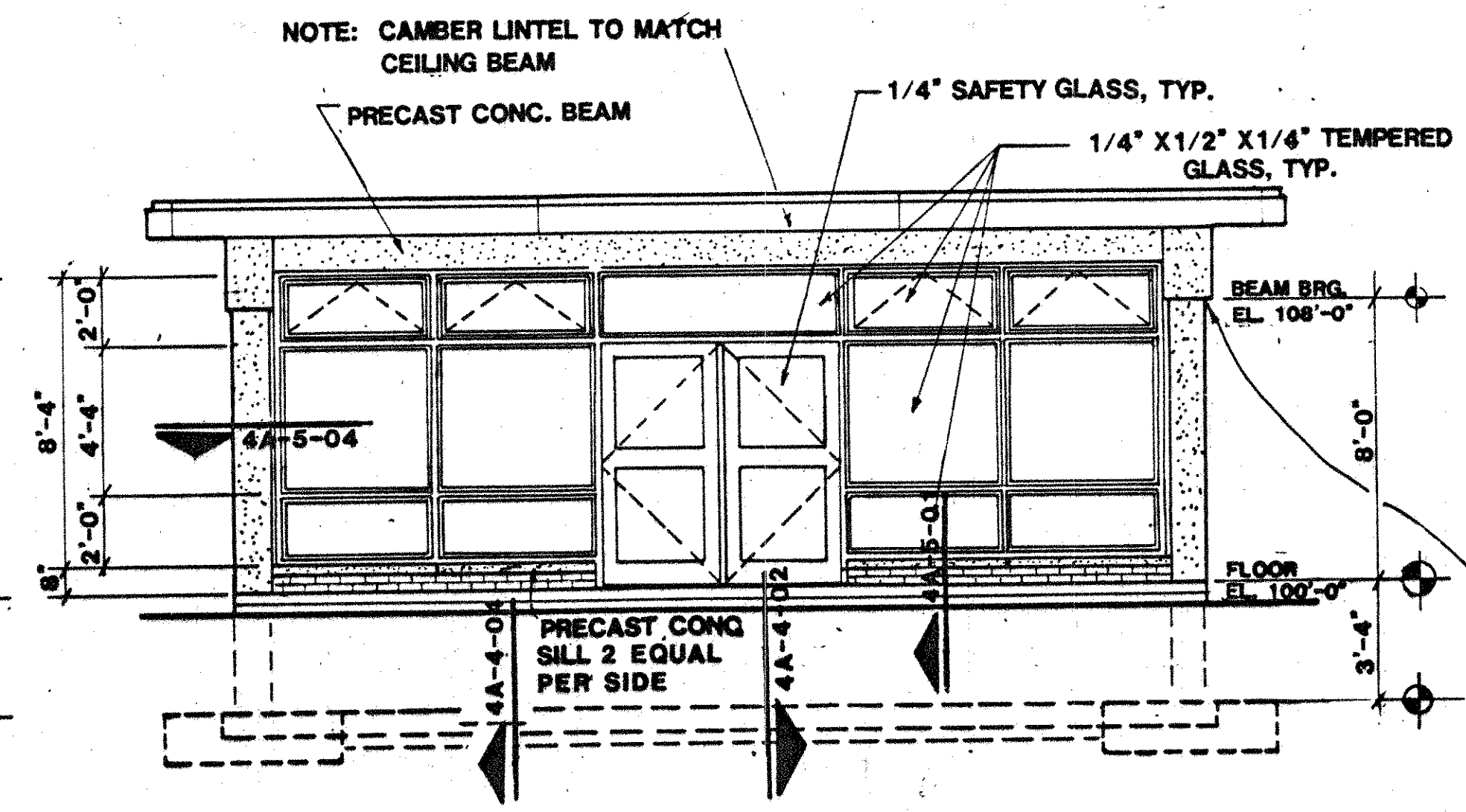
DATE
 5/2/85
 5/6/86
 8/1/86
 8/26/86
 11/20/86
 11/20/87
 3/2/87
 6/15/87

APPROVED: [Signature] Engr. of Design Services

4A-1

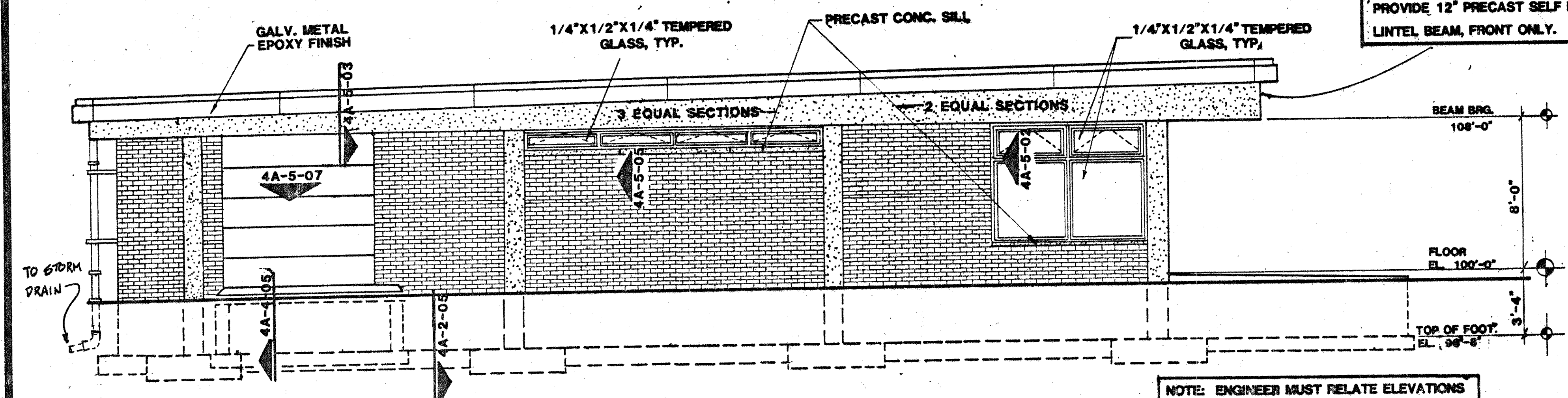


4A-2-01
REAR ELEVATION



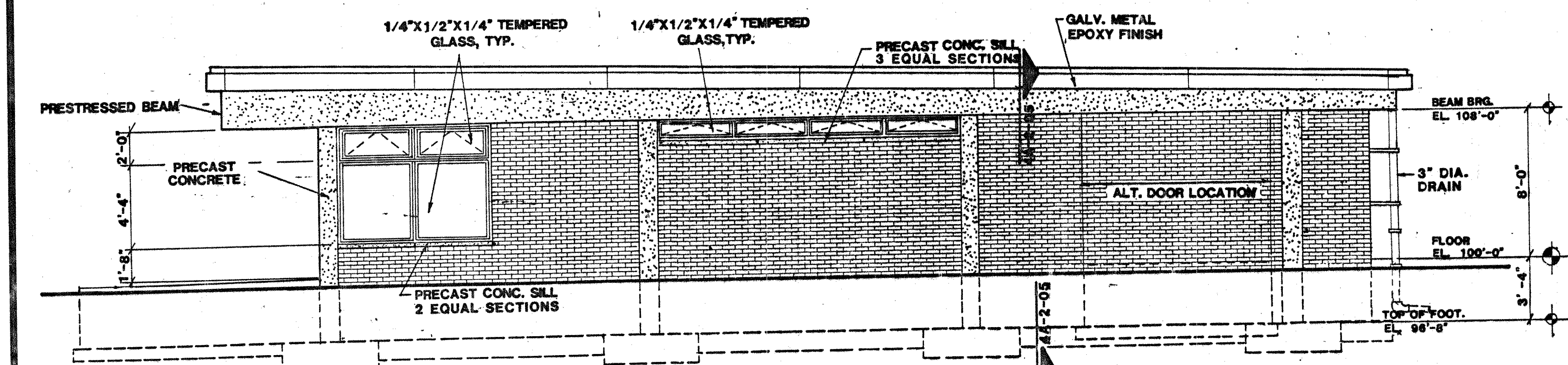
4A-2-02
FRONT ELEVATION

PRESTRESSED BEAMS ARE TO BE TAPERED FROM 24" IN FRONT TO 12" IN BACK TO GIVE ROOF SLOPE FOR PROPER DRAINAGE. PROVIDE 12" PRECAST SELF BEARING LINTEL BEAM, FRONT ONLY.



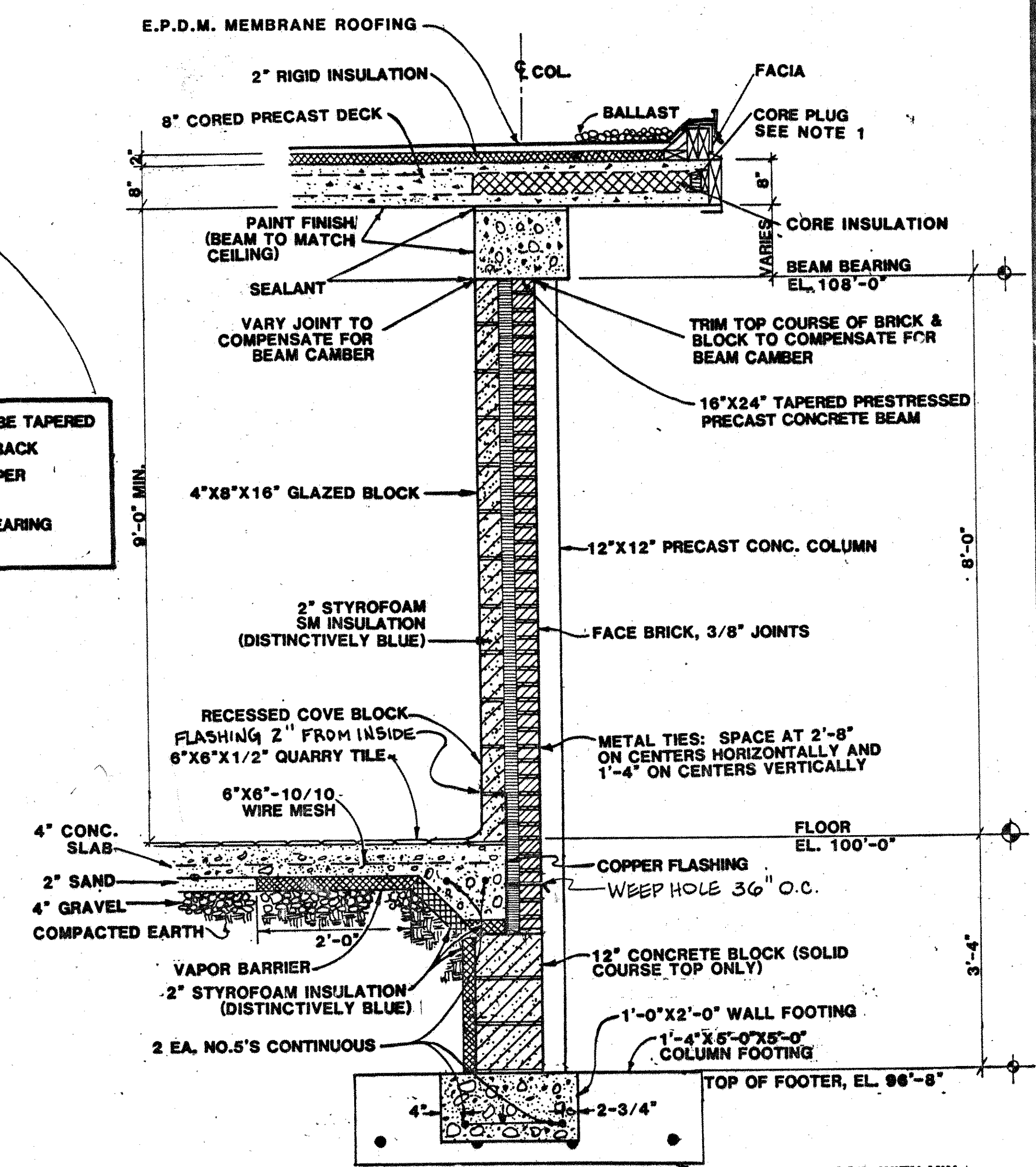
4A-2-03
LEFT SIDE ELEVATION

NOTE: ENGINEER MUST RELATE ELEVATIONS OF MOTORIST SERVICES BUILDING TO ELEVATIONS ON SITE PLAN.



4A-2-04
RIGHT SIDE ELEVATION

SCALE, ELEVATIONS: 1/4"=1'-0"



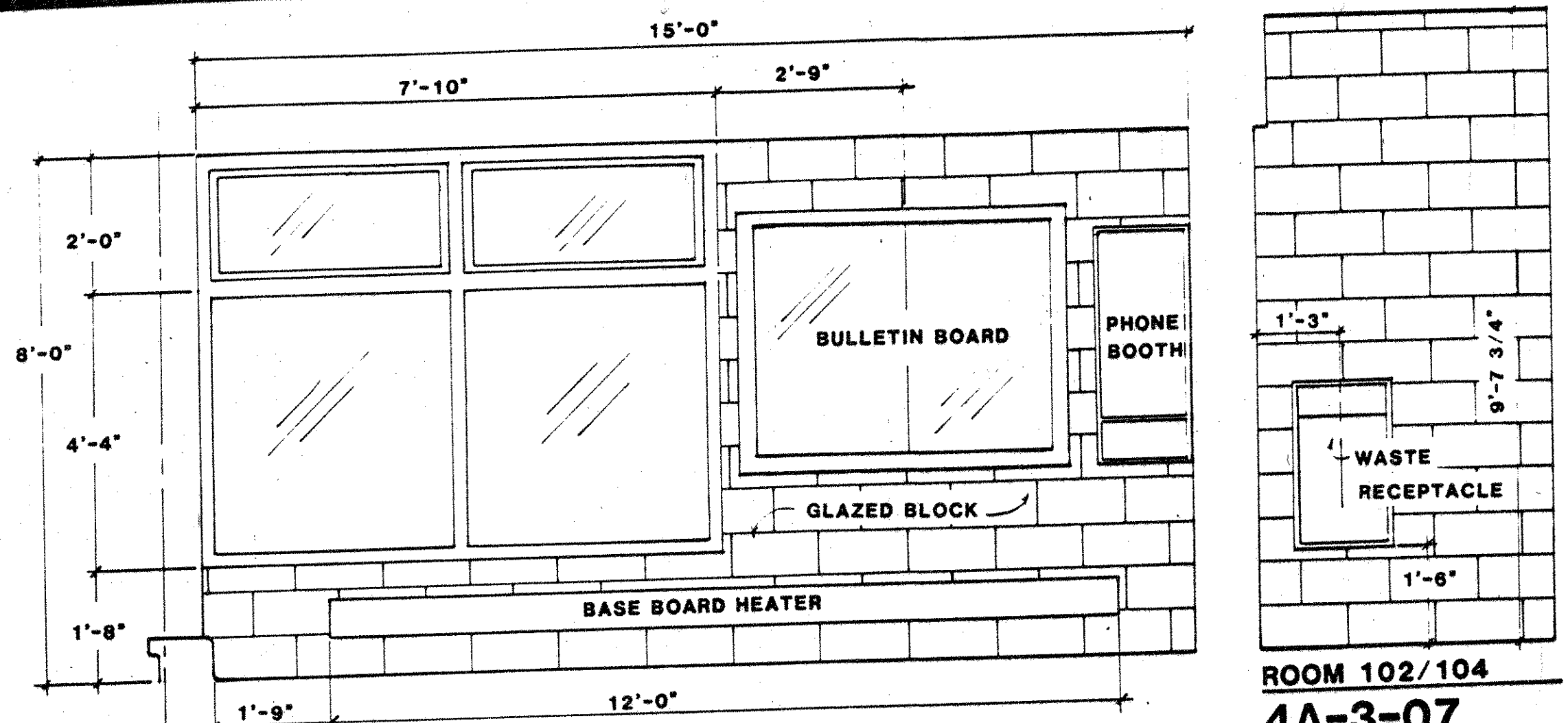
4A-2-05
WALL SECTION
SCALE: 3/4"=1'-0"

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

NOTE 1
THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL WOOD PLUGS IN ALL CORE OPENINGS. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL METAL PLUGS BEHIND THE WOOD PLUGS WHEN ELECTRICAL WIRES ARE INSIDE THE CORES.

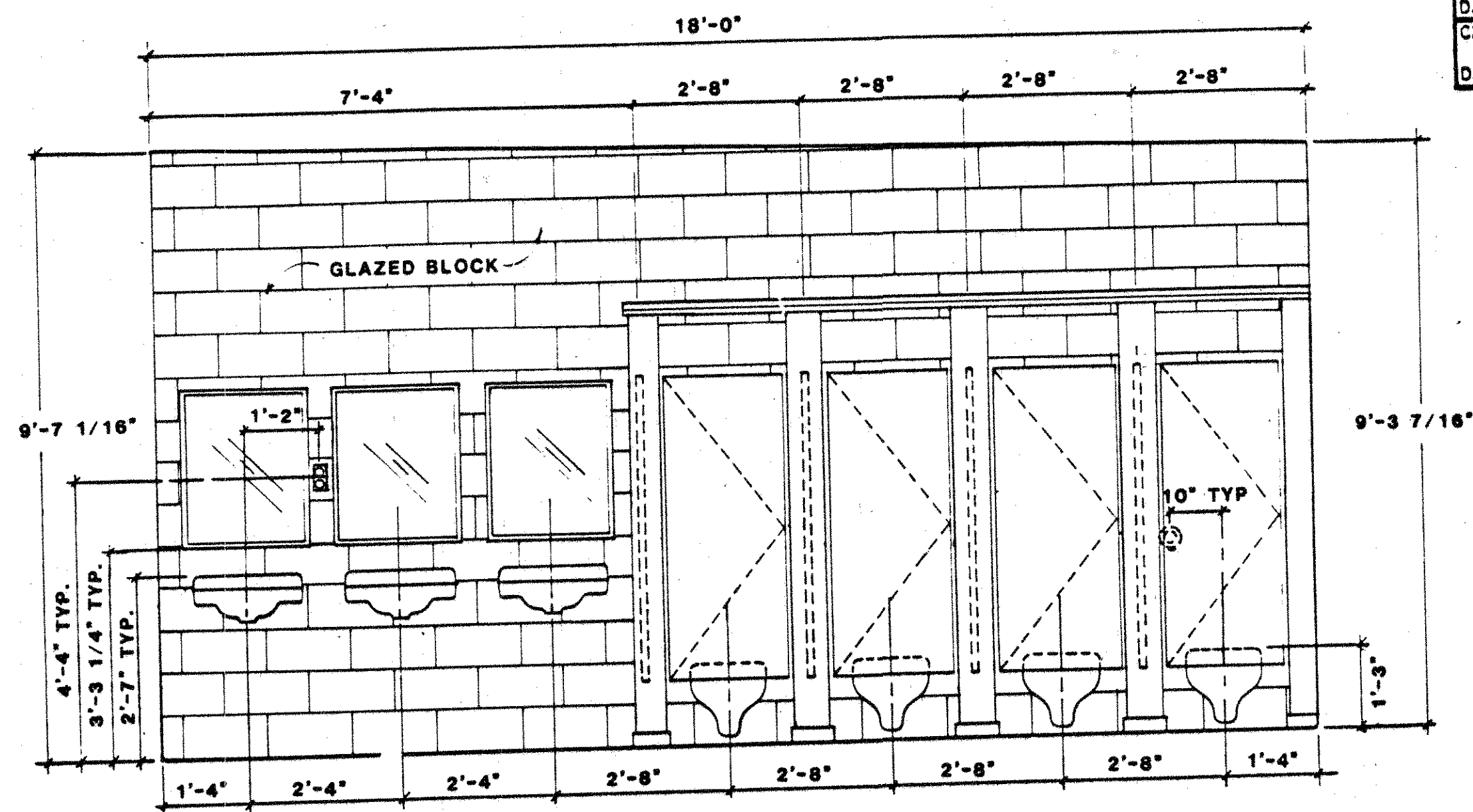
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4	5/6/86
ELEVATIONS & WALL SECTIONS	8/1/86
	1/20/87
	3/2/87
	10/30/87
APPROVED _____ Engr. of Design Services	4A-2

REV 10/30/87

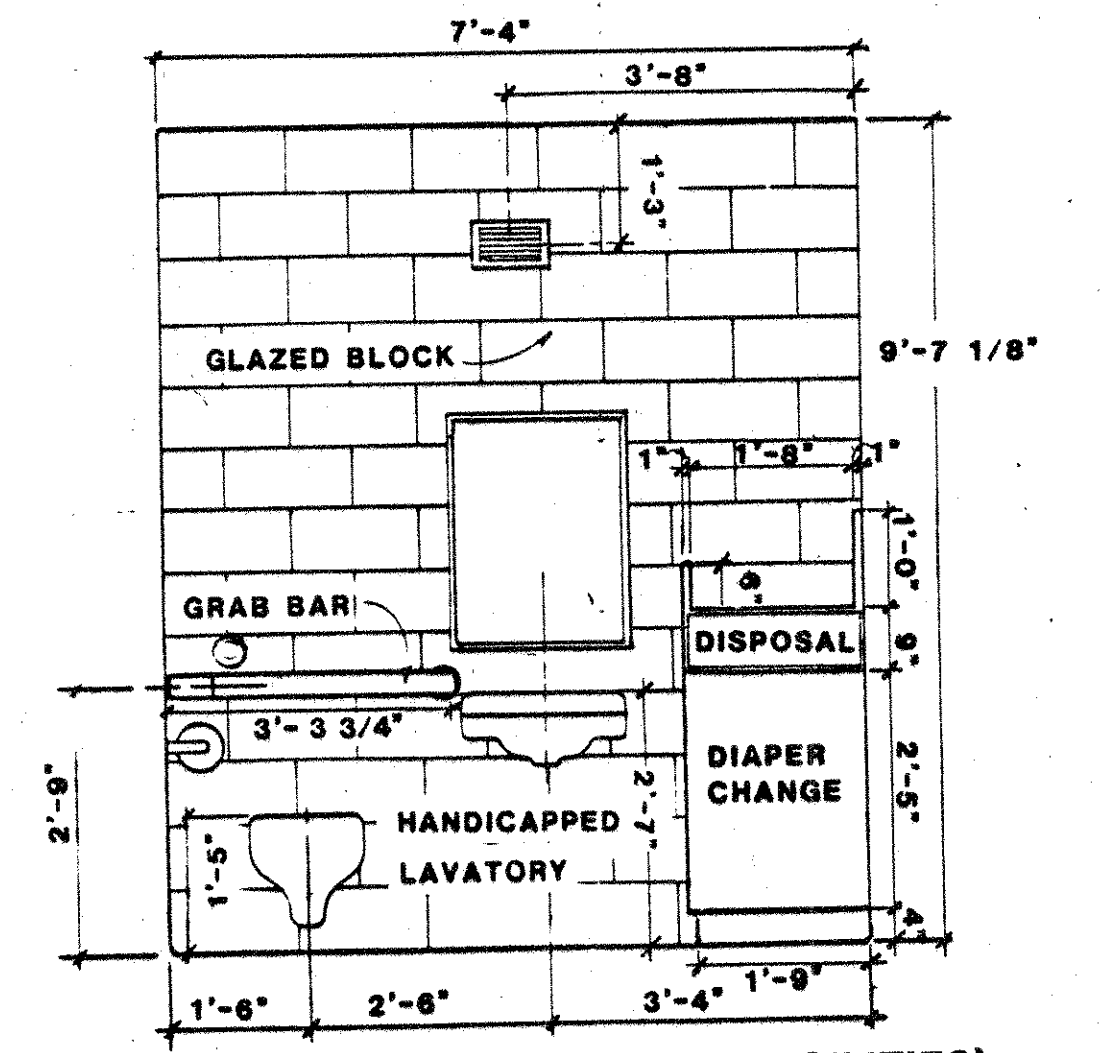


ROOM 101 (LOBBY)
SAME BOTH SIDES
4A-3-01

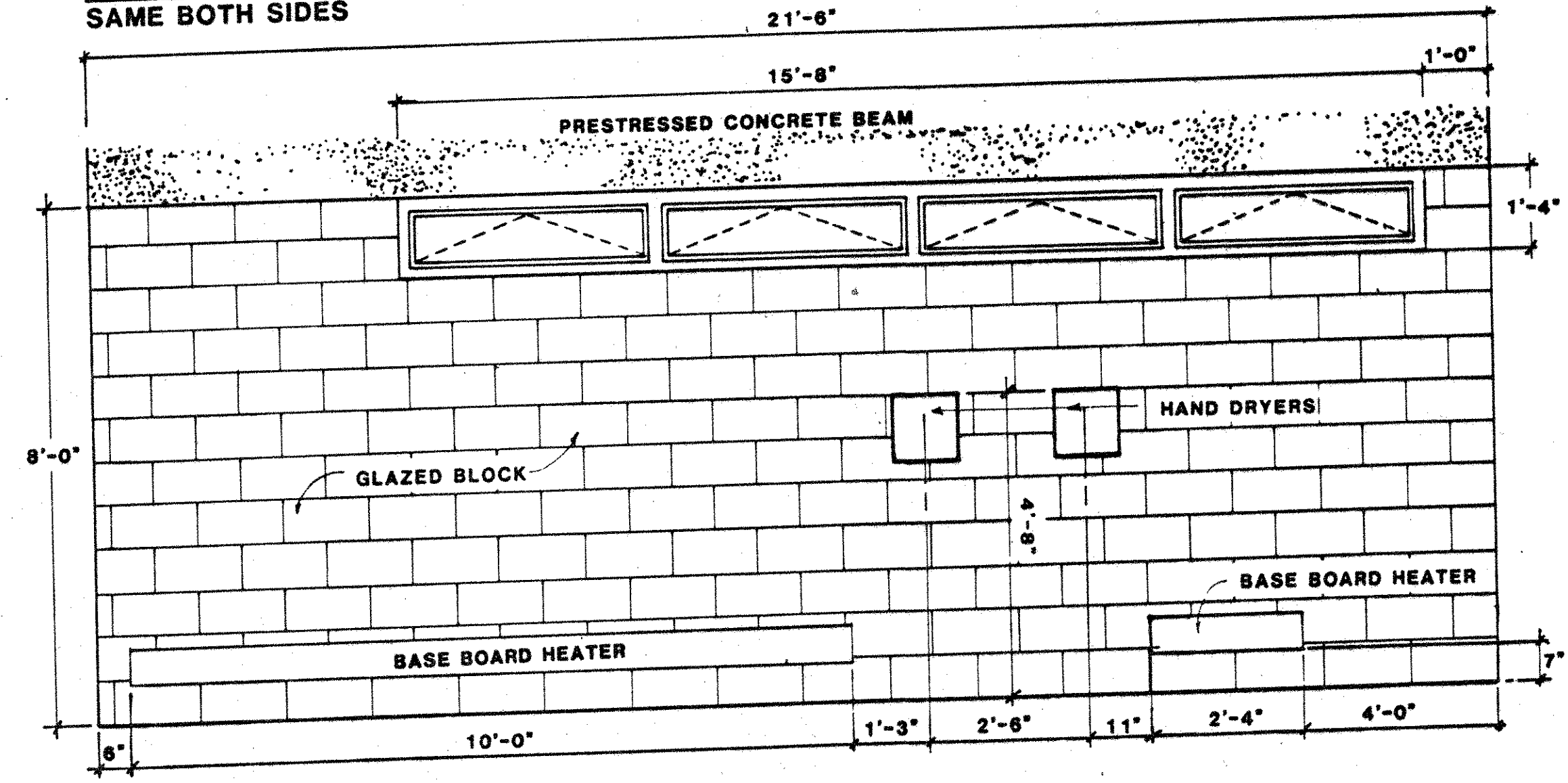
ROOM 102/104
4A-3-07



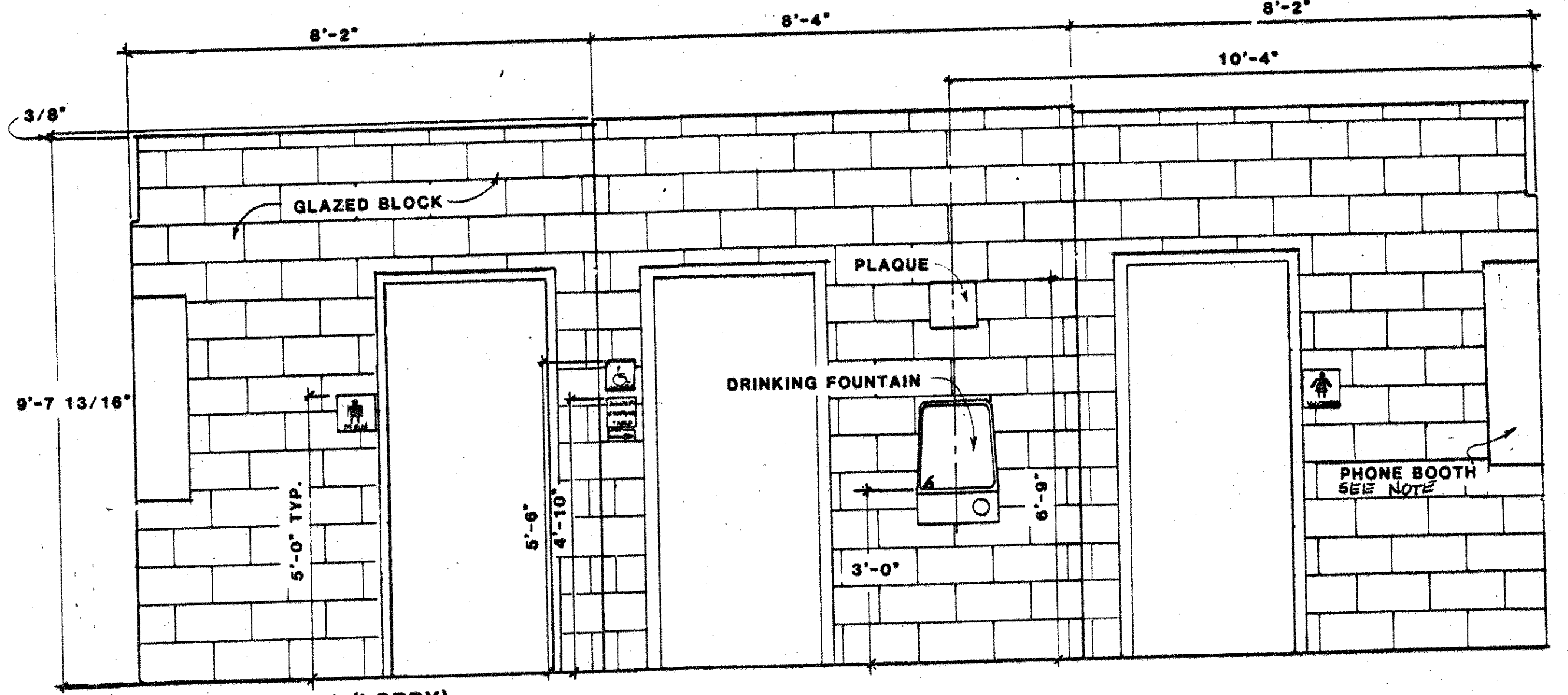
ROOM 104 (WOMEN)
4A-3-05



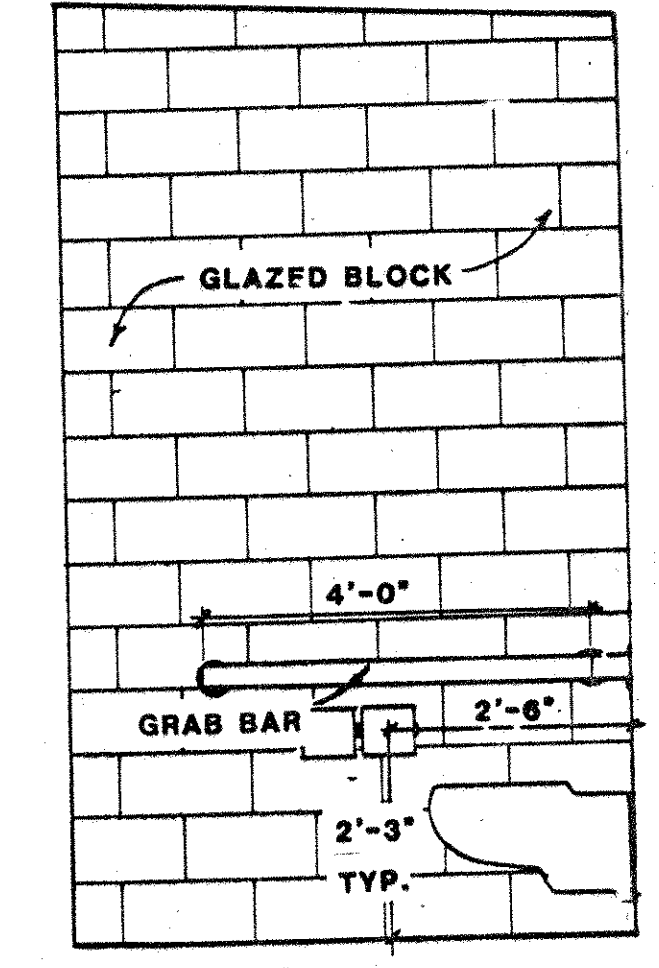
ROOM 106 (HANDICAPPED FACILITIES)
4A-3-09



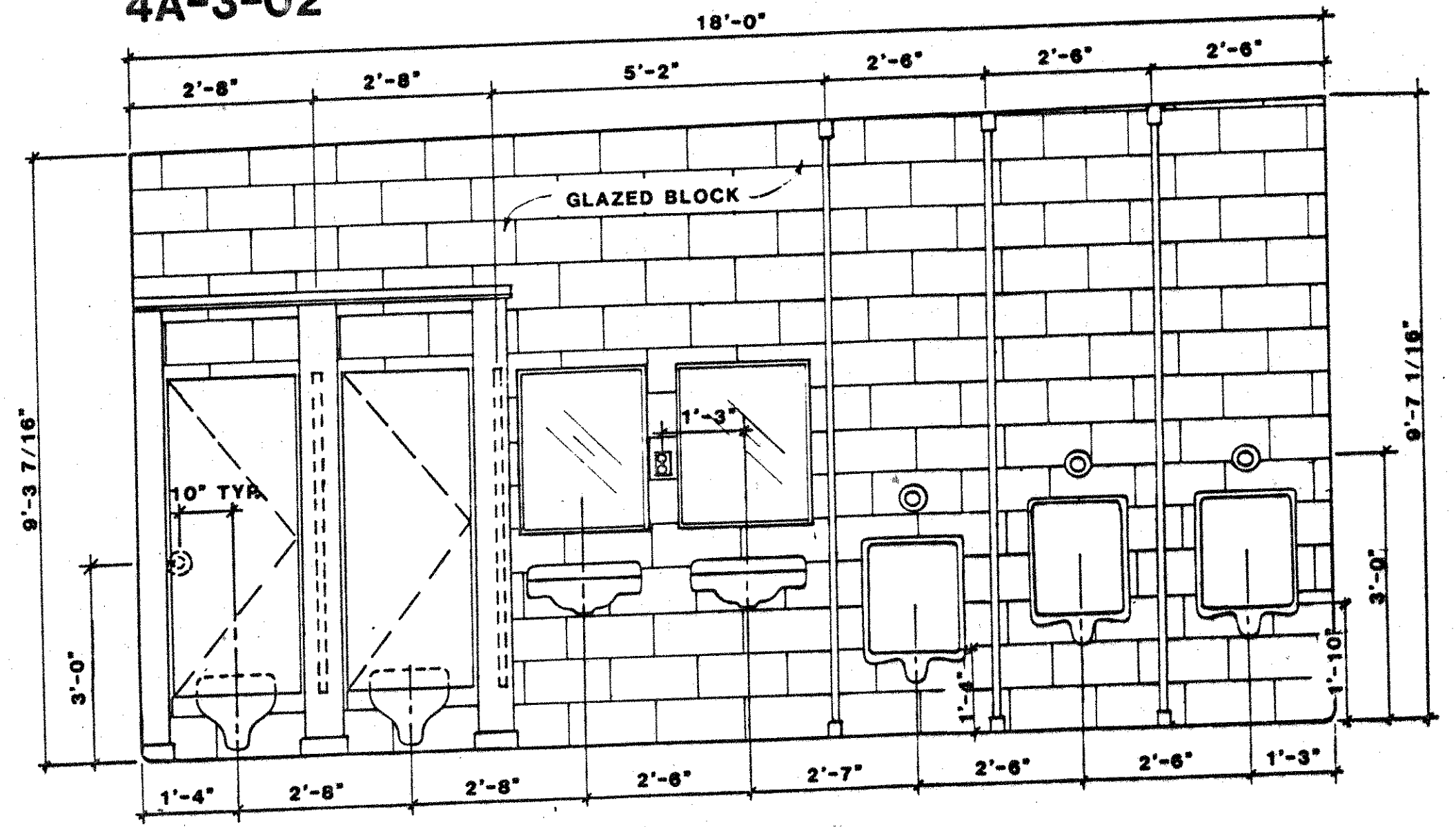
ROOM 104 (WOMEN)
4A-3-02



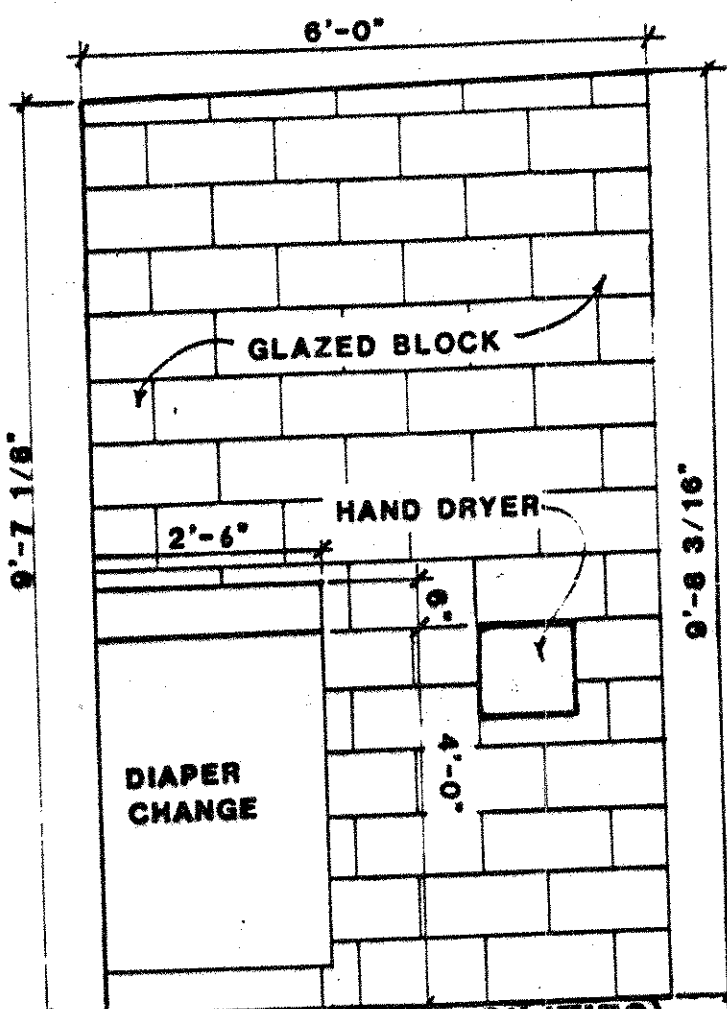
ROOM 101 (LOBBY)
4A-3-04



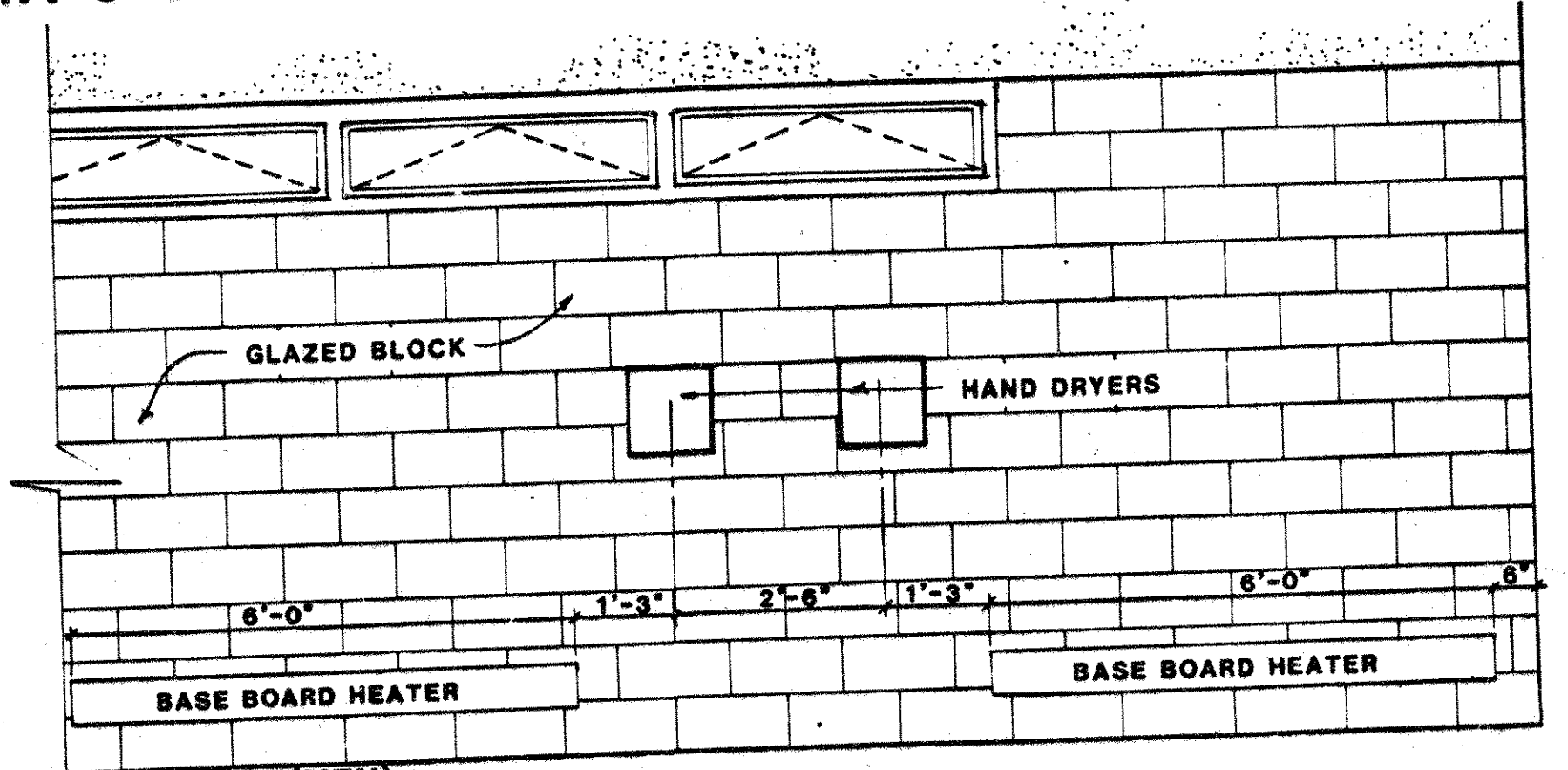
ROOM 106 (HANDICAPPED FACILITIES)
4A-3-10



ROOM 102 (MEN)
4A-3-03



ROOM 106 (HANDICAPPED FACILITIES)
4A-3-08



ROOM 102 (MEN)
4A-3-06

NOTE:
COIN SLOT OF
TELEPHONE SHALL
BE 54" ABOVE
FINISHED FLOOR.

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

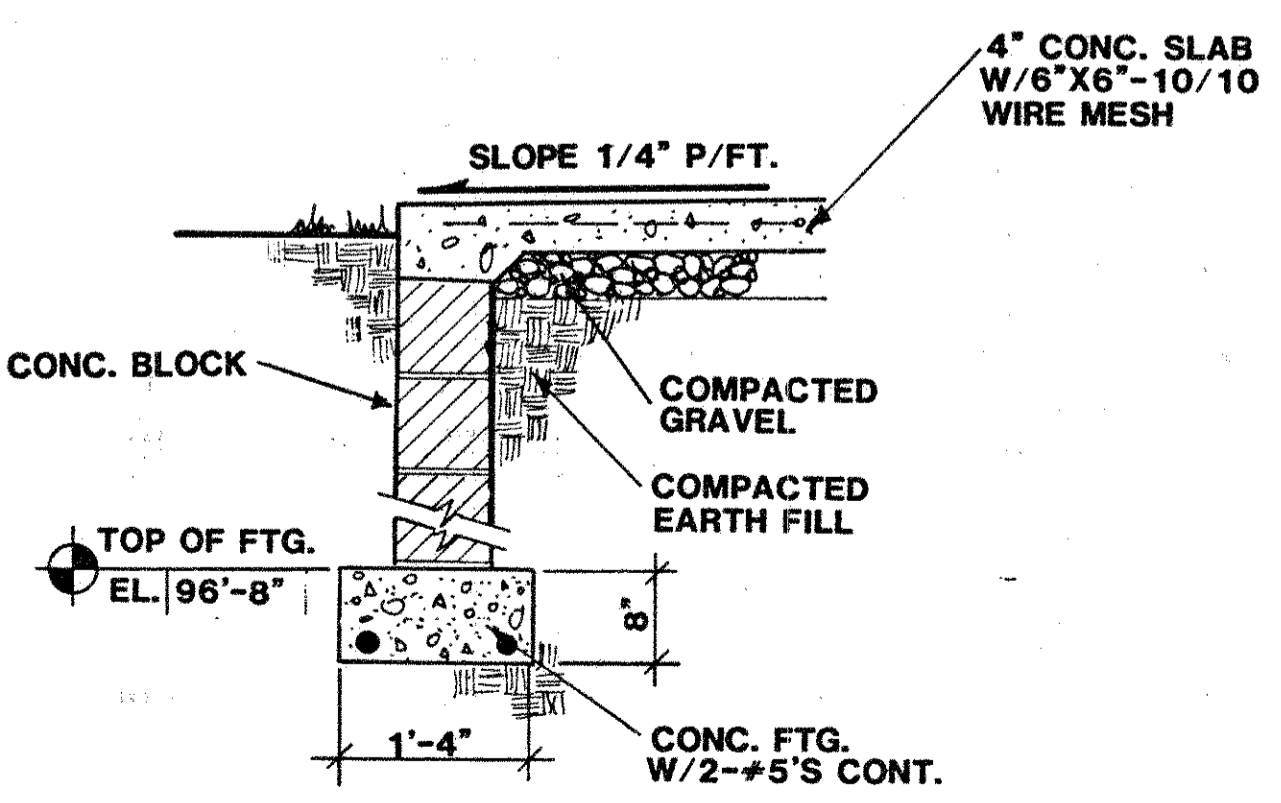
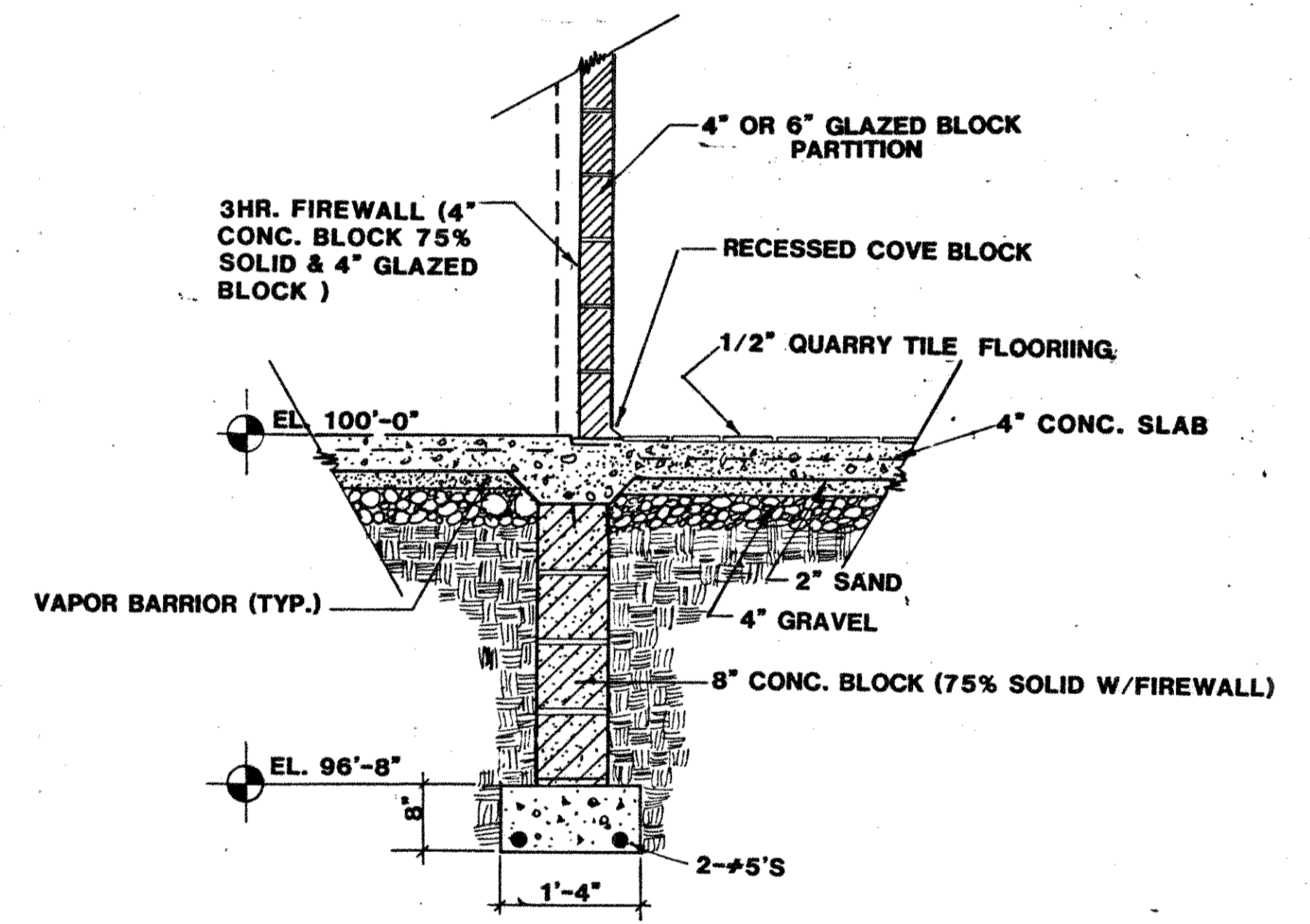
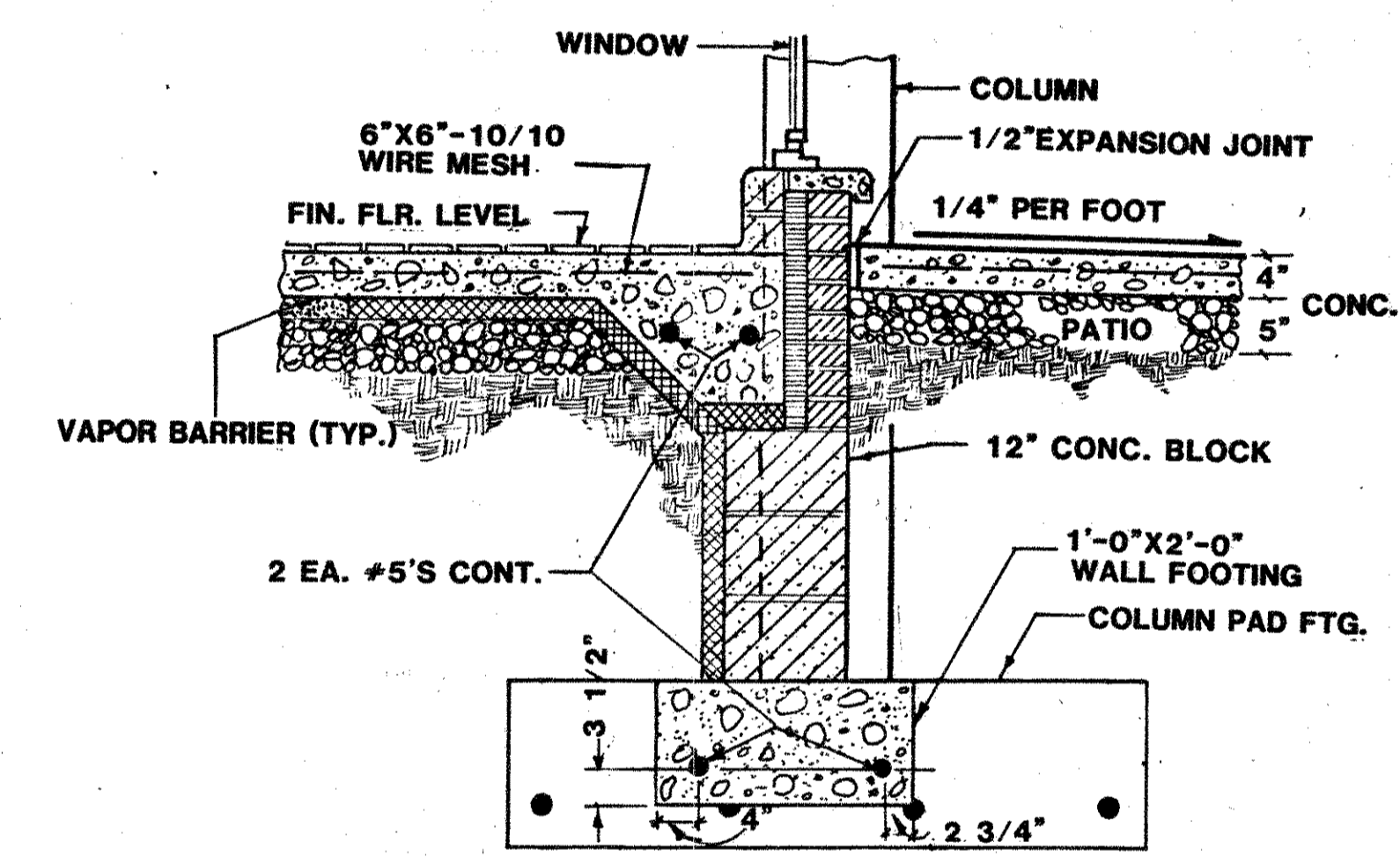
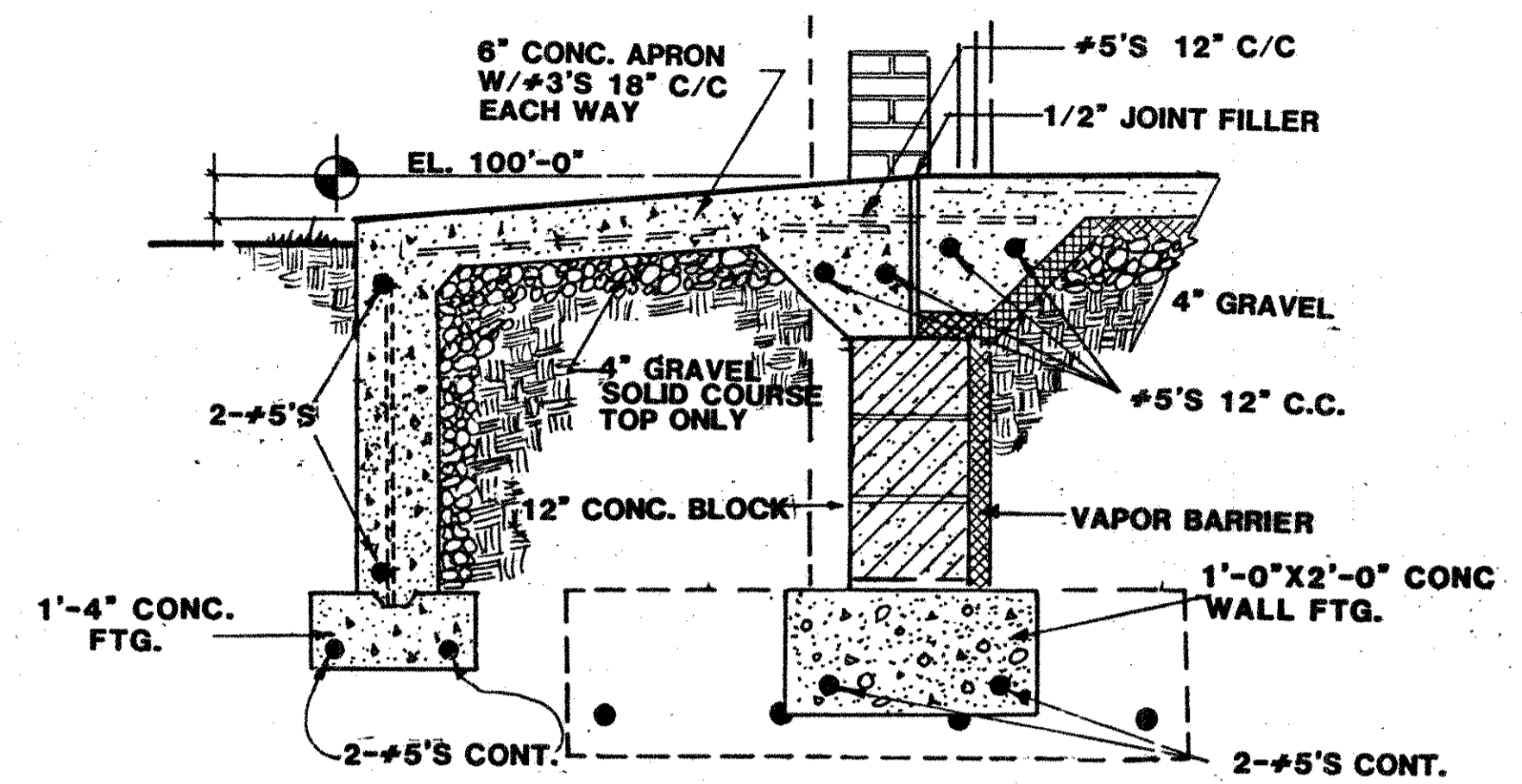
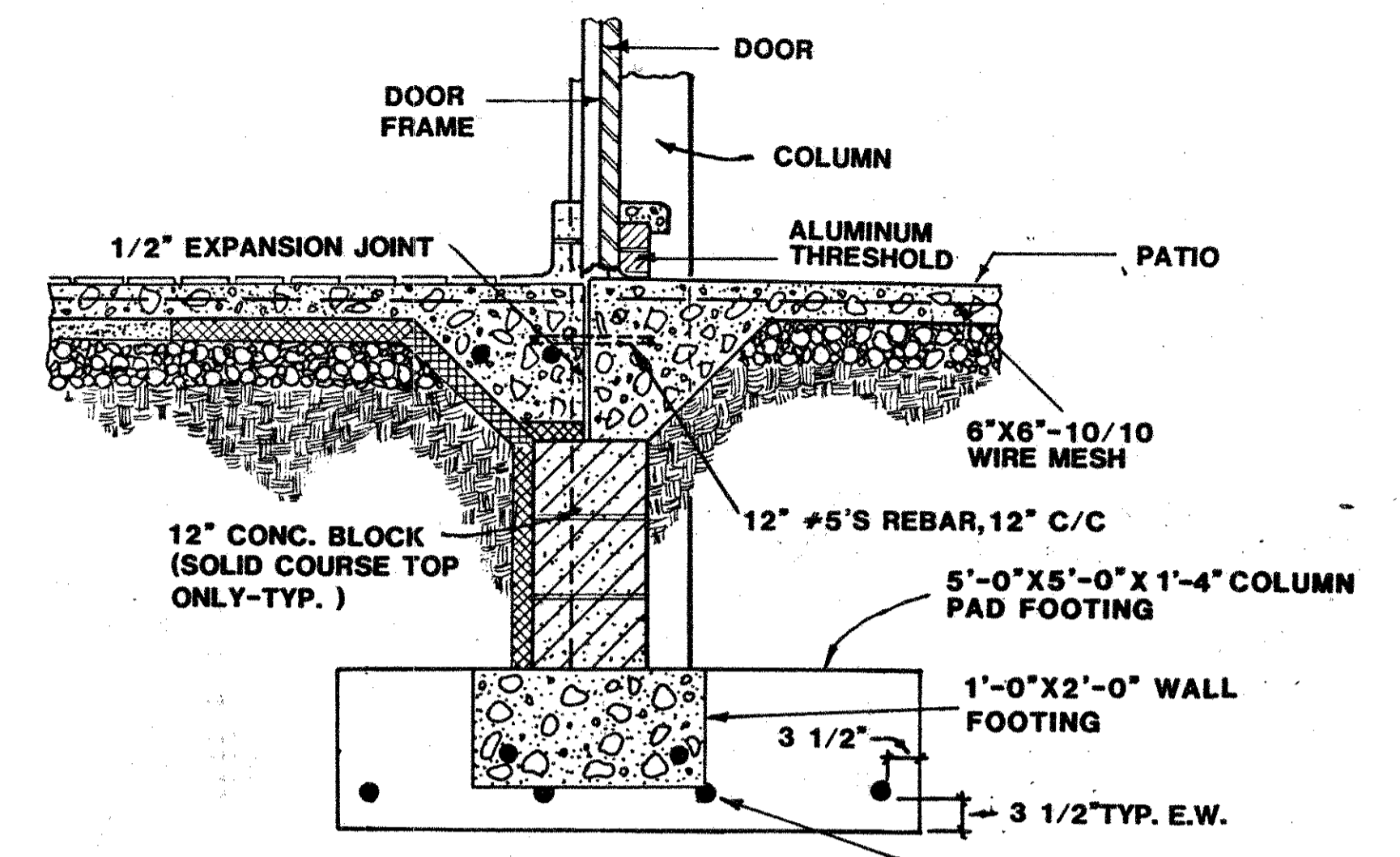
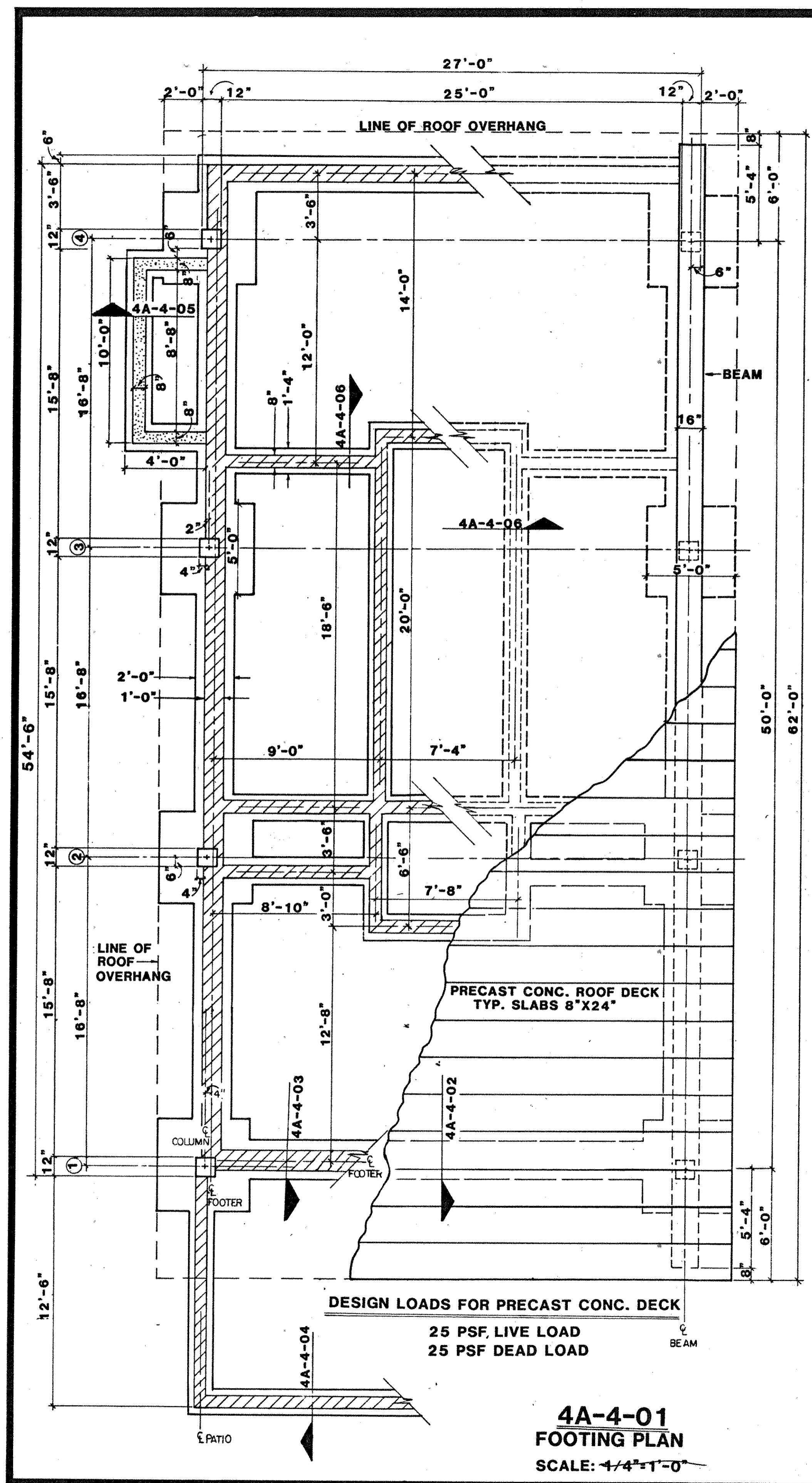
BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

ROADSIDE DEVELOPMENT
MSB-4

INTERIOR WALL CROSS SECTIONS

DATE
8/2/86
1/20/87
3/2/87
10-30-87

APPROVED: [Signature] Engr. of Design Services

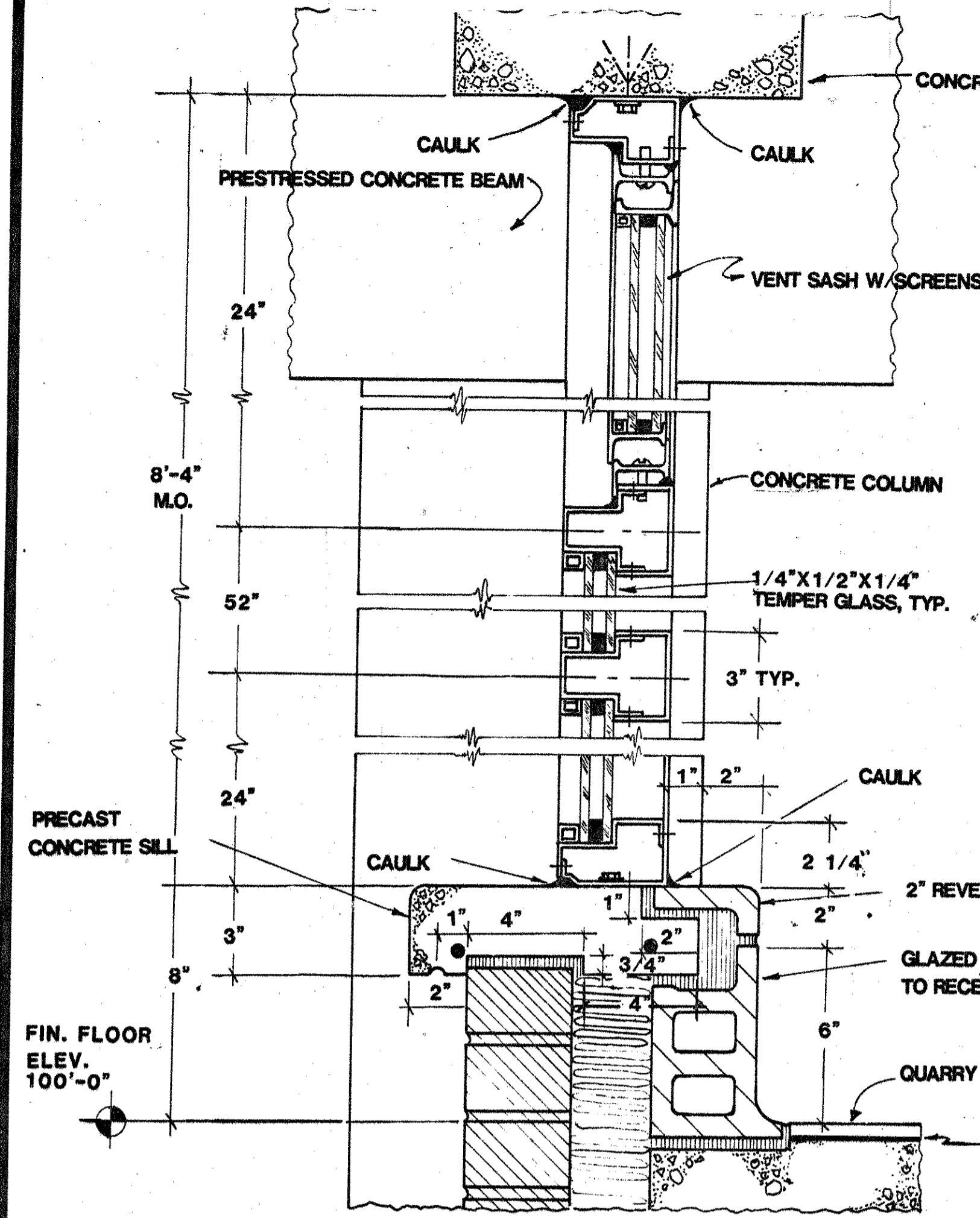


- FOUNDATION NOTES:**
- FOOTINGS ARE DESIGNED FOR 2000 PSI SOIL BEARING PRESSURE. FOOTINGS SHALL BE FOUNDED ON UNDISTURBED SOIL. EXCAVATIONS KEPT FREE OF WATER AT ALL TIMES. CONSULT ENGINEER IF SOIL AT GIVEN ELEVATION DO NOT SATISFY REQUIREMENTS.
 - MATERIALS:
 - A. CONCRETE
 - INTERIOR SLAB ON GRADE, FOOTINGS: f_c +3000 PSI
 - EXTERIOR SLAB ON GRADE: f_c +4000 PSI (AIR)
 - LEAN CONCRETE FOR OVEREXCAVATION: f_c +1500 PSI
 - B. REINFORCING STEEL: f_y +60000 PSI
 - CAST IN FOOTINGS INSERTS, ANCHOR BOLTS AND/OR POCKETS FOR PRECAST CONCRETE COLUMN CONNECTION AS DETAILED ON APPROVED PRECAST CONCRETE ERECTION DRAWINGS. ALL LOOSE HARDWARE AND SETTING DIAGRAMS WILL BE FURNISHED BY THE PRECAST CONCRETE SUPPLIER.

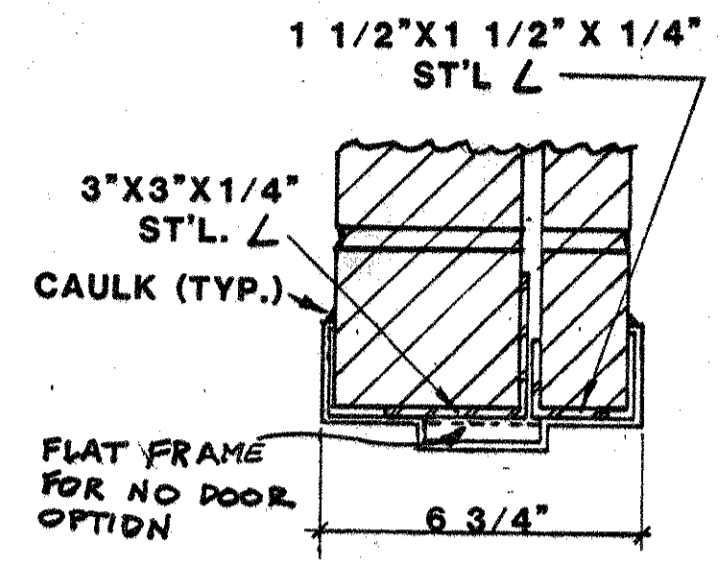
SCALE, ALL DETAILS: 3/4"=1'-0"

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

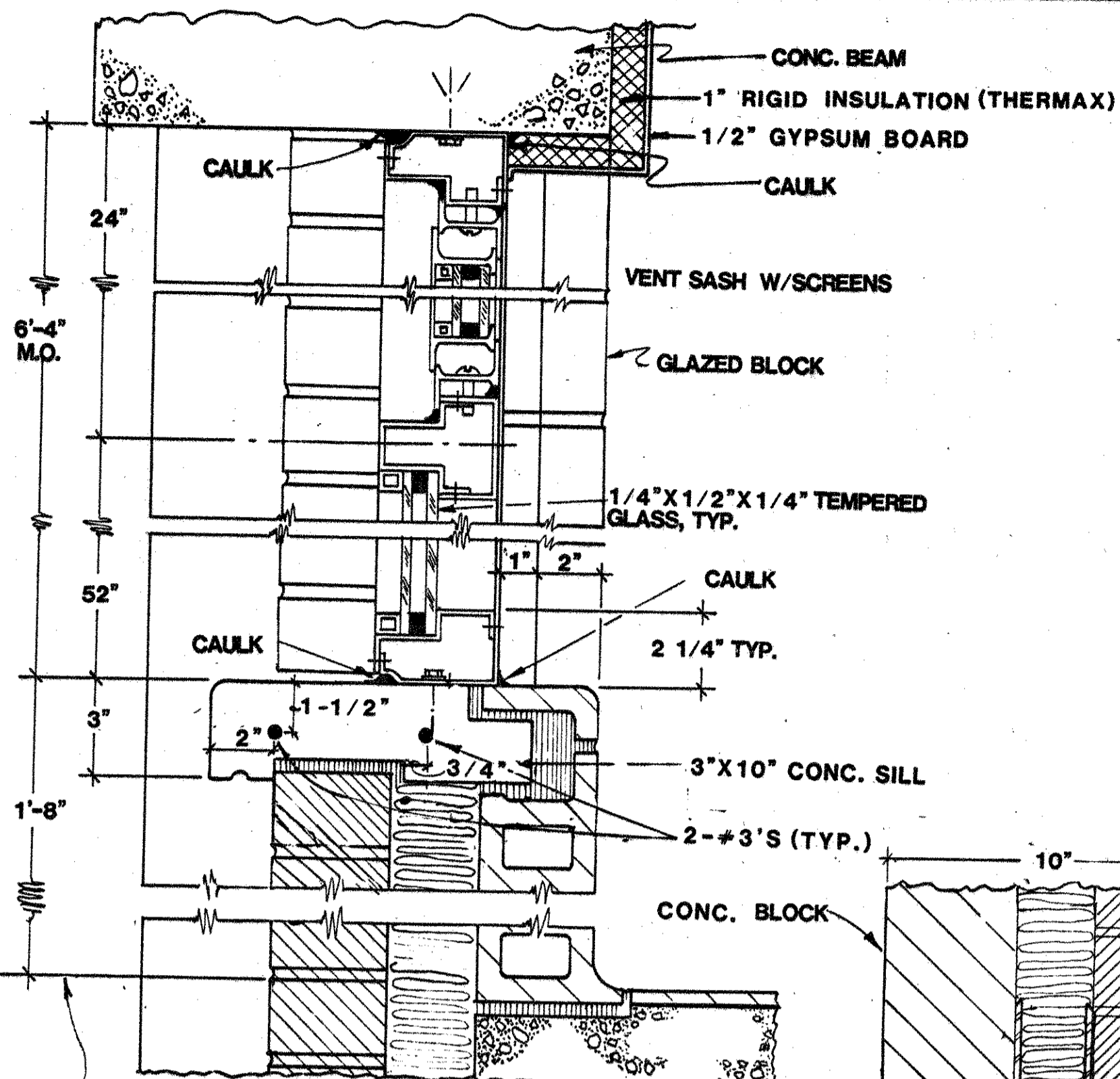
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4	5/6/86
FOOTING PLAN & DETAILS	8/14/86
	1/20/87
APPROVED <i>R. Williams</i> Engr. of Design Services	
4A-4	



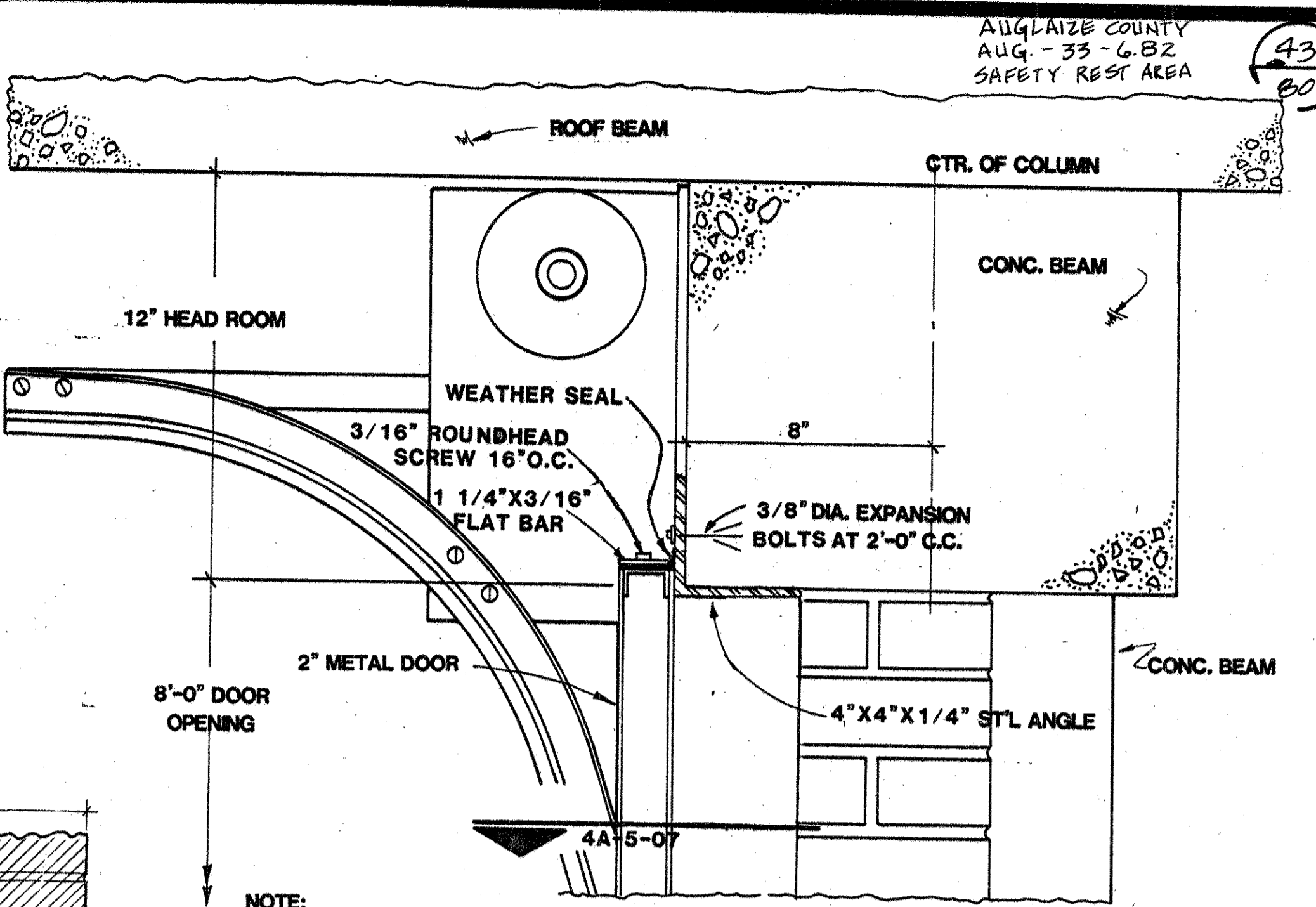
4A-5-01
FRONT WINDOW, 101



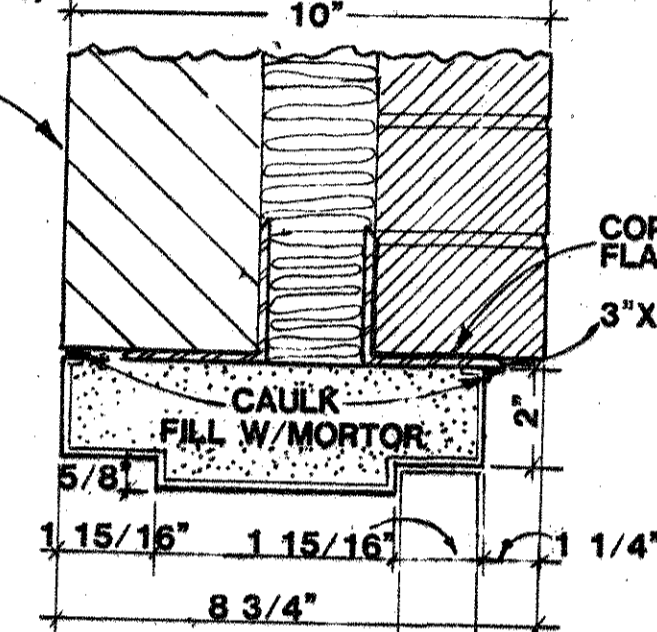
4A-5-10
HEAD, FRONT DOORS, RMS.
102, 104, & 106



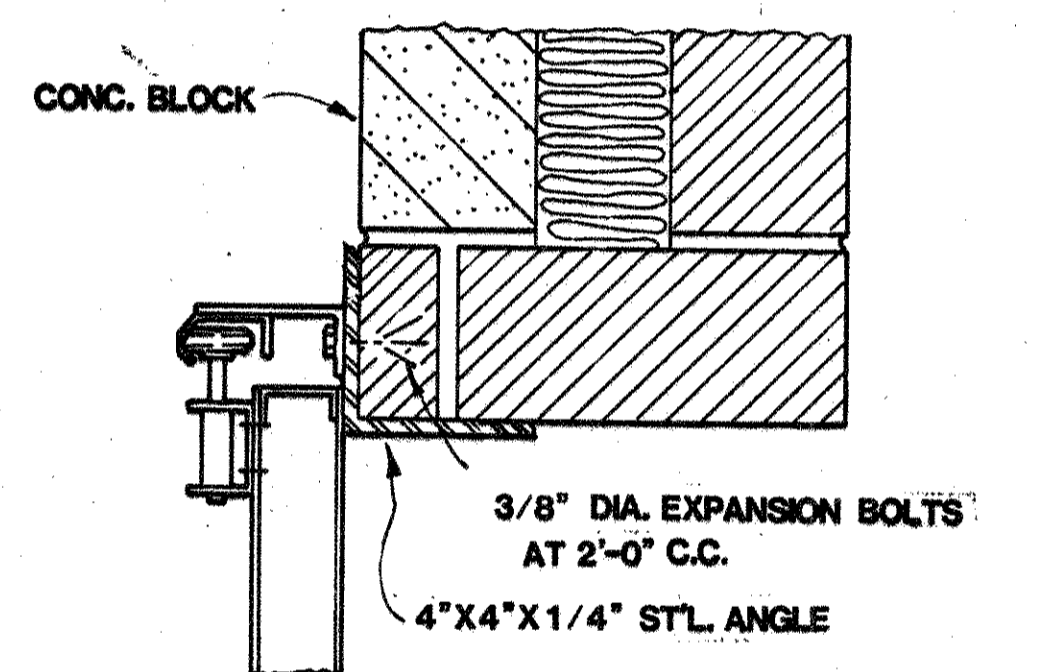
4A-5-02
SIDE WINDOWS, ROOM 101



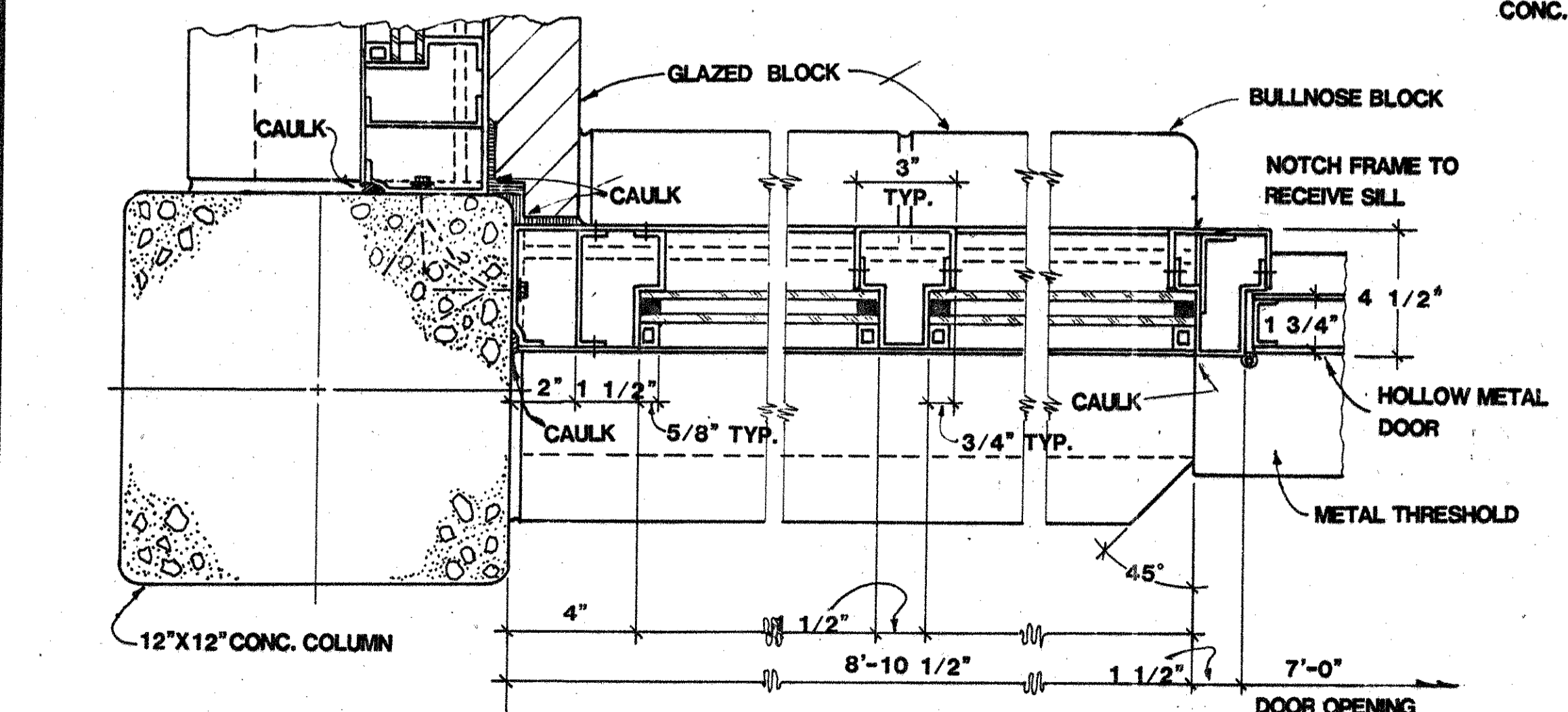
4A-5-03
HEAD, OVERHEAD DOOR



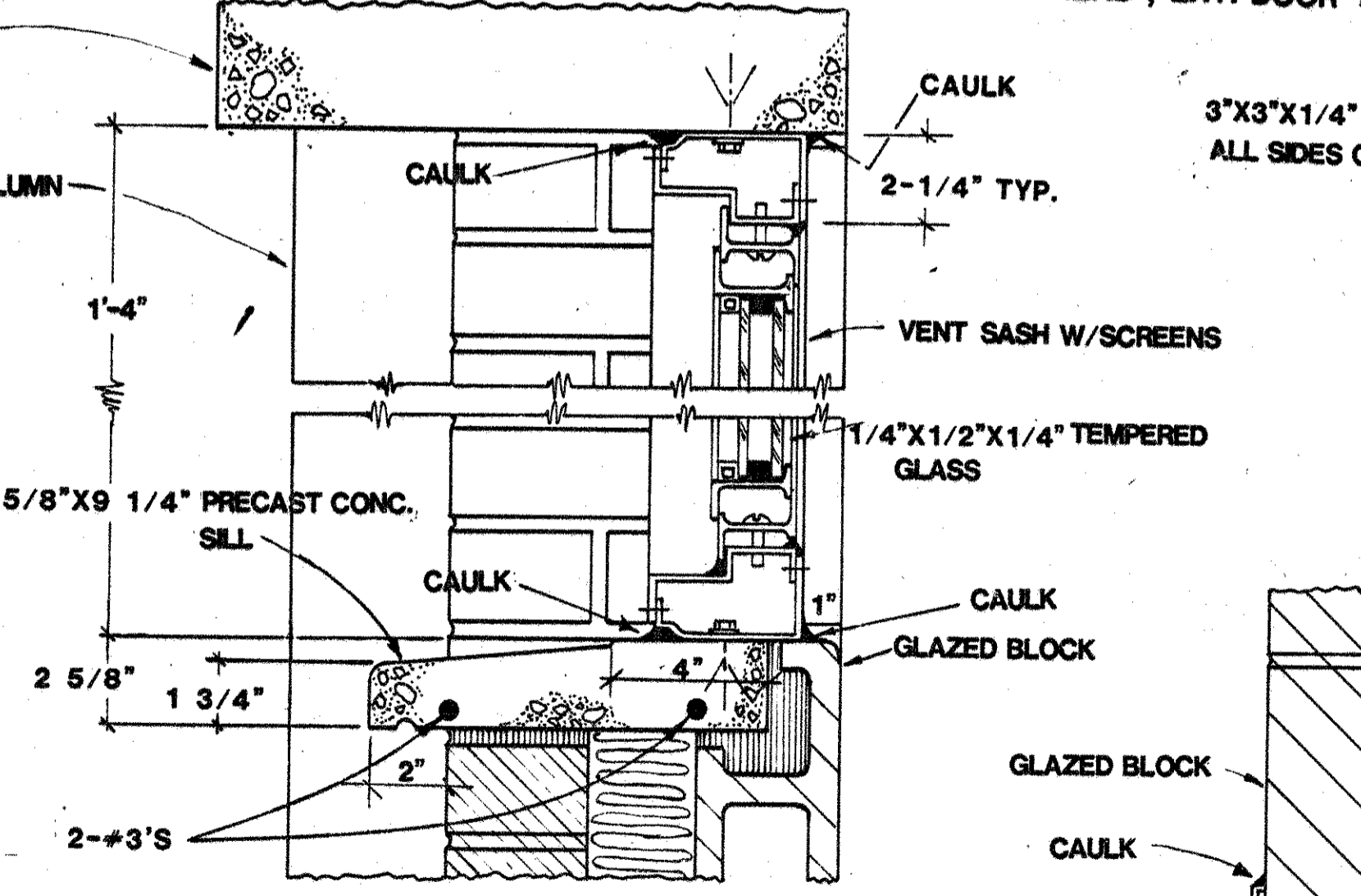
4A-5-09
HEAD, EXT. DOOR RM. 105



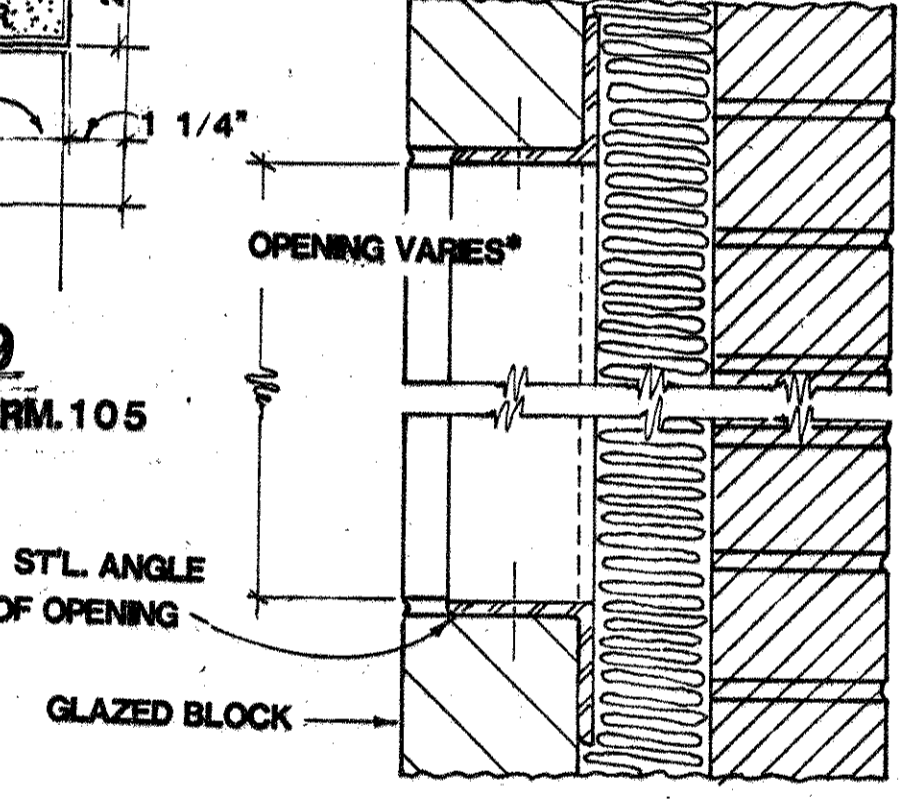
4A-5-07
JAMB, OVERHEAD DOOR



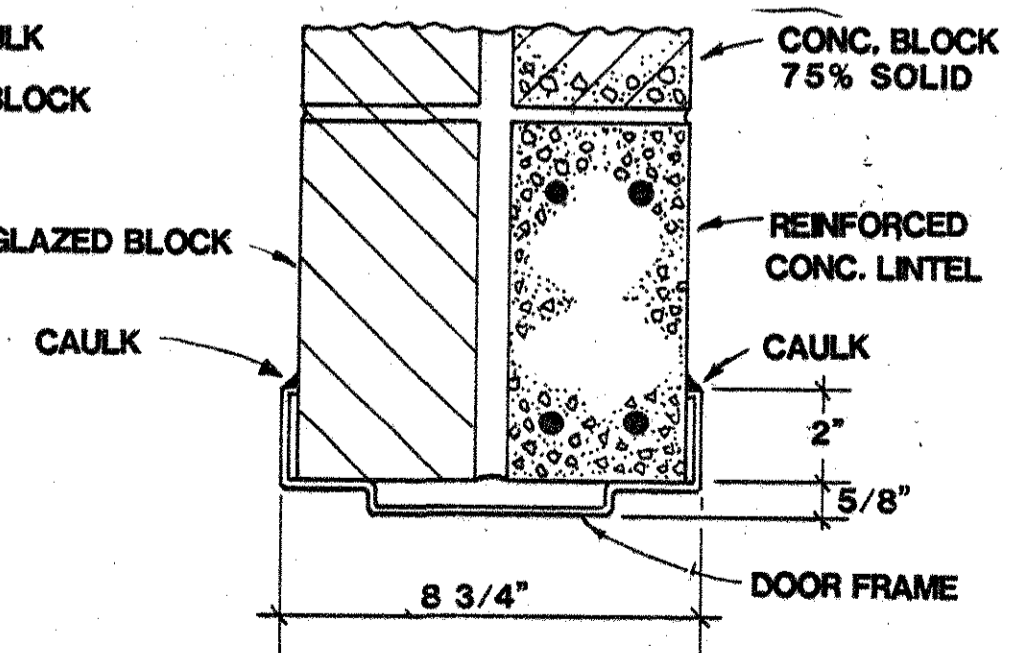
4A-5-04
FRONT WINDOW & DOOR FRAME



4A-5-05
SIDE WINDOWS, RMS. 102 & 104



4A-5-06
OPENING FRAMES FOR WASTE
RECEPTACLES AND HAND DRYERS



4A-5-08
HEAD, REAR DOORS, RMS. 102, 103 & 104

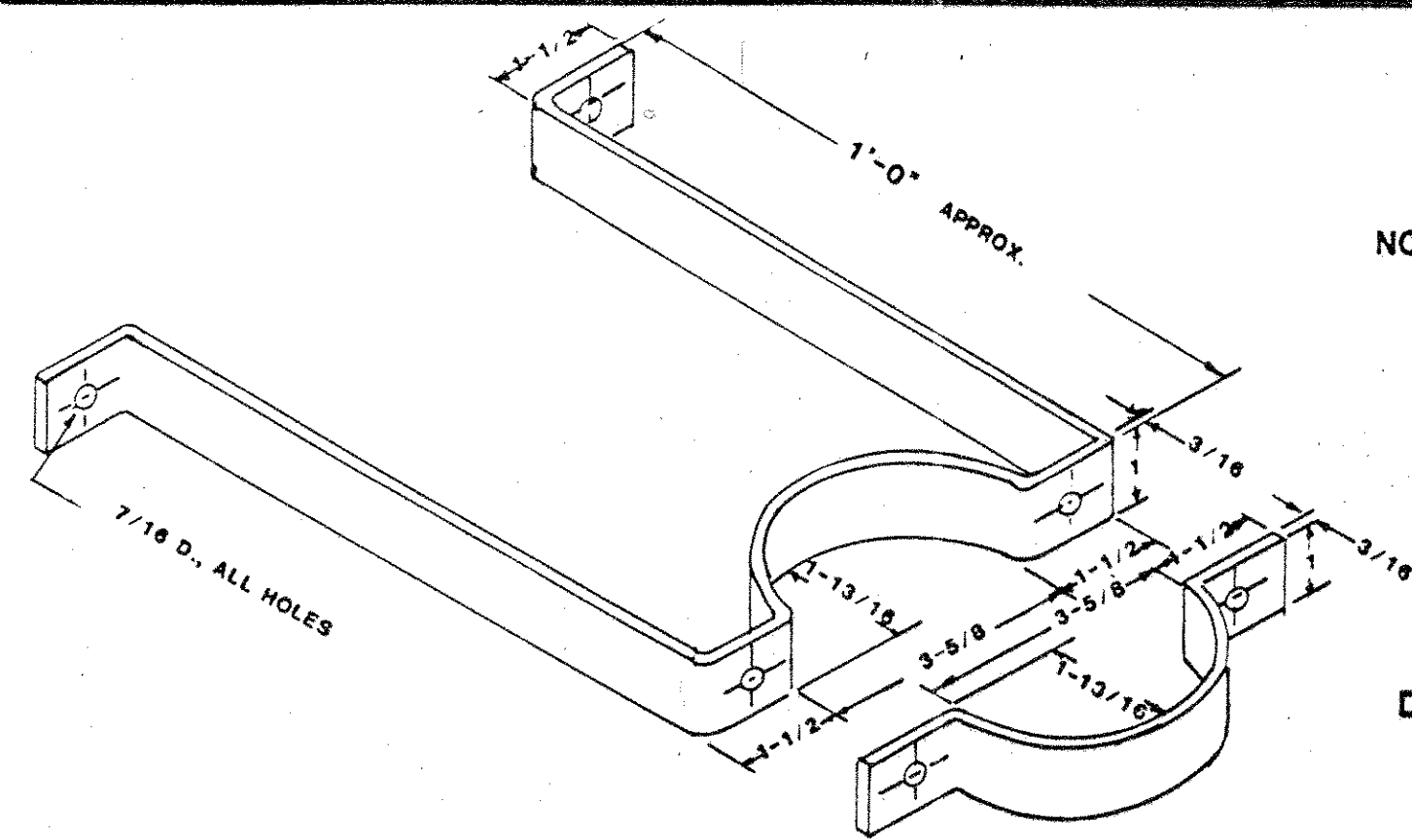
* CHECK REQUIRED OPENINGS OF DESIRED RECEPTALS & HAND DRYERS.

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4	5/6/86
DOOR & WINDOW DETAILS	8/11/86
	8/26/86
	1/20/87
	3/21/87
	10/30/87
APPROVED <i>[Signature]</i> Engr. of Design Services	4A-5

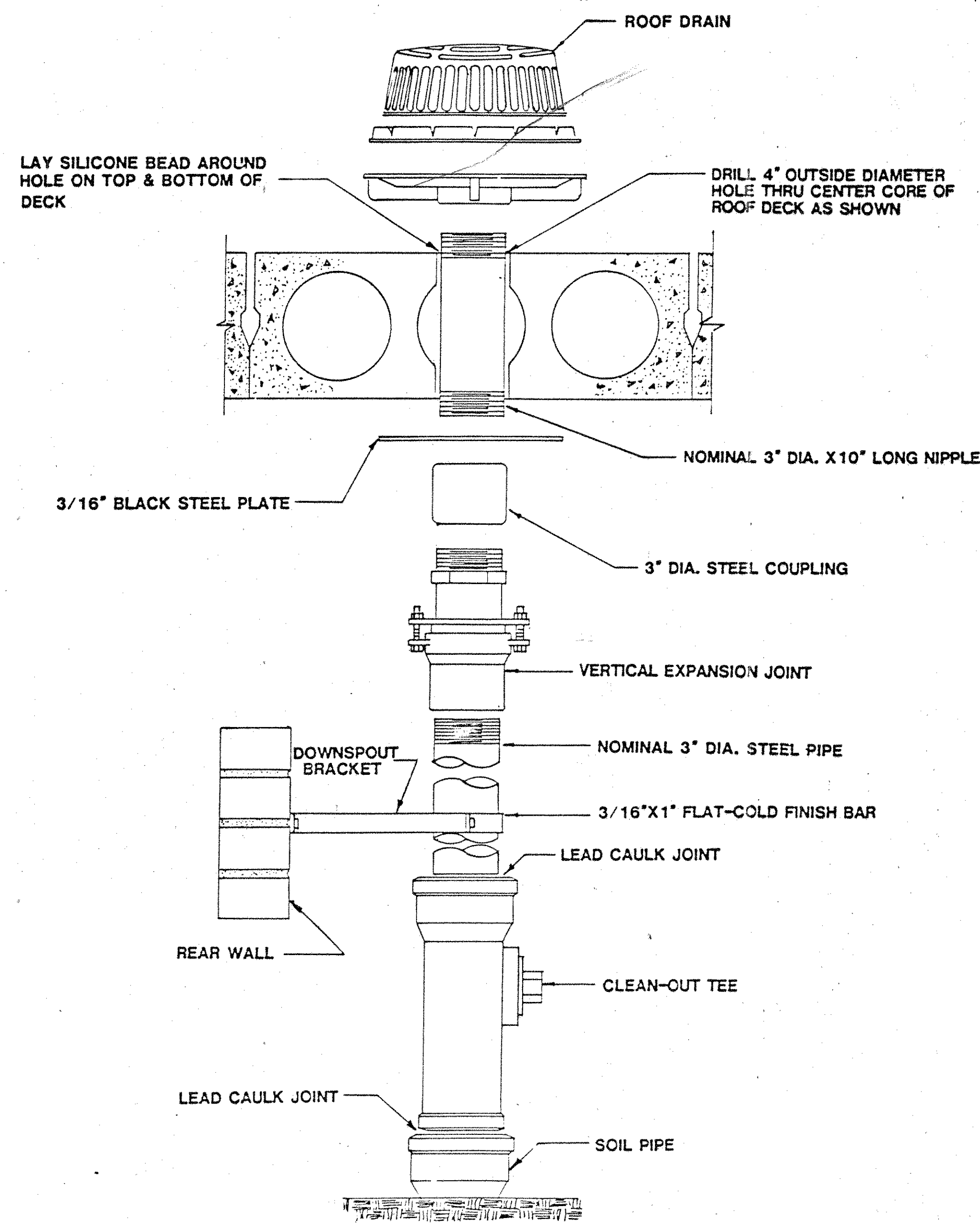
SCALE: 3"=1'-0"

REV 10/30/87

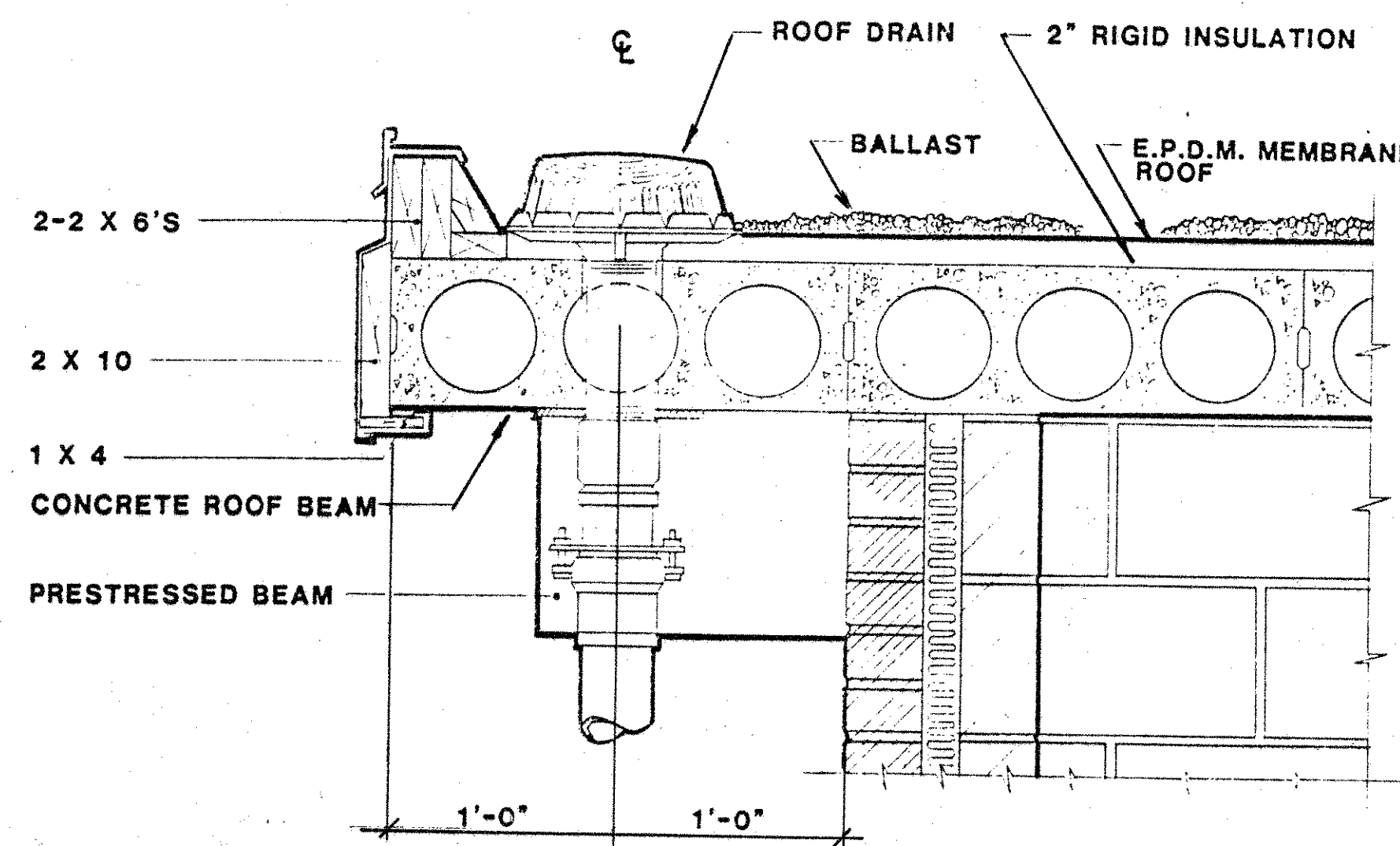


NOTE: USE 2-3/8" WEDGE ANCHORS
 W/WASHERS TO MOUNT PIPE
 BRACKET TO WALL & 2-3/8"x1"
 CADMIUM PLATED BOLTS W/WASHERS
 TO BOLT BRACKET TOGETHER

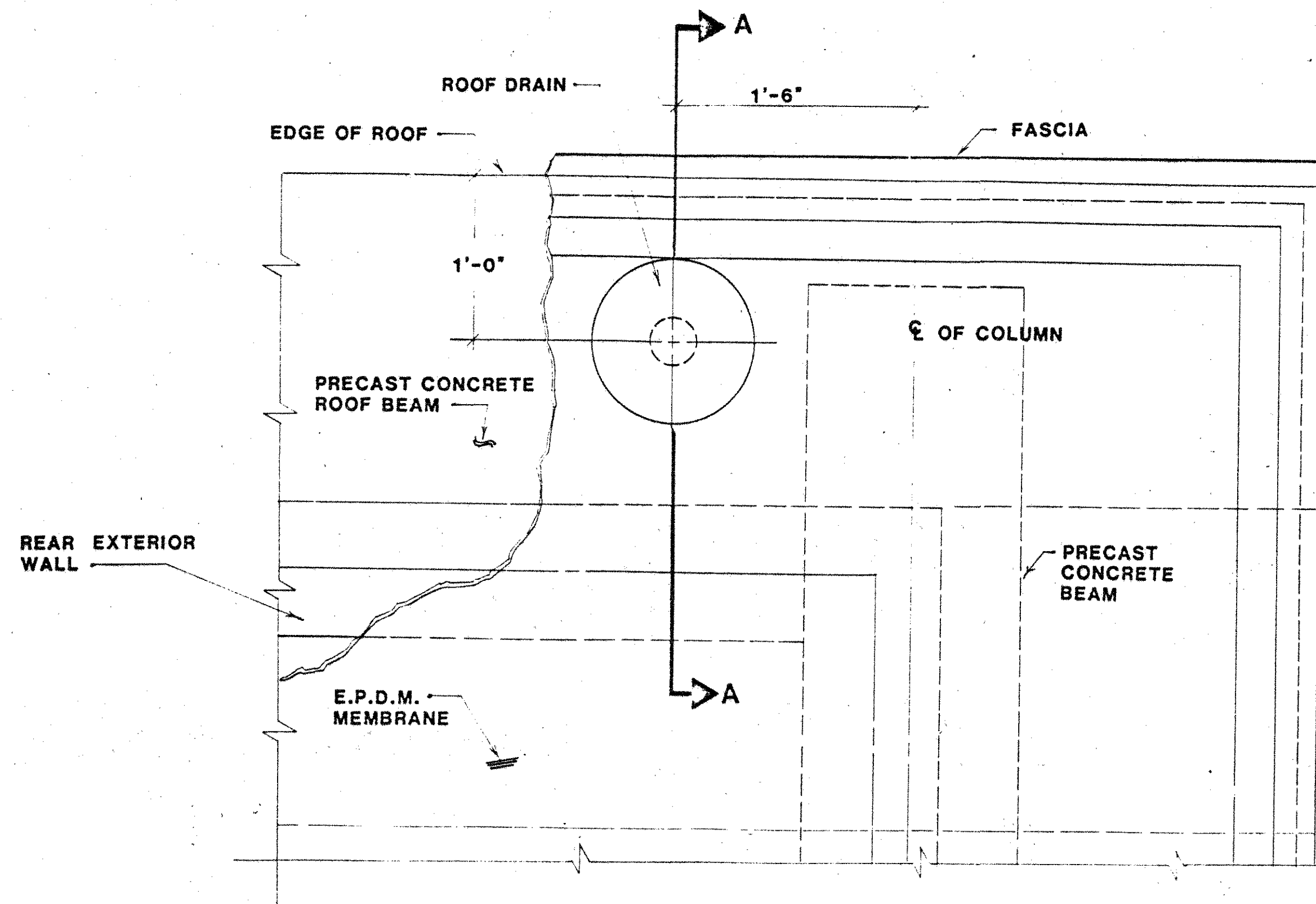
4A-6-01
 DETAIL OF DOWNSPOUT BRACKET
 NO SCALE



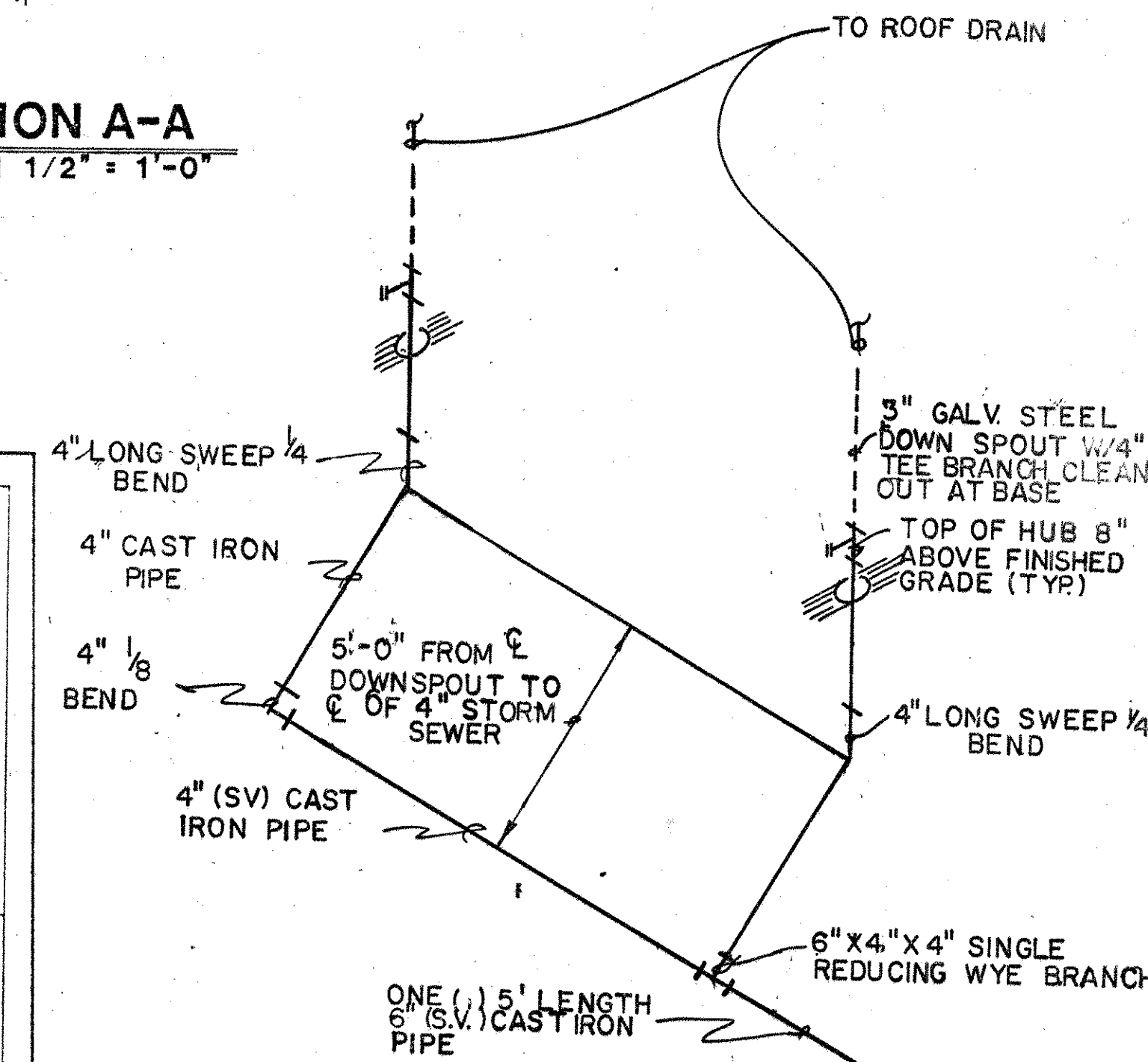
4A-6-02
 ROOF DRAIN & DOWNSPOUT ASSEMBLY DETAIL
 NO SCALE



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



4A-6-04
 RIGHT HALF OF ROOF WITH DRAIN
 NO SCALE

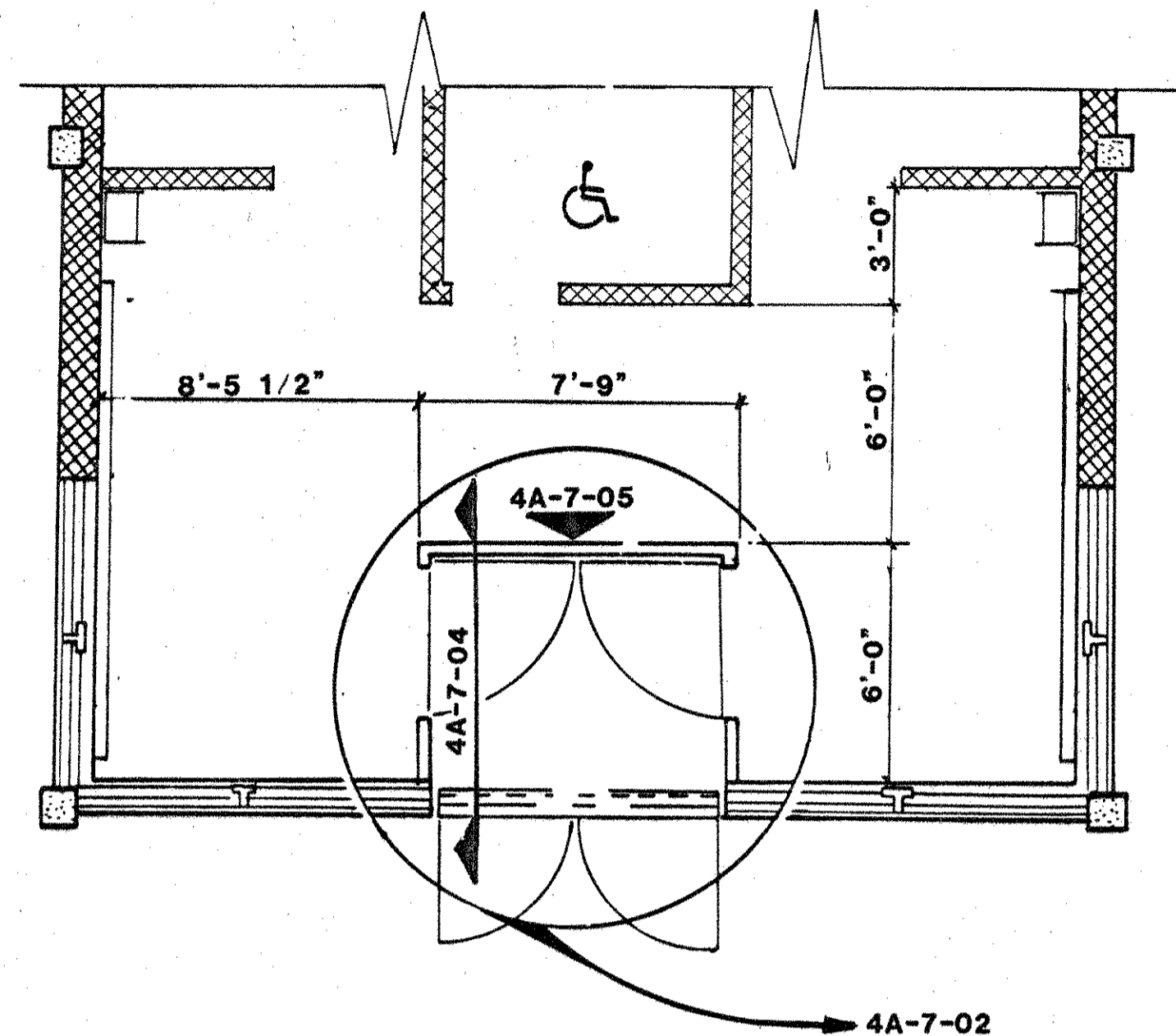


ISOMETRIC OF STORM SEWER CONNECT TO BUILDING DOWNSPOUT & ROOF DRAIN

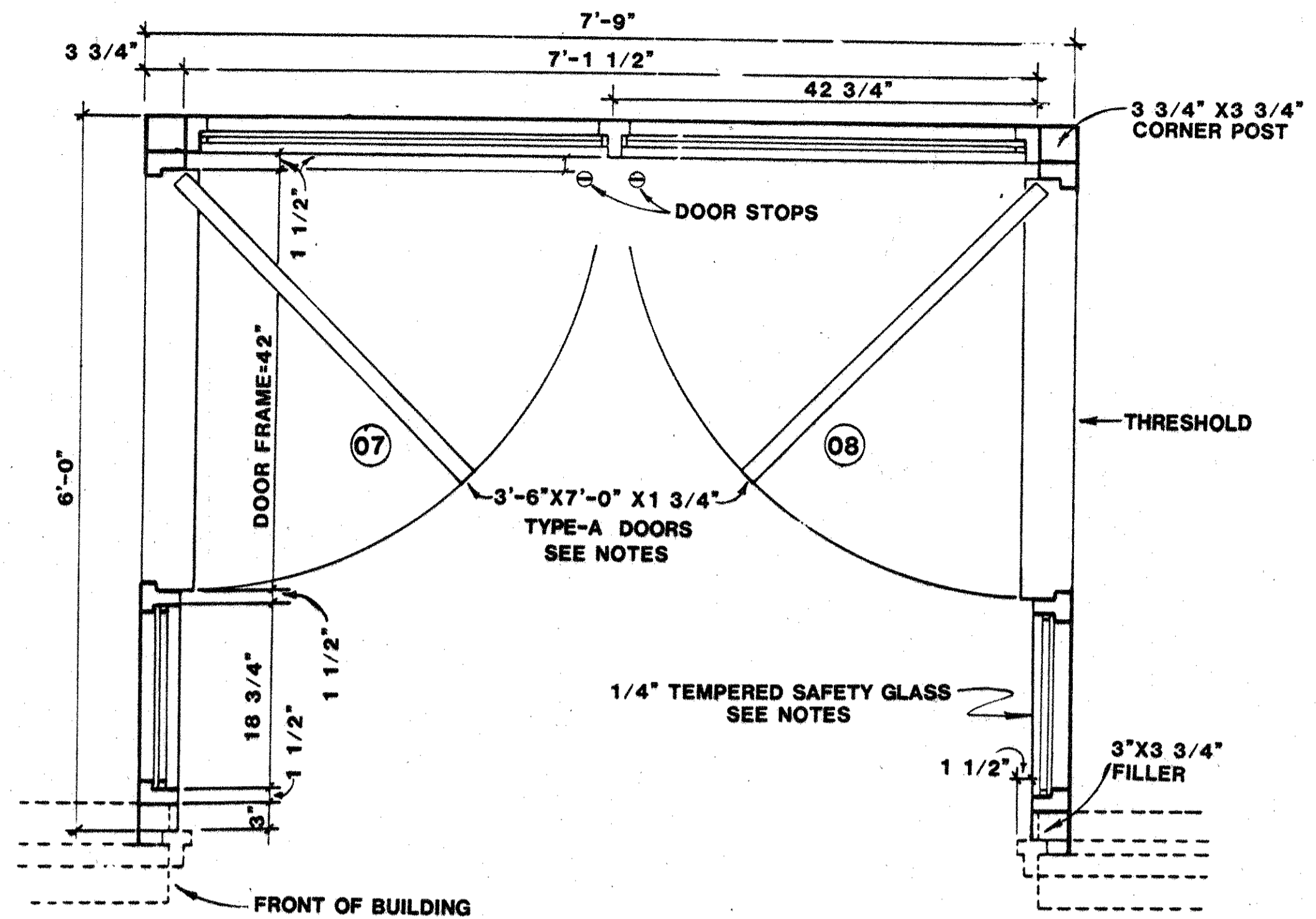
SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4	8/11/86
ROOF DETAILS	10/30/87
APPROVED <i>[Signature]</i> Engr. of Design Services	
4A-6	

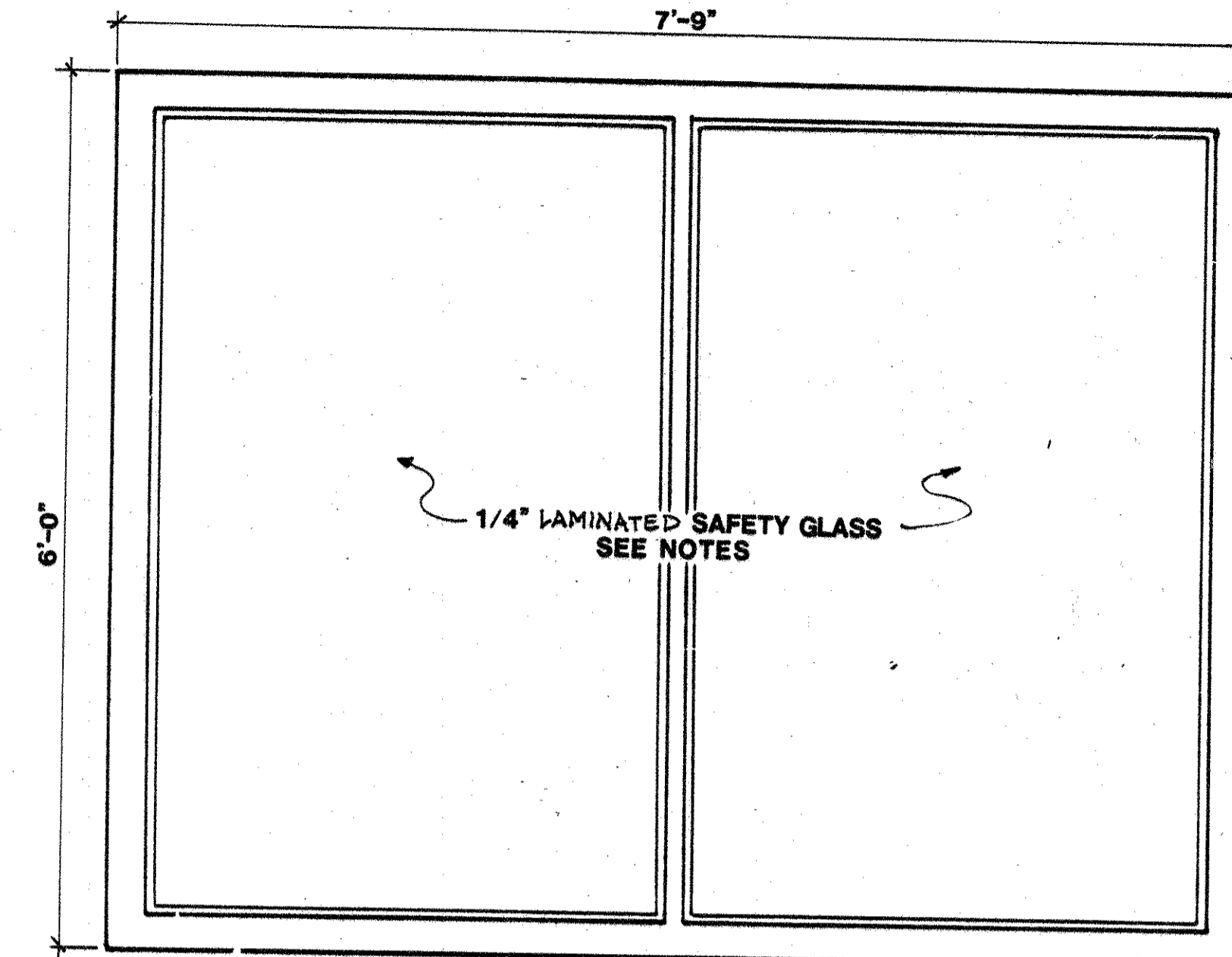
BEL 10/30/87



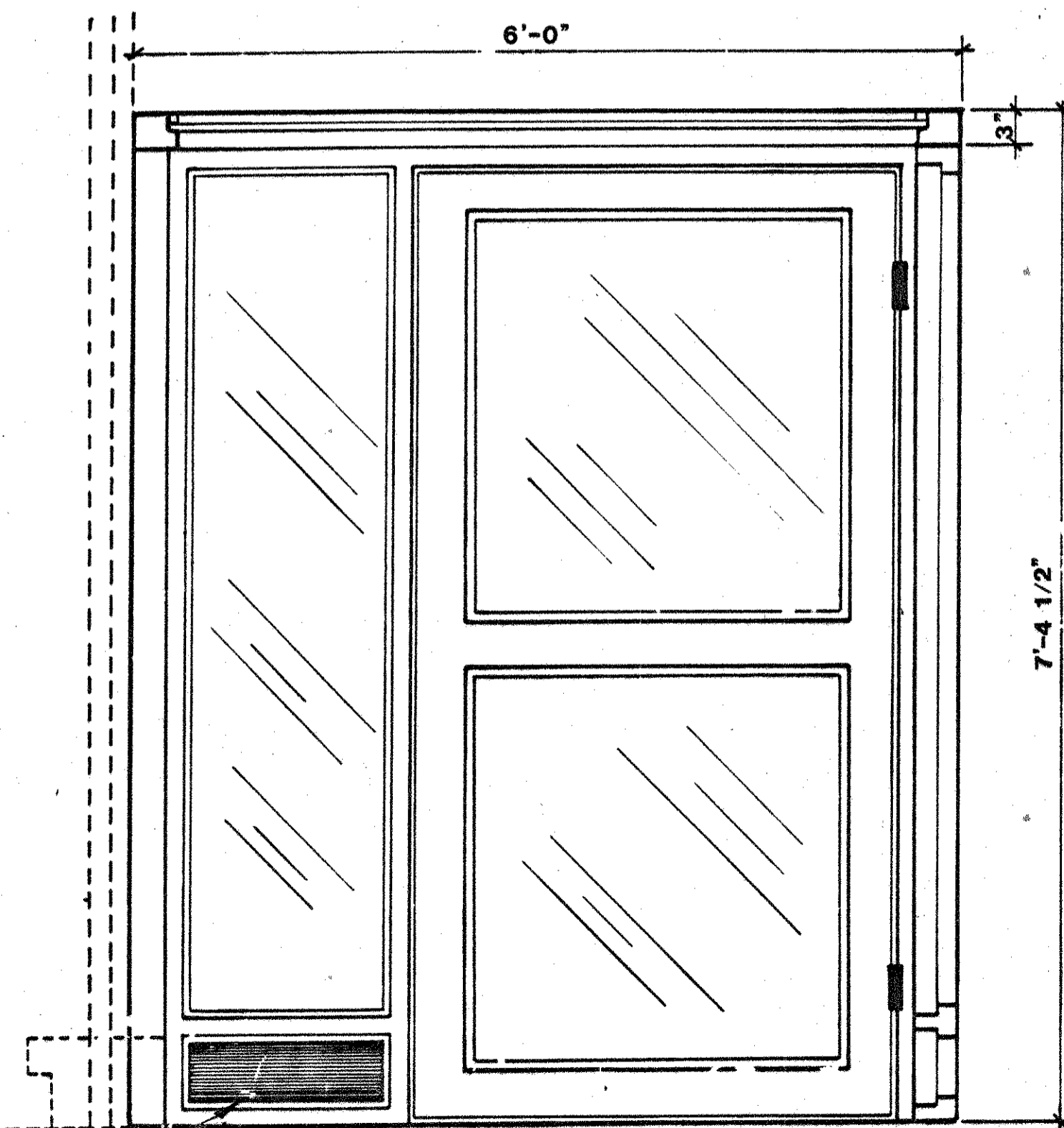
4A-7-01
 PARTIAL PLAN OF BUILDING
 SCALE: 1/4"=1'-0"



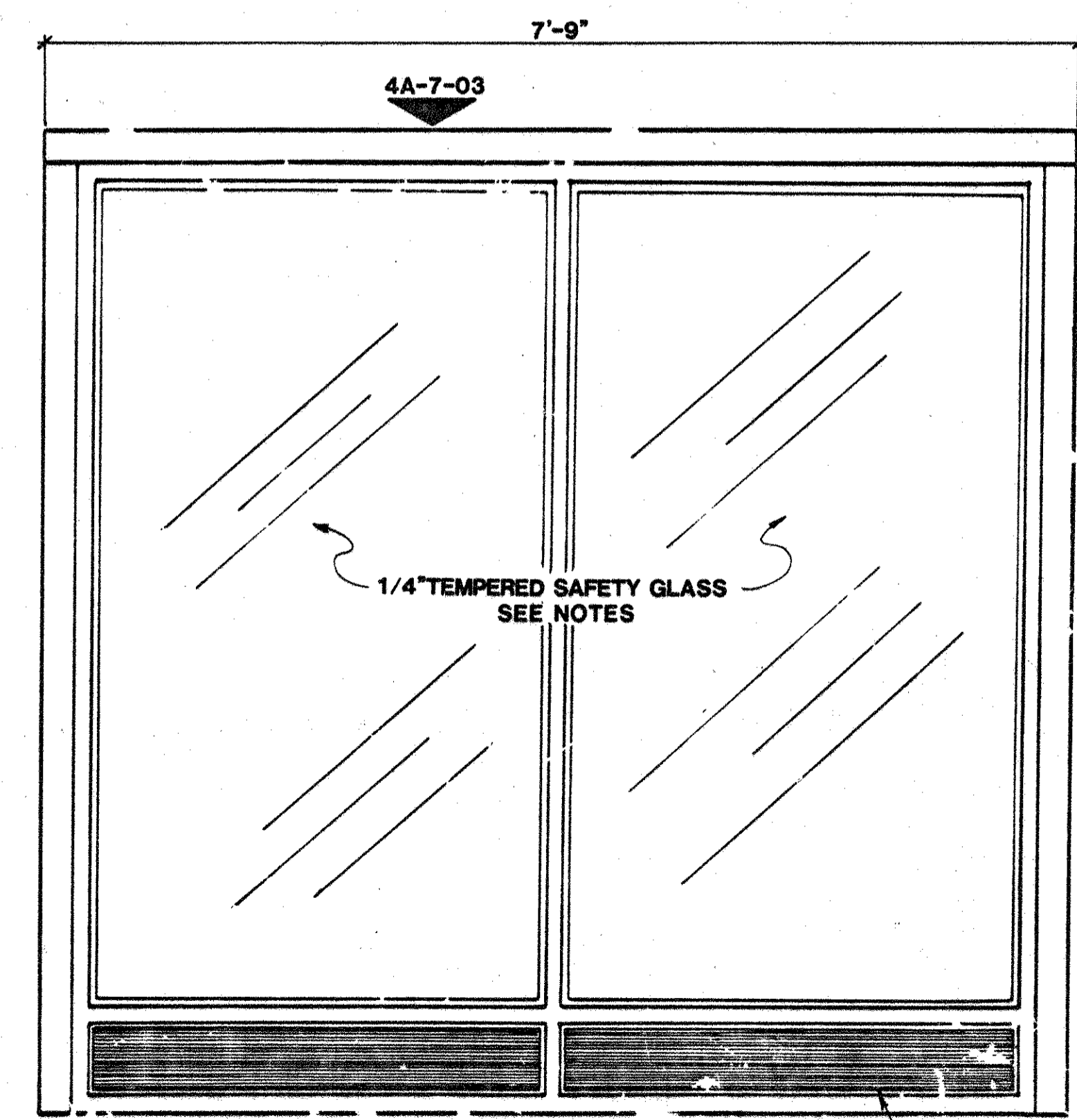
4A-7-02
 PLAN
 SCALE: 3/4"=1'-0"



4A-7-03
 TOP
 SCALE: 3/4"=1'-0"



4A-7-04
 SIDE ELEVATION/SECTION
 SCALE: 3/4"=1'-0"



4A-7-05
 REAR ELEVATION
 SCALE: 3/4"=1'-0"

DOOR SCHEDULE				
DOOR NO.	TYPE	SIZE	HDWR.	REMARKS
07	A	3'-6"X7'-0"X1 3/4"	H	CENTER STILE (MIN. 4" HIGH) W/1/4" LAMINATED SAFETY GLASS
08				

- NOTES**
- DOOR & WINDOW FRAMES SHALL BE EXTRUDED FROM 6063-T5 ALUMINUM WITH A FINISH EQUAL TO PPG HARD COAT #62 DARK BRONZE ANODIZED FINISH.
 - DOOR GLASS SHALL BE 1/4" CLEAR LAMINATED SAFETY GLASS.
 - WINDOW GLASS SHALL BE 1/4" CLEAR SAFETY GLASS.
 - FOR MANUFACTURING & IDENTIFICATION REQUIREMENTS SEE SECT. 08800, GLAZING, IN SPECIFICATIONS.
- HARDWARE -H**
- | | |
|-------|--|
| 1 1/2 | PRS. BUTTS SS48500 45TBB 32DXNRP |
| 1 | PULL 1" DIA. X 13" LONG STAINLESS STEEL ROD W/V.P. BOLTS |
| 1 | KICK PLATE 8X35 32D |
| 1 | CLOSER 4040 EDA CUSH & STOP ALUM. |
| 1 | THRESHOLD PEMKO 270B OR APPROVED EQUAL |
| 1 | PUSH PLATE 4 1/2"X15"X 0.05" BEVELED EDGES, US 32 |
| 1 | DOOR STOP 400-264 |

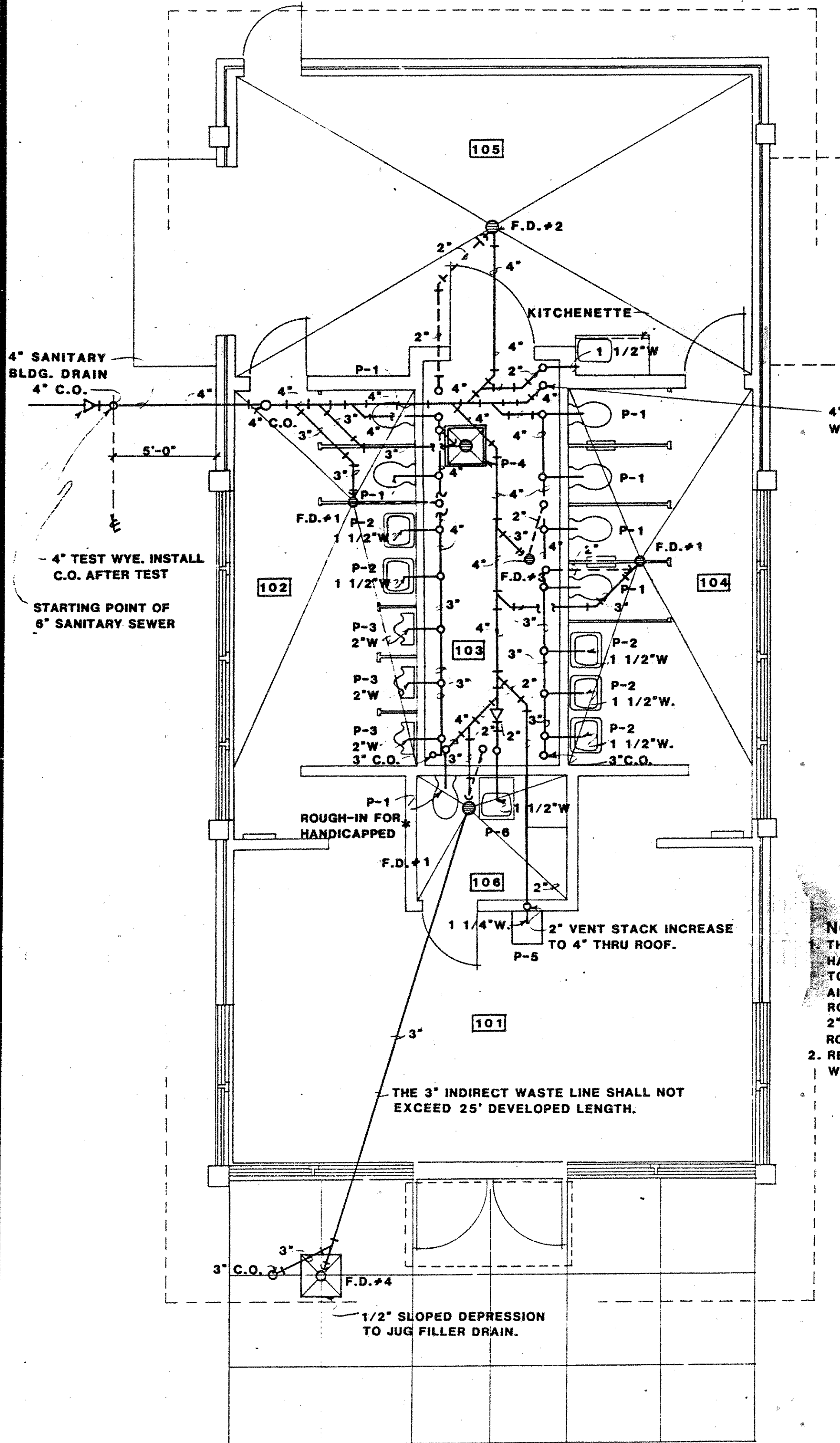
REV. 10-30-87
 SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES
 DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

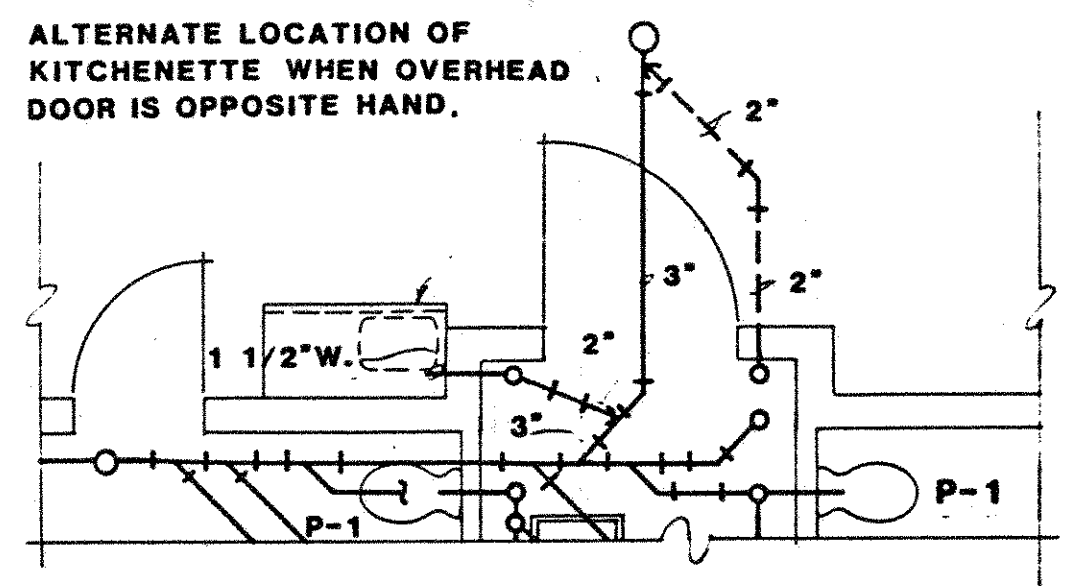
ROADSIDE DEVELOPMENT	DATE 3-5-86
MSB-4	1-20-87
AIRLOCK	3-2-87
	10-30-87

APPROVED: *[Signature]* Eng. of Design Services **4A-7**

REV 10/30/87



**WASTE AND VENT PLUMBING PLAN
4P-1-01**



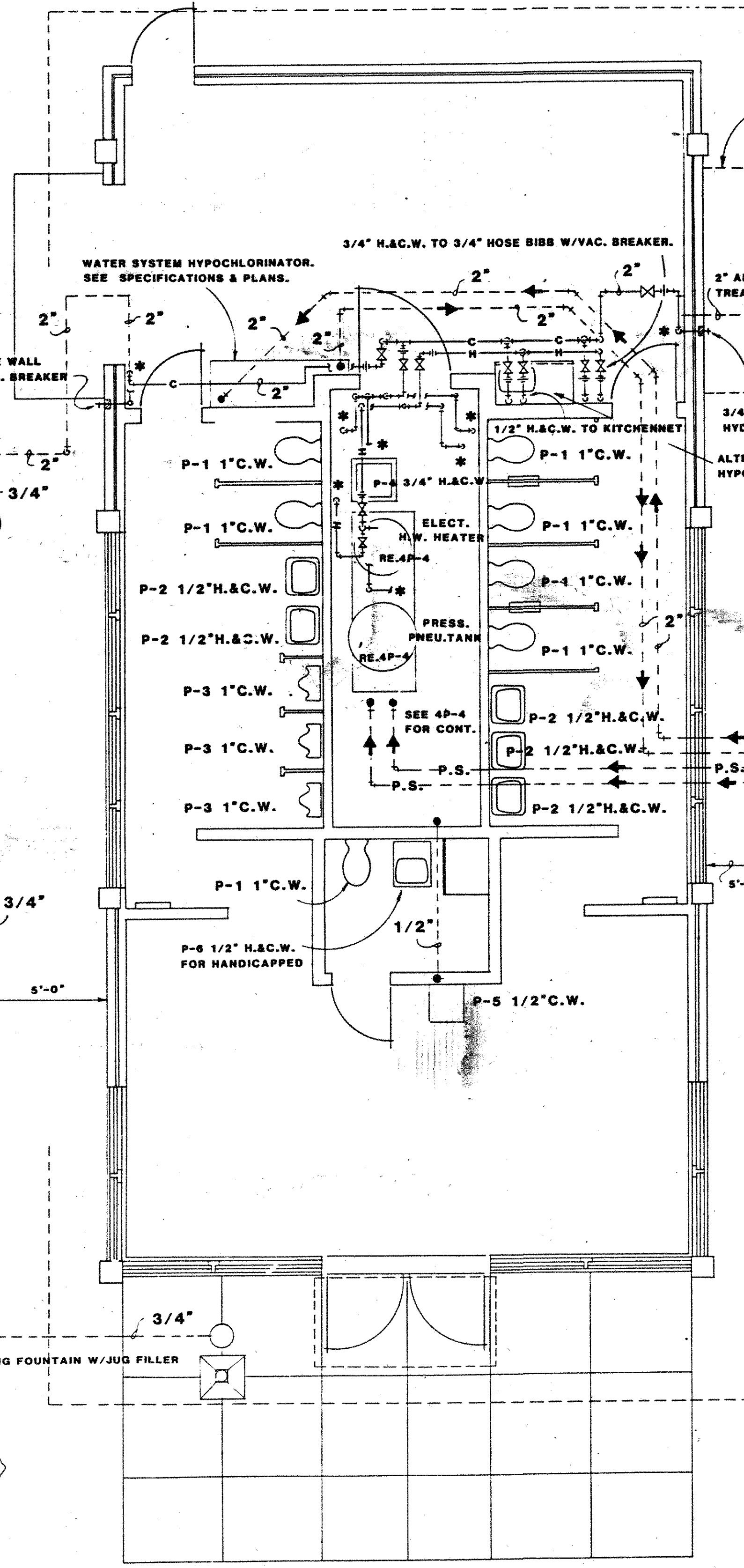
ALTERNATE KITCHENETTE LOCATION

4" MAIN VENT STACK THRU ROOF
W/4" C.O. AT BASE OF STACK.

2" TYPE "K" HARD COPPER TUBING
TO WASTEWATER TREATMENT PLANT.
MIN. 4'-0" COVER

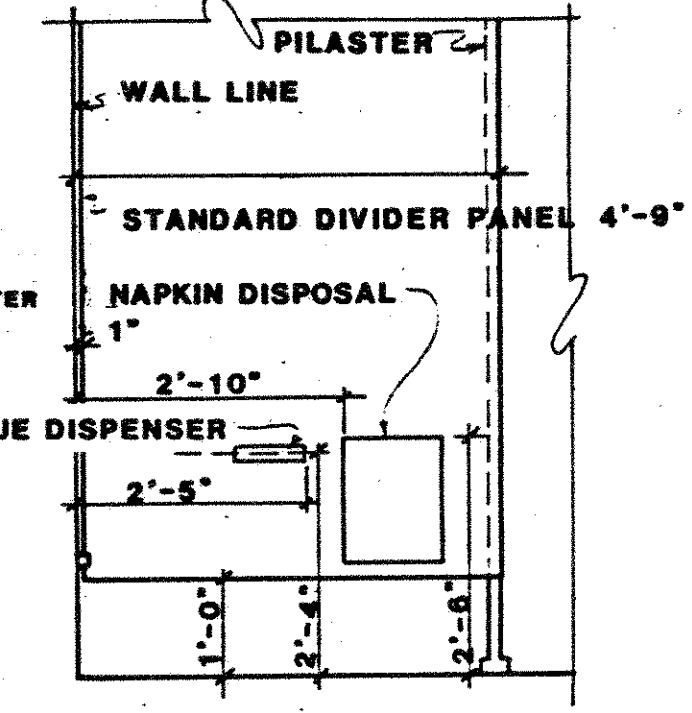
EXTEND 3/4" TYPE "K" HARD COPPER TUBING TO
ANTI-FREEZING DRINKING FOUNTAIN & JUG FILLER
MIN. 4'-0" COVER

NOTE:
1. THE 2" VENT OFF OF FLOOR DRAIN IN
HANDICAPPED TOILET ROOM SHALL OFFSET
TO MISS 2" BACK VENT AND EXHAUST
AIR DUCT FROM HANDICAPPED TOILET
ROOM AND SEPARATELY VENT THRU ROOF.
2" VENT SHALL INCREASE TO 4" THRU
ROOF W/2" C.O. AT BASE.
2. REFER TO ISOMETRIC FOR THE SOIL,
WASTE AND VENT PIPING INSTALLATION.



**WATER SYSTEM PLUMBING PLAN
4P-1-02**

ALTERNATE LOCATION OF OVERHEAD DOOR. CHANGE HAND
OF PLUMBING TO ACCOMODATE DOOR CHANGE.



**DETAIL OF TOILET ROOM ACCESSORIES
4P-1-03**

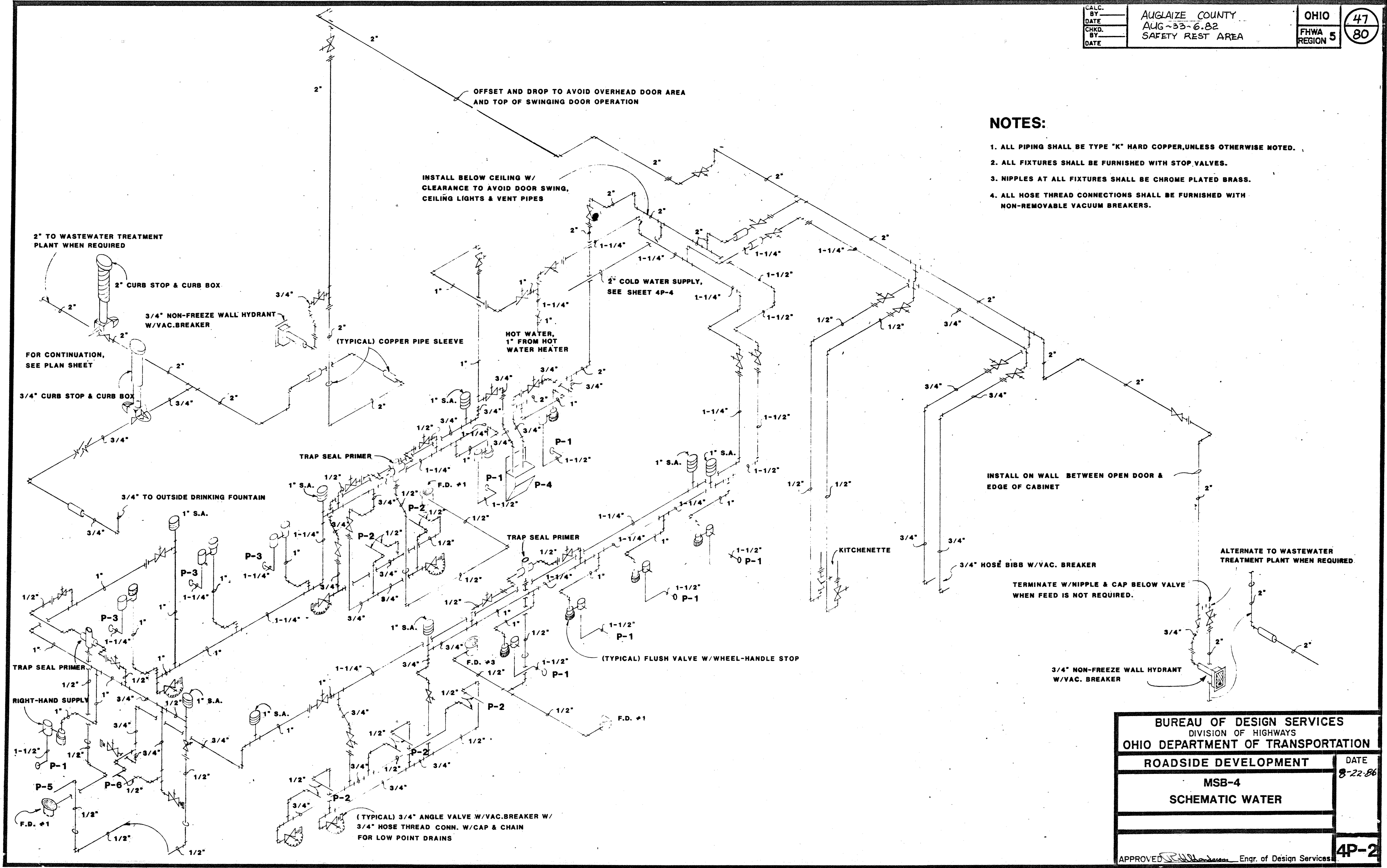
2" TYPE "K" HARD COPPER TUBING. 4'-0" MIN. COVER
FROM WELL TO UNDERGROUND STORAGE TANK

NOTES:
1. THE ASTERISK (*) WHERE SHOWN ON THE PLAN INDICATES
REFERENCE SHALL BE MADE TO P4-2 FOR CONT. OF PIPING.
2. COPPER PIPE SLEEVES SHALL BE FURNISHED AND INSTALLED AS
SHOWN OR REQUIRED FOR ALL WATE 1 LINES PASSING THROUGH
WALLS OR FLOORS.

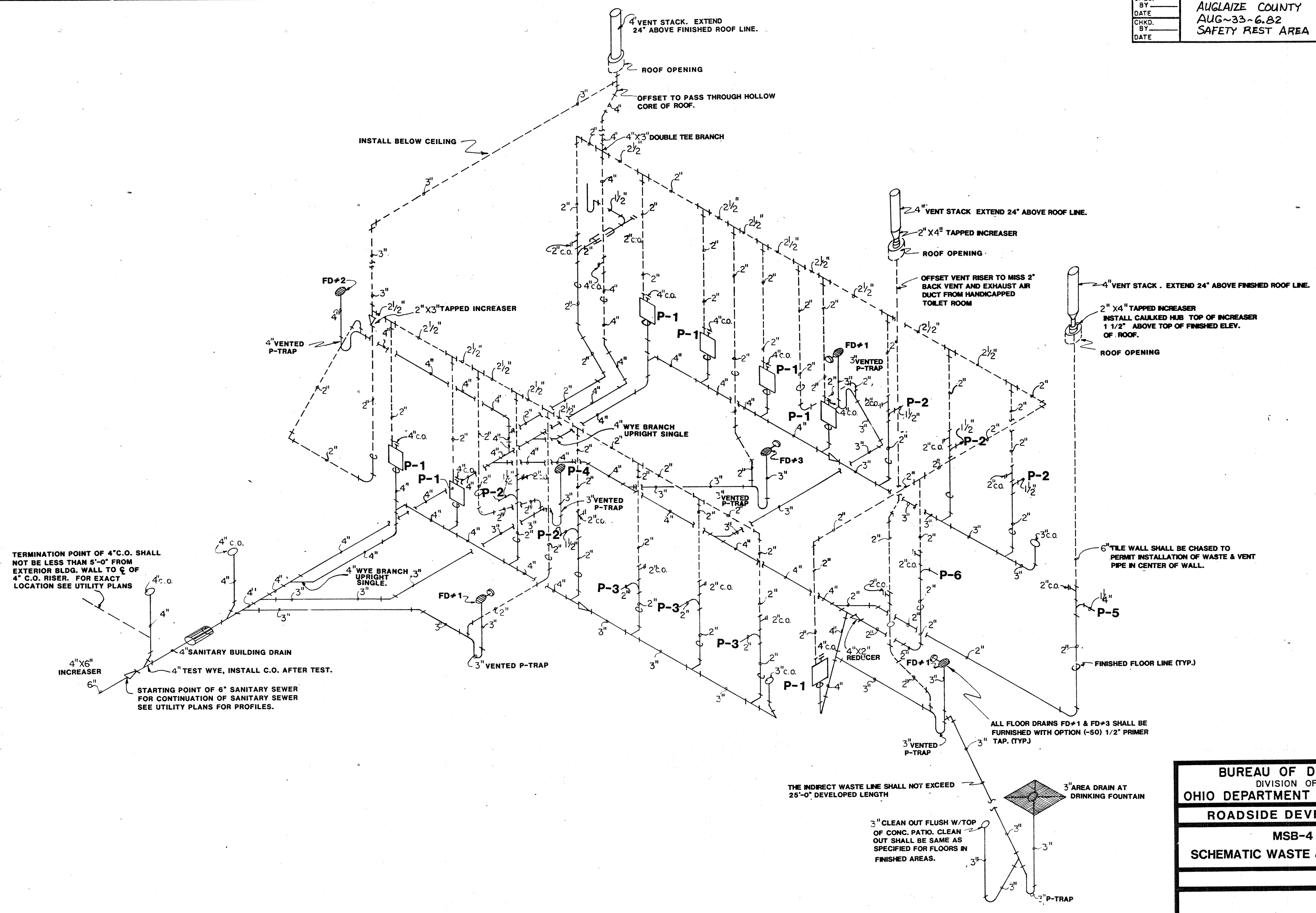
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8-22-86
MSB-4	
PLUMBING PLANS	
APPROVED <i>[Signature]</i> Engr. of Design Services	4P-1

NOTES:

1. ALL PIPING SHALL BE TYPE "K" HARD COPPER, UNLESS OTHERWISE NOTED.
2. ALL FIXTURES SHALL BE FURNISHED WITH STOP VALVES.
3. NIPPLES AT ALL FIXTURES SHALL BE CHROME PLATED BRASS.
4. ALL HOSE THREAD CONNECTIONS SHALL BE FURNISHED WITH NON-REMOVABLE VACUUM BREAKERS.



BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8-22-86
MSB-4 SCHEMATIC WATER	
APPROVED <i>[Signature]</i> Engr. of Design Services	
4P-2	



TERMINATION POINT OF 4" C.O. SHALL NOT BE LESS THAN 5'-0" FROM EXTERIOR BLDG. WALL TO C OF 4" C.O. RISER. FOR EXACT LOCATION SEE UTILITY PLANS

STARTING POINT OF 6" SANITARY SEWER FOR CONTINUATION OF SANITARY SEWER SEE UTILITY PLANS FOR PROFILES.

ALL FLOOR DRAINS FD#1 & FD#3 SHALL BE FURNISHED WITH OPTION (-50) 1/2" PRIMER TAP. (TYP.)

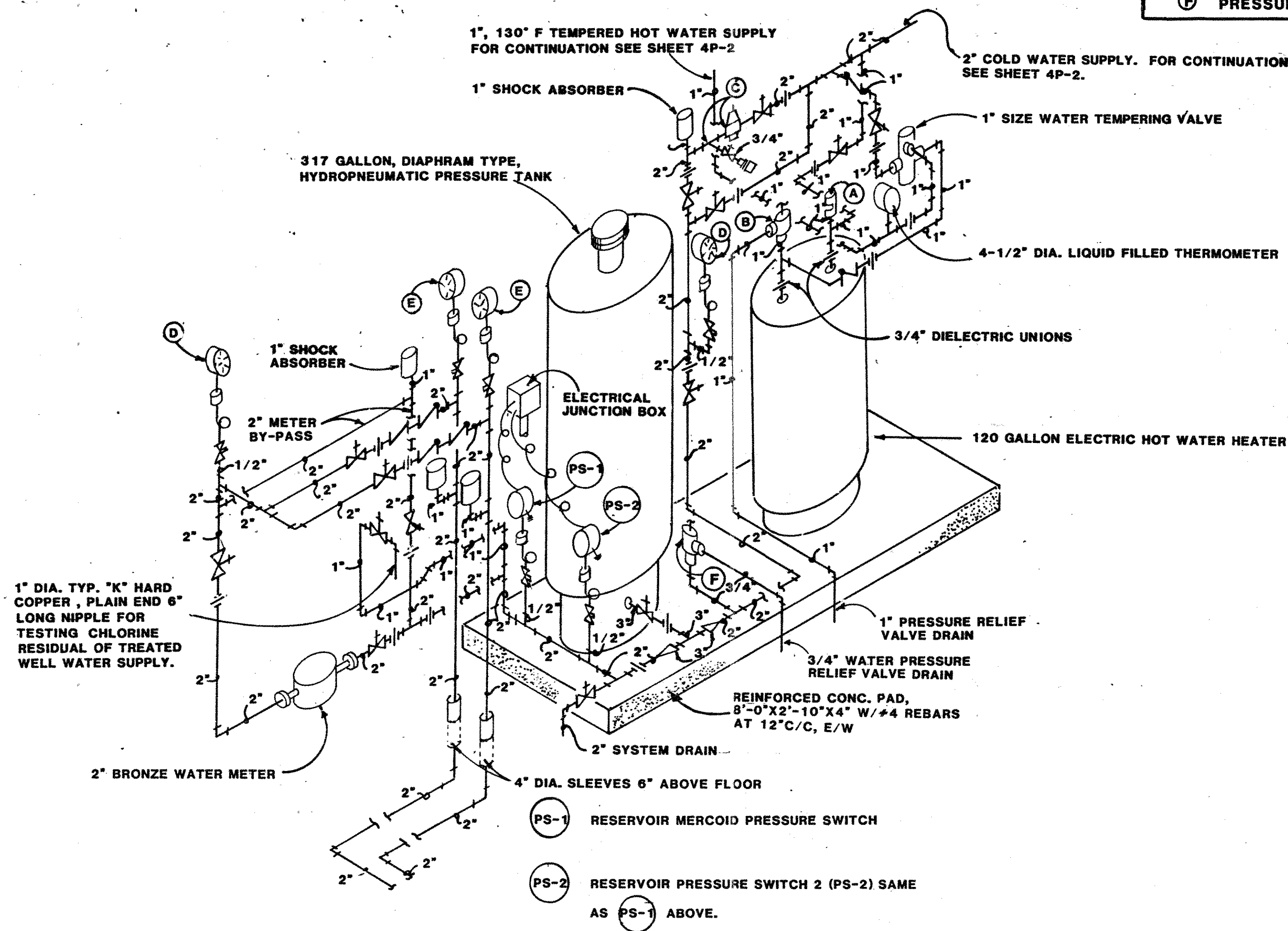
THE INDIRECT WASTE LINE SHALL NOT EXCEED 25'-0" DEVELOPED LENGTH

3" CLEAN OUT FLUSH W/TOP OF CONC. PATIO. CLEAN OUT SHALL BE SAME AS SPECIFIED FOR FLOORS IN FINISHED AREAS.

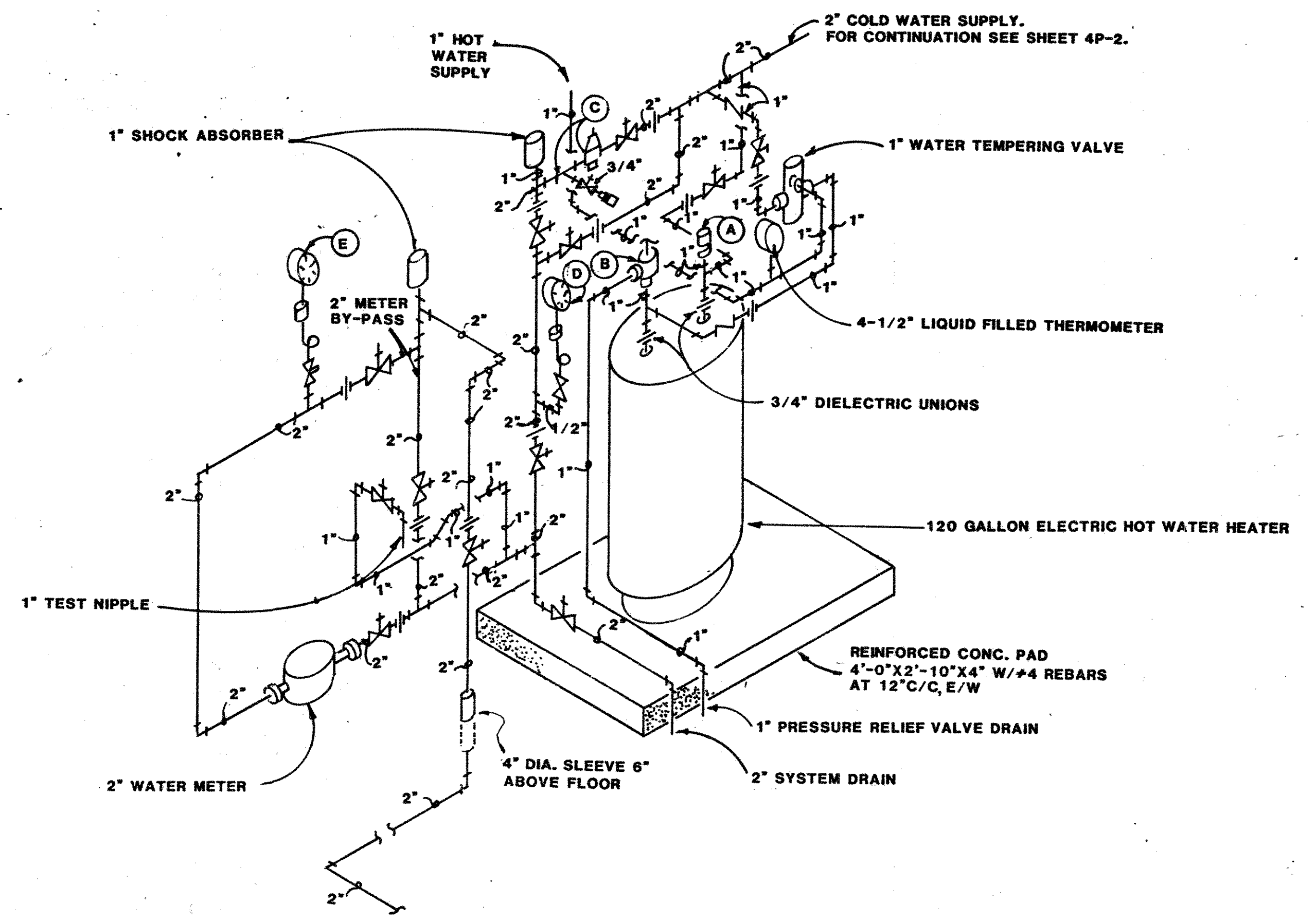
6" TILE WALL SHALL BE CHASED TO PERMIT INSTALLATION OF WASTE & VENT PIPE IN CENTER OF WALL.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8-20-86
MSB-4	
SCHEMATIC WASTE & VENT PIPING	
APPROVED <i>[Signature]</i> Engr. of Design Services	

- (A) 1" DIA. VACUUM RELIEF VALVE
- (B) PRESSURE & TEMP. RELIEF VALVE
- (C) 2" DIA. WATER PRESSURE REDUCING VALVE
- (D) 3-1/2" DIA. PRESSURE GAUGE W/TYPICAL SNUBBER ASSEMBLY
- (E) 3-1/2" DIA. COMPOUND PRESSURE GAUGE W/1/4" BRASS PIGTAIL, 1/4" SNUBBER, & 1/4" BRASS TEE HANDLE COCK
- (F) PRESSURE RELIEF VALVE



4P-4-01
WELL WATER SYSTEM

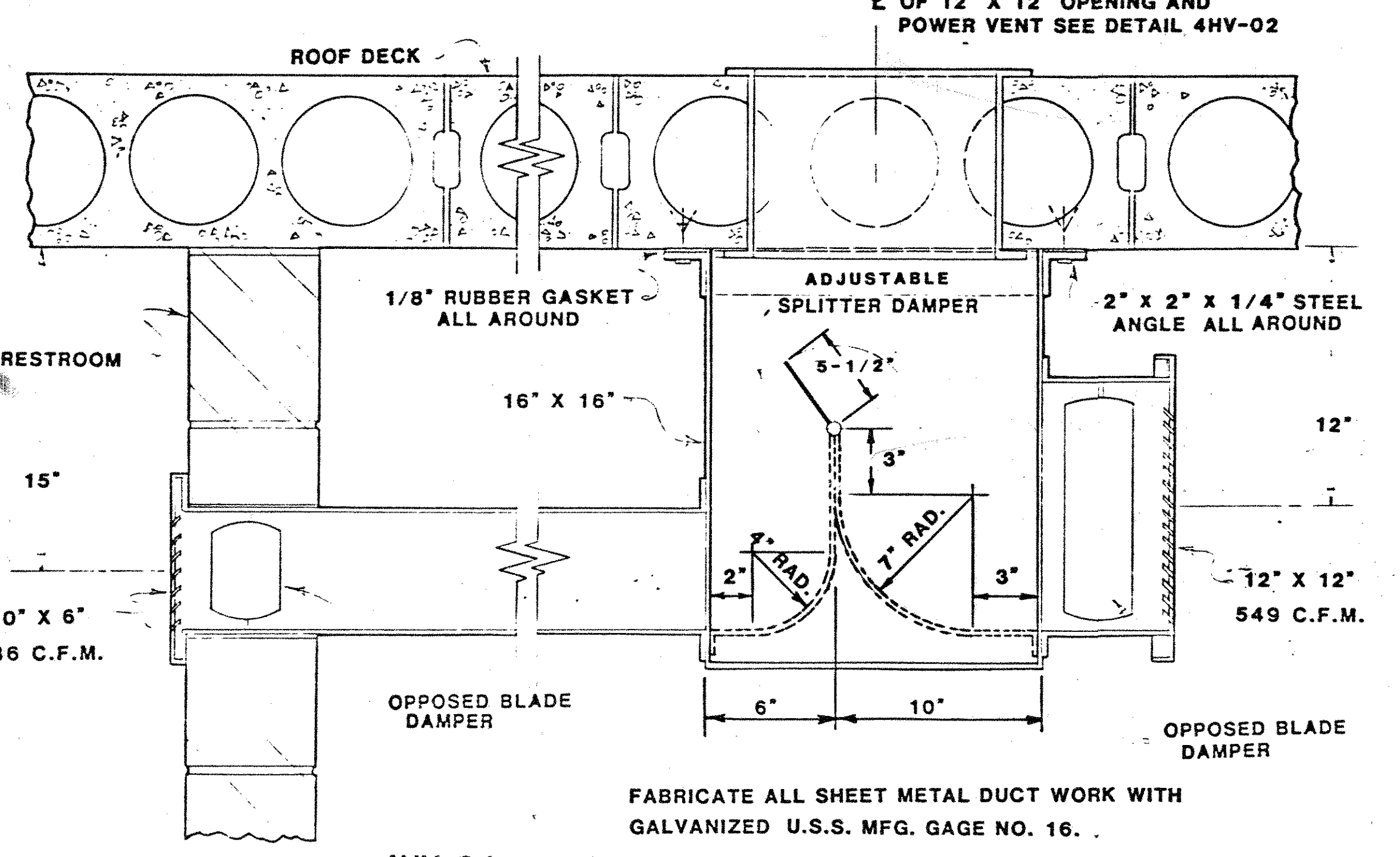
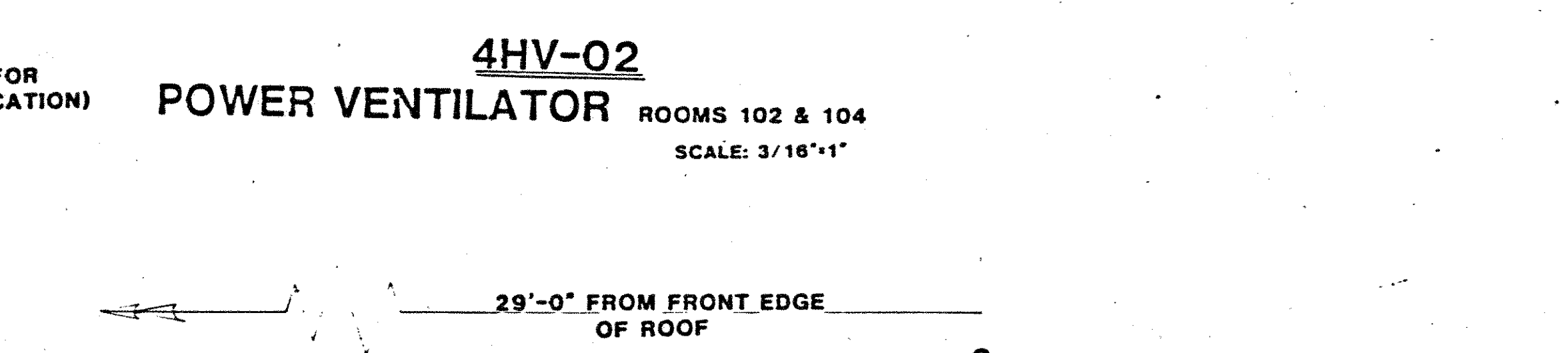
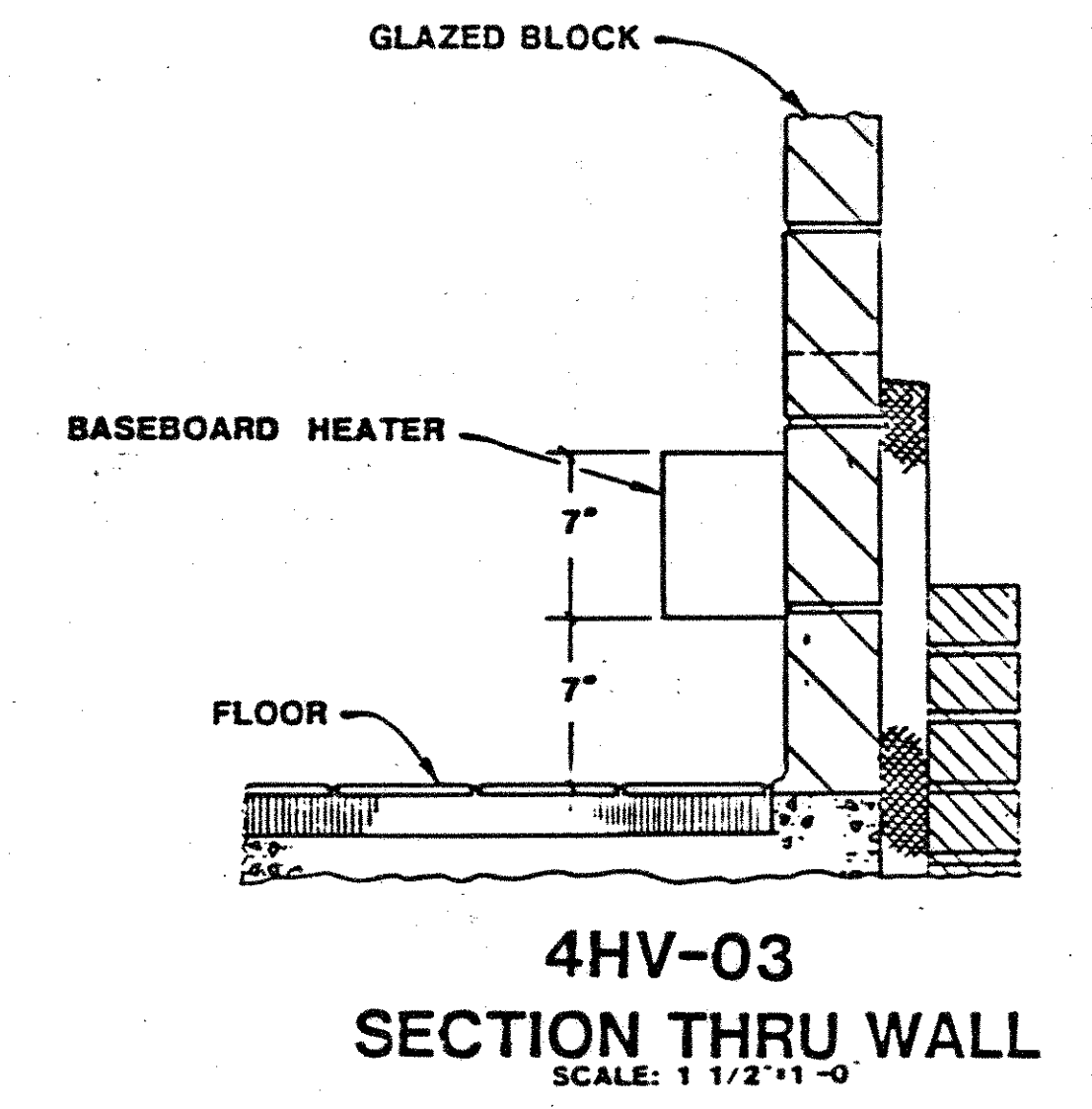
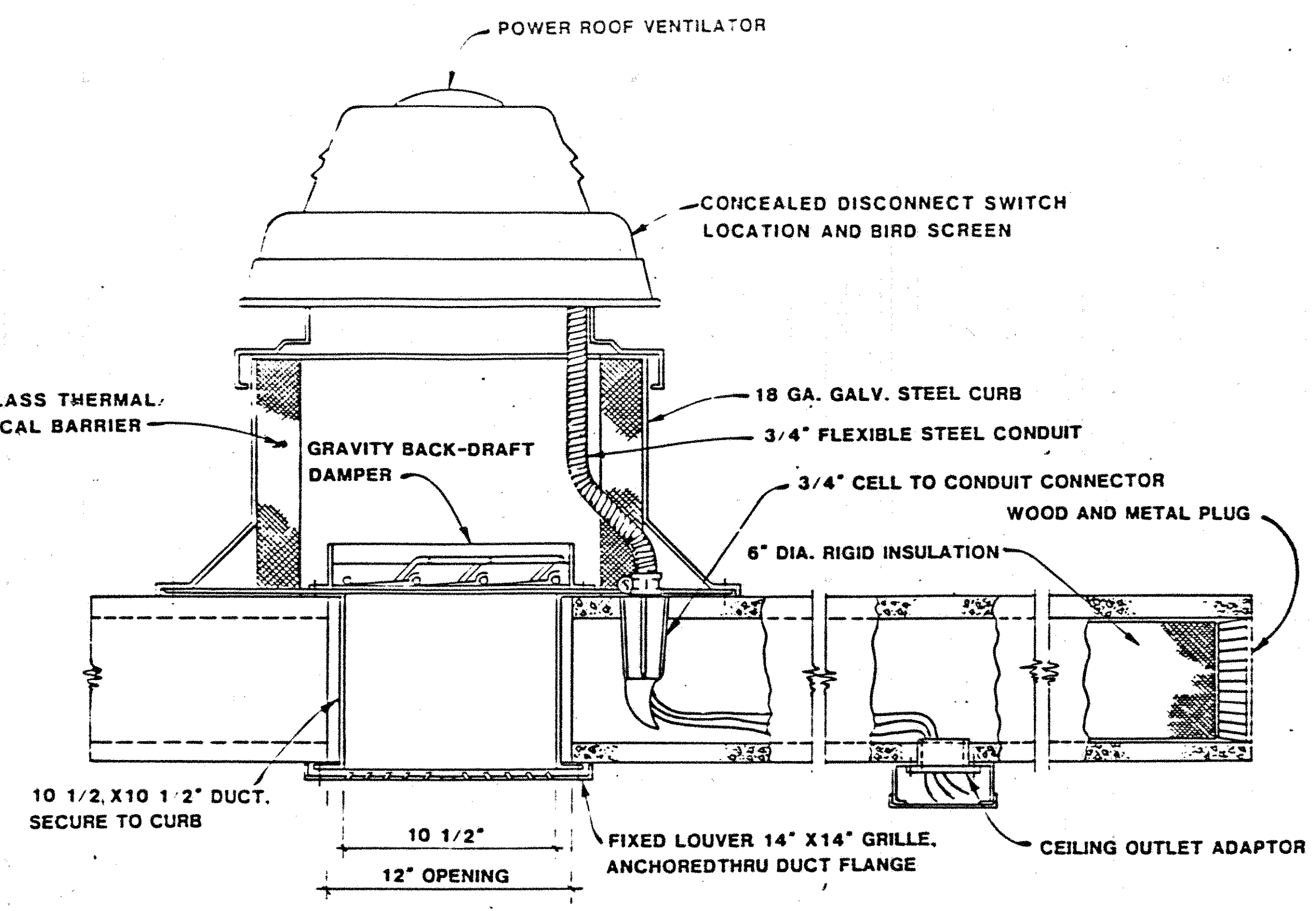
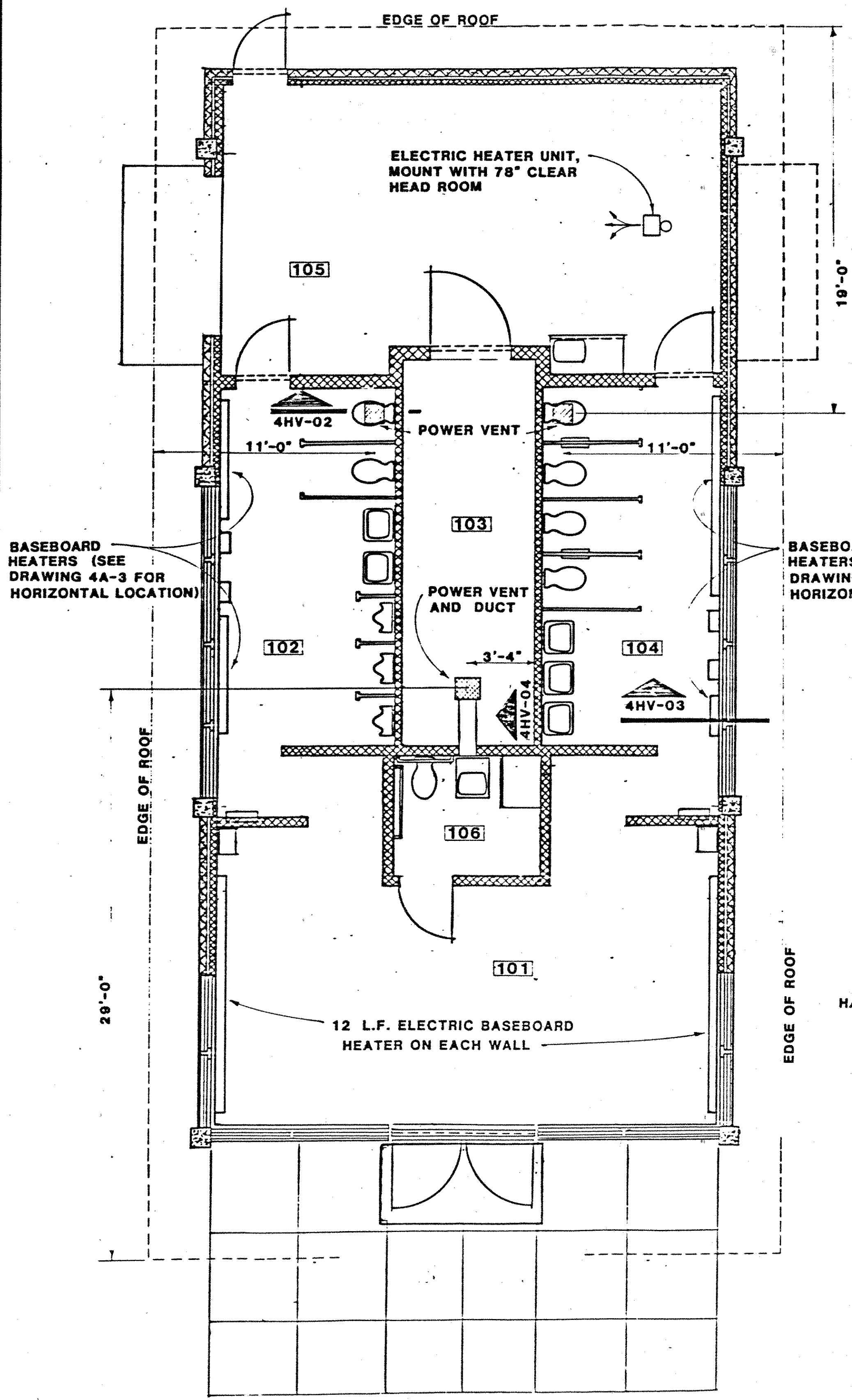


4P-4-02
PUBLIC WATER SYSTEM

- NOTES:
- FOR NAMES OF APPROVED MANUFACTURERS FOR ITEMS NOTED HEREON REFER TO SPECIFICATIONS.
 - REVERSE POSITION OF PLUMBING LINES MAY BE REQUIRED DUE TO DOOR RELOCATION & EQUIPMENT REPLACEMENT. ALSO SITE CONDITIONS. CHECK SITE PLANS & MAKE ALL CORRECTIONS AS REQUIRED.
 - ALL UNVENTED FLOOR DRAINS SHALL NOT EXCEED 10'-0" IN DEVELOPED LENGTH.

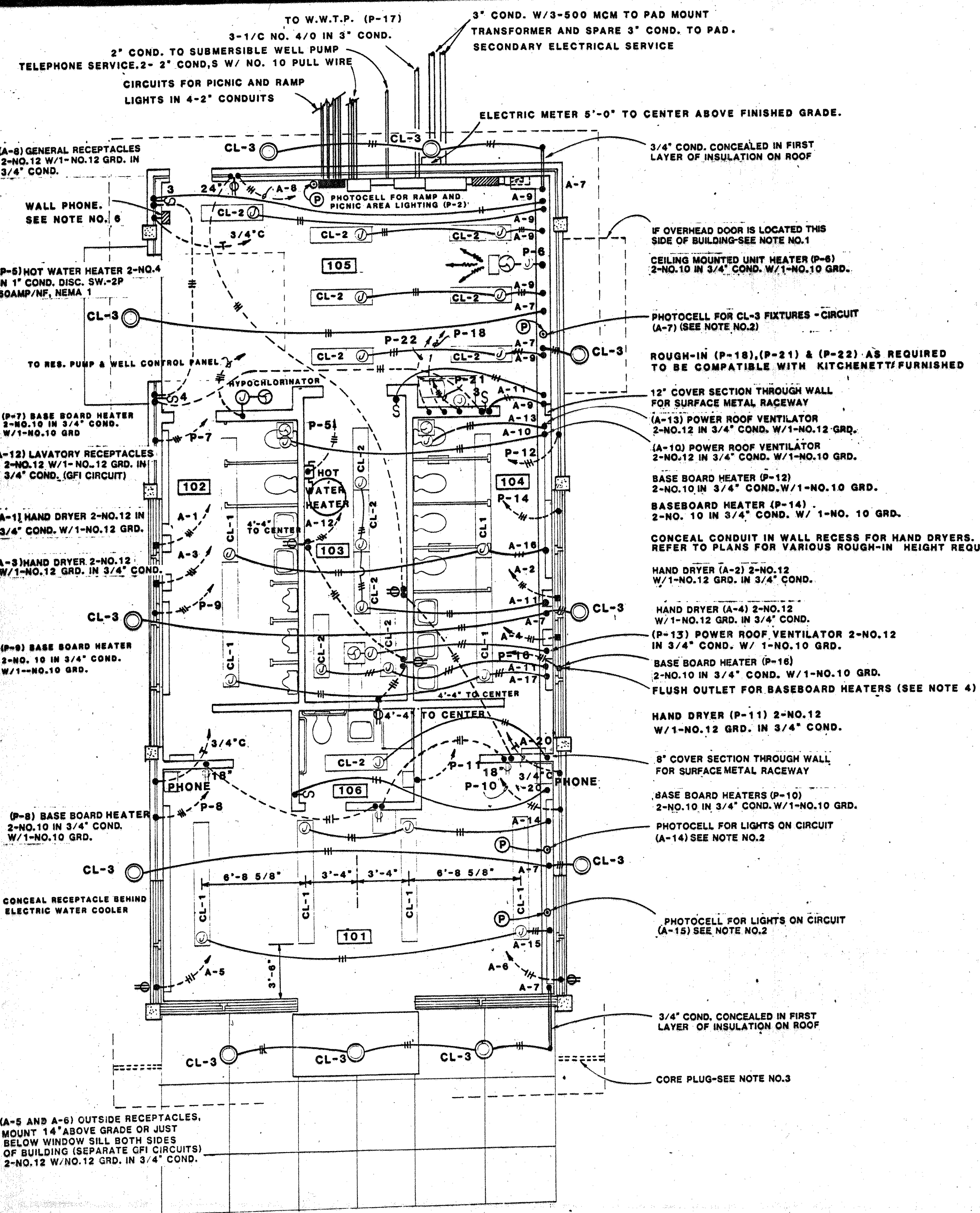
SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85 8/26/86
MSB-4 PUBLIC & WELL WATER SYSTEMS	
APPROVED <i>[Signature]</i> Engr. of Design Services	



SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4	8/11/86
HEATING AND VENTILATION	3/2/87
APPROVED _____ Engr. of Design Services	4 HV



LEGEND

SYMBOL	MEANING	MOUNTING HEIGHT
○	LIGHTING OUTLET, CEILING	SEE FIXTURE SCHEDULE
3 3 3	SWITCH, 3-WAY, ETC.	4'-8"
⊕	DUPLEX RECEPTACLE	AS NOTED
⊙	PHOTOELECTRIC CELL	18" ABOVE ROOF
⊕	PRESSURE SWITCH	AS REQUIRED
⊕	JUNCTION BOX	AS REQUIRED
⊕	WIRING CONCEALED IN CORE OF CEILING	HASH MARKS INDICATE NUMBER OF CONDUCTORS WHEN MORE THAN TWO ARE PRESENT
⊕	WIRING CONCEALED IN OR BELOW FLOOR SLAB	
⊕	MOTOR OUTLET	AS REQUIRED
⊕	DISCONNECT SWITCH	5'-4" OR AS REQUIRED
⊕	STARTER W/DISCONNECT SWITCH BELOW	5'-4" OR AS REQUIRED
⊕	FLUSH CEILING OUTLET WITH BLANK COVER	
⊕	WIRED JUNCTION	AS REQUIRED
⊕	POWER PANEL "P"	AS REQUIRED
⊕	LIGHTING PANEL "A"	AS REQUIRED

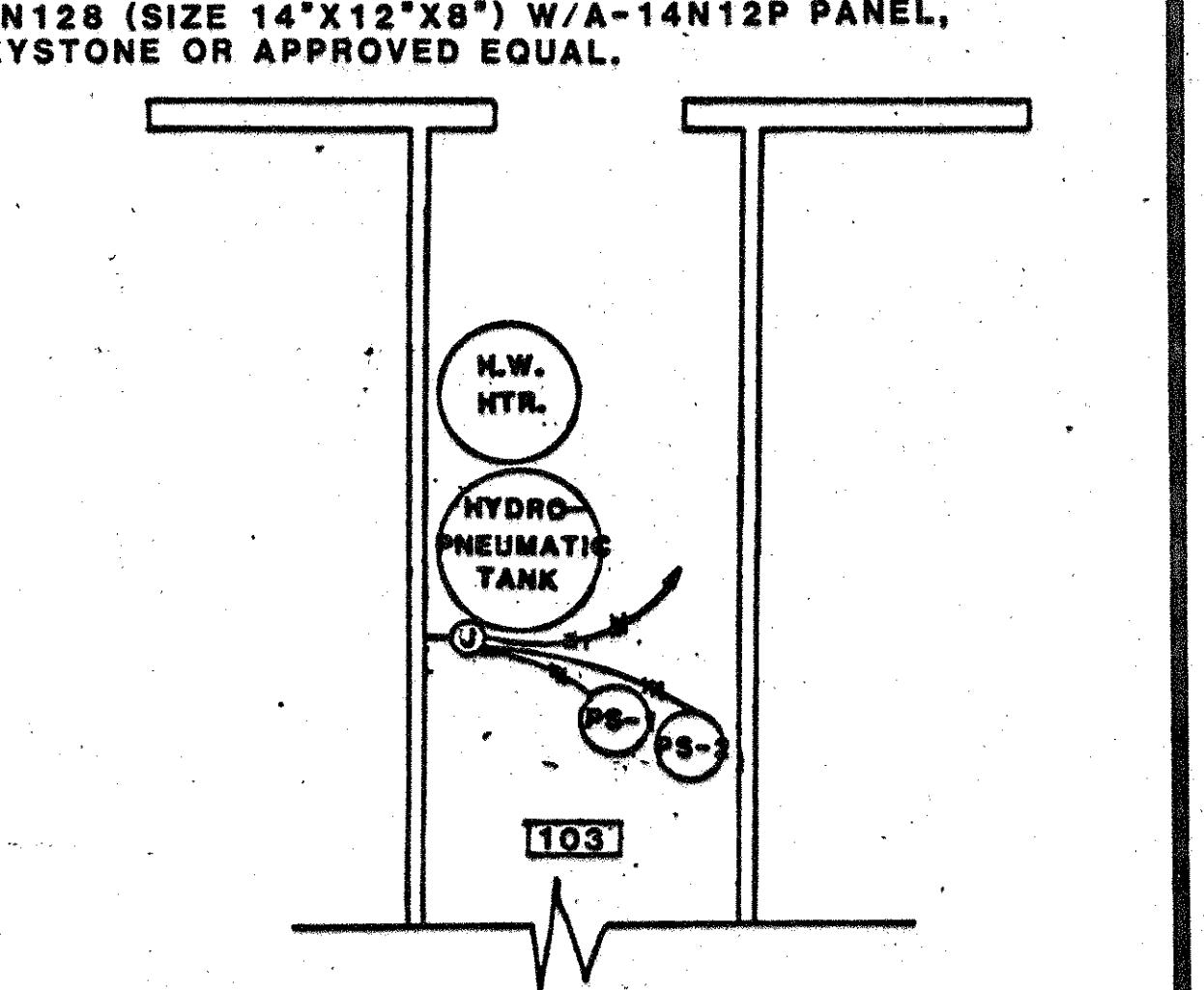
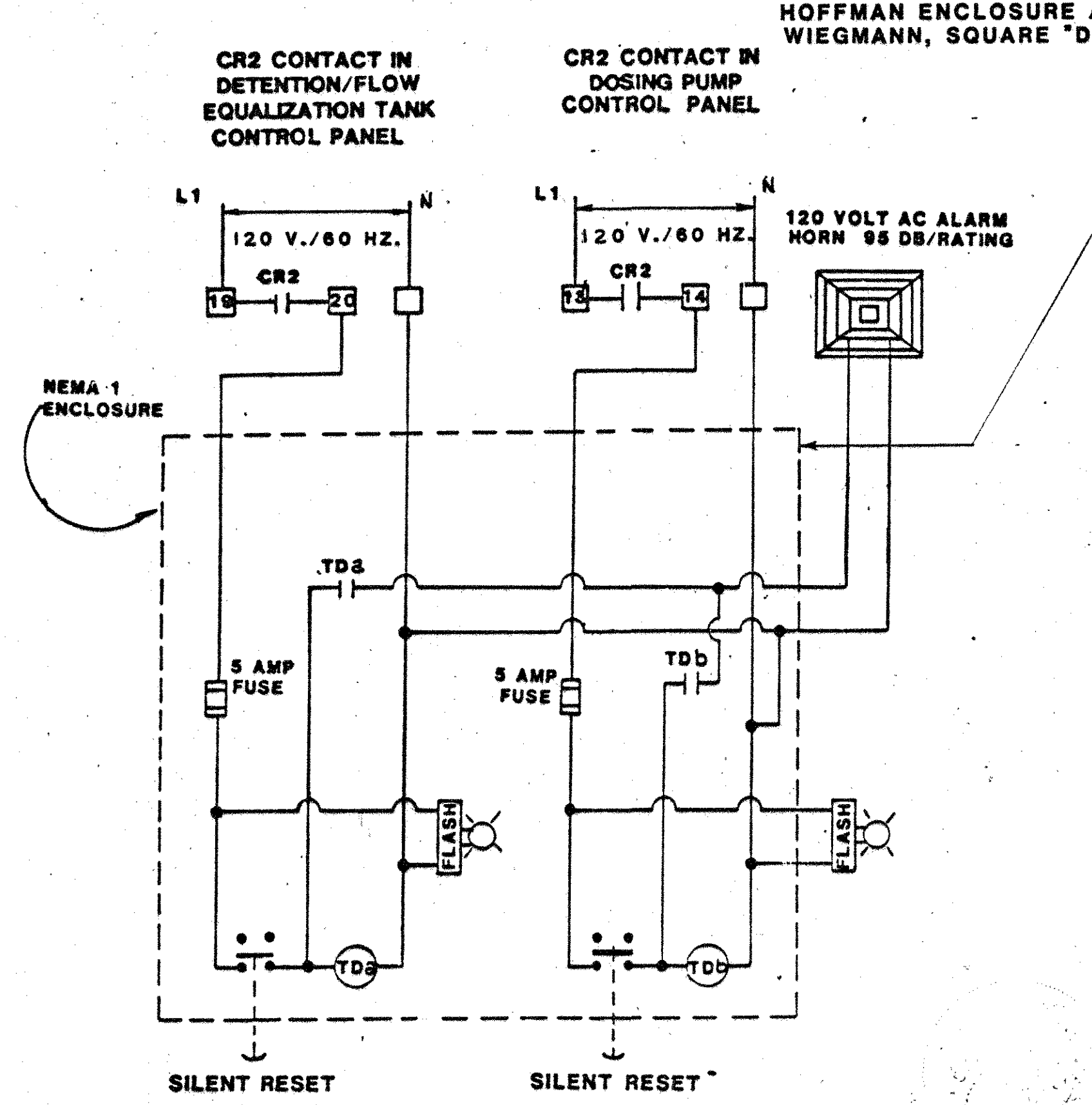
FIXTURE SCHEDULE

FIXT. NO.	MANUFACTURER	CATALOGUE NO.	LAMP SIZE	REMARKS:
CL-1	MILLER	CP-2191-08	4-F40 WW	RAPID START
CL-2	MILLER	CP-2191-04	2-F40 WW	RAPID START
CL-3	MOLOPHANE	PARK PAK #247	70W. 582	HIGH PRES. SODIUM

NOTE: FIXTURE NUMBER LETTER PREFIX DENOTES TYPE OF MOUNTS AS FOLLOWS:
 CL-MOUNT ON CEILING SURFACE, W-MOUNT ON WALL

NOTE: FIXTURES SHOWN ARE GIVEN FOR TYPE AND QUALITY ONLY, OTHER FIXTURE MANUFACTURERS SHALL BE COLUMBIA, DAYBRITE, MARCO, MC PHILBEN, SUNBEAM, AND SMITHCRAFT.

- ### NOTES
- IF OVERHEAD DOOR IS LOCATED IN THIS SIDE OF BUILDING, ALL ELECTRICAL LIGHTS, PANELS, SURFACE METAL RACEWAY, THERMOSTATS, SWITCHES, HEATERS, ETC., SHALL BE LOCATED OPPOSITE HAND TO THE ARRANGEMENT SHOWN. THE MAIN SWITCH GEAR SHALL REMAIN ON THE SAME WALL BUT SHALL BE REVERSED FROM THAT SHOWN IN DETAIL, AND SHALL MOVE BACK TOWARDS THE SIDE OF THE BUILDING AWAY FROM THE OVERHEAD DOOR.
 - PHOTOCELLS SHALL BE MOUNTED ON THE END OF 3/4" CONDUIT AT 18" ABOVE THE ROOF. THE "WINDOW" OF THE SENSING DEVICE IN THE PHOTO-ELECTRIC CELL SHALL BE FACED DUE NORTH IF NO MARKING IS PROVIDED TO INDICATE AIMING THE DEVICE.
 - METAL CORE PLUGS SHALL BE INSTALLED BETWEEN THE INSULATION CORE AND WOOD CORE PLUG BY THE ELECTRICAL CONTRACTOR IN BOTH ENDS OF ALL DECK CORES USED FOR ELECTRICAL WIRING. INSULATION CORES AND WOOD CORE PLUGS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR. REFER TO DETAILS 4NY-82.
 - THE ELECTRICAL CONTRACTOR SHALL INSTALL A FLUSH OUTLET AND CONCEALED CONDUIT FOR ELECTRIC BASE BOARD HEATERS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE HEIGHT OF THE HEATING AND VENTILATING CONTRACTOR.
 - ALL WIRE, UNLESS OTHERWISE NOTED, SHALL BE TYPE "THW" OR "THHW" WITH COPPER CONDUCTORS. GREEN CONDUCTORS SHALL BE USED FOR GROUNDING PURPOSES.
 - THE ELECTRICAL CONTRACTOR SHALL ALWAYS INSTALL CONDUIT AND OUTLET BOX IN WALL. A STANDARD WALL HUNG TELEPHONE, DIRECT DIAL, FOR CANNETAKERS USE ONLY, WILL BE FURNISHED AND INSTALLED BY THE TELEPHONE COMPANY, WHEN SPECIFIED.



ELECTRICAL INSTALLATION REQUIRED FOR WELL WATER SYSTEM

REV. 10-30-87

BUREAU OF DESIGN SERVICES
 DIVISION OF HIGHWAYS
 OHIO DEPARTMENT OF TRANSPORTATION
 ROADSIDE DEVELOPMENT

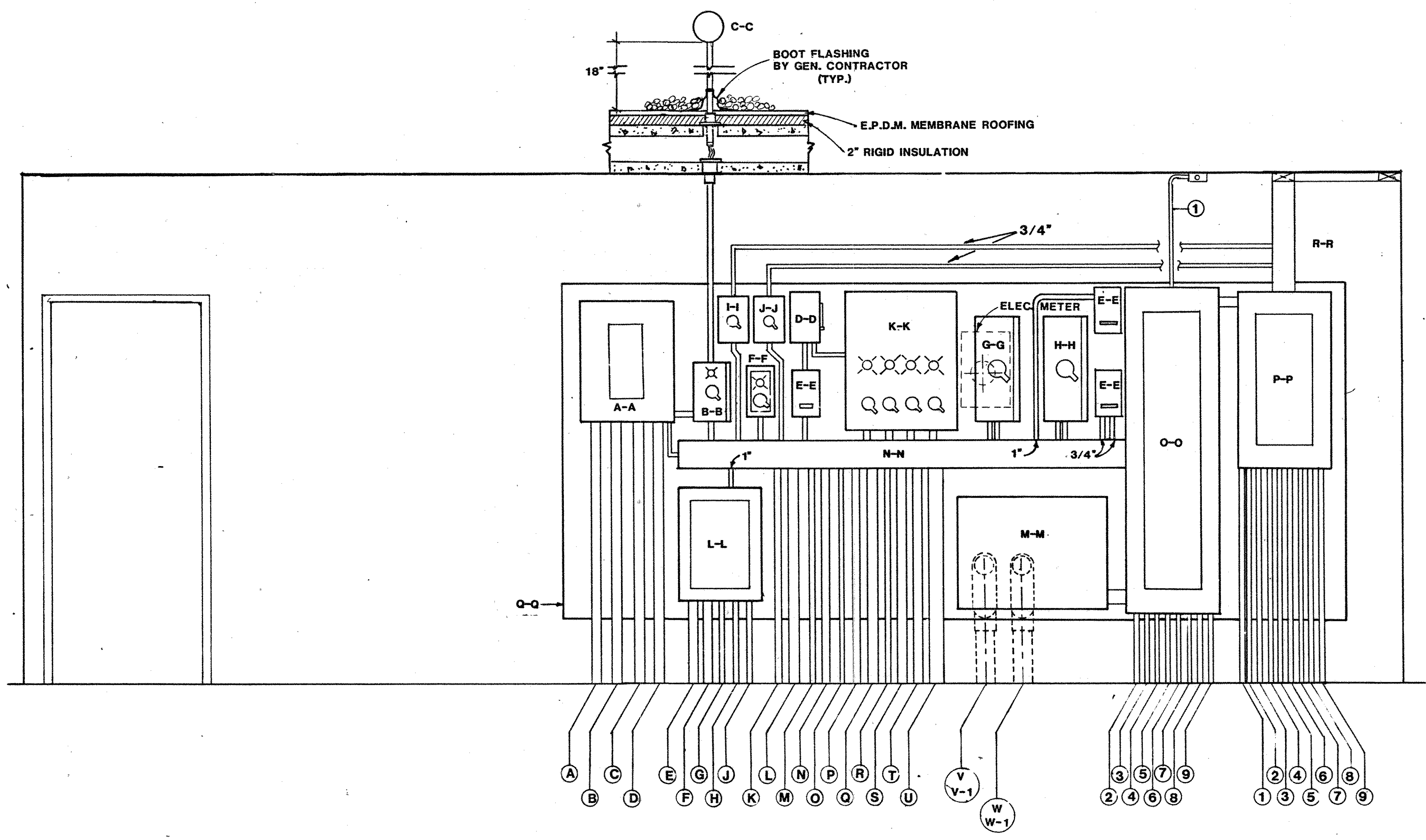
MSB-4
 ELECTRICAL PLAN

DATE
 5/2/85
 10/31/85
 3-12-86
 8-11-86
 3-2-87
 10-30-87

APPROVED *[Signature]* Engr. of Design Services

4E-1

400 AMPS

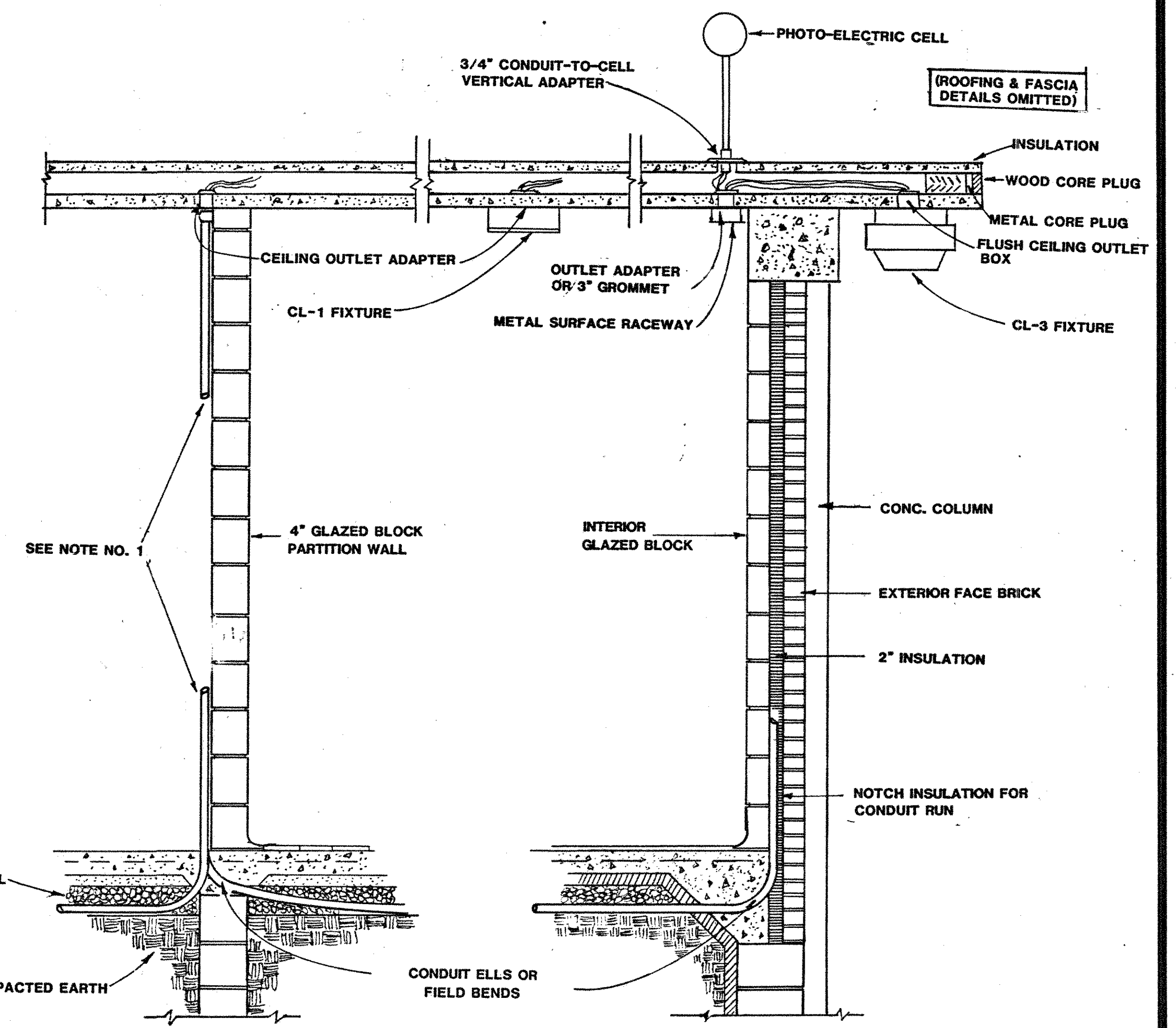


ELECTRICAL PANEL
4E-2-01

LEGEND

- | | | | |
|-----|--|-----|--------------------------------|
| A-A | P & R PANEL | K-K | RES. & WELL PUMP CONTROL PANEL |
| B-B | P & R LIGHTING CONTACTOR & DISCONNECT SWITCH | L-L | TELEPHONE |
| C-C | P & R PHOTO-ELECTRIC CELL SWITCH | M-M | C/T CABINET |
| D-D | SUB. WELL PUMP DISCONNECT SWITCH | N-N | 6X6 WIREWAY |
| E-E | SUB. WELL & RES. PUMP MOTOR CONTROL BOX | O-O | PANEL "P" |
| F-F | SUB. WELL PUMP A/C MAGNETIC STARTER | P-P | PANEL "A" |
| G-G | RESERVOIR PUMP #1 | Q-Q | PLYWOOD MOUNTING BOARD |
| H-H | RESERVOIR PUMP #2 | R-R | SURFACE METAL RACEWAY |
| I-I | LIGHTING CONTACTOR A-14 | | |
| J-J | LIGHTING CONTACTOR A-15 | | |

SCALE: 3/4"=1'-0"



ELECTRICAL DISTRIBUTION
4E-2-02

ELECTRICAL DISTRIBUTION NOTES

- ELECTRICAL DEVICE BOXES INSTALLED IN THE 4" PARTITION WALL BETWEEN ROOM 103 AND ROOMS 101, 102 AND 104 MAY BE SERVICED BY EXPOSED CONDUIT ATTACHED TO THE 4" WALL INSIDE OF ROOM 103. INSTEAD OF CONCEALING CONDUIT INSIDE OF THE 4" WALL, DISCONNECT SWITCHES, MOTOR CONTROLS AND OTHER ELECTRICAL DEVICES INSIDE OF ROOM 103 MAY BE SERVICED BY ELECTRICAL CONDUITS ATTACHED TO THE WALL; HOWEVER, NO ELECTRICAL CONDUITS SHALL RUN EXPOSED ACROSS THE FLOOR OR CEILING. THE ONLY EXPOSED ELECTRICAL CONDUITS IN ROOM 105 SHALL BE BETWEEN THE PANELBOARD AND THE FLOOR OR CEILING. NO EXPOSED ELECTRICAL CONDUITS SHALL BE PERMITTED IN ROOMS 101, 102 AND 104 EXCEPT FOR THE CEILING MOUNTED SURFACE METAL RACEWAY SHOWN ON THE PLANS.
- METAL CORE PLUGS SHALL BE INSTALLED BETWEEN THE INSULATION CORES AND WOOD PLUGS BY THE ELECTRICAL CONTRACTOR IN BOTH ENDS OF ALL CORES USED FOR ELECTRICAL WIRING. INSULATION CORES AND WOOD CORE PLUGS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

3. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE(1) 1-INCH CONDUIT FROM 6X6 WIREWAY (N-N) TO THE TELEPHONE CABINET (L-L) AND EXTEND ONE(1) INSULATED 1/c, NO. 8 GROUND WIRE FROM PANEL "P" (O-O) TO THE TELEPHONE CABINET (L-L). LEAVE 3'-0" OF COILED GROUND WIRE IN TELEPHONE CABINET FOR TELEPHONE CO. TO MAKE NECESSARY GROUND CONNECTION TO THEIR SYSTEM.

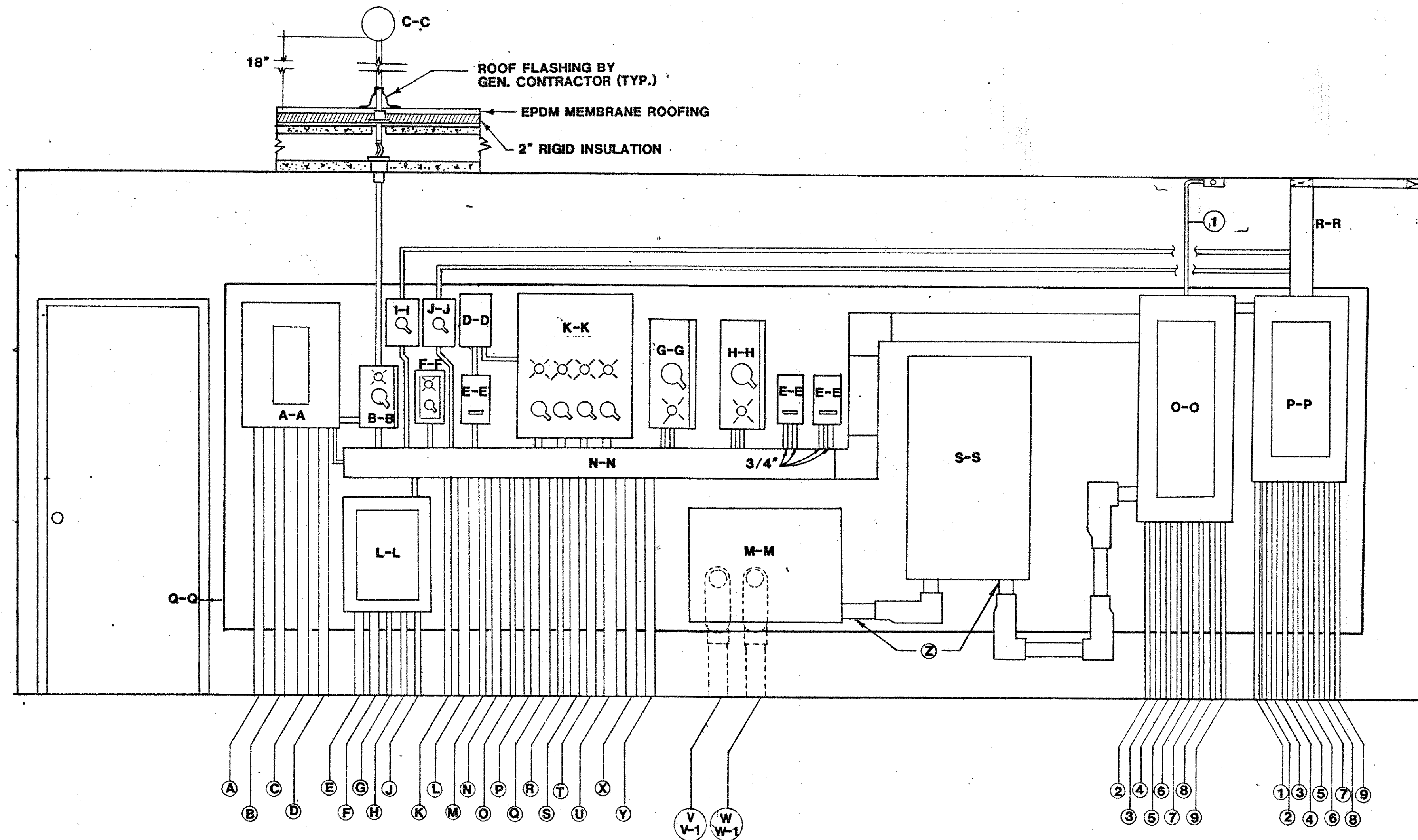
SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS		DATE
OHIO DEPARTMENT OF TRANSPORTATION		5/2/85
ROADSIDE DEVELOPMENT	MSB-4 400 AMPS	10/31/85
ELECTRICAL PANEL/DISTRIBUTION		
APPROVED <i>[Signature]</i> Engr. of Design Services		4E-2 400 AMP

600 AMPS

AUGLAIZE COUNTY
AUG-33-6.82
SAFETY REST AREA

53
80



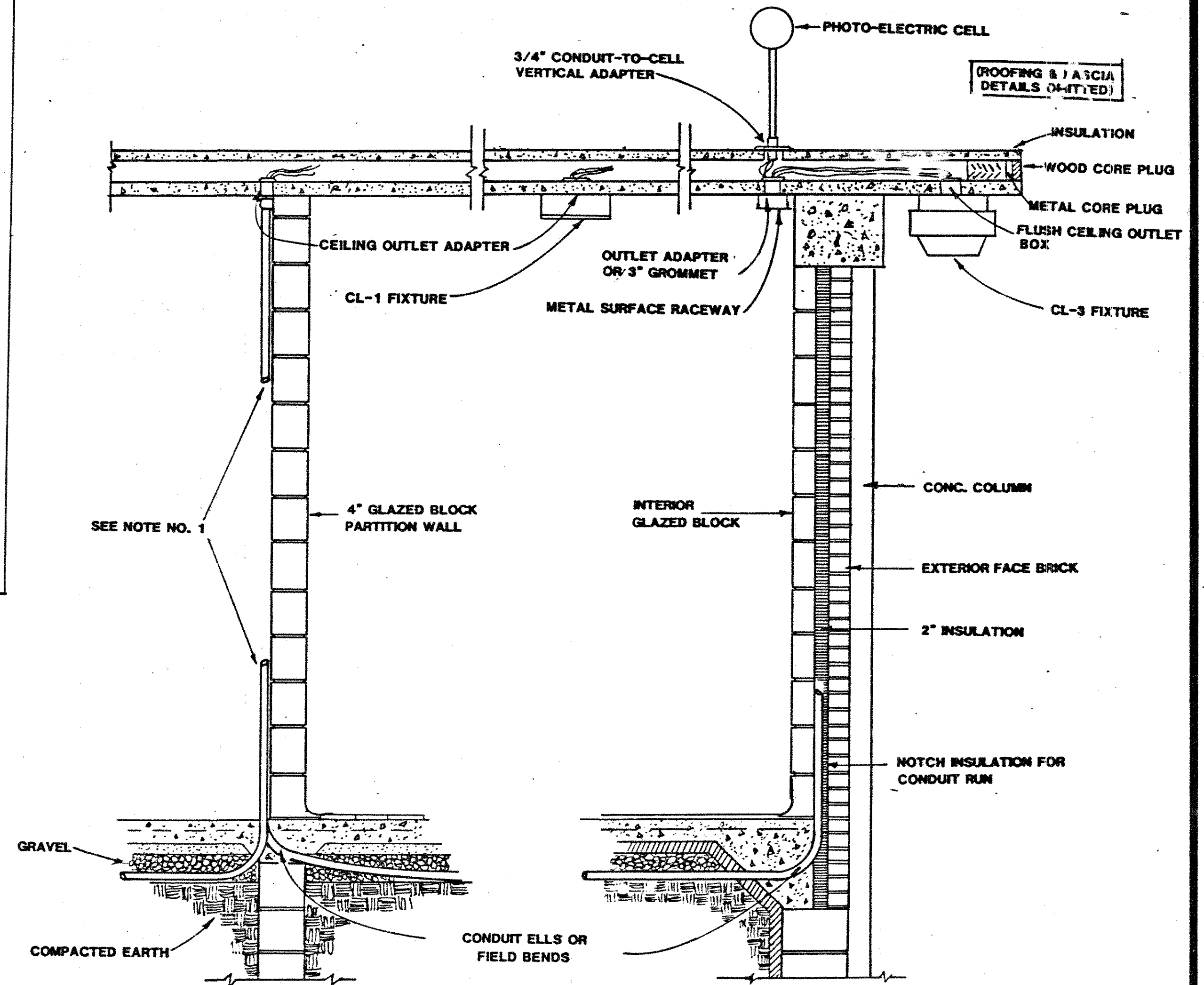
**ELECTRICAL PANEL
4E-2-01**

LEGEND

- | | | | |
|-----|--|-----|--------------------------------|
| A-A | P & R PANEL | K-K | RES. & WELL PUMP CONTROL PANEL |
| B-B | P & R LIGHTING CONTACTOR & DISCONNECT SWITCH | L-L | TELEPHONE |
| C-C | P & R PHOTO-ELECTRIC CELL SWITCH | M-M | C/T CABINET |
| D-D | SUB. WELL PUMP DISCONNECT SWITCH | N-N | 6X6 WIREWAY |
| E-E | SUB. WELL & RES. PUMP MOTOR CONTROL BOX | O-O | PANEL "P" |
| F-F | SUB. WELL PUMP A/C MAGNETIC STARTER | P-P | PANEL "A" |
| G-G | RESERVOIR PUMP #1 | Q-Q | PLYWOOD MOUNTING BOARD |
| H-H | RESERVOIR PUMP #2 | R-R | SURFACE METAL RACEWAY |
| I-I | LIGHTING CONTACTOR A-14 | S-S | SERVICE ENTRANCE SWITCH |
| J-J | LIGHTING CONTACTOR A-15 | | |

3. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE(1) 1-INCH CONDUIT FROM 6X6 WIREWAY (N-N) TO THE TELEPHONE CABINET (L-L) AND EXTEND ONE(1) INSULATED 1/c. NO. 8 GROUND WIRE FROM PANEL "P" (O-O) TO THE TELEPHONE CABINET (L-L). LEAVE 3'-0" OF COILED GROUND WIRE IN TELEPHONE CABINET FOR TELEPHONE CO. TO MAKE NECESSARY GROUND CONNECTION TO THEIR SYSTEM.

SCALE: 3/4"=1'-0"



**ELECTRICAL DISTRIBUTION
4E-2-02**

ELECTRICAL DISTRIBUTION NOTES

1. ELECTRICAL DEVICE BOXES INSTALLED IN THE 4" PARTITION WALL BETWEEN ROOM 103 AND ROOMS 101, 102 AND 104 MAY BE SERVICED BY EXPOSED CONDUIT ATTACHED TO THE 4" WALL INSIDE OF ROOM 103, INSTEAD OF CONCEALING CONDUIT INSIDE OF THE 4" WALL. DISCONNECT SWITCHES, MOTOR CONTROLS AND OTHER ELECTRICAL DEVICES INSIDE OF ROOM 103 MAY BE SERVICED BY ELECTRICAL CONDUITS ATTACHED TO THE WALL; HOWEVER, NO ELECTRICAL CONDUITS SHALL RUN EXPOSED ACROSS THE FLOOR OR CEILING. THE ONLY EXPOSED ELECTRICAL CONDUITS IN ROOM 103 SHALL BE BETWEEN THE PANELBOARD AND THE FLOOR OR CEILING. NO EXPOSED ELECTRICAL CONDUITS SHALL BE PERMITTED IN ROOMS 101, 102 AND 104 EXCEPT FOR THE CEILING MOUNTED SURFACE METAL RACEWAY SHOWN ON THE PLANS.
2. METAL CORE PLUGS SHALL BE INSTALLED BETWEEN THE INSULATION CORES AND WOOD PLUGS BY THE ELECTRICAL CONTRACTOR IN BOTH ENDS OF ALL CORES USED FOR ELECTRICAL WIRING. INSULATION CORES AND WOOD CORE PLUGS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4 600 AMPS	10/31/85
ELECTRICAL PANEL/DISTRIBUTION	
APPROVED <i>[Signature]</i> Engr. of Design Services	
4E-2 600 AMP	

ELECTRICAL PANEL NOTES

400 AMP

P & R LIGHTING PANEL (A-A)

- (A) 2" COND. PER 713.04 W/3-NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000 VOLT CONDUCTORS. FEED TO RAMP AND AREA LIGHTS CIRCUIT "A". EXTEND TO 1ST PULL BOX AND PROVIDE (3) EPOXY FILLED SPLICE KIT PER 713.15. 2" DIA., 36" RADIUS 90° ELBOW AS PER 713.04 SHALL BE USED TO ENTER BUILDING, (120/240 VOLT, 3-WIRE GROUNDED NEUTRAL CIRCUIT)
- (B) 2" COND. PER 713.04 W/3-NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000 VOLT CONDUCTORS. FEED TO RAMP AND AREA LIGHTS CIRCUIT "B". EXTEND TO 1ST PULL BOX AND PROVIDE (3) EPOXY FILLED SPLICE KITS PER 713.15. 2" DIA., 36" RADIUS 90° ELBOW AS PER 713.04 SHALL BE USED TO ENTER BUILDING. (120/240 VOLT, 3-WIRE GROUNDED NEUTRAL CIRCUIT).
- (C) 2" COND. PER 713.04 W/3- NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000 VOLT CONDUCTORS. FEED TO RAMP AND AREA LIGHTS CIRCUIT "C". EXTEND TO 1ST PULL BOX AND PROVIDE (3) EPOXY FILLED SPLICE KITS PER 713.15. 2" DIA., 36" RADIUS 90° ELBOWS AS PER 713.04 SHALL BE USED TO ENTER BUILDING. (120/240 VOLT, 3-WIRE GROUNDED NEUTRAL CIRCUIT.) IF ONLY "A" AND "B" CIRCUITS IS USED, TERMINATE CIRCUIT "C" IN 1ST PULL BOX. INSTALL AS NOTED HERE-IN.
- (D) 2" COND. PER 713.04 W/3-NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000 VOLT CONDUCTOR. FEED TO RAMP AND AREA LIGHTS CIRCUIT "D". EXTEND TO 1ST PULL BOX AND PROVIDE (3) EPOXY FILLED SPLICE KITS PER 713.15. 2" DIA., 36" RADIUS 90° ELBOWS AS PER 713.04 SHALL BE USED TO ENTER BUILDING. (120/240 VOLT, 3-WIRE GROUNDED NEUTRAL CIRCUIT.) IF ONLY "A", "B" AND "C" CIRCUITS ARE USED, TERMINATE CIRCUIT "D" IN 1ST PULL BOX. INSTALL AS NOTED HERE-IN.

TELEPHONE CABINET (L-L)

- (E) 2" COND. PER 713.04 W/1 - NO. 10 PULL WIRE (FOR TELEPHONE SERVICE 20-PAIR CONDUCTORS) FROM TELEPHONE CABINET TO 1ST PULL BOX IF TELEPHONE CO. TERMINAL BOX IS REMOTE FROM BUILDING. IF TELEPHONE COMPANY TERMINAL BOX IS ADJACENT TO BACK WALL OF BUILDING. THE CONDUIT SHALL FEED TO THEIR TERMINAL BOX AND ANOTHER 2" COND. AS PER ABOVE SHALL FEED FROM THEIR TERMINAL BOX TO THE 1ST PULL BOX.
- (F) 2" COND. PER 713.04 W/1 - NO. 10 PULL WIRE (FOR EXTERIOR TELEPHONE DISTRIBUTION) FROM TELEPHONE CABINET TO 1ST PULL BOX.
- (G) 3/4" COND. PER 713.04 W/1-NO. 10 PULL WIRE (TELEPHONE) TO TELEPHONE STATION IN RM. 101, ADJACENT TO MEN'S TOILET ROOM ENTRANCE.
- (H) 3/4" COND. PER 713.04 W/ 1-NO. 10 PULL WIRE (TELEPHONE) TO TELEPHONE STATION IN RM. 105 (DIRECT DIAL PHONE FOR EMPLOYEE USE ONLY). IF TELEPHONE NOT REQUESTED BY ODOT DISTRICT OFFICE, PROVIDE STAINLESS STEEL BLANK COVER ON OUTLET BOX.
- (J) 3/4" COND. PER 713.04 W/1-NO. 10 PULL WIRE (TELEPHONE) TO TELEPHONE STATION IN RM. 101, ADJACENT TO WOMEN'S TOILET ENTRANCE.

CIRCUITS TO 6" X 6" WIRE WAY (N-N)

- (K) 1.) (1)-1 1/4" CONDUIT PER 713.04 W/6-NO. 12 (▲) CONDUCTORS FROM PANEL "A" CIRCUITS NO. A-14 AND A-15 FROM 1 1/4" CONDUIT FROM PANEL "S" (120 VOLTS, 1-PHASE, 3-WIRE, 60 HZ. FEED (LIGHTS IN ROOM NO. 101).
- 2.) FROM 6" X 6" WIREWAY, 3-NO. 12 (▲) CONDUCTORS, 600 VOLTS, SHALL FEED THROUGH 1" CONDUIT PER 713.04 AND CONNECT TO CAT. NO. 702L-TAD 92 AC LIGHTING CONTRACTOR NOTED AS "CIR. A-15" (120 VOLTS, 1-PHASE, 60HZ. FEED)(LIGHTS IN ROOM NO. 101)
- 3.) FROM 6" X 6" WIREWAY, 3-NO. 12 (▲) CONDUCTORS, 600 VOLTS, SHALL FEED THROUGH 1" CONDUIT PER 713.04 AND CONNECT TO CAT. NO. 702L-TAD 92 AC LIGHTING CONTRACTOR NOTED AS "CIR. A-14". (120 VOLTS, 1-PHASE, 60 HZ. FEED)(LIGHTS IN ROOM NO. 101)
- (L) (1) 2" CONDUIT PER 713.04 W/1-NO. 10 PULL WIRE. EXTEND 5'-0" OUTSIDE BUILDING WALL, UNDERGROUND, AND CAP. (FOR FUTURE CIRCUIT)
- (M) (1) 1" CONDUIT PER 713.04 W/5-TYPE 3Z1A SUSPENSION WIRES, 4/64" INSULATED, SINGLE CONDUCTOR, 18 GAUGE, 41 STRAND COPPER; 2-ACTIVE TO WELL PUMP START/STOP ELECTRODE SENSOR, 1-ACTIVE TO WELL PUMP GROUND ELECTRODE SENSOR AND 2-SPARE (TO SUBMERSIBLE WELL PUMP FROM RELAYS IN THE RESERVOIR AND WELL PUMP CONTROL PANEL. B/W SW SUSPENSION WIRE AND ELECTRODE SENSORS ALSO MEET APPROVAL.
- (N) 1.) (1) 2" CONDUIT PER 713.04 W/3-NO. 10 RHH/RHW, 600 VOLT CONDUCTORS. BRANCH FEED TO SUBMERSIBLE WELL PUMP FROM F.E. MYERS CO. MOTOR CONTROL CAT. NO. CU3-2. (240 VOLTS, 1-PHASE, 3-WIRE, 60 HZ. BRANCH FEED TO SUBMERSIBLE WELL PUMP)
- 2.) FROM MOTOR CONTROL CAT. NO. CJ3-2 FEED THROUGH 1 1/4" CONDUIT PER 713.04 TO WIREWAY AND FROM WIREWAY TO SQUARE "D" AC MAGNETIC STATER CAT. NO. SAG 11, CLASS 8536. 3-NO. 10 (▲), 600 VOLTS CONDUCTORS IN 1 1/4" CONDUIT PER 713.04. (240 VOLTS, 1-PHASE, 3-WIRE, 60 HZ. FEED)
- 3.) FROM 2) ABOVE FEED 3-NO. 10 (▲), 600 VOLT CONDUCTORS IN 1 1/4" CONDUIT TO SQUARE "D" HEAVY DUTY, 3-POLE, 240 VOLT, VISIBLE BLADE, FUSED, SAFETY SWITCH, CAT. NO. H221N.
- 4.) FROM 3) ABOVE FEED 3-NO. 10 (▲), 600 VOLT CONDUCTORS IN 2" CONDUIT. PER 713.04 TO CIRCUIT AND RELAYS IN THE RESERVOIR AND WELL PUMP CONTROL PANEL. (240 VOLTS, 1-PHASE, 3-WIRE, 60 HZ, BRANCH FEED)
- (O) (1) 3/4" CONDUIT PER 713.04 W/3-NO. 12 (▲), 600 VOLT CONDUCTOR TO ROOM NO. 105. EXTEND CONDUIT UP TO OUTLET BOX, IN WALL, AND INSTALL AN ARROW-HART, U.L. LISTED, 3-WIRE ISOLATED GROUNDING DUPLEX RECEPTACLE, 15 AMP, 125 VOLT CAT. NO. IG-5262 W/STAINLESS STEEL WALL PLATE CAT. NO. 93101. THIS RECEPTACLE SHALL BE USED TO PLUG THE CHLORINATOR LIQUID LEVEL SWITCH ASSEMBLY INTO WHICH, IN TURN, OPERATES THE 110 WATT RATED CHLORINATOR PUMP. (120 VOLTS, 1-PHASE, 60 HZ. BRANCH FEED.) FROM THE

6" X 6" WIREWAY THE 3-NO. 12 (▲), 600 VOLT CONDUCTORS SHALL FEED THROUGH 2" CONDUIT TO RESERVOIR AND WELL PUMP CONTROL PANEL AND CONNECT TO THE 120 VOLT TERMINALS ON THE PRIMARY 240/480 VOLT, 60 HZ, SECONDARY 120-VOLT, 60 HZ FUSED, 50 V.A. RATED CONTROL CIRCUIT TRANSFORMER, ALLEN-BRADLEY CAT. NO. 1497-N27 (MOUNT IN RESERVOIR AND WELL PUMP CONTROL CABINET.)

FROM THE 240 VOLT TERMINALS OF THE TRANSFORMER THE 3-NO. 12 CONDUCTORS SHALL FEED TO CONTACTS AS SHOWN ON THE WIRING. SCHEMATIC FOR WELL PUMP CONTROL. A ALLEN-BRADLEY OIL-TIGHT, 3-POSITION HAND-OFF-AUTO (H.O.A.) SWITCH UNIT CAT. NO. 800T-J2A W/STANDARD TYPE OPERATOR, MAINTAINED POSITION, 2 N.O.-2 N.C., COMPLETE W/LEGEND PLATE MARKED "HAND-OFF-AUTO", SHALL BE INSTALLED IN THE RESERVOIR WELL PUMP CONTROL PANEL TO ENERGIZE THE LIQUID LEVEL SWITCH ASSEMBLY AND CHLORINATOR PUMP FOR TESTING OR IN THE AUTO MODE TO BE ENERGIZED BY ACTION OF THE RELAYS. REFER TO WIRING SCHEMATIC FOR CONTROL WIRING.

- (P) (1) 1 1/4" CONDUIT PER 713.04 W/6-NO. 12 (▲), 600 VOLT CONDUCTORS FROM PRESSURE SWITCHES P-1 AND P-2 CONTACTS IN RESERVOIR AND WELL PUMP CONTROL PANEL TO PRESSURE SWITCHES IN ROOM # 103. 3-CONDUCTOR SHALL FEED PRESSURE SWITCH P-1, OF WHICH ONE CONDUCTOR SHALL BE A GROUND; THE REMAINING 3-CONDUCTORS SHALL FEED PRESSURE SWITCH P-2, OF WHICH ONE CONDUCTOR SHALL BE A GROUND.
- (Q) (1) 2" CONDUIT PER 713.04 W/3 NO. 4 AWG, MV-90 DRY, 5000 VOLT CONDUCTORS TO 1ST PULL BOX AND PROVIDE (3) EPOXY FILLED SPLICE KITS PER 713.15. FEED OFF OF 1-POLE, 20 AMP CIRCUIT BREAKER IN P&R PANEL WHICH IS CONTROLLED BY A PHOTO-ELECTRIC CELL. THIS CIRCUIT SHALL FEED THE LIGHTS IN THE EXTERIOR TELEPHONE BOOTHS. 2-CONDUCTORS SHALL BE FOR THE 120 VOLT, 1-PHASE, 60 HZ. CIRCUIT, THE REMAINING CONDUCTOR SHALL BE A GROUND. THE 3-NO. 4 AWG, MV-90 DRY, 5000 VOLT CONDUCTORS SHALL FEED FROM THE 6" X 6" WIREWAY IN 1" CONDUIT PER 713.04 TO THE P&R PANEL.
- (R) (1) 1" CONDUIT AS PER 713.04 W/9-TYPE 3Z1A SUSPENSION WIRE, 4/64" INSULATED, SINGLE CONDUCTOR, 18 GAUGE, 41 STRAND COPPER OR APPROVED EQUAL BY BW. 4 ACTIVE FOR ELECTROD LEVEL SENSORS AND 1-FOR GROUND SENSOR, AND 4-SPARE TO UNDER GROUND RESERVOIR TANK FROM RESERVOIR AND WELL PUMP CONTROL PANEL. TERMINATE SPARES AS REQUIRED. (240 VOLTS, 60 HZ. CONTROL COIL CONTACT CONNECTIONS.)
- (S) (1) 2" CONDUIT PER 713.04 W/6-NO. 6 RHH/RHW, 600 VOLT CONDUCTORS. TWO SEPARATE 3-WIRE CIRCUIT BRANCH FEEDS, ONE TO EACH SUBMERSIBLE RESERVOIR PUMP, EXTERIOR LOCATION ADJACENT TO RESERVOIR TANK. FROM THE 6" X 6" WIREWAY THE CONDUCTORS SHALL FEED THRU 2" CONDUIT PER 713.04 TO THE TWO (2) SQUARE "D" NEMA I, CLASS 8538, CAT. NO. SBG-12, 30 AMP, (230 VOLT, 1-PHASE, 3-WIRE, 60 HZ., 3-POLE) COMBINATION STARTER, FUSIBLE DISCONNECT SWITCH TYPE W/CLASS R FUSE CLIPS, NON-REVERSING W/3-MELTING OVERLOAD RELAYS NEMA SIZE O RATING W/HAND-OFF-AUTO SELECTOR SWITCH FORM C, FUSED CONTROL TRANSFORMER FORM FT, AND PILOT LIGHT FORM P-G. NOTE: THE H.O.A.

AND PILOT LIGHT SHALL BE MOUNTED IN THE COMBINATION STARTERS, ADDITIONAL H.O.A. AND PILOT LIGHTS SHALL BE INSTALLED IN THE RESERVOIR AND WELL PUMP CONTROL PANEL FOR RESERVOIR PUMP PER THE WIRING SCHEMATIC. FUSE ONLY TWO POLES W/30 AMP CLASS R FUSES. (THESE CIRCUITS SHALL FEED RESERVOIR PUMP NO. 1 AND RESERVOIR PUMP NO. 2, 3-H.P., 230 VOLT, 1-PHASE, 3-WIRE, 6 HZ. SUBMERSIBLE RESERVOIR PUMPS.) FROM PANEL "P" CIRCUIT NO. P-3 AND P-4 SHALL FEED THROUGH 6" X 6" WIREWAY AND FROM WIREWAY THROUGH 2" CONDUIT PER 713.04 INTO RESERVOIR AND WELL PUMP CONTROL PANEL W/6-NO. 6 RHH/RHW, 600 VOLT CONDUCTORS AND MAKE CONNECTIONS TO RELAY AND CONTROL TERMINALS AS PER WIRING SCHEMATIC.

- (T) (1)-2" CONDUIT PER 713.04 W/1-NO. 10 PULL WIRE FOR FUTURE ANNUCIATOR CONDUCTORS FROM SEWAGE TREATMENT PLANTS MAIN CONTROL PANEL AND DOSING PUMPS CONTROL PANEL. TERMINATE PULL WIRES IN 6" X 6" WIREWAY, PULL BOXES AND PANELS AS REQUIRED.
- (U) (1) - 3" CONDUIT PER 713.04 W/3-NO. 4/0 TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS FROM PANEL "P" CIRCUIT P-17 THROUGH 6" X 6" WIREWAY TO SEWAGE TREATMENT PLANT MAIN BLOWER CONTROL PANEL. (230 VOLTS, 1-PHASE, 3-WIRE, 60 HZ. BRANCH FEED.) FOR CONTINUATION OF CIRCUIT P-17 REFER TO UTILITY PLANS AND WIRING DIAGRAMS FOR CONNECTIONS TO ALL SEWAGE TREATMENT CONTROL PANELS.
- (V) (1) - 3" CONDUIT PER 713.04 W/3-500 MCM, TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS, FOR 120/240 VOLTS, 1-PHASE, 3-WIRE, 60HZ. SECONDARY ELECTRICAL SERVICE FROM UTILITY COMPANY'S TRANSFORMER (PRIMARY SERVICE). ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CROUSE-HINES COMPANY OR APPROVED EQUAL 3" SIZE CAT. NO. LBNECS DIE CAST ALUMINUM MOGUL PULLING 90° ELBOW, COMPLETE W/GASKET AND SCREWS. THIS SHALL EXTEND FROM A 3" DIA., 36" RADIUS LONG SWEEP 90° ELL ON EXTERIOR SIDE OF WALL, AND FEED INTO C/T CABINET THROUGH A 3" DIA. NIPPLE PER 713.04. FURNISH AND INSTALL TWO "BRUNDY" CAT. NO. KS-34 SOLDERLESS SERVICE CONNECTORS OR APPROVED EQUAL BY BLACKBURN OR PENN-UNION, ONE ON EACH PHASE LEG OF THE 240 VOLT, 3-WIRE, 60 HZ CONDUCTORS INSIDE THE C/T CABINET. THESE SHALL BE USED TO PERMIT C/T COILS TO BE INSTALLED ON EACH PHASE LEG OF THE SECONDARY SERVICE IF THE UTILITY COMPANY SELECTS TO INSTALL C/T COILS. THESE CONNECTORS SHALL BE TAPED WITH ELECTRICIANS TAPE AFTER ALL DEVICES AND CONDUCTORS HAVE BEEN PROPERLY INSTALLED. A

(▲)
THWN
OR THHN
S1-58101

BUREAU OF DESIGN SERVICES		DATE 5/2/85 10/31/85
DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION		
ROADSIDE DEVELOPMENT		
MSB-4 400 AMP		
ELECTRICAL PANEL NOTES		
APPROVED <i>[Signature]</i> Engr. of Design Services		4E-3 a

CONT'D.

ELECTRICAL PANEL NOTES (CONT'D)

AUGLAIZE COUNTY
AUG-33-6.82
SAFETY REST AREA

55
80

400 AMP CONT'D

1 1/4" DIA. NIPPLE PER 713.04 SHALL EXTEND FROM THE C/T CABINET, THROUGH THE WALL TO PERMIT CONDUCTOR WIRES TO CONNECT TO THE 400 AMP METER SOCKET ENCLOSURE IF REQUIRED. IF NOT REQUIRED THIS NIPPLE SHALL BE CAPPED ON THE EXTERIOR SIDE OF WALL. THE NEUTRAL CONDUCTOR SHALL NOT BE FURNISHED WITH A "BRUNDY" FITTING.

(W) 1) - 3" CONDUIT PER 713.04 W/1-NO. 10 PULL WIRE. THE 3" CONDUIT SHALL BE INSTALLED SAME AS (V) ABOVE AND SHALL BE USED FOR SPARE SECONDARY ELECTRICAL SERVICE. TERMINATION POINTS SHALL BE IN THE C/T CABINET AND IN THE TRANSFORMER (PRIMARY SERVICE). STUB 6" ABOVE TOP OF PAD OR FINISHED GRADE AND CAP.

(V-1) IF THE ELECTRIC UTILITY COMPANY FURNISHES A 400 AMP METER SOCKET ENCLOSURE W/C/T COILS IN THE ENCLOSURE, THE 3" CONDUIT W/3-500 MCM, TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS IN (V) ABOVE SHALL FEED TO THE 400 AMP METER ENCLOSURE, AND FROM ENCLOSURE SHALL FEED THROUGH 3" CONDUIT PER 713.04 DOWN EXTERIOR WALL TO A 3" SIZE CAT. NO. LBNEC8 MOGUL PULLING 90° ELBOW AND ENTER C/T CABINET THROUGH A 3" DIA. NIPPLE PER 713.04 THROUGH WALL. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL SPADE LUG TERMINAL CONNECTORS TO CONNECT THE 3-500 MCM, TYPE USE, RHH/RHW CONDUCTORS TO THE 400 AMP METER SOCKET AS REQUIRED. LUGS MUST MEET APPROVAL OF THE UTILITY COMPANY BEFORE BEING INSTALLED.

(W-1) IF (V-1) IS INSTALLED, (W) ABOVE SHALL BE INSTALLED IN LOCATION SHOWN BUT SHALL TERMINATE 6" ABOVE FINISHED GRADE AND CAPPED FOR SPARE SECONDARY ELECTRICAL SERVICE OUTSIDE BUILDING WALL. THE OTHER END SHALL TERMINATE IN THE PAD MOUNTED TRANSFORMER AS NOTED IN (W) ABOVE.

PANEL "P" (0-0)

- ① 2 - NO. 10 (▲) & 1 - NO. 10 (▲) GREEN GRD. IN 3/4" COND. TO JUNCTION BOX ON CEIL. THEN TO CEIL. MOUNT UNIT HEATER. 5KW. CKT. P-6, RM. 105.
- ② 2 - NO. 4 (▲) & 1 - NO. 4 (▲) GREEN GRD. IN 1 1/4" COND. TO H.W. HEATER. 10 KW, CKT. P-5, RM. 103. CKT. P-5 SHALL FEED TO A SQUARE "D" HEAVY-DUTY SAFETY SWITCH, VISIBLE BLADES, SINGLE THROW FUSIBLE, 3-WIRE (2 BLADES AND FUSEHOLDERS, 1 S/N) 120/240 V. AC, 1-PHASE, NEMA 1, UL LISTED, 60 AMPS. CAT. NO. H 222 N, WITH CLASS R FUSE REJECTION KIT CAT. NO. HRK 60. FUSES SHALL BE GOULD SHAWMUT A2D 60 R OR APPROVED EQUAL. FROM DISCONNECT SWITCH MOUNTED ON WALL OF RM. 103 CONDUCTOR SHALL CONNECT TO H.W. HEATER AS REQUIRED.
- ③ 4 - NO. 10 (▲) & 2 - NO. 10 (▲) GREEN GRD. IN 1" COND. TO (2) 2-P/30A BRK'S, TO (2) 4'-0", 2.5 KW B.B. HEATERS, CKT'S P-7 & P-9, RM. 102.
- ④ 4 - NO. 10 (▲) & 2 - NO. 10 (▲) GREEN GRD. IN 1" COND. TO (2) 2-P/30A BRK'S, TO (2) 4'-0", 2.5 KW B.B. HEATERS, CKT'S P-11 & P-13, RM. 102.
- ⑤ 2 - NO. 10 (▲) & 1 - NO. 10 (▲) GREEN GRD. IN 3/4" COND. TO 2 - P/30A BRK., (2) 6'-0", 2.25 KW B.B. HEATERS, CKT. P-8, RM. 101.

- ⑥ 2 - NO. 10 (▲) & 1 - NO. 10 (▲) GREEN GRD. IN 3/4" COND. TO 2-P/30A BRK., (2) 6'-0", 2.25 KW B.B. HEATERS, CKT. P-10, RM. 101.
- ⑦ 4 - NO. 10 (▲) & 2 - NO. 10 (▲) GREEN GRD. IN 1" COND. TO (2) 2-P/30A BRK'S, TO (2) 4'-0", 2.5 KW B.B. HEATERS, CKT'S P-12 & P-14, RM. 104.
- ⑧ 4 - NO. 10 (▲) & 2 - NO. 10 (▲) GREEN GRD. IN 1" COND. TO (2) 2-P/30A BRK'S, TO (2) 4'-0", 2.5 KW B.B. HEATERS, CKT'S P-15 & P-18, RM. 104.

⑨ 1 - NO. 1/0 COPPER (▲) GREEN GROUND IN 1" CONDUIT. CONDUCTOR SHALL BE THE SECONDARY SERVICE EQUIPMENT GROUNDING CONDUCTOR. CONDUIT SHALL EXTEND UNDER FLOOR TO OUTSIDE THE EXTERIOR WALL AND STUB 8" ABOVE FINISH GRADE.

THE GROUND WIRE SHALL BE BONDED, AS PER 625.10 AND 713.16, TO A GROUND ROD. BONDING AND GROUND CONNECTIONS SHALL BE FURNISHED AND INSTALLED ON EACH CONDUIT AS PER ARTICLE 250 OF THE N.E.C..

PANEL "A" (P-P)

- ① 1 1/4" CONDUIT PER 713.04 W/6-NO. 12 (▲) CONDUCTORS TO "K" LINE FEEDING INTO 6"X6" WIREWAY. 3 - NO. 12 (▲), 600 VOLT CONDUCTORS SHALL FEED OFF OF CIRCUIT NO. A15 FROM PANEL "A" AND CONNECT TO ALLEN BRADLEY CAT. NO. 702L-TAD 92 AC LIGHTING CONTRACTOR W/H.O.A. SWITCH NOTED AS "CIR. A-15". THE REMAINING 3-NO. 12 (▲), 600 VOLT CONDUCTOR SHALL FEED OFF OF CIRCUIT NO. A14 FROM PANEL "A" AND CONNECT TO ALLEN BRADLEY CAT. NO. 702L-TAD 92 AC LIGHTING CONTRACTOR W/H.O.A. SWITCH NOTED AS "CIR. A-14".
- ② 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. HAND DRYER, CKT. A-1, RM 102.
- ③ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. HAND DRYER CKT A-2, RM 104.
- ④ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. HAND DRYER, CKT A-3, RM 102.
- ⑤ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. HAND DRYER, CKT. A-4, RM. 104.
- ⑥ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. FROM GFCI CKT. BRK, TO EXTERIOR DUPLEX RECEPTACLE, CKT. A-5.
- ⑦ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. FROM GFCI CKT. BRK. TO EXTERIOR DUPLEX RECEPTACLE, CKT. A-6.
- ⑧ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. TO RECEPTACLE IN RM'S. 105, 103 & 101, CKT. A-8.
- ⑨ 2 - NO. 12 (▲) & 1 - NO. 12 (▲) GREEN GRD. IN 3/4" COND. FROM GFCI CKT. BREAKER TO (2) INTERIOR DUPLEX RECEPTACLES IN RM'S 102 & 104. CKT. A-12.

(▲) THHN OR THWN S1-58101

600 AMP.

600 AMP. SYSTEM

- (X) 1) 2" CONDUIT PER 713.04 W/3- 1/C NO. 4 TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS FROM PANEL "P", CIRCUIT P-19, THROUGH 6" X 6" WIREWAY TO NO. 1 SEWAGE LIFT STATION MAIN CONTROL PANEL LOCATED AT LIFT STATION. (240 VOLTS, 1-PHASE, 3-WIRE, 60 HZ. BRANCH FEED). FOR CONTINUATION OF CIRCUIT P-17, REFER TO UTILITY PLANS AND WIRING DIAGRAMS FOR CONNECTIONS TO THE NO. 1 SEWAGE LIFT STATION MAIN CONTROL PANEL.
- 2) SHOULD NO LIFT STATION NO. 2 BE REQUIRED THE ELECTRICAL CONTRACTOR SHALL EXTEND THE 2" CONDUIT, PER 713.04, 5'-0" BEYOND EXTERIOR WALL, INSTALL ONE (1) 1/C NO. 10 PULL WIRE IN THE 2" CONDUIT AND PROVIDE A 2" CAP ON END OF CONDUIT AT TERMINATION POINT OUTSIDE BUILDING. THIS SHALL BE USED FOR FUTURE CIRCUIT AND SHALL BE NOTED AS A "SPARE".
- (Y) (1) 2" CONDUIT PER 713.04 W/3-1/C NO. 4, TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS FROM PANEL "P", CIRCUIT P-20, THROUGH 6" X 6" WIREWAY TO NO. 2 SEWAGE LIFT STATION MAIN CONTROL PANEL LOCATED AT LIFT STATION. (240 VOLTS, 1-PHASE, 3-WIRE, 60 HZ. BRANCH FEED). FOR CONTINUATION OF CIRCUIT P-20, REFER TO UTILITY PLANS AND WIRING DIAGRAMS FOR CONNECTIONS TO THE NO. 2 SEWAGE LIFT STATION MAIN CONTROL PANEL.
- (2) SHOULD NO LIFT STATION NO. 2 BE REQUIRED THE ELECTRICAL CONTRACTOR SHALL EXTEND THE 2" CONDUIT, PER 713.04, 5'-0" BEYOND EXTERIOR WALL, INSTALL ONE (1) 1/C NO. 10 PULL WIRE IN THE 2" CONDUIT AND PROVIDE A 2" CAP ON END OF CONDUIT AT TERMINATION POINT OUTSIDE BUILDING. THIS SHALL BE USED FOR FUTURE CIRCUIT AND SHALL BE NOTED AS A "SPARE".
- (Z) THE ELECTRICAL CONTRACTOR SHALL EXTEND THE SECONDARY ELECTRICAL SERVICES 6-1/C - 350 MCM, TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS FROM THE C/T CABINET THROUGH 4" CONDUIT, PER 713.04, INTO THE 600 AMP. SERVICE ENTRANCE FUSED DISCONNECT SWITCH, MAKE CONNECTION THEREIN, AS REQUIRED AND FEED LIKE CONDUCTORS FROM DISCONNECT SWITCH TO POWER PANEL "P" THROUGH 4" CONDUIT, PER 713.04 AND MAKE CONNECTION TO TERMINALS LUGS AS REQUIRED. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL FOUR (4) CROUSE-HINDS THREADED RIGID BODIES, CONDULET CONDUIT OUTLET BODIES LB FITTINGS, STYLE MARK 9, CAT. NO. LB1089, HUB SIZE .4" w/CROUSE-HINDS FERALOY BLANK COVERS W/GASKETS CAT. NO. 8G98, SIZE 4", AS SHOWN ON DRAWING TO PERMIT THE SECONDARY SERVICE CONDUCTORS TO BE INSTALLED IN AN EASY MANNER WITHOUT DAMAGE TO THE CONDUCTORS. A CONTINUOUS INSULATED GROUND SHALL CONNECT TO ALL COMPONENTS AND SHALL BE SIZED AS NOTED IN THE SPECIFICATIONS.

SECONDARY

- (V) (1) - 4" CONDUIT PER 713.04 W/6-350 MCM, TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS, FOR 120/240 VOLTS, 1-PHASE, 3-WIRE, 60HZ. SECONDARY ELECTRICAL SERVICE FROM UTILITY COMPANY'S TRANSFORMER (PRIMARY SERVICE). ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CROUSE-HINES COMPANY OR APPROVED EQUAL 4" SIZE CAT. NO. LBNEC8 DIE CAST ALUMINUM MOGUL PULLING 90° ELBOW, COMPLETE W/GASKET AND SCREWS. THIS SHALL EXTEND FROM A 4" DIA., 36" RADIUS LONG SWEEP 90° ELL ON EXTERIOR SIDE OF WALL, AND FEED INTO C/T CABINET THROUGH A 4" DIA. NIPPLE PER 713.04. FURNISH AND-INSTALL (4) "BRUNDY" CAT. NO. KS-31 SOLDER-LESS SERVICE CONNECTORS OR APPROVED EQUAL BY BLACKBURN OR PENN-UNION, ONE ON EACH PHASE LEG OF THE 240 VOLT, 3-WIRE, 60 HZ CONDUCTORS INSIDE THE C/T CABINET. THESE SHALL BE USED TO PERMIT C/T COILS TO BE INSTALLED ON EACH PHASE LEG OF THE SECONDARY SERVICE IF THE UTILITY COMPANY SELECTS TO INSTALL C/T COILS. THESE CONNECTORS SHALL BE TAPED WITH ELECTRICIANS TAPE AFTER ALL DEVICES AND CONDUCTORS HAVE BEEN PROPERLY INSTALLED. A 1 1/4" DIA. NIPPLE PER 713.04 SHALL EXTEND FROM THE C/T CABINET, THROUGH THE WALL TO PERMIT CONDUCTOR WIRES TO CONNECT TO THE 600 AMP METER SOCKET ENCLOSURE IF REQUIRED. IF NOT REQUIRED THIS NIPPLE SHALL BE CAPPED ON THE EXTERIOR SIDE OF WALL. THE NEUTRAL CONDUCTOR SHALL NOT BE FURNISHED WITH A "BRUNDY" FITTING. USE TWO CONDUCTOR PER PHASE AND GROUND FOR A TOTAL OF SIX CONDUCTORS.
- (W) 1) - 4" CONDUIT PER 713.04 W/1-NO. 10 PULL WIRE. THE 4" CONDUIT SHALL BE INSTALLED SAME AS (V) ABOVE AND SHALL BE USED FOR SPARE SECONDARY ELECTRICAL SERVICE. TERMINATION POINTS SHALL BE IN THE C/T CABINET AND IN THE TRANSFORMER (PRIMARY SERVICE). STUB 6" ABOVE TOP OF PAD OR FINISHED GRADE AND CAP.
- (V-1) IF THE ELECTRIC UTILITY COMPANY FURNISHES A 600 AMP METER SOCKET ENCLOSURE W/C/T COILS IN THE ENCLOSURE, THE 4" CONDUIT W/6-350 MCM, TYPE USE, RHH/RHW, 600 VOLT CONDUCTORS IN (V) ABOVE SHALL FEED TO THE 600 AMP METER ENCLOSURE, AND FROM ENCLOSURE SHALL FEED THROUGH 4" CONDUIT PER 713.04 DOWN EXTERIOR WALL TO A 4" SIZE CAT. NO. LBNEC8 MOGUL PULLING 90° ELBOW AND ENTER C/T CABINET THROUGH A 4" DIA. NIPPLE PER 713.04 THROUGH WALL. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL SPADE LUG TERMINAL CONNECTORS TO CONNECT THE 6-350 MCM, TYPE USE, RHH/RHW CONDUCTORS TO THE 600 AMP METER SOCKET AS REQUIRED. LUGS MUST MEET APPROVAL OF THE UTILITY COMPANY BEFORE BEING INSTALLED.
- (W-1) IF (V-1) IS INSTALLED, (W) ABOVE SHALL BE INSTALLED IN LOCATION SHOWN BUT SHALL TERMINATE 6" ABOVE FINISHED GRADE AND CAPPED FOR SPARE SECONDARY ELECTRICAL SERVICE OUTSIDE BUILDING WALL. THE OTHER END SHALL TERMINATE IN THE PAD MOUNTED TRANSFORMER AS NOTED IN (W) ABOVE.

BUREAU OF DESIGN SERVICES	
DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE
MSB-4 400 AMP/600 AMP	5/2/85
ELECTRICAL PANEL NOTES	
4E-3 b	
APPROVED <i>[Signature]</i> Engr of Design Services	

400 AMP SCHEDULES

PANEL "P" SCHEDULE								
400 AMPS, 42 POLES, 120/240 V., 1-PHASE, 60 HERTZ, 3-WIRE S/N (400 A. MN. CKT BRKR.-2 POLE)								
CIRCUIT NO.	DESCRIPTION	LOCATION	VOLTS	HP/FLA	BREAKER		CONNECTED	
					POLES	AMPS	WATTS	
1	PANEL "A", 26.4 KW (QZ-H SUB-FEED BREAKER)	RM. 105	240	180.2	2	225	26419	
2	RAMP & PICNIC AREA LIGHTING, 10.0KW	EXTERIOR	240	41.7	2	60	10000	
3	RESERVOIR PUMP NO.1, 4.1KW	EXTERIOR	240	17.0	2	30	4080	
4	RESERVOIR PUMP NO.2, 4.1KW	EXTERIOR	240	17.0	2	30	4080	
5	HOT WATER HEATER, 10.0KW	RM. 103	240	41.7	2	60	10000	
6	UNIT HEATER, 5.0KW	RM. 105	240	20.8	2	30	5000	
7	B.B. HEATER (1) 3.75 KW	RM. 102	240	15.6	2	20	3750	
8	B.B. HEATER (2) 3.75 KW	RM. 101	240	31.3	2	40	7500	
9	B.B. HEATER (1) 3.75 KW	RM. 102	240	15.6	2	20	3750	
10	B.B. HEATER (2) 3.75 KW	RM. 101	240	31.3	2	40	7500	
11	HAND DRYER, 2.4 KW	RM. 106	240	10.0	2	20	2400	
12	B.B. HEATER (1) 3.13 KW	RM. 104	240	26.0	2	30	6250	
13	EXHAUST FAN 0.3 KW	RM. 103	120	2.4	1	20	288	
14	B.B. HEATER 3.13 KW	RM. 104	240	26.0	2	30	6250	
15	SUBMERSIBLE WELL PUMP, 1.7KW	EXTERIOR	240	6.9	2	20	1656	
16	B.B. HEATER (1) 1.25 KW	RM. 104	240	5.2	2	20	1250	
17	WASTE TREATMENT PLANT, 22.5KW	EXTERIOR	240	93.7	2	100	22496	
18	REFRIGERATOR UNIT (DUPLEX RECETACLE)	RM.105	120	1.7	1	20	200	
19	SPARE		240		2	30		
20	SPARE		240		2	30		
21	MICROWAVE OVEN 1.44 KW	RM. 105	120	12.0	1	20	1440	
22	COFFEE MAKER 1.8 KW (DUPLEX RECEPTACLE)	RM. 105	120	15.0	1	20	1800	
23	SUB-FEEDER INFORMATION TRAILER, 19.7KW	EXTERIOR	240	82.0	2	100	19686	

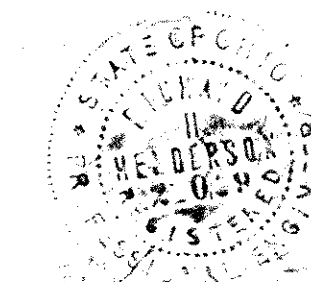
TOTAL CONNECTED WATTS 145795
TOTAL CONNECTED AMPS 623.1

PANEL "A" SCHEDULE								
225 AMPS, 24 POLES, 120/240 VOLTS, 1-PHASE, 60-HERTZ, 3-WIRE S/N (MAIN LUGS ONLY)								
CIRCUIT NO.	DESCRIPTION	LOCATION	VOLTS	HP/FLA	BREAKER		CONNECTED	
					POLES	AMPS	WATTS	
1	HAND DRYER, 2.4KW	RM. 102	240	10.0	2	20	2400	
2	HAND DRYER, 2.4KW	RM. 104	240	10.0	2	20	2400	
3	HAND DRYER, 2.4KW	RM. 102	240	10.0	2	20	2400	
4	HAND DRYER, 2.4KW	RM. 104	240	10.0	2	20	2400	
5	DUPLEX RECEPT. TO GRD. FAULT CIR. BKR., 2.4KW	EXTERIOR	120	20.0	1	20 GFI	2400	
6	DUPLEX RECEPT. TO GRD. FAULT CIR. BKR., 2.4KW	EXTERIOR	120	20.0	1	20 GFI	2400	
7	EXTERIOR BLD'G. LIGHTS, 1.0KW	EXTERIOR	120	8.2	1	20	979	
8	DUPLEX RECEPTACLES, 2.4KW	RM'S 101, 103, & 105	120	20.0	1	20	2400	
9	LIGHTS, 0.7 KW	RM. 105	120	5.6	1	20	672	
10	EXHAUST FAN, 0.3KW	RM. 102	120	2.4	1	20	288	
11	LIGHTS, 0.5 KW	RM. 103	120	4.0	1	20	480	
12	(3)DUPLEX RECEPTACLES, TO GRD. FAULT CIR. BKR., 2.4KW	RM'S 102, 104 & 106	120	20.0	1	20 GFI	2400	
13	EXHAUST FAN, 0.3KW	RM. 104	120	2.4	1	20	288	
14	LIGHTS, 0.4KW	RM. 101	120	3.2	1	20	384	
15	LIGHTS, 0.4KW	RM. 101	120	3.2	1	20	384	
16	LIGHTS, 0.4KW	RM'S 102 & 104	120	3.2	1	20	384	
17	LIGHTS, 0.4KW	RM'S 102 & 104	120	3.2	1	20	384	
18	IRRIGATION SYSTEM CONTROLLER BOX	RM. 103	120		1	20		
19	FLOW SWITCH	RM. 103	120	24.0	1	20 25	2880	
20	LIGHT, 0.1 KW	RM. 106	120	0.8	1	20	96	

TOTAL CONNECTED WATTS 26419
TOTAL CONNECTED AMPS 180.2

NOTE: ALL CIRCUIT BREAKERS SHALL BE FURNISHED AS SHOWN FOR EACH PANEL

REV. 10-30-87



BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE
MSB-4 (400 AMP)	5/2/85 3/5/86
ELECTRICAL PANEL SCHEDULES	
APPROVED Engr. of Design Services	
4E-4	

600 AMP SCHEDULES

PANEL "P" SCHEDULE								
600 AMPS, 42 POLES, 120/240 V., 1-PHASE, 60 HERTZ, 3-WIRE S/N								
(MAIN LUGS ONLY)								
CIRCUIT NO.	DESCRIPTION	LOCATION	VOLTS	HP/FLA	BREAKER		CONNECTED	
					POLES	AMPS	WATTS	
1	PANEL "A", 26.4 KW <small>(QZ-H SUB-FEED BREAKER)</small>	RM. 105	240	180.2	2	225	26419	
2	RAMP & PICNIC AREA LIGHTING, 10.0KW	EXTERIOR	240	41.7	2	60	10000	
3	RESERVOIR PUMP NO.1, 4.1KW	EXTERIOR	240	17.0	2	30	4080	
4	RESERVOIR PUMP NO.2, 4.1KW	EXTERIOR	240	17.0	2	30	4080	
5	HOT WATER HEATER, 10.0KW	RM. 103	240	41.7	2	60	10000	
6	UNIT HEATER, 5.0KW	RM. 105	240	20.8	2	30	5000	
7	B.B. HEATER (1) 3.75 KW	RM. 102	240	15.6	2	20	3750	
8	B.B. HEATER (2) 3.75 KW	RM. 101	240	31.3	2	40	7500	
9	B.B. HEATER (1) 3.75 KW	RM. 102	240	15.6	2	20	3750	
10	B.B. HEATER (2) 3.75 KW	RM. 101	240	31.3	2	40	7500	
11	HAND DRYER, 2.4 KW	RM. 106	240	10.0	2	20	2400	
12	B.B. HEATER (1) 3.13 KW	RM. 104	240	26.0	2	30	6250	
13	EXHAUST FAN 0.3 KW	RM. 103	120	2.4	1	20	288	
14	B.B. HEATER 3.13 KW	RM. 104	240	26.0	2	30	6250	
15	SUBMERSIBLE WELL PUMP, 1.7KW	EXTERIOR	240	6.9	2	20	1656	
16	B.B. HEATER (1) 1.25 KW	RM. 104	240	5.2	2	20	1250	
17	WASTE TREATMENT PLANT, 22.5KW	EXTERIOR	240	93.7	2	100	22496	
18	REFRIGERATOR UNIT (DUPLX RECETACLE)	RM.105	120	1.7	1	20	200	
19	NO.1 SEWAGE LIFT STATION, 11.4KW		240	47.3	2	70	11356	
20	SPARE		240	47.3	2	70	11356	
21	MICROWAVE OVEN 1.44 KW	RM. 105	120	12.0	1	20	1440	
22	COFFEE MAKER 1.8 KW (DUPLX RECEPTACLE)	RM. 105	120	15.0	1	20	1800	
23	SUB-FEEDER INFORMATION TRAILER, 19.7KW	EXTERIOR	240	82.0	2	100	19686	

TOTAL CONNECTED WATTS 168507

PANEL "A" SCHEDULE										
225 AMPS, 24 POLES, 120/240 VOLTS, 1-PHASE, 60-HERTZ, 3-WIRE S/N										
(MAIN LUGS ONLY)										
CIRCUIT NO.	DESCRIPTION	LOCATION	VOLTS	HP/FLA	BREAKER		CONNECTED			
					POLES	AMPS	WATTS			
1	HAND DRYER, 2.4KW	RM. 102	240	10.0	2	20	2400			
2	HAND DRYER, 2.4KW	RM. 104	240	10.0	2	20	2400			
3	HAND DRYER, 2.4KW	RM. 102	240	10.0	2	20	2400			
4	HAND DRYER, 2.4KW	RM. 104	240	10.0	2	20	2400			
5	DUPLX RECEPT. TO GRD. FAULT CIR. BKR., 2.4KW	EXTERIOR	120	20.0	1	20 GFI	2400			
6	DUPLX RECEPT. TO GRD. FAULT CIR. BKR., 2.4KW	EXTERIOR	120	20.0	1	20 GFI	2400			
7	EXTERIOR BLD'G. LIGHTS, 1.0KW	EXTERIOR	120	8.2	1	20	979			
8	DUPLX RECEPTACLES, 2.4KW	RM.'S 101, 103, & 105	120	20.0	1	20	2400			
9	LIGHTS, 0.7 KW	RM. 105	120	5.6	1	20	672			
10	EXHAUST FAN, 0.3KW	RM. 102	120	2.4	1	20	288			
11	LIGHTS, 0.5 KW	RM. 103	120	4.0	1	20	480			
12	(3) DUPLX RECEPTACLES, TO GRD. FAULT CIR. BKR., 2.4KW	RM.'S 102, 104 & 106	120	20.0	1	20 GFI	2400			
13	EXHAUST FAN, 0.3KW	RM. 104	120	2.4	1	20	288			
14	LIGHTS, 0.4KW	RM. 101	120	3.2	1	20	384			
15	LIGHTS, 0.4KW	RM. 101	120	3.2	1	20	384			
16	LIGHTS, 0.4KW	RM.'S 102 & 104	120	3.2	1	20	384			
17	LIGHTS, 0.4KW	RM.'S 102 & 104	120	3.2	1	20	384			
18	IRRIGATION SYSTEM CONTROLLER BOX	RM. 103	120		1	20				
19	FLOW SWITCH	RM. 103	120	24.0	1	25	2880			
20	LIGHT, 0.1 KW	RM. 106	120	0.8	1	20	96			

TOTAL CONNECTED WATTS 26419

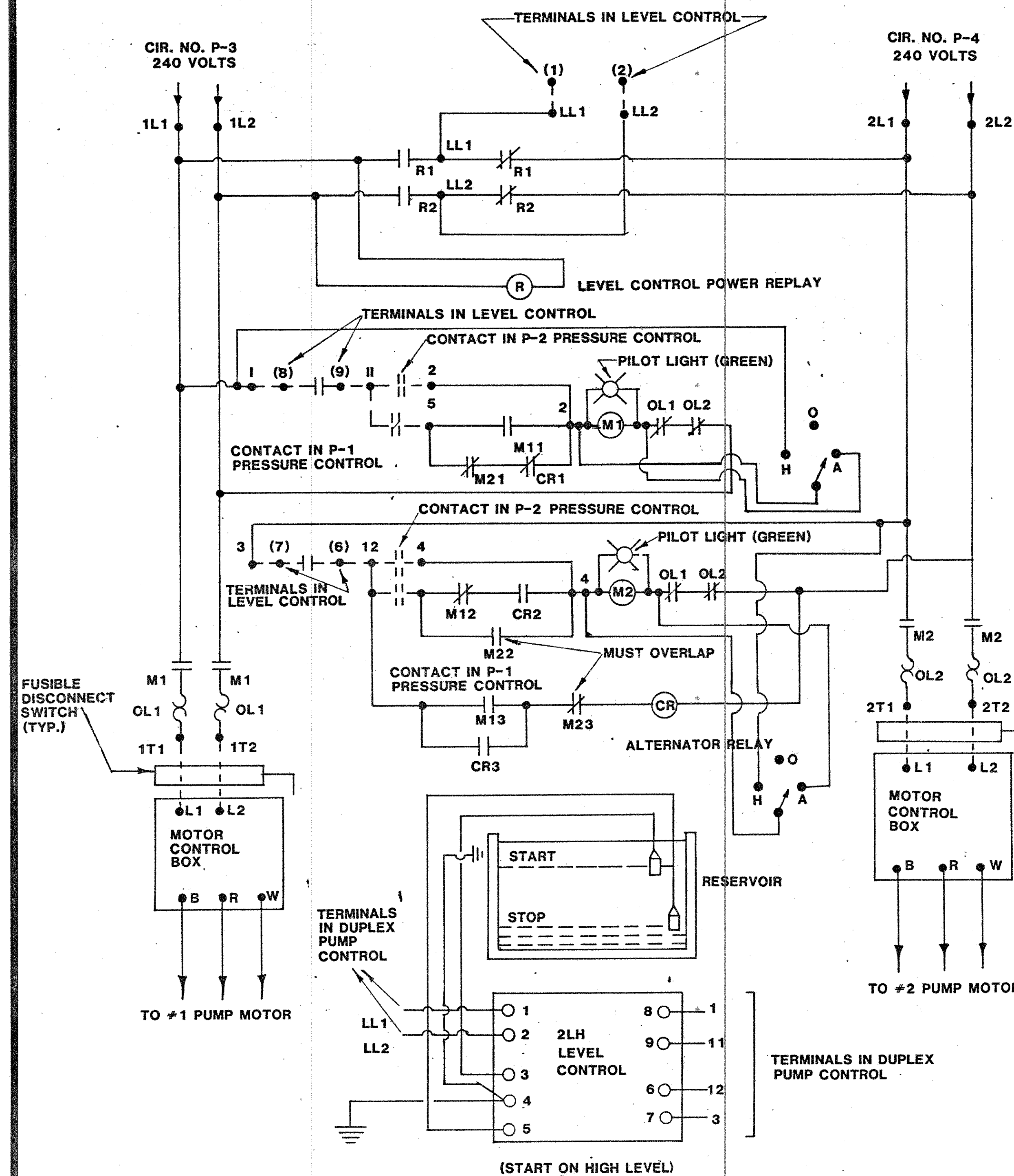
NOTE: ALL CIRCUIT BREAKERS SHALL BE FURNISHED AS SHOWN FOR EACH PANEL.

REV. 10-30-87

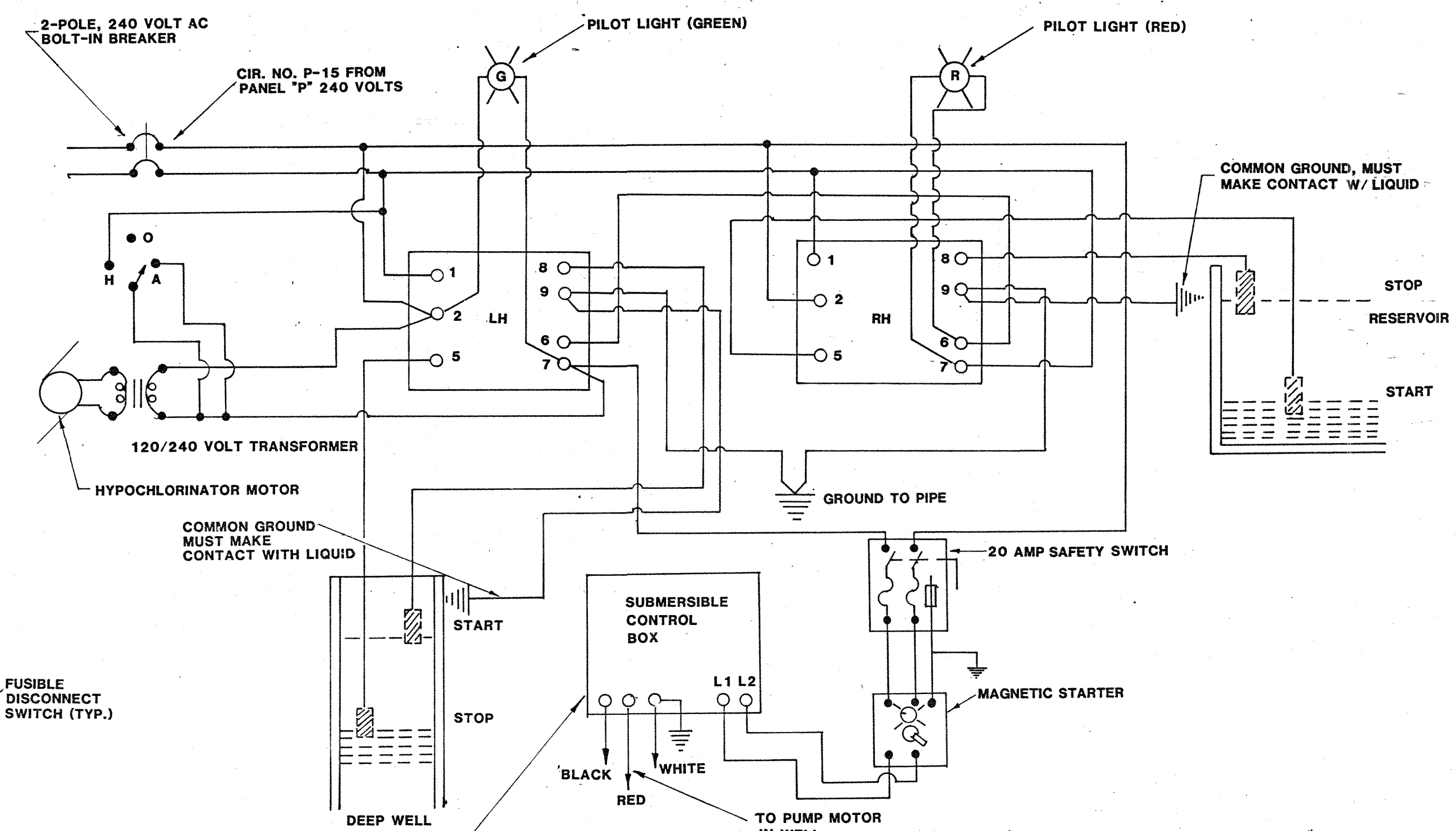
BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

ROADSIDE DEVELOPMENT	DATE
MSB-4 (600 AMP)	5/2/85
ELECTRICAL PANEL SCHEDULES	9/12/86
	10/30/87

APPROVED *[Signature]* Engr. of Design Services 4E-4



SCHEMATIC FOR RESERVOIR PUMPS & HYDROPNEUMATIC PRESSURE TANK CONTROL
NO SCALE
4E-5-01



SCHEMATIC FOR WELL PUMP CONTROL
NO SCALE
4E-5-02

NOTE: CONTRACTORS SHALL SUBMIT FOR APPROVAL PRIOR TO INSTALLATION, SHOP DRAWINGS AND COMPLETE WIRING DIAGRAMS OF THE FOLLOWING:
SUBMERSIBLE WELL PUMP. PITLESS ADAPTER ASSEMBLY. WATER-TIGHT CAP WITH INTEGRAL JUNCTION BOX. ALL REQUIRED PUMP CONTROLS.
REFER TO GENERAL NOTE CONCERNING ELECTRICAL SHOP DRAWINGS. CONTRACTORS SHALL COMPLY AS TO SPECIFICATIONS.

LH - LEVEL CONTROL (START ON HIGH LEVEL)
RH - LEVEL CONTROL (START ON LOW LEVEL)

CONTROL MUST BE COMPATIBLE W/TYPE AND SIZE PUMP FURNISHED PER PUMP MANUFACTURERS SPECIFICATIONS

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 5/2/85
MSB-4 PUMP CONTROL SCHEMATICS	
APPROVED _____	Engr. of Design Services

Rev 10-30-87

4E-5

PLANT CAPACITY	TRASH TRAP	DETENTION FLOW EQUALIZATION TANK	SLUDGE STORAGE TANK	AERATION TANK	FINAL SETTLING TANK		FIX MEDIA CLARIFIER		DOSING TANK PUMP		SAND FILTER	CHLORINATION TANK
					SURFACE AREA	EFFECTIVE VOLUME	VOLUME	AREA	VOLUME	RATE		
					S.F.	GAL.	GAL.	S.F.	GAL.	S.F.		
4,000	650	2480	1000	4000	40	1000	647	18	304	83	162	152
5,000	750	3100	1000	5000	50	1250	1294	36	374	83	200	187
6,000	900	3720	1000	6000	60	1500	1294	36	454	83	242	227
7,000	1050	4340	1050	7000	70	1750	1294	36	524	83	280	262
8,000	1200	4960	1200	8000	80	2000	1294	36	600	83	321	300
9,000	1350	5580	1350	9000	90	2250	1294	36	682	83	365	341
10,000	1500	6200	1500	10000	100	2500	1294	36	760	83	406	380
12,000	1750	7440	1800	12000	105	3000	1294	36	900	83	481	450
14,000	1950	8680	2100	14000	112	3500	1294	36	1060	83	567	530
16,000	2100	9920	2400	16000	116	4000	1294	36	1212	83	648	606
18,000	2250	11160	2700	18000	120	4500	1294	36	1350	83	722	675
20,000	2400	12400	3000	20000	126	5000	1486	40	1496	83	800	748



THIS PROJECT

NOTE: THESE MINIMUM ACCEPTABLE CAPACITIES APPLY TO BOTH THE STEEL AND CONCRETE WASTEWATER TREATMENT PLANTS.

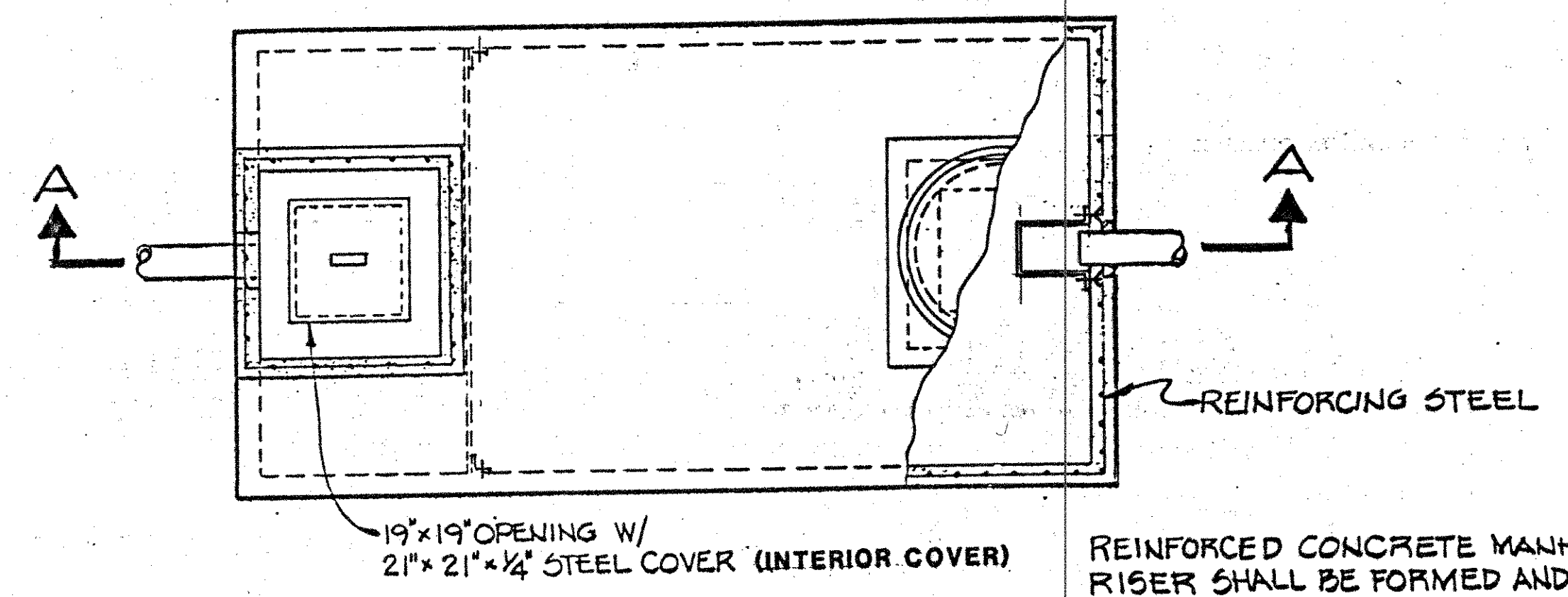
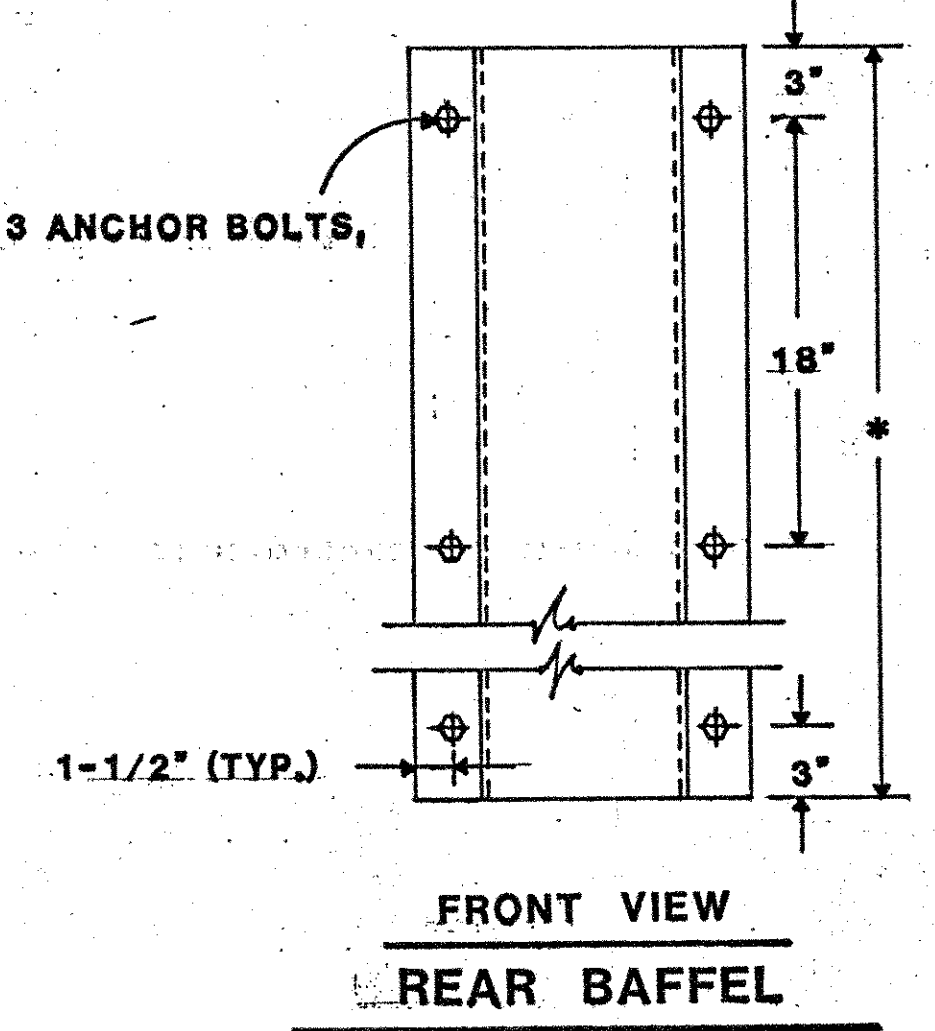
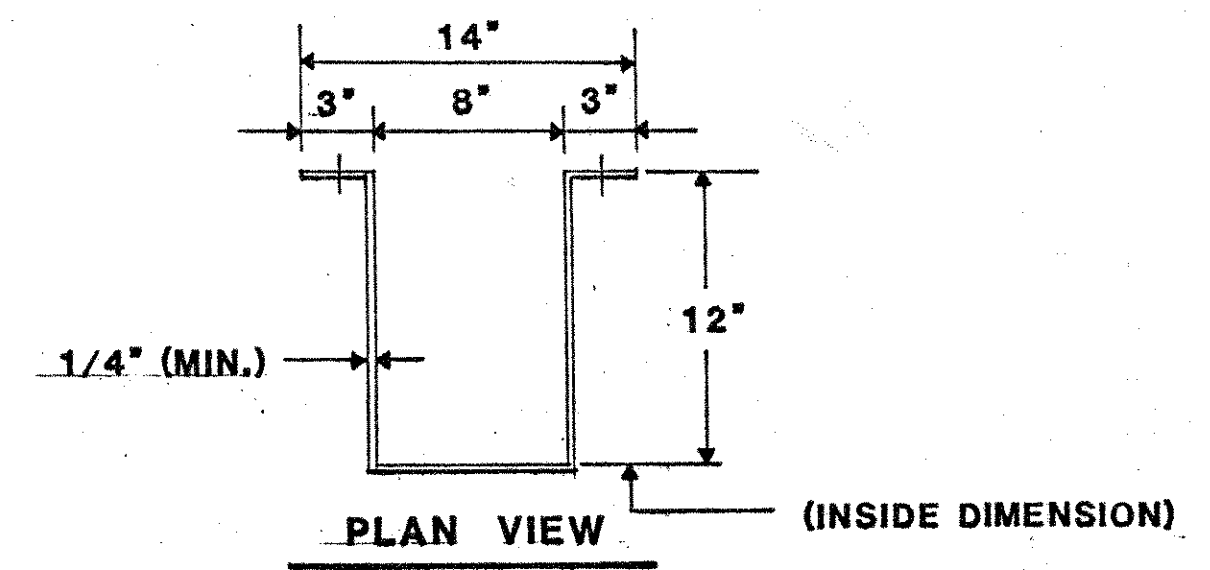
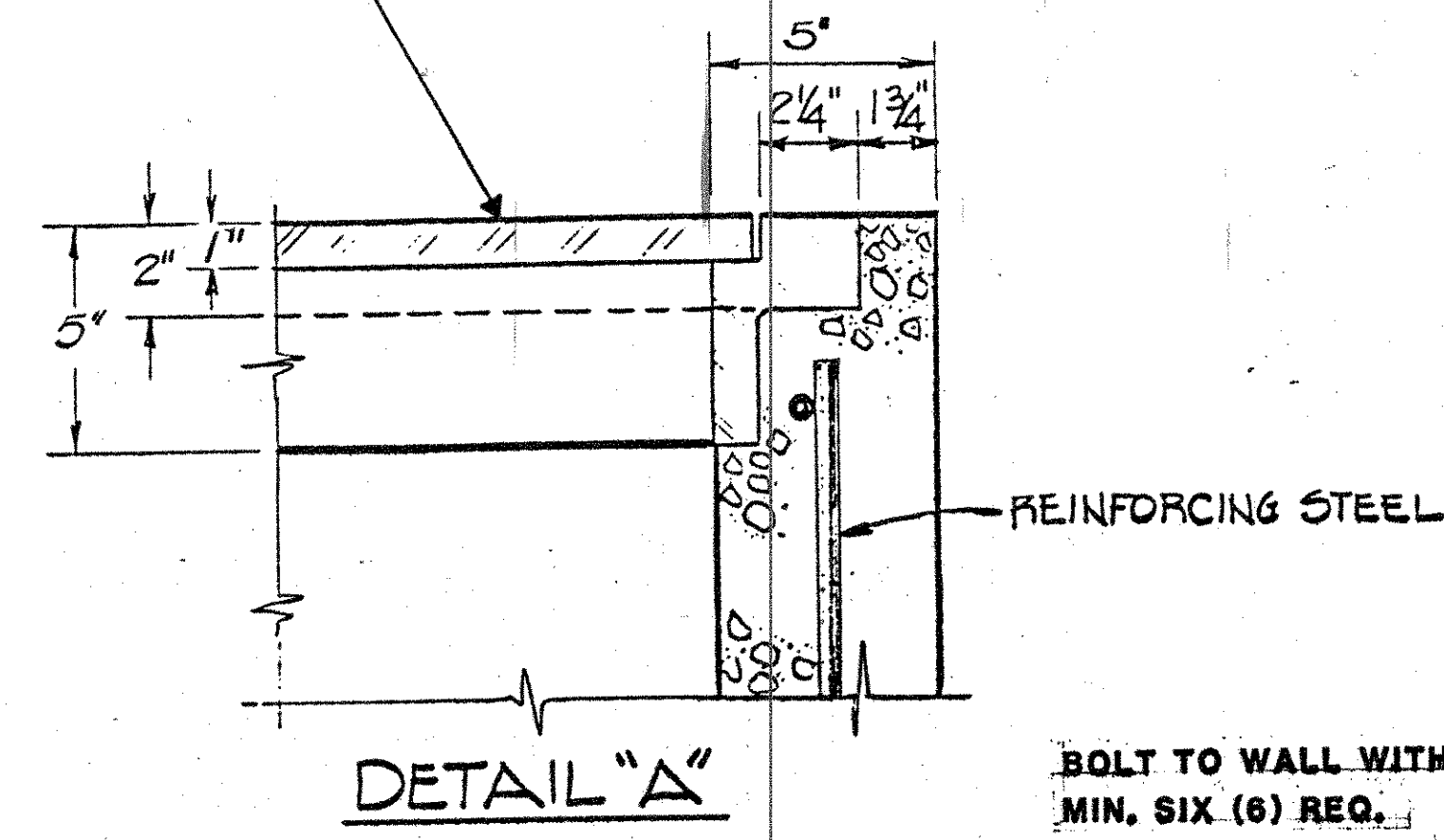
NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE
MINIMUM ACCEPTABLE CAPACITIES	10/30/87
WWTP-1	
APPROVED: <i>S. H. Henshaw</i>	ENGR OF DESIGN SERVICES
	1/14

BEX 10/30/87

NEENAH CAT. NO. R-1799-0 CAST IRON FRAME W/ ALUMINUM SOLID LID (30° CLEAR OPENING),
 MCKINLEY TYPE S32L (ALUMINUM) OR LIKE KIND AND QUALITY BY APPROVED EQUAL MANUFACTURERS
 AS SPECIFIED. (TWO (2) EACH REQUIRED)

CALC. BY	AUGLAIZE COUNTY AUG-33-6.82 SAFETY BEST AREA	OHIO	60 80
DATE		FHWA	
CHKD BY		REGION 5	
DATE			

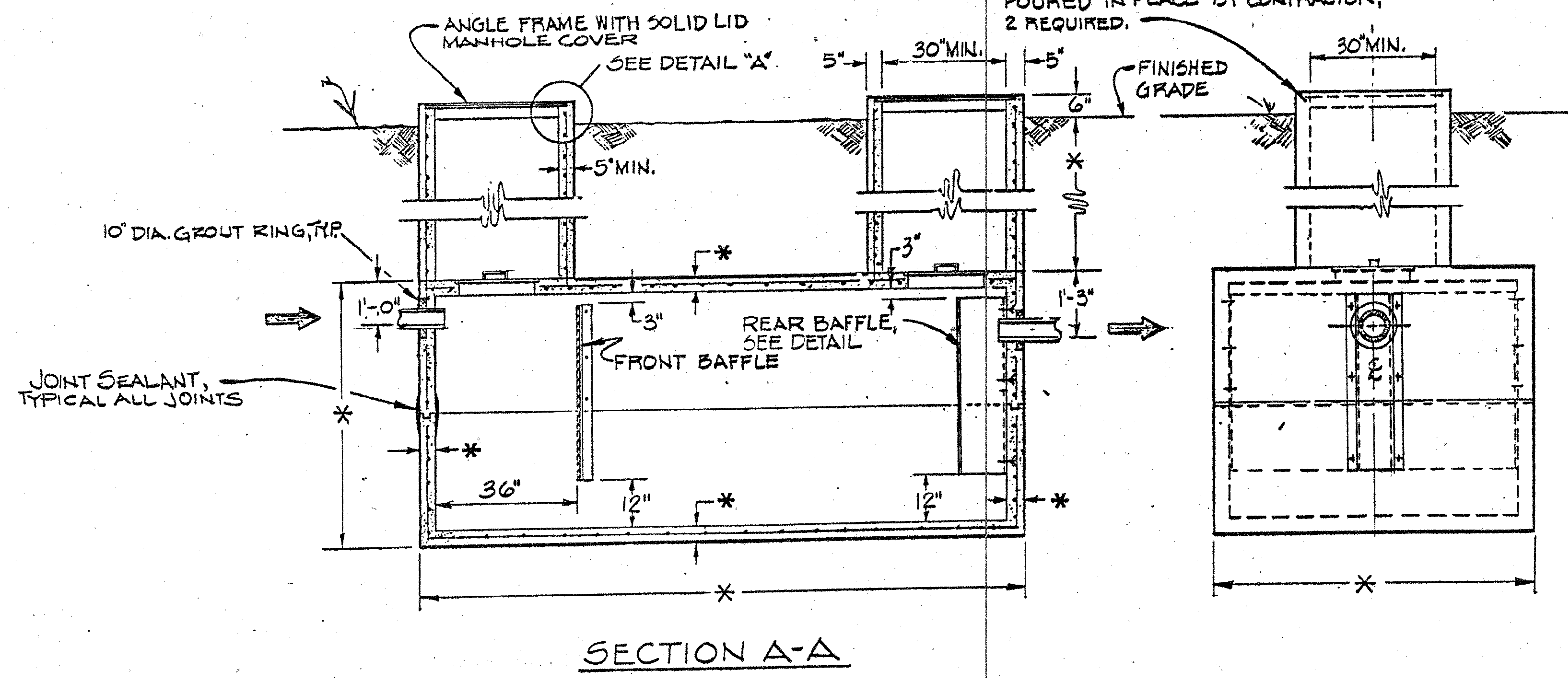


**BOLT TO WALL WITH 1/2" DIA. - 13 ANCHOR BOLTS,
MIN. SIX (6) REQ.**

**REINFORCED CONCRETE MANHOLE
RISER SHALL BE FORMED AND
POURED IN PLACE BY CONTRACTOR,
2 REQUIRED.**

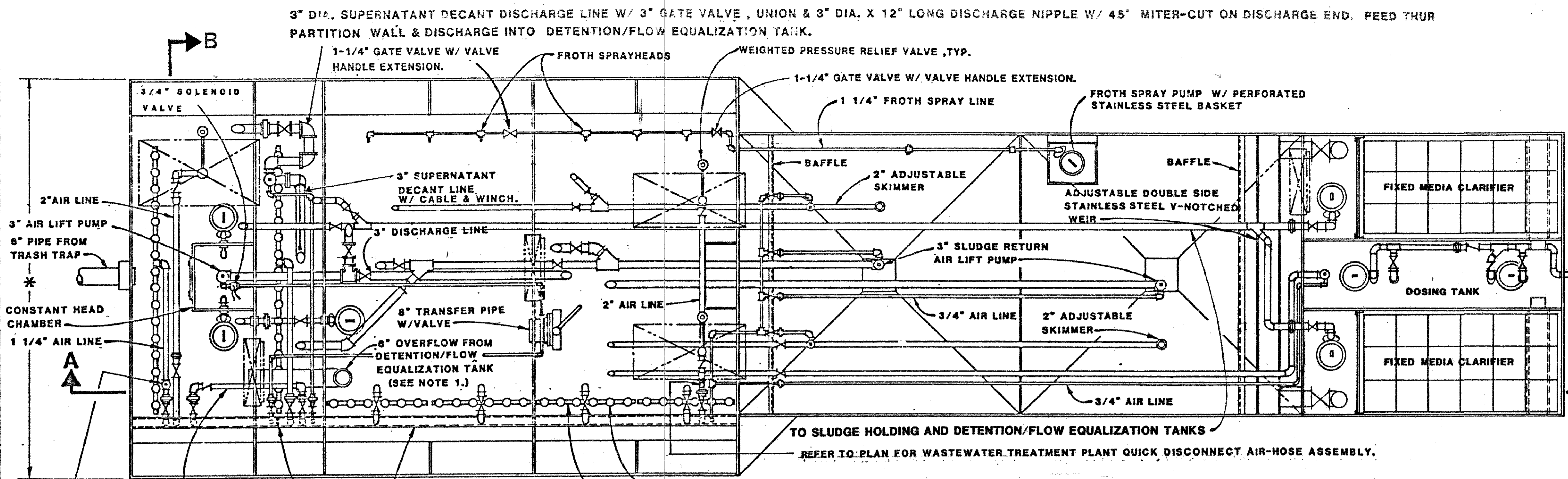
**NOTE: ALL COMPONENTS OF THE PLANT SHALL BE
AS DESCRIBED IN THE SPECIFICATIONS.**

***= DIMENSION TO BE SHOWN ON MANUFACTURERS SHOP
DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1**



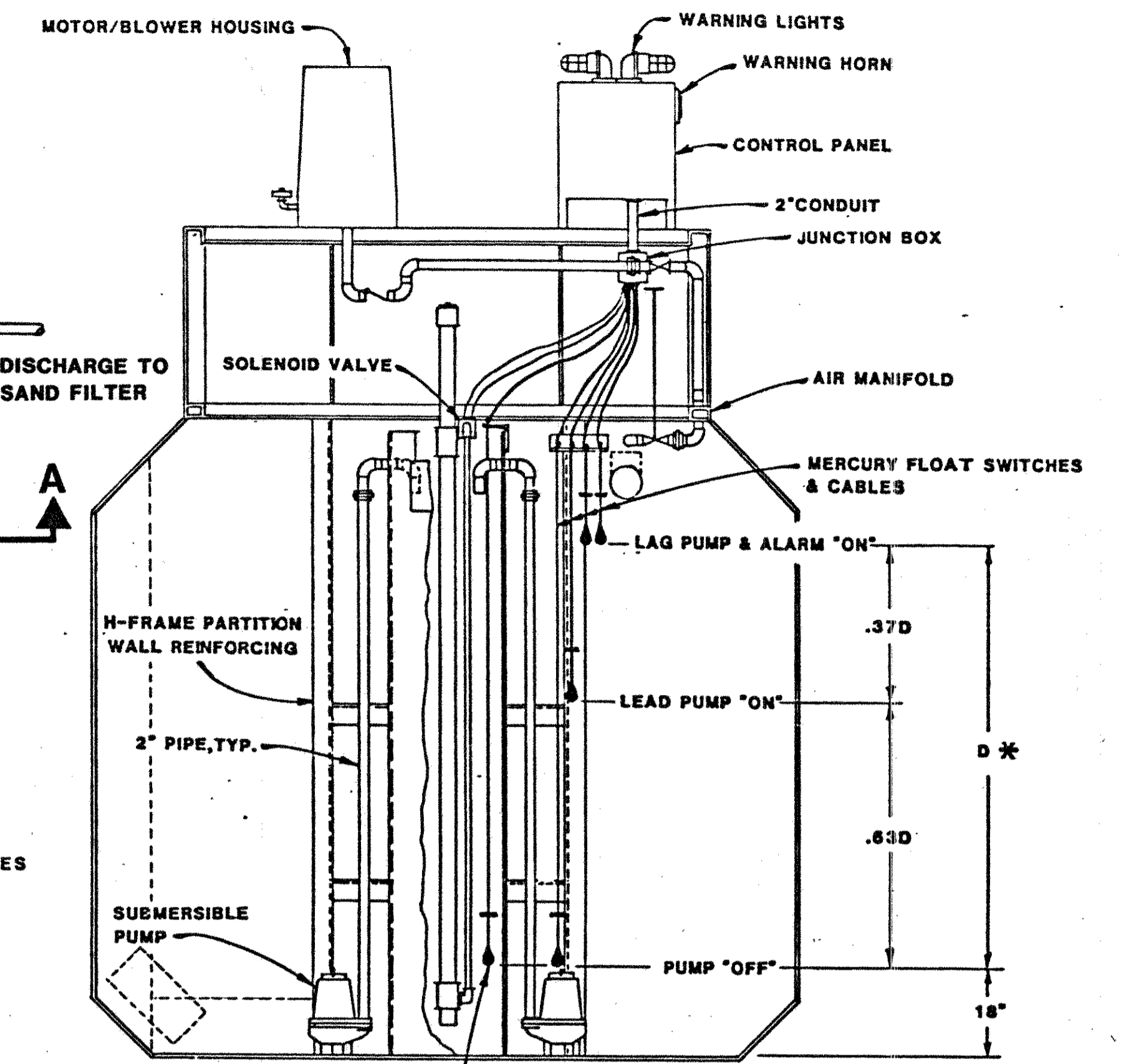
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8/25/86
CONCRETE TRASH TRAP	12/11/86 10/30/87
WWTP-2	
APPROVED <i>[Signature]</i> Engr. of Design Services	
WASTEWATER TREATMENT PLANT	

REV 10/30/87

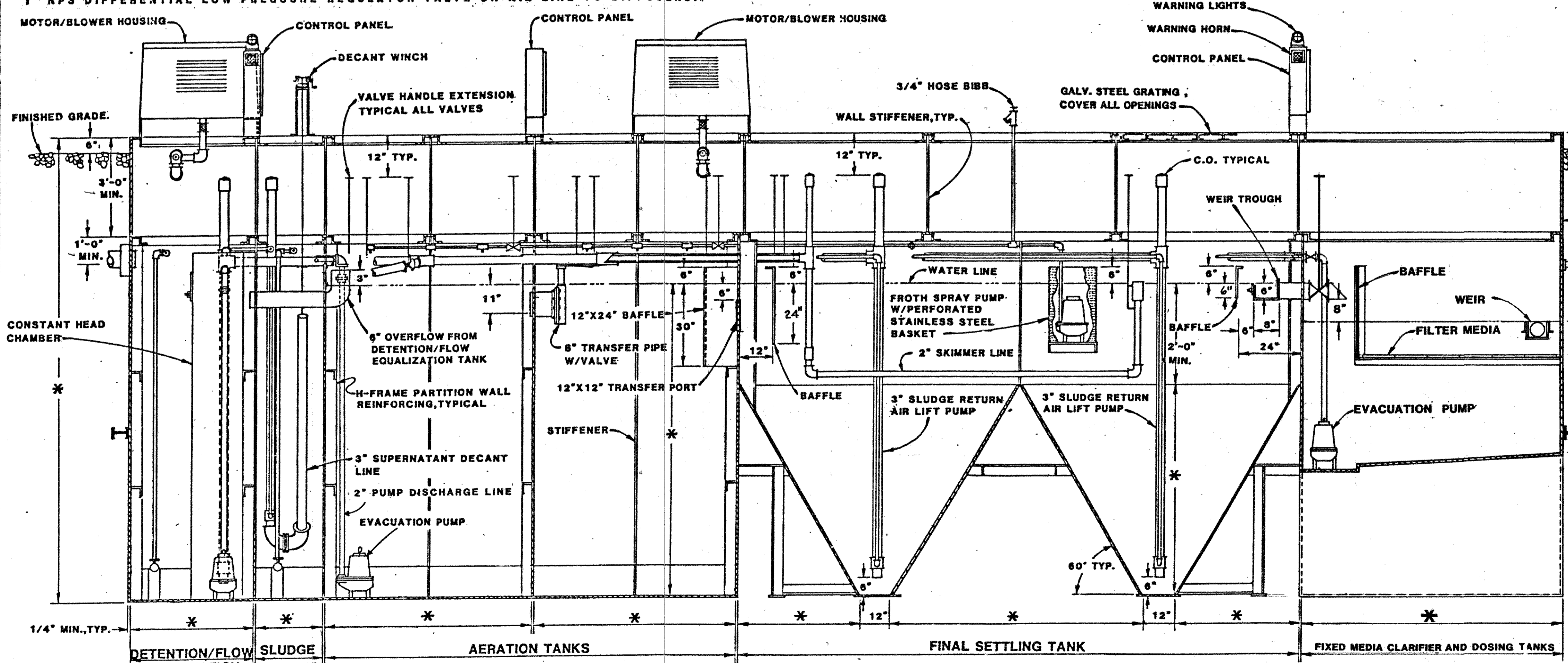


NOTE: EVACUATION PUMP 2" DIA. DISCHARGE LINE SHALL FEED THRU BOTH PARTITION WALLS OF THE SLUDGE HOLDING TANK AND DISCHARGE INTO THE DETENTION/FLOW EQUALIZATION TANK. PROVIDE & INSTALL VALVE, NIPPLES & UNIONS IN 2" RISER NEAR 90° ELBOW AND ON FEED THRU DISCHARGE LINE. CENTER LINE OF 2" FEED THRU DISCHARGE LINE SHALL BE INSTALLED 12" BELOW TOP OF TANK (NOT TOP OF WALL EXTENSION).

NOTE 1. THE RIM OF THE 6" OVERFLOW SHALL BE 2" LOWER THAN THE INVERT ELEVATION OF THE INCOMING 6" PIPE IN THE DETENTION/FLOW EQUALIZATION TANK
NOTE 2. FURNISH AND INSTALL MAGNESIUM ANODES AND ANODE TEST BOXES AS SPECIFIED.

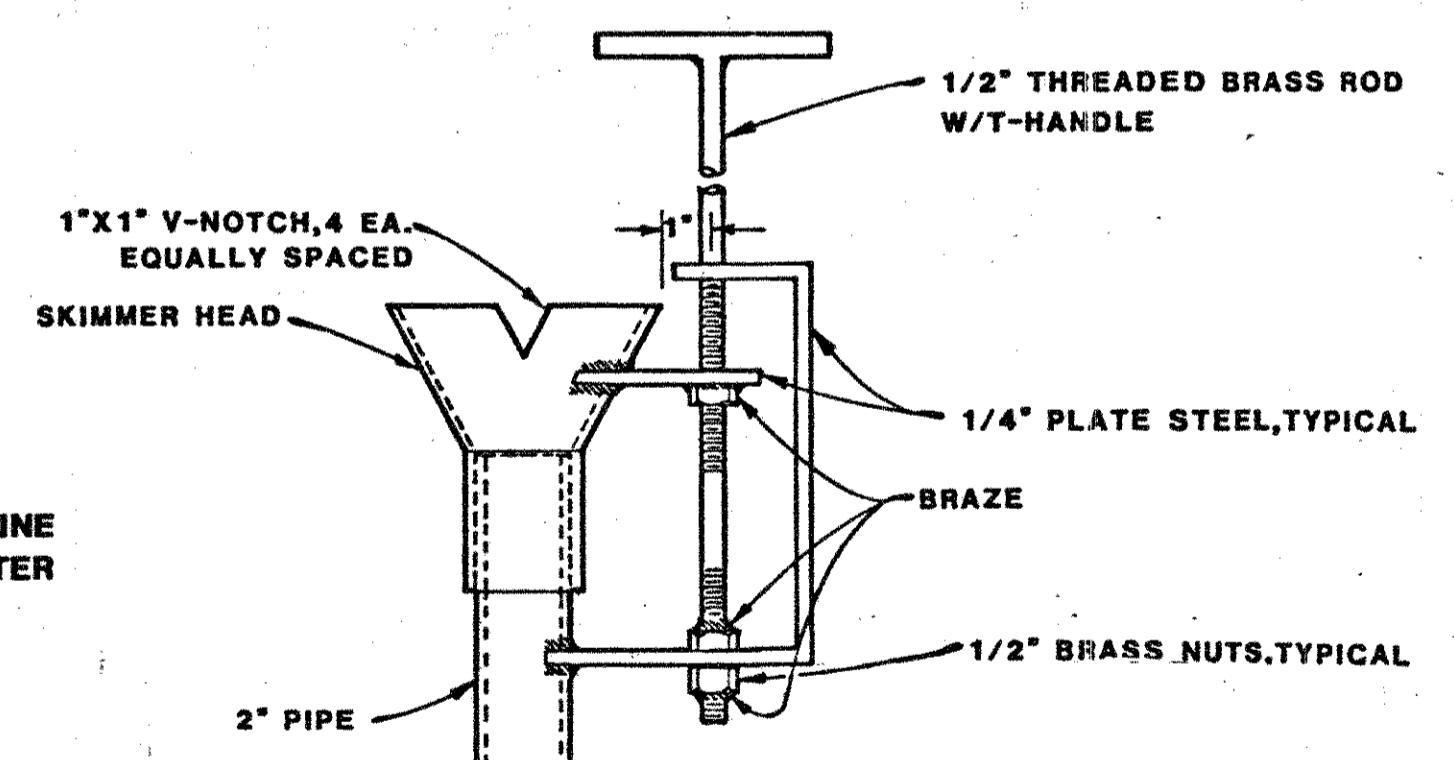


SECTION B-B



SECTION A-A

*- DIMENSION TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1

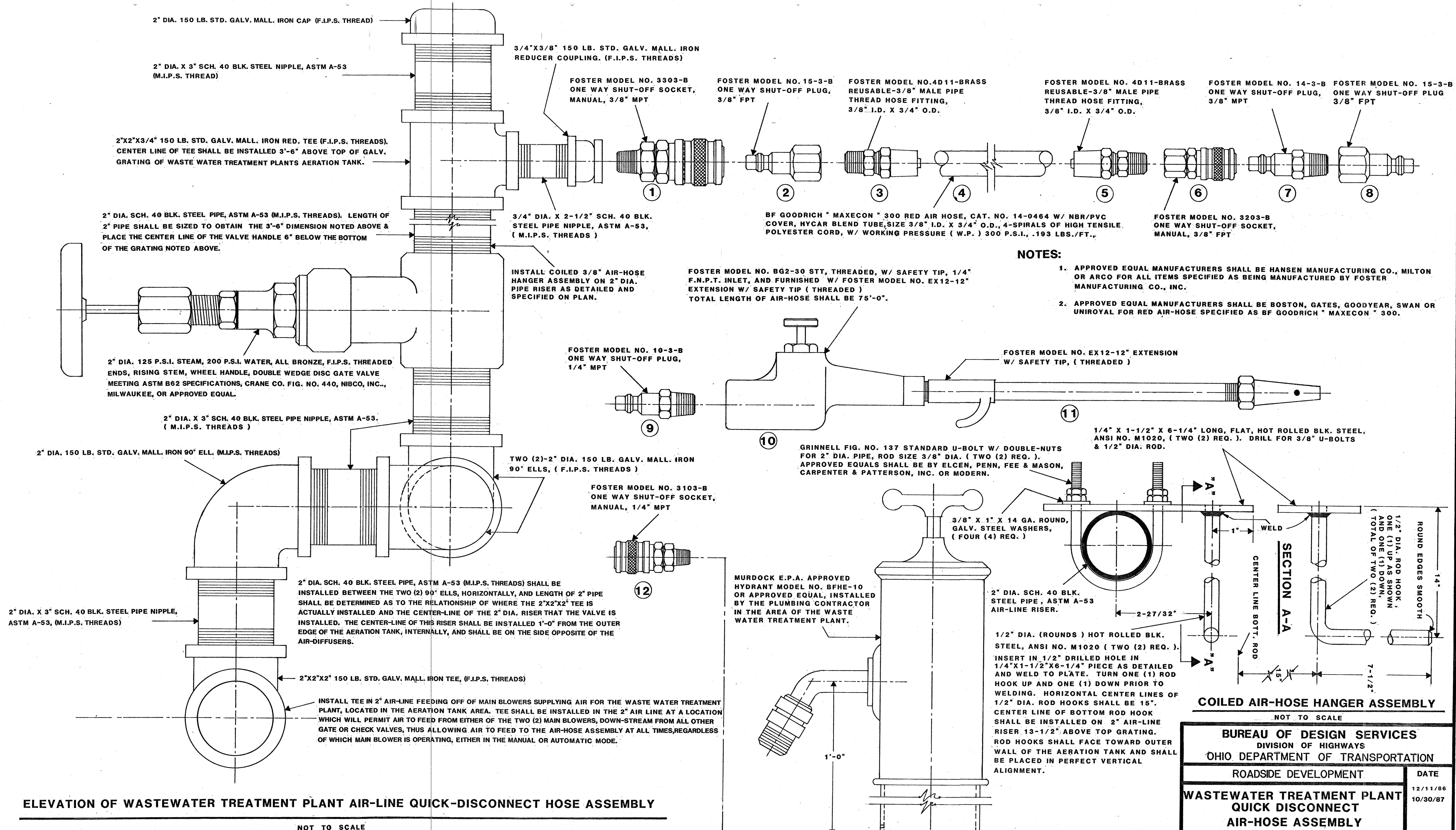


ADJUSTABLE SKIMMER DETAIL

NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8/25/86 10/31/86 12/11/86 10/30/87
STEEL WASTEWATER TREATMENT PLANT	
WWTP-3	
APPROVED <i>[Signature]</i> Engr. of Design Services	

Rev. 10-30-87



ELEVATION OF WASTEWATER TREATMENT PLANT AIR-LINE QUICK-DISCONNECT HOSE ASSEMBLY

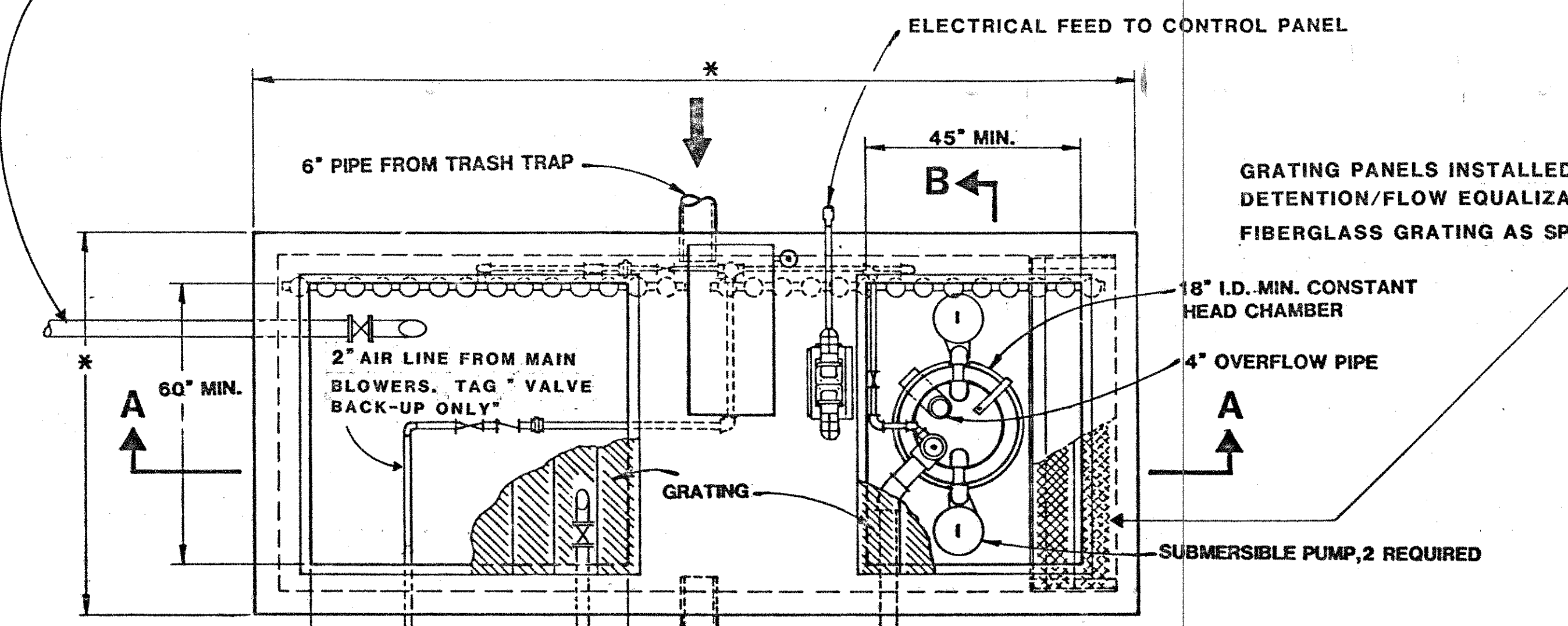
NOT TO SCALE

THE PLUMBING CONTRACTOR SHALL DRILL AND TAP THE OUTER PIPE RISER OF THE HYDRANT AS SHOWN FOR 1/4" MPT, THE GENERAL CONTRACTOR SHALL INSTALL THE NO. 12 FOSTER FITTING IN THE TAPPED HOLE. USING NO. 7 & 8 FITTINGS, AIR-HOSE CAN BE CONNECTED TO NO. 7 FITTING TO BLOW-OUT WATER IN THE OUTER PIPE AFTER USE IN TEMPERATURES AT OR BELOW 32° F. TO PREVENT HYDRANT FROM FREEZING.

REV 10/30/87

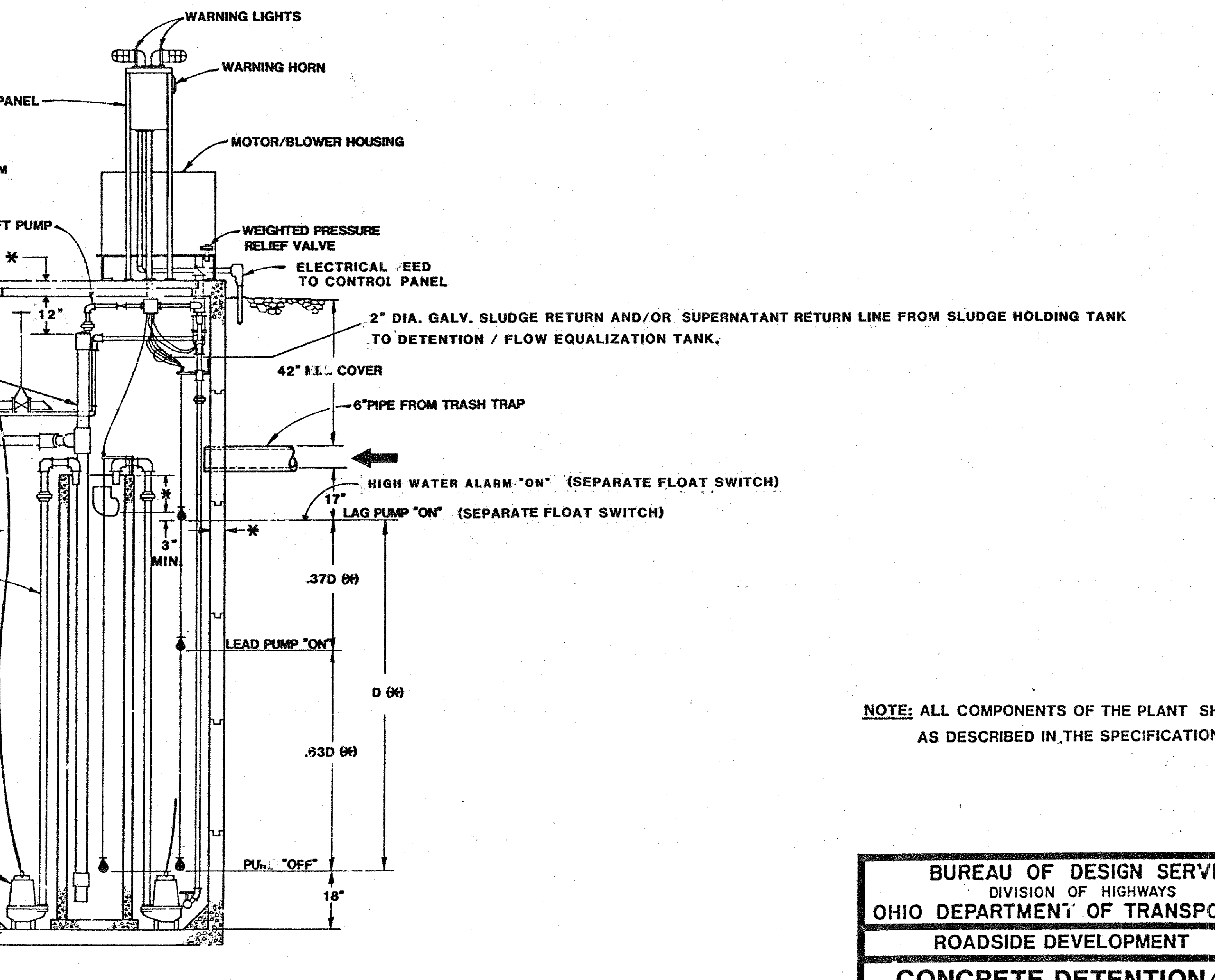
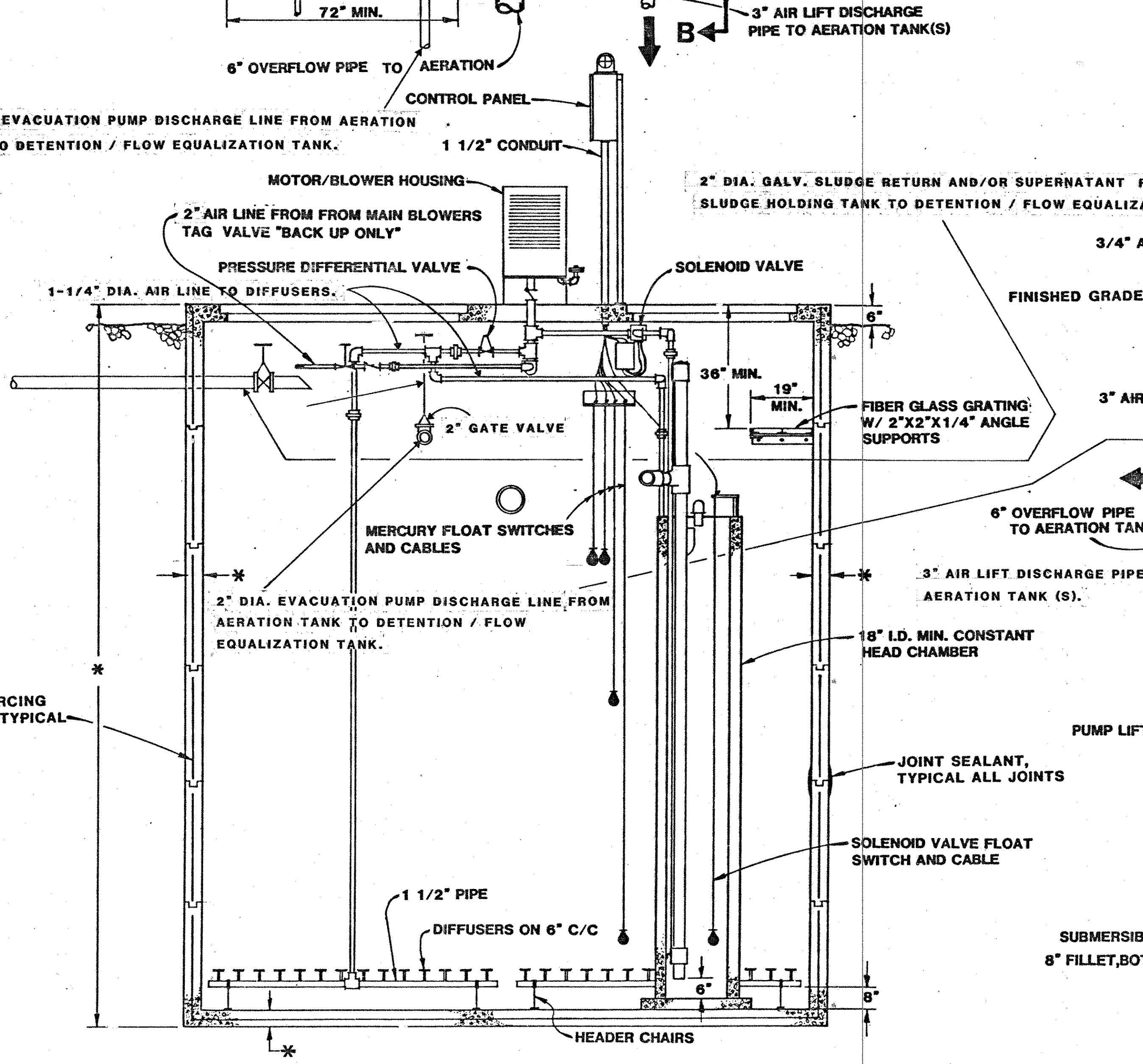
BUREAU OF DESIGN SERVICES		DATE 12/11/86 10/30/87
DIVISION OF HIGHWAYS		
OHIO DEPARTMENT OF TRANSPORTATION		
ROADSIDE DEVELOPMENT		
WASTEWATER TREATMENT PLANT QUICK-DISCONNECT AIR-HOSE ASSEMBLY		
WWTP- 4		
APPROVED <i>[Signature]</i> Engr. of Design Services		4/14

2" DIA. GALV. SLUDGE RETURN AND/OR SUPERNATANT RETURN LINE FROM SLUDGE HOLDING TANK TO DETENTION/FLOW EQUALIZATION TANK.



GRATING PANELS INSTALLED ON THE TOP OF AND AT THE INTERMEDIATE SERVICE LEVEL OF THE DETENTION/FLOW EQUALIZATION TANK AND CONSTANT-HEAD PUMP CHAMBER (ONLY) SHALL BE FIBERGLASS GRATING AS SPECIFIED.

*=DIMENSION TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1



NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8/25/86
CONCRETE DETENTION/ FLOW EQUALIZATION TANK	12/11/86
	10/30/87
WWTP- 5	
APPROVED <i>[Signature]</i> Engr. of Design Services	5/14

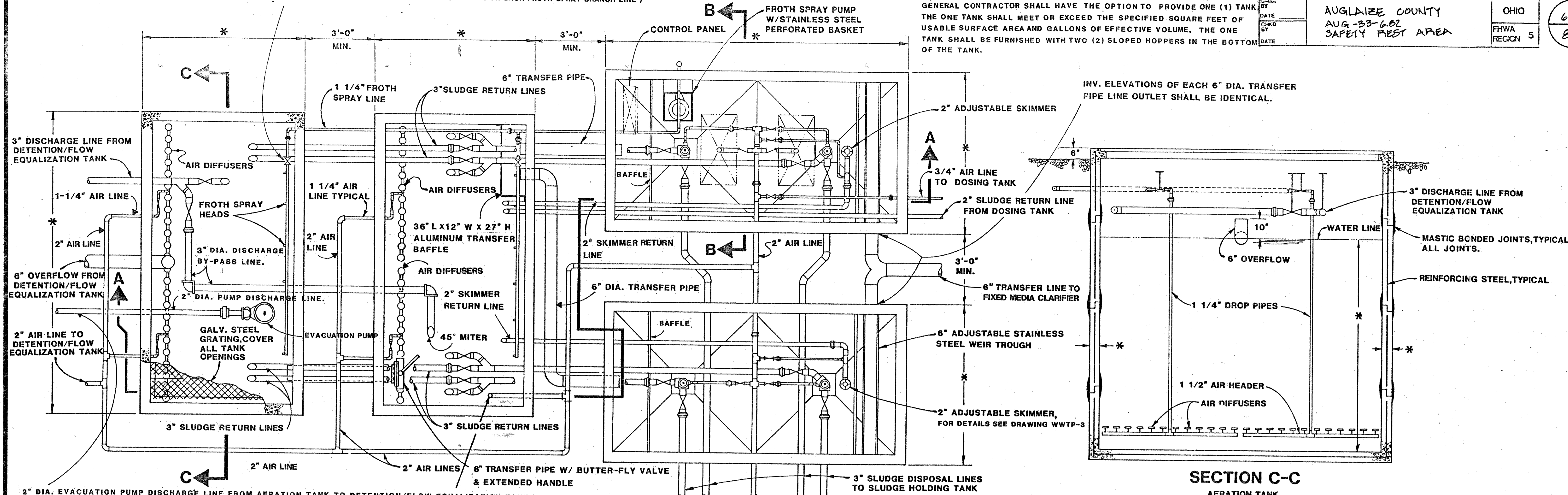
REV 10/30/87

1-1/4" GATE VALVE W/ VALVE HANDLE EXTENSION. (TYPICAL ON EACH FROTH SPRAY BRANCH LINE)

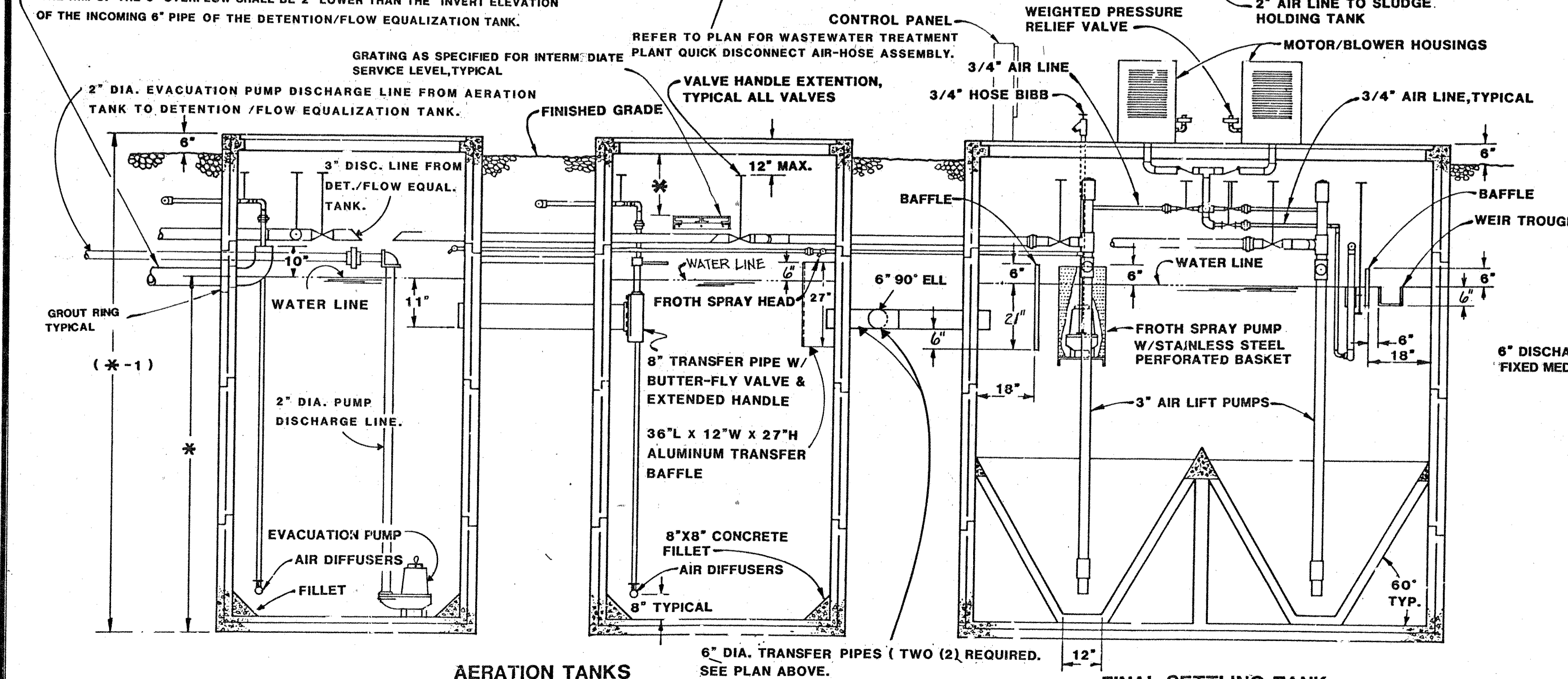
NOTE: IN LIEU OF THE TWO (2) FINAL SETTLING TANKS SHOWN ON PLANS, THE GENERAL CONTRACTOR SHALL HAVE THE OPTION TO PROVIDE ONE (1) TANK. THE ONE TANK SHALL MEET OR EXCEED THE SPECIFIED SQUARE FEET OF USABLE SURFACE AREA AND GALLONS OF EFFECTIVE VOLUME. THE ONE TANK SHALL BE FURNISHED WITH TWO (2) SLOPED HOPPERS IN THE BOTTOM OF THE TANK.

CALC. BY	AUGLAIZE COUNTY	OHIO
DATE	AUG-33-6.02	FHWA REGION 5
CHKD BY	SAFETY REST AREA	
DATE		

64
80



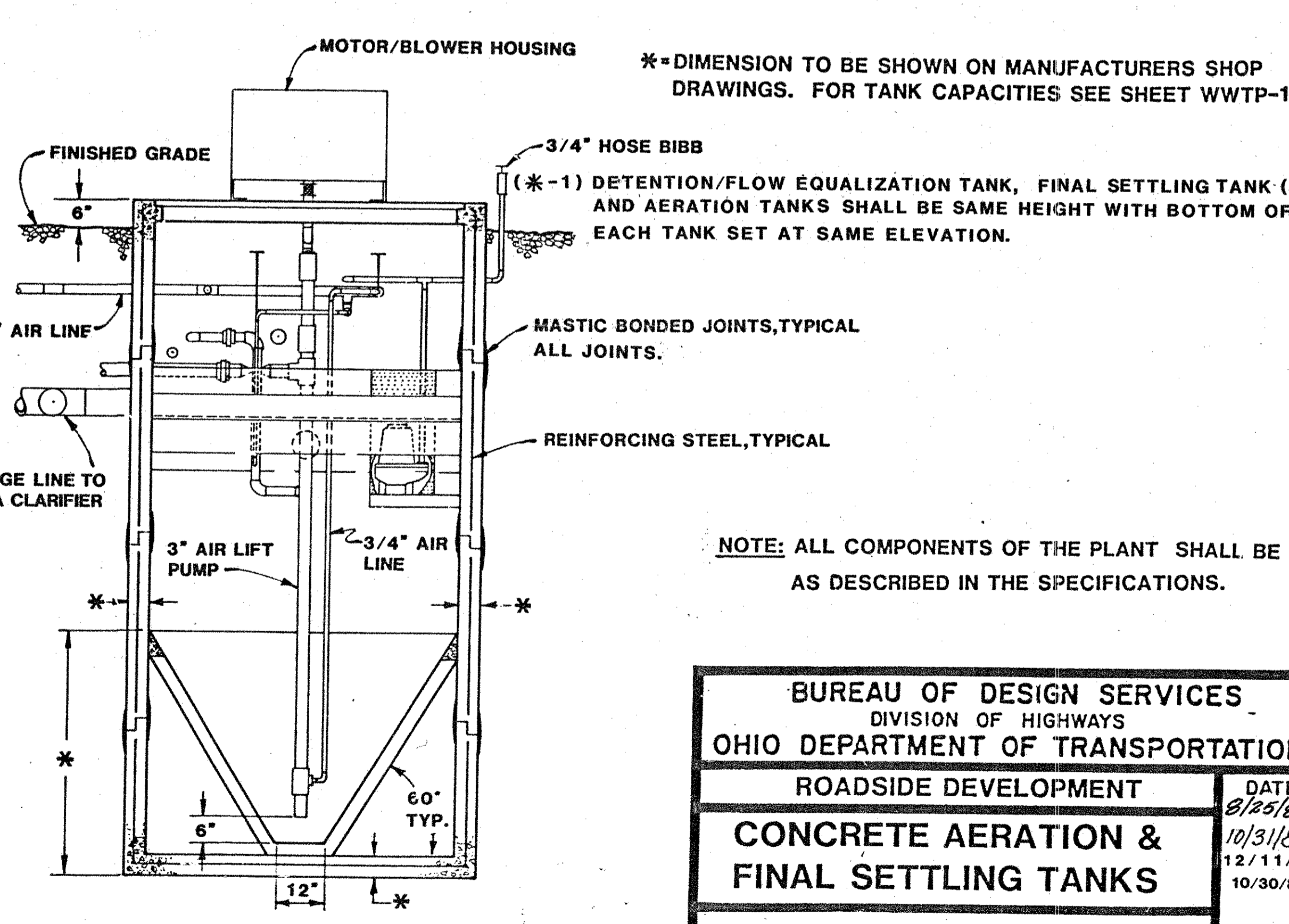
SECTION C-C
AERATION TANK



AERATION TANKS

FINAL SETTLING TANK

SECTION A-A



SECTION B-B
FINAL SETTLING TANK

NOTE: ALL CONCRETE TANKS SHALL REQUIRE A 3-INCH SAND BED BETWEEN THE BOTTOM OF TANKS AND TOPS OF CONCRETE BASE PADS.

*-DIMENSION TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1

(*-1) DETENTION/FLOW EQUALIZATION TANK, FINAL SETTLING TANK(S), AND AERATION TANKS SHALL BE SAME HEIGHT WITH BOTTOM OF EACH TANK SET AT SAME ELEVATION.

NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

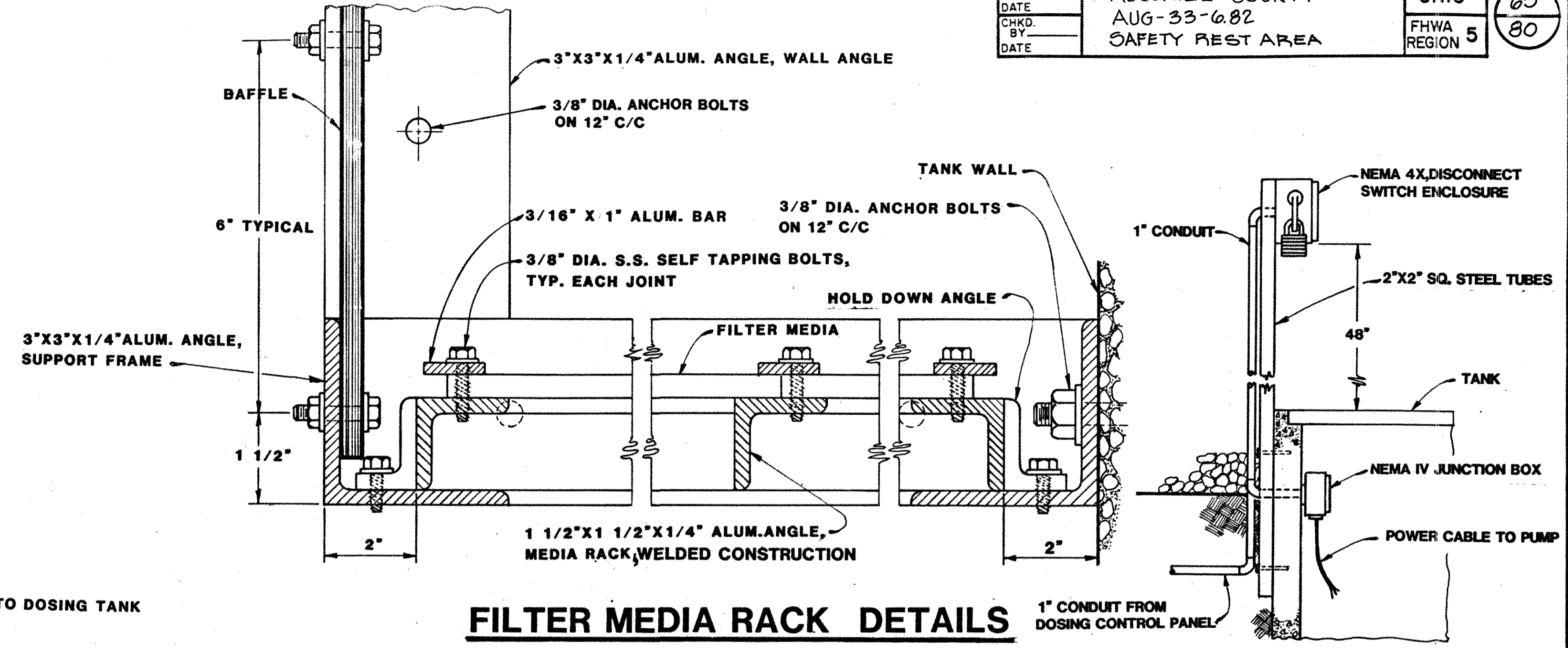
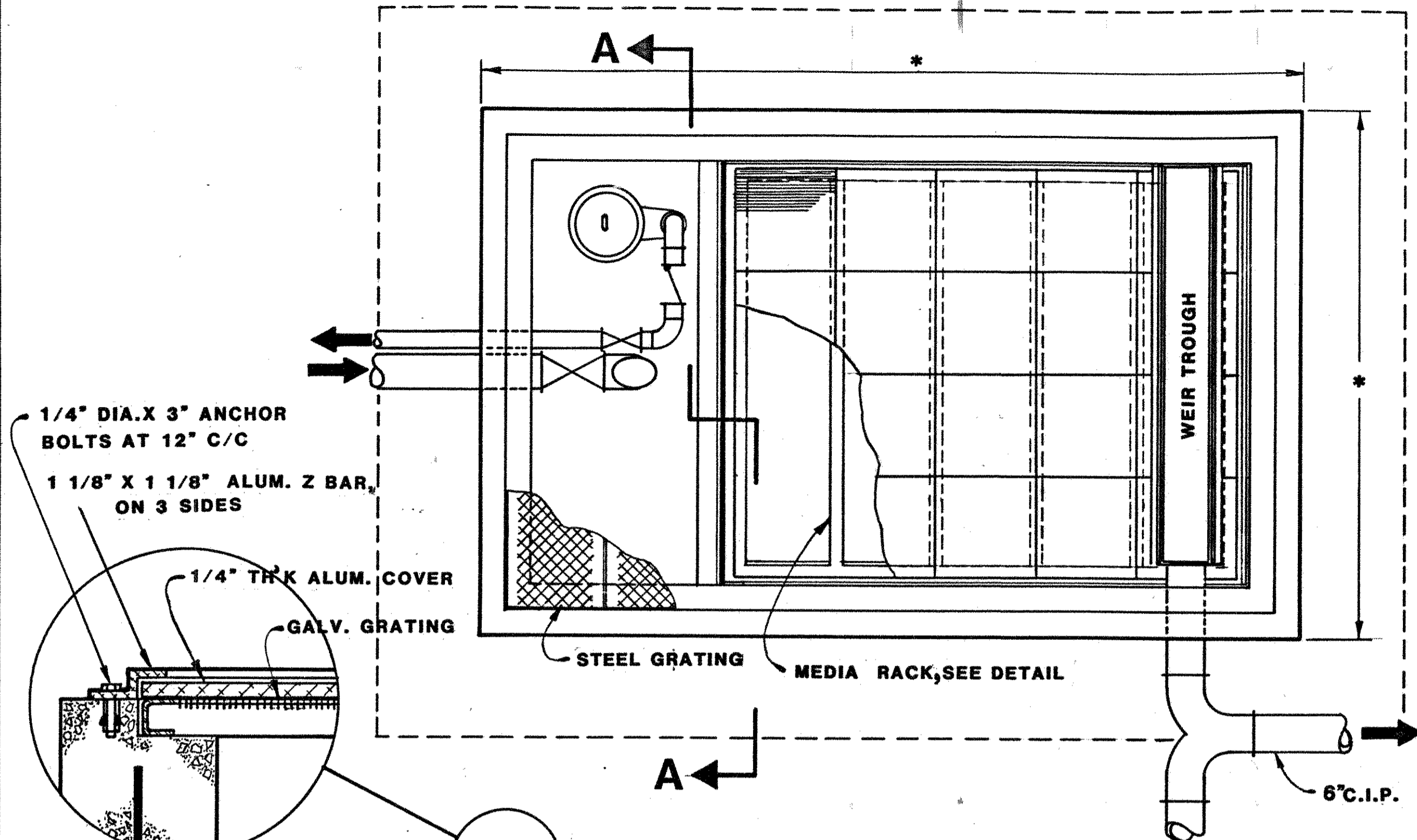
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	
DATE	10/31/06
CONCRETE AERATION & FINAL SETTLING TANKS	
DATE	12/11/06
DATE	10/30/07

WWTP- 6

REV 10/30/07

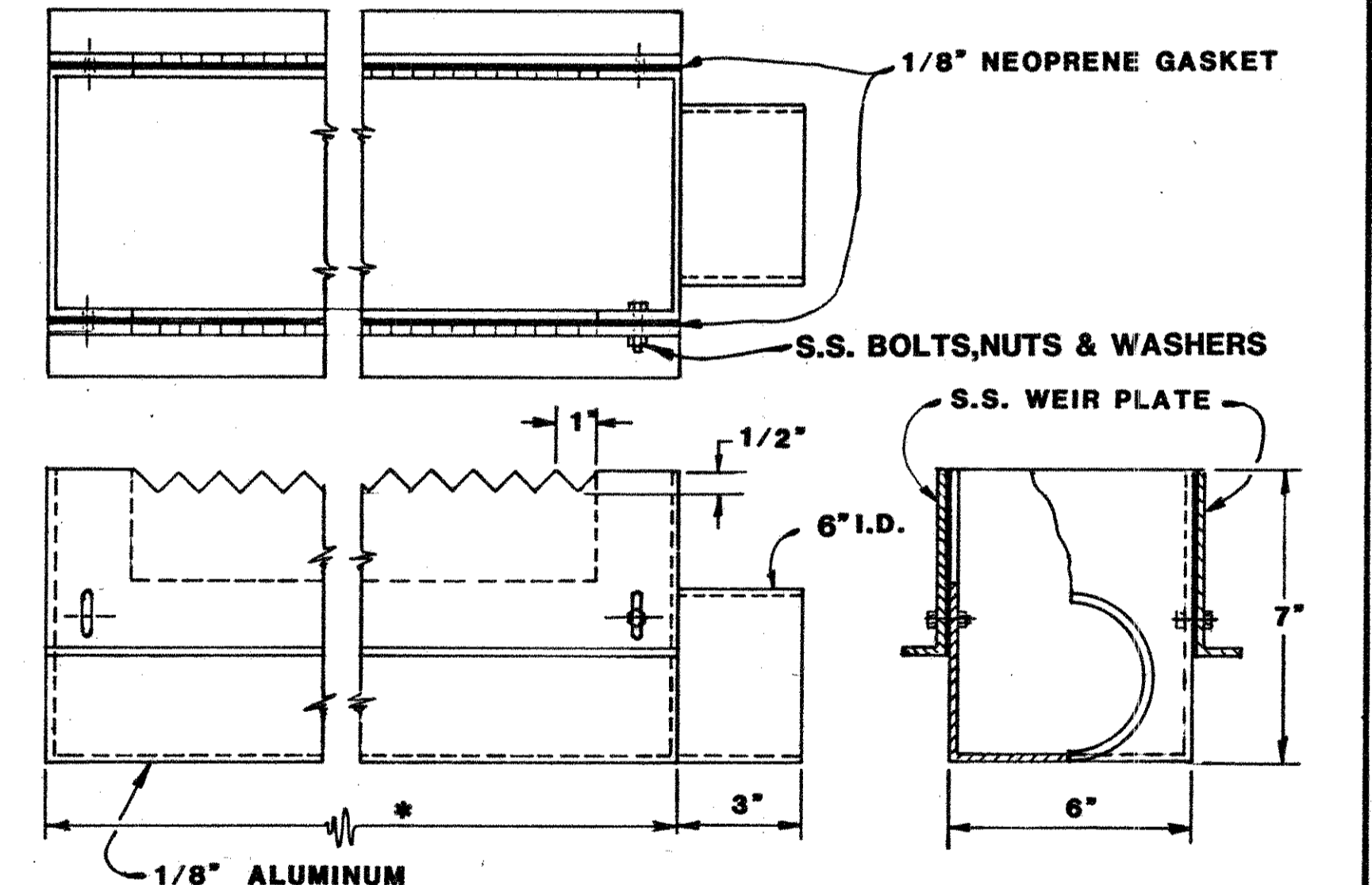
APPROVED [Signature] Engr. of Design Services

6 / 14



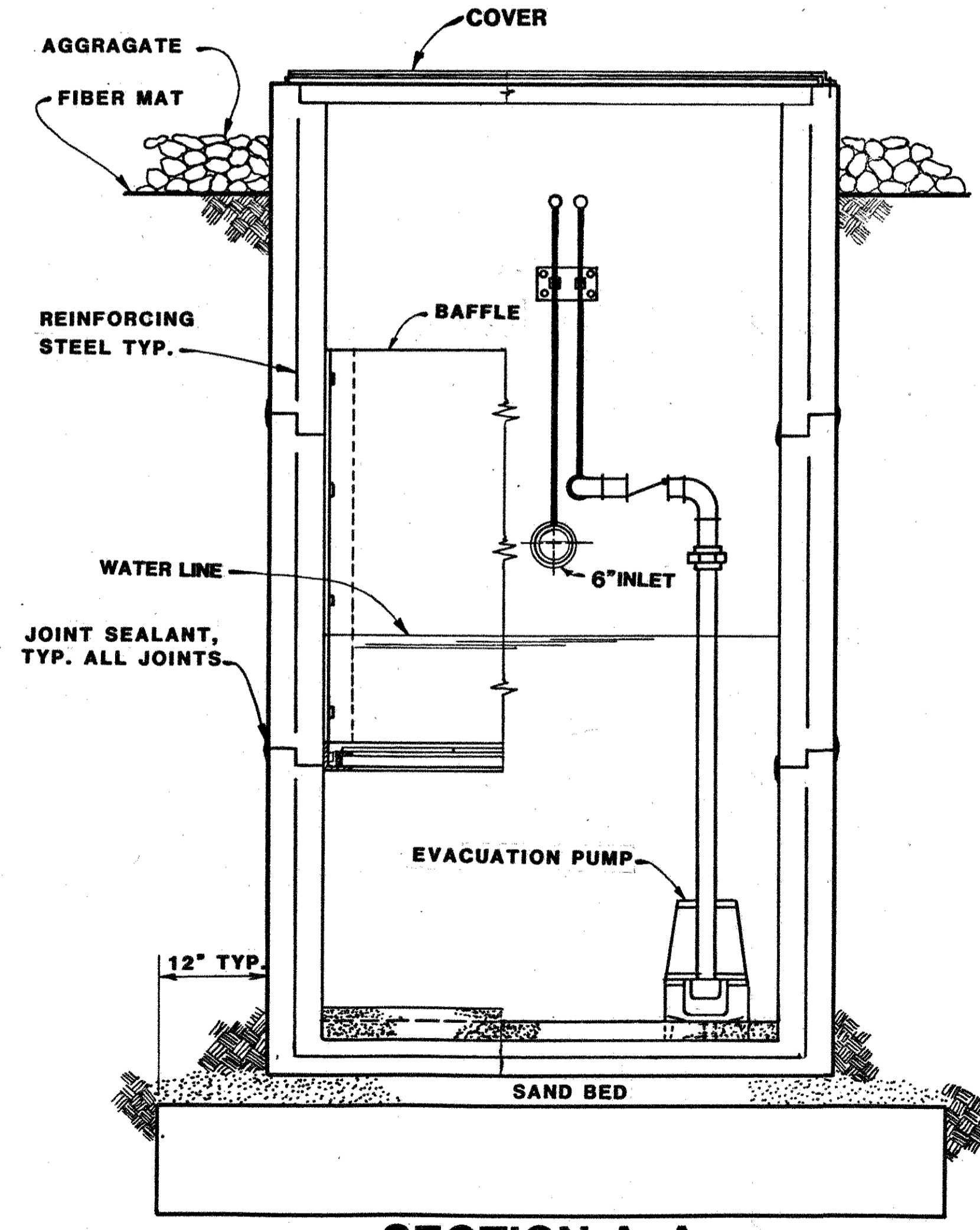
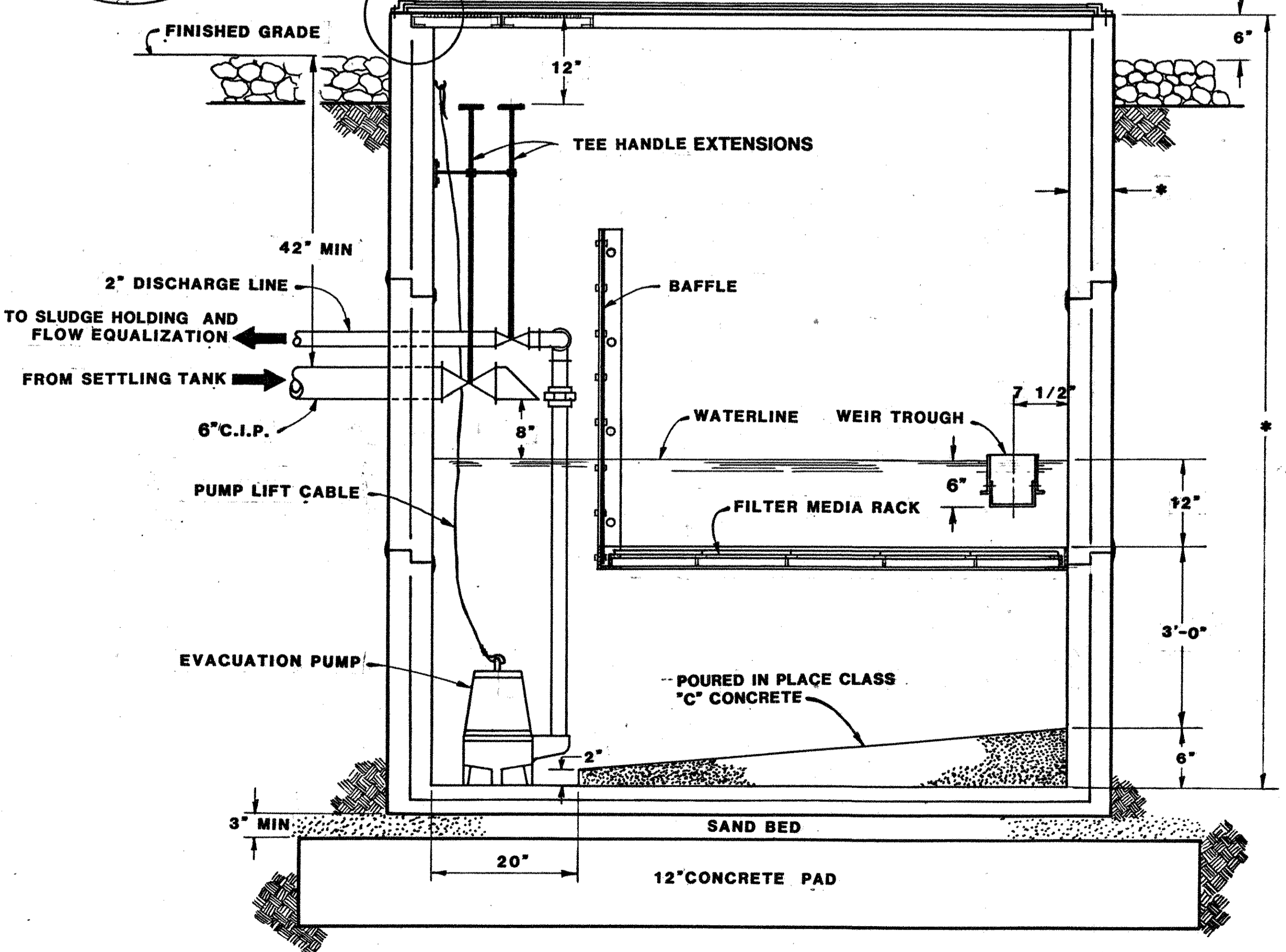
FILTER MEDIA RACK DETAILS

ELECTRICAL DETAILS



WEIR TROUGH DETAILS

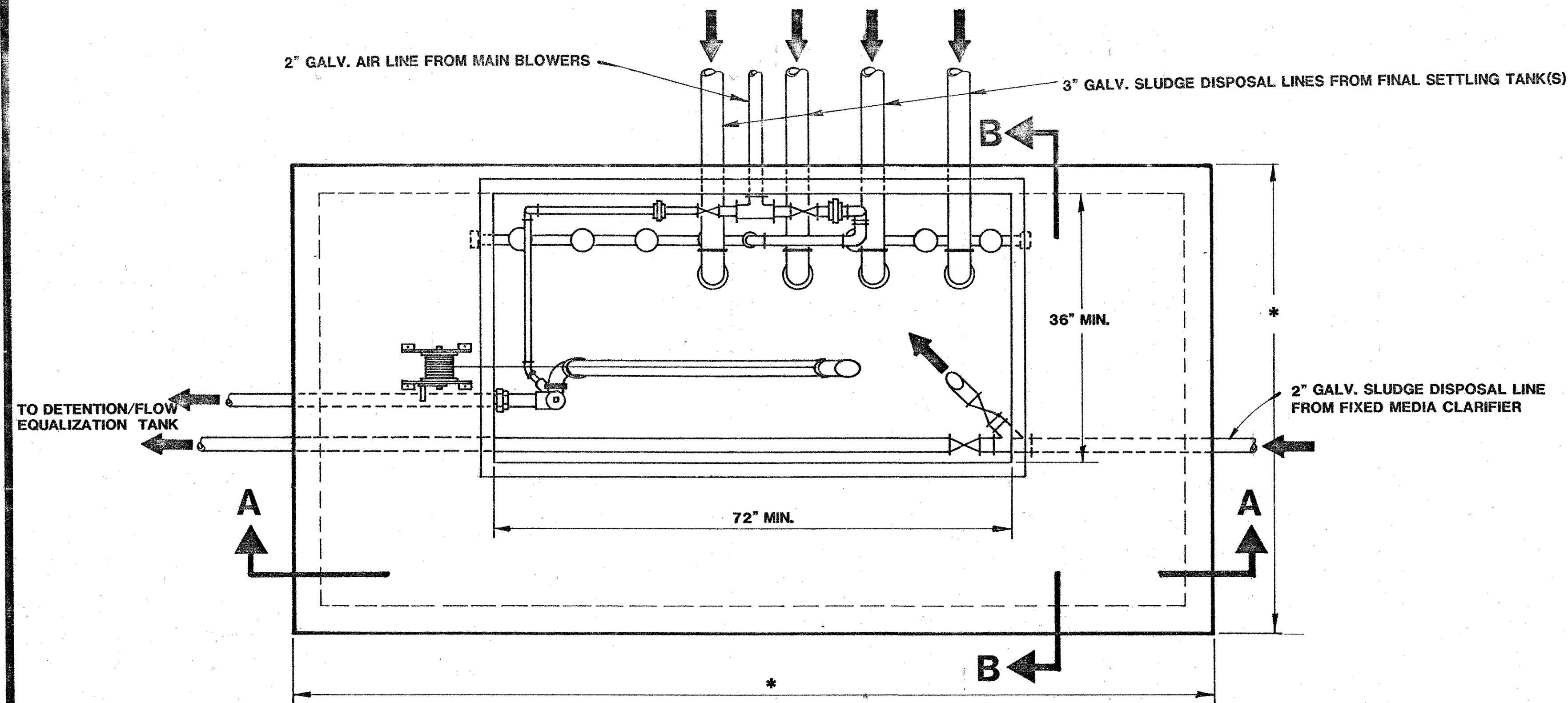
NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.



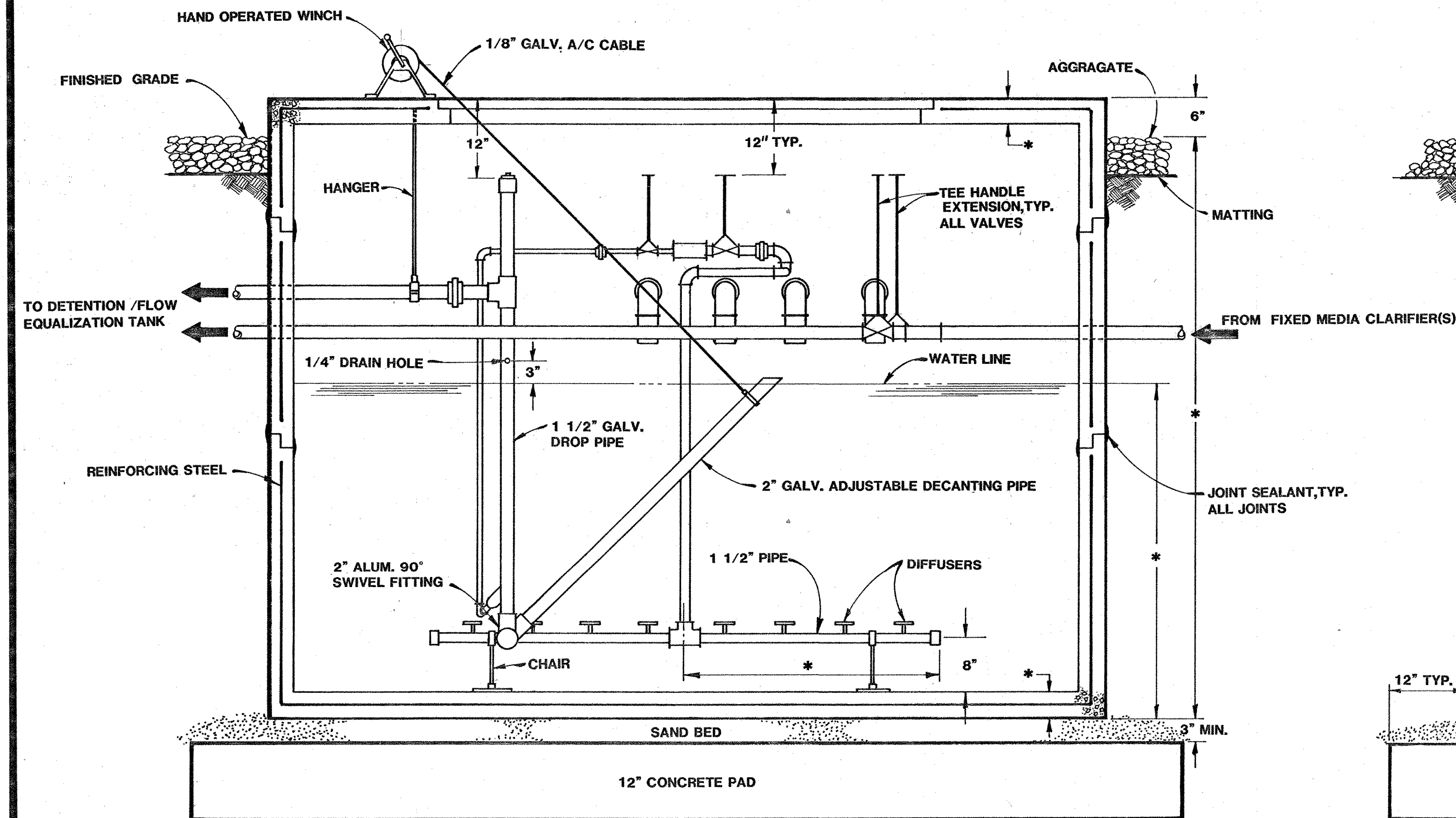
SECTION A-A

* DIMENSIONS TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1

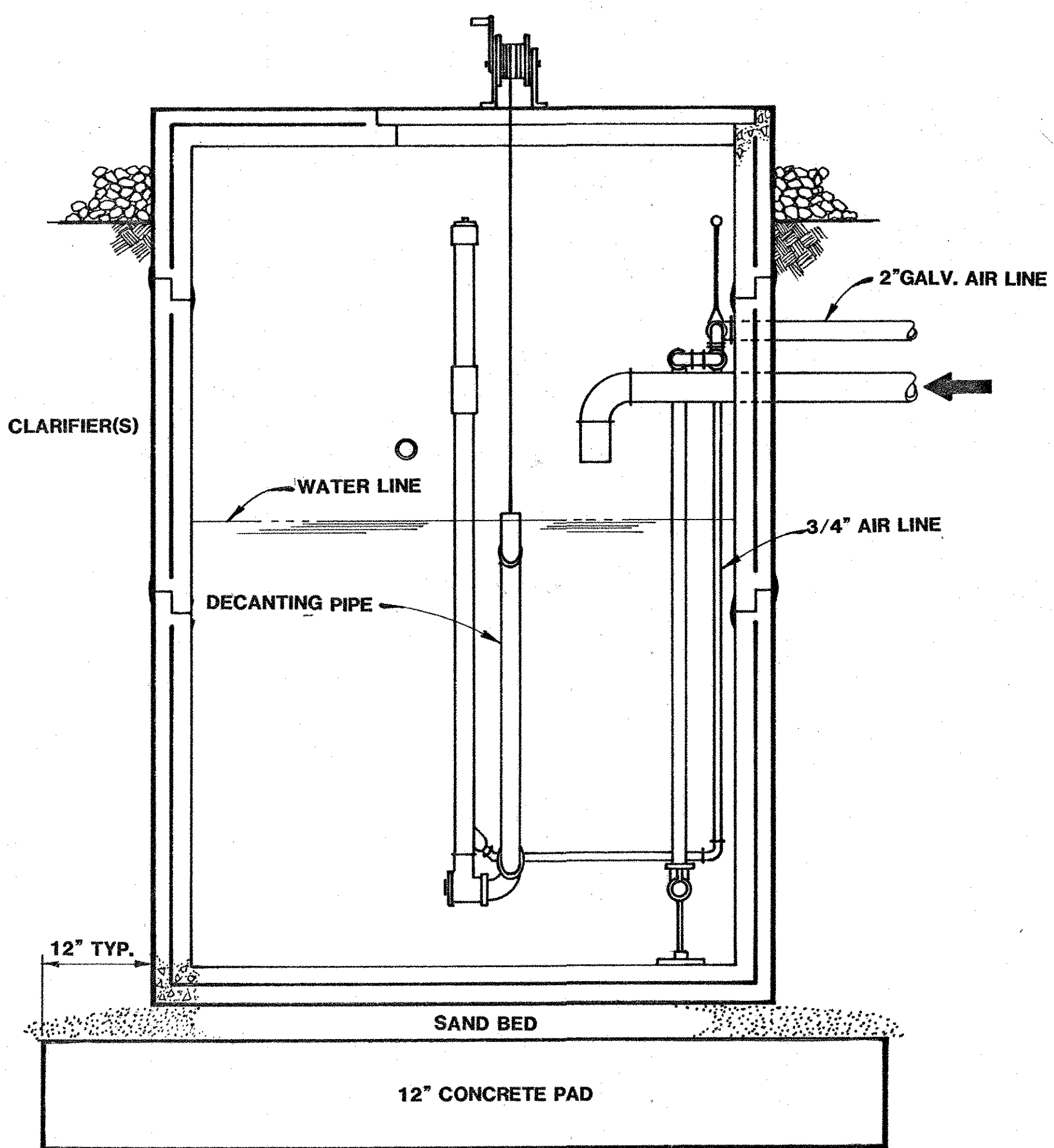
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADWAY DEVELOPMENT	DATE 10/30/87
FIXED MEDIA CLARIFIER	
WWTP-7	
APPROVED <i>[Signature]</i> ENGR. OF DESIGN SERVICES	7/14



* = DIMENSIONS TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS FOR TANK CAPACITIES SEE SHEET WWTP-1



SECTION A-A

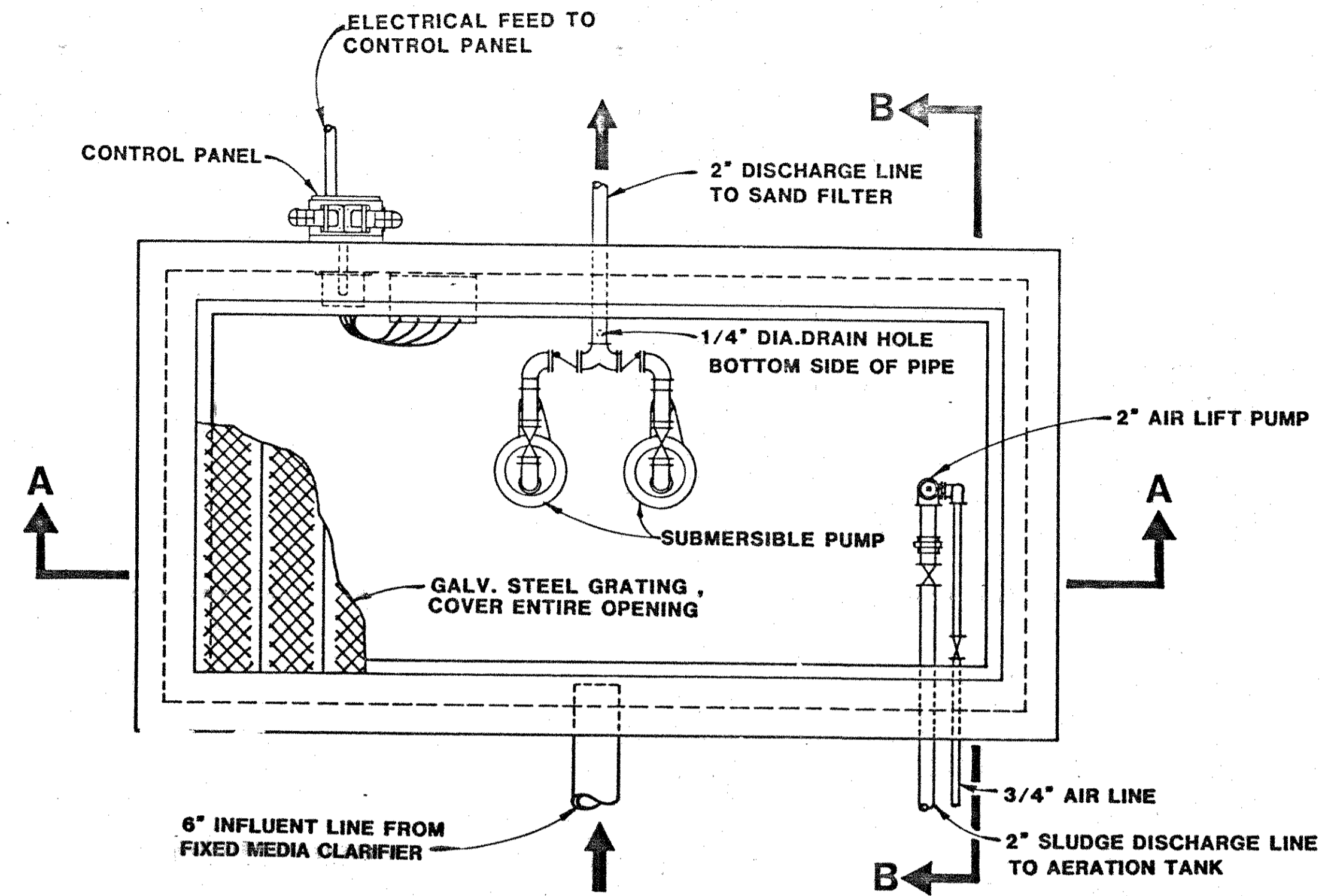


SECTION B-B

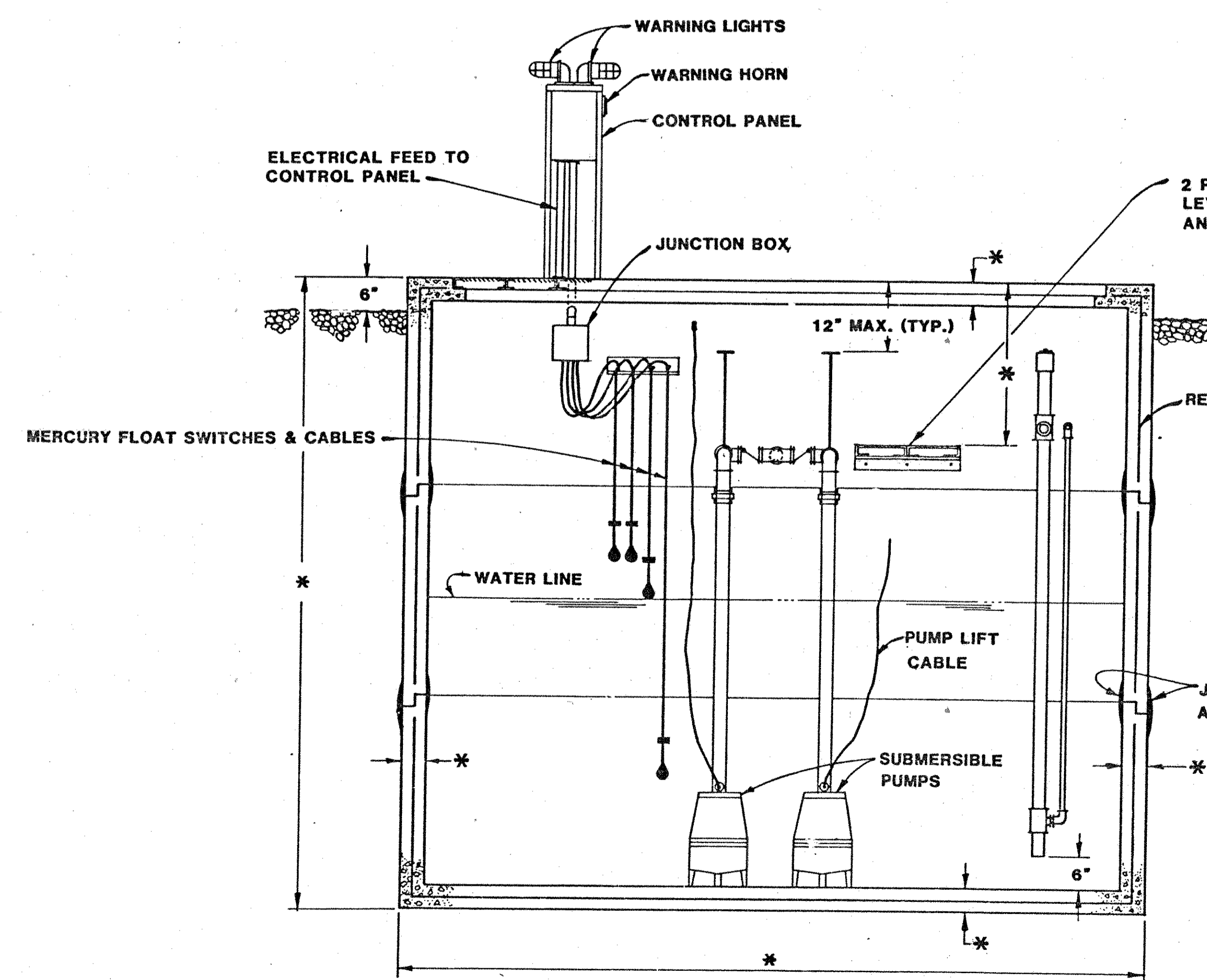
NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 10/30/87
CONCRETE SLUDGE HOLDING TANK	
WWTP-8	
APPROVED <i>[Signature]</i> ENGR. OF DESIGN SERVICES	8/14

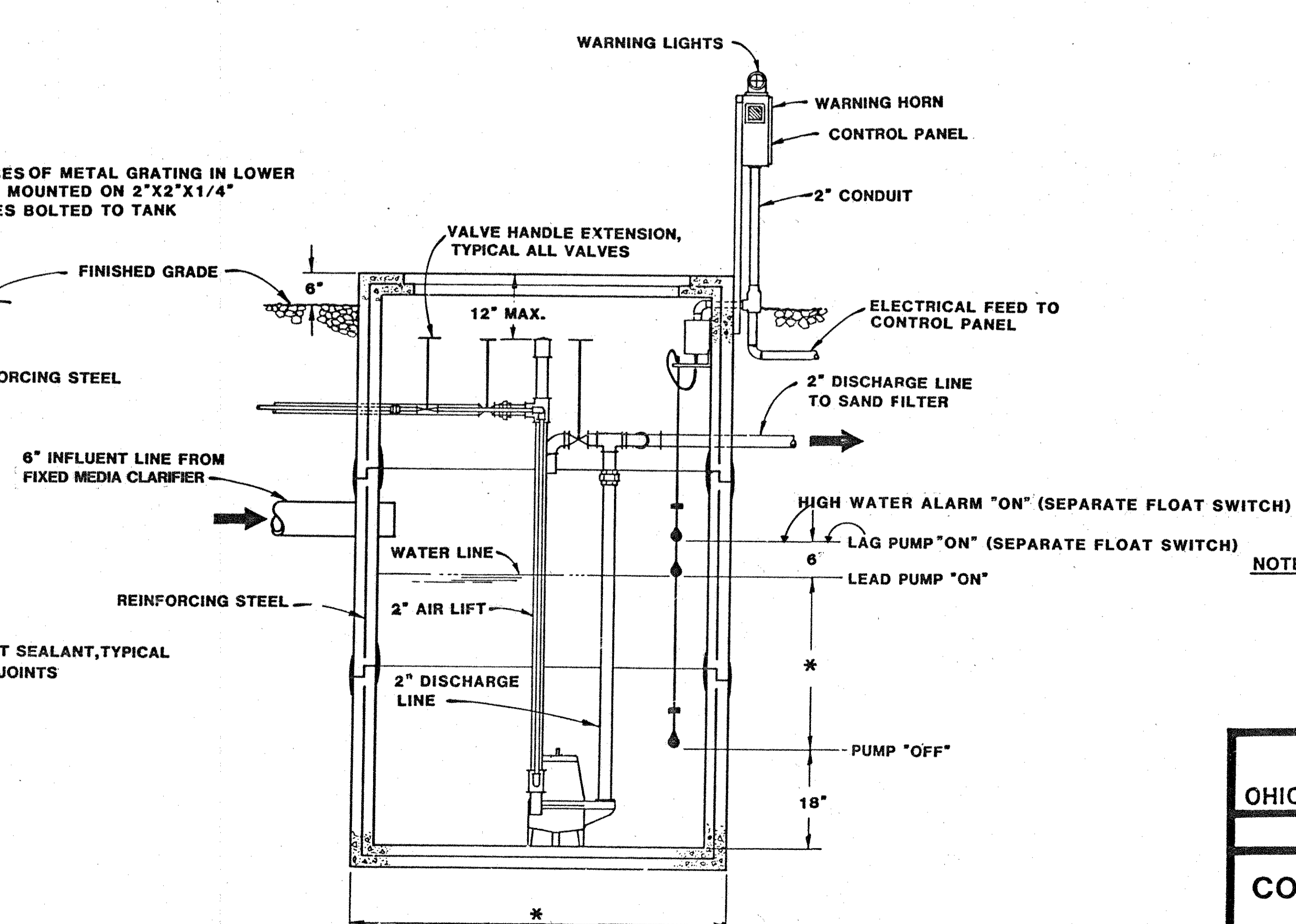
REV 10/30/87



*-DIMENSION TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1



SECTION A-A

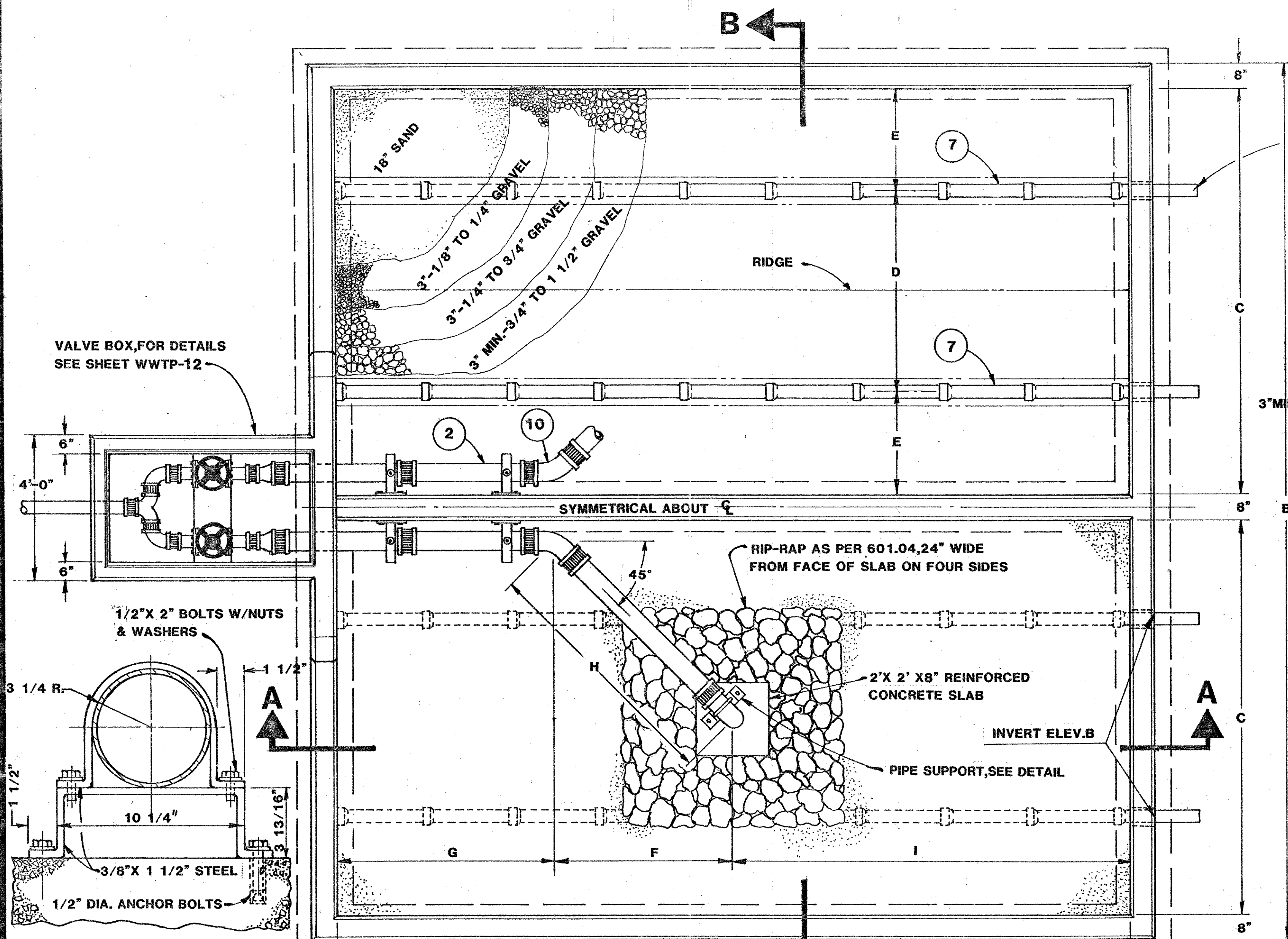


SECTION B-B

NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

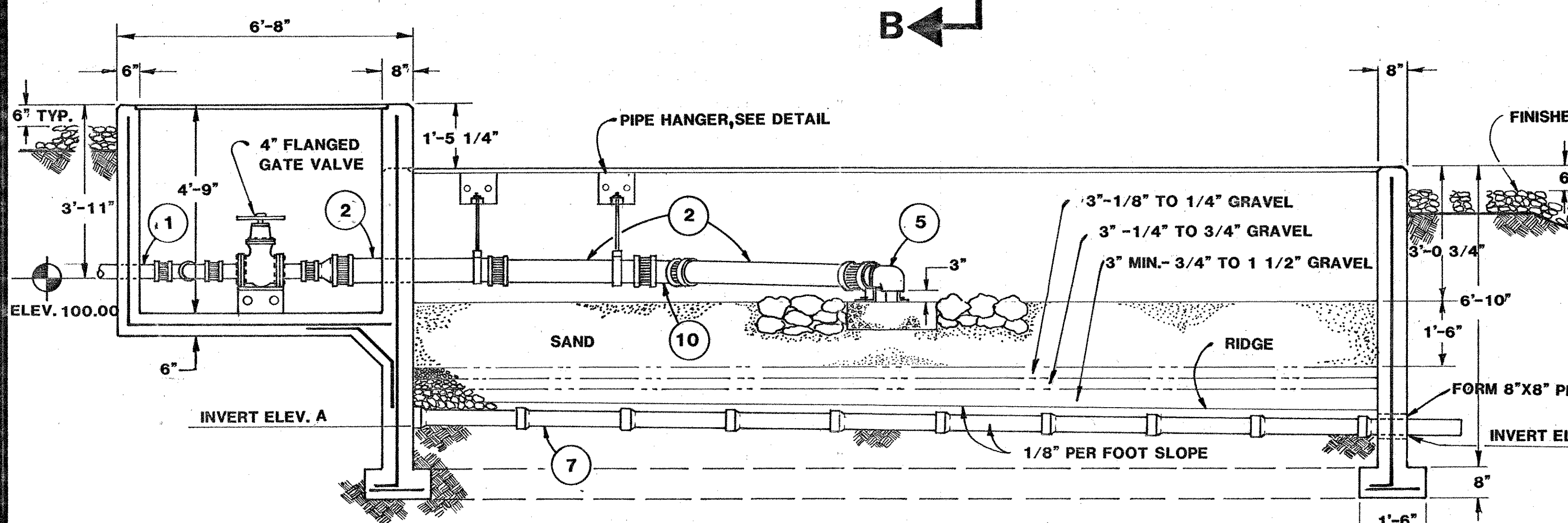
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8/25/86
CONCRETE DOSING TANK	12/11/86 10/30/87
WWTP-9	
APPROVED <i>[Signature]</i> Engr. of Design Services	9/14

REV 10/30/87

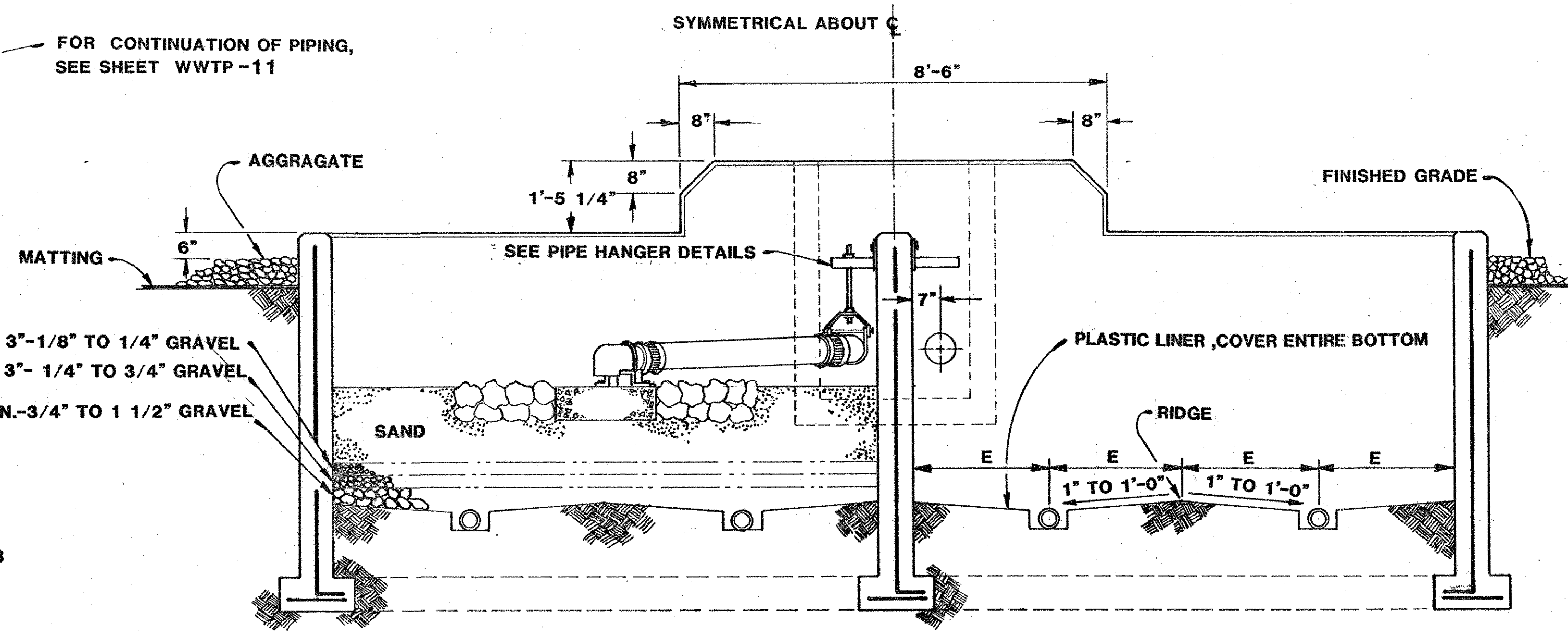


PIPE SUPPORT

VALVE BOX, FOR DETAILS SEE SHEET WWTP-12

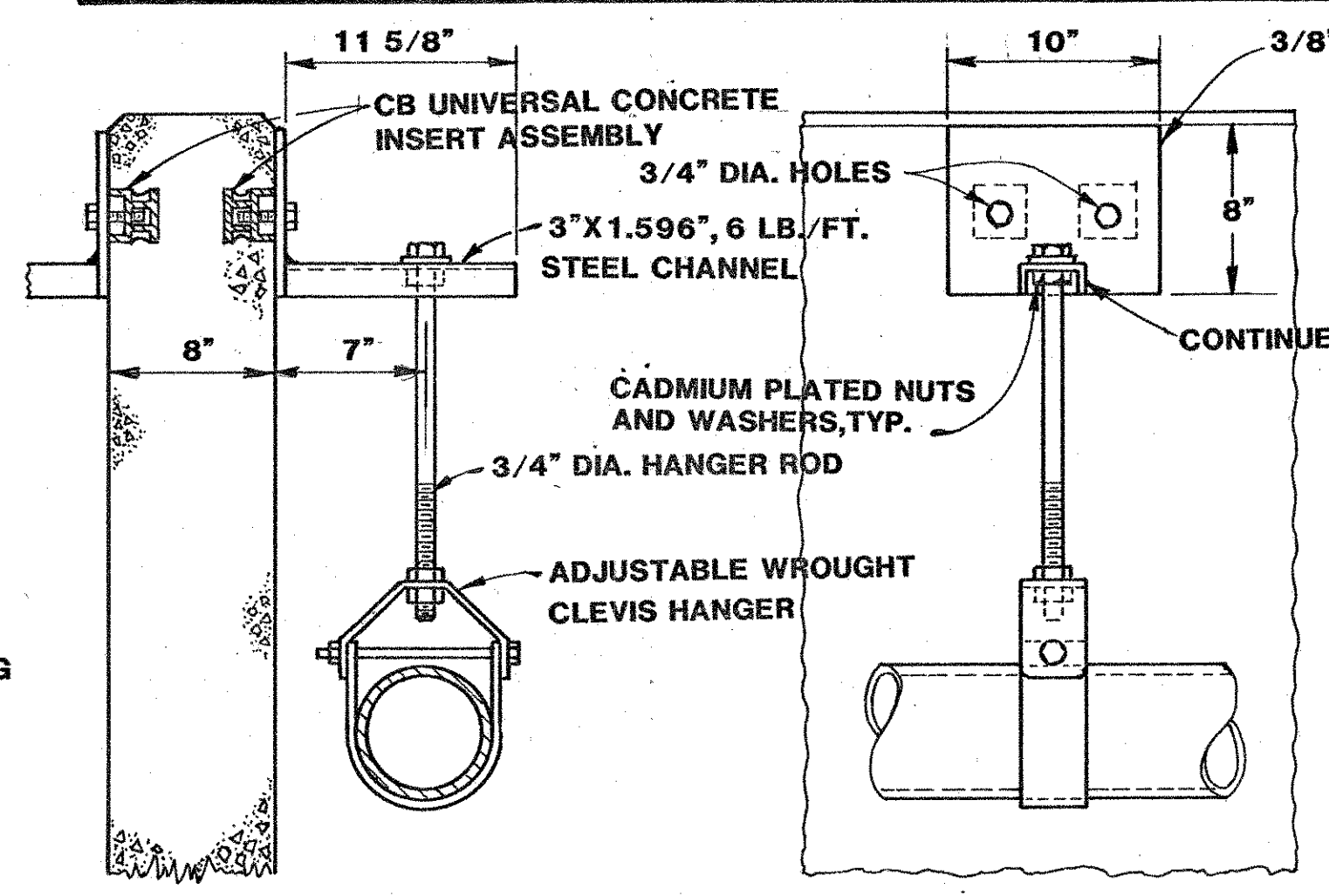


SECTION A-A



SECTION B-B

PLANT CAPACITY G.P.D.	DIMENSIONS										INVERT A	INVERT B
	A	B	C	D	E	F	G	H	I	J		
4000	10'-4"	20'-0"	9'-0"	4'-6"	2'-3"	3'-11"	7"	5'-6 1/2"	4'-6"	9'-0"	96.26	96.17
5000	11'-4"	22'-0"	10'-0"	5'-0"	2'-6"	4'-5"	7"	6'-3"	5'-0"	10'-0"	96.26	96.16
6000	12'-4"	24'-0"	11'-0"	5'-6"	2'-9"	4'-11"	7"	6'-11 1/2"	5'-6"	11'-0"	96.26	96.15
7000	13'-2"	25'-8"	11'-10"	5'-11"	2'-11 1/2"	5'-4"	7"	7'-6 1/2"	5'-11"	11'-10"	96.26	96.14
8000	14'-0"	27'-4"	12'-8"	6'-4"	3'-2"	5'-9"	7"	8'-1 5/8"	6'-4"	12'-8"	96.26	96.13
9000	14'-10"	29'-0"	13'-6"	6'-9"	3'-4 1/2"	6'-2"	7"	8'-8 5/8"	6'-9"	13'-6"	96.26	96.12
10000	15'-7"	30'-6"	14'-3"	7'-1 1/2"	3'-5 3/4"	6'-6 1/2"	7"	9'-3"	7'-1 1/2"	14'-3"	96.26	96.11
12000	21'-4"	26'-0"	21'-0"	6'-0"	3'-0"	5'-5"	4'-7"	7'-8"	10'-0"	20'-0"	96.26	96.05
14000	21'-7"	30'-0"	14'-0"	7'-0"	3'-6"	6'-5"	3'-8 1/2"	9'-1"	10'-1 1/2"	20'-3"	96.26	96.05
16000	24'-6"	30'-0"	14'-0"	7'-0"	3'-6"	6'-5"	5'-2"	9'-1"	11'-7"	23'-2"	96.26	96.02
18000	27'-2"	30'-0"	14'-0"	7'-0"	3'-6"	6'-5"	6'-6"	9'-1"	12'-11"	25'-10"	96.26	95.99
20000	29'-11"	30'-0"	14'-0"	7'-0"	3'-6"	6'-5"	7'-10 1/2"	9'-1"	14'-3 1/2"	28'-7"	96.26	95.96



PIPE HANGER DETAIL

NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION
ROADSIDE DEVELOPMENT

SAND FILTER

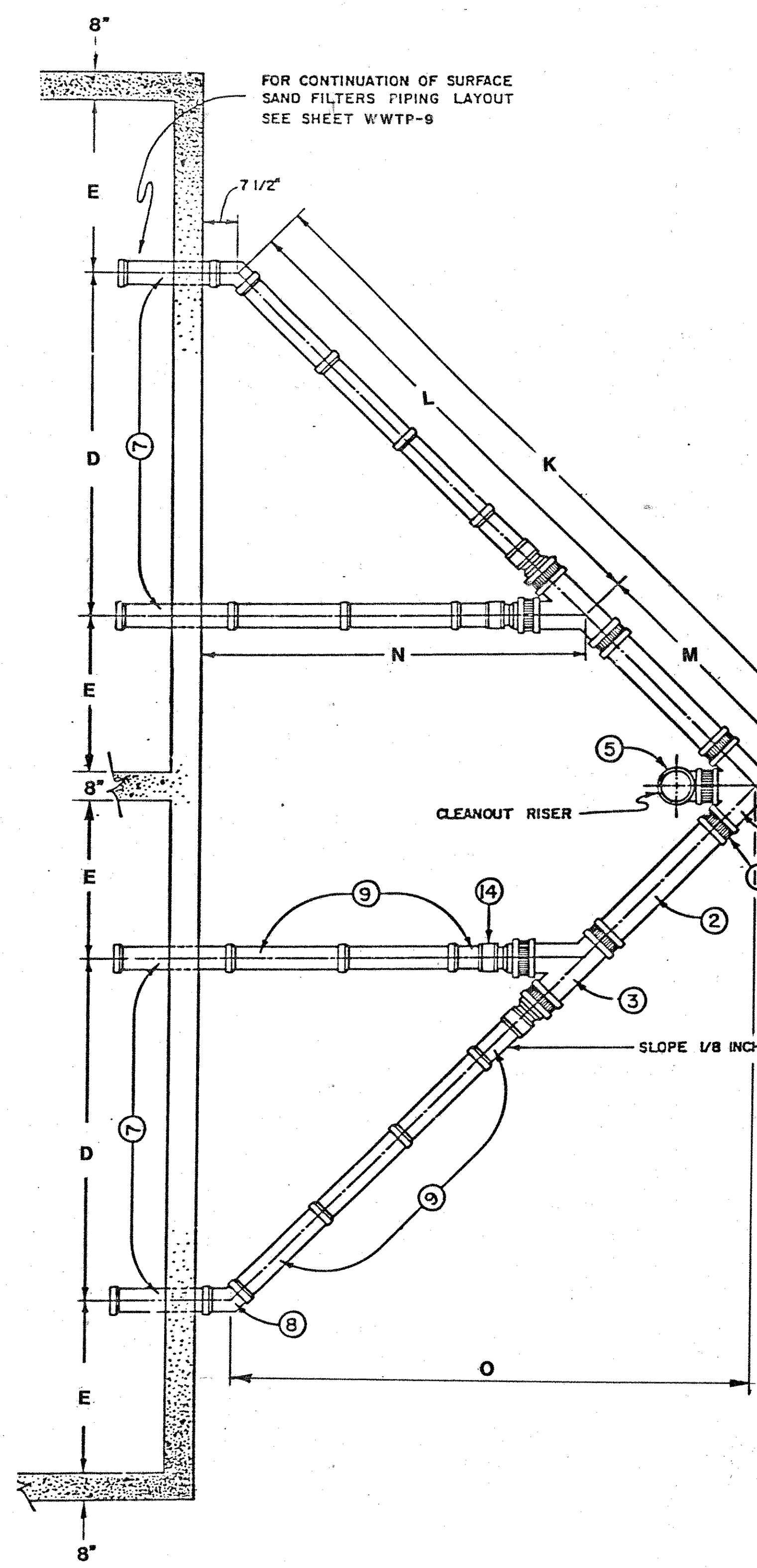
WWTP-10

APPROVED *[Signature]* ENGR. OF DESIGN SERVICES

DATE 10/30/87

10/14

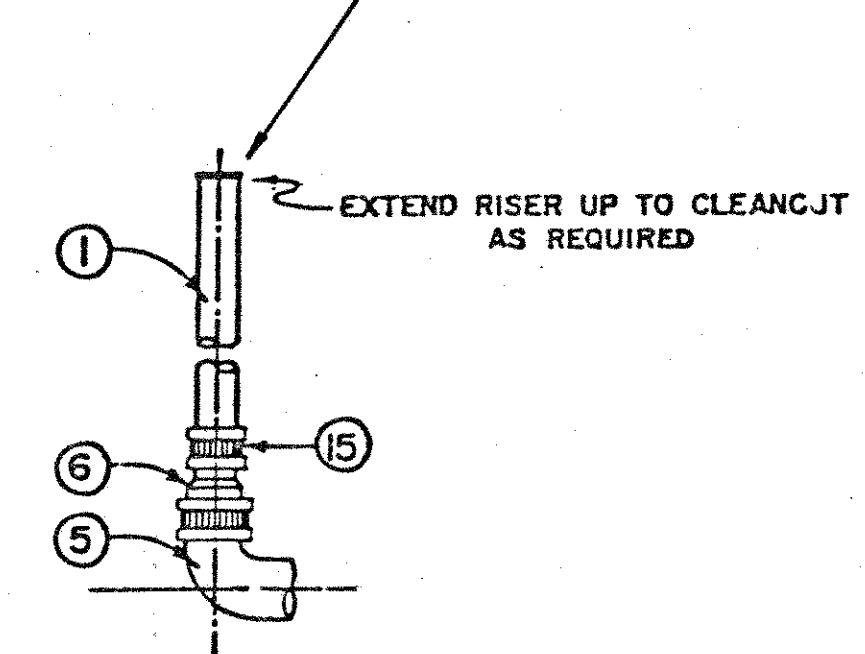
REV 10/30/87



PIPE AND FITTING LEGEND

- ① 4-INCH NO HUB CAST-IRON SOIL PIPE
- ② 6-INCH, SAME AS ABOVE
- ③ 6-INCH x 6-INCH NO HUB CAST-IRON SOIL 45° WYE
- ④ 6-INCH x 6-INCH NO HUB CAST-IRON SOIL DOUBLE WYE BRANCH
- ⑤ 6-INCH NO HUB CAST-IRON SOIL 1/4 BEND
- ⑥ 6-INCH x 4-INCH NO HUB CAST-IRON SOIL REDUCER
- ⑦ 4-INCH EXTRA STRENGTH PERFORATED VITRIFIED CLAY PIPE 706.08 WITH 706.12 RESILIENT AND FLEXIBLE JOINTS.
- ⑧ 4-INCH EXTRA STRENGTH VITRIFIED CLAY PIPE FITTING 45° CUT CURVE 706.08 WITH 706.12 RESILIENT AND FLEXIBLE JOINTS.
- ⑨ 4-INCH EXTRA STRENGTH VITRIFIED CLAY PIPE 706.08 WITH 706.12 RESILIENT AND FLEXIBLE JOINTS
- ⑩ 6-INCH NO HUB CAST-IRON SOIL 1/8 BEND
- ⑪ 4-INCH x 2-INCH NO HUB CAST-IRON SOIL 45° WYE AND 1/8 BEND
- ⑫ 4-INCH NO HUB CAST IRON SOIL 1/4 BEND
- ⑬ 2-INCH NO HUB CAST-IRON SOIL PIPE
- ⑭ 4-INCH VITRIFIED CLAY TO 4-INCH CAST-IRON PIPE CONNECTOR
- ⑮ NO HUB CAST-IRON SOIL PIPE CONNECTOR

A 6-INCH IRON BODY FERRULE W/ BRASS, RAISED-HEAD CLEAN-OUT PLUG SHALL BE FURNISHED & INSTALLED FLUSH W/ FINISHED GRADE, AT TOP OF RISER.



CLEAN-OUT RISER DETAIL

NOT TO SCALE

PLANT SIZE	COLLECTOR PIPING EXTENSION DIMENSIONS							INVERT C
	D	E	K	L	M	N	O	
4000	4'-6"	2'-3"	10'-0 1/8"	6'-4 21/64"	3'-7 13/16"	5'-1 29/64"	7'-1"	95.97
5000	5'-0"	2'-6"	11'-31/32"	7'-27/32"	4'-0"	5'-7 29/64"	7'-10"	95.95
6000	5'-6"	2'-9"	12'-1 11/16"	7'-9 3/3"	4'-0 21/64"	6'-1 29/64"	8'-7"	95.93
7000	5'-11"	2'-11 1/2"	13'-0 1/4"	8'-4 29/64"	4'-7 59/64"	6'-6 31/64"	9'-2 1/2"	95.91
8000	6'-4"	3'-2"	13'-10 13/16"	8'-11 17/32"	4'-11 13/32"	6'-11 17/32"	9'-10"	95.89
9000	6'-9"	3'-4 1/2"	14'-9 31/64"	9'-6 39/64"	5'-3"	7'-4 29/64"	10'-5 1/2"	95.87
10000	7'-1 1/2"	3'-5 3/4"	15'-5 41/64"	10'-0 31/32"	5'-4 11/16"	7'-9"	10'-11 1/4"	95.85
12000	6'-0"	3'-0"	13'-2 13/32"	8'-5 57/64"	4'-8 17/32"	6'-7 29/64"	9'-4"	95.82
14000	7'-0"	3'-6"	15'-3 27/32"	9'-10 13/16"	5'-5 3/64"	7'-7 29/64"	10'-10"	95.79
16000	7'-0"	3'-6"	15'-3 27/32"	9'-10 13/16"	5'-5 3/64"	7'-5 29/64"	10'-10"	95.76
18000	7'-0"	3'-6"	15'-3 27/32"	9'-10 13/16"	5'-5 3/64"	7'-7 29/64"	10'-10"	95.73
20000	7'-0"	3'-6"	15'-3 27/32"	9'-10 13/16"	5'-5 3/64"	7'-7 29/64"	10'-10"	95.70

NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

ROADSIDE DEVELOPMENT

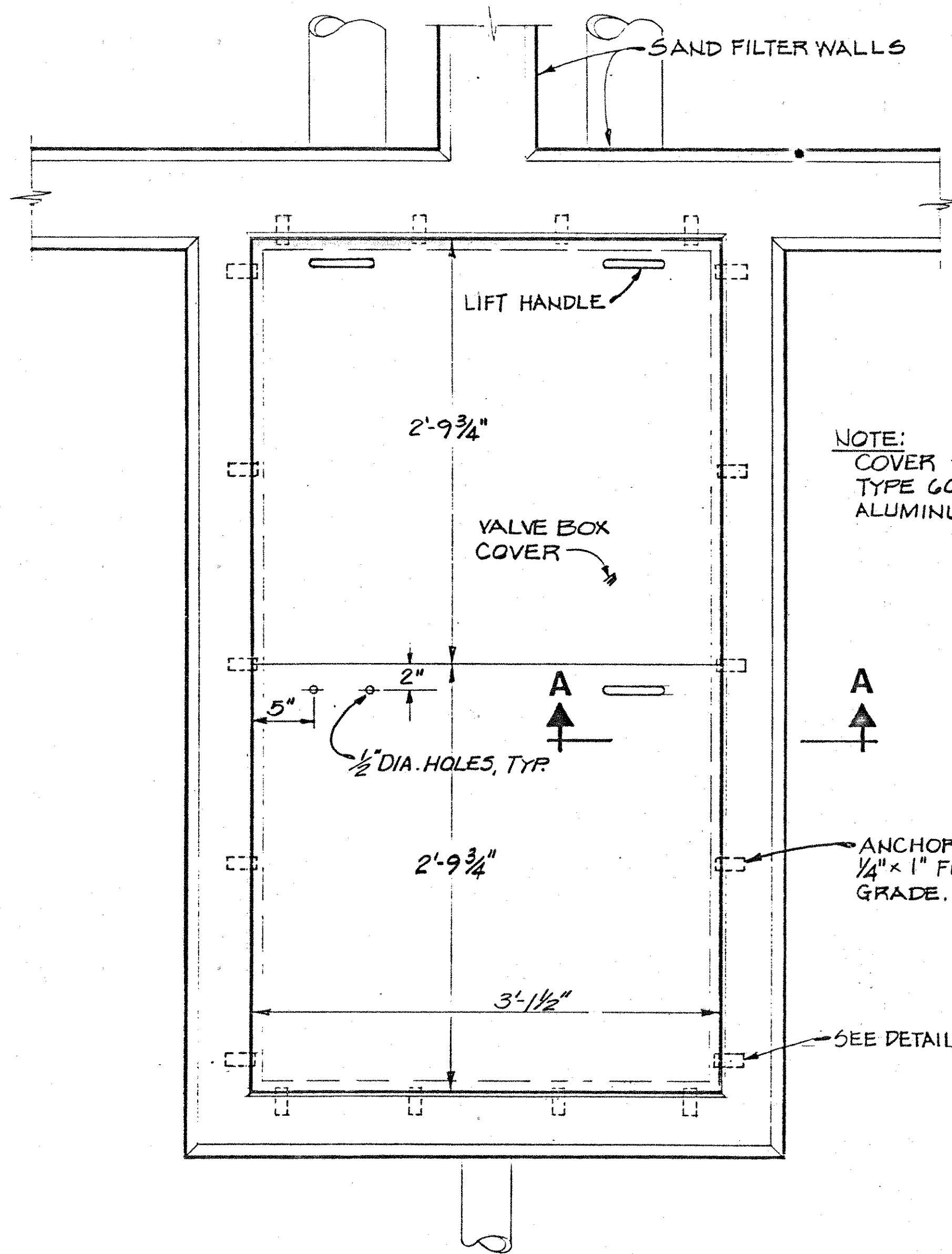
SAND FILTER

WWTP-11

DATE 8/25/86
12/11/86
10/30/87

APPROVED [Signature] Engr. of Design Services

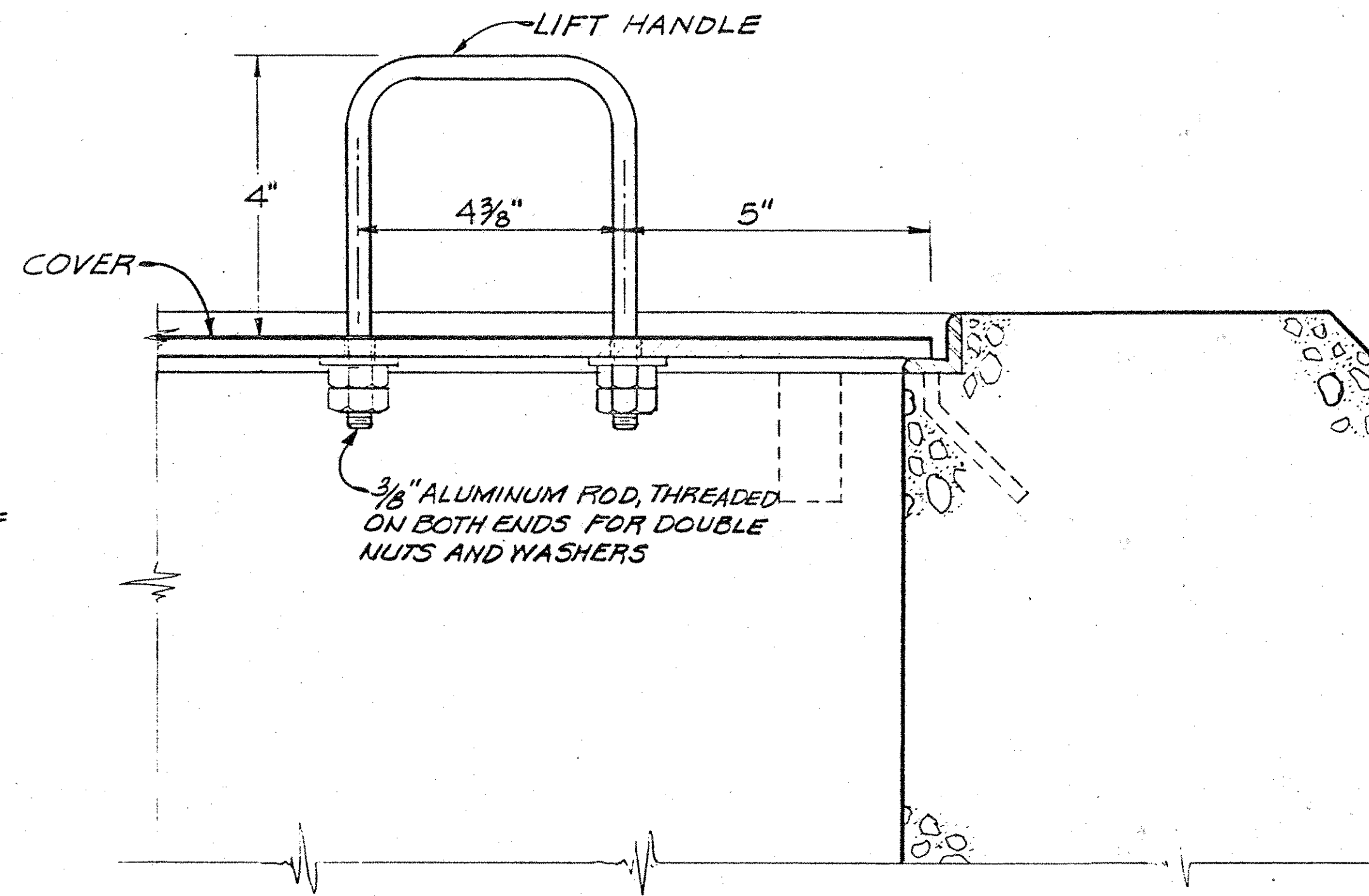
REV 10/30/87



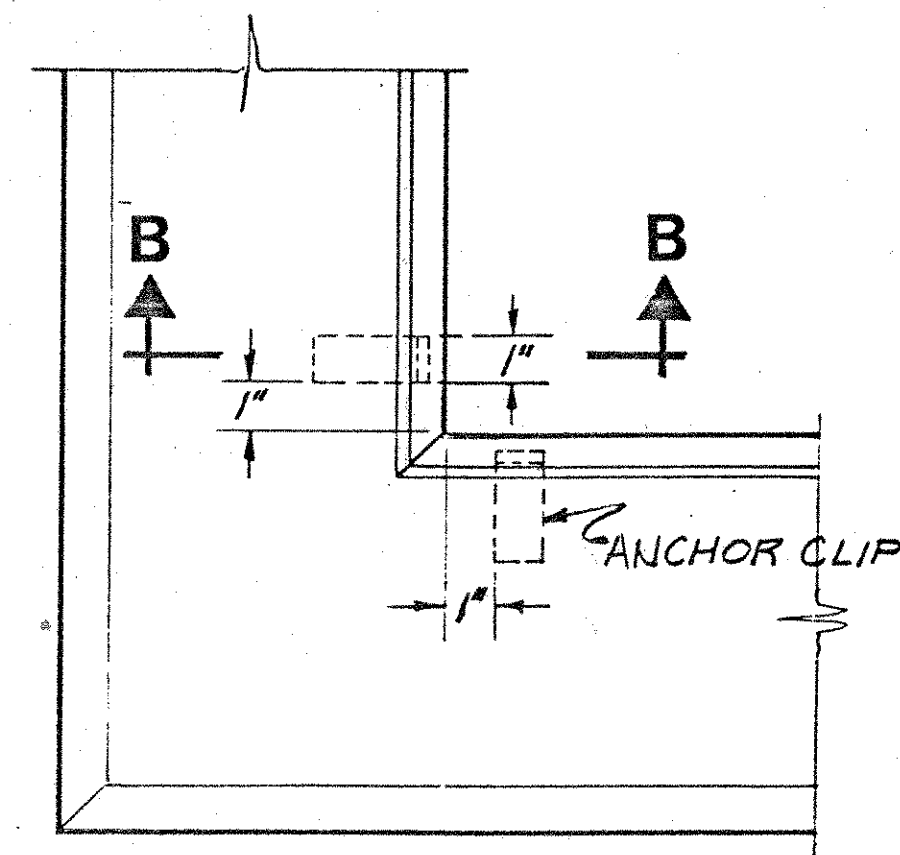
NOTE:
COVER SHALL BE CONSTRUCTED OF
TYPE 6061, 3/8\"/>

ANCHOR CLIPS, SHALL BE CONSTRUCTED OF
1/4\"/>

SEE DETAIL C.

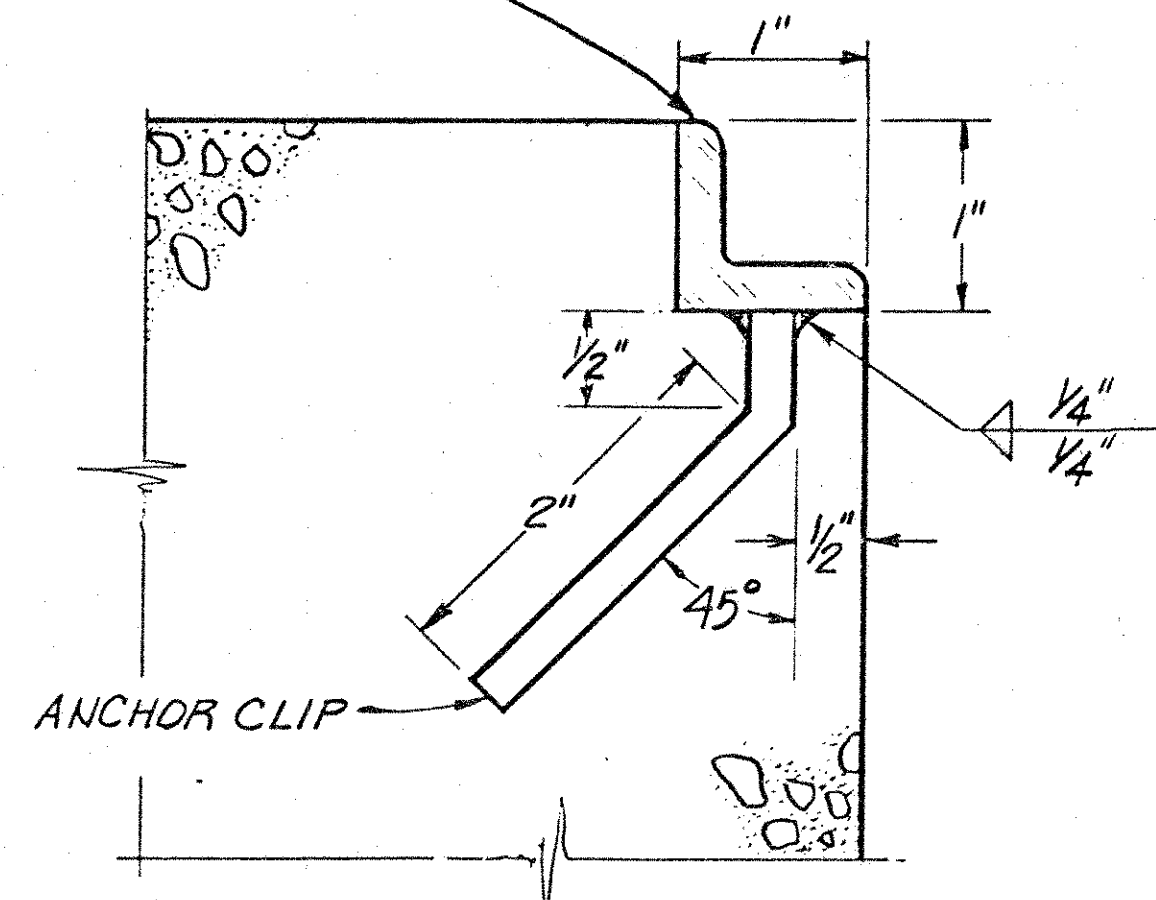


SECTION A-A



DETAIL C

FRAME, 1\"/>



SECTION B-B

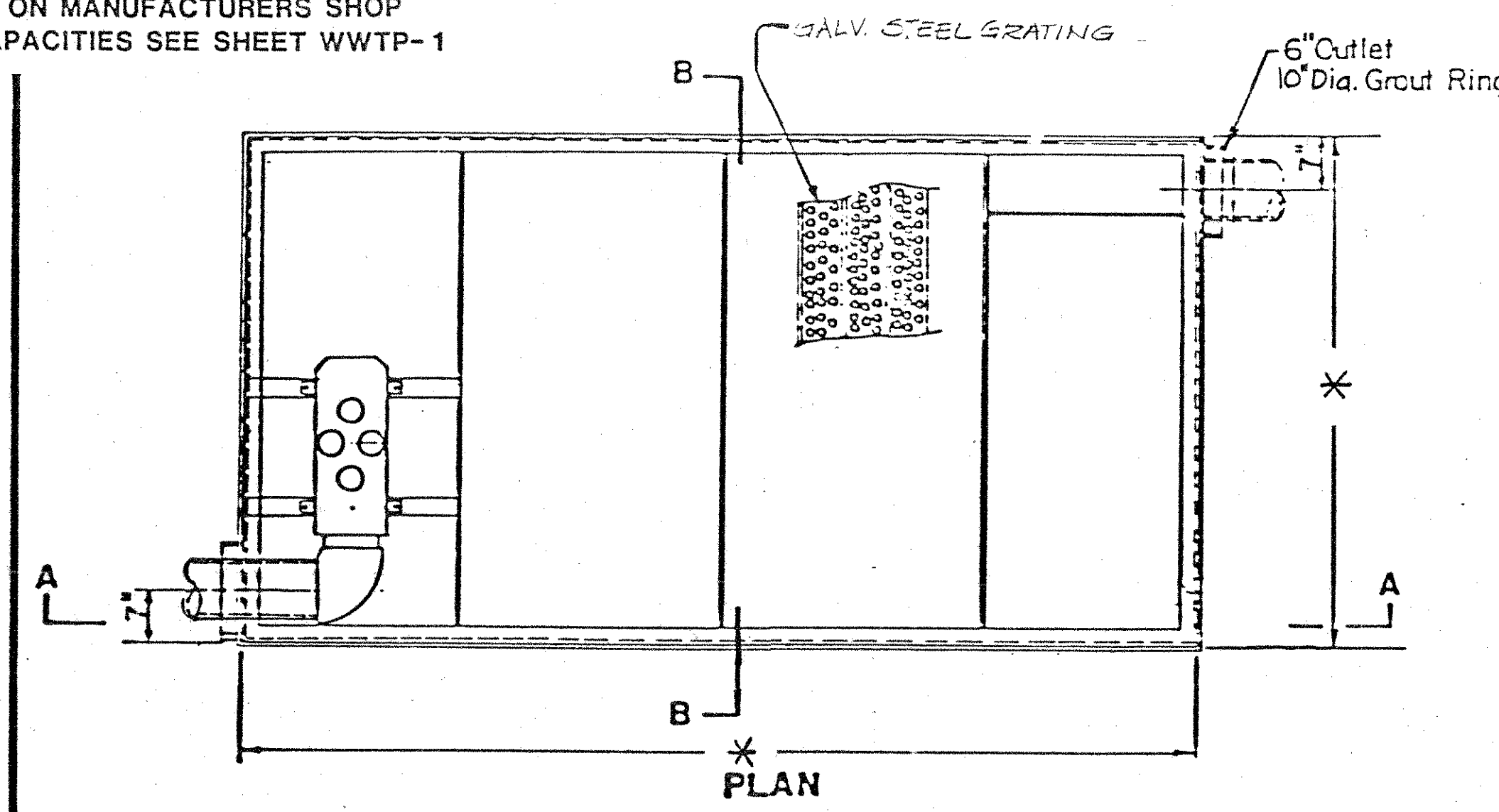
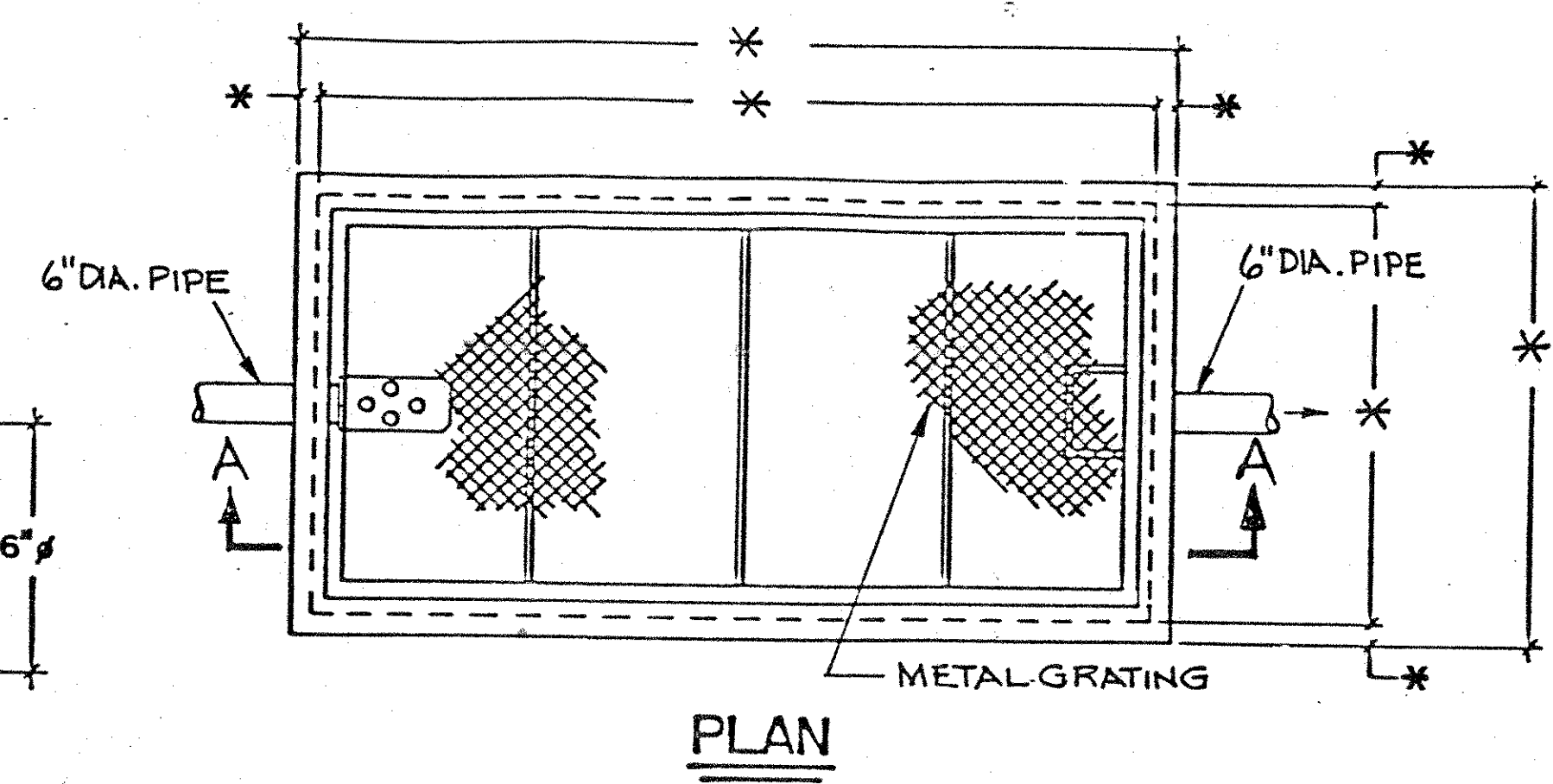
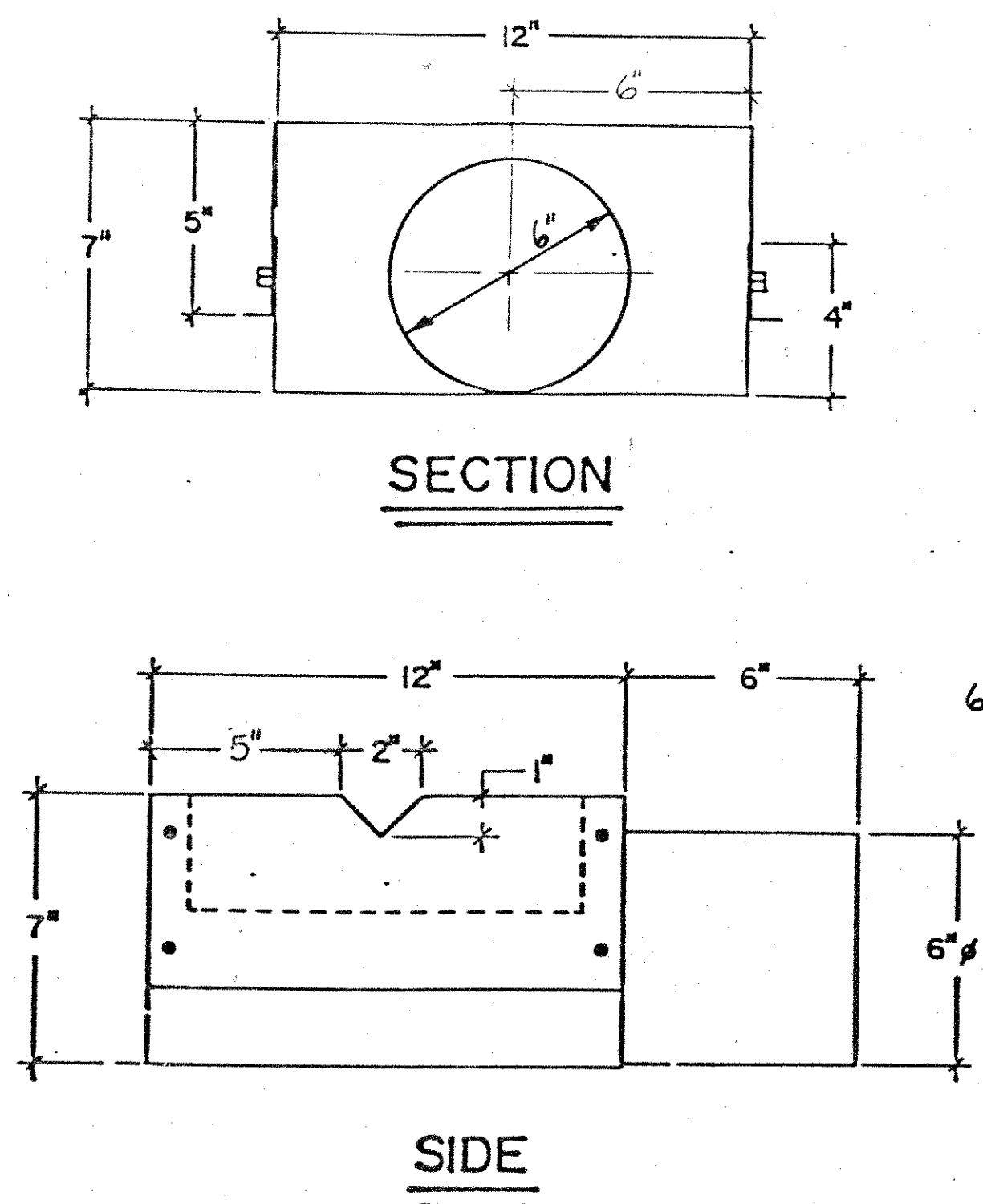
NOTE: ALL COMPONENTS OF THE PLANT SHALL BE
AS DESCRIBED IN THE SPECIFICATIONS.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE 8/25/86
SAND FILTER VALVE BOX DETAILS	12/11/86
WWTP-12	10/30/87

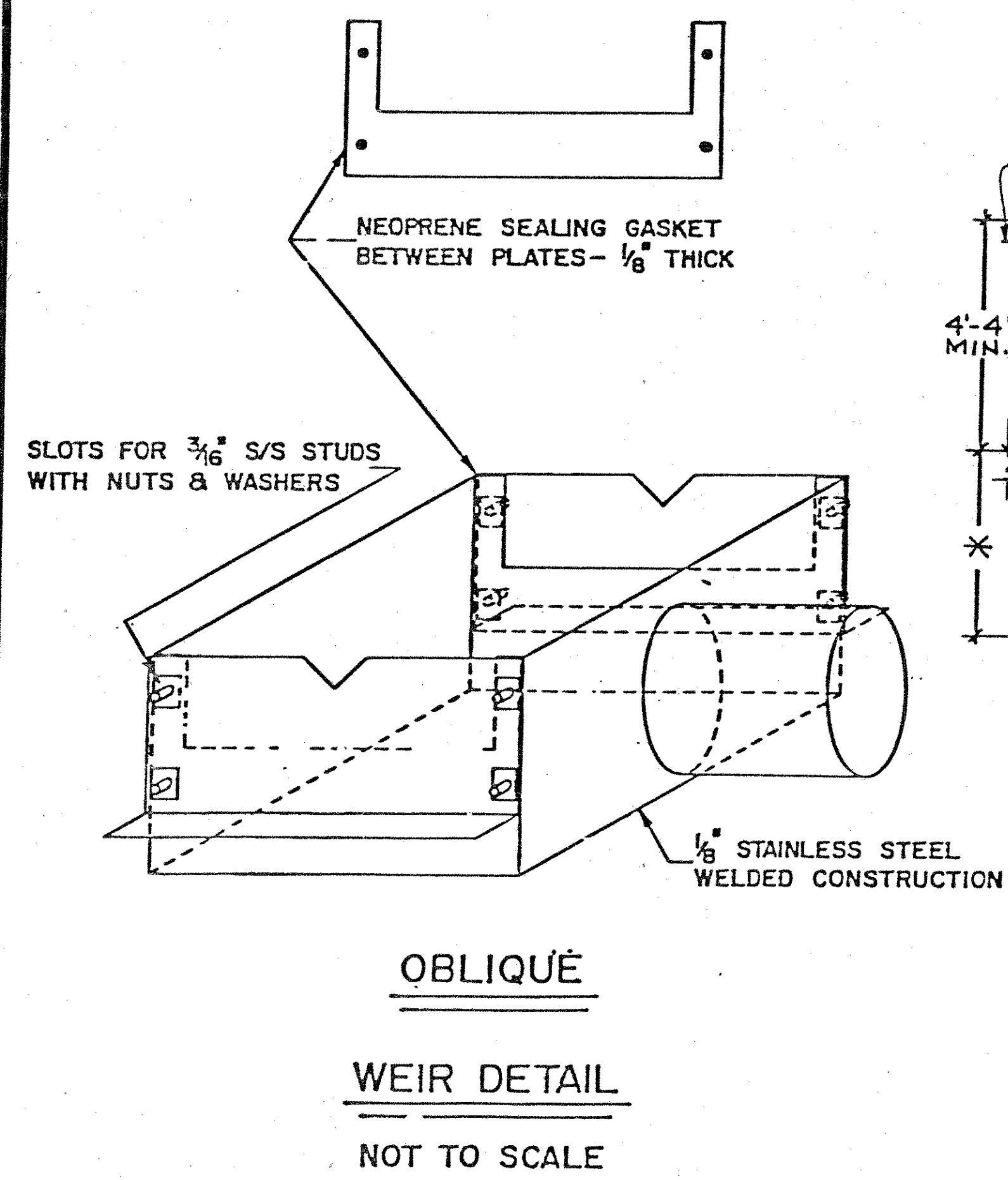
REV 10/30/87

NOTE: ALL COMPONENTS OF THE PLANT SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.

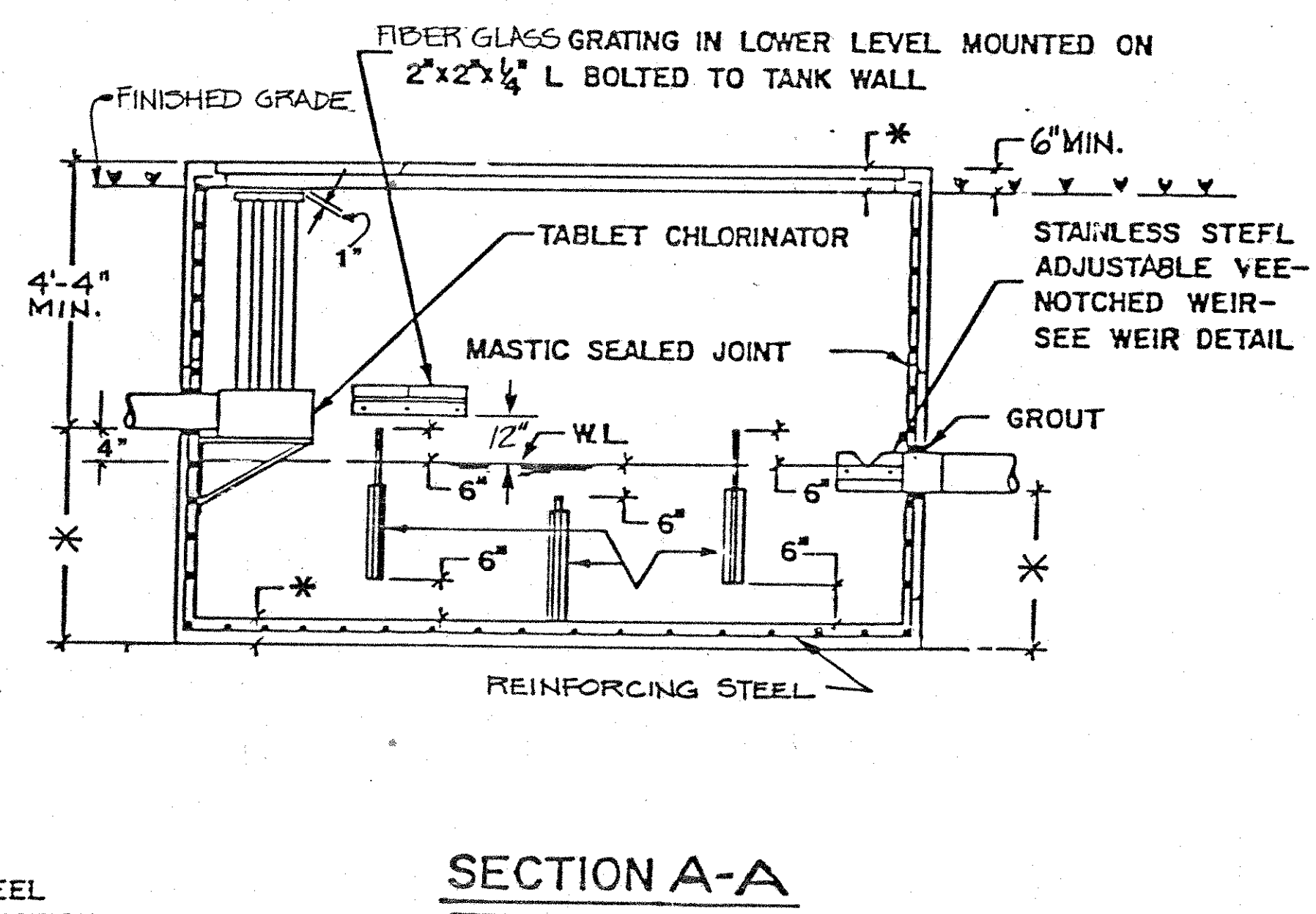
*=DIMENSION TO BE SHOWN ON MANUFACTURERS SHOP DRAWINGS. FOR TANK CAPACITIES SEE SHEET WWTP-1



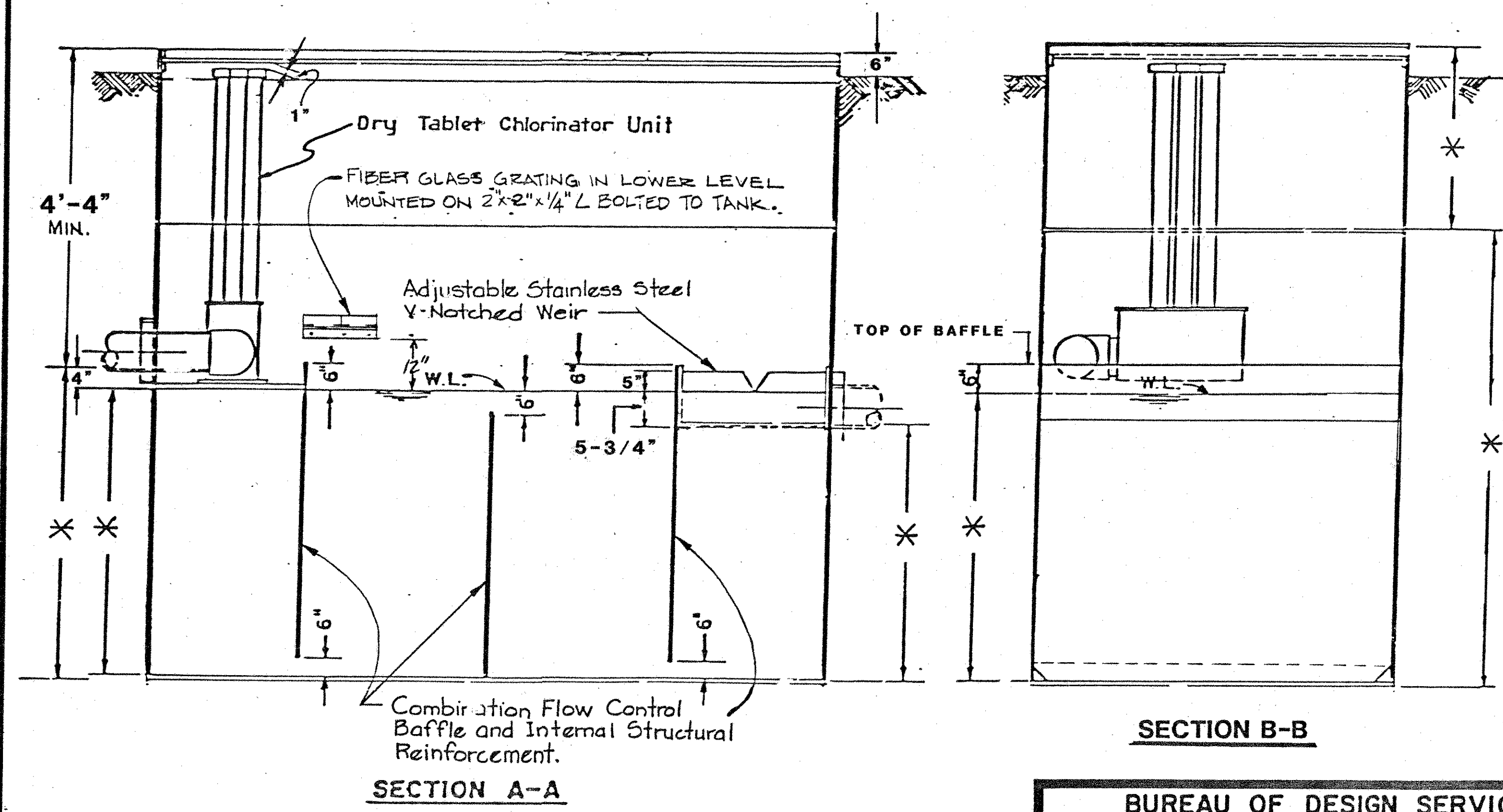
NOTE: FURNISH AND INSTALL MAGNESIUM ANODES AND ANODE TEST BOXES AS SPECIFIED.



CONCRETE CHLORINE CONTACT TANK
NOT TO SCALE



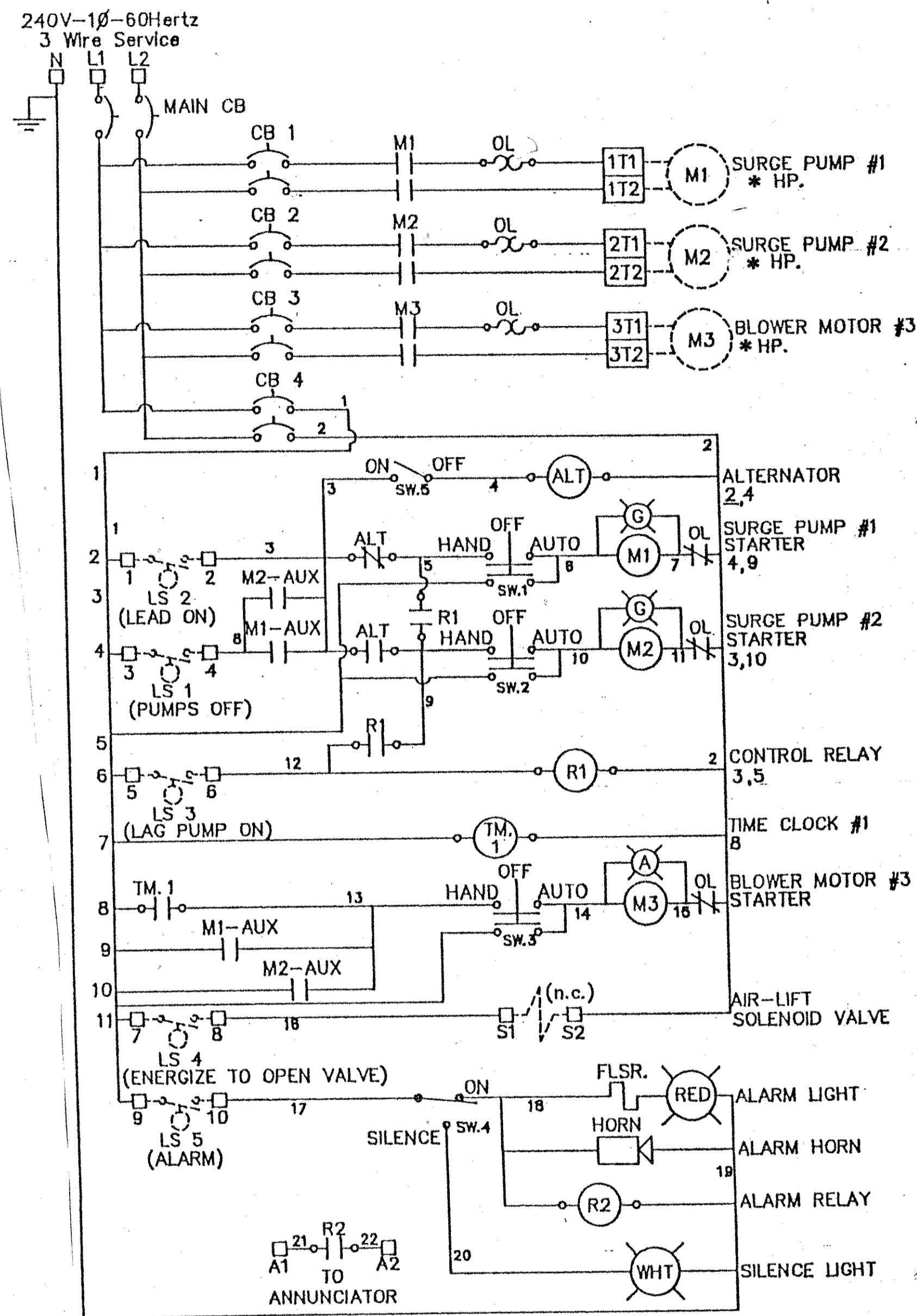
SECTION A-A



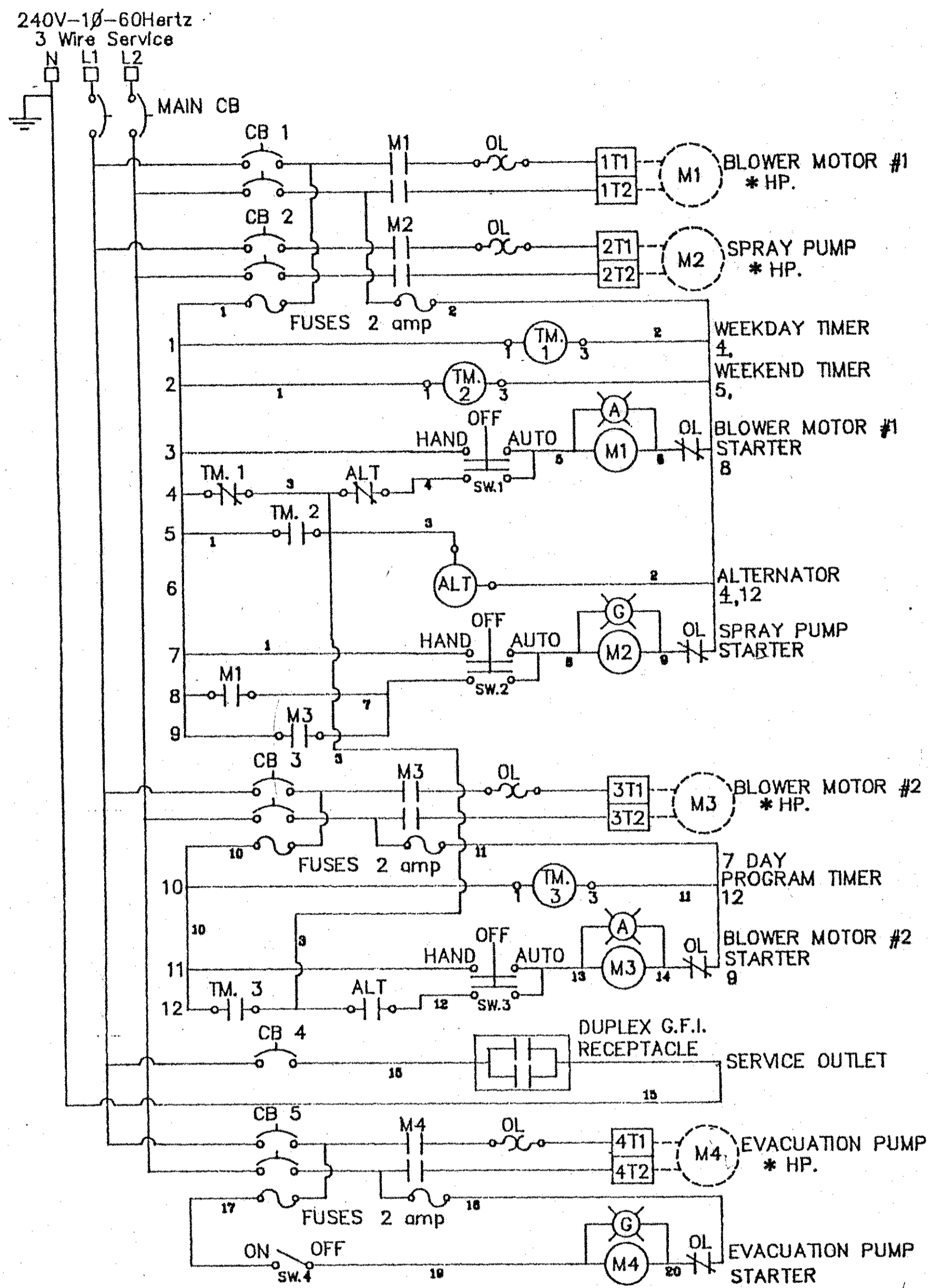
STEEL CHLORINE CONTACT TANK
NOT TO SCALE

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION		DATE 8/25/86
ROADSIDE DEVELOPMENT		12/11/86
CHLORINE CONTACT TANKS		10/30/87
WWTP-13		
APPROVED <i>[Signature]</i> Engr. of Design Services		13/14

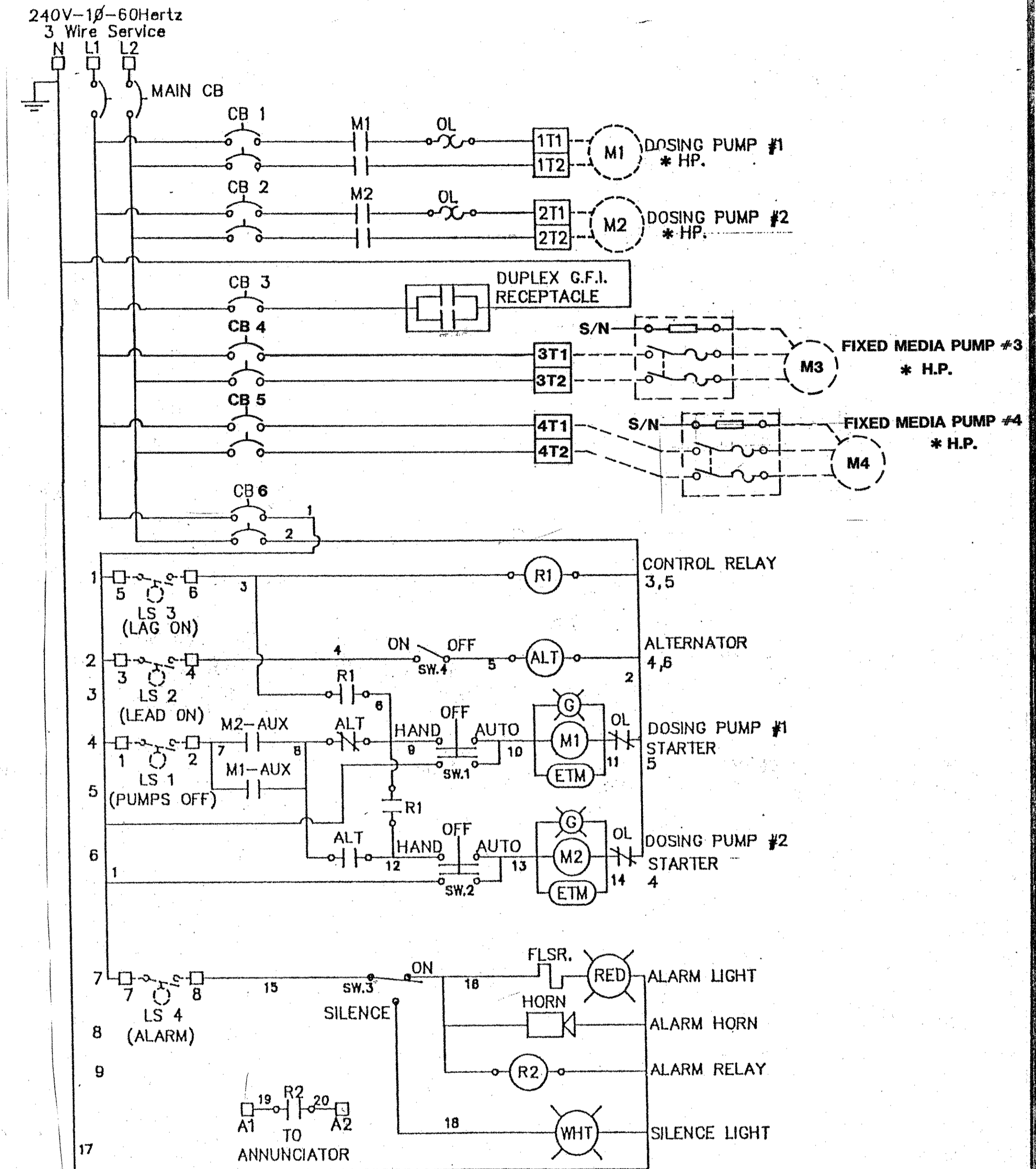
REV 10/30/87



DETENTION/FLOW EQUALIZATION TANK CONTROL PANEL



MAIN BLOWER, EVACUATION AND FROTH PUMP CONTROL PANEL



DOSING PUMP CONTROL PANEL

* SEE SPECIFICATIONS FOR REQUIRED MOTOR HORSE POWER RATING

REV 10/30/87

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS	
OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE
ELECTRICAL WIRING DIAGRAM	10/30/87
WWTP-14	
APPROVED: <i>[Signature]</i> ENGR. OF DESIGN SERVICES	14/14

GRINDER PUMPS

GENERAL NOTES

FHWA REGION	STATE	PROJECT
OHIO	AUG.-33-6.82	

LIFT STATION NO. 1

GORMAN-RUPP COMPANY

AND INSTALL (2) ABS PUMPS, INC.

SAFETY REST AREA

ABS PIRANNA GRINDER SUBMERSIBLE PUMPS - The Contractor shall furnish Submersible sewage pumps as manufactured by ABS PUMPS, INC., Flygt Corporation or approved equal. (MIN.) 20.0 US G.P.M. (MIN.) 43.72 (MAX.) 71.00 valve pit cover slab.

The Pumps shall be equal to PIRANNA GRINDER, VERTICAL MOUNT, MODEL-PIRANNA E2. Submersible sewage pumps. Each pump shall be designed for a capacity of against a foot total dynamic head.

Each pump shall have a UL listed, hermetically sealed, submersible type, electric motor of 2 H.P. 3450 R.P.M. for operation on 3-wire 230 Volt, Single phase, 60 hertz power designed to Class I, Group D, Division 1 specifications for use in hazardous locations and for general use in pumping water and sewage. The motor name plate horsepower rating shall not be exceeded by the brake horsepower requirement of the pump for the design condition of service specified and for the impeller diameter furnished. The motor shaft shall be stainless steel, impervious to the liquid and waste matter which is being pumped. Thermal overload protection and a moisture detection system shall be built into the motor.

Two mechanical seals shall be used to contain the oil in the probe and detection chamber. Two probes shall be supplied in this chamber for moisture detection. The mechanical seals shall have carbon and ceramic mating faces, stainless steel metal parts and Buna N elastomers.

THIRTY feet of UL approved, extra hard usage, multi-conductor cable with ground wire shall be supplied with the motor. (NCC 100F 50-11) FURNISH W/ STRAIN RELIEF POSITIVE CABLE CLAMP.

Lifting eyes shall be cast into the motor housing adequately designed to lift the pump-motor assembly. The pump shall be constructed in accordance with A.S.T.M. Specifications No. A48-64, Class 30, which shall include cast iron for integral support legs, pump casing and impeller. All pipe flanges shall be faced and to the thickness required for compliance with 125.16 American Standard. Bolt slots are acceptable in lieu of drilled holes.

The pump casing shall be of the volute type and made of cast iron. The casing shall be of one piece construction and of center line discharge design to minimize clogging or flow interference. The exterior shall be factory finish. ALL FASTENERS SHALL BE 304 STAINLESS STEEL.

The impeller shall be cast in one piece and directly mounted to a one piece stainless steel pump-motor shaft. It shall not require separate pump shaft or coupling. Each impeller shall be capable of freely passing through a 1-1/4" PIPING SYSTEM INTO A 4" FORCE MAIN TO prevent clogging.

The impeller hub shall be provided with a keyway and key and will be locked to the pump shaft and maintained in this position by a washer and self-locking impeller screw.

Bearings shall be in accordance with electric motor specification B10, life of 15,000 hours. The bottom bearing is to be a locked shaft, high thrust, anti-friction bearing which prevents shaft movement.

QUICK LIFT ASSEMBLY - The Contractor shall furnish 2 slide rail assemblies to guide submersible pumps from upper level to its operational location in the sump basin, PER ABS GUILD RAIL SYSTEM. All slide mechanism to link up the pump, with the base elbow, mounting of rails etc. shall be included, AND SHALL BE UL LISTED EQUIPMENT.

ENCLOSURE 14 GAUGE, TYPE 304 STAINLESS 36"X30"X8"

DUPLX SUBMERSIBLE PUMP CONTROL PANEL - The Contractor shall furnish and install a free standing mounting dead front control panel fabricated of steel with fully gasketed hinged door and lockable door handle. The panel shall be weatherproof and conform to NEMA 4X STAINLESS STEEL CONSTRUCTION MAIN DISCONNECT SWITCH.

The Controls will be mounted to a removable subpanel, wired and spaced in accordance with National Electric Code. Each pump will be supplied with a properly sized magnetic type circuit breaker to provide short circuit protection and act as a main disconnect for each pump. Magnetic across-the-line starter to provide under voltage release and thermal overload relays in all three phases to insure complete single phase protection. Controls shall include contacts for float switches, an alternator relay, two green running lights and two hand-off-auto selector switches. All controls except the float switches to be mounted inside the control cabinet. UNLESS SHOWN OTHERWISE

An automatic alternator to provide operational sequence of lead and lag pumps to equalize wear and usage of the pumps. 1-POLE, 20 AMP. BREAKER ALSO CONTROL RELAY & CONTACTS FOR HIGH WATER ALARM TO REMOTE ALARM IN BUILDING.

Control center enclosure will be for 115/230 Volts, single phase, 60 hertz, 3 wire power supply. A 120 Volt control circuit with disconnect and overload protection shall be included. All items shall be wired to terminal strips for connection to external wiring. Control Panel shall conform to ENCLOSED DRAWING OF A pump control center or equivalent by Flygt Corporation, or approved equal. SUBMERSIBLE DUPLEX PUMP LIFT STATION CONTROL PANEL WIRING DETAIL.

ALARM (FLASHING) PROTECTION - In addition to the control center the following options shall be included: Control Relay with high water alarm, ALARM HORN, red light and silencing switch. Utility Light outlet for use of trouble light and small maintenance tools. GROUND FAULT Float Switch/Test Push-buttons. Auxiliary Contacts wired to Terminal Blocks. Lightning Arrestor/Main Disconnect Switch on incoming lines. Safe Panels and Audible Alarm and Switch. AND GROUND ROD (1" DIA.) AS PER 625.10 (75.16), WHITE SILENT LIGHT. 120 VOLT CONTROL WIRING FOR 2-POLE, 3-WIRE GROUNDING 20 AMP., 125 VOLT A.C., HOSPITAL GRADE DUPLEX G.F.I.C. RECEPTACLE

LEVEL SENSORS - 4 Mercury liquid level sensors shall be furnished and installed they shall be shock resistant, mercury switch sealed in a vinyl ball, is to have feet of cord attached. The mercury switch level control shall sense the liquid level and provide the signal to the control panel.

Three switches are required for normal operation of a duplex pump installation, providing the following signals: one SHALL STOP ALL pumps, the second starts the LEAD pump and the third operates the LAG PUMP. One additional switch shall provide a signal for high water alarm. FURNISH AND INSTALL A NEMA 4X JUNCTION BOX FOR FLOAT CABLES PER ABS PUMPS, INC OR APPROVED EQUAL. Each bracket shall provide for the hanging positions for 4 Sensors.

ACCESS DOOR (LIFTING STATION AND VALVE PIT) - Access Doors are to be double door, aluminum construction. They are to be equipped with concrete anchors for setting in concrete and torsion bar springs to hold the doors in the open position while work is being performed AND SHALL BE DOUBLE-LEAFED. Outside entrance shall be obtained with a removable key wrench. A handle shall be provided inside the Access Doors to permit opening the door from the inside. Doors shall be checkered plate 26"X4'-0" in size.

The Access Doors shall be constructed integrally with the lifting station pre-cast cover slab and the resilient connector conforming to ASTM C-923. The cost of all materials shall be included in the unit price bid for: LIFT STATION & VALVE BOX ASSEMBLY (EXCEPT ELECTRICAL)

Conduits shall be jointed to the manhole with a gasketed flexible watertight connection or a watertight resilient connector conforming to ASTM C-923. The cost of all materials shall be included in the unit price bid for: LIFT STATION & VALVE BOX ASSEMBLY (EXCEPT ELECTRICAL)

A MULTIPLE VANE CENTRIFUGAL TYPE. THE CUTTER MATERIAL SHALL BE SIMILAR TO AN ANSI 440C STAINLESS STEEL W/ THE ADDITION OF COBALT, VANADIUM, & MOLYBDENUM FOR SUPERIOR ABRASION RESISTANCE AND A HARDNESS OF 58-62 ROCKWELL C 420.

ELECTRICAL CONTRACT ITEMS - The Power Control Panel shall be installed by the Contractor as shown on the plans. Power service to the Duplex Control Panel shall be supplied from the Motorists Service Building (SEE PLAN SHEET NO. R(42)) WHICH SHALL BE FURNISHED AND INSTALLED BY THE ELECT. CONTR. as per Section 625 of the Specifications. The ELECT. CONTR. shall connect the power service to the input side of the control panel and connect the various panel leads to the pumps and level controls in accordance with the manufacturers recommendations and at the direction of the Engineer. ELECTRICAL CONTRACTOR SHALL ALSO INSTALL AND MAKE CONNECTION TO THE GROUND ROD AS REQD. Payment for all of the above described work shall be included in the unit price bid for quantities as follows:

Item Special : LIFT STATION & VALVE BOX ASSEMBLY (ELECTRICAL ONLY)

COOPERATION BETWEEN CONTRACTORS -

In the event the Contract does fall within the work limits of another contract the Contractor to whom this project is awarded shall cooperate with the other Contractor in accordance with 105.07 and arrange a mutually acceptable work schedule subject to approval by the Engineer. Any proposed changes to this work schedule shall be submitted to the affected parties and to the Engineer a minimum of 7 days prior to the proposed start of work. Any conflict between Contractors involving work schedules, work areas or cooperation will be resolved by the Engineer. Compensation for the above cooperation will be incidental to the various pay items included with this project.

GENERAL NOTES

SAFETY REST AREA

IDENTIFICATION ~ The Contractor shall provide laminated nameplates for all disconnect switches panels, motor starters, contactor's cabinet, transformers and similar items of equipment, stating the purpose of each switch, size and purpose of transformers, designation of each control unit use of each contactor, etc. Plates shall be laminated phenolic with white core and black surface 1/16 inch thick for size up to 2 inch x 4 inch and 1/8 inch thick for larger sizes. Engraved lettering shall be condensed gothic 1/16 inch letters at 4 letters per inch, with 3/4 inch high letters on the largest plates. Plates shall be secured to equipment with brass screws and nuts.
Panel schedules shall be typewritten.

FIELD SERVICE ~ At the time the Lift Station is filled with water by the General Contractor, power connections are completed and all equipment is approved for service, the General Contractor shall provide the services of a Manufacturer's Representative who shall instruct the State's Representatives in the proper start-up, maintenance and operation of the Lift Station, including instructions in conducting all required operational tests. The Manufacturer's Representative shall turn over to the State's Representatives at that time eight (8) sets of service manuals outlining in detail all operational instructions and procedures. The Manufacturer's Representative shall also make inspections every other month and provide reports to the District Deputy Director in accordance with the requirements of the Ohio Department of Health and Ohio Department of Transportation for a period of one (1) year. An additional copy of each report shall be forwarded to Bureau of Design Services, 25 South Front Street, Columbus, Ohio 43215.

GUARANTEES AND WARRANTIES ~ The following guarantees and/or warranties shall be required for the Lift Station and Valve Box Assembly.
Manufacturer's Warranties or Guarantees on all electrical and mechanical equipment as well as structures consistent with those provided as customary trade practice.
Contractor's Warranties or Guarantees providing for satisfactory in service operation of the mechanical and electrical equipment and related components for a period not to exceed twelve (12) months following project acceptance.

THE OHIO ADMINISTRATIVE CODE (OAC) FOR BUILDING APPROVAL COMPLIANCE ~ All Electrical work will conform to the requirements of Article 20 (OAC 4101:2-20) and NEC, NFPA Standard No. 70, and is subject to the approval of the District Electrical Inspector assigned by the Division of Factory and Building Inspection.

SHOP DRAWINGS ~ The Contractor shall submit for approval, prior to installation, (1) sets of complete applicable, accurate shop drawings, complete wiring diagrams and descriptive literature of all equipment and their component parts which constitute the make-up of an equipment unit. This shall include items such as individual motors, controls, pumps, blowers and/or electrical enclosures or housings or electrical safety devices constituting an individual piece of equipment sold as a package unit.
The electrical wiring diagram shall be submitted in the following manner:
1) One (1) drawing shall be presented in the form of an actual "wiring diagram" which shall include all of the devices in the system and show their physical relationship to each other. All poles, terminals, coils, etc, shall be shown in the proper places on each device.
2) The drawing described in the first paragraph shall be supplemented by the addition of one (1) "line diagram," sometimes referred to as a "schematic diagram," which is a representative of the system showing everything in the simplest form. All control devices are shown between vertical lines which represent the source of control power and circuits are shown connected as directly as possible from one of these lines to the other. This shall show the effect that opens and closes various contacts or devices in the circuit.
3) A copy of each of the above drawings shall be placed in the control panel of each individual system required or shown on the drawings for ready reference for maintenance. This shall be in addition to the operation manuals which shall also include the above specified drawings.

MANUFACTURER'S SHOP DRAWINGS ~ The Contractor shall submit to the Engineer for approval, SEVEN (7) copies of manufacturer's drawings and/or data for all precast concrete structural work required and for all purchased units required to complete installation of the work, including pipe, conduit, wiring, etc.
The Contractor shall check all manufacturer's drawings for conformance to the plans and specifications and shall indicate his approval of the drawings before forwarding them to the Engineer. The Engineer will not consider any manufacturer's drawings for approval which do not bear the Contractor's stamp of approval.
The Engineer's approval of manufacturer's drawings or schedules shall not relieve the Contractor from responsibility for errors or omissions in manufacturer's drawings or schedules and deviations from the plans and specifications.

PERMITS ~ The Ohio Department of Transportation shall obtain the following permits:
1) Permit to Construct - Ohio Environmental Protection Agency, Water and Wastewater Units.
All other permits shall be obtained and paid for by the Contractor.

PADLOCKS ~ The Contractor shall furnish and install all padlocks required for access doors and control panels. Padlocks shall be Master Lock, No. 4 BXP, w/Brass shackles, Keyed-alike and furnished with 10 keys. Wilson Bohannon 660 or approved equal, subject to the Engineer's approval.

WITH DUST COVER EQUAL TO GRAINGER, S (CRAMER MFR, S MODEL 835G),
ENGLER INSTRUMENTS 200 SERIES CAT. NO. AC200-190 N-L-7 OR
APPROVED EQUAL.

ELAPSE TIME METER AND MOISTURE DETECTOR ~ Each Duplex Submersible Pump will be equipped with a meter which totals its operational time IN HOURS, 115 VOLTS, 60 HERTZ, MAXIMUM READING 99999.9 HOURS, NON-RESET, 8" WIRE LEAD TERMINALS.
Each Duplex Submersible Pump will be equipped with a Moisture Detector Alarm Light and Shutdown. Each motor shall be equipped with two seals and an oil chamber between them. If water gets past the lower seal, it will actuate the moisture probe and alarm light.

APPROVED _____

AFTER THE CONTRACTOR RECEIVES CORRECTED APPROVED SHOP DRAWINGS AND MANUFACTURERS SHOP DRAWINGS HE SHALL SUBMIT TO THE ENGINEER (12) COPIES OF APPROVED DRAWINGS & DATA. THE ENGINEER WILL RETAIN FOUR (4) COPIES OF THE DRAWINGS SUBMITTED FOR APPROVAL AND NINE (9) COPIES OF THE APPROVED DRAWINGS. THE BALANCE OF THE APPROVED DRAWINGS WILL BE RETURNED TO THE RESPECTIVE CONTRACTOR.

ELEVATION DATUM ~ All Elevations are based on DISTRICT DAFUM

GENERAL NOTES

SAFETY REST AREA

72" PRECAST REINFORCED CONCRETE PIPE WETWELL - The 72" Pre-cast Concrete Conduit for the Lift Station waste water receiver shall conform to Reinforced Concrete Circular Pipe ASTM C-478 Resilient and Flexible Gasket Joints for concrete pipe ASTM C-443-7B.

WETWELL AND VALVE BOX VOIDS AND JOINTS - All voids and joints in the 72" Pre-cast Reinforced Concrete Wetwell and Valve Box shall be sealed with a non-shrink, non-metallic grout or mortar.

GROUND ROD - The equipment Ground Rod shall be furnished and installed and tested as per Construction and Material Specifications, Jan 1, 1987 Spec. 625.10 and 713.16, and shall also comply to the latest edition of the National Electrical Code (NEC). The equipment intended being the Lift Station Control Panel and all related components.

PAYMENT- WET WELL "CONTINUED"

8. CAST IRON FLANGED 4" CROSS (ONE (1) REQ.)
9. 4" Makeup DL piping Flange to Flange. (DL=DUCTILE IRON)
10. CAST IRON FLANGED 4" 90° ELBOWS. (FOUR (4) REQ.)
11. CAST IRON FLANGED 4" X 3" CONCENTRIC REDUCER (TWO (2) REQ.)
12. 3" Trap Drain.
13. 3/8" HIGH TEST LIFT CHAIN ASSEMBLY, U.L. LISTED (TWO (2) REQ.)
15. 3" Vent Pipe
16. Wet Well Concrete slope build up
17. KORN-N-SEAL BOOTS OR APPROVED EQUAL, ONE (1) FOR 6" PIPE & FIVE (5) FOR 4" PIPE.

14. 4" DUCTILE IRON FLANGED JOINT PIPE & FITTINGS PER ANSI/AWWA C115/A21.15 STANDARD AND ANSI/AWWA C151/A21.51 STANDARD FOR PIPE BARREL REQUIREMENTS, CLASS A53 AND CLASS 125 CAST IRON FLANGED FITTINGS, COMPLETE W/ FULL FACED RED RUBBER GASKETS, BOLTS, NUTS PER CLASS 125 ANSI B16.1 OR ANSI/AWWA C110/A21.10 STANDARD AS REQUIRED. (ESTIMATED QUANTITY = 30 LIN. FT.)

18. GROUND ROD, 1" DIA. AS PER CMS 625.10 & 713.16. (ONE (1) REQ.)
19. 20.0 USG.P.M. (MIN.) AT 43.72 (MAX.) FOOT TOTAL DYNAMIC HEAD (T.D.H.) SUBMERSIBLE SEWAGE GRINDER PUMPS, VERTICAL MOUNT, 2.0 H.P., 230 VOLT, 3-WIRE, 60 HZ. (TWO (2) REQ.)
20. CLASS 125 P.S.I. IRON BODY, BRONZE MOUNTED, DOUBLE DISC, PARALLEL SEAT, FLANGED ENDS, NON-RISING STEM (NRS) W/ WHEEL HANDLE, CLOW CORPORATION FIG. NO. 5280. GATE VALVE OR APPROVED EQUAL BY CRANE, NIBCO, OR WM. POWELL CO. (THREE (3) REQ.) SIZE 4" DIA.
21. DOVER CORPORATION/OPW DIVISION CAT. NO. OPW 23. SIZE 3" VENT W/40-MESH BRASS SCREEN, OR APPROVED EQUAL. (ONE (1) REQ.)
22. CLASS 175 P.S.I. IRON BODY, BRONZE MOUNT, HORIZONTAL SWING CHECK VALVE, FLANGED ENDS W/ OUTSIDE SPRING & LEVER, CLOW FIG. NO. 5381 OR APPROVED EQUAL BY CRANE, NIBCO OR WM. POWELL CO. (TWO (2) REQ.) SIZE 4" DIA.
23. CAST IRON 4" CONNECTOR MJ/FLANGED. (ONE (1) REQ.)
24. FULL FACED RED RUBBER SHEET GASKETS, BOLTS, NUTS & WASHERS (AS REQ.)
25. CAST IRON BLIND FLANGE (ONE (1) REQ.)
26. NEMA 4X JUNCTION BOX FOR FLOAT SENSOR CABLES, MERCURY LIQUID LEVEL SENSOR SWITCHES & 30 FEET CORD ATTACHMENTS. (ONE (1) REQ.)
27. 30 FEET 3-WIRE POWER LEAD CABLES TO EACH SUBMERSIBLE GRINDER PUMP MOTOR.
28. 2" X 1-1/4" 125 LB. STANDARD, SCREWED, CONCENTRIC REDUCER W/ 2" DIA. X 6" LONG, THREADED ASTM A-53, SCH. 40 BLACK STEEL NIPPLE. (TWO (2) OF EACH REQ.)
29. 1-1/4" ASTM A-53 BLACK STEEL PIPE, THREAD & COUPLING. (LENGTH AS REQ.)
30. 2'-8" X 4'-0" DOUBLE-LEAF, ALUMINUM CONSTRUCTED ACCESS DOORS W/ TORSION BAR SPRINGS TO HOLD DOORS IN OPEN POSITION. (TWO (2) REQ.)
31. TYLER PIPE, SUBSIDIARY OF TYLER CORPORATION CAT. NO. S-136 CAST IRON MECHANICAL JOINT REDUCER (MJ SMALL END BELL REDUCER) SIZE 4" X 2" W/ APPROPRIATE FLEXIBLE NEOPRENE GASKET FOR USE OF CONNECTION FROM 2" MJ TO 2" PVC PIPE OR APPROVED EQUAL. (REQUIRED ONLY WHEN 2" FORCE MAIN IS SPECIFIED)
32. EXCAVATION FOR LIFT STATION WET WELL AND VALVE PIT SHALL CONFORM TO CMS.503; DISPOSAL OF EXCAVATED MATERIAL SHALL CONFORM TO CMS 203.05, AGGREGATE BACKFILL SHALL CONFORM TO CMS 703.05, OMITTING THE USE OF AIR-COOLED SLAG. SIEVE SIZE SHALL BE 3/8", 100% PASSING, FOREIGN MATTER SUCH AS ROCK, CINDERS, LUMBER, ETC. SHALL NOT BE ALLOWED IN BACKFILL. EXCAVATION AND BACKFILL FOR SEWER LINES SHALL CONFORM TO CMS 603 W/ CLASS B BEDDING.
33. LIFT STATION WET WELL AND VALVE PIT SHALL BE CLEANED AND THE WET WELL FILLED WITH NECESSARY WATER AS SOON AS POSSIBLE TO PREVENT FLOATATION. WET WELL MUST REMAIN PROPERLY FILLED AT ALL TIMES TO PREVENT FLOATATION. LIFT STATION SHALL BE CHECKED FOR LEAKS AND REPAIRS MADE TO THE SATISFACTION AND APPROVAL OF THE ENGINEER. PRIOR TO FINAL ACCEPTANCE AND APPROVAL OF THE LIFT STATION WET WELL AND VALVE PIT INSTALLATION, WET WELL SHOULD BE PUMPED OUT AND CLEANING AND WATER FILLING REPEATED TO ENABLE FURTHER TESTING PROCEDURES THAT SHALL BE PERFORMED AND APPROVED BEFORE FINAL ACCEPTANCE. THIS SHALL BE CONDUCTED WHEN DIRECTED BY THE ENGINEER.

HYDROSTATIC TESTING - In lieu of the Hydraulic (Water) Test as in 603.06 of the Construction and Materials Specification an Air Pressure Test shall be performed by the Contractor. The Air Pressure Test of the pipe joints shall be made after the completion of the sewer. All joints shall be free and clear of any backfill to allow for inspection. The Air Pressure Test for leakage shall be performed on all sanitary sewer lines which shall include the 6" Sewer conduit gravity sections and the 4" Sewer conduit forced main section of the system. The Air Pressure Test shall meet the requirements of the Environmental Protection Agency and the APPROPRIATE County Sanitary District. Should any section of the conduit fail to meet the test requirements, corrections shall be made until the Test requirements for the section are met. The Environmental Protection Agency and the APPROPRIATE Sanitary District shall be notified by ODOT a minimum of 48 Hours prior to performing any Air Tests. The cost of all materials, equipment, labor and incidentals necessary for performing the tests and making any necessary corrections and replacements shall be included in the price bid for the pertinent conduit.

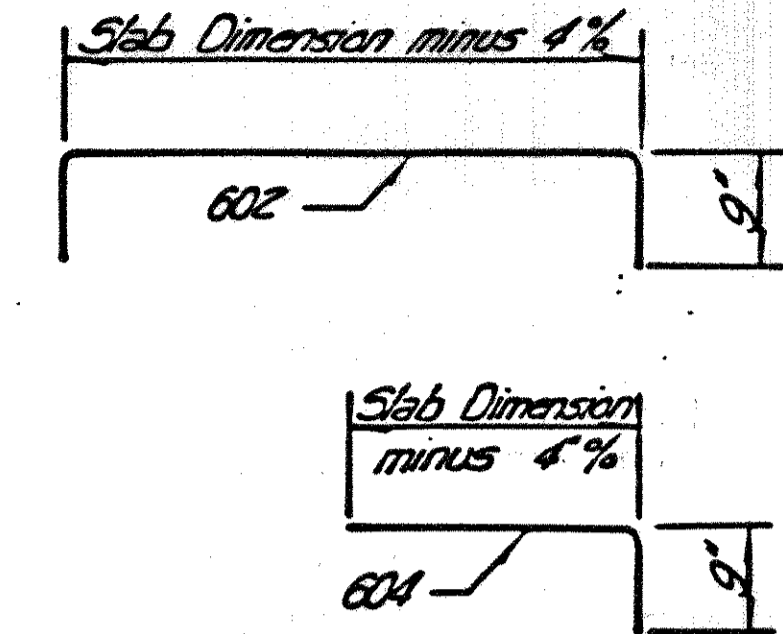
- PAYMENT- PRECAST CONCRETE SEWAGE WET WELL INCLUDING LIFT STA. VALVE BOX** - The Special Item - Precast Concrete Sewage Wet Well including LIFT STA. VALVE BOX shall include the following items:
1. 72" C-478 Concrete Wet Well w/ Reinforced Concrete Foundations and cast in place slab.
 2. Reinforced Valve Pit.
 3. Duplex Control Panel & Control Panel Support.
 4. 3" X 3" X 1/4" ANGLE IRON GATE VALVE SUPPORT BRACKET W/ ANCHOR BOLTS, NUTS & WASHERS.
 5. Quick Lift Assembly. (TWO (2) REQ.)
 6. VALVE PIT CONCRETE SLOPE BUILD UP.
 7. CAST IRON REGULAR REDUCING FLANGE, SIZE 2" X 7-1/2". (TWO (2) REQ.)

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR LIFT STATION & VALVE BOX ASSEMBLY (EXCEPT ELECTRICAL). PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH ITEM FURNISHED IN PLACE AND ALL CONNECTIONS COMPLETE AND ACCEPTED.

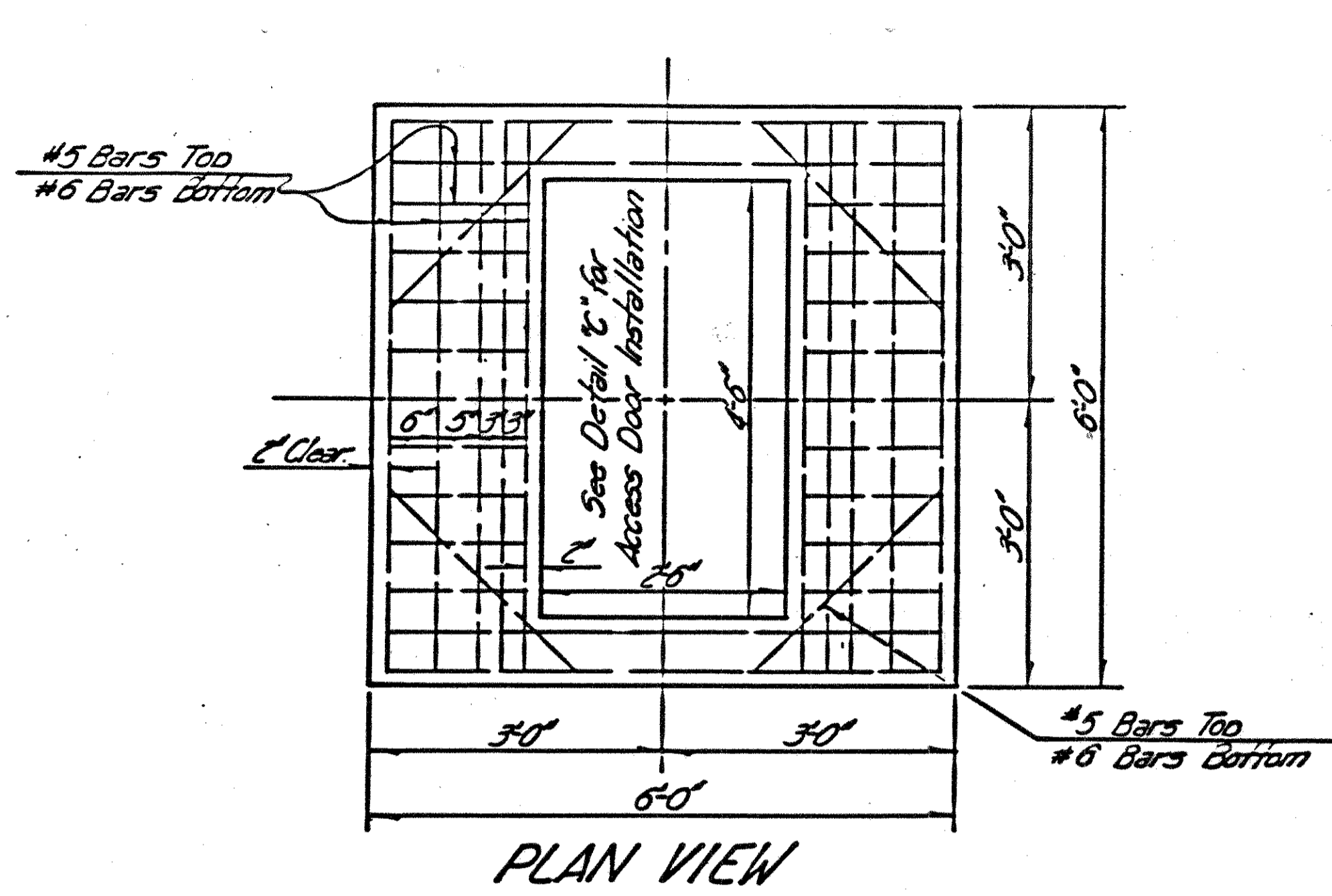
VALVE PIT & MISCELLANEOUS DETAILS

FHWA REGION	STATE	PROJECT	76 80
	OHIO	AUG. 33-602	

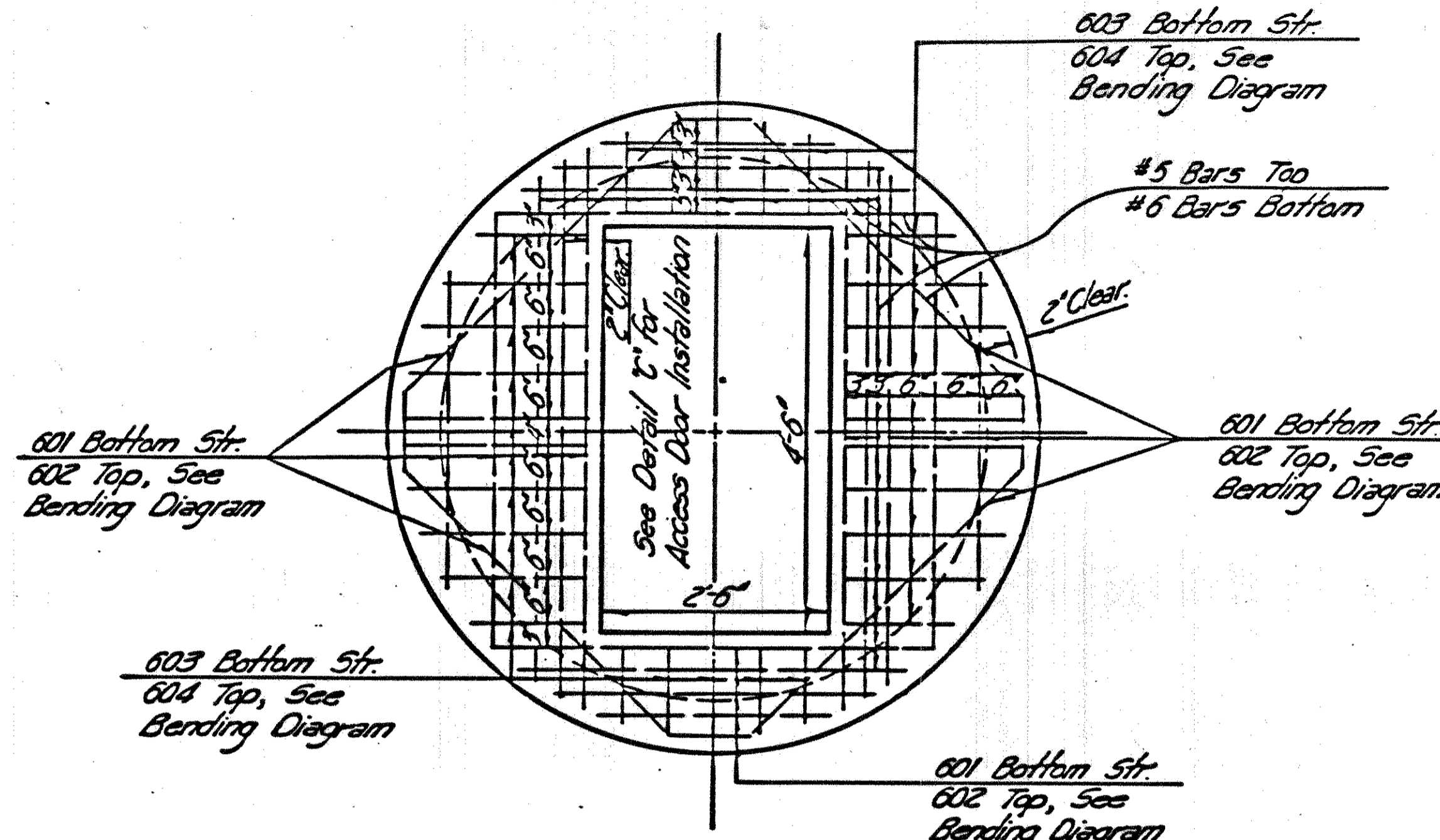
SAFETY REST AREA



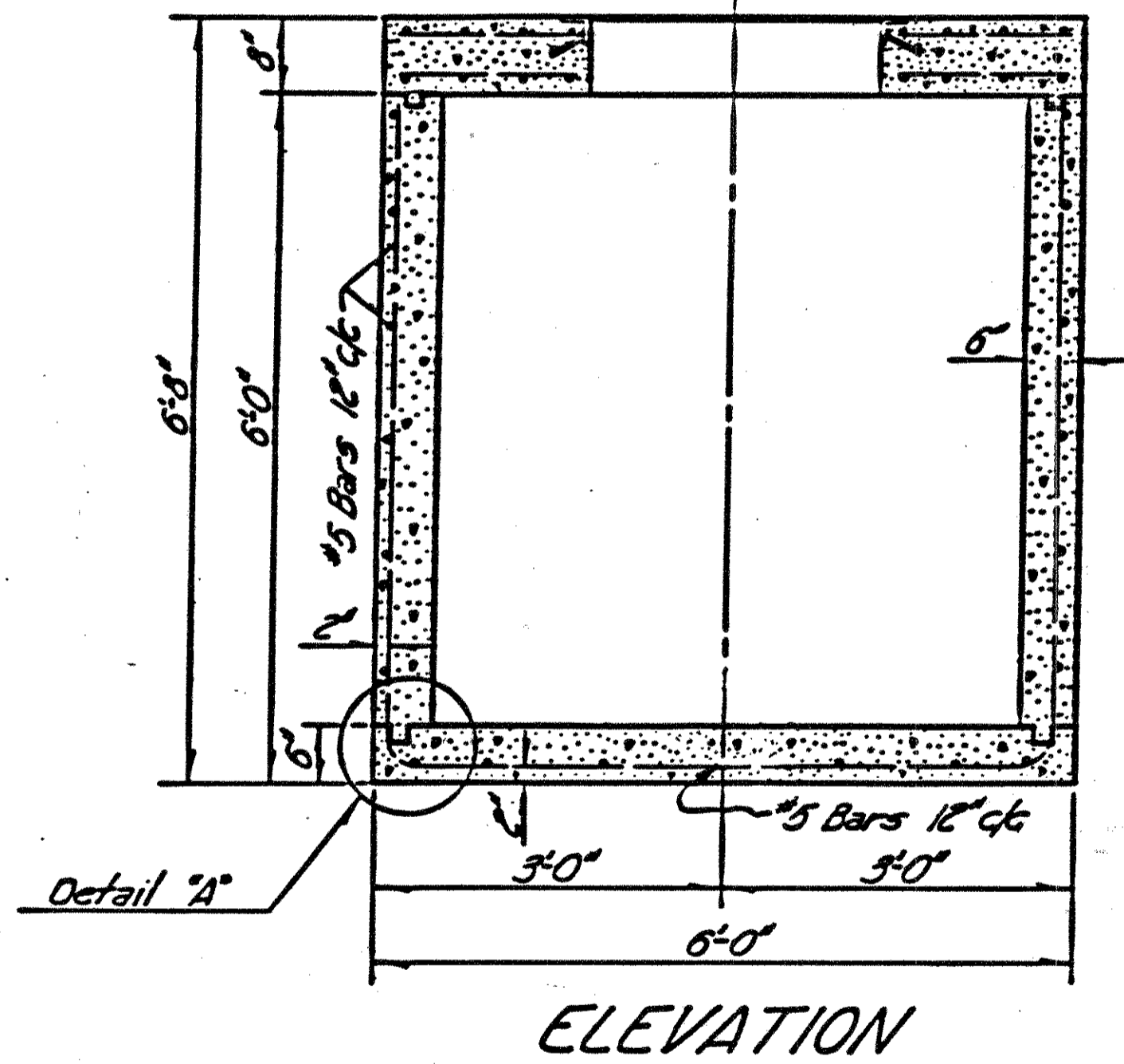
BENDING DIAGRAM



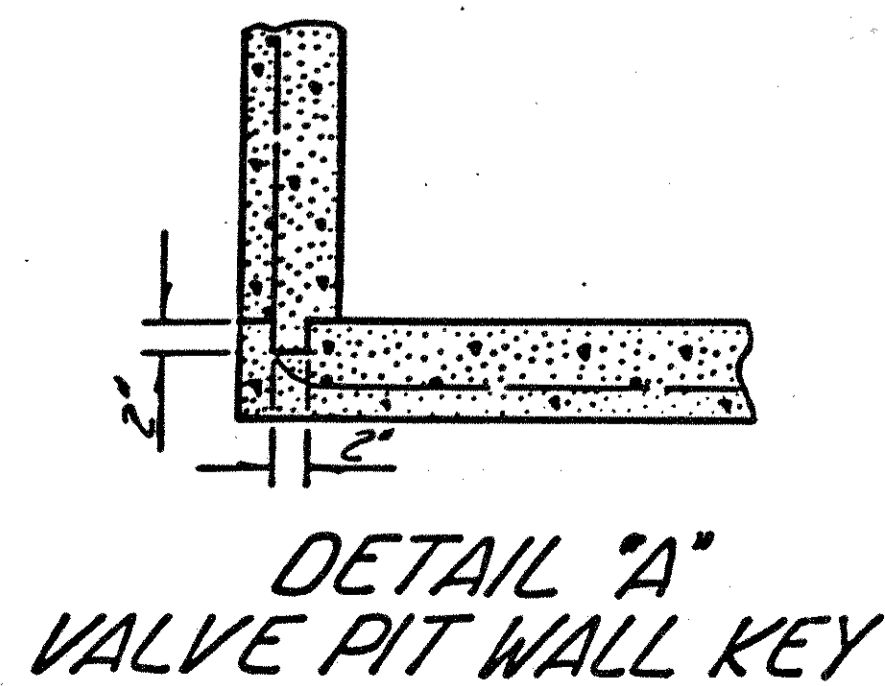
PLAN VIEW



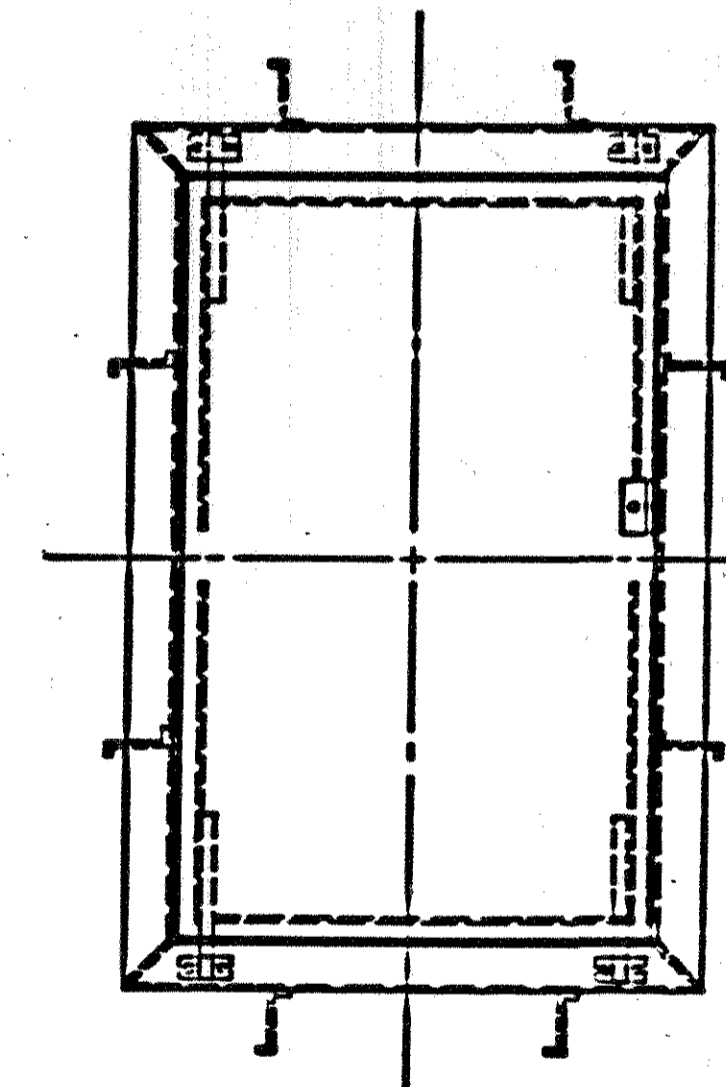
LIFT STATION PRECAST CONCRETE SLAB



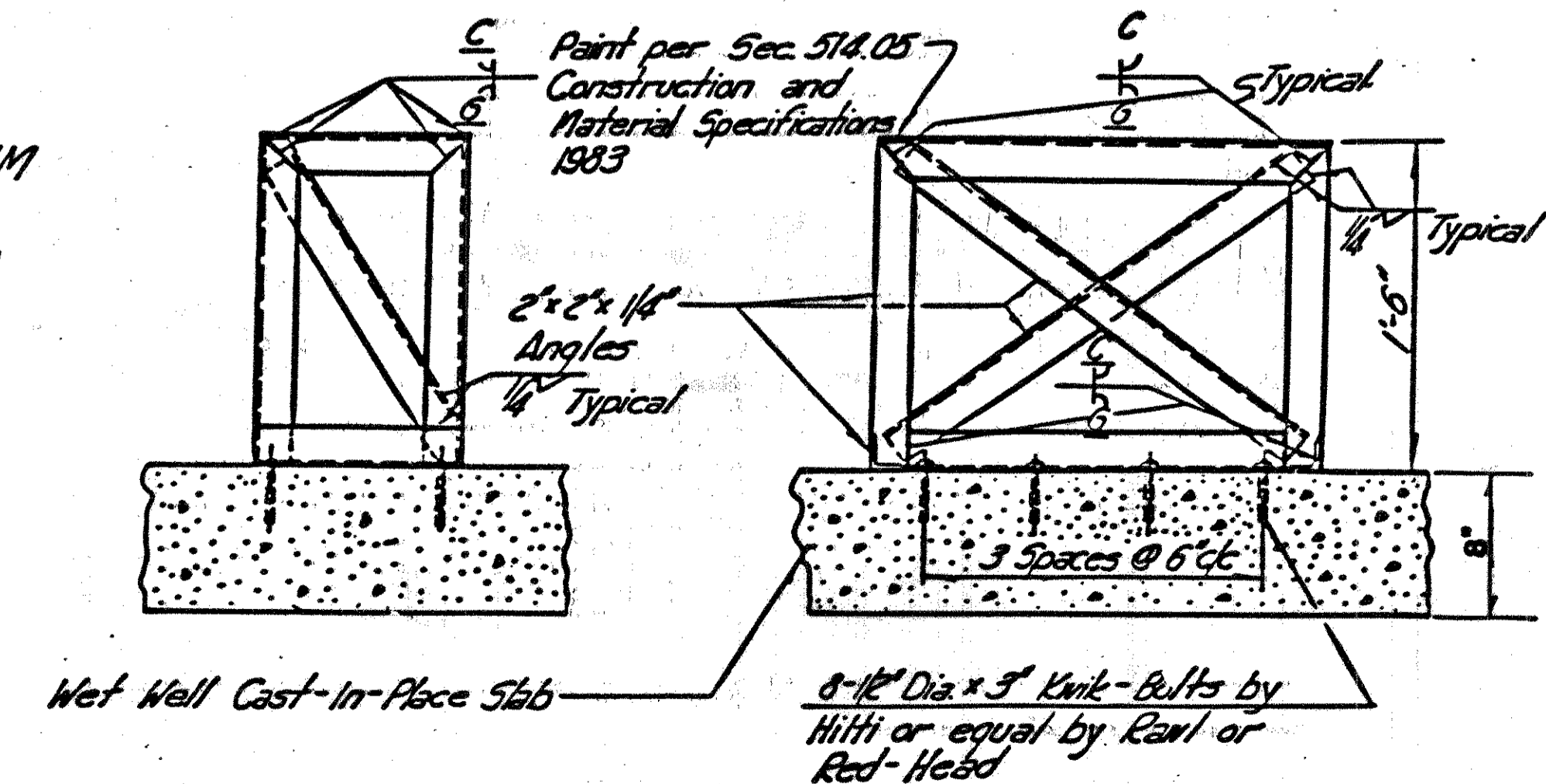
ELEVATION



DETAIL "A"
VALVE PIT WALL KEY



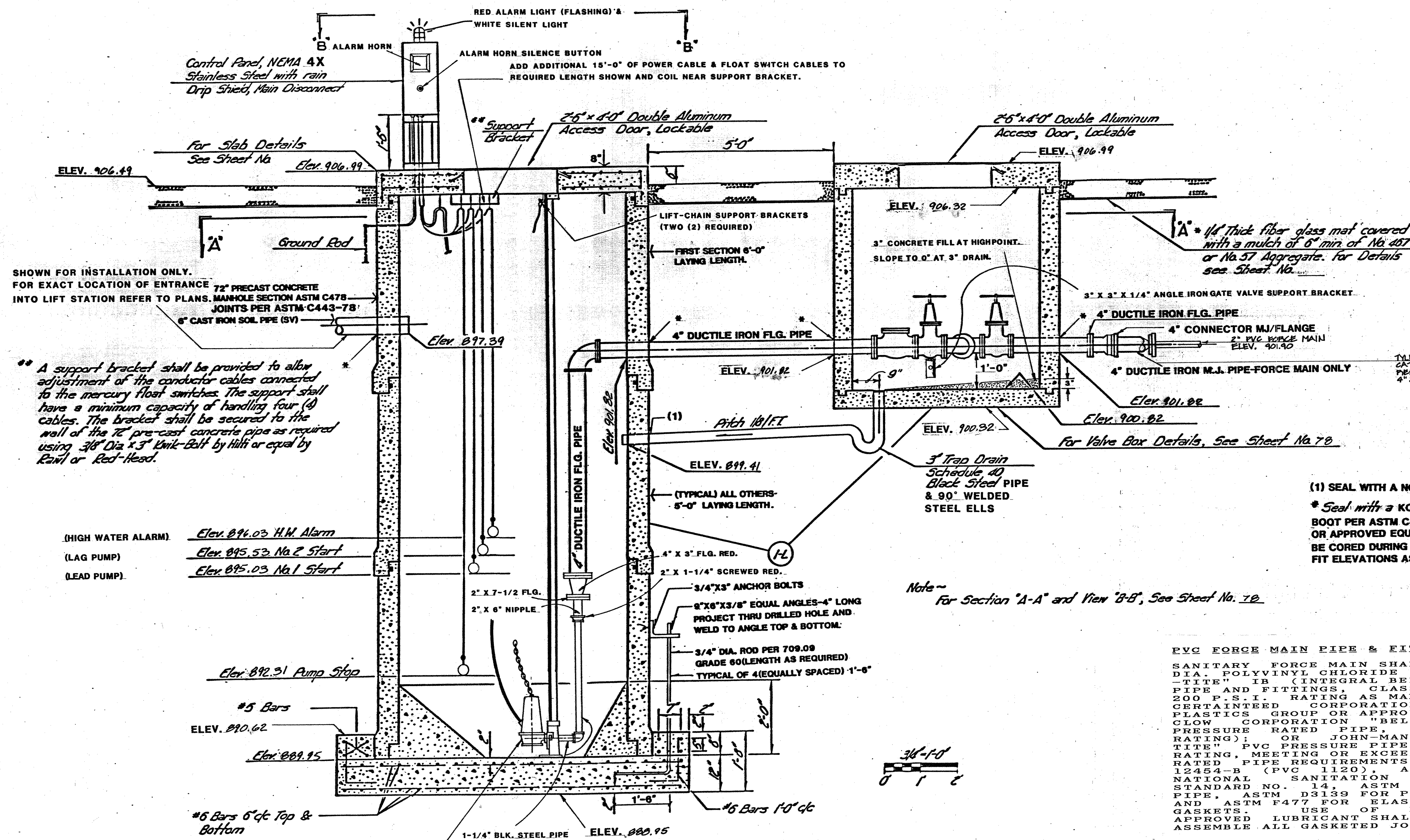
DETAIL "C"
2'-6" x 4'-0" DOUBLE ALUMINUM
ACCESS DOOR, LOCKABLE
CLOW NO. 9843A, BILCO
OR APPROVED EQUAL



CONTROL PANEL SUPPORT

LIFT STATION & VALVE PIT

SAFETY REST AREA



RED ALARM LIGHT (FLASHING) & WHITE SILENT LIGHT
 B ALARM HORN
 ALARM HORN SILENCE BUTTON
 ADD ADDITIONAL 15'-0" OF POWER CABLE & FLOAT SWITCH CABLES TO REQUIRED LENGTH SHOWN AND COIL NEAR SUPPORT BRACKET.

Control Panel, NEMA 4X
 Stainless Steel with rain
 Drip Shield, Main Disconnect

2" Support Bracket
 2-5" x 4-0" Double Aluminum
 Access Door, Lockable

2-5" x 4-0" Double Aluminum
 Access Door, Lockable

For Slab Details
 See Sheet No. ELEV. 906.99

SHOWN FOR INSTALLATION ONLY.
 FOR EXACT LOCATION OF ENTRANCE INTO LIFT STATION REFER TO PLANS.
 72" PRECAST CONCRETE MANHOLE SECTION ASTM C478 JOINTS PER ASTM C443-78
 6" CAST IRON SOIL PIPE (SV)

A support bracket shall be provided to allow adjustment of the conductor cables connected to the mercury float switches. The support shall have a minimum capacity of handling four (4) cables. The bracket shall be secured to the wall of the 72" pre-cast concrete pipe as required using 3/8" Dia x 3" Univ-Bolt by Hilti or equal by Rail or Red-Head.

(HIGH WATER ALARM) ELEV. 896.03 H.W. Alarm
 (LAG PUMP) ELEV. 895.53 No. 2 Start
 (LEAD PUMP) ELEV. 895.03 No. 1 Start

ELEV. 892.31 Pump Stop

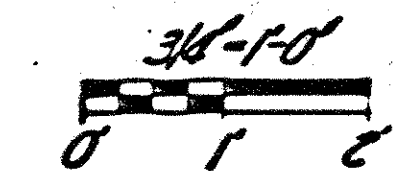
#5 Bars
 ELEV. 890.62

ELEV. 888.95

#6 Bars 6" dc Top & Bottom

1-1/4" BLK. STEEL PIPE ELEV. 888.95

ELEVATION



ABS PUMPS CO. PIRANNA GRINDER, VERTICAL MOUNT, SUBMERSIBLE SEWAGE PUMPS, 20 US G.P.M. (MIN.) AGAINST A (MIN.) 43.72 FOOT TOTAL DYNAMIC HEAD (TDH), 230 VOLT, 3-WIRE, SINGLE PHASE, 60 HERTZ, OR EQUAL BY GORMAN -RUPP, FLYGT CORPORATION OR APPROVED EQUAL. (TWO (2) REQ.) FOR DETAILS REFER TO GENERAL NOTES.

A 1/4" Thick fiber glass mat covered with a mulch of 6" min. of No. 487 or No. 57 Aggregate. for Details see Sheet No. 70

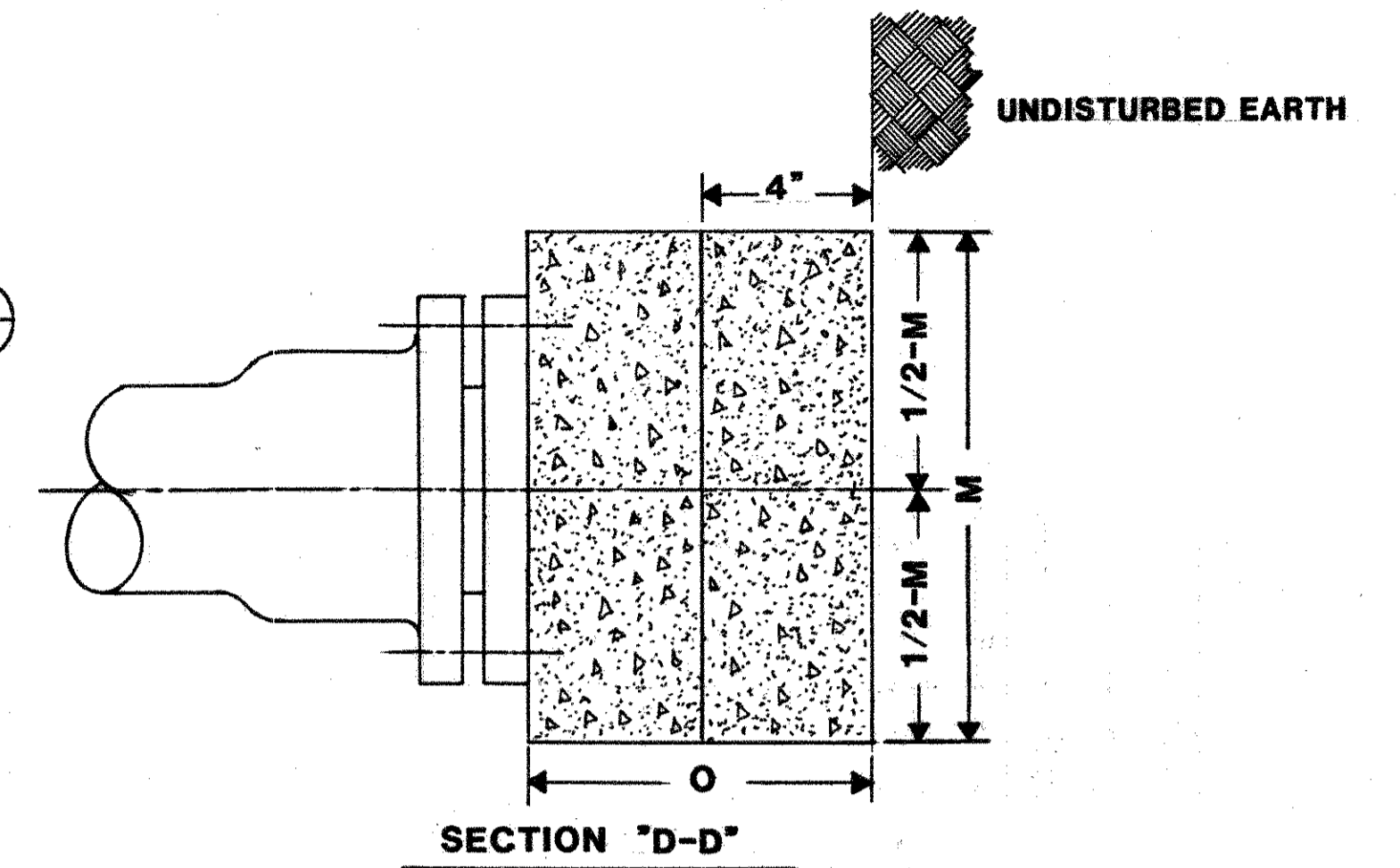
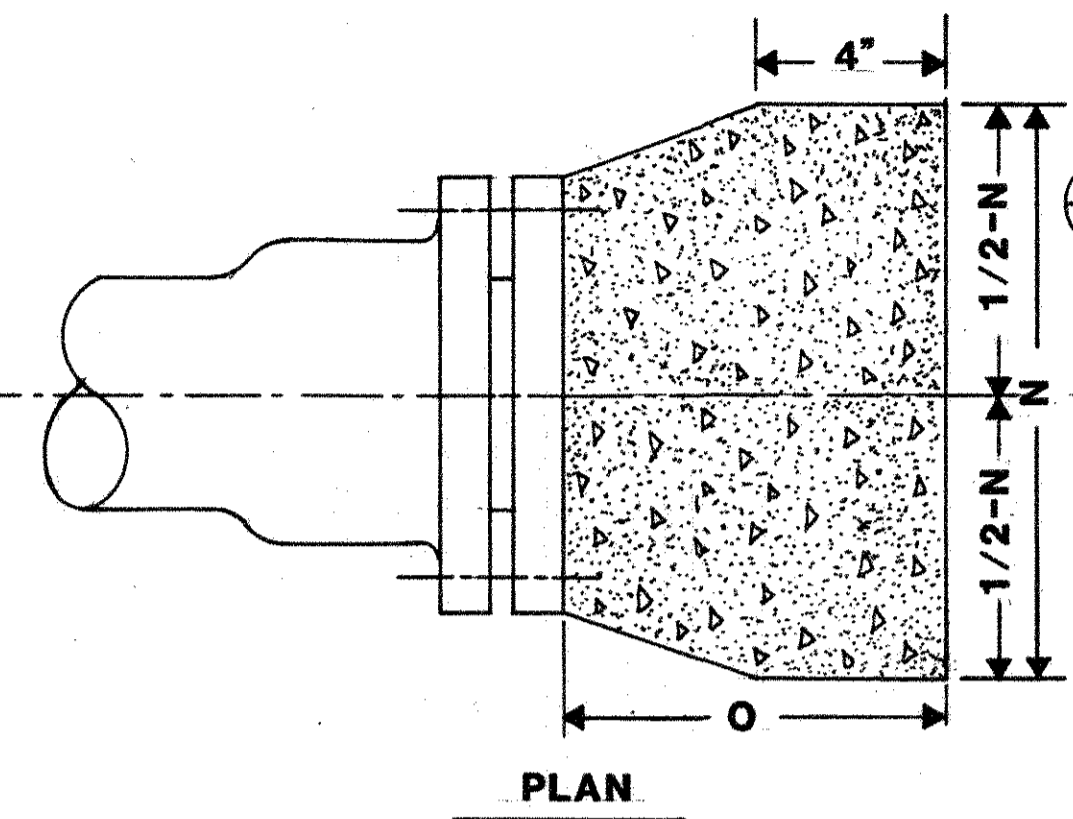
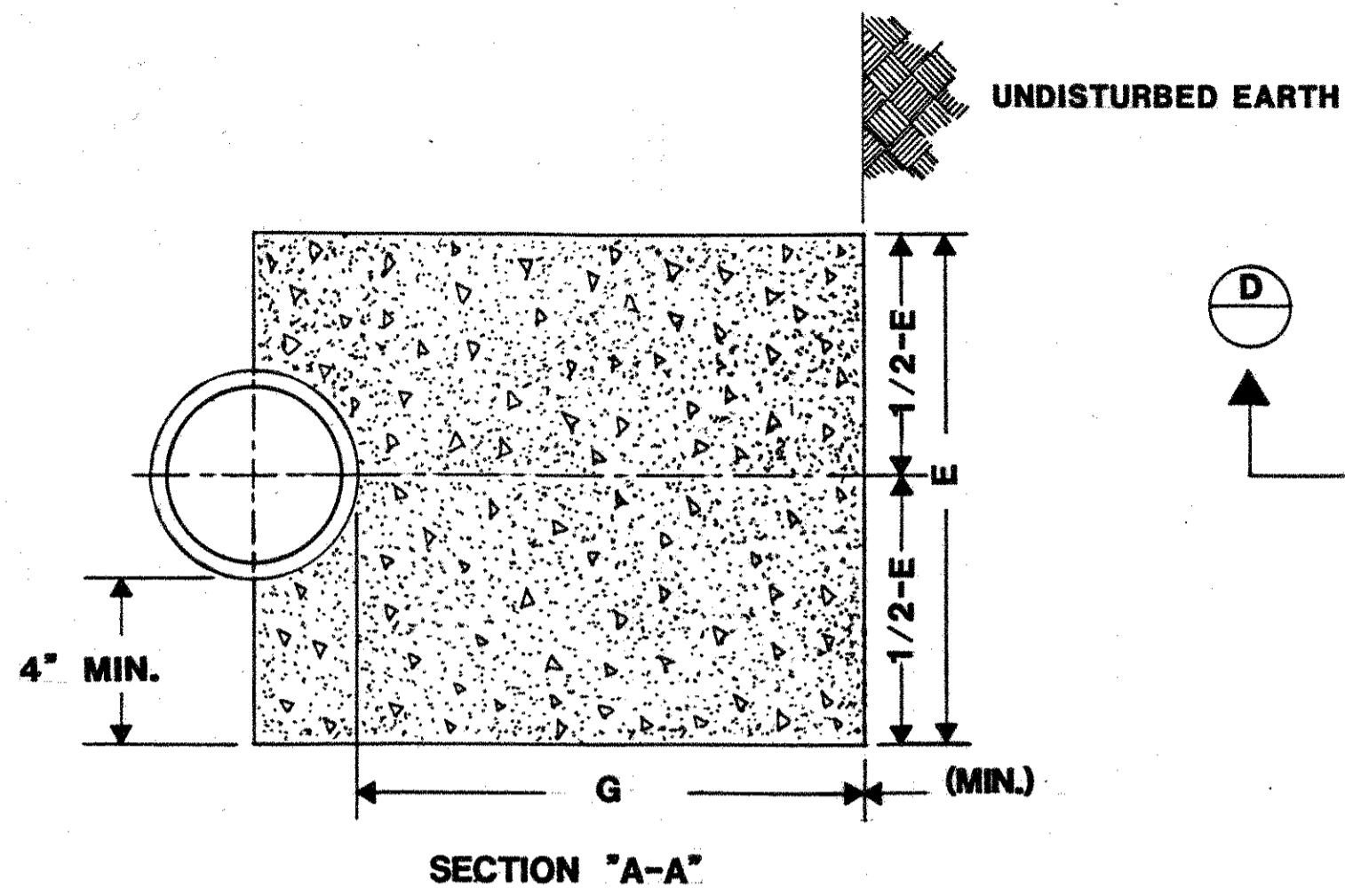
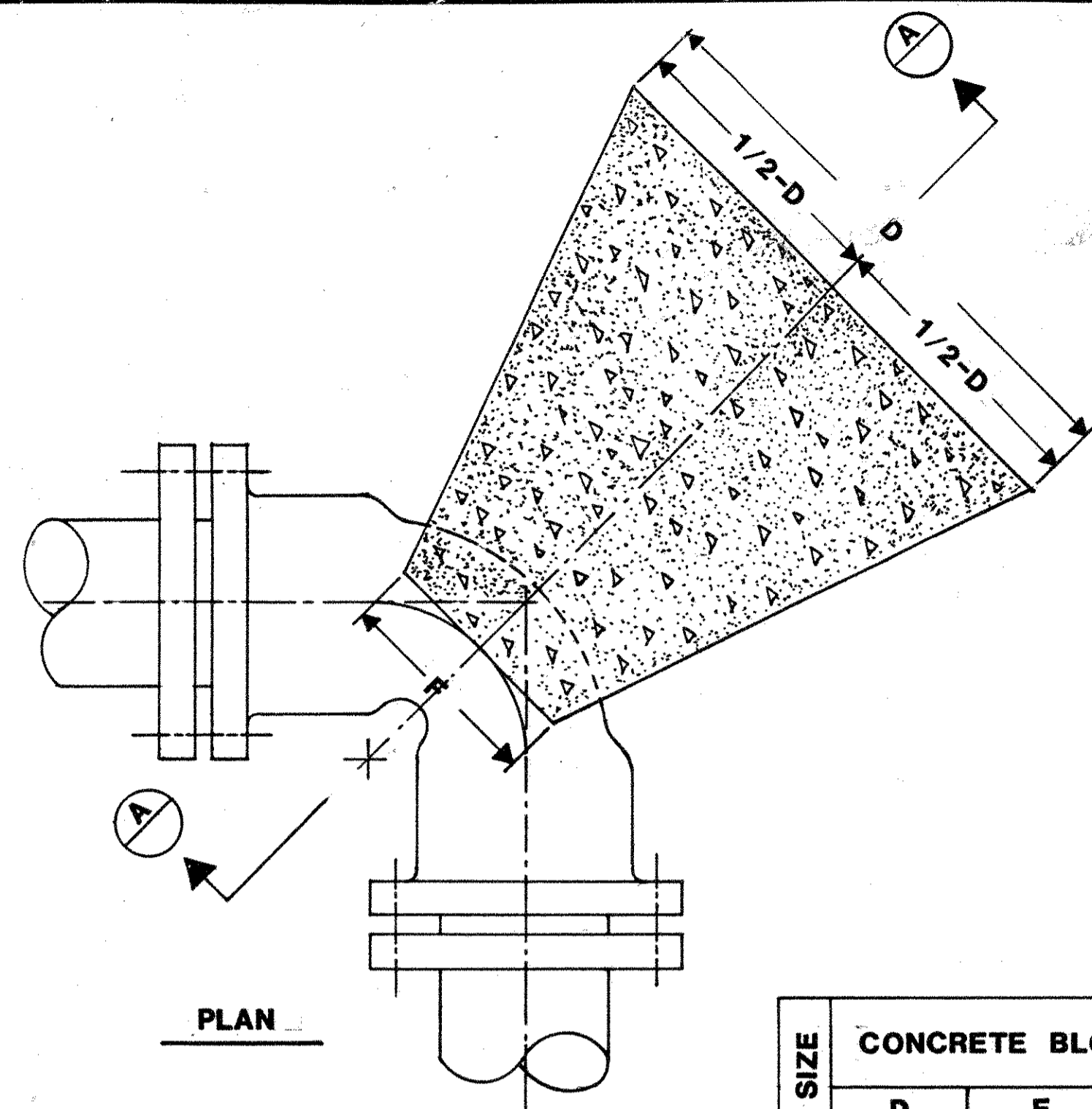
TYLER PIPE, SUBSIDIARY OF TYLER CORPORATION
 CAT. NO. 5-136 CAST IRON MECHANICAL JOINT
 REDUCER (M3 SMALL END BELL REDUCER) SIZE
 4" X 2" OR APPROVED EQUAL.

(1) SEAL WITH A NON-METALLIC EPOXY GROUT
 * Seal with a KOR-N-SEAL NEOPRENE-EPDM BOOT PER ASTM C443 W/ EXPANDING BAND CLAMPS OR APPROVED EQUAL PROPER SIZED HOLES SHALL BE CORED DURING FABRICATION AT FACTORY TO FIT ELEVATIONS AS SHOWN.

Note - For Section "A-A" and View "B-B", See Sheet No. 70

PVC FORCE MAIN PIPE & FITTINGS
 SANITARY FORCE MAIN SHALL BE 2-INCH DIA. POLYVINYL CHLORIDE (PVC), "FLUID TITE" IB (INTEGRAL BELL) PRESSURE PIPE AND FITTINGS, CLASS 200 (SDR21) 200 P.S.I. RATING AS MANUFACTURED BY CERTAINTED CORPORATION PIPE AND PLASTICS GROUP OR APPROVED EQUAL BY CLOW CORPORATION "BELL-TITE" PVC PRESSURE RATED PIPE, (200 P.S.I. RATING); OR JOHN-MANVILLE "RING-TITE" PVC PRESSURE PIPE 200 P.S.I. RATING, MEETING OR EXCEEDING PRESSURE RATED PIPE REQUIREMENTS PVC MATERIAL 12454-B (PVC 1120), ASTM D 1784, NATIONAL SANITATION FOUNDATION STANDARD NO. 14, ASTM D2241 FOR PVC PIPE, ASTM D3139 FOR PUSH-ON JOINTS AND ASTM F477 FOR ELASTOMERIC SEAL GASKETS. USE OF MANUFACTURERS APPROVED LUBRICANT SHALL BE USED TO ASSEMBLE ALL GASKETED JOINTS.

REV. 11/14/88



SIZE	CONCRETE BLOCK DIMENSIONS			
	D	E	F	G
2"	1'-0"	1'-0"	4"	1'-0"
3"	1'-0"	1'-0"	6"	1'-0"
4"	1'-4"	1'-0"	6"	1'-0"
6"	1'-9"	1'-2"	6"	1'-6"
8"	2'-6"	1'-4"	8"	1'-6"

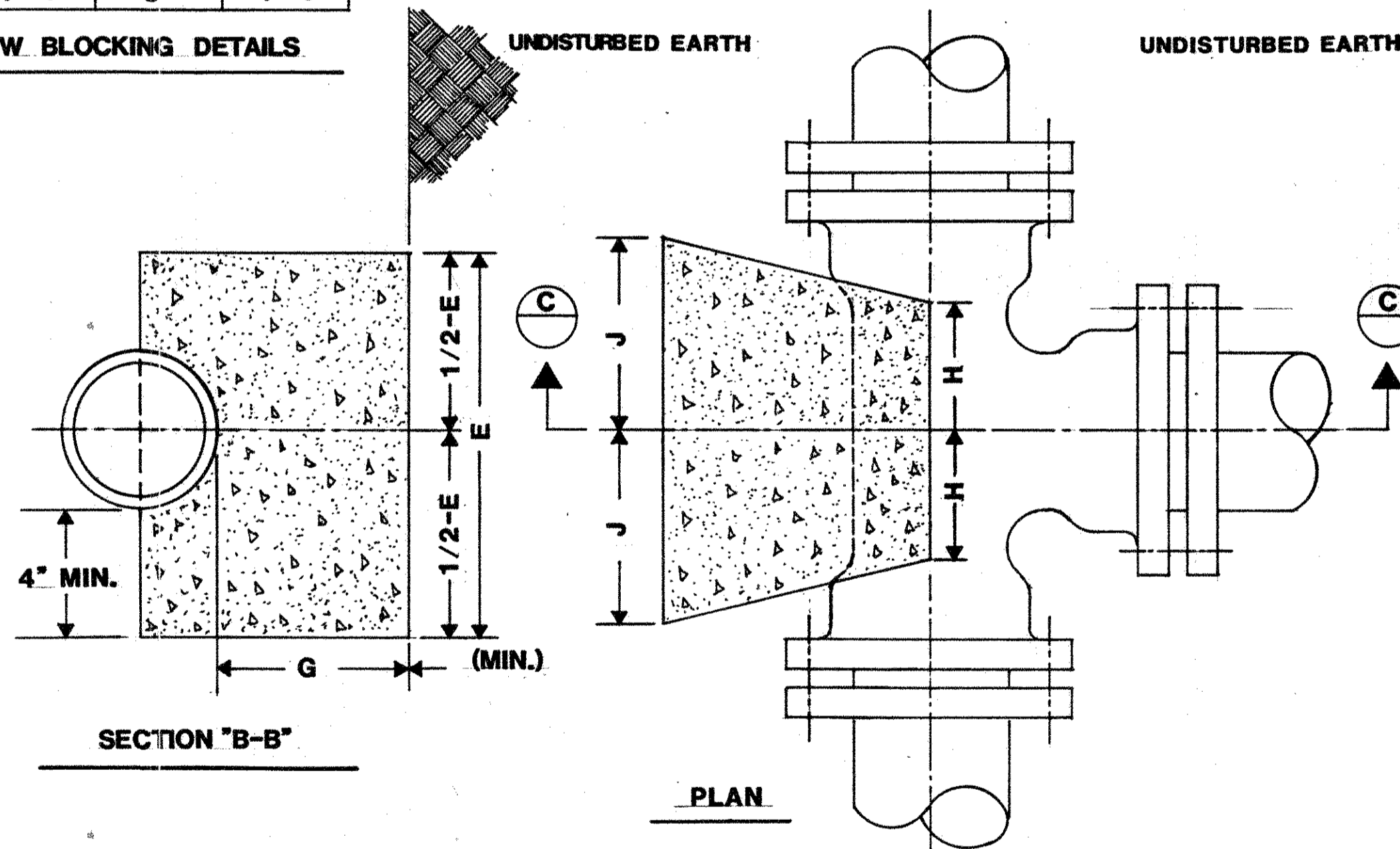
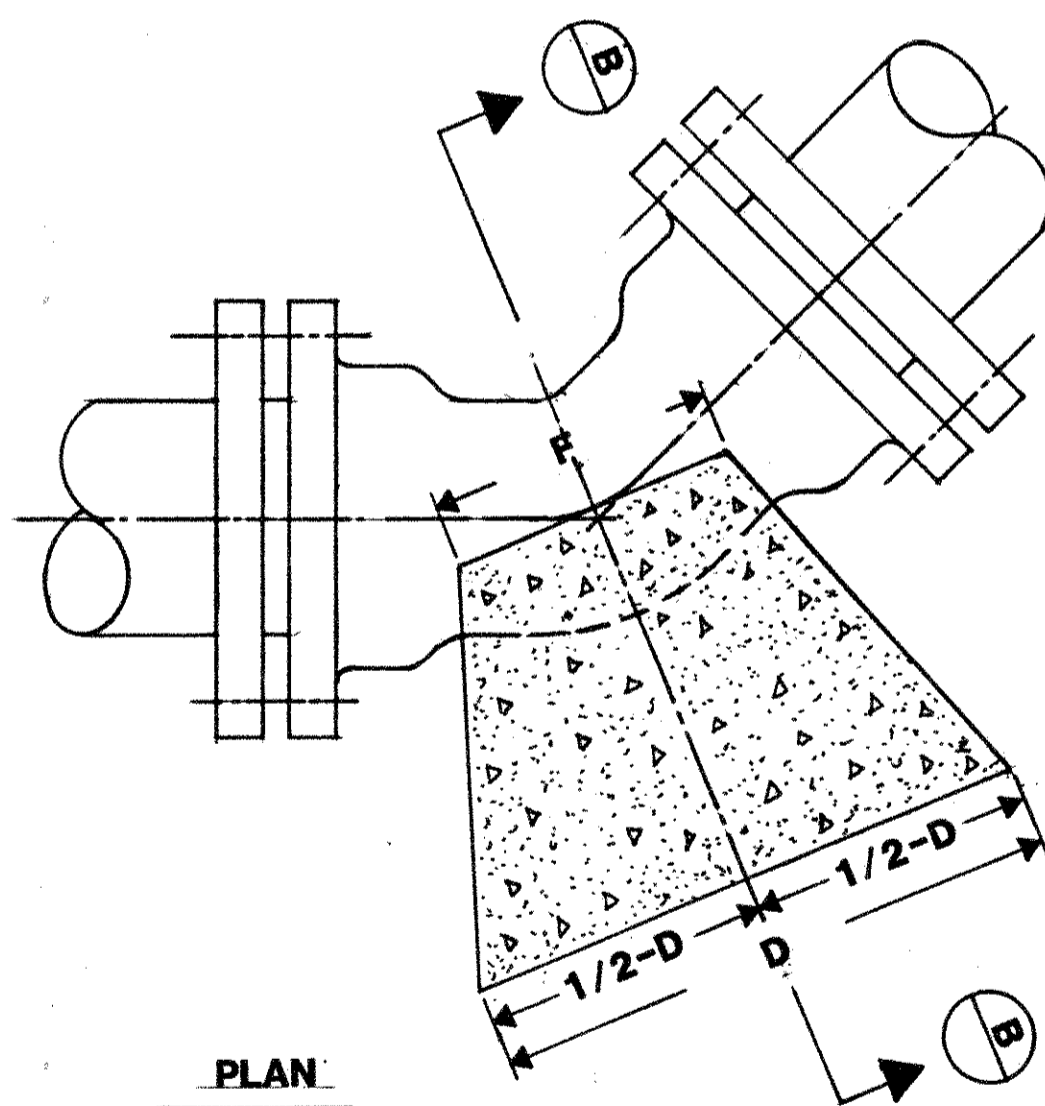
90° ELBOW BLOCKING DETAILS

SIZE	CONCRETE BLOCK DIMENSIONS FOR PLUGS AND CAPS		
	M	N	O
2"	1'-0"	1'-0"	8"
3"	1'-0"	1'-0"	8"
4"	1'-0"	1'-0"	8"
6"	1'-6"	1'-6"	8"
8"	2'-6"	1'-6"	10"

BUTTRESS FOR PLUGS AND CAPS

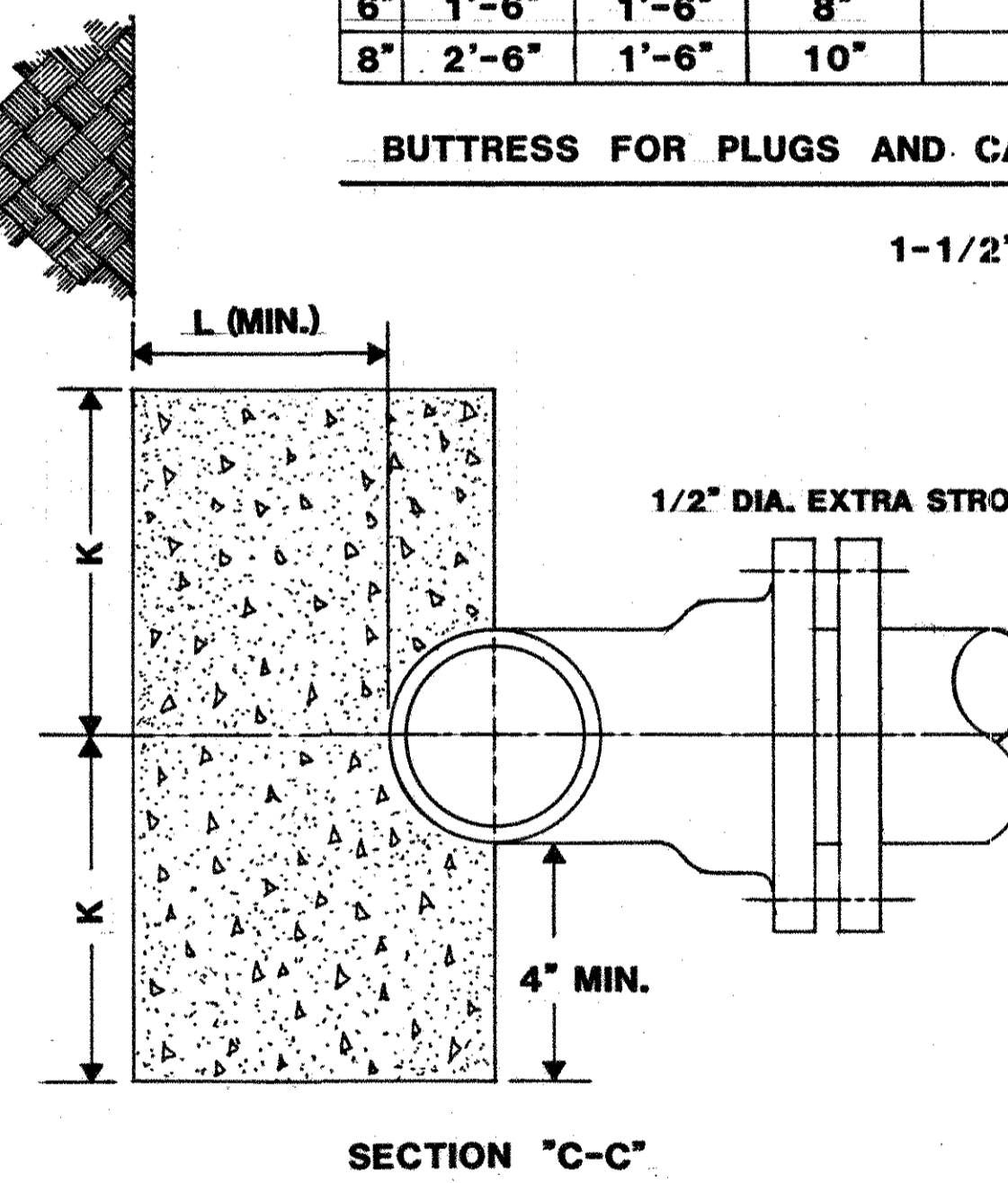
NIBCO MODEL T-134, CLASS 150 BRONZE GATE VALVE, BLOCK PATTERN, UNION BONNET, RISING STEM, SOLID WEDGE, F.S.P.S. OR APPROVED. EQUAL BY CRANE OR WM. POWELL CO.

VAL-MATIC VALVE & MFG. CORP. SEWAGE AIR RELEASE VALVE W/ ALL STAINLESS STEEL TRIM, MODEL NO. 48, INLET SIZE 2" DIA. N.P.T. AND DISCHARGE SIZE 1/2" DIA. N.P.T., ORIFICE SIZE 3/16" W/ O TO 150 P.S.I. WORKING PRESSURE OR APPROVED EQUAL BY CLOW-EDDY-IOWA DIVISION OR GOLDEN-ANDERSON INDUSTRIES, INC.



SIZE	CONCRETE BLOCK DIMENSIONS			
	D	E	F	G
2"	9"	1'-0"	4"	6"
3"	9"	1'-0"	6"	6"
4"	9"	1'-0"	6"	6"
6"	1'-0"	1'-2"	6"	8"
8"	1'-6"	1'-4"	8"	9"

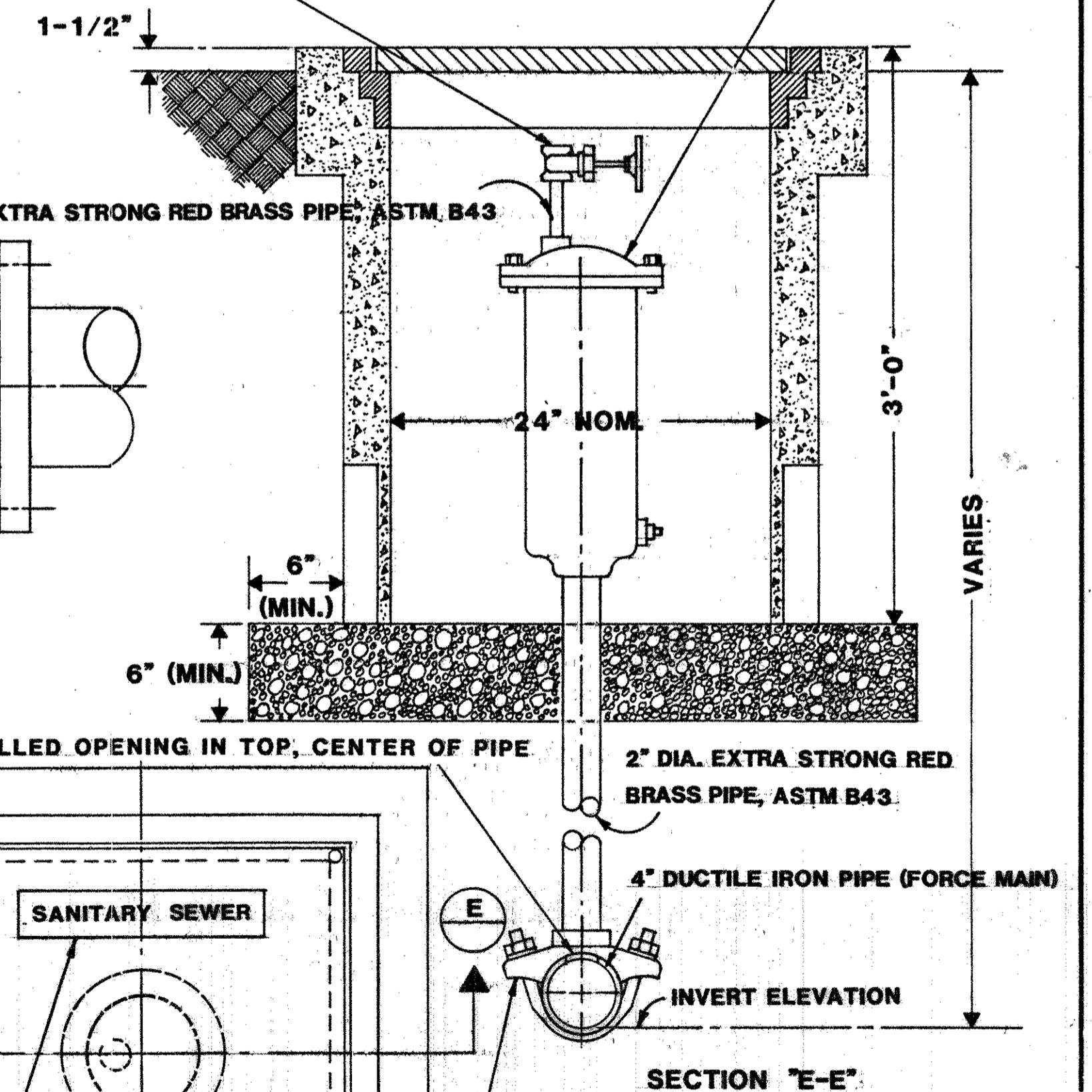
22-1/2° AND 45° ELBOW BLOCKING DETAILS



SECTION "C-C"

SIZE	CONCRETE BLOCK DIMENSIONS FOR TEES			
	H	J	K	L
2"	2.5"	6"	6"	6"
3"	4"	6"	6"	6"
4"	4"	6"	8"	6"
6"	6"	8"	10"	8"
8"	6"	9"	1'-3"	9"

BUTTRESS FOR TEES



SECTION "E-E"

ROCKWELL INTERNATIONAL CAT. NO. 313-056314-000 DOUBLE STRAP IRON SERVICE SADDLE NOM. SIZE 4"-5" O.D. RANGE 4.74"-5.63" W/ 2" NPT TAP, OR APPROVED EQUAL BY MULLER CO. OR JCM INDUSTRIES, INC.

THRUST BLOCK DETAILS

NOT TO SCALE

PLAN

CONCRETE PULL BOX PER 625.11, MODIFIED AS PER PLAN

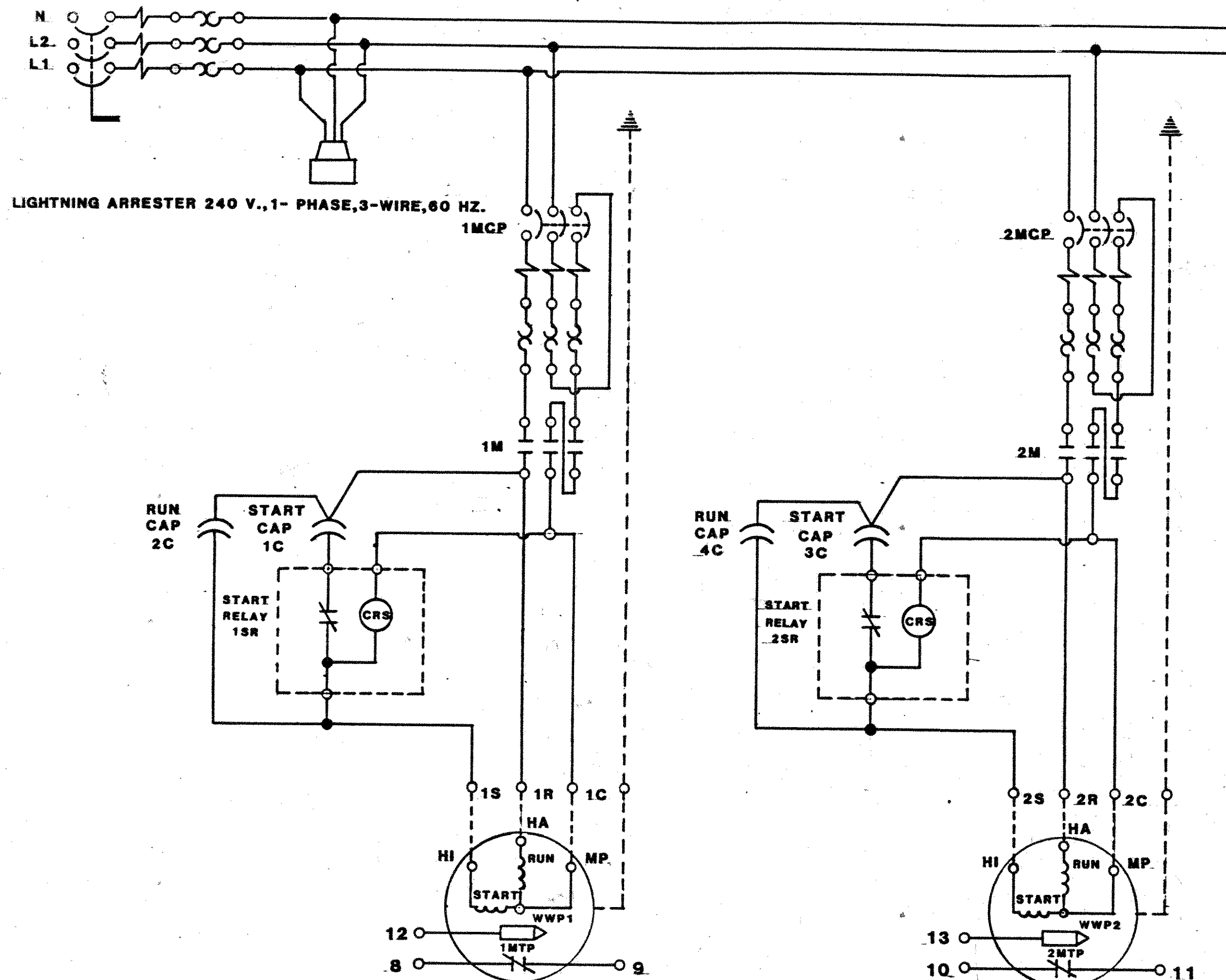
SEWAGE AIR RELEASE VALVE ASSEMBLY

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

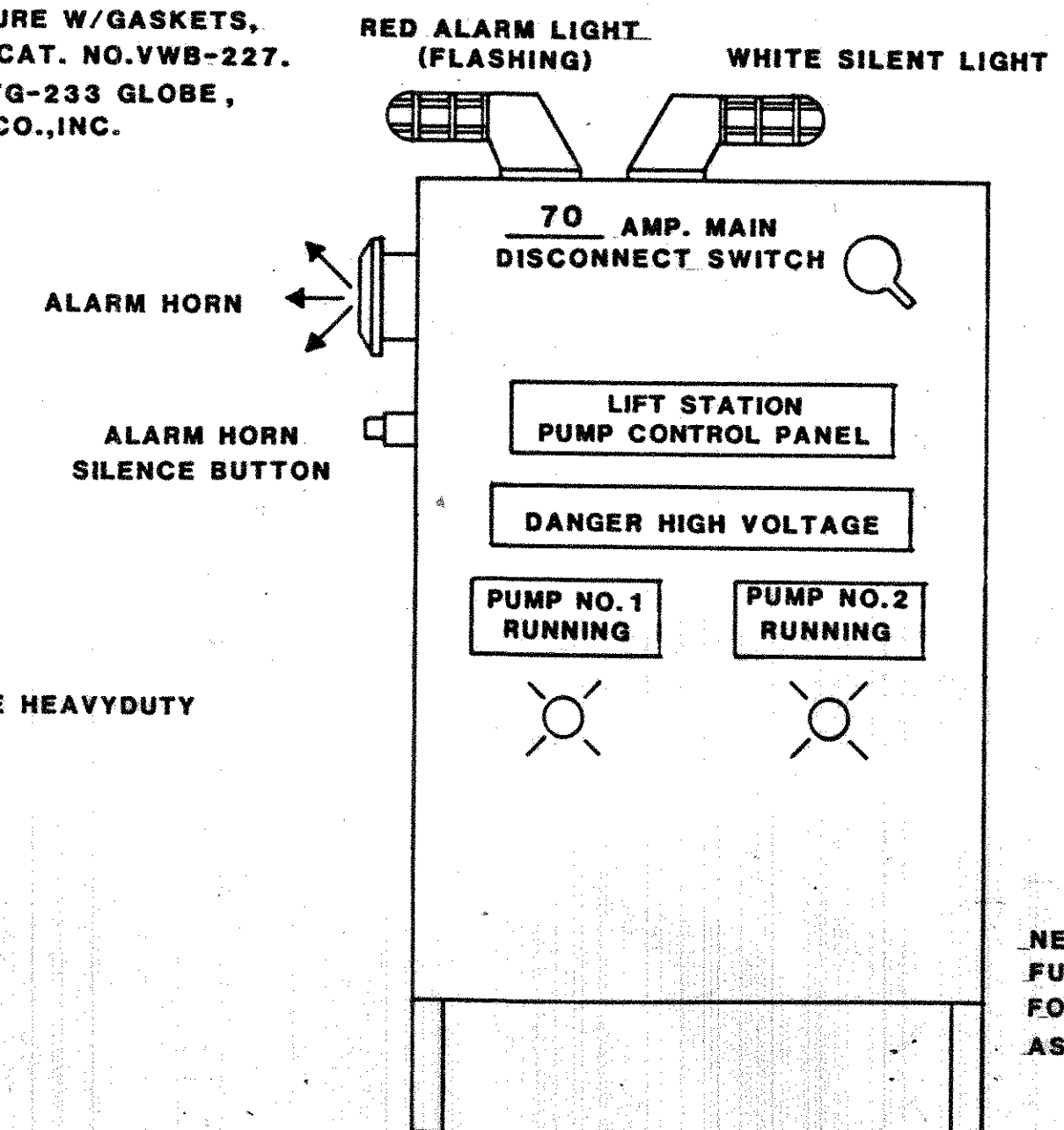
11/14/86

70 AMP. MAIN CIRCUIT BREAKER DISCONNECT SWITCH, 3-POLE, 240 VOLTS, A.C., W/STANDARD-(NO INTERNAL LOCKOFF) MECHANISM, HANDLE KIT FOR NEMA 4 ENCLOSURE AND STANDARD SHAFT AS MANUFACTURED BY WESTINGHOUSE, SQUARE "D" OR GENERAL ELECTRIC

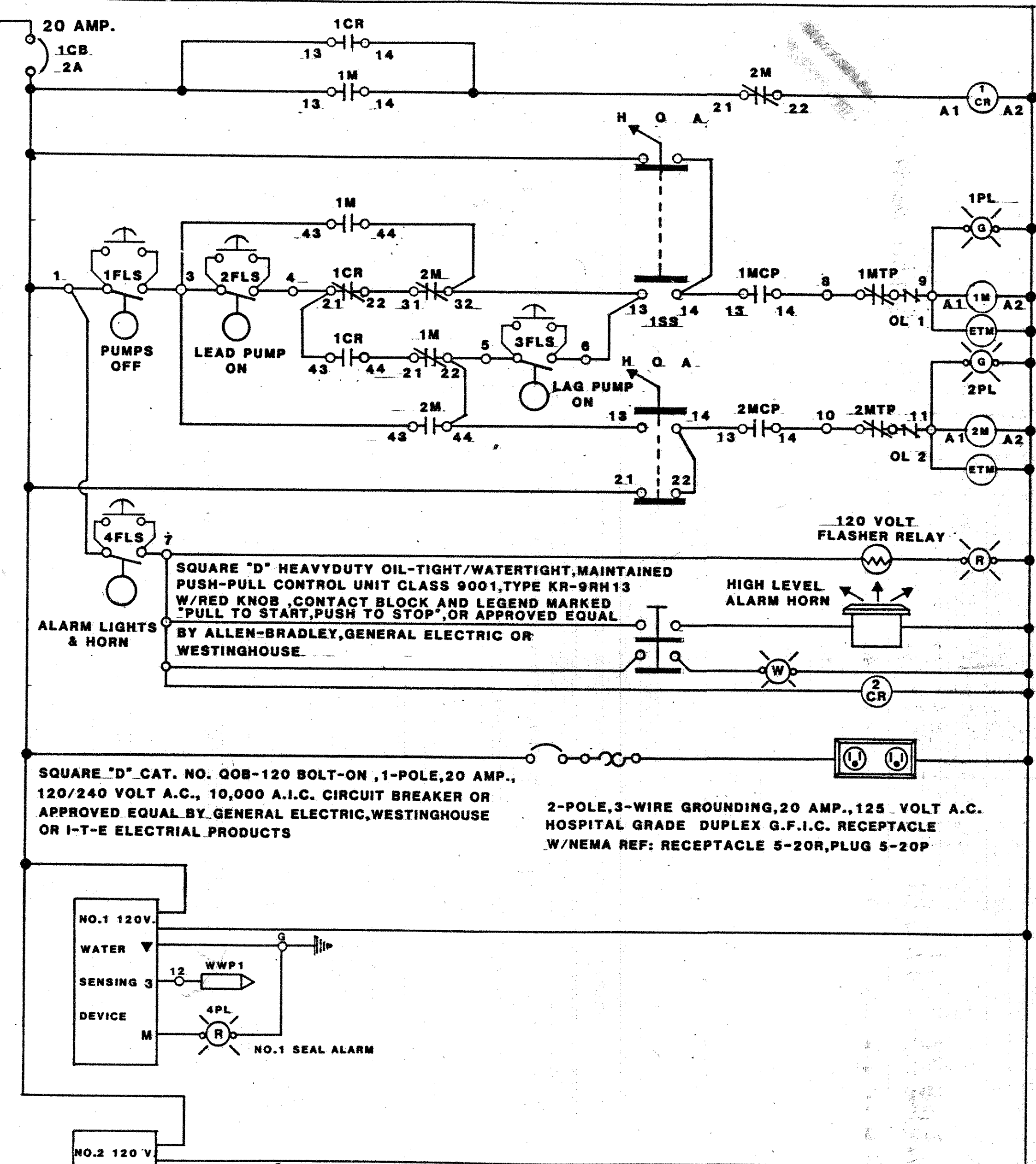
CALC. BY	AUGLAIZE COUNTY	OHIO	80
DATE	AUG-33-62	FHWA REGION	5
CHKD. BY	SAFETY REST AREA		
DATE			



ADALET MFG. CO. VAPOR-PROOF/WEATHER-PROOF 200 WATT FIXTURE W/GASKETS, DIE-CAST GUARD & LAMPED W/ 100 WATT INCANDESCENT BULBS, CAT. NO.VWB-227. FURNISH ONE FIXTURE W/(RED) VG-233R GLOBE & ONE W/(CLEAR) VG-233 GLOBE, OR APPROVED EQUAL AS MFG. BY STONCO OR RAB ELECTRIC MFG. CO.,INC.



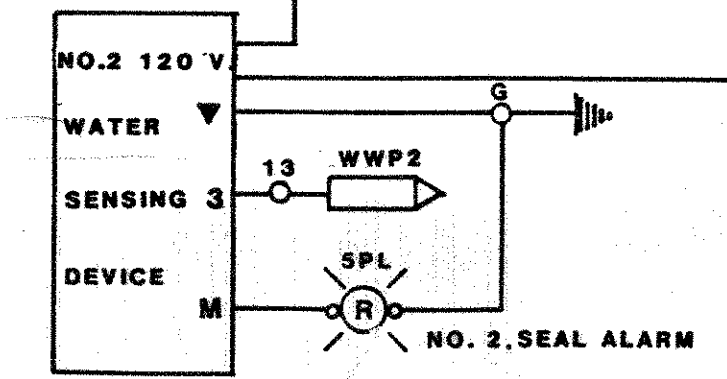
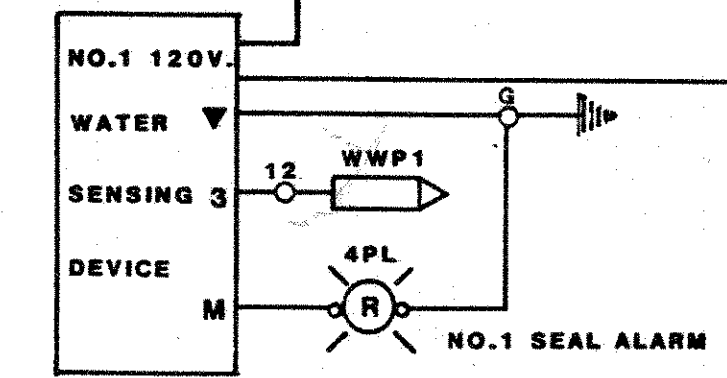
PUMP NO.1 & NO.2 RUNNING LIGHTS SHALL BE HEAVYDUTY OIL-TIGHT/WATER TIGHT CONTROL UNITS



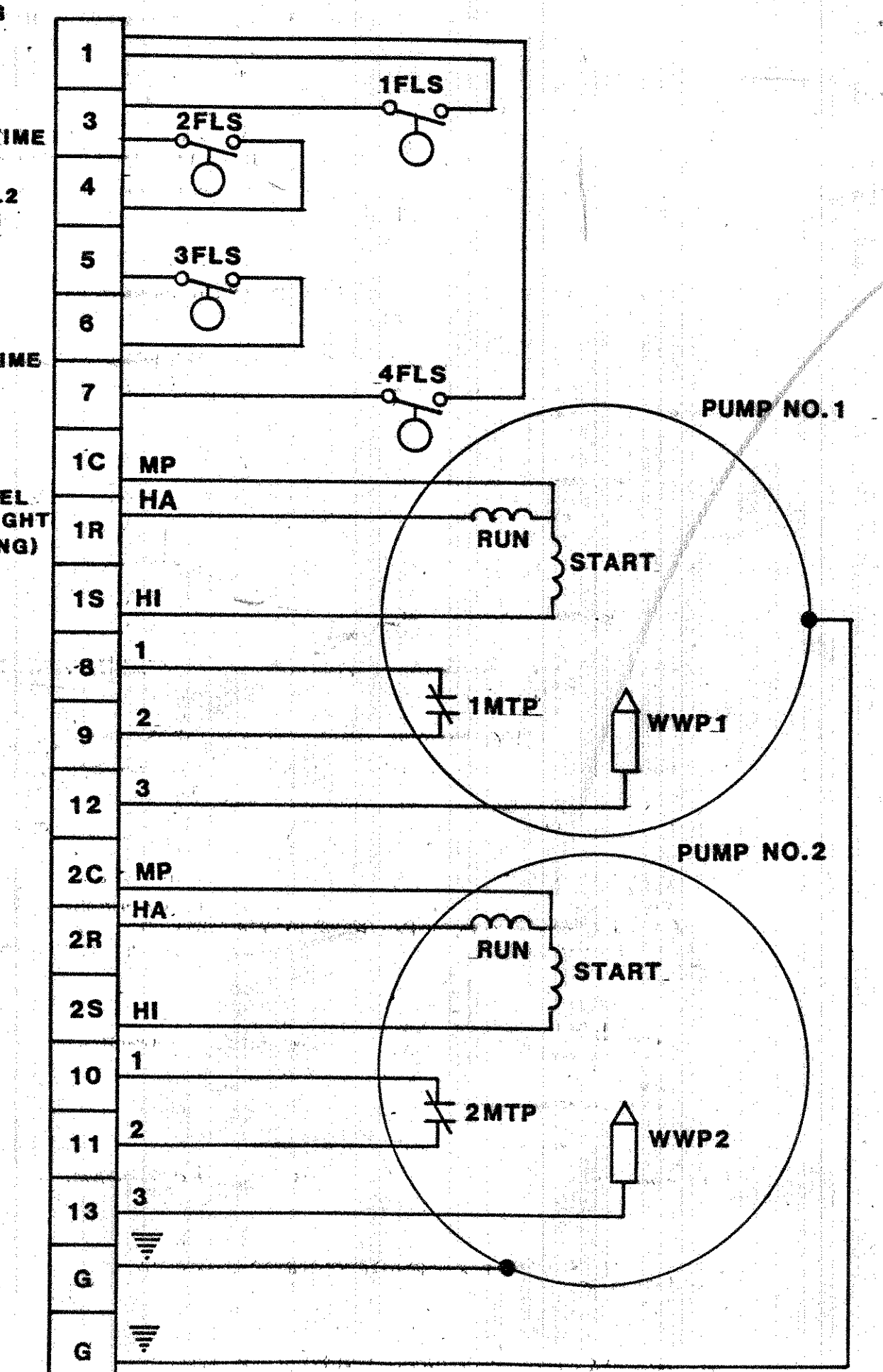
SQUARE "D" HEAVYDUTY OIL-TIGHT/WATERTIGHT, MAINTAINED PUSH-PULL CONTROL UNIT CLASS 9001, TYPE KR-9RH13 W/RED KNOB, CONTACT BLOCK AND LEGEND MARKED "PULL TO START, PUSH TO STOP" OR APPROVED EQUAL BY ALLEN-BRADLEY, GENERAL ELECTRIC OR WESTINGHOUSE.

SQUARE "D" CAT. NO. QOB-120 BOLT-ON, 1-POLE, 20 AMP., 120/240 VOLT A.C., 10,000 A.I.C. CIRCUIT BREAKER OR APPROVED EQUAL BY GENERAL ELECTRIC, WESTINGHOUSE OR I-T-E ELECTRICAL PRODUCTS

2-POLE, 3-WIRE GROUNDING, 20 AMP., 125 VOLT A.C. HOSPITAL GRADE DUPLEX G.F.I.C. RECEPTACLE W/NEMA REF: RECEPTACLE 5-20R, PLUG 5-20P



NEMA 4X STAINLESS STEEL CONSTRUCTED CONTROL PANEL W/DEAD-FRONT INTERIOR PANEL. FURNISH ENCLOSURE W/HOFFMAN ENGINEERING CO. TYPE L-24 QUICK-RELEASE LATCHES SUITABLE FOR USE IN WATER-TIGHT (NEMA TYPE 4) APPLICATIONS, OR APPROVED EQUAL AS MFG. BY SQUARE "D", GENERAL ELECTRIC OR WESTINGHOUSE



580-SS-PWA

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
ROADSIDE DEVELOPMENT	DATE REV. 11/14/66
SUBMERSIBLE DUPLEX PUMP LIFT STATION CONTROL PANEL	
APPROVED _____	ENGR. OF DESIGN SERVICES