

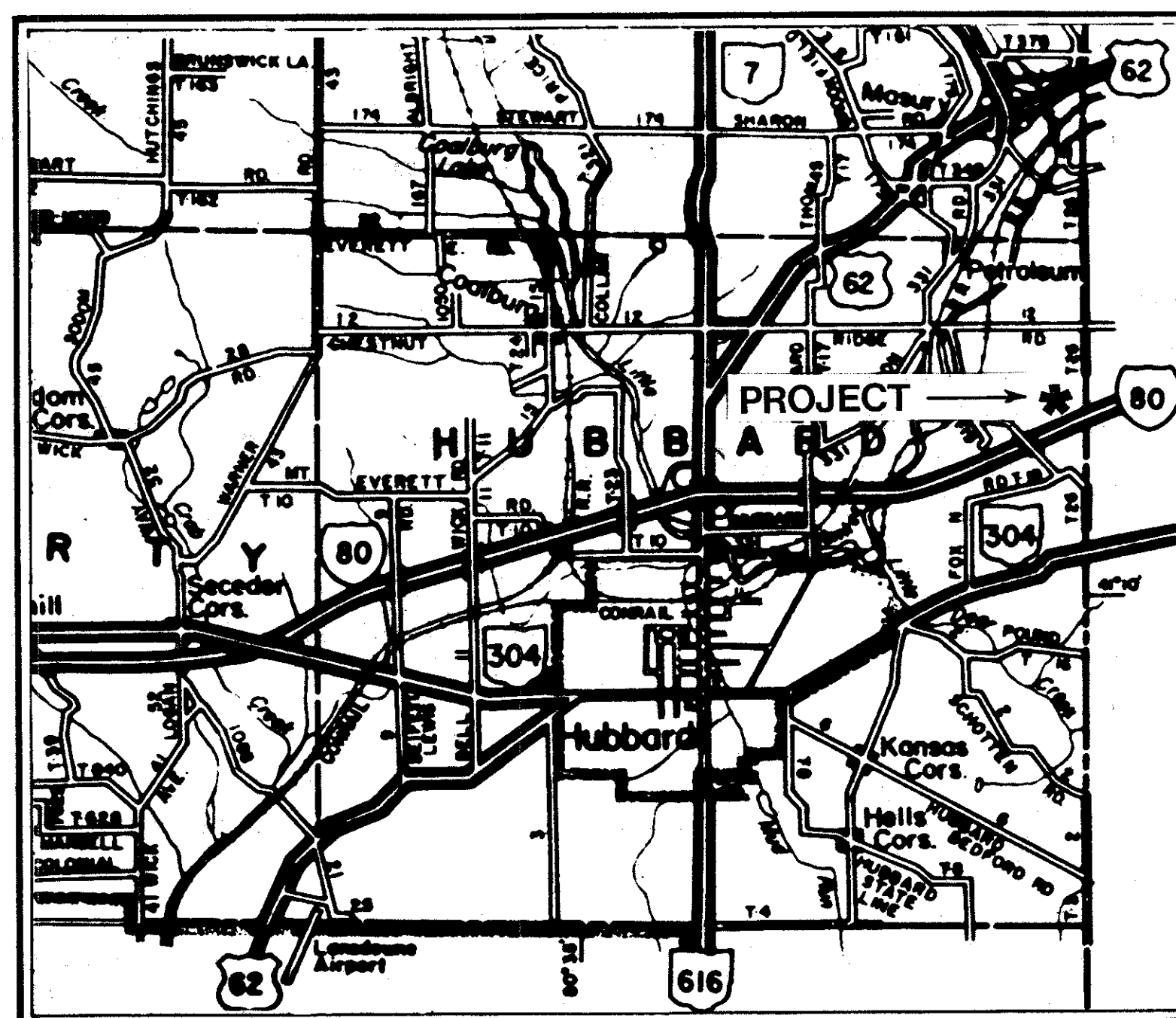
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

TRU-80-10.90

SAFETY REST AREA

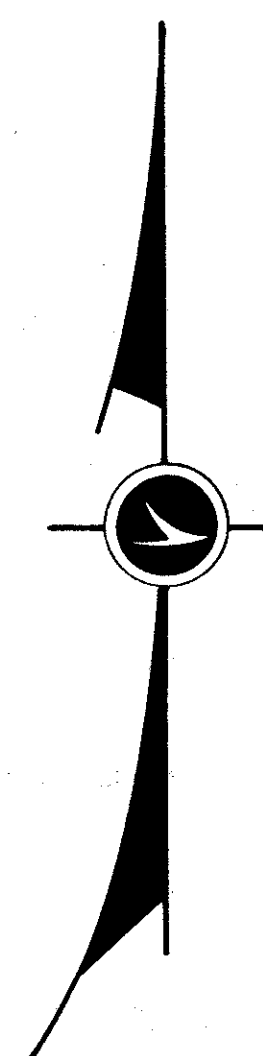
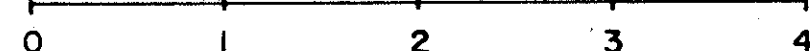
TRUMBULL COUNTY

HUBBARD TOWNSHIP



LOCATION MAP

SCALE IN MILES



TRUMBULL COUNTY	OHIO	1 41
TRU - 80 - 10.90	FHWA REGION 5	
REST AREA	FEDERAL PROJECT	
IR - 80-5 (20) 246		

IR-80-5 (20) 246

LIMITED ACCESS

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

1981 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, and that provisions for maintenance and safety of traffic will be set forth in these plans and estimate.

Approved: William M. Goldman
Date 11-19-82 District Deputy Director of Transportation

Approved: Byrd Finley Jr.
Date 1-4-83 Chief Engineer, Planning and Design (Acting)

Approved: Dwight Weir
Date 1-4-83 Director, Department of Transportation

SUPPLEMENTAL SPECIFICATIONS	
SPECIAL: STANDARD SPECIFICATIONS FOR MOTORIST SERVICES BUILDING AND STORAGE UNIT. PART I	
SPECIAL: STANDARD SPECIFICATIONS FOR COMPLETE WASTE TREATMENT SYSTEM. PART II	
814 1-1-69	839 11-25-70

CONVENTIONAL SIGNS

County Line _____	Limited Access (only) _____ LA _____
Township Line _____	Right of Way (only) _____ RW _____
Section Line _____	Limited Access & Right of Way _____ LA & RW _____
Corporation Line _____ or _____	Existing Right of Way _____
Fence Line (existing) -x- (proposed) -x- Center Line 352 353	Property Line _____ (in existing fence) -x- _____
Trees (), Stumps (), (to be removed) (X) (X)	Railroad _____ or _____
Utility Poles: Telephone (), Power (), Light ()	Guardrail (existing) o-o-o (proposed) o-o-o

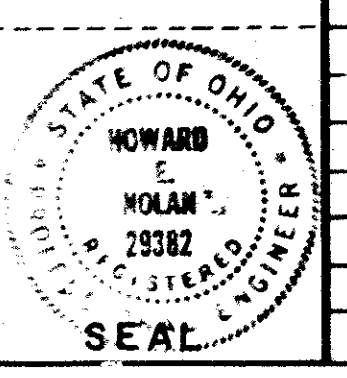
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LINE DATA

NET LENGTH OF PROJECT = 0.00 LIN. FT. OR 0.00 MILE
 BEGIN WORK 591+00
 END WORK 658+00
 TOTAL NET LENGTH OF WORK = 6700 FT. OR 1.269 MILE

Plan Prepared By:
 OHIO DEPARTMENT OF TRANSPORTATION
 BUREAU OF DESIGN SERVICES
 COLUMBUS, OHIO



SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
BP-6	6-1-65	HL-16	4-6-73	TC-51.11	4-3-79
BP-7	12-6-76	LA-1	6-1-79	MC-2	7-7-81
BP-12	7-7-81	LA-2	6-1-79		
F-1	5-1-76	LA-10	6-1-79		
HL-1	9-6-73	LA-13	2-2-81		
HL-2	7-27-73	MC-3	6-1-73		
HL-3	7-27-73	MC-4	7-26-76		
HL-8	1-21-76	CB-2-2A&B	5-1-79		
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HL-10	6-1-79	HW-D	6-1-65		
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HL-12	4-6-73	TC-42.10	8-19-77		
HL-15	1-21-76	TC-51.10	3-30-79		

Project: TRU 80 - 10.90
 Date of Letting _____ 19____, Contract No. _____
 LD0300 Rev. 11-1-78

1/18/82 GPH

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____

DIVISION ADMINISTRATOR _____ DATE _____

GENERAL NOTES

CALC BY: <u>KAH</u>	TRUMBULL COUNTY	OHIO	2 41
DATE: <u>11/12/82</u>	TRU - 80-10.90	FHWA REGION 5	
CHKD BY: <u>W/S/82</u>	REST AREA		
DATE: <u>4/84</u>			

BENCH MARK & BASE LINE

A BENCH MARK AND BASE LINE WILL BE ESTABLISHED BY O.D.O.T PERSONNEL.

MOBILIZATION, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE WHICH SHALL BE IN ACCORDANCE WITH 619.01 AND 619.02. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 624 MOBILIZATION, AS PER PLAN.

CLOSURE OF REST AREAS TO THE PUBLIC

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

UTILITIES NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ANY AREA WHICH MAY INVOLVE UNDERGROUND FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES AND THE OWNERS OF ALL UNDERGROUND UTILITY FACILITIES SHOWN IN THE PLANS.

AFTER NOTICE IS RECEIVED, THE OWNER OF ANY UNDERGROUND UTILITY FACILITY THAT IS TO REMAIN IN SERVICE DURING AND/OR AFTER CONSTRUCTION SHALL WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

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 153.64 ORC.

UTILITIES AFFECTED BY THIS PROJECT:

ELECTRIC:

OHIO EDISON COMPANY
730 SOUTH AVE.
YOUNGSTOWN, OHIO 44502
(216)747-2071

TELEPHONE:

OHIO BELL TELEPHONE CO.
2405 MARKET STREET
YOUNGSTOWN, OHIO 44507
(216)744-6450

HIGHWAY LIGHTING:

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 4 OFFICE
FRED JAMES
705 OAKWOOD STREET
RAVENNA, OHIO 44266
(216) 297-0801

SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS.

713.14 LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", WESTINGHOUSE "CERMALUX", SYLVANIA "LUMALUX", OR EQUAL APPROVED BY THE ENGINEER. 100 WATT HPS LAMPS SHALL BE OF THE 100 VOLT DESIGN, ANSI S56.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD 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.

ITEM 605, 4" SHALLOW PIPE UNDERDRAINS IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 625 - CABLE SPLICING KIT

THIS ITEM SHALL CONSIST OF PROVIDING AND INSTALLING AN APPROVED CABLE SPLICING KIT AS DESCRIBED IN PARAGRAPH 5 OF SECTION 713.15 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE COST OF ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH "ITEM SPECIAL - CABLE SPLICING KIT."

HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 839, SHALL BE PERFORMED ON ALL SECONDARY FEEDER CABLE, DISTRIBUTION CABLE AND DUCT CABLE SYSTEMS TO BE INSTALLED ON THIS PROJECT. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION, SUCH AS GUARDRAIL, FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE VICINITY OF THE LOCATION OF THE CABLE RUN BEING TESTED, HAS BEEN COMPLETED.

625.07 - 713.11 LUMINAIRES

STYLE A LUMINAIRES SHALL HAVE SINGLE RATED 240 VOLT, 200 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M250R, WESTINGHOUSE OV-14 ITT AMERICAN 250 OR EQUAL APPROVED BY THE ENGINEER.

POST TOP LUMINAIRES 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.

THE HIGH PRESSURE SODIUM BALLAST, INCLUDING STARTING AIDS, MUST PROTECT ITSELF AGAINST NORMAL LAMP FAILURE MODES. THE BALLAST SHALL BE CAPABLE OF OPERATION WITH THE LAMP IN AN OPEN OR SHORT CIRCUIT CONDITION FOR SIX MONTHS WITHOUT SIGNIFICANT LOSS OF BALLAST LIFE.

THE LUMINAIRE MANUFACTURER SHALL SUPPLY BALLAST ELECTRICAL DATA AND LAMP OPERATING VOLT-WATT TRACES FOR NOMINAL AND PLUS OR MINUS TEN PERCENT (+ 10%) RATED LINE VOLTAGE TO VERIFY BALLAST PERFORMANCE AND COMPLIANCE WITH LAMP SPECIFICATIONS, FOR THE RATED LIFE OF THE LAMP.

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. 4.

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 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.

ITEM 630 - EXISTING SIGN REVISED WITH DEMOUNTABLE COPY, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING LEGEND COPY ONLY FOR THE ADVANCE REST AREA SIGN, S-1, LOCATED IN PENNSYLVANIA.

THE LEGEND NEEDED IS "REST AREA, 1 MILE" AND SHALL BE WHITE DEMOUNTABLE COPY. THE LEGEND SIZE FOR "REST AREA" AND THE NUMERAL "1" SHALL BE 12 INCHES IN HEIGHT AND THE WORK "MILE" SHALL BE 10" INCHES IN HEIGHT.

THE METHOD OF ATTACHMENT SHALL BE ZINC COATED SELF TAPPING METAL SCREWS IN LIEU OF ALUMINUM BLIND RIVETS.

ITEM SPECIAL - CLEANING WELL

BEFORE THE PUMP IS INSTALLED AT THE WELL, LOCATED APPROXIMATELY AT STA. ~~13+44.40~~ FT. LT., WELL DRILLING EQUIPMENT SHALL BE SET UP OVER THE WELL. WATER IN THE WELL SHALL BE SURGED AND THE WELL CLEANED BY FAST BAILING, OR BY USE OF A SWAB, OR OTHER METHOD APPROVED BY THE ENGINEER.

AFTER COMPLETION OF A CLEANING, THE TOTAL DEPTH SHALL BE NOT LESS THAN **64 FT.** FEET FOR THE WELL.

THE FOLLOWING DATA SHALL BE FURNISHED TO THE ENGINEER FOR EACH WELL:

- o FIELD RATE (BAILING OR PUMPING) IN GALLONS PER MINUTE
- o DEPTH OF STATIC WATER LEVEL
- o DEPTH OF DRAW DOWN

ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK SHALL BE PAID FOR AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL-CLEANING WELL.

ITEM 603-6" C.I. SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN

6" CAST IRON SOIL PIPE (SV) SERVICE WEIGHT WITH JOINTS AS PER 706.12 AND TYPE C BEDDING IS TO BE LOCATED AS SHOWN ON THE PLANS. IT SHALL BE INSTALLED IN COOPERATION WITH THE PLUMBING CONTRACTOR. THE COST OF THE SOIL PIPE SHALL INCLUDE THE TIE-IN. ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 603-6" CAST IRON SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN, AS DESCRIBED AND DETAILED ON SHEET NUMBER 8.

7" PLAIN PORTLAND CEMENT PAVEMENT, AS PER PLAN

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

ITEM SPECIAL - 4" CASING PIPE, GRADE B, BLACK, AS PER 707.08

THE GENERAL CONTRACTOR SHALL FURNISH ALL CASING PIPE AS PER PLAN. PROVISIONS FOR EXCAVATION, PLACEMENT AND BACKFILLING SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS.

INSPECTION 23 REQUIREMENTS ARE WAIVED IN LIEU OF THE MANUFACTURE FURNISHING CERTIFICATION AS PER ASTM A53, SECTION 23.3 FOR ALL CASING PIPE.

ITEM SPECIAL - 10" CASING PIPE, GRADE B, BLACK, AS PER 707.08

THE GENERAL CONTRACTOR SHALL FURNISH ALL CASING PIPE AS PER PLAN. PROVISIONS FOR EXCAVATION, PLACEMENT AND BACKFILLING SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS.

INSPECTION 23 REQUIREMENTS ARE WAIVED IN LIEU OF THE MANUFACTURE FURNISHING CERTIFICATION AS PER ASTM A53, SECTION 23.3 FOR ALL CASING PIPE.

SPECIAL - TELEPHONE SERVICE

THE ELECTRICAL 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.

SPECIAL - POWER SERVICE

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 LOCATION 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 SPECIAL - "POWER SERVICE" FOR EACH REST AREA IN WHICH POWER SERVICE IS PROVIDED.

625 - SERVICE POLE AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF PROVIDING AND SETTING A WOOD POLE WITH THE NECESSARY HARDWARE TO ACCEPT OVERHEAD SERVICE DROPS FROM BOTH THE POWER COMPANY AND TELEPHONE COMPANY AND THE NECESSARY CONDUIT RISERS, RACEWAYS, AND ASSOCIATED HARDWARE TO ALLOW THE UTILITY COMPANIES TO CONTINUE THEIR SERVICE DROPS UNDERGROUND AS SHOWN IN THE PLANS. POLE, CONDUITS, RACEWAYS, AND HARDWARE SHALL MEET THE REQUIREMENTS OF 713.19 AND BE ARRANGED TO COMPLY WITH REQUIREMENTS OF THE UTILITY COMPANIES INVOLVED.

PAYMENT SHALL BE MADE UNDER ITEM 625 - "SERVICE POLE, AS PER PLAN."

ITEM SPECIAL - PLASTIC CAUTION TAPE

PLASTIC CAUTION TAPE, AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR THE MOTORIST SERVICES BUILDING AND STORAGE UNIT, SHALL BE INSTALLED ABOVE THE PRIMARY ELECTRIC CABLE UP TO THE TRANSFORMER PAD. VERTICAL TAPE LOCATION IS DETAILED ON SHEET NO. 8.

713.07 POLYVINYL CHLORIDE PLASTIC CONDUIT

CONDUIT FURNISHED UNDER THIS SPECIFICATION SHALL CONFORM TO NEMA STANDARDS PUBLICATION NO. TC-6 WITH THE EXCEPTION THAT CONDUIT AND CONDUIT FITTINGS COMPOSED OF ACRYLONITRILE-BUTADIENE-STYRENE (ABS) SHALL NOT BE ACCEPTABLE.

STERILIZING

IN ADDITION TO 814.09, STERILIZING OF PIPE LINES DESIGNED TO CARRY WATER THAT IS READY FOR DOMESTIC CONSUMPTION SHALL BE THOROUGHLY CLEANED, FLUSHED AND DISINFECTED BY THE CONTRACTOR BEFORE APPROVAL OF THE STATE OF OHIO, DEPARTMENT OF HEALTH AND BEFORE BEING PUT INTO SERVICE. DISINFECTION SHALL BE DONE BY THE ADDITION OF SUITABLE AMOUNTS OF CHLORINE IN THE FORM OF LIQUID CHLORINE OR HIGH TEST HYPOCHLORITE OF LIME, THE APPLICATION TO BE MADE IN ACCORDANCE WITH ANNA STANDARD C 601. TESTS FOR EFFICACY OF DISINFECTION WILL BE OBSERVED BY THE DEPARTMENT OF HEALTH; HOWEVER, ALL DISINFECTION SHALL BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.

GENERAL NOTES

RENOVATION OF EXISTING GRASS AREAS

AREAS WHICH ARE DAMAGED DUE TO STORAGE OR CONSTRUCTION OPERATIONS UNDER THIS CONTRACT ARE TO BE FILLED IN AND UNIFORMLY COVERED WITH ONE (1) INCH OF TOPSOIL (653.02).

FERTILIZER (12-12-12), 659.03, SHALL BE APPLIED AT THE RATE OF 15 POUNDS PER 1,000 SQUARE FEET AND WORKED INTO THE SOIL TO A DEPTH OF THREE (3) INCHES.

SEED SHALL BE THE URBAN MIXTURE AS SPECIFIED IN 659.09. MULCH SHALL BE AS SPECIFIED IN 659.06.

THE EXTENT OF AREAS TO BE RENOVATED SHALL BE AS DETERMINED BY THE ENGINEER. ALL AREAS TO BE RENOVATED, PLUS THE IMMEDIATE ADJACENT AREA, SHALL BE MOWED TO A HEIGHT OF TWO (2) INCHES BEFORE ACTUAL OPERATION OF SEEDING AND RENOVATING EXISTING SOIL IN ACCORDANCE WITH ITEM 655. ALL AREAS TO BE RENOVATED SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

ITEM SPECIAL - SNOW FENCE - TREE PROTECTION

SNOW FENCE SHALL CONSIST OF WOOD PICKETS 1/2" x 1/2" x 4'-0" NOMINAL SIZE, PAINTED RED AND WOVEN WITH FIVE (5) DOUBLE STRANDS OF 12 GAUGE STEEL WIRE, SPACED APPROXIMATELY 2" APART. 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, ERECTED AND SUBSEQUENTLY REMOVED.

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 OF 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 THE BRANCH SPREAD SHALL BE PROTECTED AS PER STANDARD DRAWING LA-1.

ONLY PNEUMATIC TIRE 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.

ITEM 201 - CLEARING & 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 FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES
 NO. TREES **14**
 NO. STUMPS **0**

THE ABOVE ESTIMATE IS APPROXIMATE AND 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 666 - SELECTIVE CLEARING AND PRUNING OF EXISTING TREES

SPECIFIC AREAS OF THE REST AREAS, AS INDICATED ON THE PLANS AND BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST, SHALL BE SELECTIVELY CLEARED OF SMALL TREES, STUMPS AND OTHER UNDERSTORY GROWTH TO OBTAIN A SEVEN (7) FOOT CLEARANCE ABOVE THE GROUND OR AS DIRECTED BY THE ENGINEER. TREES INDICATED TO BE SALVAGED WITHIN THE SPECIFIED AREAS SHALL BE PRUNED IN ACCORDANCE WITH ITEM 666 USING STANDARD DRAWING LA-1 AS A GUIDE. THE APPROXIMATE NUMBER AND SIZE OF TREES TO BE PRUNED IS AS FOLLOWS:

SIZES	3"-8"	8"-16"	16"-24"	24"-36"	36"+
NO. TREES	38	22	4	1	0

ALL AREAS WHERE SELECTIVE CLEARING AND PRUNING OF EXISTING TREES IS PERFORMED SHALL BE SEEDED AS PER 659.09.

ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE WORK AS DESCRIBED IN THIS NOTE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR "ITEM 666 - PRUNING EXISTING TREES".

SEEDING AND MULCHING

SEEDING AND MULCHING OF ALL CONSTRUCTION SITES AND OTHER DISTURBED AREAS WITHIN THE CONFINES OF THE REST AREAS (EXCLUSIVE OF THE SODDED AREAS) SHALL CONFORM TO 659.09.

SEED MIXTURE SHALL CONFORM TO THAT SPECIFIED FOR USE IMMEDIATELY IN FRONT OF RESIDENCES.

SODDING, AS PER PLAN

ALL NEW CONCRETE WALKS AND DRIVES WITHIN THE REST AREAS SHALL HAVE A 3 FOOT BORDER OF SOD ON EACH SIDE. SOD SHALL BE LAID IN ACCORDANCE WITH ITEM 660 EXCEPT THAT IT SHALL BE KENTUCKY BLUEGRASS, WEED FREE, AND BE COMMERCIALY CULTIVATED (NURSERY GROWN).

ITEM 656 - ROADSIDE CLEANUP, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CLEANUP OF THE REST AREA. THIS ITEM SHALL CONFORM TO ITEM 656 - ROADSIDE CLEANUP WITH THE EXCEPTION OF SECTION 656.02 INTENSITY OF CLEANUP. THE INTENSITY OF THE CLEANUP SHALL BE UNIFORM FROM THE EDGE OF THE PAVEMENT TO THE LIMIT OF THE RIGHT-OF-WAY.

THIS ITEM SHALL ALSO CONSIST OF MOWING THE ENTIRE SITE AND THE REMOVAL OF ALL CUT GRASS, DEAD BRUSH, AND OTHER VEGETATIVE GROWTH WHICH IS CUT DOWN BY THE MOWING MACHINE.

REMOVAL OF STRUCTURES, FOUNDATIONS & SLABS

THIS WORK SHALL CONSIST OF THE REMOVAL OF EXISTING CONCRETE SLABS AND WALKS IN CONFORMANCE WITH THE PROVISIONS OF SEC. 202.

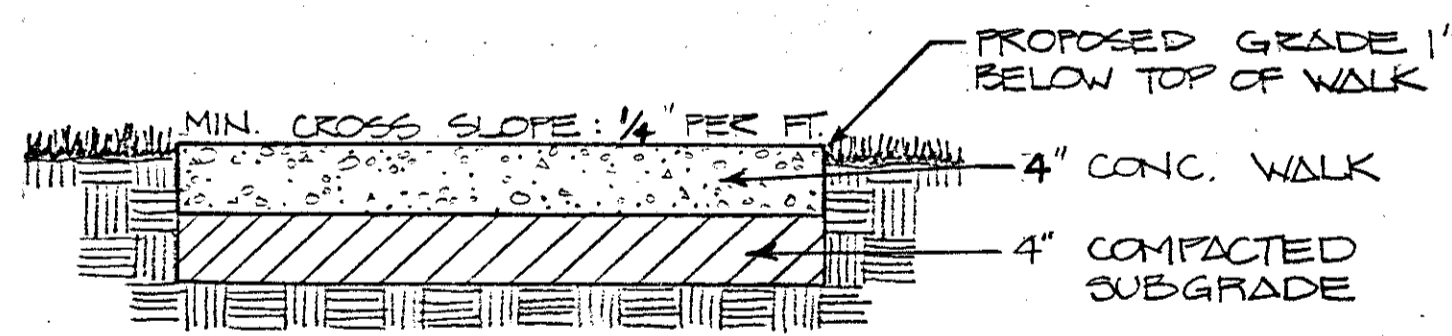
THE CONTRACTOR SHALL REMOVE: TWO (2) PICNIC TABLE SLABS, TWO (2) CHARCOAL GRILL AND SERVING TABLE SLABS AS WELL AS MISCELLANEOUS WALKS AND CURBS.

ITEM SPECIAL - CONCRETE SLABS

DETAIL PLACEMENT OF SHELTER HOUSE, PICNIC TABLES AND SLABS, WASTE RECEIPTABLE 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: **11 & 13**.

ITEM 608 - 4" CONCRETE WALKS, AS PER PLAN

SUBGRADE UNDER 4" CONCRETE WALKS SHALL BE COMPACTED TO A DEPTH OF 4 INCHES AS DESCRIBED IN 203.13. EXCAVATION FOR FOUR (4) INCHES OF SUBGRADE COMPACTION 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.



4" CONCRETE SIDEWALK DETAIL

AGGREGATE FINISH

THE CONTRACTOR SHALL FURNISH A SAMPLE OF AGGREGATE FINISH TO BE APPLIED TO WASTE RECEIPTABLE SLEEVES AND PICNIC TABLES. (SEE SHEET NO. 41 & LA-13).

ITEM SPECIAL - CHARCOAL GRILL & SERVING TABLE WITHOUT SLAB

THIS ITEM SHALL CONFORM TO LA-10 WITH THE EXCEPTION OF CONCRETE SLAB. CONCRETE SLABS AS LABELED ON SHEET II ARE EXISTING.

ITEM SPECIAL - WOOD BENCH

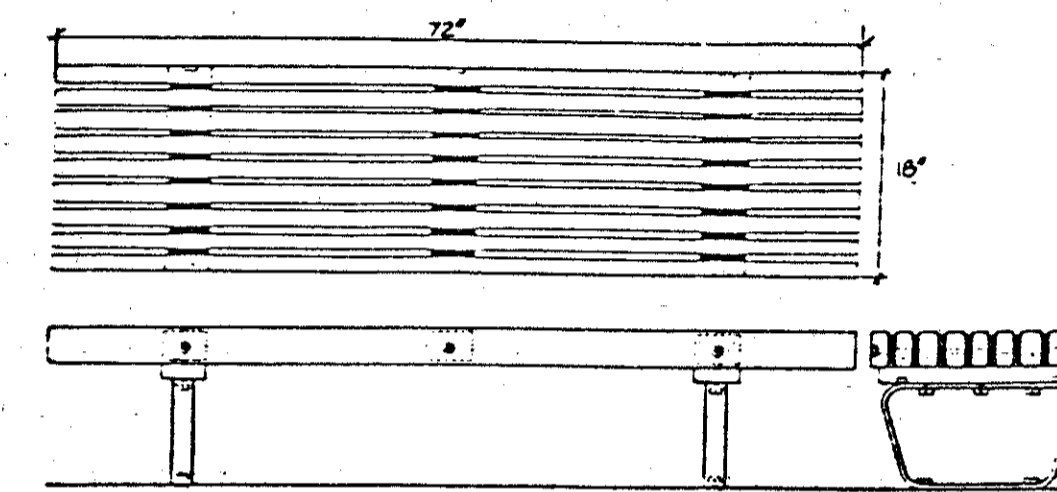
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING WOOD BENCHES AS SHOWN ON THE PLANS.

BENCHES SHALL BE MADE OF CLEAR HEARTWOOD REDWOOD, APPROXIMATELY 72" LONG BY 18" WIDE, SEAT PLANKS SET ON EDGE, SURFACE MOUNTED WITH GALVANIZED VANDALPROOF FASTENERS AS PER MANUFACTURER'S RECOMMENDATIONS AND APPROVAL OF THE ENGINEER.

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

- "MACOTTA" MB 7220
- "VAUGHAN & ASSOC." F17003R
- "TIMBERFORM" 2160-2

THE COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE PRICE BID FOR EACH ITEM SPECIAL - WOOD BENCH.



WOOD BENCH - TYPICAL DETAIL

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.

STORAGE OF MATERIALS & EQUIPMENT

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

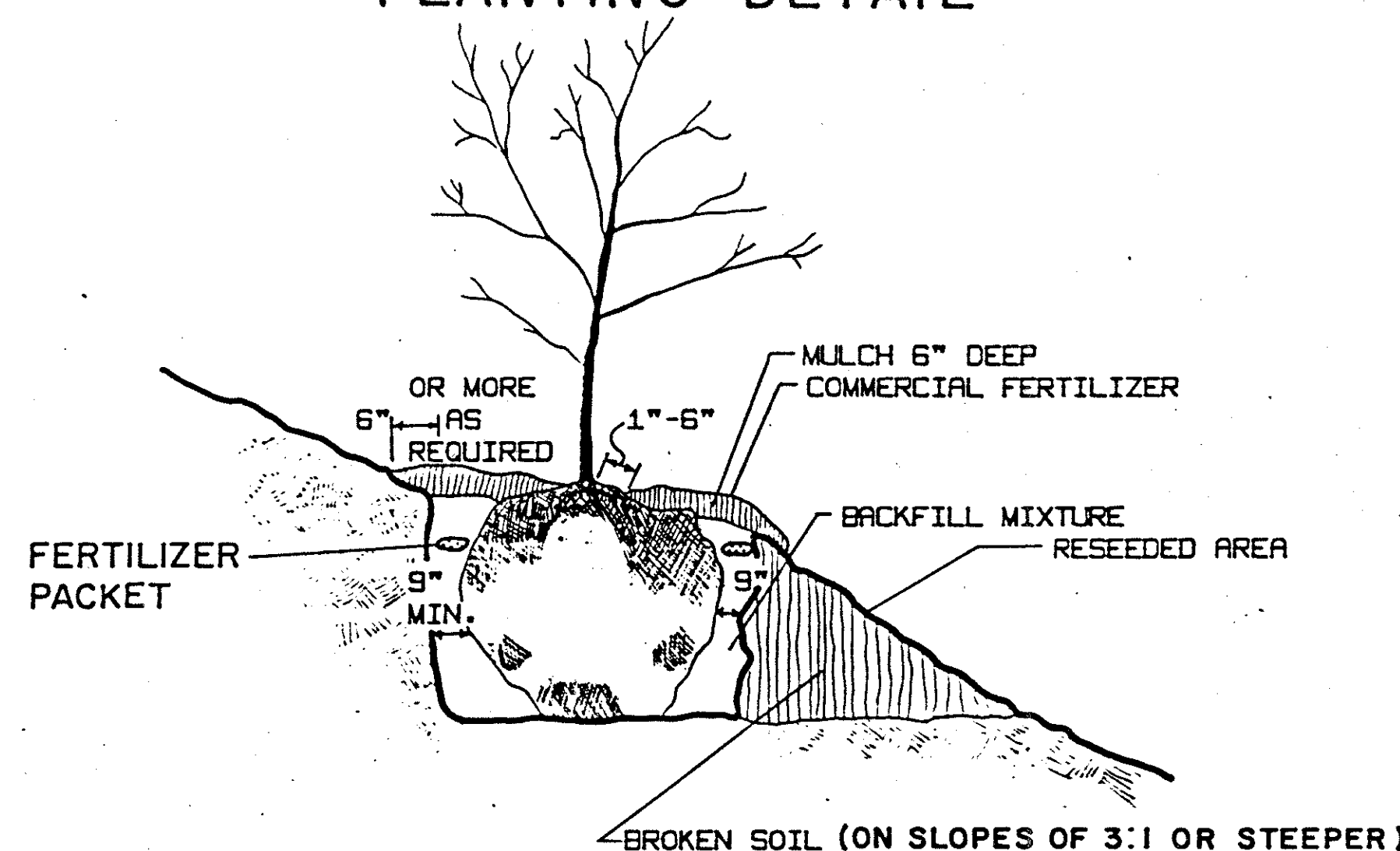
APPROVED EQUAL MANUFACTURES OR COMPANIES

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 IS FOLLOWED.

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

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

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 DIST. HORTICULTURIST, 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.

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 MICROPOROUS 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'	3 PACKETS
SHRUBS 3'-4'	3 PACKETS
TREES 5'-6'	4 PACKETS
TREES 6'-8'	4 PACKETS
TREES 1 1/2"-2" CAL.	2 PACKETS
TREES 2'-2 1/2" CAL.	3 PACKETS
TREES 2 1/2"-3" CAL.	4 PACKETS
TREES 3"-3 1/2" 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", "THE UNIQUE FEEDER" OR AN APPROVED EQUAL SHALL BE USED.

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 DISTRICT HORTICULTURIST. 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.

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

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 HWB DATE 10-24-81
CHKD BY JTB DATE 12-2-81

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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 (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 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 GALLONS 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 "TURFACE," "LUSOIL," "TERRAGREEN," 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. ALTERNATE SHALL BE HORTICULTURAL PERLITE.

HERBICIDES

AFTER PLANTING AND FERTILIZING HAVE BEEN COMPLETED AND APPROVED, THE AREA OF THE BED SHALL BE TREATED WITH SIMAZINE, DYMID OR AN APPROVED EQUAL HERBICIDE. RATE AND METHOD OF APPLICATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS AND 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 653 AS DETERMINED BY THE ENGINEER.

11/15/82
12/02/81

GENERAL SUMMARY

CALC. BY: HWD
 DATE: 11-8-82
 CHECKED BY: AHH
 DATE: 11/15/82

TRUMBULL COUNTY
 TRU-80-10.90

OHIO
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ITEM	SHEET NUMBER											ITEM	QUANT	UNIT	DESCRIPTION		
	4	6	7	8	11	12	13	14	15	16							
																	GENERAL CONTRACT
																	SPEC. 1 EACH MOTORIST SERVICES BUILDING & STORAGE UNIT (EXCEPT ELECTRICAL, PLUMBING, HEATING & VENTILATING WORK)
																	SPEC. 1 EACH COMPLETE WASTE TREATMENT SYSTEM (EXCEPT ELECTRICAL WORK)
																	SPEC. 1 EACH REST AREA RESERVOIR ASSEMBLY (EXCEPT ELECTRICAL & PLUMBING WORK)
		1,700															SPEC. 1,700 LN.FT. SNOW FENCE - TREE PROTECTION
																	SPEC. 1 EACH SHELTER HOUSE (EXCEPT ELECTRICAL WORK)
																	SPEC. 11 EACH PICNIC TABLE
																	SPEC. 13 EACH PICNIC TABLE AND SLAB
																	SPEC. 3 EACH CHARCOAL GRILL & SERVING TABLE WITHOUT SLAB
																	SPEC. 7 EACH CHARCOAL GRILL & SERVING TABLE
																	SPEC. 12 EACH WASTE RECEPTACLE SLEEVE
																	SPEC. 8 EACH WASTE RECEPTACLE SLAB
																	SPEC. 9 EACH 6' WOOD BENCH
																	SPEC. 50 LN.FT. 4" CASING PIPE, GRADE B, BLACK, AS PER 707.08
																	SPEC. 62 LN.FT. 10" CASING PIPE, GRADE B, BLACK, AS PER 707.08
		LUMP															201 LUMP CLEARING AND GRUBBING
		2,321															202 2,321 SQ.FT. WALK REMOVED
		387															202 387 LN.FT. CURB REMOVED
		2															202 2 EACH PICNIC TABLE SLAB REMOVED
		2															202 2 EACH CHARCOAL GRILL & SERVING TABLE SLAB REMOVED
																	203 LUMP EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
																	203 LUMP EMBANKMENT
																	452 432 SQ.YD. 7" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT, AS PER PLAN
																	601 6 CU.YD. ROCK CHANNEL PROTECTION, TYPE B WITH BEDDING
																	602 2.6 CU.YD. CONCRETE MASONRY
																	603 254 LN.FT. 6" CAST IRON SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN (SANITARY SEWER)
																	603 362 LN.FT. 6" CONDUIT, TYPE F, 707.01
																	604 1 EACH STANDARD NO. 2-2-B CATCH BASIN
																	604 3 EACH STANDARD NO. 3 MANHOLE WITH FLAT SLAB TOP
																	606 26 EACH TEMPORARY DRUMS
																	607 320 LN.FT. FENCE, TYPE CL, 6'
																	607 1 EACH GATE, TYPE CL, 6' x 10' WIDE
																	608 8,164 SQ.FT. 4" CONCRETE WALK, AS PER PLAN
																	608 24 LN.FT. CONCRETE STEPS, STANDARD TYPE B
																	608 2 EACH CURB RAMP, STANDARD TYPE 2, MODIFIED AS PER PLAN

GENERAL SUMMARY

CALC. BY: HWB
 DATE: 11-2-90
 CHECKED BY: GHH
 DATE: 11/15/90

TRUMBULL COUNTY
 TRU-80-10.90

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ITEM	SHEET NUMBER					ITEM	QUANT	UNIT	DESCRIPTION
	2A	4	5	11	12				
									GENERAL CONTRACT (CONTINUED)
						349	609	349 LN.FT.	CURB, STANDARD TYPE 6
			157				630	157 SQ.FT.	SIGNS, EXTRUSHEET
			11				630	11 SQ.FT.	SIGNS, OVERLAY
			3				630	3 EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT
			1				630	1 EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN & REERECTION
			100				630	100 SQ.FT.	COVERING OF SIGNS
			33				630	33 LN.FT.	GROUND MOUNTED SUPPORTS, S4 x 7.7 BEAM
			33				630	33 LN.FT.	GROUND MOUNTED SUPPORTS, W6 x 9 BEAM
			75				630	75 LN.FT.	GROUND MOUNTED SUPPORTS, W10 x 12 BEAM
			5.60				630	5.60 CU.YD.	CONCRETE FOR EMBEDDED FOUNDATION
			8				630	8 EACH	BREAKAWAY BEAM CONNECTIONS
			1				630	1 EACH	EXISTING SIGN REVISED WITH DEMOUNTABLE COPY, AS PER PLAN
			132				656	132 MSQ.FT.	ROADSIDE CLEANUP, AS PER PLAN
								6,000	
							659	6,000 SQ.YD.	SEEDING AND MULCHING
								0.54	
							659	0.54 TON	COMMERCIAL FERTILIZER
								450	
							660	450 SQ.YD.	SODDING, AS PER PLAN
									BOTANICAL NAME - COMMON NAME SIZE CONDITION
								10,000	
							661	10,000 EACH	HEDERA HELIX 'BALTICA' (BALTIC ENGLISH IVY) 1 YR. ROOTED CUTTING IN FLATS
								15	
							662	15 EACH	JUNIPERUS CHINENSIS PFITZERIANA (PFITZER JUNIPER) 18"-24", NO.3 CONTAINER
								51	
							662	51 EACH	AESCULUS PARVIFLORA (BOTTLEBRUSH BUCKEYE) 18"-24", NO.3 CONTAINER
								2	
							662	2 EACH	COTINUS COGGYRIA 'VELVET CLOAK' (PURPLE SMOKEBUSH) 18"-24", NO.3 CONTAINER
								86	
							662	86 EACH	COTONEASTER APICULATA (CRANBERRY COTONEASTER) 15"-18", NO.2 CONTAINER
								24	
							662	24 EACH	EUONYMUS ALATUS 'COMPACTUS' (DWARF BURNINGBUSH) 18"-24", NO.3 CONTAINER
								24	
							662	24 EACH	JUNIPERUS HORIZ. PLUMOSA COMPACTA (COMPACT ANDORRA JUNIPER) 18"-24", NO.3 CONTAINER
								30	
							662	30 EACH	TAXUS MEDIA 'WARDI' (WARD ANGLOJAP YEW) 18"-24", B&B 12"
								36	
							662	36 EACH	VIBURNUM PLICATUM TOM. 'MARISSII' (MARISS DOUBLEFILE VIBURNUM) 2'-3' NO.3 CONTAINER
								1	
							663	1 EACH	AMELANCHIER LAEVIS (ALLEGHENY SERVICEBERRY) 8'-10' CLUMP, B&B 20"
								2	
							663	2 EACH	ACER RUBRUM 'AUTUMN FLAME' (AUTUMN FLAME RED MAPLE) 2 1/2"-3" CAL., B&B 32"
								3	
							663	3 EACH	ACER RUBRUM 'OCTOBER GLORY' (OCTOBER GLORY RED MAPLE) 2 1/2"-3" CAL., B&B 32"
								2	
							663	2 EACH	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE) 2 1/2"-3" CAL., B&B 32"
								1	
							663	1 EACH	FRAXINUS AMERICANA 'AUTUMN PURPLE' (AUTUMN PURPLE WHITE ASH) 2 1/2"-3" CAL., B&B 32"
								1	
							663	1 EACH	LIQUIDAMBAR STYRACIFLUA (AMERICAN SWEETGUM) 2 1/2"-3" CAL., B&B 32"
								1	
							663	1 EACH	MAGNOLIA VIRGINIANA (SWEETBAY MAGNOLIA) 6'-8' CLUMP, B&B 18"
								3	
							663	3 EACH	MALUS 'PROFUSION' (PROFUSION CRABAPPLE) 1 1/2"-1 3/4" CAL., B&B 22"
								1	
							663	1 EACH	MALUS 'RED JEWEL' (RED JEWEL CRABAPPLE) 1 1/2"-1 3/4" CAL., B&B 22"
								3	
							663	3 EACH	MALUS 'SNOWDRIFT' (SNOWDRIFT CRABAPPLE) 1 1/2"-1 3/4" CAL., B&B 22"

GENERAL SUMMARY

CALC. BY: HWD
 DATE: 11-8-82
 CHG. BY: GHH
 DATE: 11-15-82

TRUMBULL COUNTY
 TRU-80-10.90

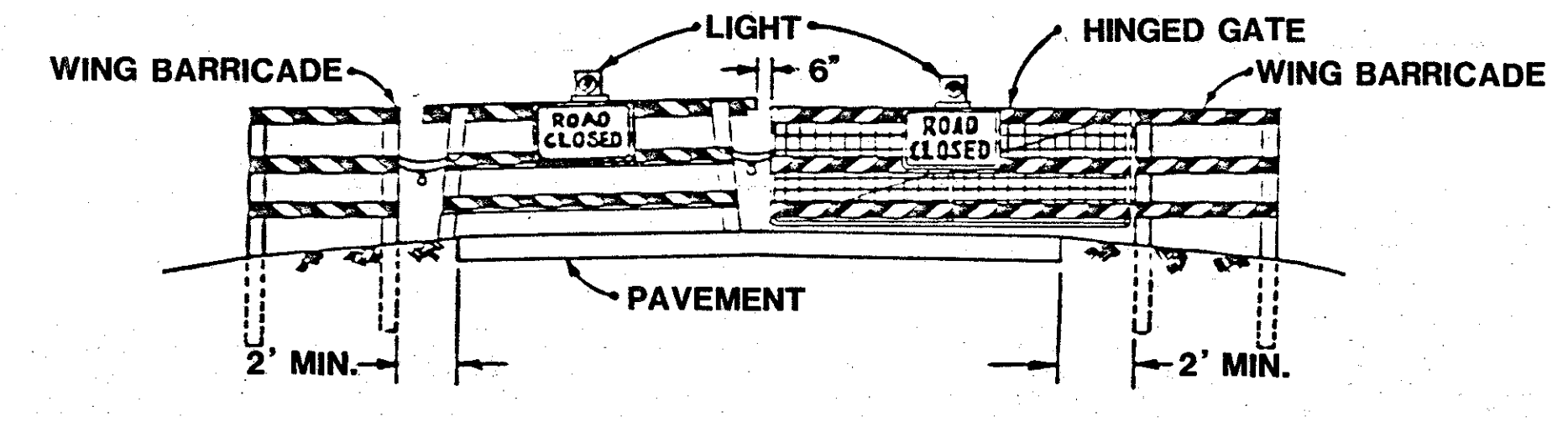
OHIO
 FHWA REGION 5

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ITEM	SHEET NUMBER					ITEM	QUANT	UNIT	DESCRIPTION
	2	2A	8	11	12				
									GENERAL CONTRACT (CONTINUED)
									BOTANICAL NAME - COMMON NAME SIZE CONDITION
						663	1	EACH	QUERCUS PALUSTRIS (PIN OAK) 2 1/2"-3" CAL. B&B 32"
						663	3	EACH	QUERCUS RUBRA MAXIMA 'BOREALIS' (EASTERN RED OAK) 2 1/2"-3" CAL. B&B 32"
				11		663	11	EACH	ABIES CONCOLOR (WHITE FIR) 5'-6' HEIGHT B&B 22"
				11		663	11	EACH	PICEA ABIES (NORWAY SPRUCE) 5'-6' HEIGHT B&B 22"
				17		663	17	EACH	PINUS NIGRA (AUSTRIAN PINE) 5'-6' HEIGHT B&B 22"
				14		663	14	EACH	PINUS STROBUS (EASTERN WHITE PINE) 5'-6' HEIGHT B&B 22"
					12	662	12	EACH	KERRIA JAPONICA (JAPANESE KERRIA) 2'-3' HEIGHT, NO.3 CONTAINER
		38				666	38	EACH	PRUNING EXISTING TREES, 3-TO 8-IN. DIAMETER
		22				666	22	EACH	PRUNING EXISTING TREES, 8-TO 16-IN. DIAMETER
		4				666	4	EACH	PRUNING EXISTING TREES, 16-TO 24-IN. DIAMETER
		1				666	1	EACH	PRUNING EXISTING TREES, 24-TO 36-IN. DIAMETER
						614	LUMP		MAINTAINING TRAFFIC
						623	LUMP		CONSTRUCTION LAYOUT STAKES
						624	LUMP		MOBILIZATION, AS PER PLAN
									TOTAL BID GENERAL CONTRACT
									PLUMBING CONTRACT
						SPEC. 1	1	EACH	MOTORIST SERVICES BUILDING & STORAGE UNIT (PLUMBING ONLY)
					250	SPEC. 250	LN.FT.		COLD WATER SERVICE TO WASTE TREATMENT SYSTEM
						SPEC. 1	1	EACH	CLEANING WELL
						SPEC. 1	1	EACH	WATER WELL ASSEMBLY (EXCEPT ELECTRICAL WORK)
						SPEC. 1	1	EACH	WATER SYSTEM HYPOCHLORINATOR (EXCEPT ELECTRICAL WORK)
						SPEC. 1	1	EACH	REST AREA RESERVOIR ASSEMBLY (PLUMBING ONLY)
						624	LUMP		MOBILIZATION
									TOTAL BID PLUMBING CONTRACT
									HEATING & VENTILATING CONTRACT
						SPEC. 1	1	EACH	MOTORIST SERVICES BUILDING & STORAGE UNIT (HEATING & VENTILATING ONLY)
						624	LUMP		MOBILIZATION
									TOTAL BID HEATING & VENTILATING CONTRACT

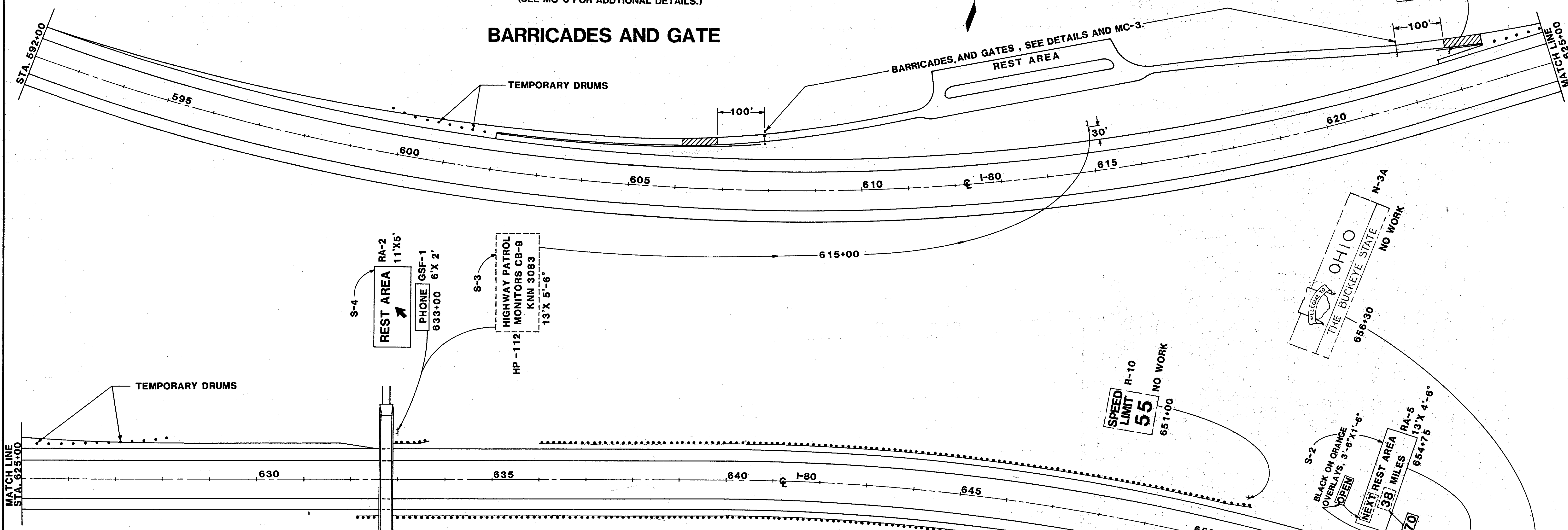
GENERAL SUMMARY

ITEM	SHEET	NUMBER	10	ITEM	QUANT	UNIT	DESCRIPTION
							ELECTRICAL CONTRACT
			1	SPEC.	1	EACH	MOTORIST SERVICES BUILDING & STORAGE UNIT (ELECTRICAL ONLY)
			1	SPEC.	1	EACH	WATER WELL ASSEMBLY (ELECTRICAL ONLY)
			1	SPEC.	1	EACH	REST AREA RESERVOIR ASSEMBLY (ELECTRICAL ONLY)
			1	SPEC.	1	EACH	WATER SYSTEM HYPOCHLORINATOR (ELECTRICAL ONLY)
			1	SPEC.	1	EACH	SHELTER HOUSE (ELECTRICAL ONLY)
			1	SPEC.	1	EACH	COMPLETE WASTE TREATMENT SYSTEM (ELECTRICAL ONLY)
			1	SPEC.	1	EACH	TELEPHONE SERVICE
			1,700	SPEC.	1,700	LN. FT.	PLASTIC CAUTION TAPE
			1	SPEC.	1	EACH	POWER SERVICE
			6	625	6	EACH	LIGHT POLE DESIGN AT 15B 34.2
			3	625	3	EACH	LIGHT POLE DESIGN AT 15BB 34.2
			5	625	5	EACH	LIGHT POLE DESIGN AT ON 15
			14	625	14	EACH	LIGHT POLE FOUNDATION, 24" x 6'
			12	625	12	EACH	LUMINAIRE, TYPE III STYLE A, 200 WATT, HPS, 713.11
			5	625	5	EACH	LUMINAIRE, POST TOP TYPE V, 100 WATT, HPS, 713.11
			14	625	14	EACH	GROUND ROD, 713.16
			6	625	6	EACH	PULL BOX, 24" CONCRETE, 713.08
			150	605	150	LN. FT.	4" SHALLOW PIPE UNDERDRAIN FOR PULL BOXES
			4,770	625	4,770	LN. FT.	TRENCH, 24" DEEP
			175	625	175	LN. FT.	TRENCH, 30" DEEP
			315	625	315	LN. FT.	TRENCH, 48" DEEP, AS PER PLAN
			475	625	475	LN. FT.	1" CONDUIT, 713.04
			320	625	320	LN. FT.	1 1/2" CONDUIT, 713.04
			82	625	82	LN. FT.	3" CONDUIT, 713.04
			320	625	320	LN. FT.	4" CONDUIT, 713.07
			30	625	30	LN. FT.	3" CONDUIT, 713.04, JACKED UNDER PAVEMENT
			5,415	625	5,415	LN. FT.	1 1/2" DUCT CABLE WITH THREE NO. 4 AWG., 5,000 VOLT CONDUCTORS
			1,050	625	1,050	LN. FT.	NO. 10 AWG., POLE & BRACKET CABLE
			4	625	4	EACH	CABLE SPLICING KIT
			LUMP	625	LUMP		SERVICE POLE, AS PER PLAN
			22	625	22	EACH	CONNECTOR KIT, TYPE II
			11	625	11	EACH	CONNECTOR KIT, TYPE III
			3	625	3	EACH	CONNECTOR KIT, TYPE V
			6	625	6	EACH	CONNECTOR KIT, TYPE VI
			LUMP	839	LUMP		HIGH VOLTAGE TEST
				623	LUMP		CONSTRUCTION LAYOUT STAKES
				624	LUMP		MOBILIZATION
							TOTAL BID ELECTRICAL CONTRACT



(SEE MC-3 FOR ADDITIONAL DETAILS.)

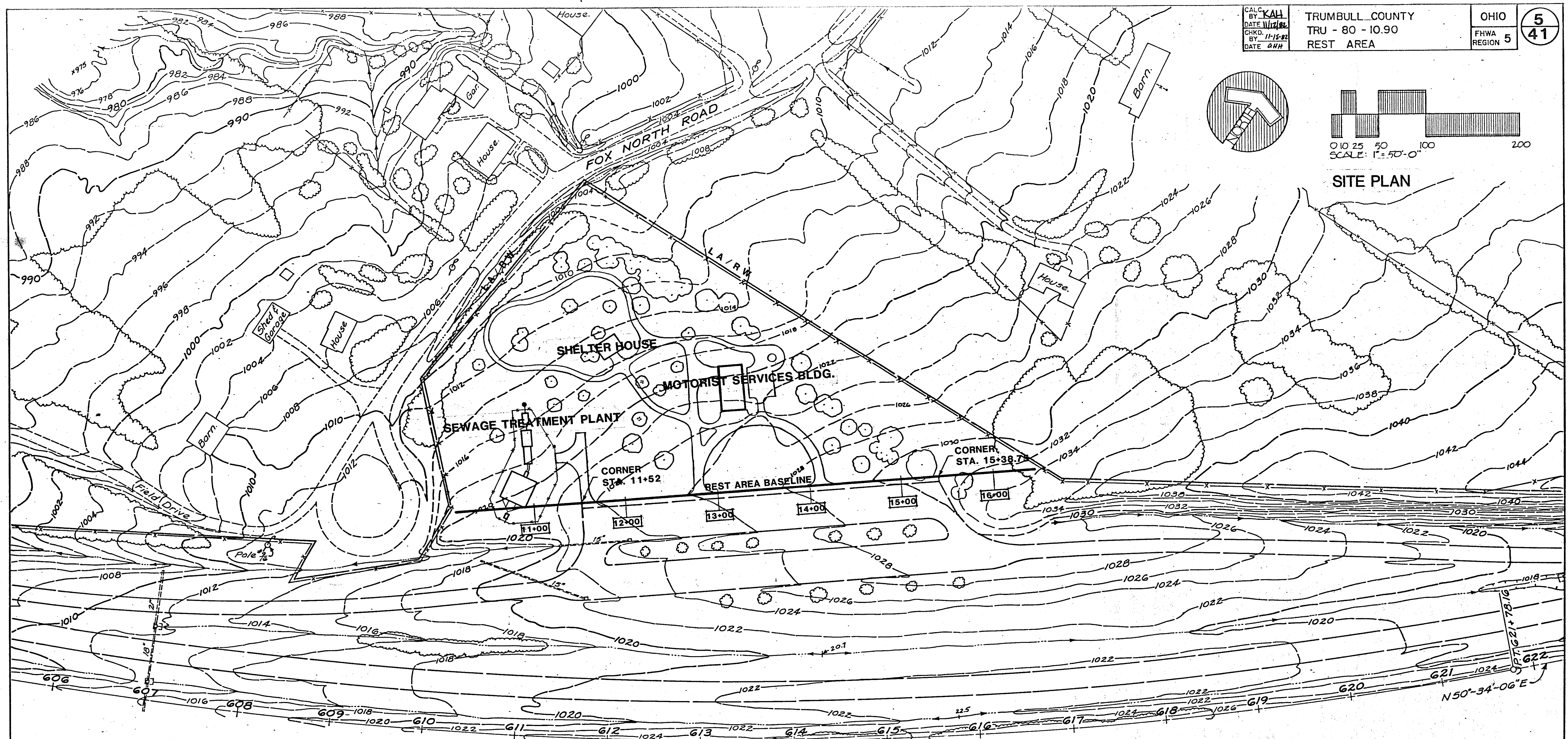
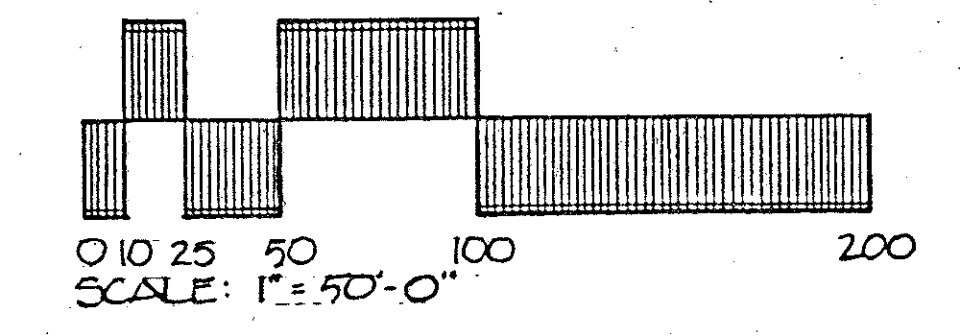
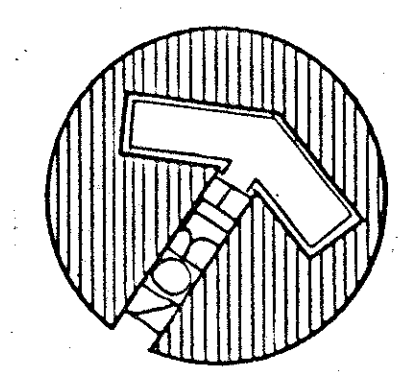
BARRICADES AND GATE



SIGNS & SUPPORTS 630

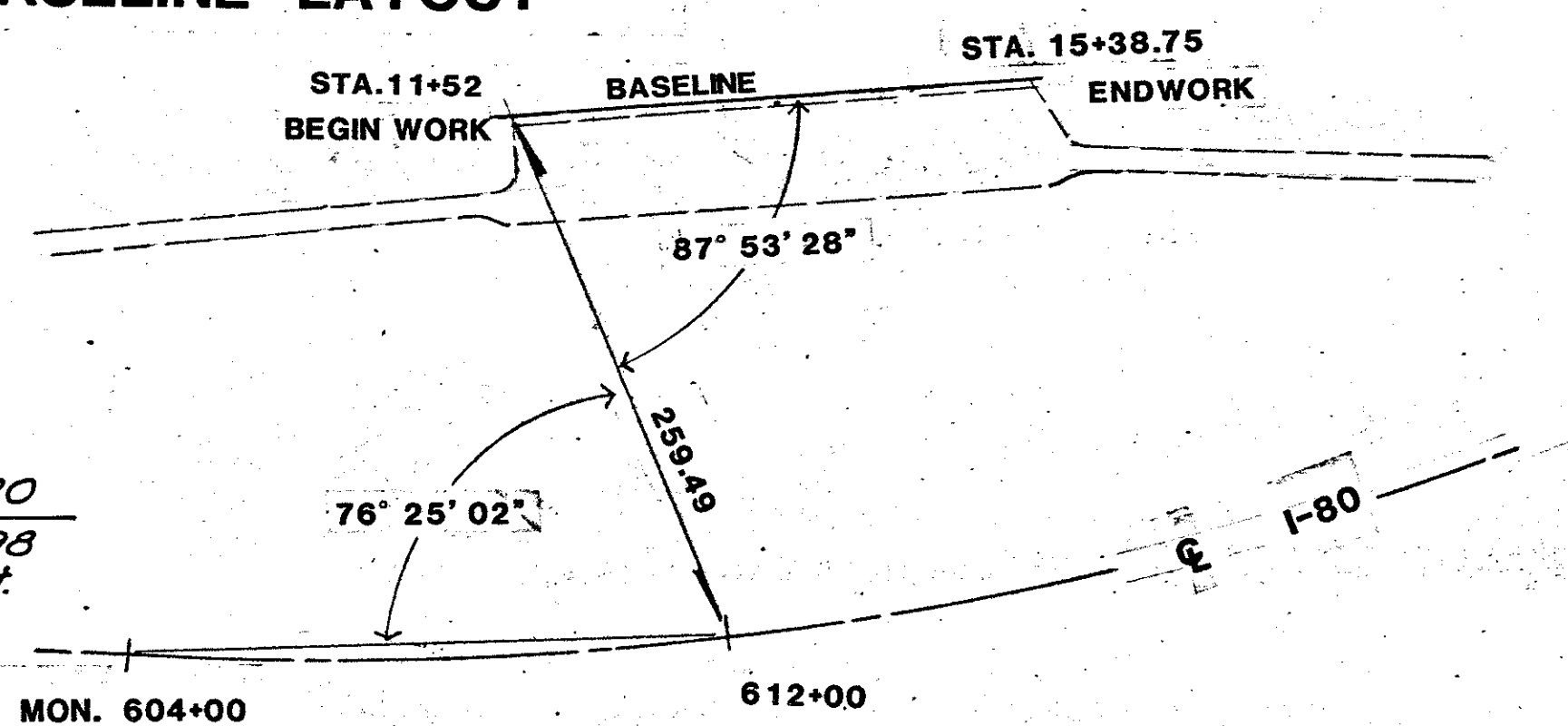
SIGN NO.	STATION LOCATION	SIDE	SIGN CODE	SIZE	SIGNS, EXTRUSHEET		SIGNS, OVERLAY		REMOVAL OF GRD. MTD. POST SUPPORT		REMOVAL OF GRD. MTD. MAJOR SIGN AND REECTION		COVERING OF SIGNS		GRD. MTD. SUPPORTS, S4X7.7 BEAM		GRD. MTD. SUPPORTS, W6X9 BEAM		GRD. MTD. SUPPORTS, W10X12 BEAM		CONCRETE FOR EMBEDDED FOUND.		BREAKAWAY BEAM CONNECTIONS		EXISTING SIGN REVISED WITH DEMOUNTABLE COPY, AS PER PLAN		TEMPORARY DRUMS		
					S.F.	S.F.	EA.	EA.	S.F.	L.F.	L.F.	L.F.	C.Y.	EA.	EA.	EA.	EA.	EA.	EA.										
S-1	SEE SHT. 2	LT.																											
S-2	654+75	LT.	RA-5	13'X4'-6"	58.5	58.5									33			.66	2										
S-3	615+00	LT.	HP-112	13'X5'-6"			3	1									37	2.20	2										
S-4	633+00	LT.	RA-2	11'X5'	55						55						38	2.20	2										
S-4	633+00	LT.	GSF-1	6'X2'	12						12																		
S-5	623+00	LT.	RA-4	6'X5'-6"	33						33	33						.54	2										
	599+75-601+75																												9
	624+00-628+00																												17
TOTALS CARRIED TO GENERAL SUMMARY					158.510.5		3	1	100	33	33	75	5.60	8	1														26

S-1
 REST AREA
 1 MILE
 FURNISH AND INSTALL COPY ON EXISTING SIGN LOCATED IN PENNSYLVANIA. SEE NOTE ON SHEET 2 FOR LEGEND TYPE AND HEIGHTS.



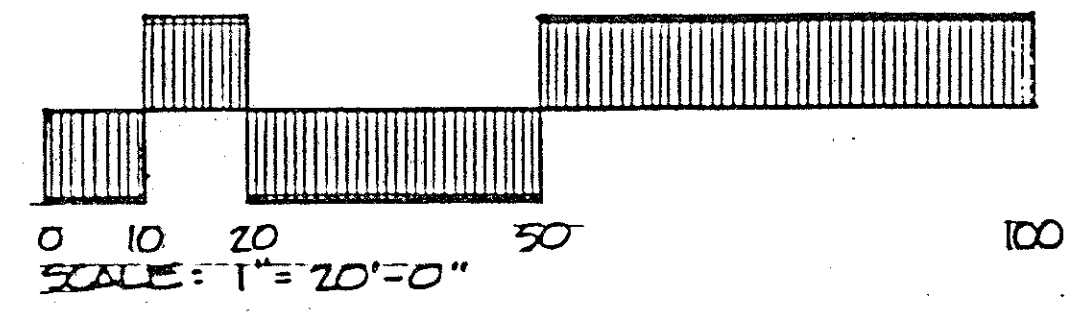
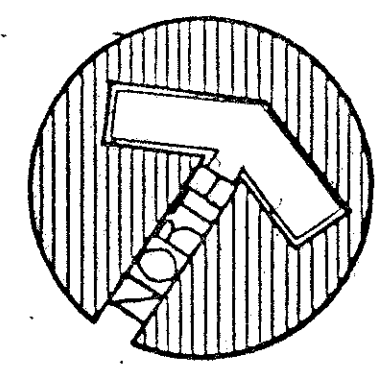
BASELINE LAYOUT

BEGIN WORK STA. 591+00 → ← END WORK STA. 658+00




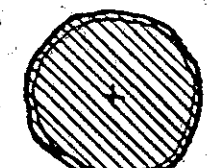

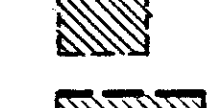

CURVE DATA I.R. 80
 P.I. Sta. 607+58.98
 $\Delta = 37^{\circ} 19' 55''$ Lt.
 $D_c = 1'-16''$
 $T = 1528.08'$
 $L = 2947.26'$
 $R = 4523.35'$
 $E = 251.14'$

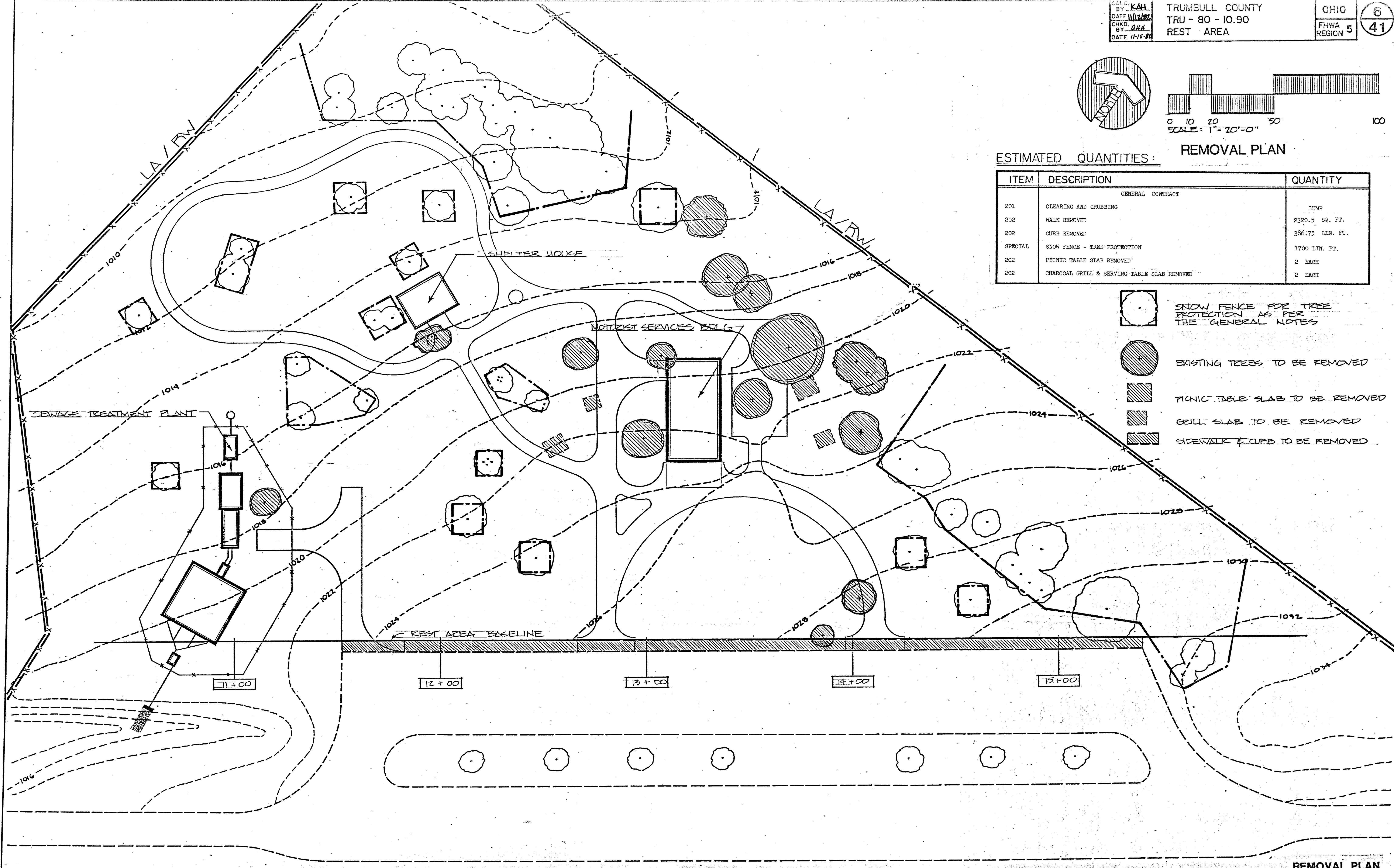
$N 57^{\circ} 54' 01'' E$
 $N 50^{\circ} 34' 06'' E$
 P.I. Sta. 607+58.98

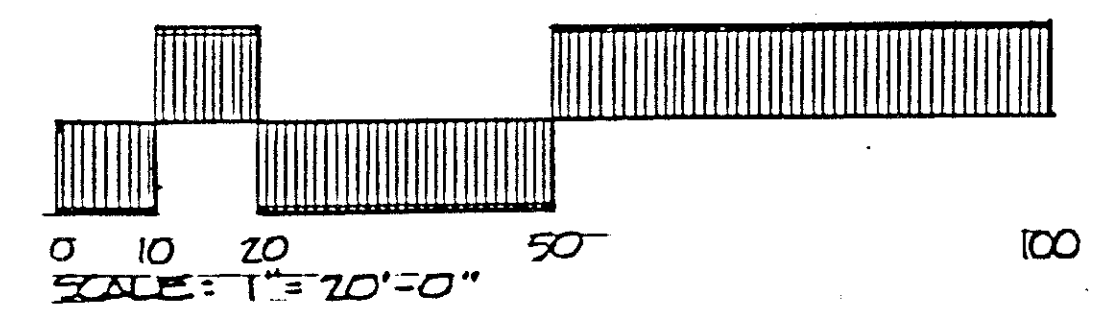
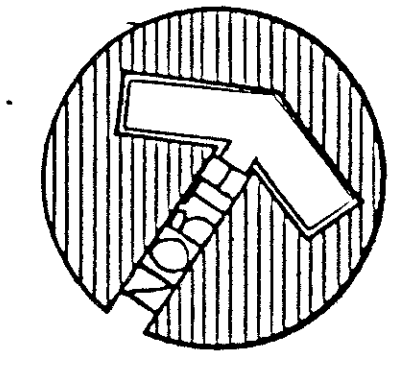


ESTIMATED QUANTITIES: **REMOVAL PLAN**

ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
201	CLEARING AND GRUBBING	LUMP
202	WALK REMOVED	2320.5 SQ. FT.
202	CURB REMOVED	386.75 LIN. FT.
SPECIAL	SNOW FENCE - TREE PROTECTION	1700 LIN. FT.
202	PICNIC TABLE SLAB REMOVED	2 EACH
202	CHARCOAL GRILL & SERVING TABLE SLAB REMOVED	2 EACH

-  SNOW FENCE FOR TREE PROTECTION AS PER THE GENERAL NOTES
-  EXISTING TREES TO BE REMOVED
-  PICNIC TABLE SLAB TO BE REMOVED
-  GRILL SLAB TO BE REMOVED
-  SIDEWALK & CURB TO BE REMOVED

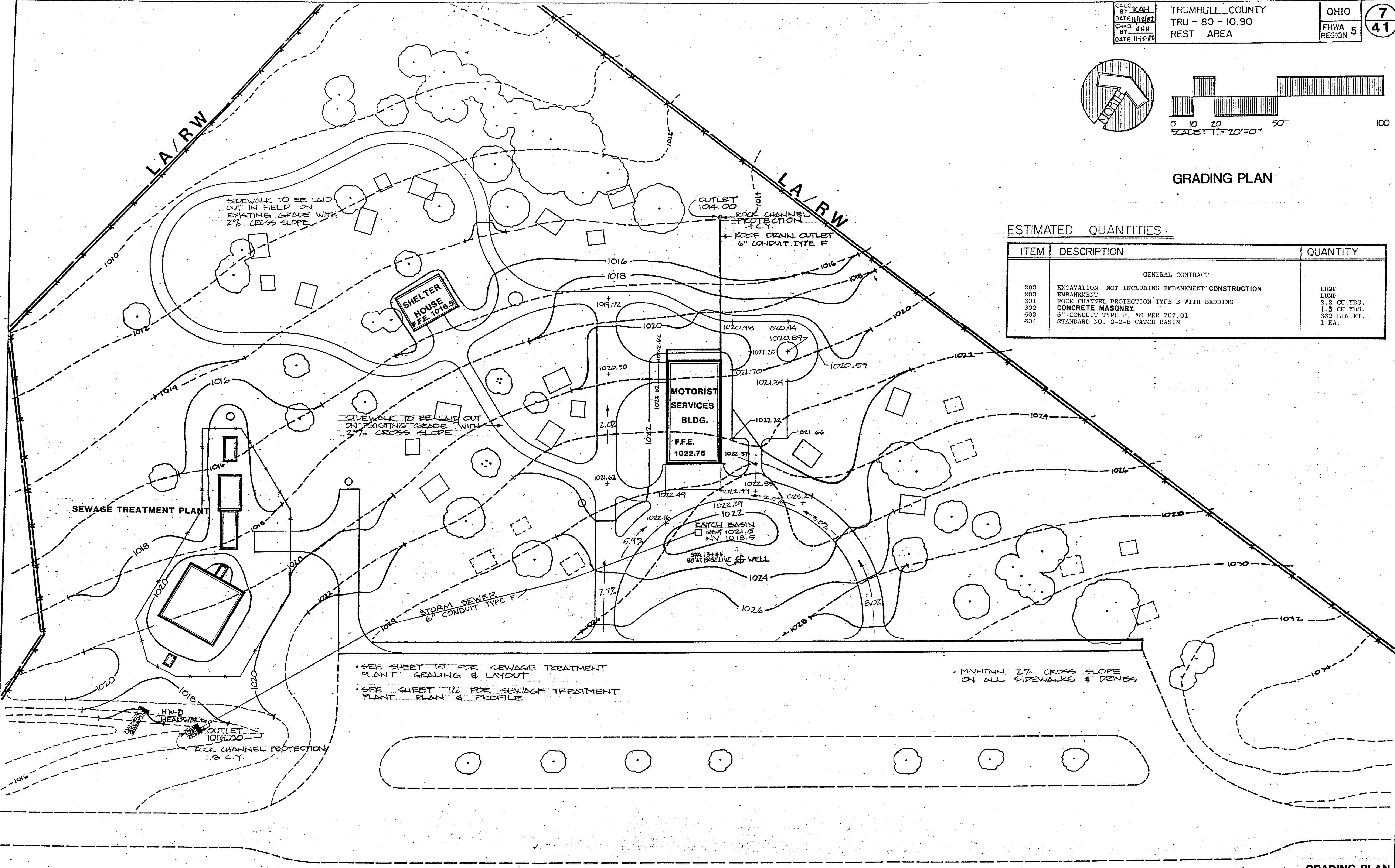




GRADING PLAN

ESTIMATED QUANTITIES:

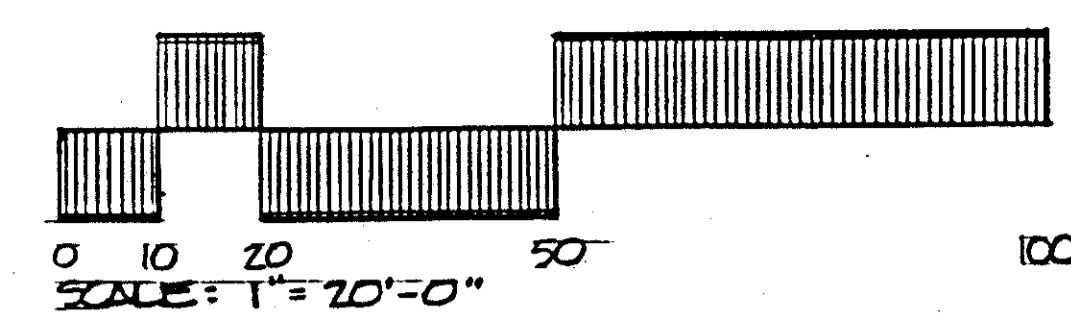
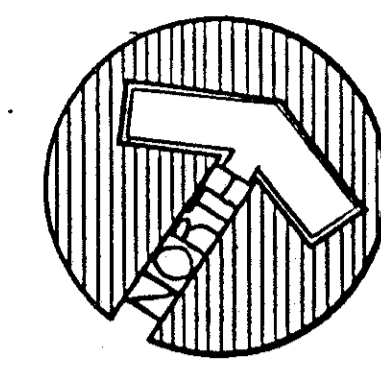
ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	LUMP
203	EMBANKMENT	LUMP
601	ROCK CHANNEL PROTECTION TYPE B WITH BEDDING	2.2 CU. YDS.
602	CONCRETE MASONRY	1.3 CU. YDS.
603	6" CONDUIT TYPE F, AS PER 707.01	362 LIN. FT.
604	STANDARD NO. 2-2-B CATCH BASIN	1 EA.



• SEE SHEET 15 FOR SEWAGE TREATMENT PLANT GRADING & LAYOUT
 • SEE SHEET 16 FOR SEWAGE TREATMENT PLANT PLAN & PROFILE

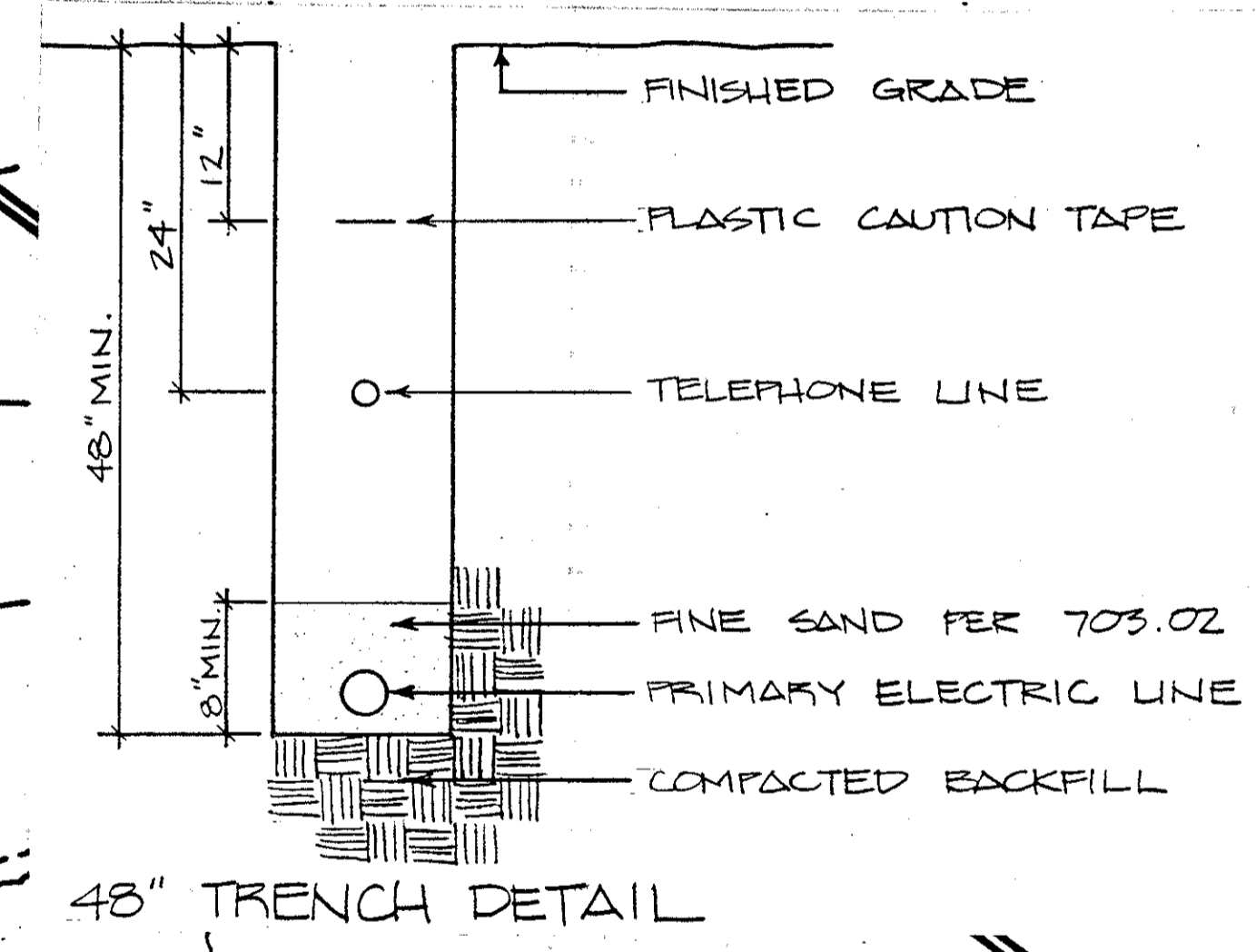
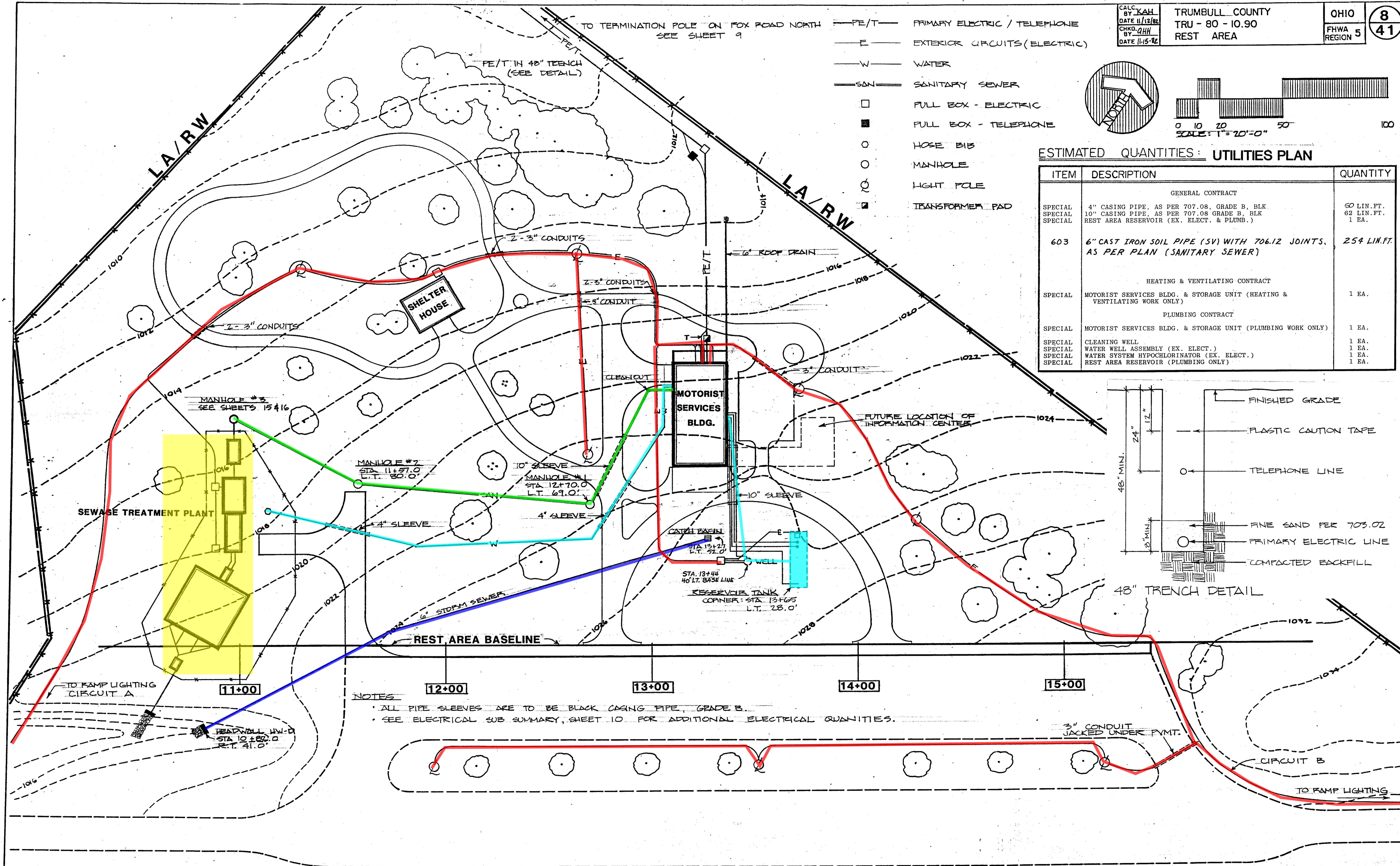
• MAINTAIN 2% CROSS SLOPE ON ALL SIDEWALKS & DRIVES

- PE/T PRIMARY ELECTRIC / TELEPHONE
- E EXTERIOR CIRCUITS (ELECTRIC)
- W WATER
- SAN SANITARY SEWER
- FULL BOX - ELECTRIC
- FULL BOX - TELEPHONE
- HOSE BIB
- MANHOLE
- LIGHT POLE
- TRANSFORMER PAD



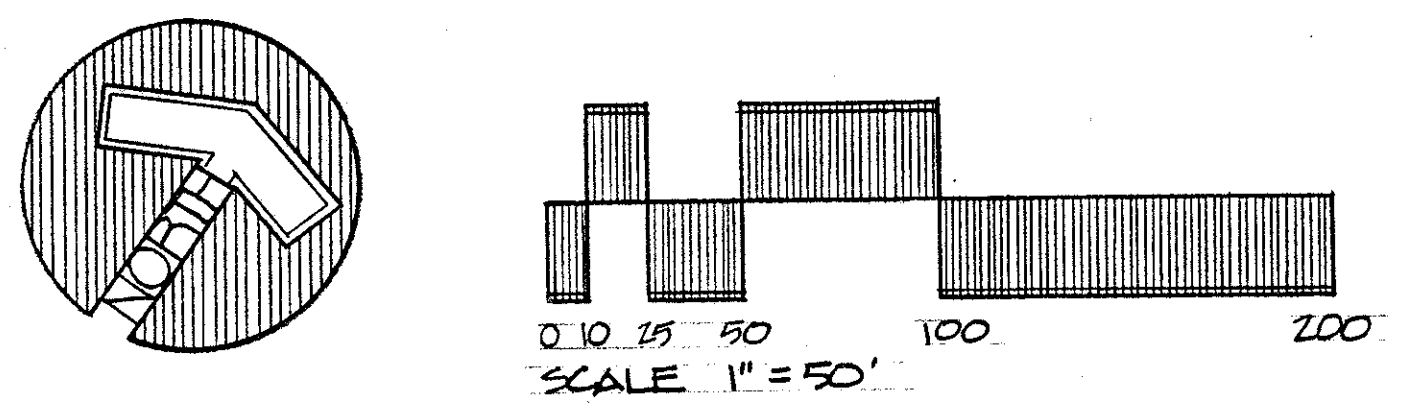
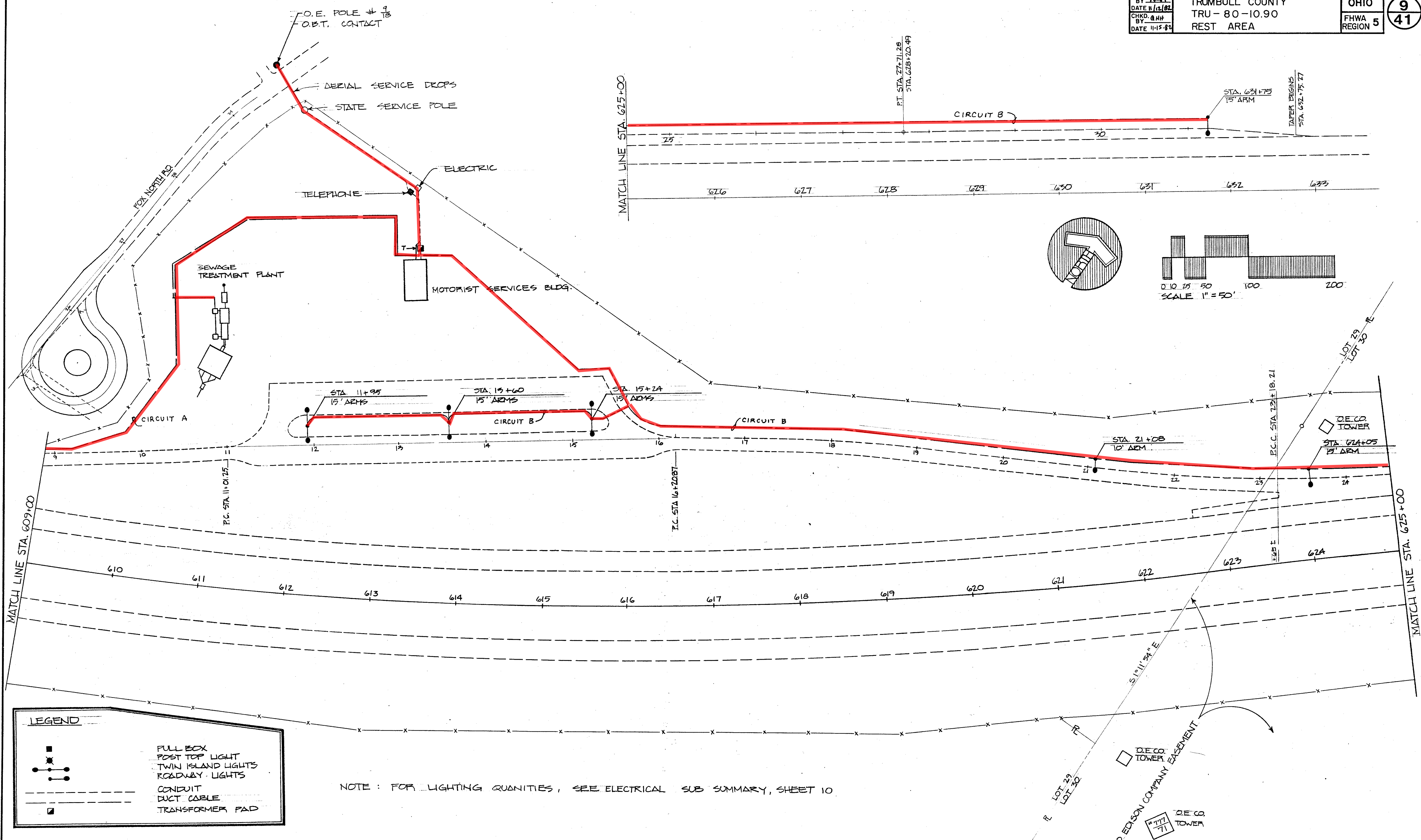
ESTIMATED QUANTITIES: UTILITIES PLAN

ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
SPECIAL	4" CASING PIPE, AS PER 707.08, GRADE B, BLK	60 LIN. FT.
SPECIAL	10" CASING PIPE, AS PER 707.08 GRADE B, BLK	62 LIN. FT.
SPECIAL	REST AREA RESERVOIR (EX. ELECT. & PLUMB.)	1 EA.
603	6" CAST IRON SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN (SANITARY SEWER)	254 LIN. FT.
HEATING & VENTILATING CONTRACT		
SPECIAL	MOTORIST SERVICES BLDG. & STORAGE UNIT (HEATING & VENTILATING WORK ONLY)	1 EA.
PLUMBING CONTRACT		
SPECIAL	MOTORIST SERVICES BLDG. & STORAGE UNIT (PLUMBING WORK ONLY)	1 EA.
SPECIAL	CLEANING WELL	1 EA.
SPECIAL	WATER WELL ASSEMBLY (EX. ELECT.)	1 EA.
SPECIAL	WATER SYSTEM HYPOCHLORINATOR (EX. ELECT.)	1 EA.
SPECIAL	REST AREA RESERVOIR (PLUMBING ONLY)	1 EA.



NOTES

- ALL PIPE SLEEVES ARE TO BE BLACK CASING PIPE, GRADE B.
- SEE ELECTRICAL SUB SUMMARY, SHEET 10 FOR ADDITIONAL ELECTRICAL QUANTITIES.



LEGEND

- FULL BOX
- POST TOP LIGHT
- TWIN ISLAND LIGHTS
- ROADWAY LIGHTS
- CONDUIT
- DUCT CABLE
- TRANSFORMER PAD

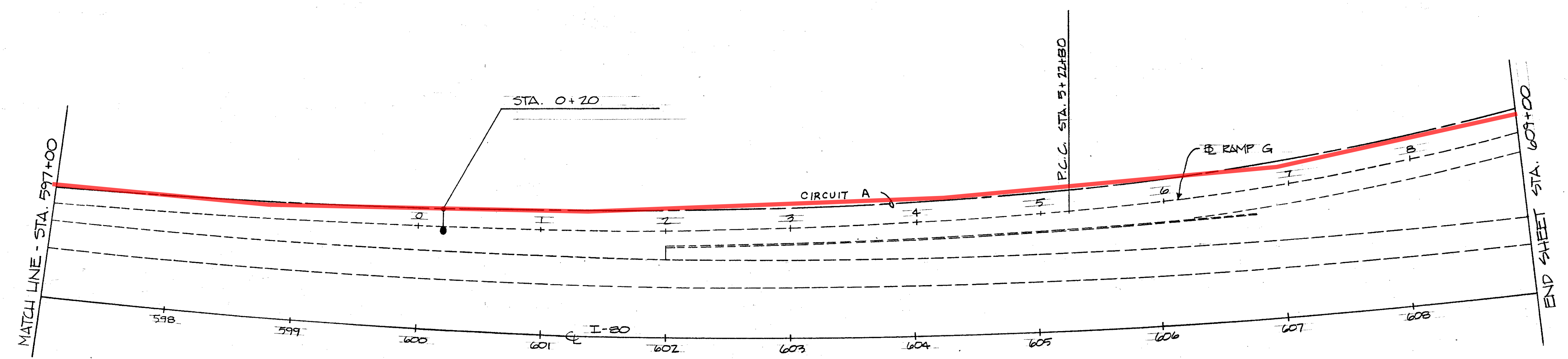
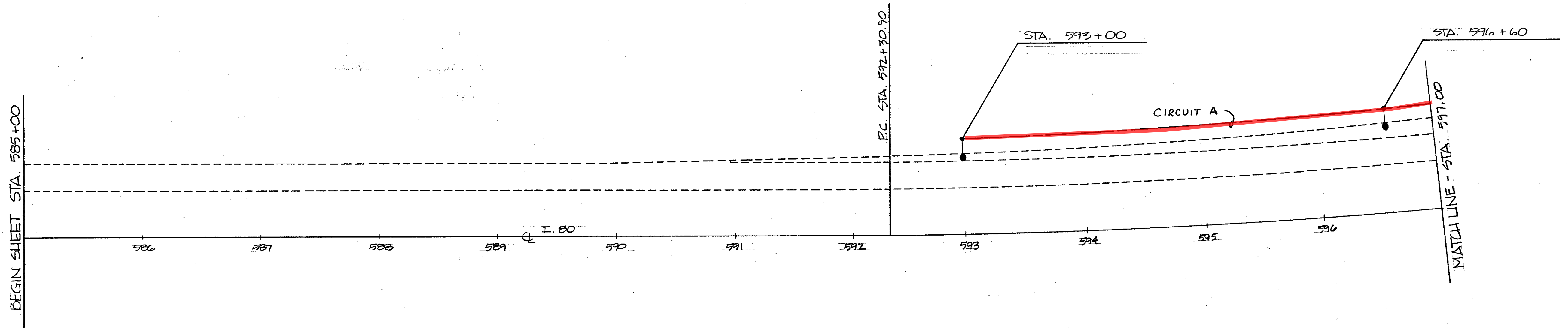
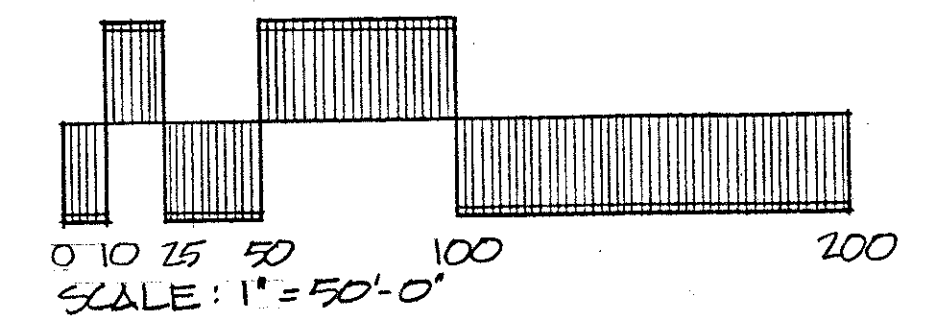
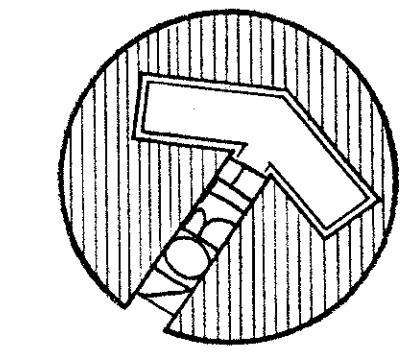
NOTE: FOR LIGHTING QUANTITIES, SEE ELECTRICAL SUB SUMMARY, SHEET 10

CALC. BY: KAH
 DATE: 11/12/82
 CHKD. BY: G.H.H.
 DATE: 11-15-82

TRUMBULL COUNTY
 TRU 80 10.90
 REST AREA

OHIO
 FHWA REGION 5

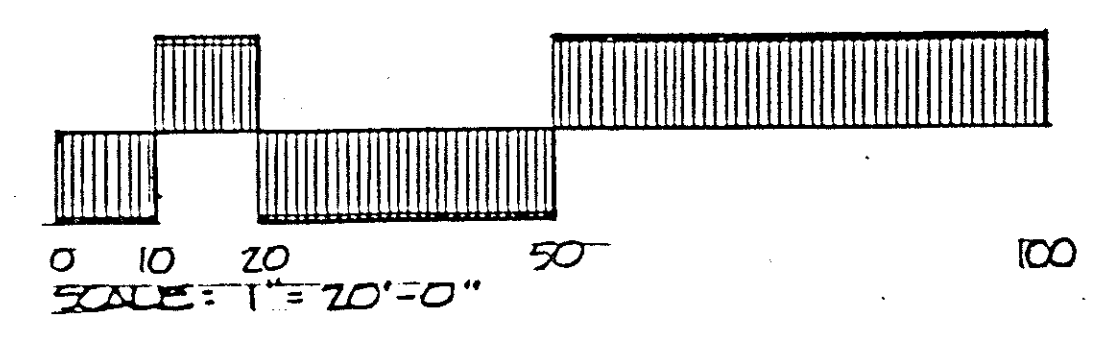
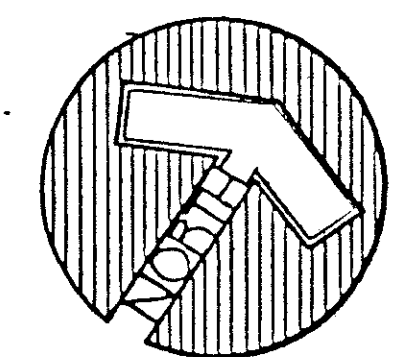
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NOTE: FOR LIGHTING QUANTITIES, SEE ELECTRICAL SUB SUMMARY, SHEET 10

LEGEND

- ROADWAY LIGHTS
- DUCT CABLE

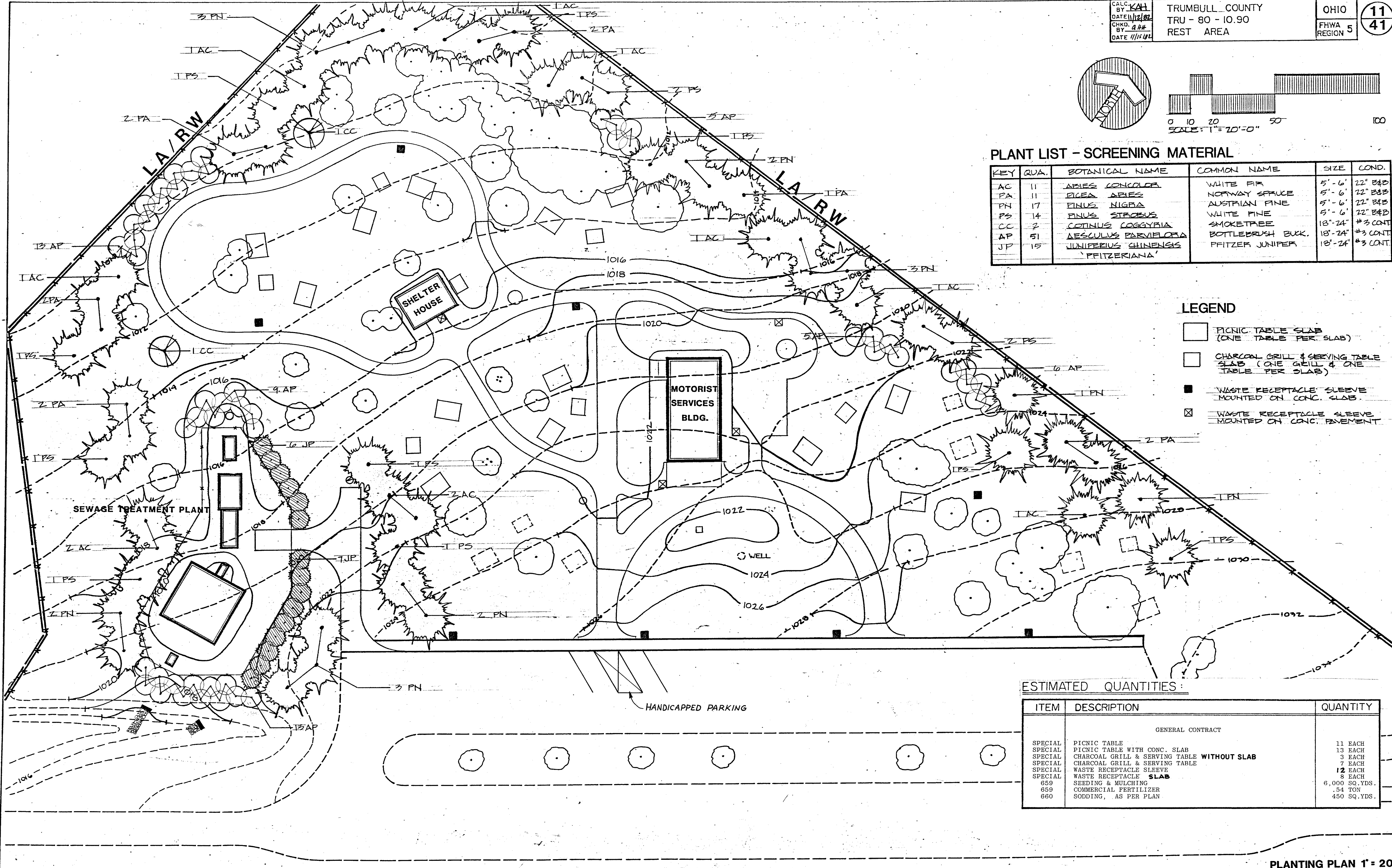


PLANT LIST - SCREENING MATERIAL

KEY	QUA.	BOTANICAL NAME	COMMON NAME	SIZE	COND.
AC	11	ABIES CONCOLOR	WHITE FIR	5'-6"	22" E&B
PA	11	PICEA ABIES	NORWAY SPRUCE	5'-6"	22" E&B
PN	17	PINUS NIGRA	AUSTRIAN PINE	5'-6"	22" E&B
PS	14	PINUS STROBUS	WHITE PINE	5'-6"	22" E&B
CC	2	COTINUS COGGYRIA	SMOKETREE	18"-24"	#3 CONT.
AP	51	AESCULUS PARVIFLORA	BOTTLEBRUSH BUCK.	18"-24"	#3 CONT.
JP	15	JUNIPERUS CHINENSIS 'PEITZERIANA'	PFITZER JUNIPER	18"-24"	#3 CONT.

LEGEND

- PICNIC TABLE SLAB (ONE TABLE PER SLAB)
- CHARCOAL GRILL & SERVING TABLE SLAB (ONE GRILL & ONE TABLE PER SLAB)
- WASTE RECEPTACLE SLEEVE MOUNTED ON CONC. SLAB
- WASTE RECEPTACLE SLEEVE MOUNTED ON CONC. PAVEMENT



ESTIMATED QUANTITIES:

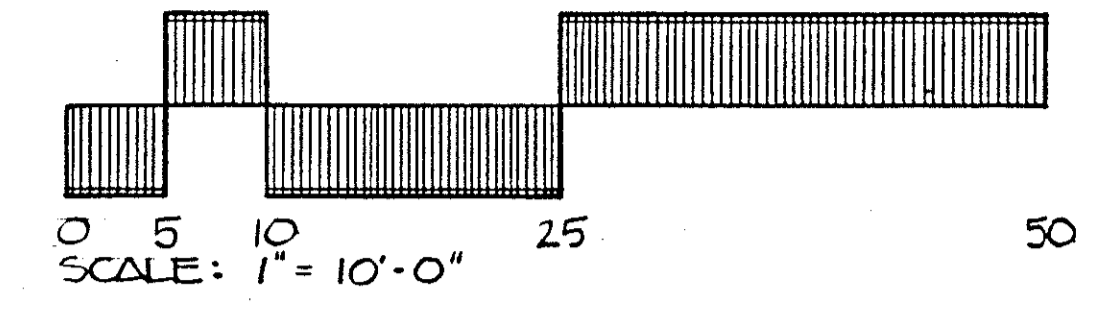
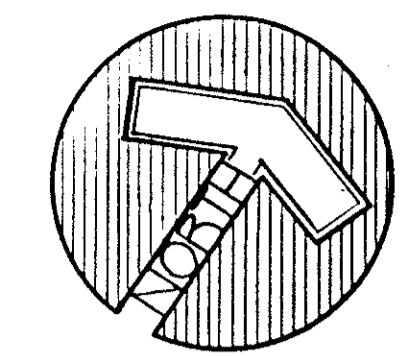
ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
SPECIAL	PICNIC TABLE	11 EACH
SPECIAL	PICNIC TABLE WITH CONC. SLAB	13 EACH
SPECIAL	CHARCOAL GRILL & SERVING TABLE WITHOUT SLAB	3 EACH
SPECIAL	CHARCOAL GRILL & SERVING TABLE	7 EACH
SPECIAL	WASTE RECEPTACLE SLEEVE	12 EACH
SPECIAL	WASTE RECEPTACLE SLAB	8 EACH
659	SEEDING & MULCHING	6,000 SQ. YDS.
659	COMMERCIAL FERTILIZER	.54 TON
660	SODDING, AS PER PLAN	450 SQ. YDS.

CALC. BY: KAH
 DATE: 11/12/82
 CHKD. BY: G.H.H.
 DATE: 11-15-82

TRUMBULL COUNTY
 TRU - 80 - 10.90
 REST AREA

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 FHWA REGION 5

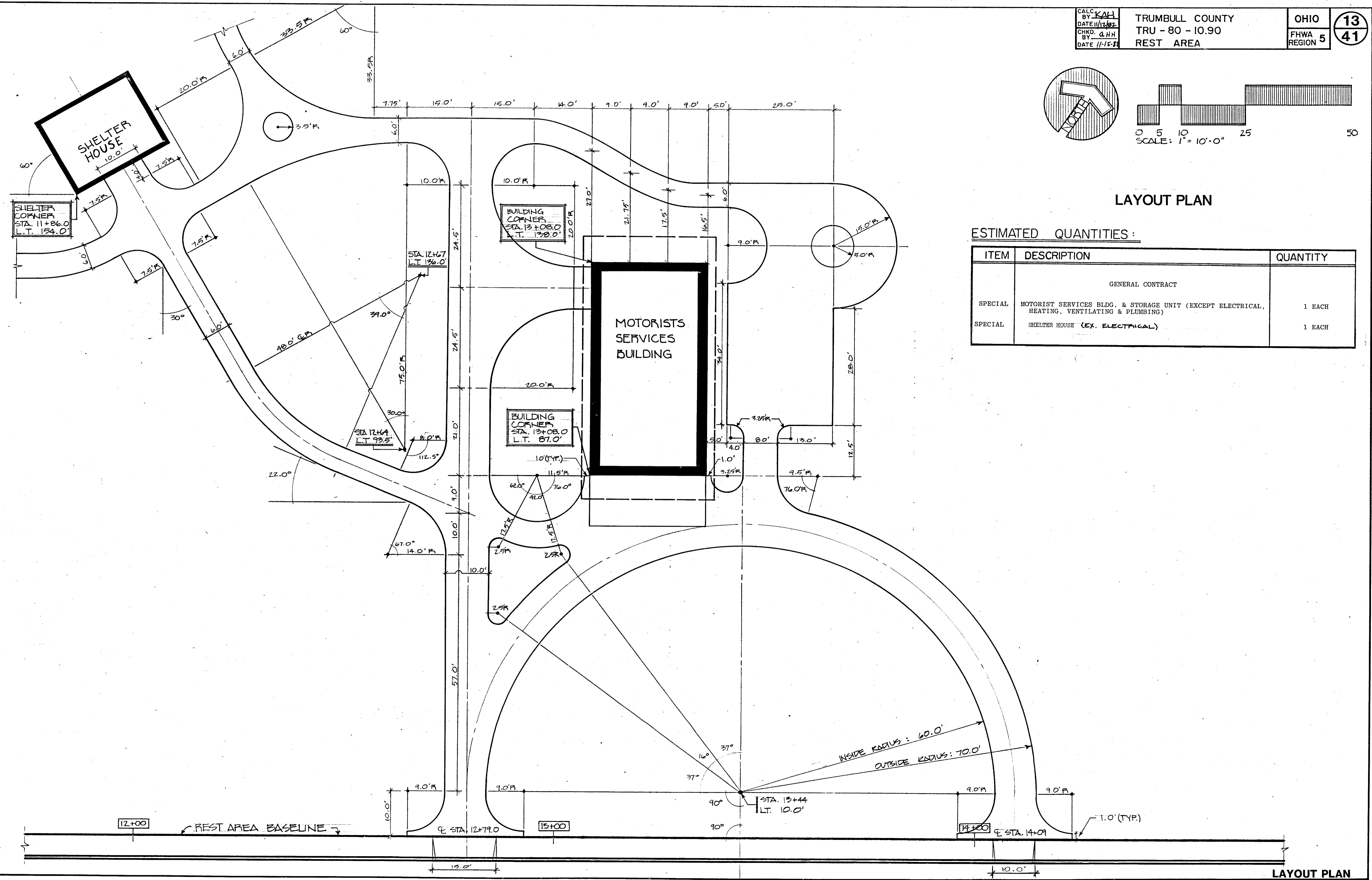
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LAYOUT PLAN

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
	GENERAL CONTRACT	
SPECIAL	MOTORIST SERVICES BLDG. & STORAGE UNIT (EXCEPT ELECTRICAL, HEATING, VENTILATING & PLUMBING)	1 EACH
SPECIAL	SHELTER HOUSE (EX. ELECTRICAL)	1 EACH

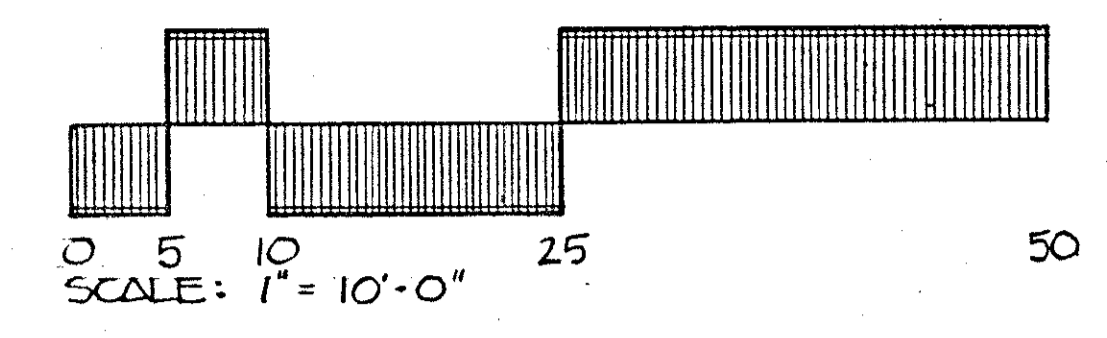
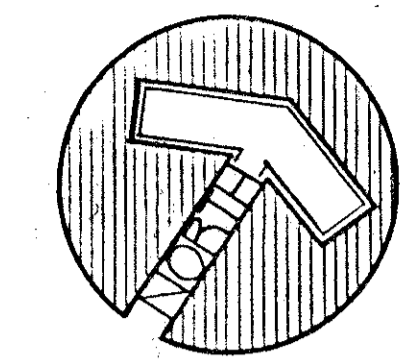


CALC BY: KAH
 DATED: 12-22-82
 CHKD BY: QHH
 DATE: 11-15-82

TRUMBULL COUNTY
 TRU - 80 - 10.90
 REST AREA


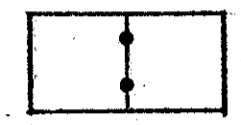
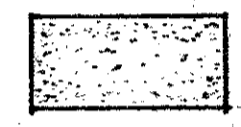

OHIO
 FHWA REGION 5

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 41



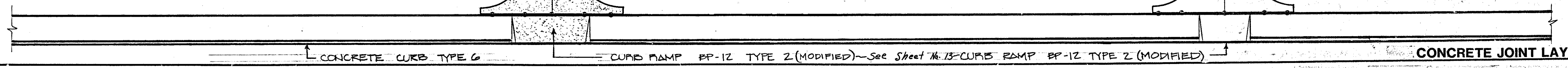
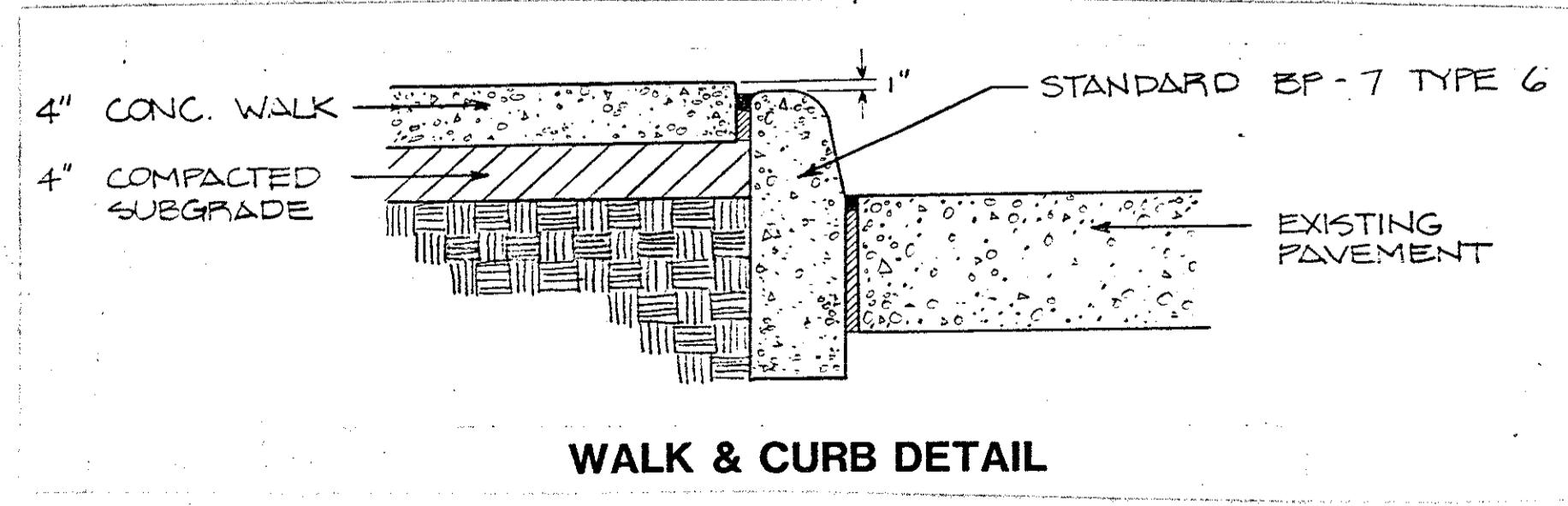
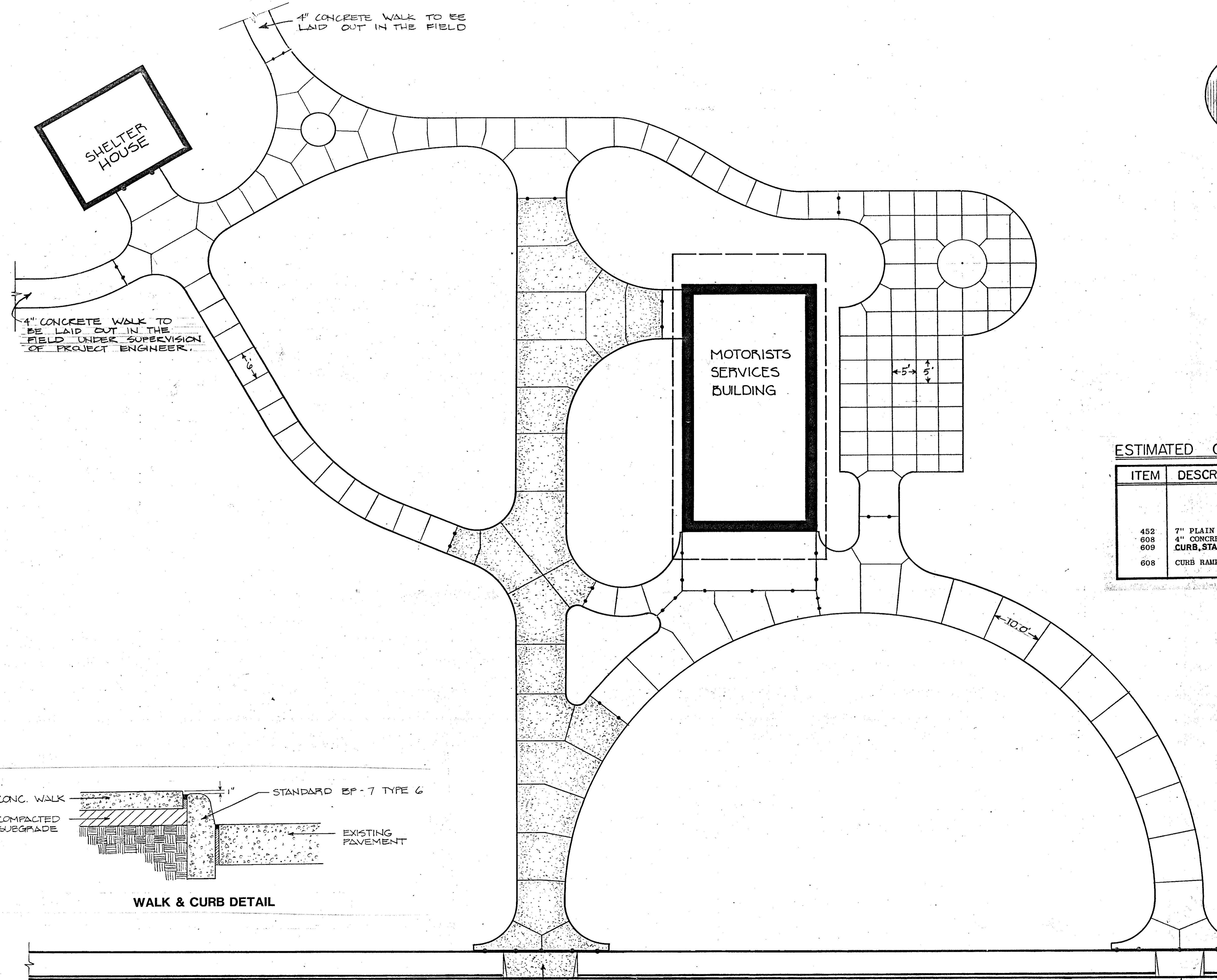
CONCRETE JOINT LAYOUT PLAN

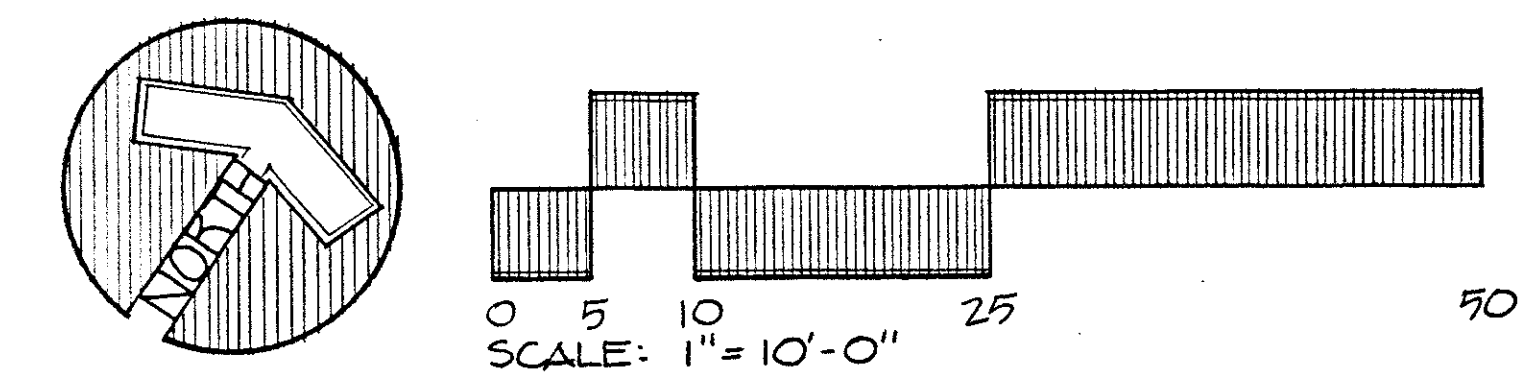
LEGEND

-  CONTROL JOINT
-  EXPANSION JOINT
-  7" CONCRETE
-  4" CONCRETE

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
452	7" PLAIN PORTLAND CEMENT PAVEMENT - AS PER PLAN	268 SQ. YD.
608	4" CONCRETE WALK - AS PER PLAN	8164 SQ. FT.
609	CURB, STANDARD TYPE 6	349 LIN. FT.
608	CURB RAMP, STD. TYPE 2, MODIFIED AS PER PLAN.	2 EACH



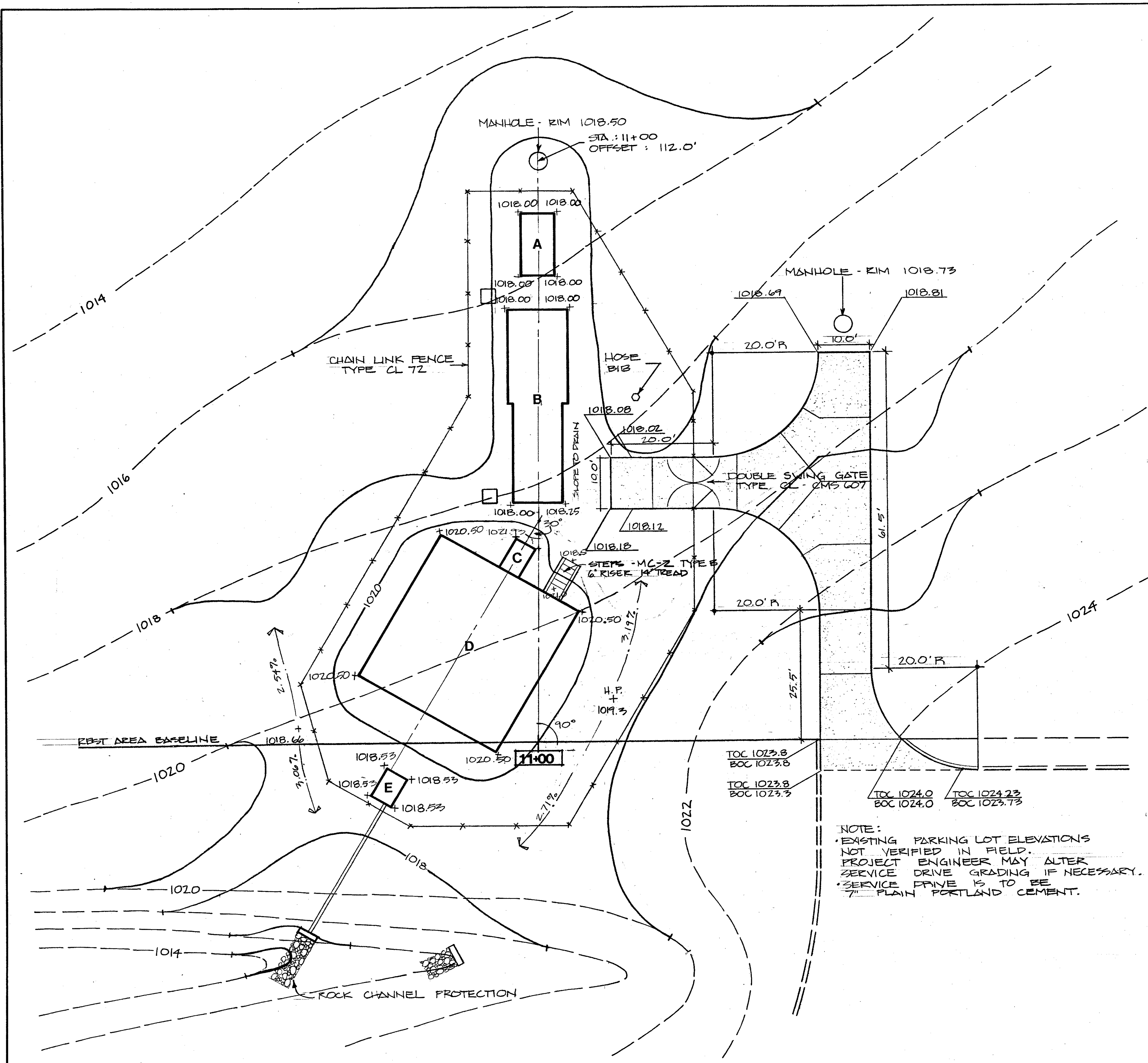


SEWAGE TREATMENT PLANT GRADING & LAYOUT PLAN

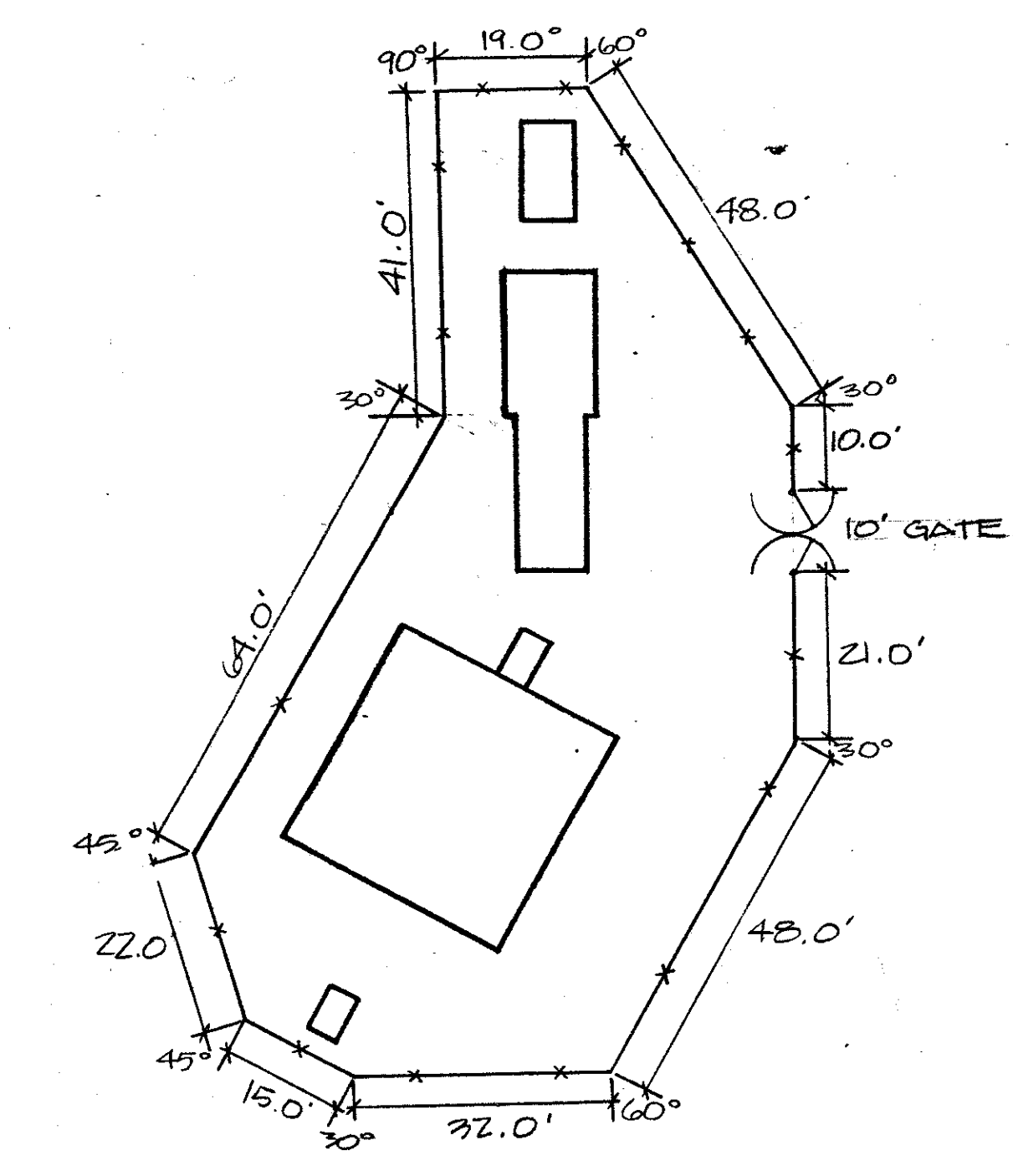
A - TRASH TRAP	RIM 1018.50
B - AERATION TANK / CLARIFIER	RIM 1018.50
C - INFLUENT CHAMBER	RIM 1022.43
D - SAND FILTER	RIM 1021.00
E - CHLORINATOR	RIM 1019.03

ESTIMATED QUANTITIES:

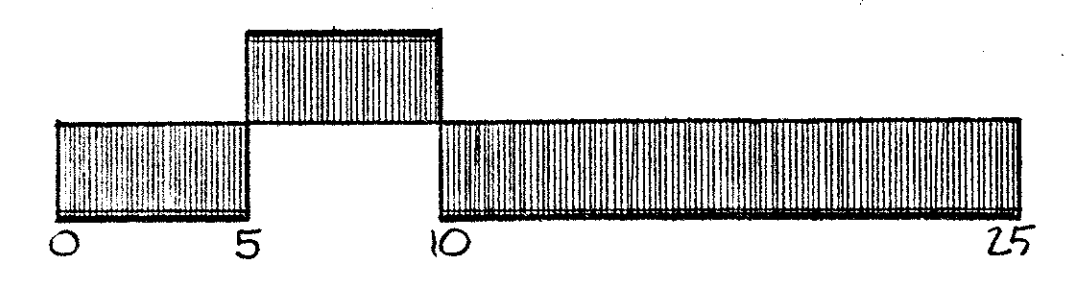
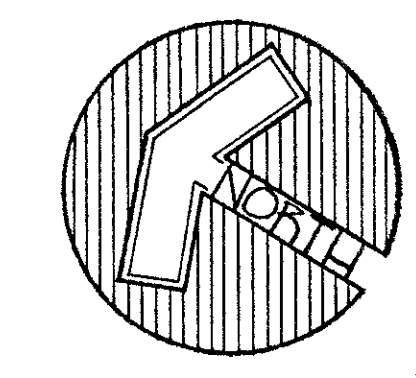
ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
452	7" PLAIN PORTLAND CEMENT PAVEMENT	164 SQ. YDS.
607	FENCE, TYPE CL, 72"	320 LIN. FT.
607	GATE, TYPE CL, 72"x10' DOUBLE SWING	1 EACH
608	CONCRETE STEPS, STD. TYPE B	24 LIN. FT.



NOTE:
 * EXISTING PARKING LOT ELEVATIONS NOT VERIFIED IN FIELD.
 * PROJECT ENGINEER MAY ALTER SERVICE DRIVE GRADING IF NECESSARY.
 * SERVICE DRIVE IS TO BE 7" PLAIN PORTLAND CEMENT.



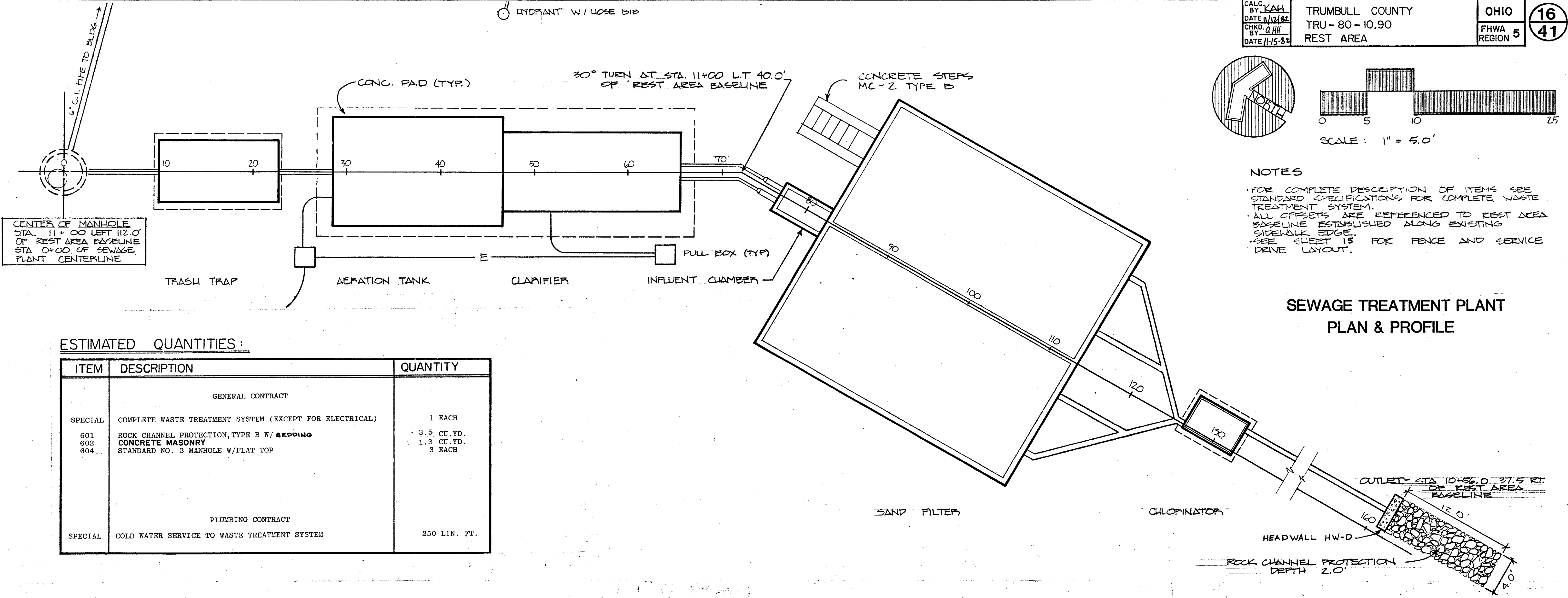
FENCE LAYOUT 1" = 20'



NOTES

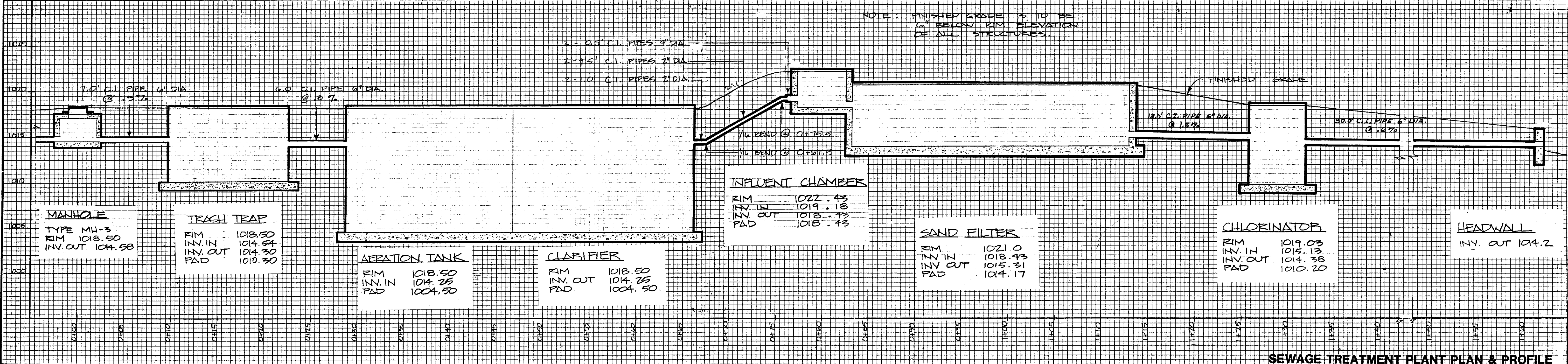
- FOR COMPLETE DESCRIPTION OF ITEMS SEE STANDARD SPECIFICATIONS FOR COMPLETE WASTE TREATMENT SYSTEM.
- ALL OFFSETS ARE REFERENCED TO REST AREA BASELINE ESTABLISHED ALONG EXISTING SIDEWALK EDGE.
- SEE SHEET 15 FOR FENCE AND SERVICE DRIVE LAYOUT.

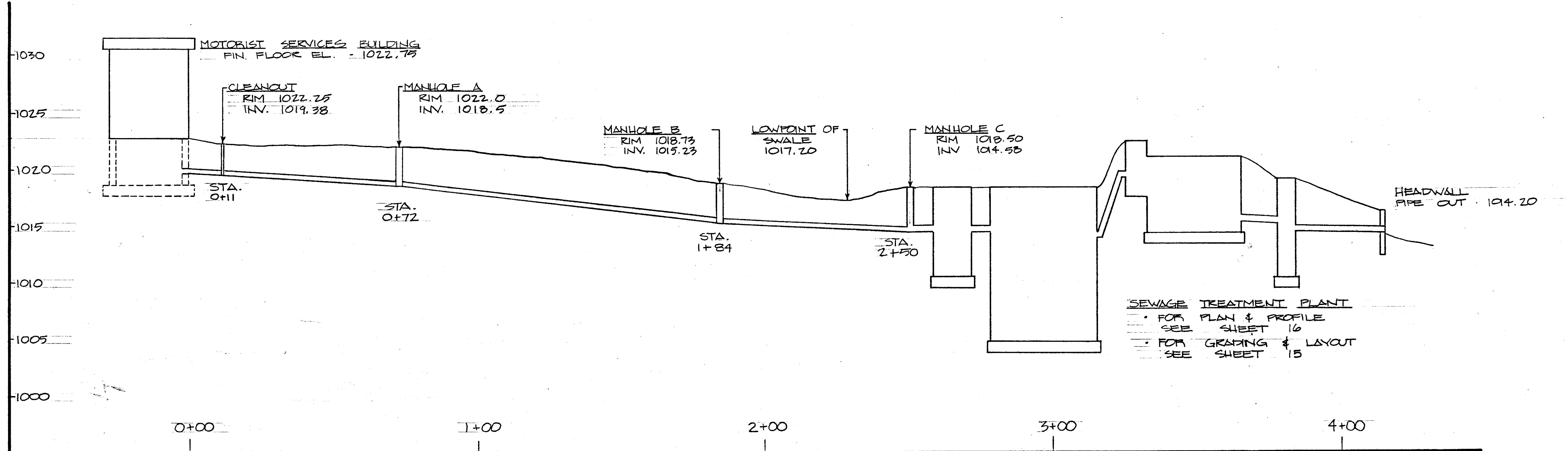
HYDRANT W/ HOSE BIB



ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
GENERAL CONTRACT		
SPECIAL	COMPLETE WASTE TREATMENT SYSTEM (EXCEPT FOR ELECTRICAL)	1 EACH
601	ROCK CHANNEL PROTECTION, TYPE B W/ BEDDING	3.5 CU. YD.
602	CONCRETE MASONRY	1.3 CU. YD.
604	STANDARD NO. 3 MANHOLE W/ FLAT TOP	3 EACH
PLUMBING CONTRACT		
SPECIAL	COLD WATER SERVICE TO WASTE TREATMENT SYSTEM	250 LIN. FT.



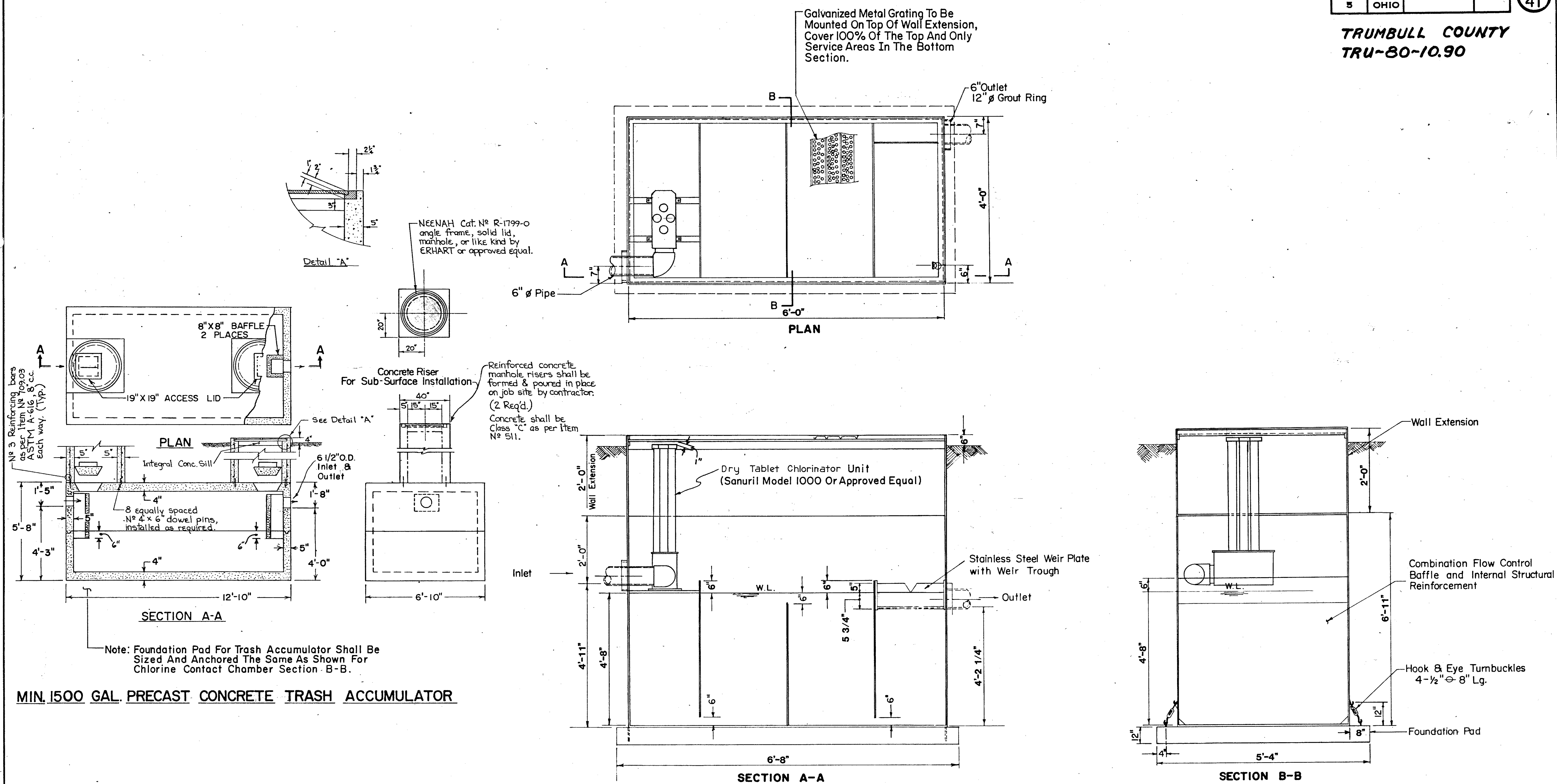


SEWAGE TREATMENT PLANT
 • FOR PLAN & PROFILE
 SEE SHEET 16
 • FOR GRADING & LAYOUT
 SEE SHEET 15

SANITARY SEWER PROFILE - BUILDING TO SEWAGE PLANT

HORIZONTAL SCALE 1" = 20' VERTICAL SCALE 1" = 5'

TRUMBULL COUNTY
TRU-80-10.90



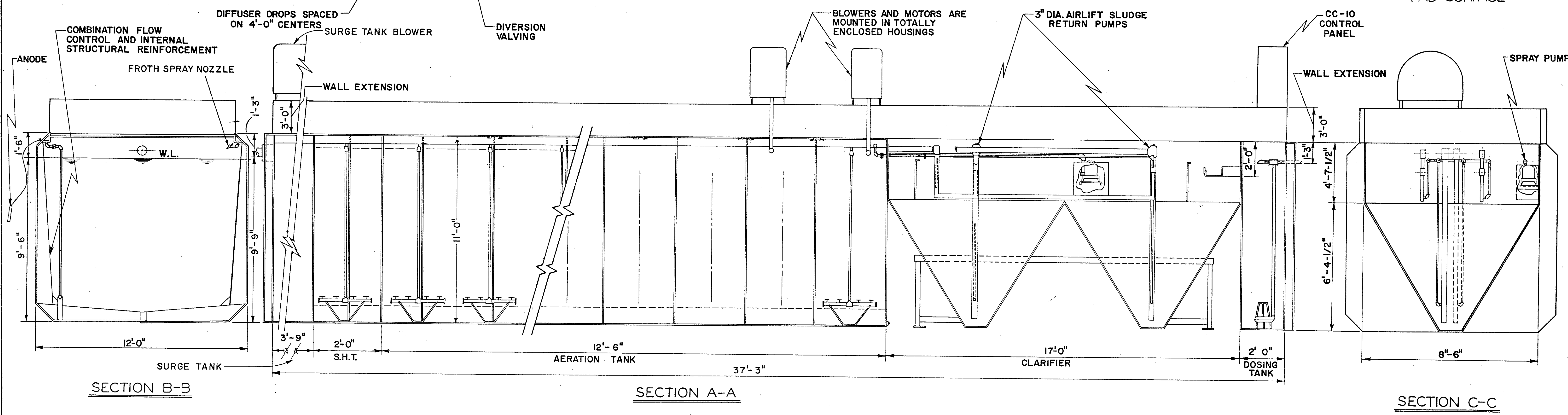
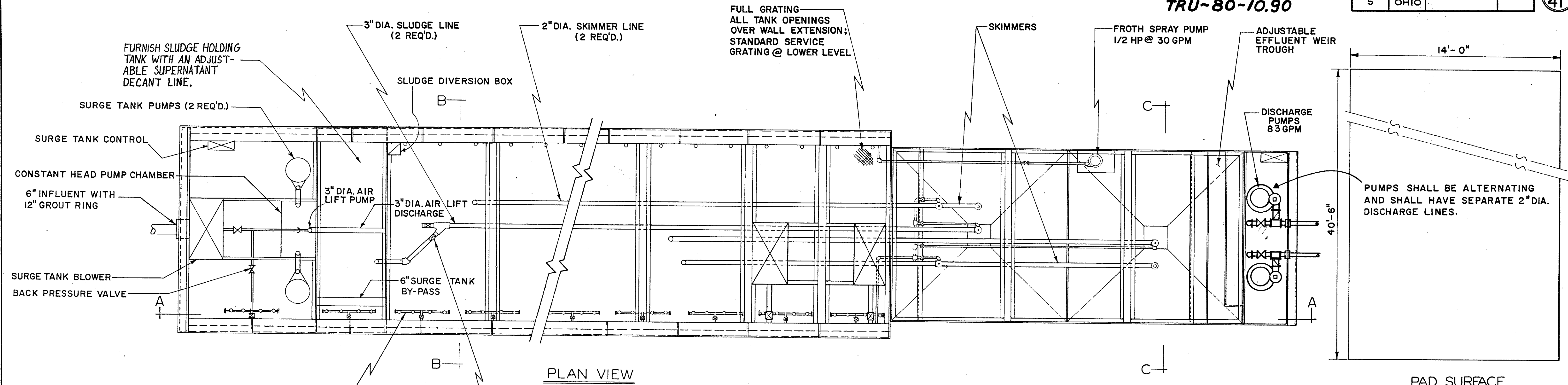
Vol.	Ret.
Gal.	Time
825	118 Min.

BUREAU OF DESIGN SERVICES		
OHIO DEPARTMENT OF TRANSPORTATION		
REVISIONS 11/5/82 11-27-82	TRASH ACCUMULATOR & CHLORINE CONTACT CHAMBER	SHEET NO. RRA 10
		DATE 3-1-78

TRUMBULL COUNTY
TRU-80-10.90

FHWA REGION	STATE	PROJECT	
5	OHIO		

19
41

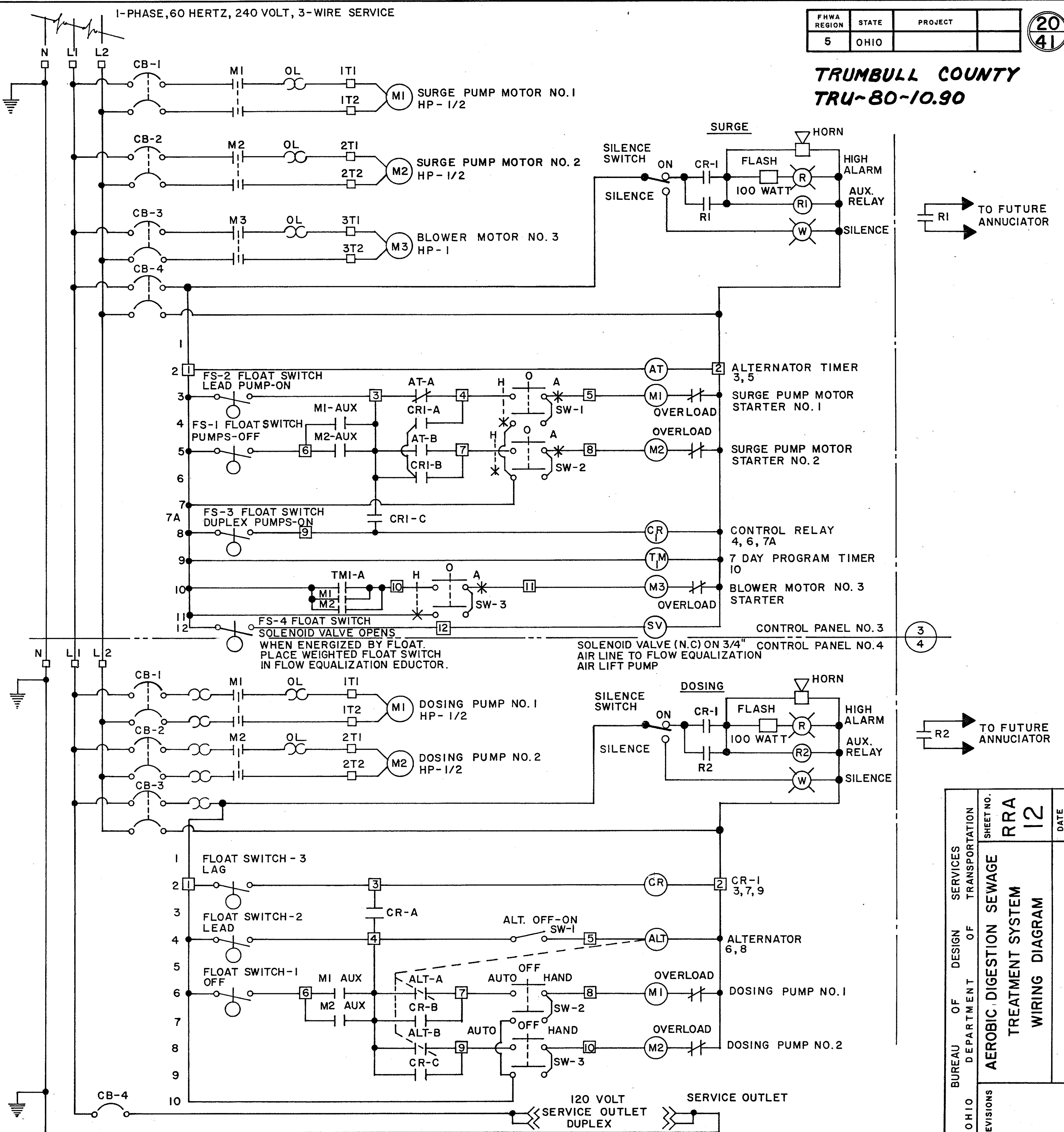
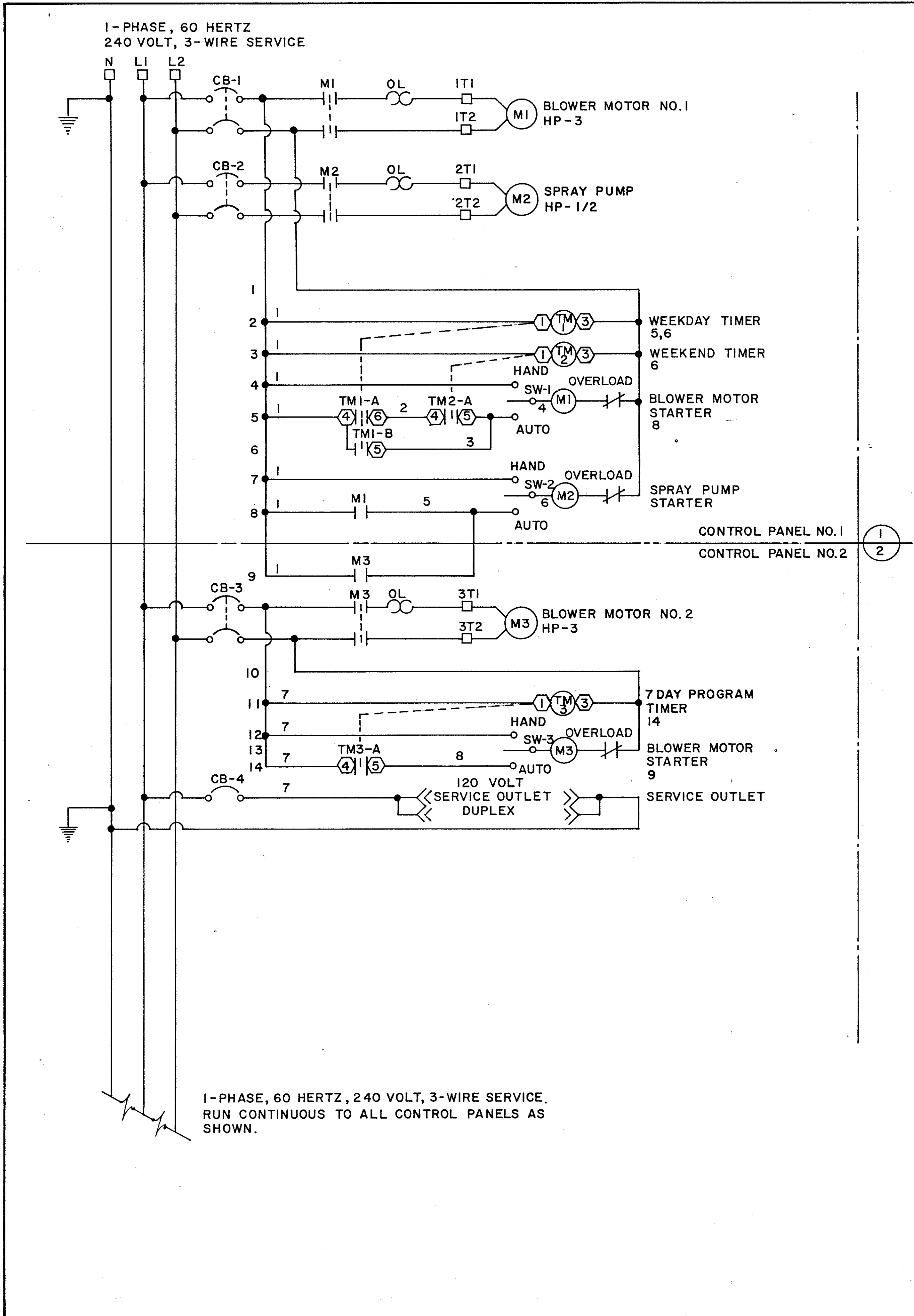


MODEL NUMBER	DESIGN FLOW G.P.D.	AERATION VOL. GAL.	CLARIFIER VOL. GAL.	BLOWER		No. OF SECTIONS SHIPPED	No. OF ANODES	S.H.T. VOL. GAL.	DOSING TANK VOL. GAL.	SURGE TANK VOL. GAL.
				CFM	HP					
OS-100-33-3	10,000	10,000	5,032	54	3	1	4	1,650	825	2,800

BUREAU OF DESIGN SERVICES		
OHIO DEPARTMENT OF TRANSPORTATION		
REVISIONS 7-28-78 11-5-82	AEROBIC DIGESTION SEWAGE TREATMENT SYSTEM	SHEET NO. RRR 11
		DATE 3-1-78

Rev. Per E.P.A. 7-28-78

TRUMBULL COUNTY
TRU-80-10.90



TO FUTURE ANNUNCIATOR

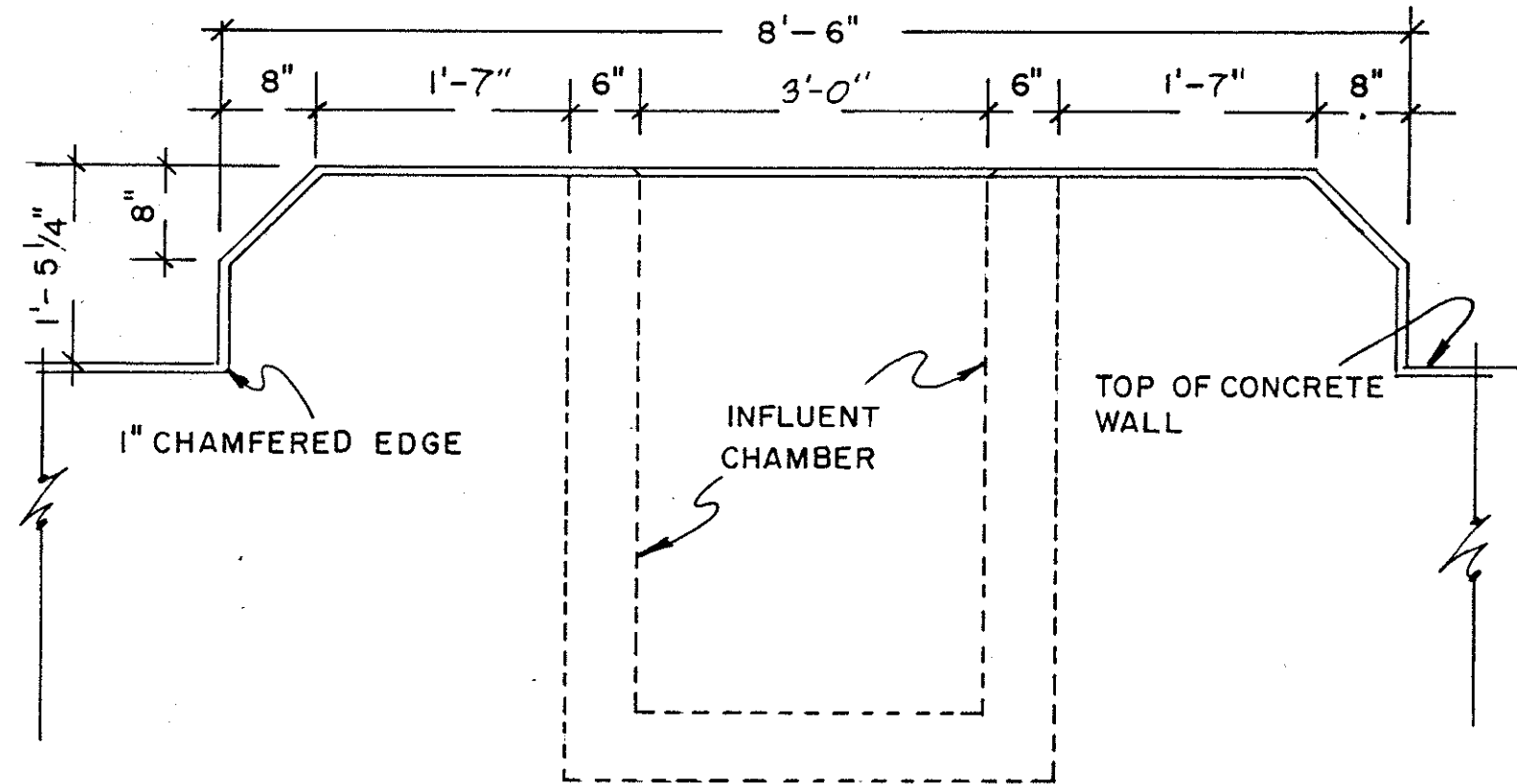
TO FUTURE ANNUNCIATOR

OHIO DEPARTMENT OF TRANSPORTATION	SHEET NO.	RRA	DATE	10-5-82
	REVISIONS	12		

AEROBIC DIGESTION SEWAGE TREATMENT SYSTEM WIRING DIAGRAM

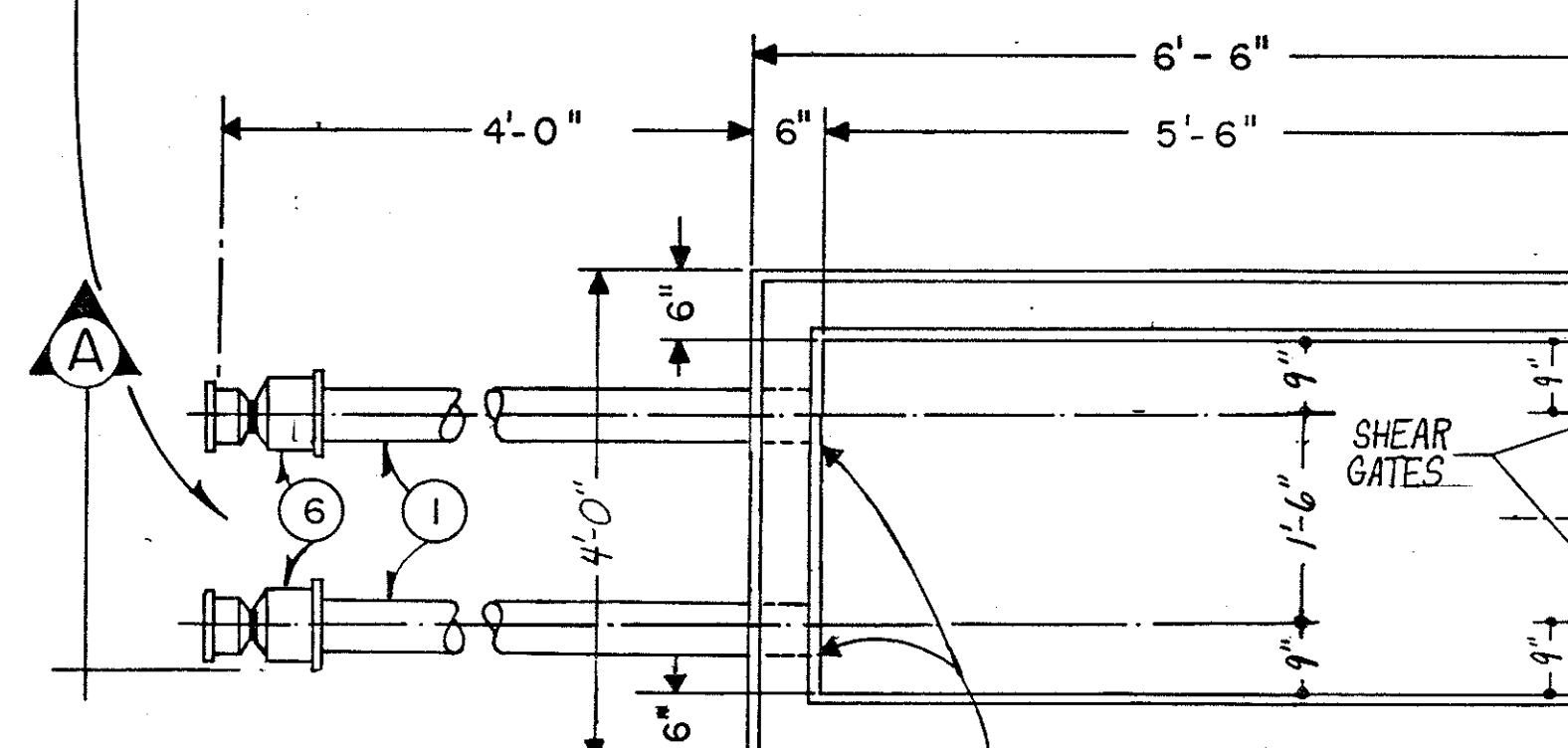
TRUMBULL COUNTY
TRU-80-10.90

SURFACE SAND FILTER WALLS AND INFLUENT CHAMBER THROUGHOUT SHALL BE CONSTRUCTED OF REINFORCED CLASS "C" CONCRETE AS PER ITEM 511.



WALL WING DETAIL

FOR CONTINUATION SEE SHEET NO. 19



INV. ELEV. 1019.18

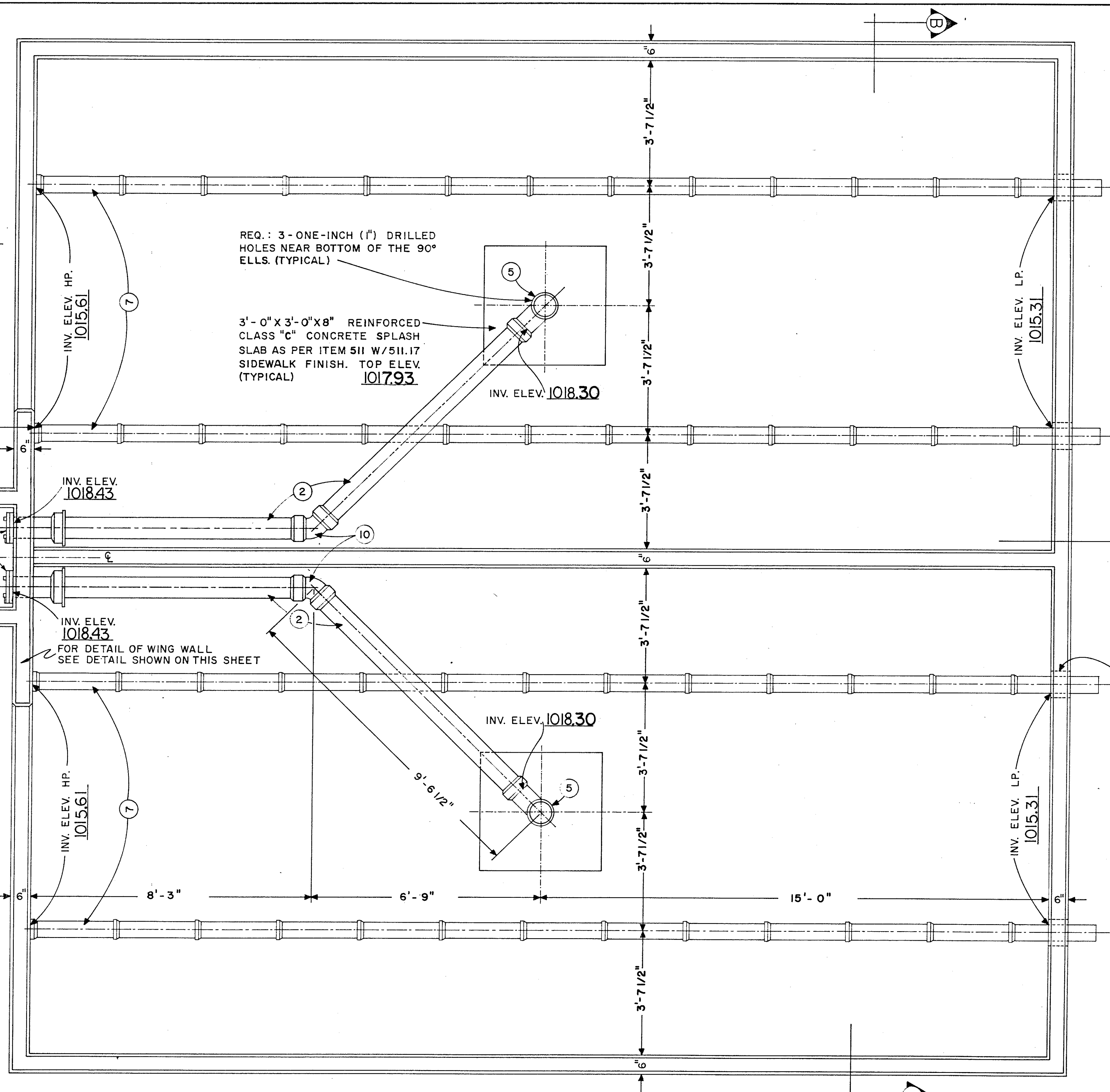
INFLUENT CHAMBER
SEE DETAIL SHEET NO. 23 & 25

EXCAVATION AND BACKFILL FOR ALL SEWAGE TREATMENT STRUCTURES SHALL BE IN CONFORMANCE TO THE REQUIREMENTS OF ITEM 503-EXCAVATION FOR STRUCTURES.

EXCAVATION AND BACKFILL FOR ALL SANITARY SEWER PIPING, EXCLUDING PIPING WITHIN THE SURFACE SAND FILTERS, SHALL CONFORM TO THE REQUIREMENT OF ITEM 603 USING CLASS "C" BEDDING.

ALL FORM WORK REQUIRED FOR THE CONSTRUCTION OF THE SEWAGE TREATMENT STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF ITEM 508 FALSEWORK AND FORMS.

PLAN VIEW OF SURFACE SAND FILTERS
NOT TO SCALE



FOR CONTINUATION OF SURFACE SAND FILTERS PIPING LAYOUT SEE SHEET NO. 22

FORM 8 - INCH X 8 - INCH PIPE OPENINGS FOR ALL PIPE LINES, FOUR (4) REQ. (TYPICAL)

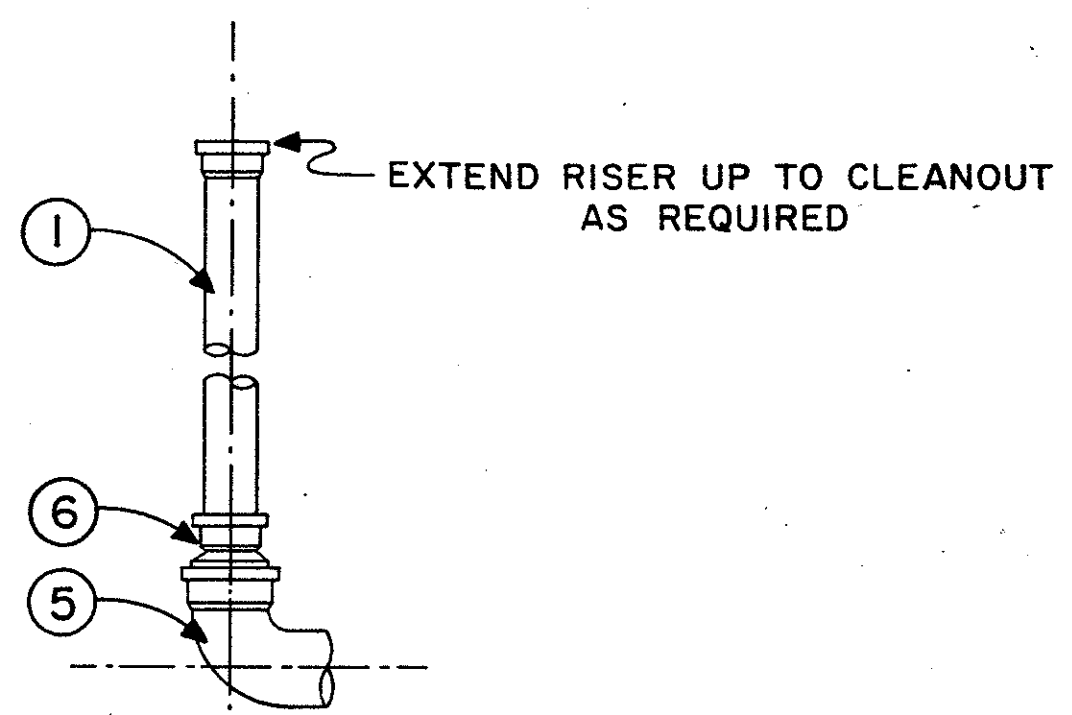
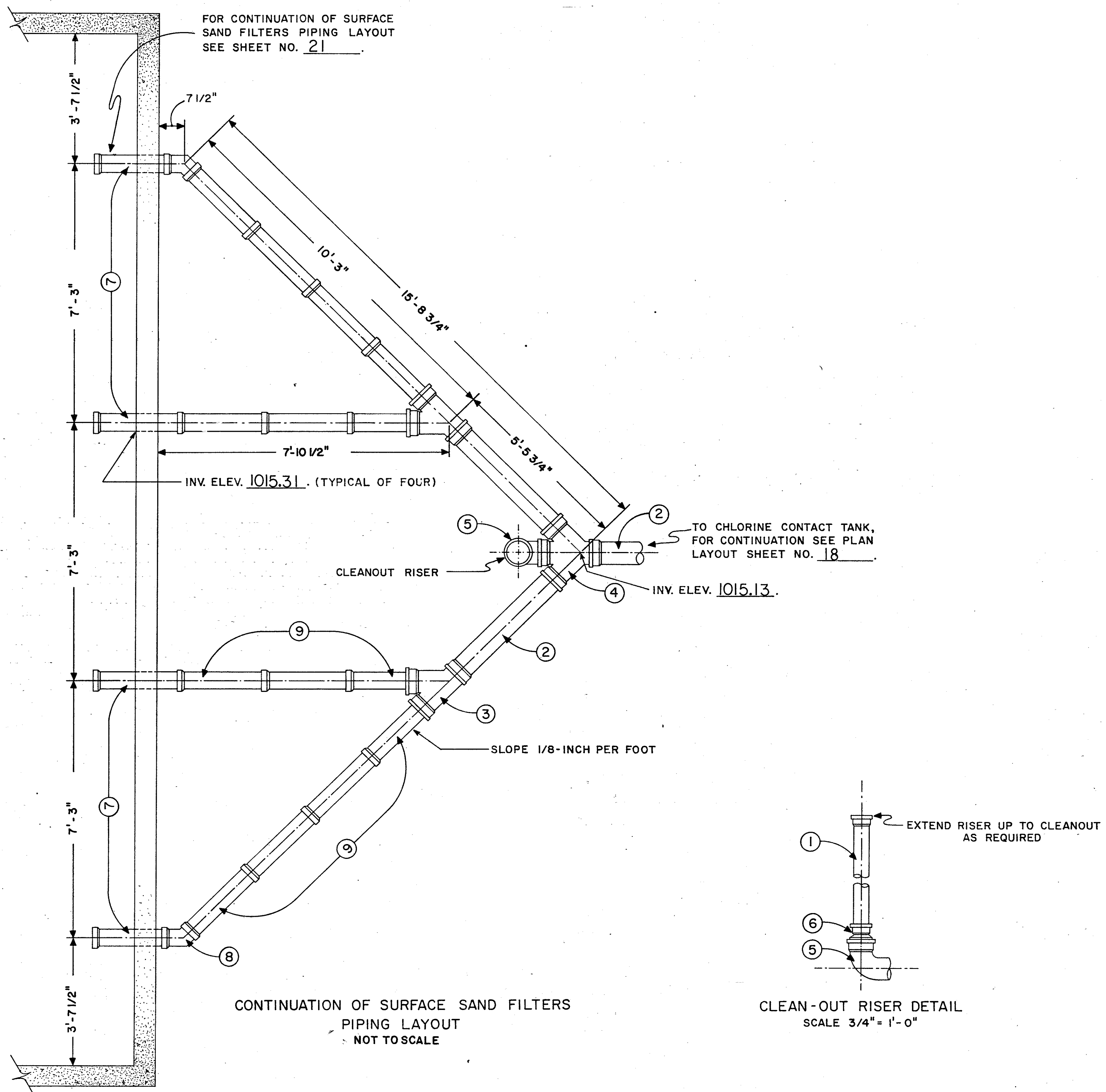
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	DATE	PEREPA.
	3-1-78	7-28-78
SURFACE SAND FILTERS 10,000 GPD	8-8-78	12-12-80
	10-5-82	

TRUMBULL COUNTY
TRU-80-10.90

PIPE AND FITTING LEGEND

- ① 4-INCH EXTRA HEAVY CAST-IRON SOIL PIPE, BELL AND SPIGOT, WITH LEAD AND OAKUM CAULKED JOINTS.
- ② 6-INCH, SAME AS ABOVE
- ③ 6-INCH X 6-INCH EXTRA HEAVY CAST-IRON SOIL 45° WYE, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- ④ 6-INCH X 6-INCH EXTRA HEAVY CAST-IRON SOIL DOUBLE WYE BRANCH, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- ⑤ 6-INCH EXTRA HEAVY CAST-IRON SOIL 1/4 BEND, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- ⑥ 6-INCH X 4-INCH EXTRA HEAVY CAST-IRON SOIL REDUCER, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- 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 EXTRA HEAVY CAST-IRON SOIL 1/8 BEND, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- ⑪ 4-INCH X 2-INCH EXTRA HEAVY CAST-IRON SOIL 45° WYE AND 1/8 BEND, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- ⑫ 4-INCH EXTRA HEAVY CAST-IRON SOIL 1/4 BEND, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.
- ⑬ 2-INCH EXTRA HEAVY CAST-IRON SOIL PIPE, BELL AND SPIGOT, WITH LEAD AND OAKUM JOINTS.

NOTE: Extra Heavy Cast Iron Pipe noted above shall be understood to read Service Weight (SV) Cast Iron Soil Pipe and Fittings.



CLEAN-OUT RISER DETAIL
SCALE 3/4" = 1'-0"

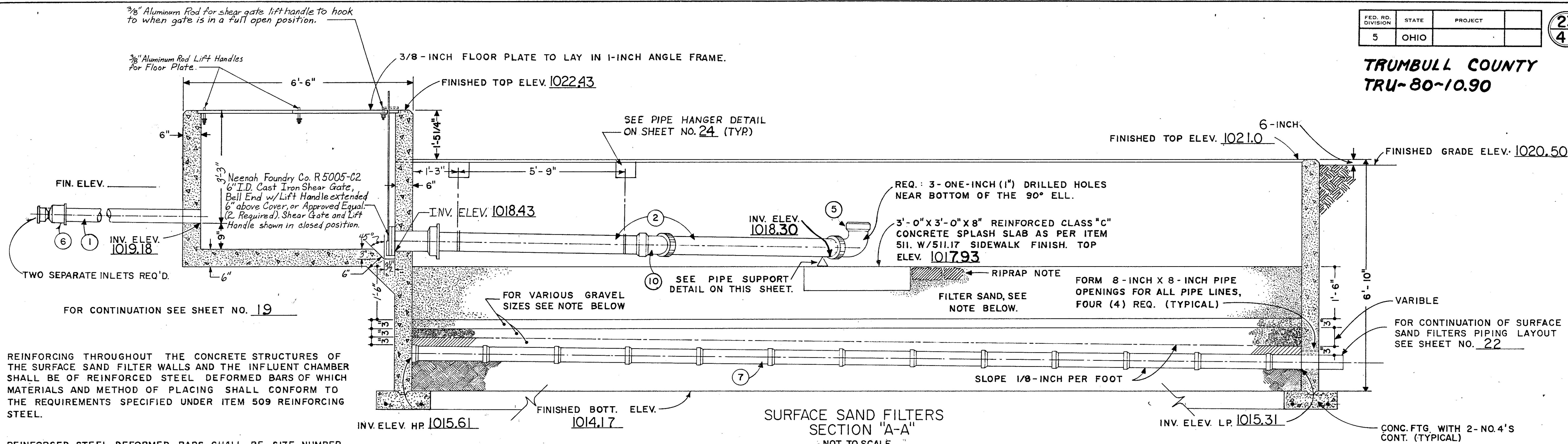
CONTINUATION OF SURFACE SAND FILTERS
PIPING LAYOUT
NOT TO SCALE

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
SURFACE SAND FILTERS 10,000 GPD	DATE 3-1-78 7-28-78 8-8-78

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

23
41

TRUMBULL COUNTY
TRU-80-10.90

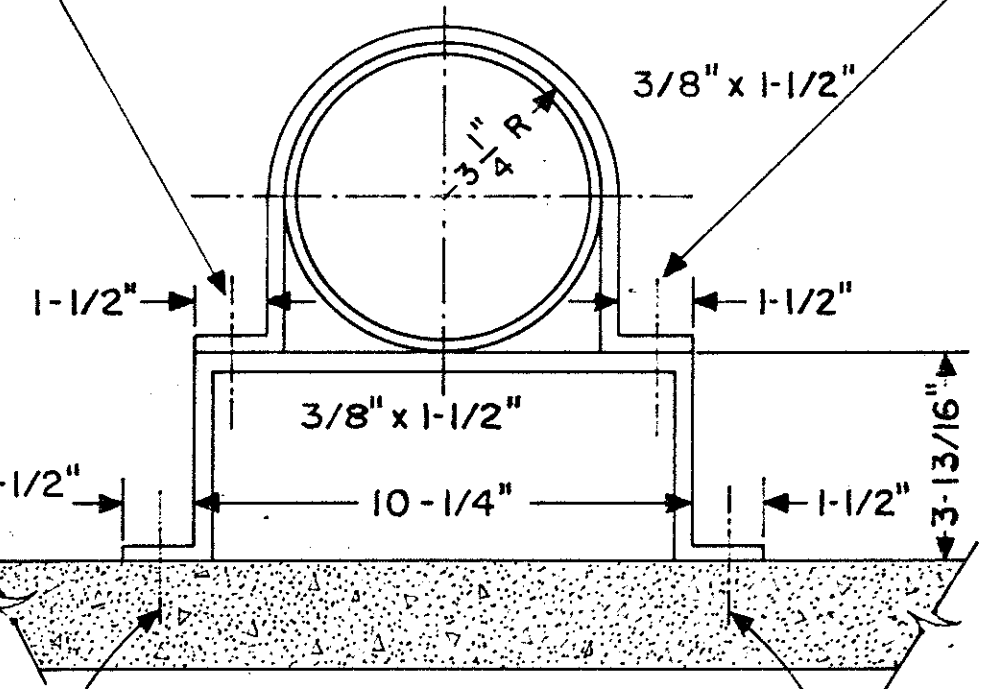


REINFORCING THROUGHOUT THE CONCRETE STRUCTURES OF THE SURFACE SAND FILTER WALLS AND THE INFLUENT CHAMBER SHALL BE OF REINFORCED STEEL DEFORMED BARS OF WHICH MATERIALS AND METHOD OF PLACING SHALL CONFORM TO THE REQUIREMENTS SPECIFIED UNDER ITEM 509 REINFORCING STEEL.

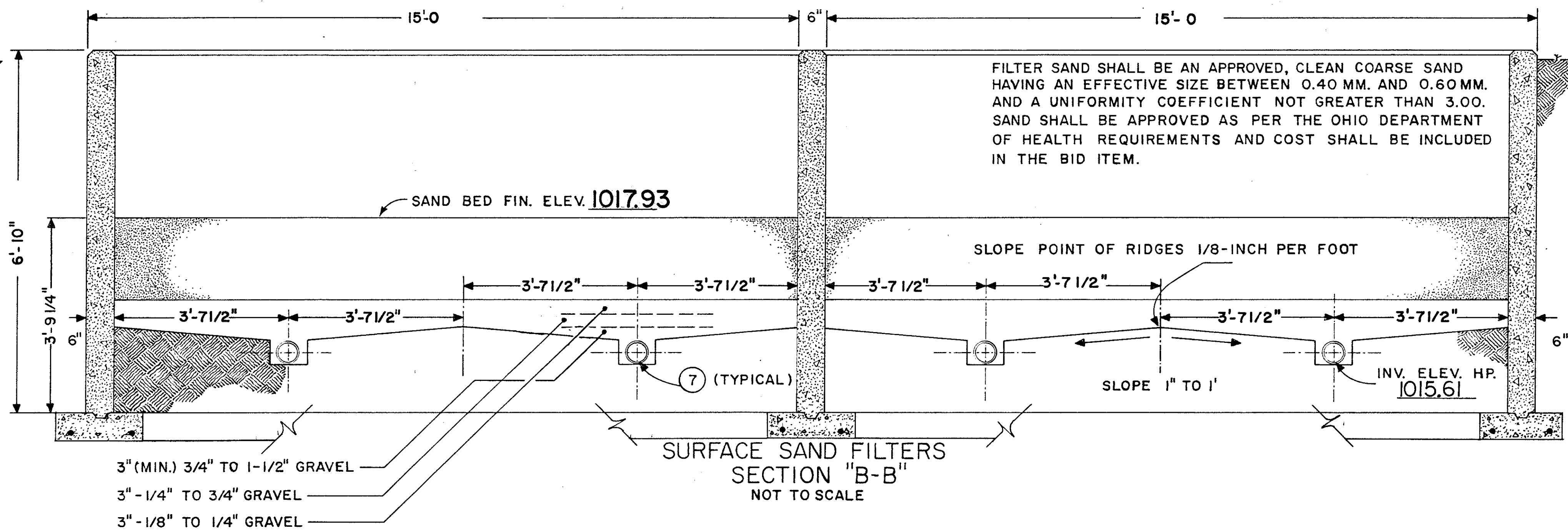
REINFORCED STEEL DEFORMED BARS SHALL BE SIZE NUMBER 4'S (.500"), PLACED AT TWELVE-INCHES (12") ON CENTERS, EACH WAY THROUGHOUT THE CONSTRUCTION OF THE SURFACE SAND FILTER WALLS AND INFLUENT CHAMBER WALLS AND BASE. STANDARD BENDS AND SPLICES SHALL CONFORM TO ITEM 509. REINFORCING STEEL SHALL BE AS PER 709-REINFORCING STEEL. ALLOW 2-INCHES BETWEEN STEEL AND INTERIOR FACE OF WALLS.

CONSTRUCT FROM SPECIFIED CLIP ANCHOR MATERIAL, SIZE 3/8-INCH x 1-1/2-INCH.

1/2-INCH x 2-INCH CADMIUM PLATED BOLTS W/ DOUBLE WASHERS AND CADMIUM PLATED NUTS.



1/2-INCH ANCHOR SHIELDS W/ WASHERS AND 1/2-INCH CADMIUM PLATED BOLTS.
PIPE SUPPORT AT 90° ELLS
SCALE 3" = 1'-0"

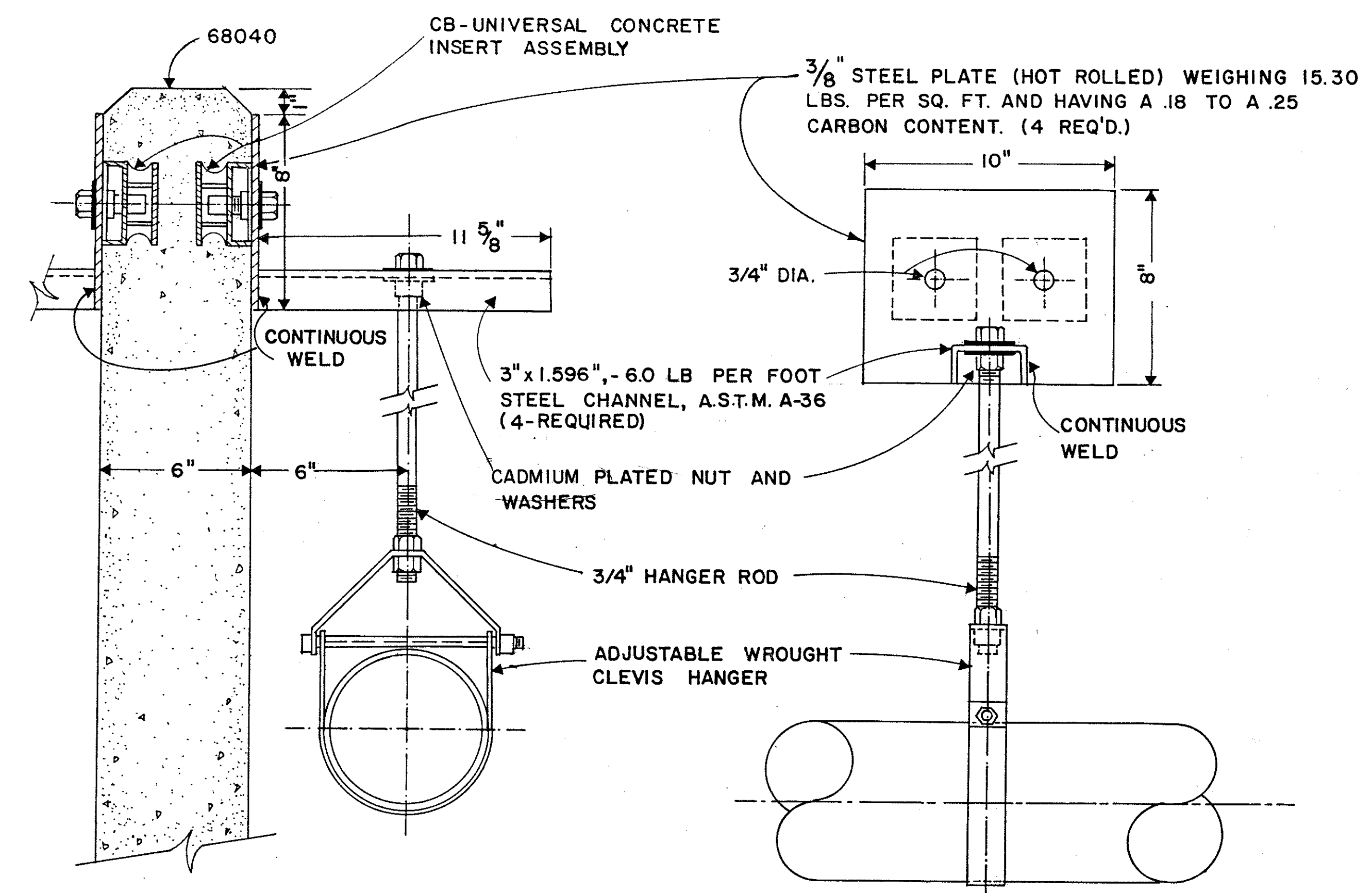


3" (MIN.) 3/4" TO 1-1/2" GRAVEL
3" - 1/4" TO 3/4" GRAVEL
3" - 1/8" TO 1/4" GRAVEL

FILTER SAND SHALL BE AN APPROVED, CLEAN COARSE SAND HAVING AN EFFECTIVE SIZE BETWEEN 0.40 MM. AND 0.60 MM. AND A UNIFORMITY COEFFICIENT NOT GREATER THAN 3.00. SAND SHALL BE APPROVED AS PER THE OHIO DEPARTMENT OF HEALTH REQUIREMENTS AND COST SHALL BE INCLUDED IN THE BID ITEM.

RIPRAP NOTE:
FURNISH AND INSTALL EIGHTEEN-INCHES, WIDTH, OF RIPRAP AROUND THE PERIMETER OF THE CONCRETE SPLASH BLOCKS. RIPRAP SHALL COMPLY TO 601.04 - RIPRAP.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
SURFACE SAND FILTERS 10,000 GPD	DATE 3-1-78 7-28-78 8-8-78 2-25-81 10-5-82



PIPE HANGER DETAILS
SCALE 3" = 1'-0"

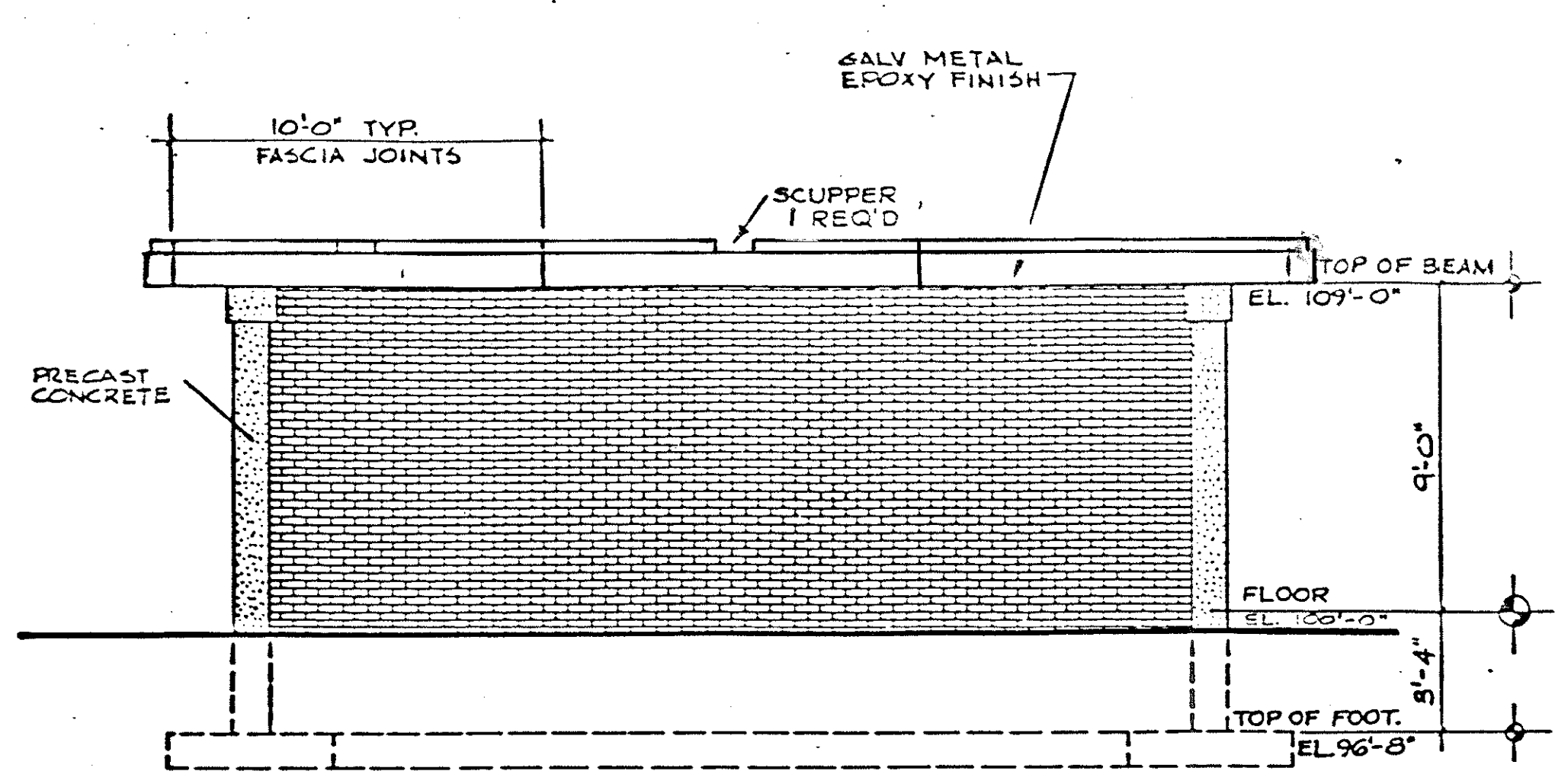
6-INCH ADJUSTABLE WROUGHT CLEVIS HANGER
GRINNELL FIG. NO. 260 OR EQUAL BY FEE & MASON OR ELCEN (4-REQUIRED)

CB-UNIVERSAL CONCRETE INSERT ASSEMBLY WITH
CADMIUM PLATED BOLT AND WASHER, GRINNELL
FIG. NO. 282 OR EQUAL BY FEE & MASON OR
ELCEN. (8 REQUIRED)

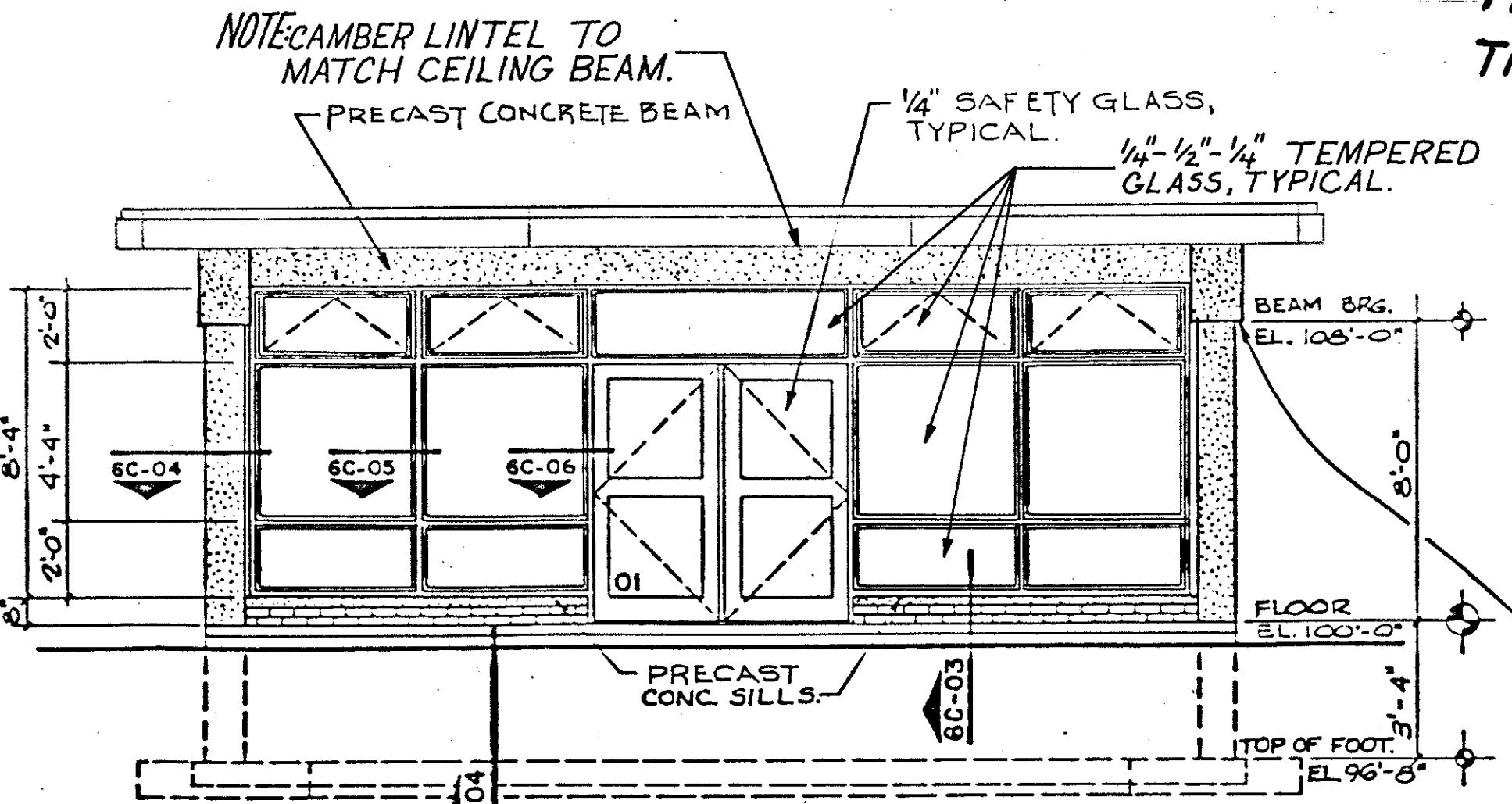
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
SURFACE SAND FILTERS 10,000 GALLON CAPACITY	DATE 3-1-78 1-21-83

TRUMBULL COUNTY
TRU-80-10.90

FHWA REGION	STATE	PROJECT	27 41
5	OHIO	TRUMBULL	

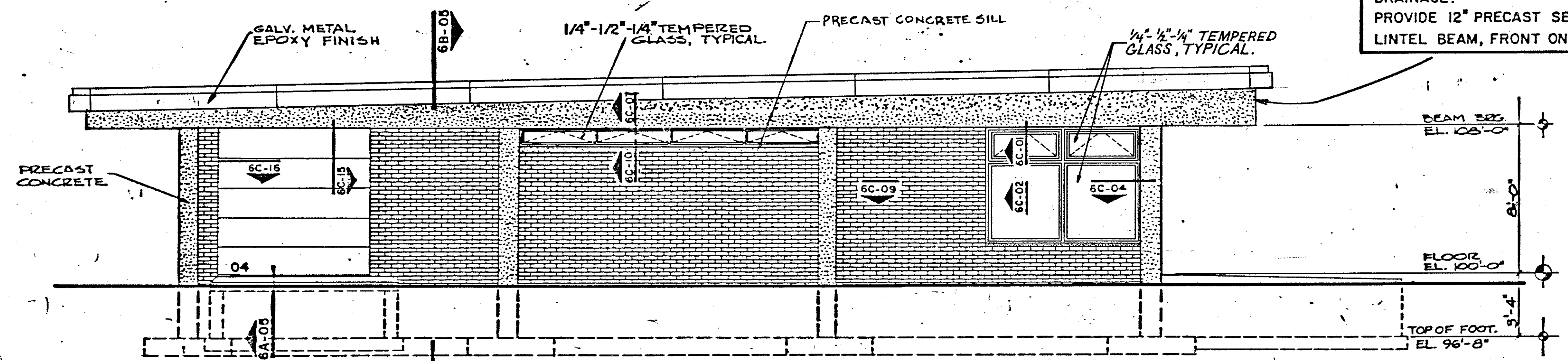


6B-01
REAR ELEVATION
1/4" = 1'-0"



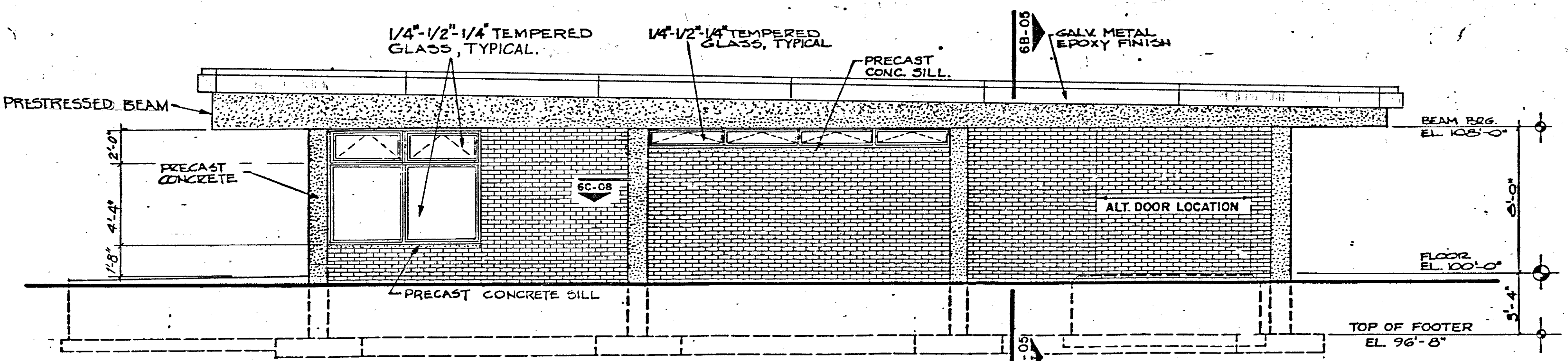
6B-02
FRONT ELEVATION
1/4" = 1'-0"

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.

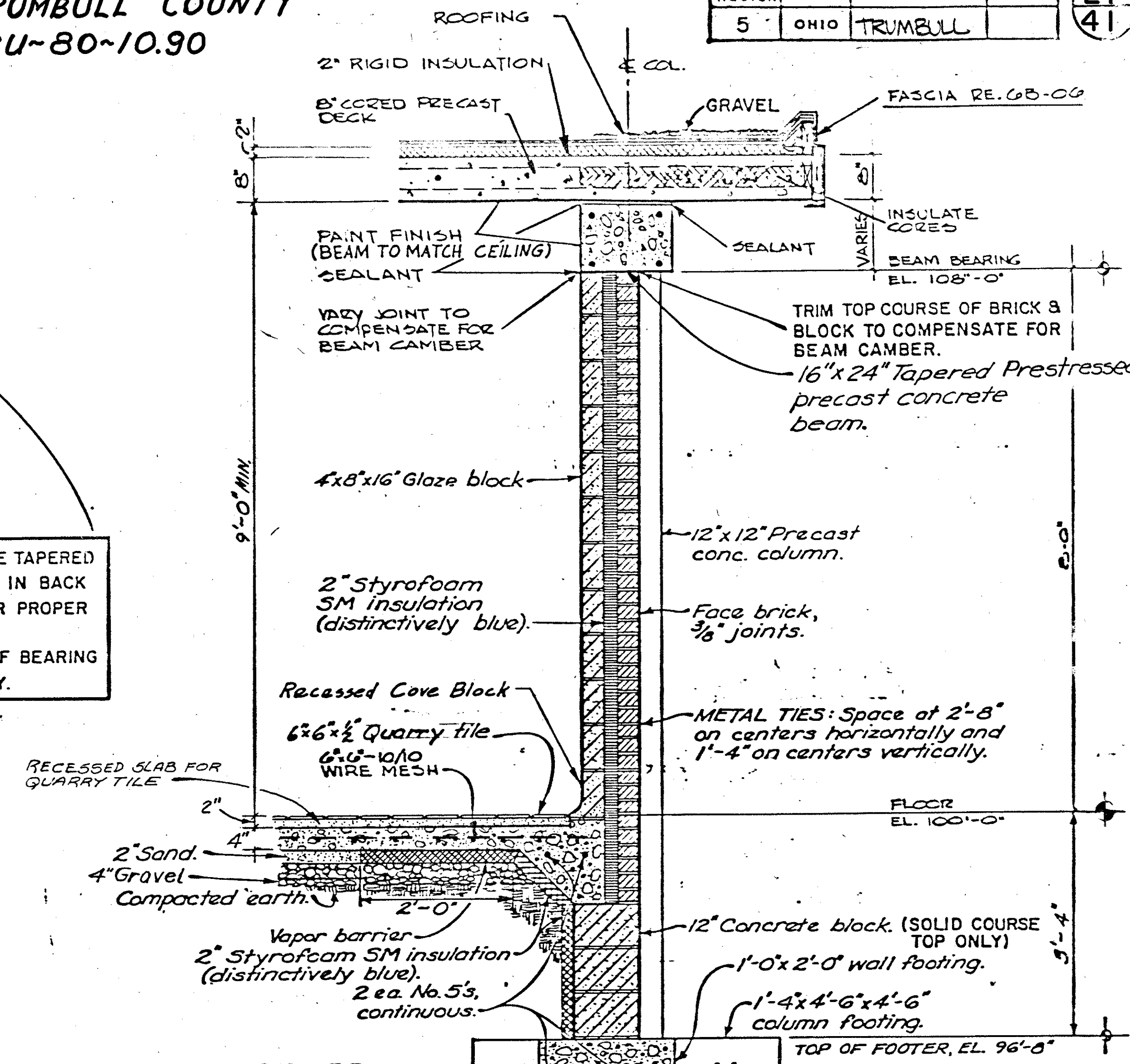
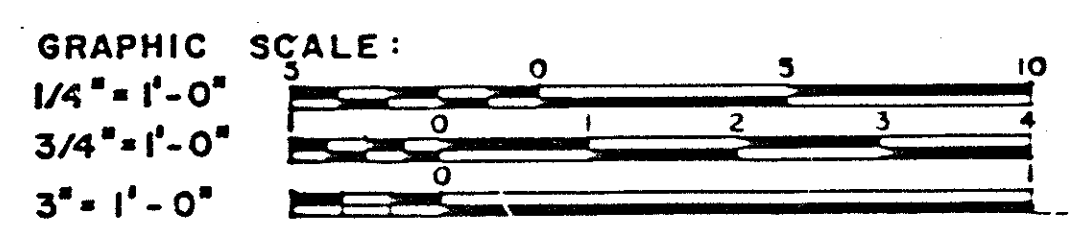


6B-03
LEFT SIDE ELEVATION
1/4" = 1'-0"

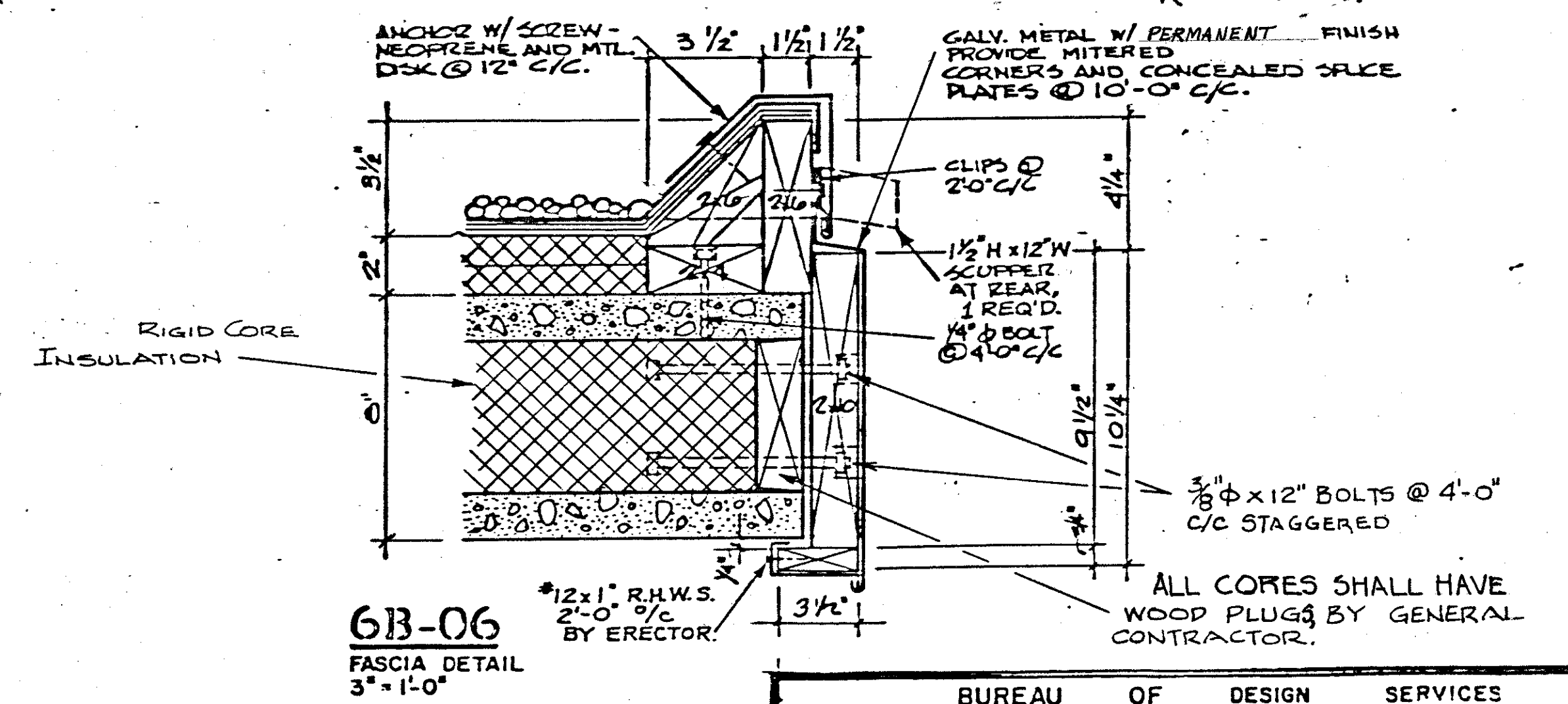
Note: Engineer must relate elevations of Motorist Services Building to elevations on site plan, Re: 6B-05.



6B-04
RIGHT SIDE ELEVATION
1/4" = 1'-0"

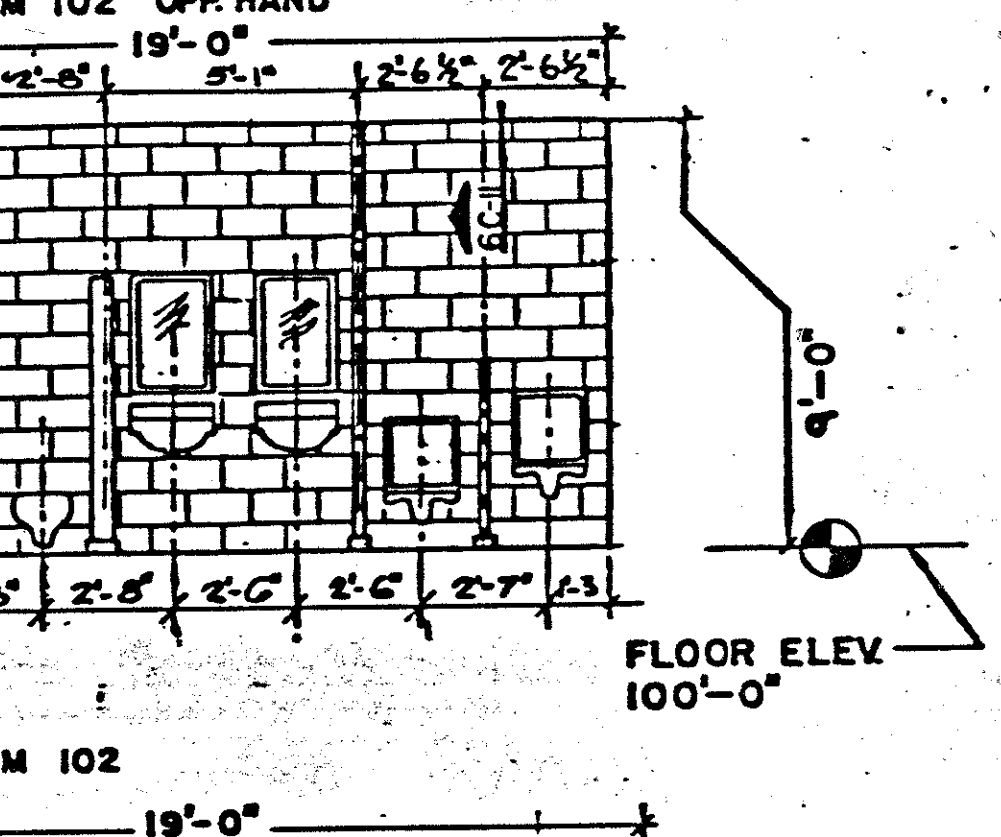
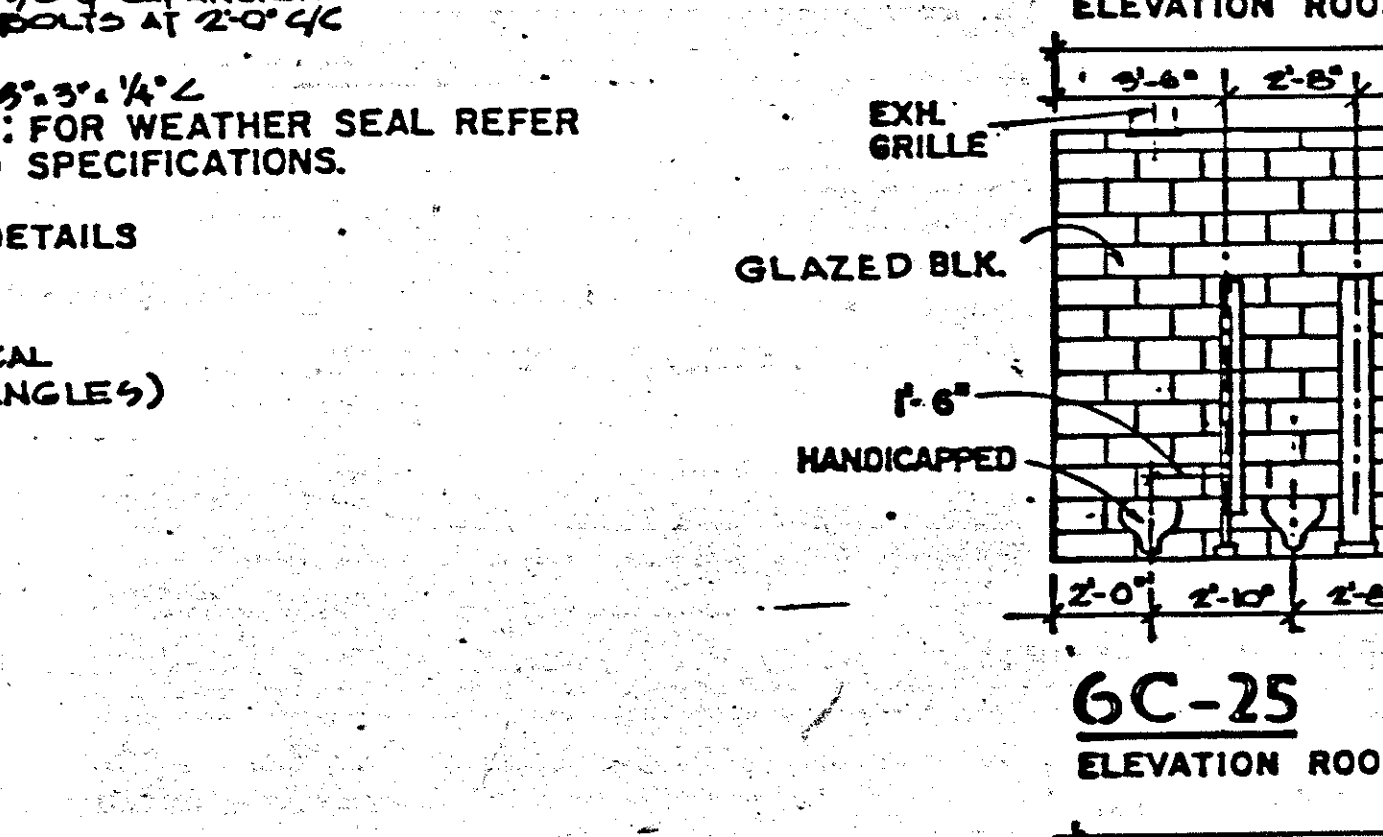
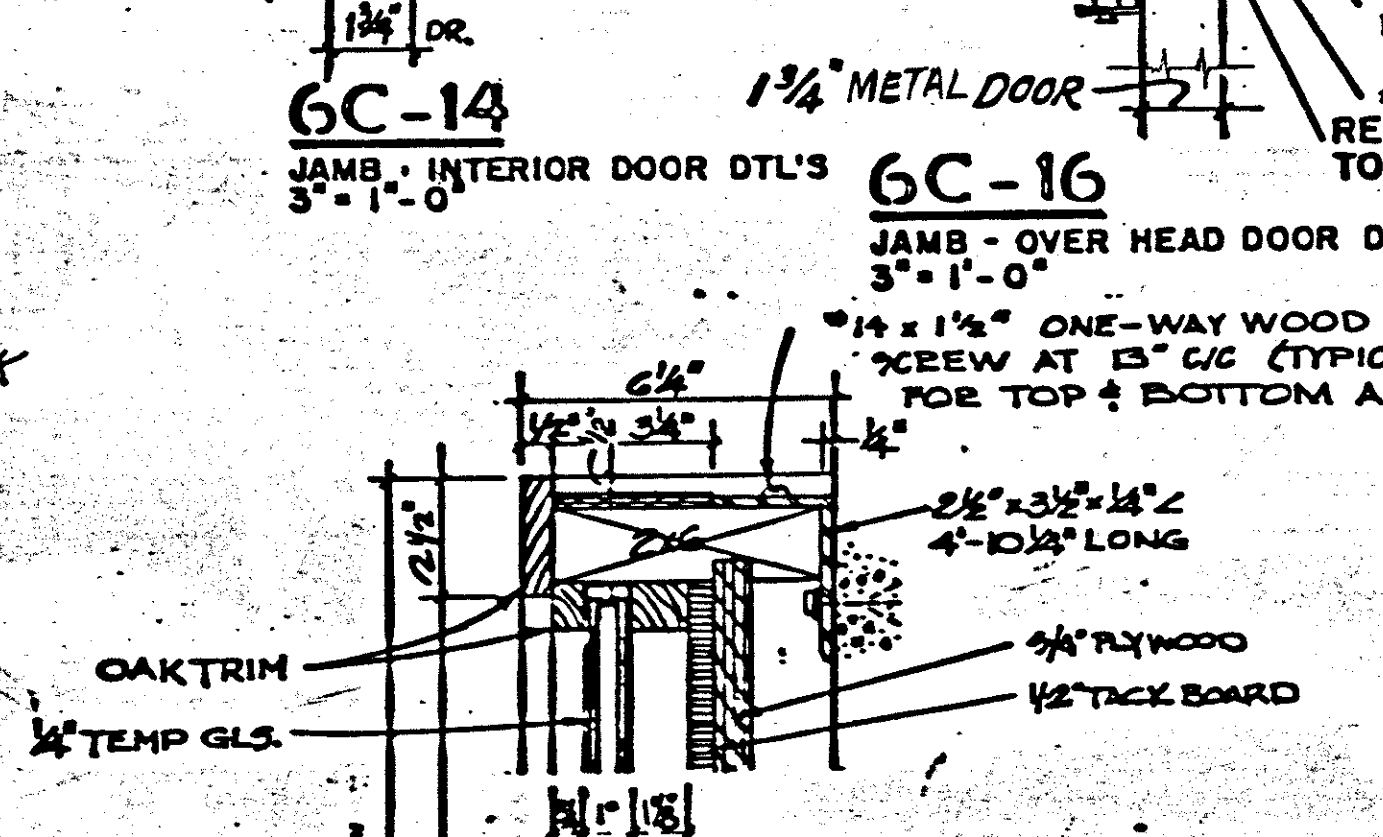
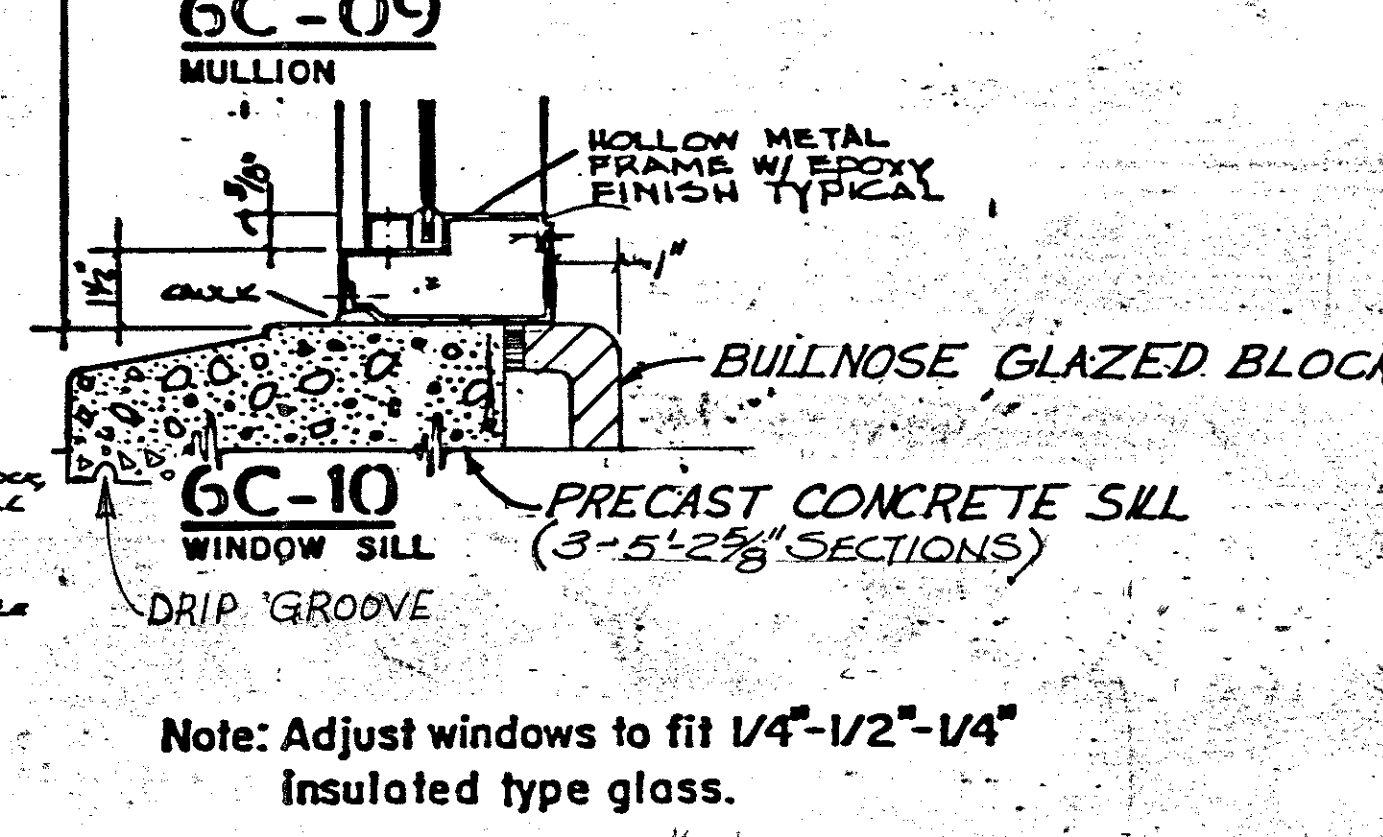
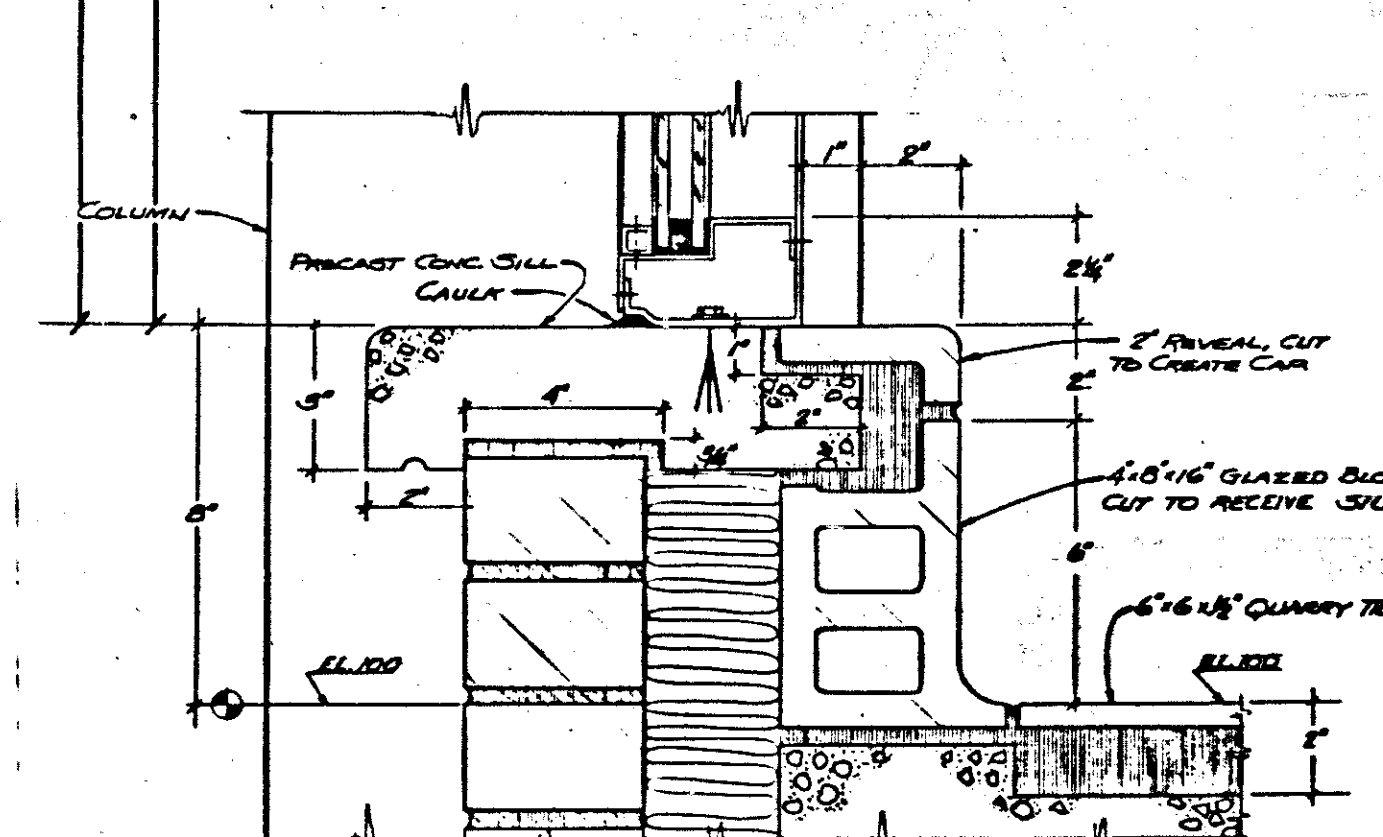
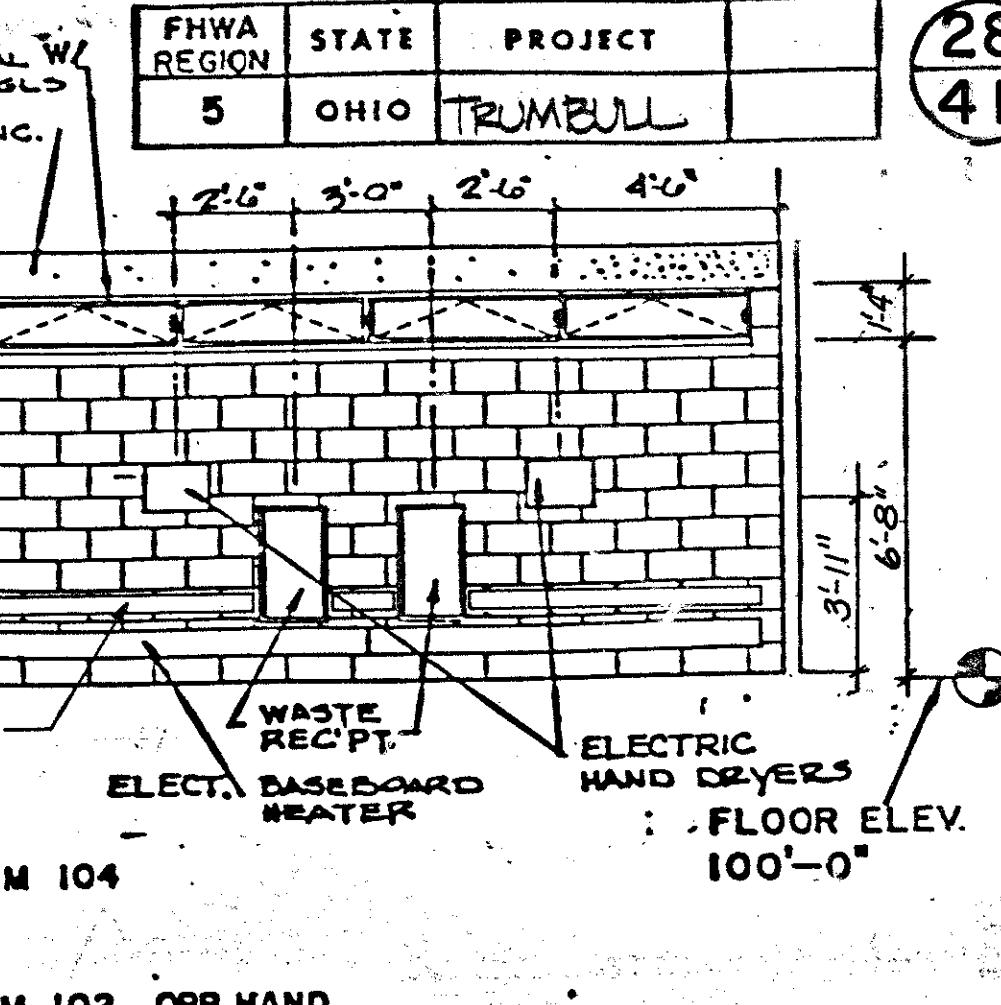
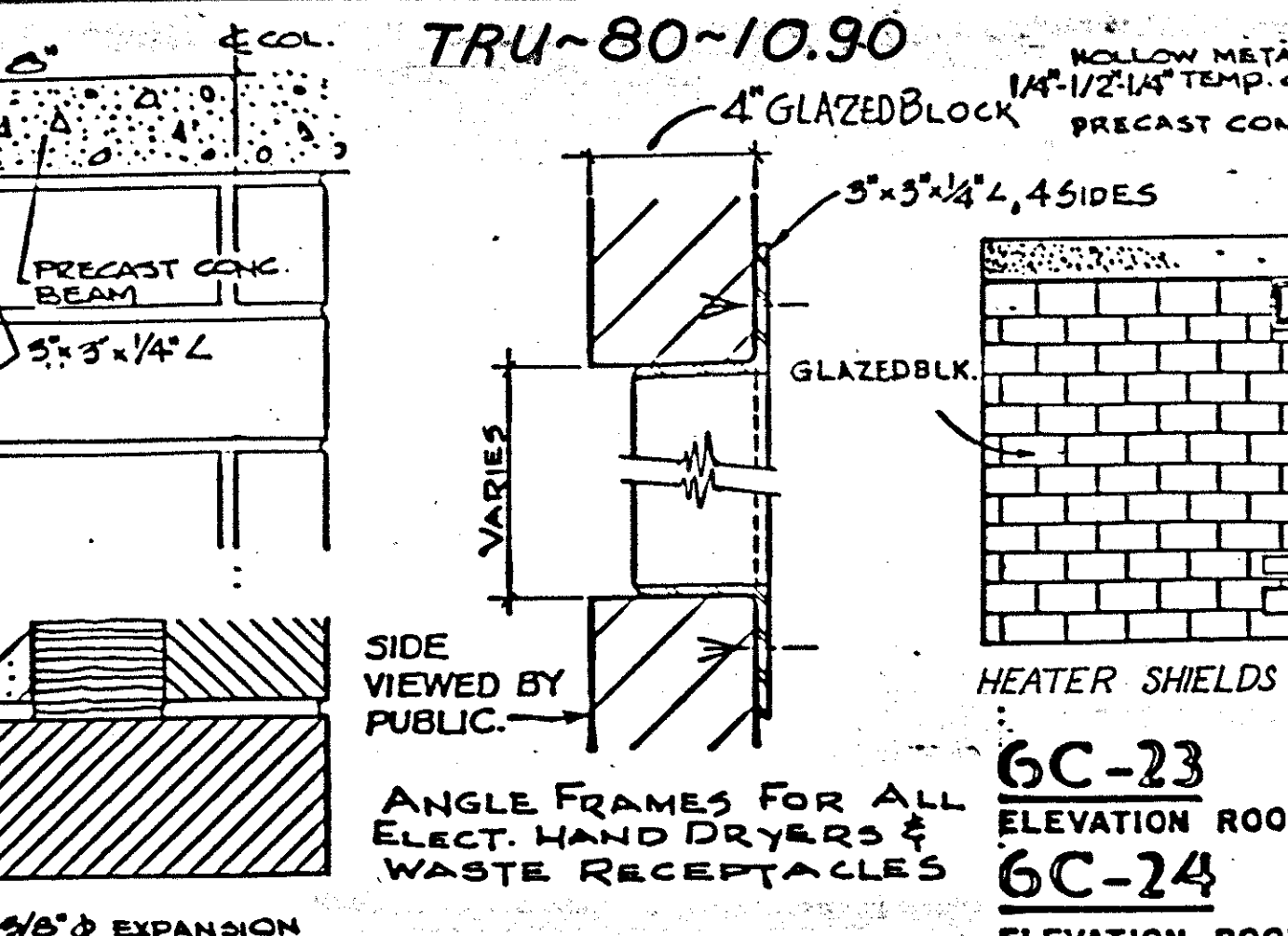
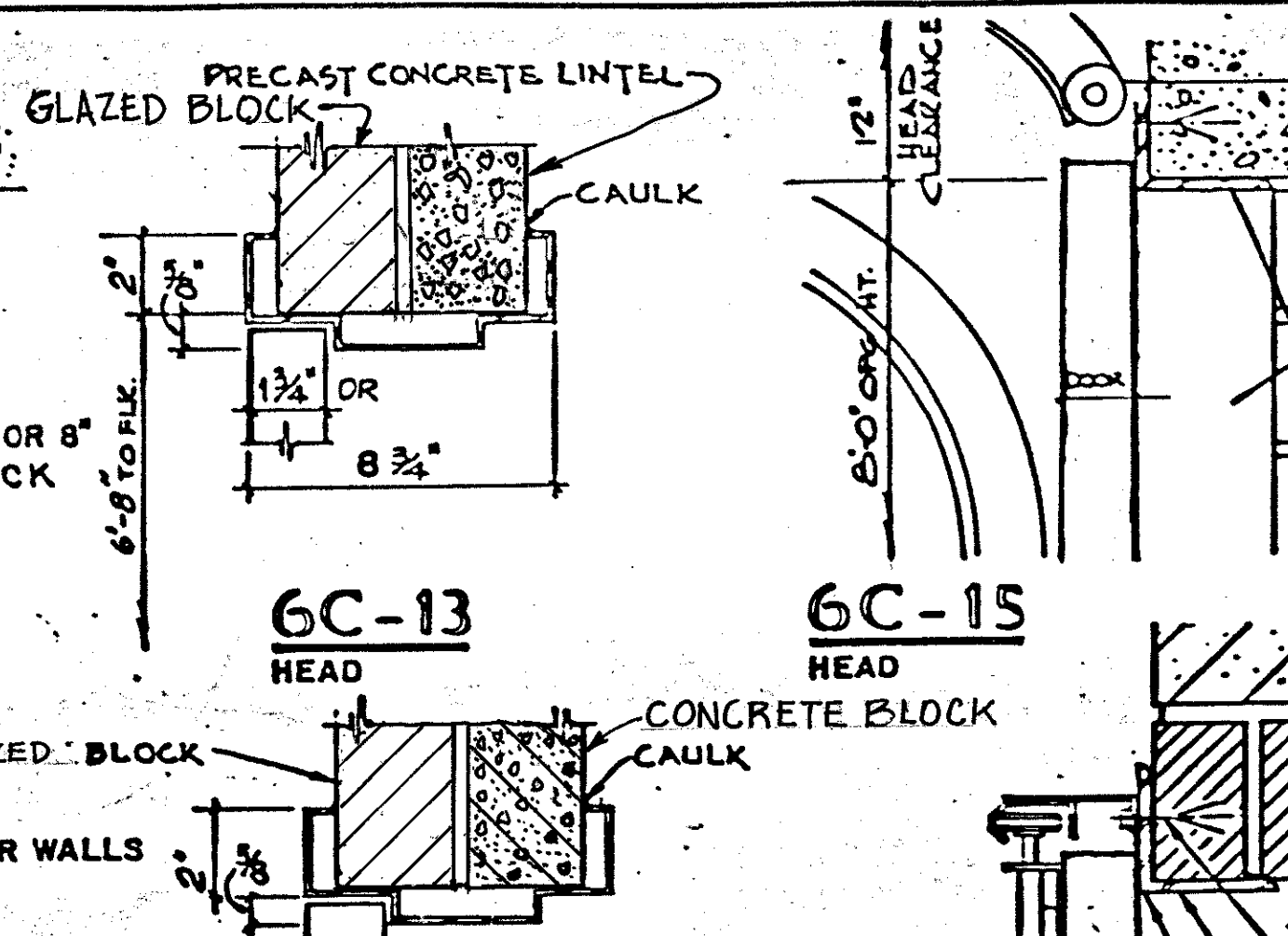
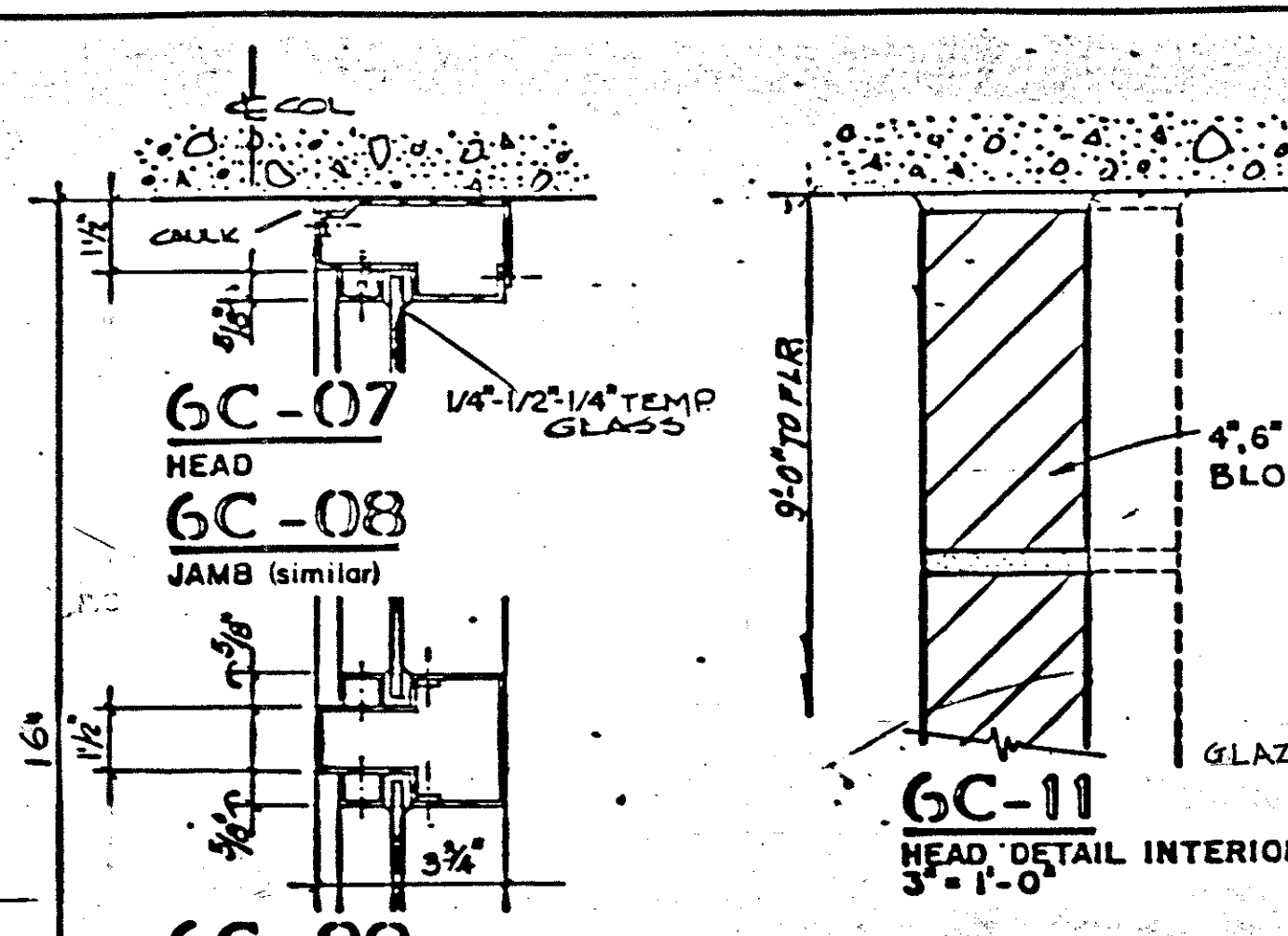
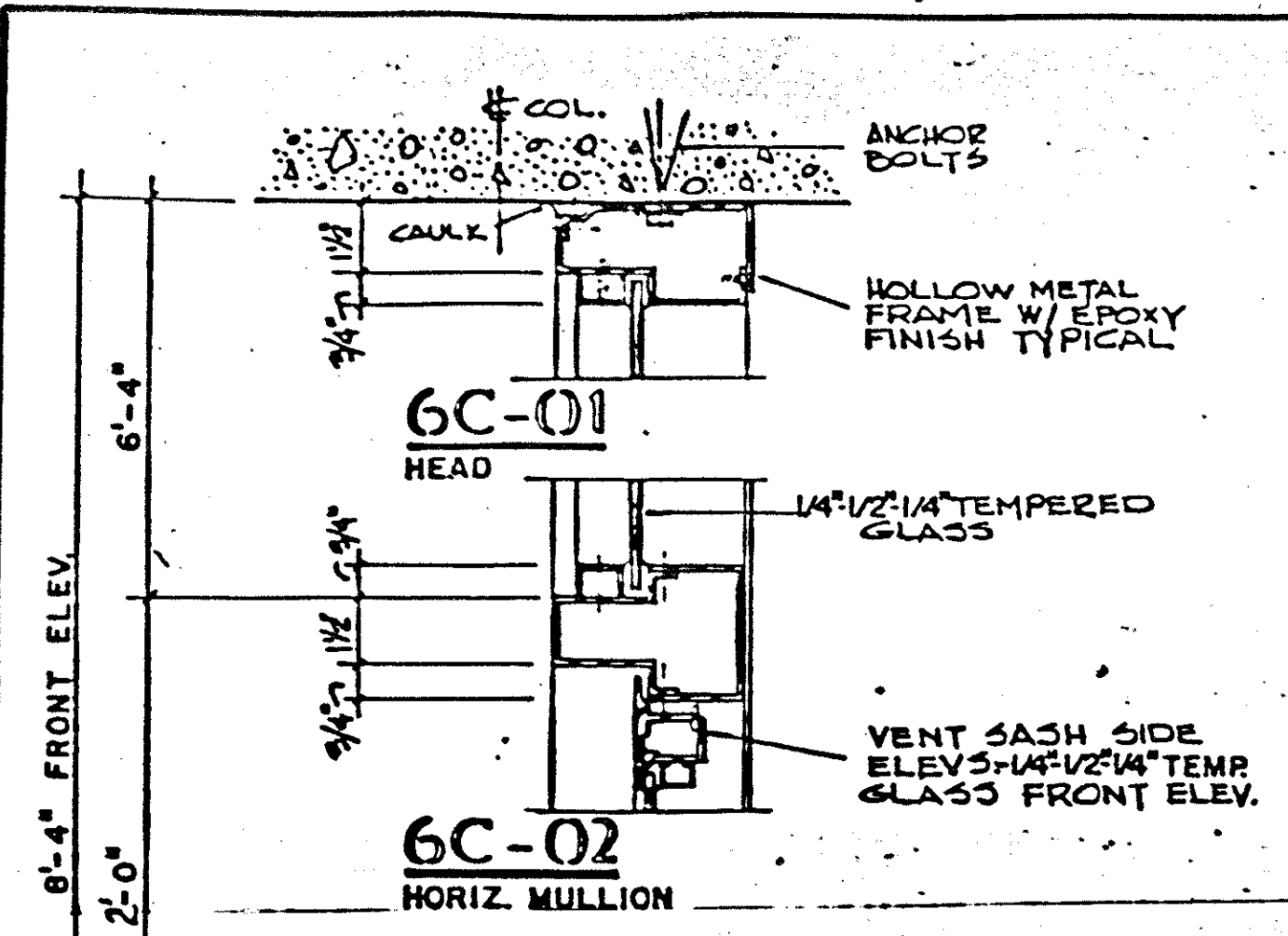


6B-05
TYPICAL WALL SECTION
3/4" = 1'-0"



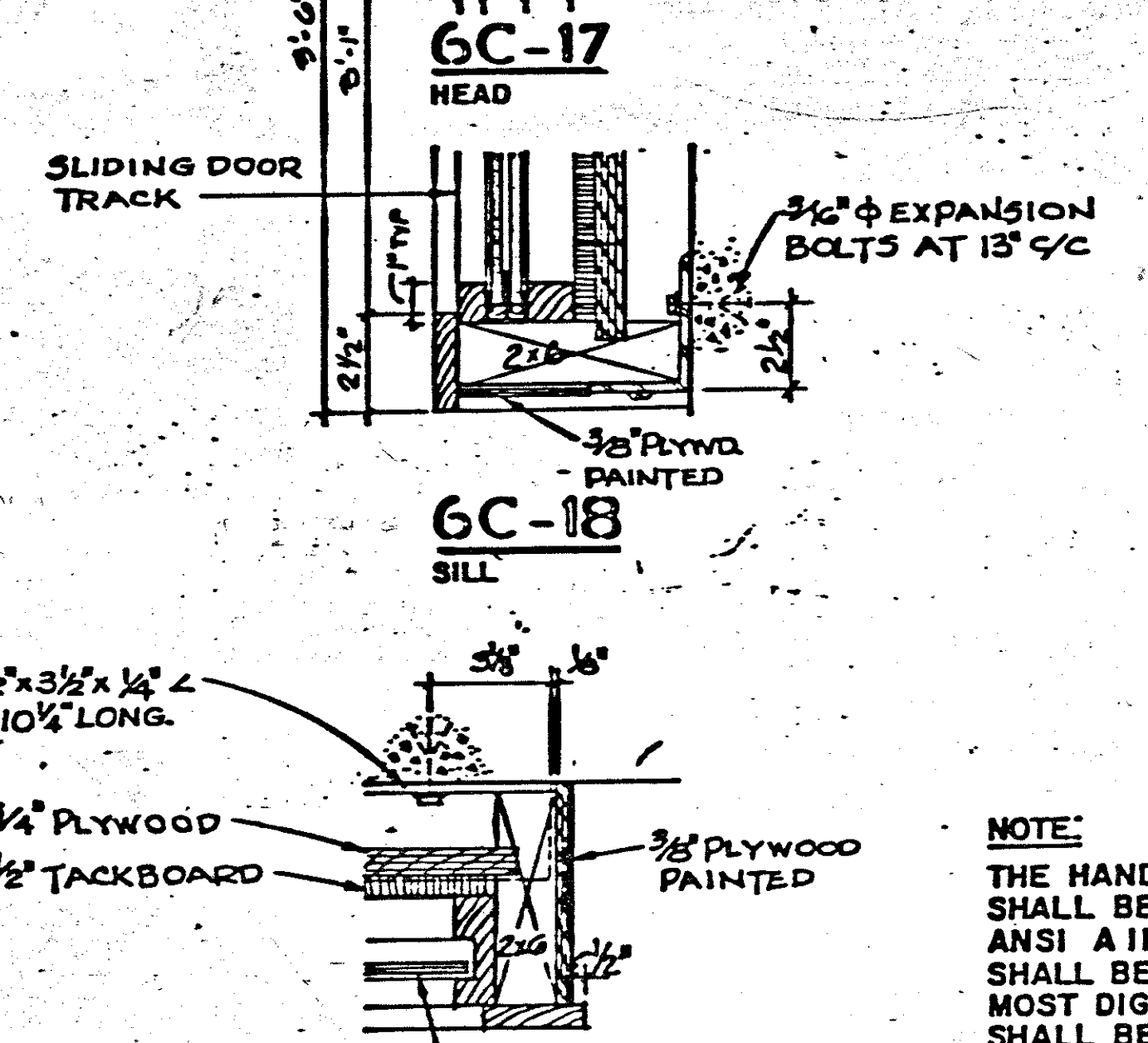
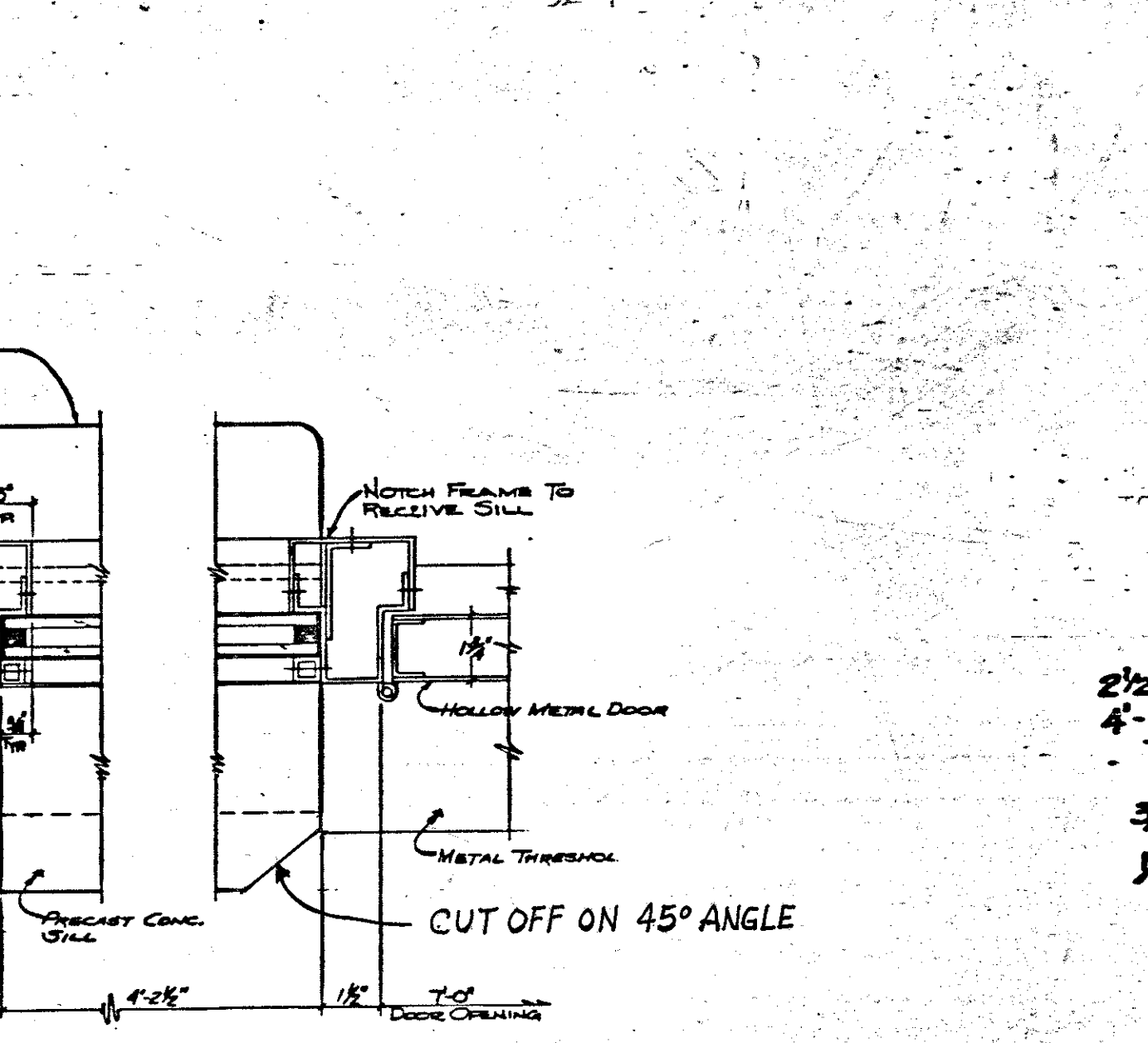
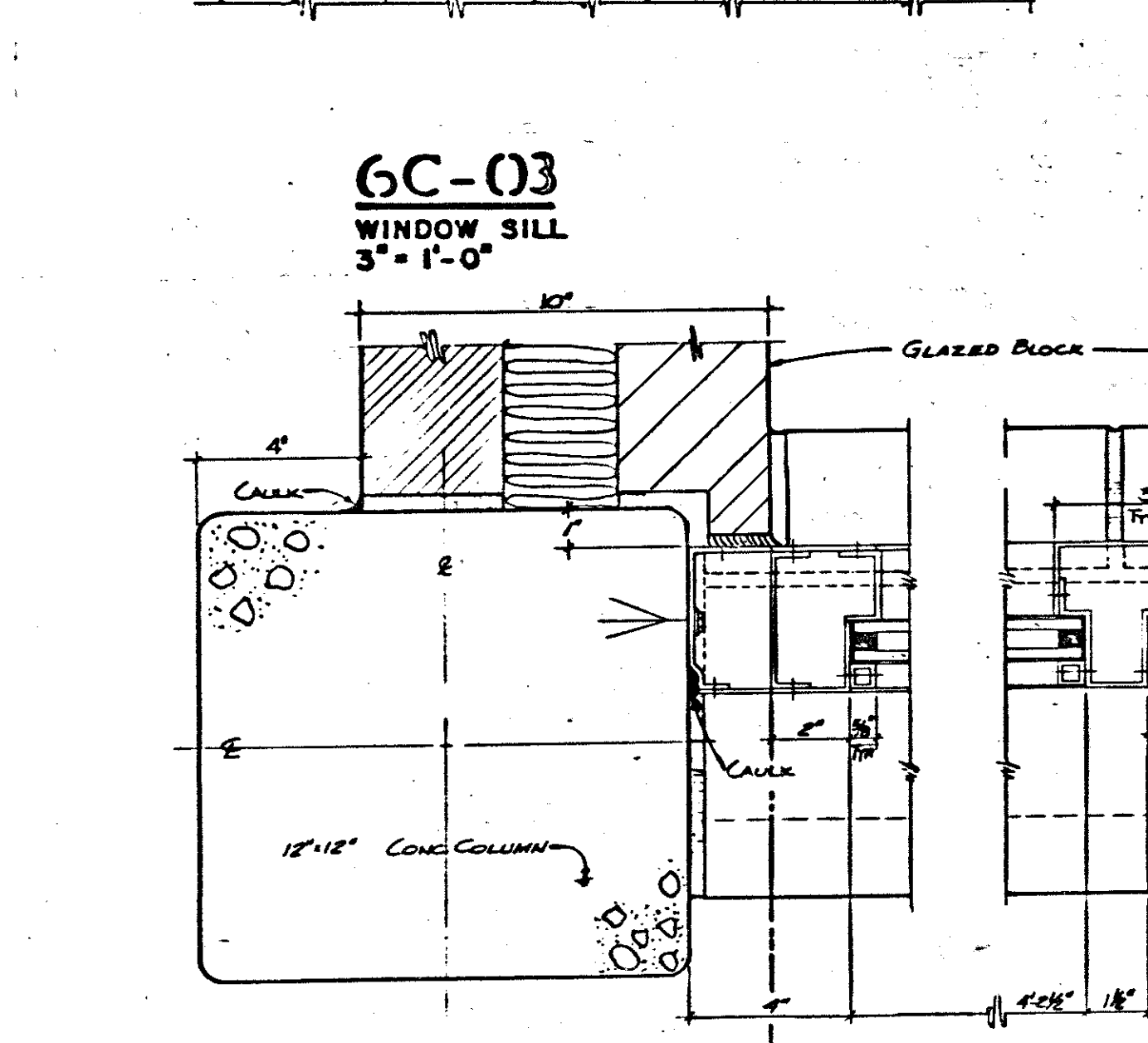
6B-06
FASCIA DETAIL
3" = 1'-0"

OHIO BUREAU OF DESIGN SERVICES		DEPARTMENT OF TRANSPORTATION	
REVISIONS: 10-13-82	MOTORIST SERVICES BUILDING & STORAGE UNIT		SHEET NO.: RRR 63
PREPARED BY DEPARTMENT OF PUBLIC WORKS ADAMS, HARDER, KIMCHROE, KOCHER, SWARINGEN			DATE: 9-1-70

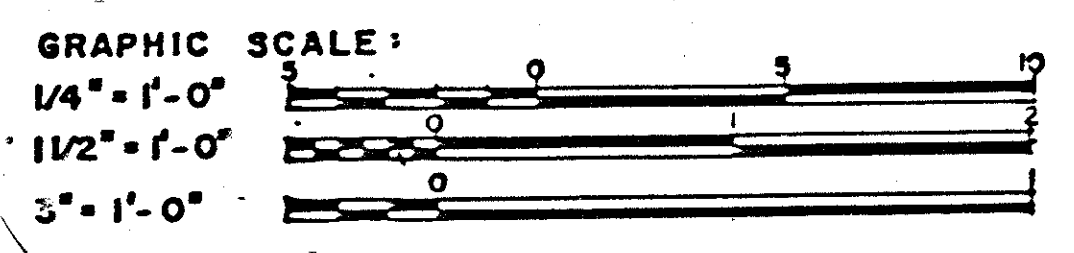
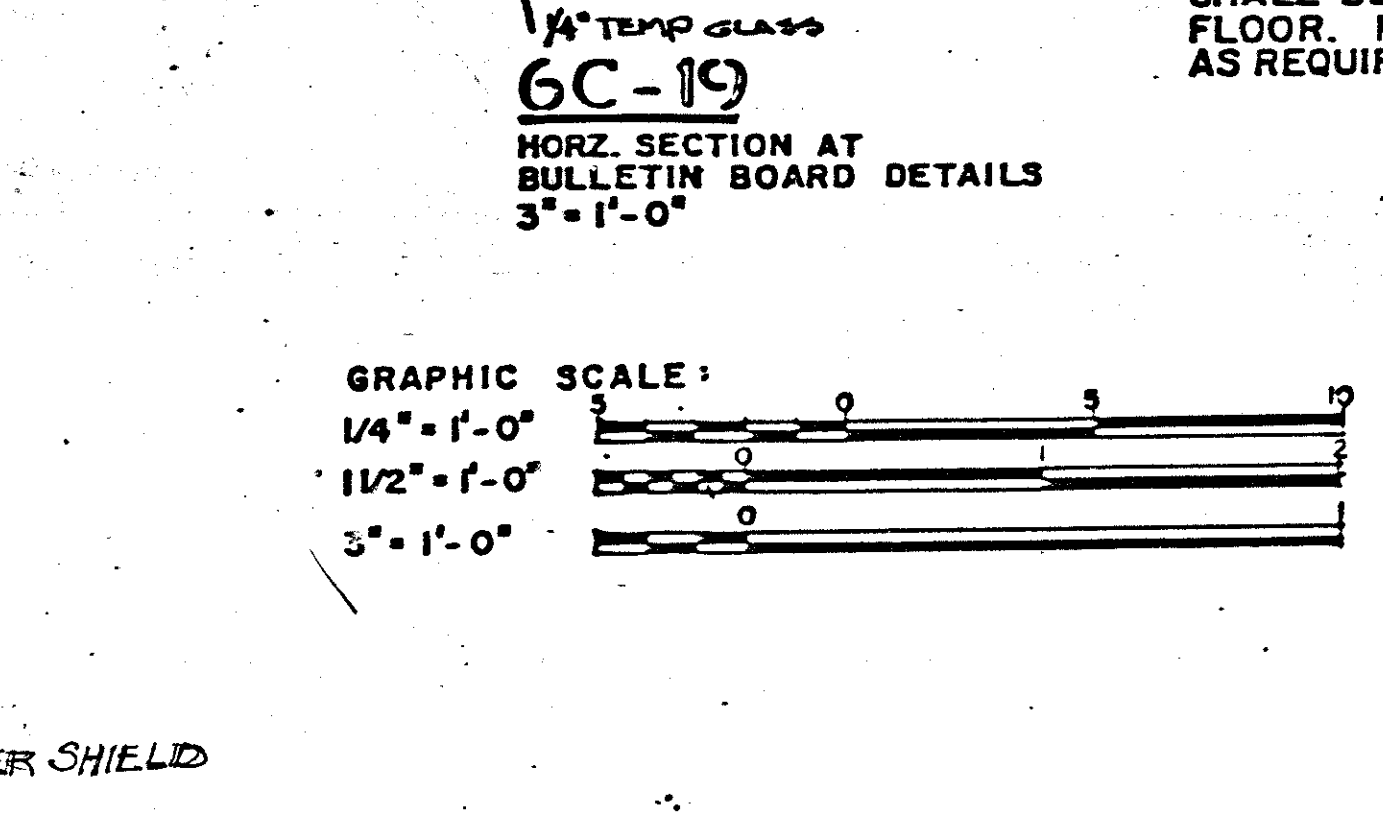
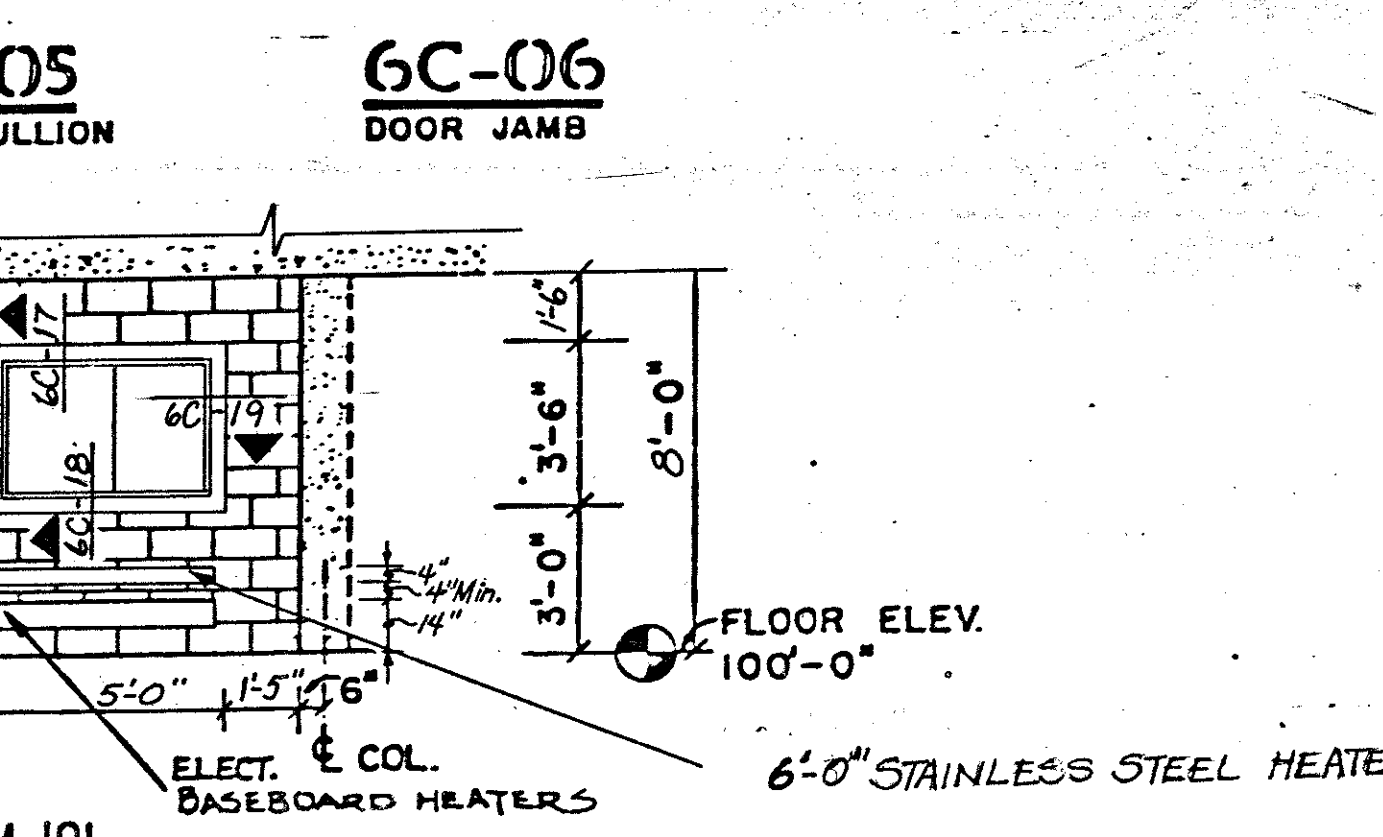
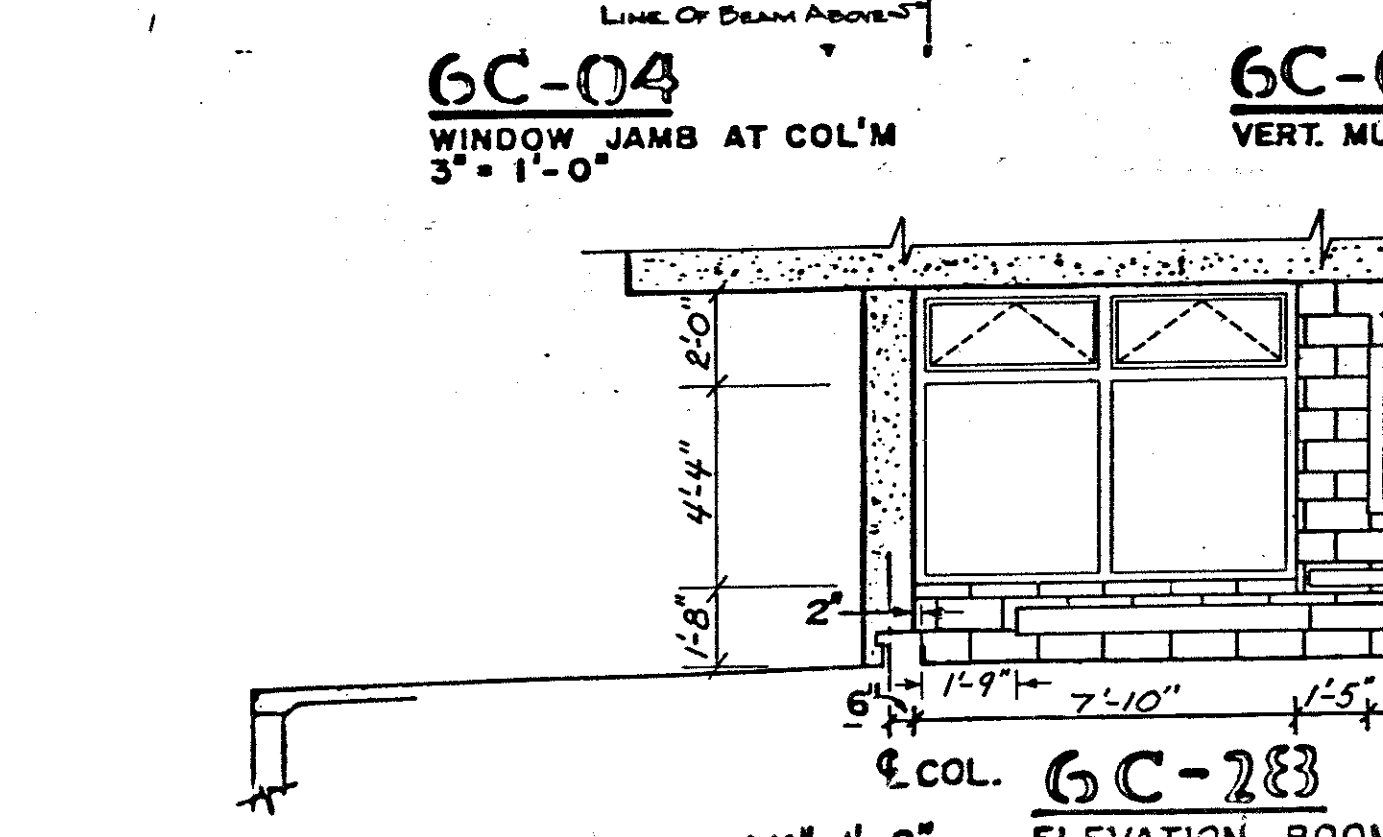
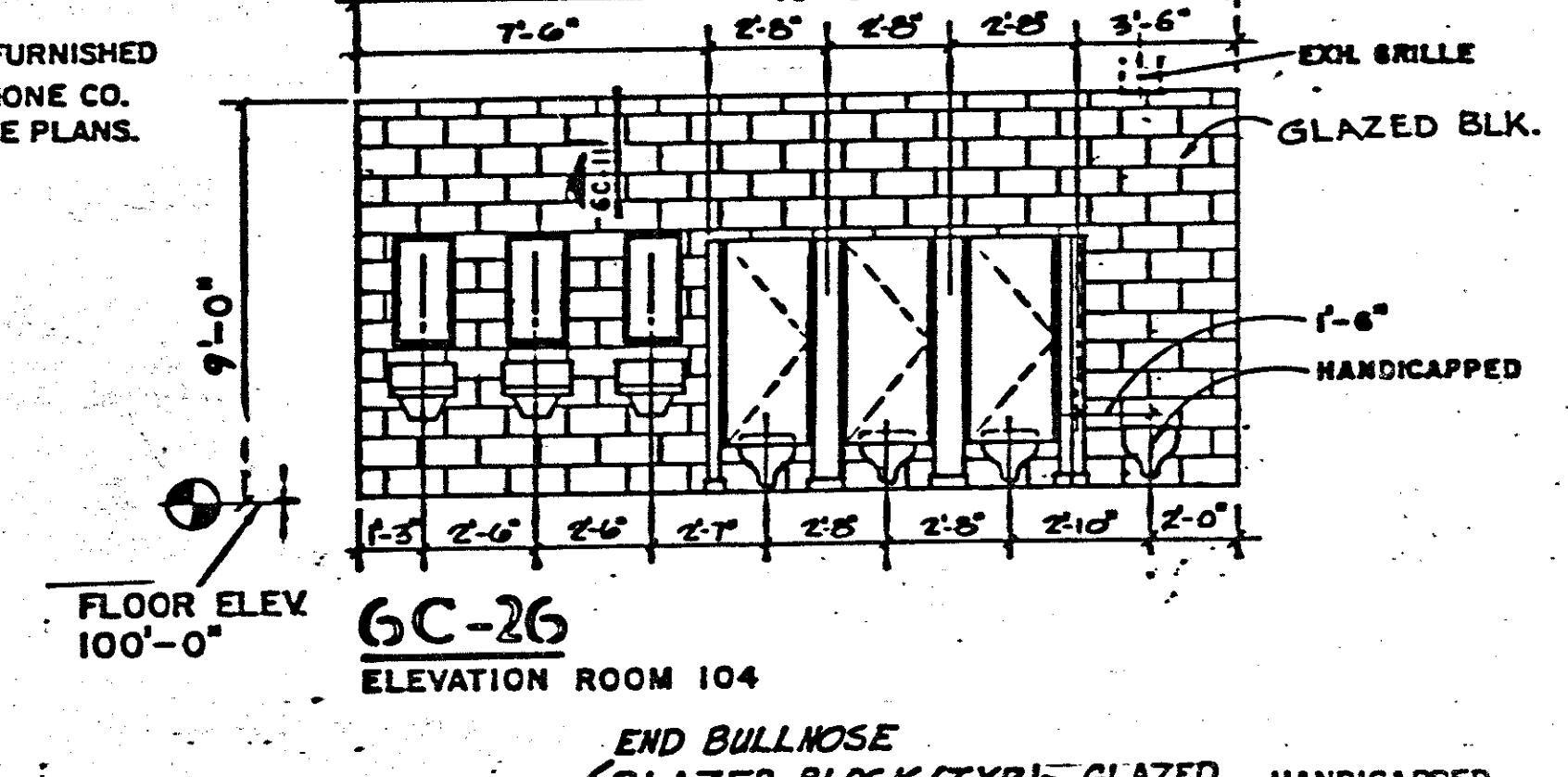


Note: Adjust windows to fit 1/4"-1/2"-1/4" insulated type glass.

NOTE: TELEPHONE BOOTHS ARE TO BE FURNISHED AND INSTALLED BY THE TELEPHONE CO. IN THE LOCATIONS SHOWN IN THE PLANS.



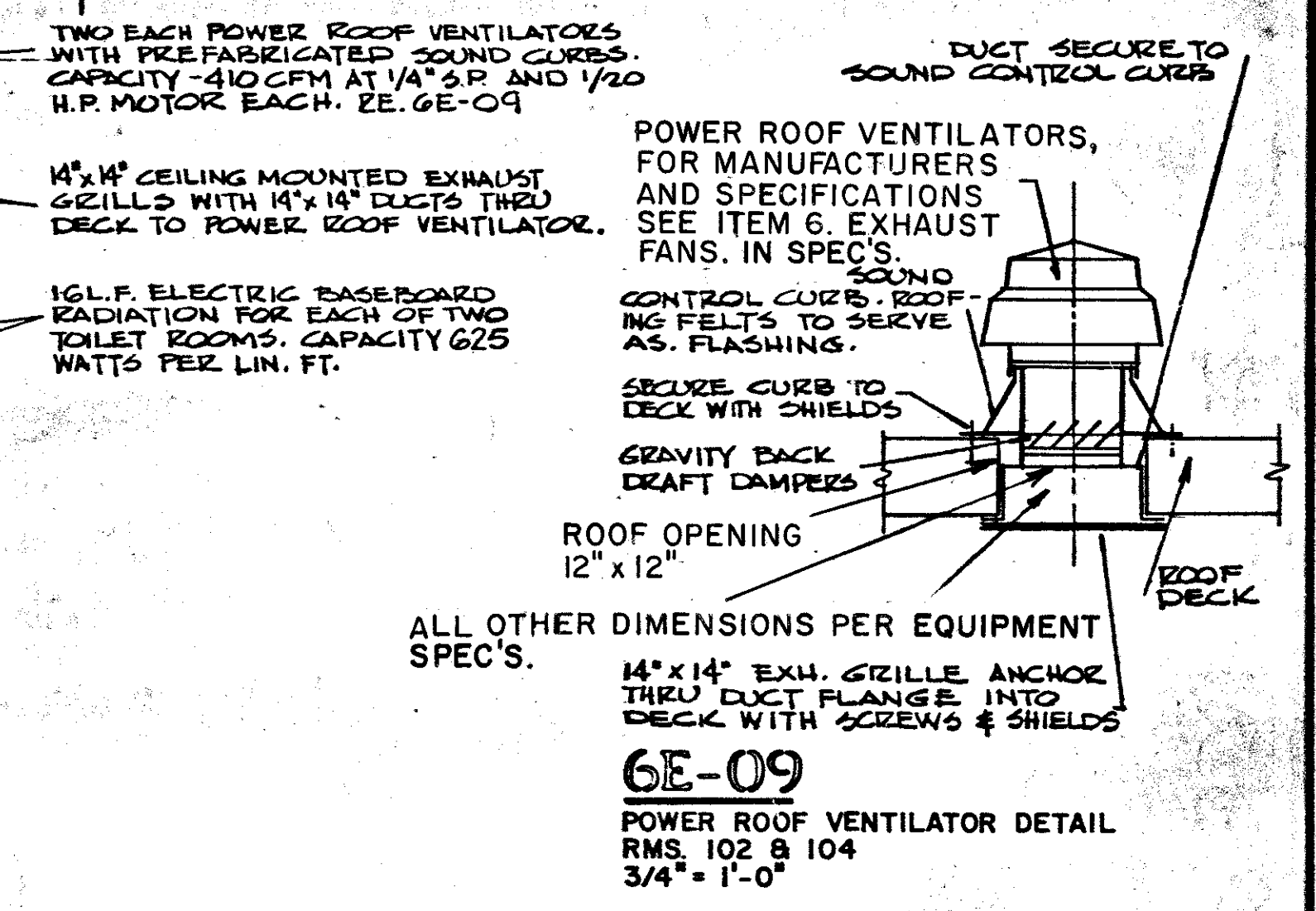
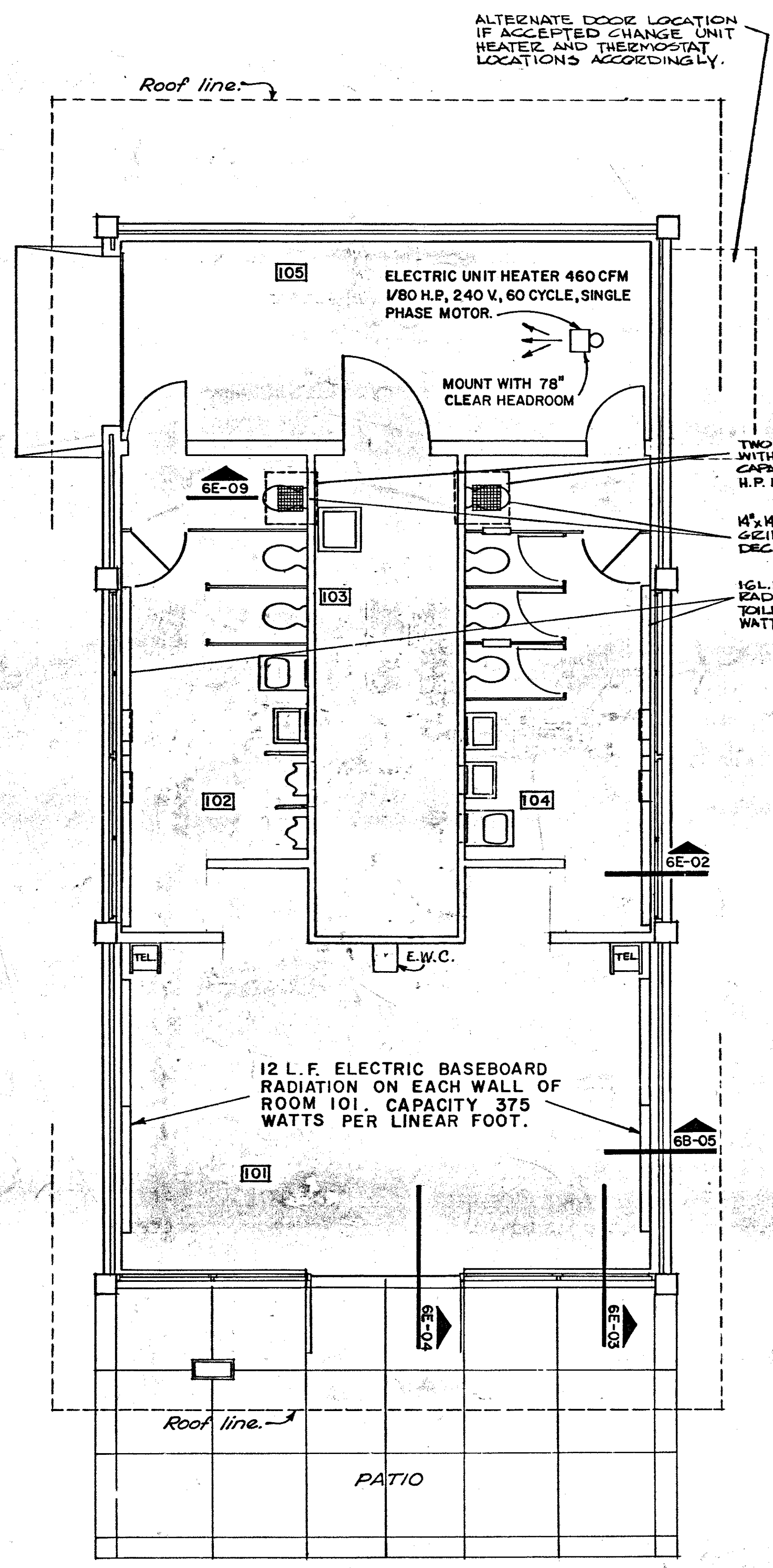
NOTE: THE HANDICAPPED TELEPHONE BOOTH SHALL BE INSTALLED TO COMPLY TO ANSI A117.1, SECTION 4.31 THE PHONE SHALL BE PLACED SO THAT THE TOP MOST DIGIT OF THE DIAL AND HAND SET SHALL BE 48" FROM E TO FINISHED FLOOR. MAKE NECESSARY ADJUSTMENTS AS REQUIRED TO BE IN COMPLIANCE.



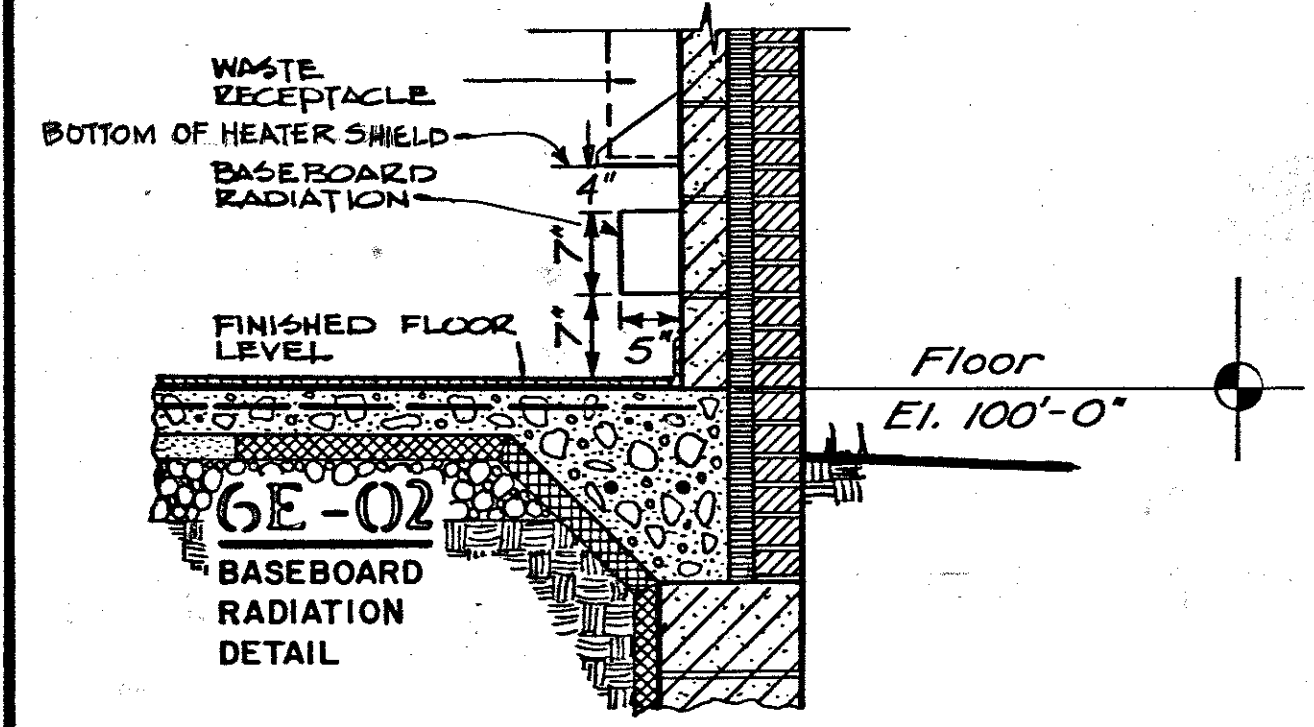
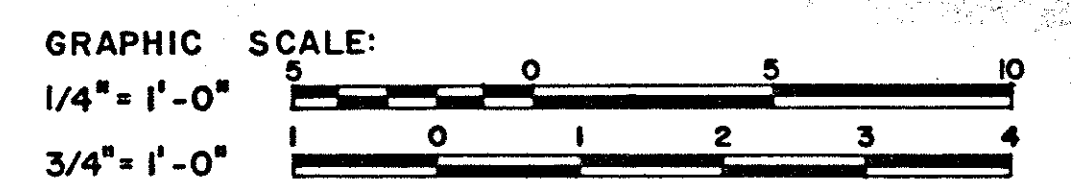
FIXTURE ROUGHING-IN MEASUREMENTS TO TOP OF FIXTURE OVERFLOW RIM FROM THE FINISHED FLOOR AS FOLLOWS:	
WATER CLOSETS (INCLUDING HANDICAPPED)	1'-3"
LAVATORIES (INCLUDING HANDICAPPED)	2'-7"
URINAL (LOW MOUNTED)	1'-4"
URINAL (HIGH MOUNTED)	1'-10"
NOTE: THE TOP OF ALL MIRRORS SHALL BE MOUNTED 5'-8 3/4" OFF OF FINISHED FLOOR.	

OHIO BUREAU OF DESIGN SERVICE		DEPARTMENT OF TRANSPORTATION	
MOTORIST SERVICES BUILDING & STORAGE UNIT			
REVISIONS	DATE	DATE	
3-1-78	BY O.D.T.	RRR	
7-6-78			
9-26-78			
1-22-80			
2-11-81			
2-24-81			
11-27-82			
PREPARED BY DEPARTMENT OF PUBLIC WORKS		ASSOCIATE ARCHITECTS	
ADAMS, HARDER, KINCHLOE KOCH		BRINGEN	
MASTER 1980			

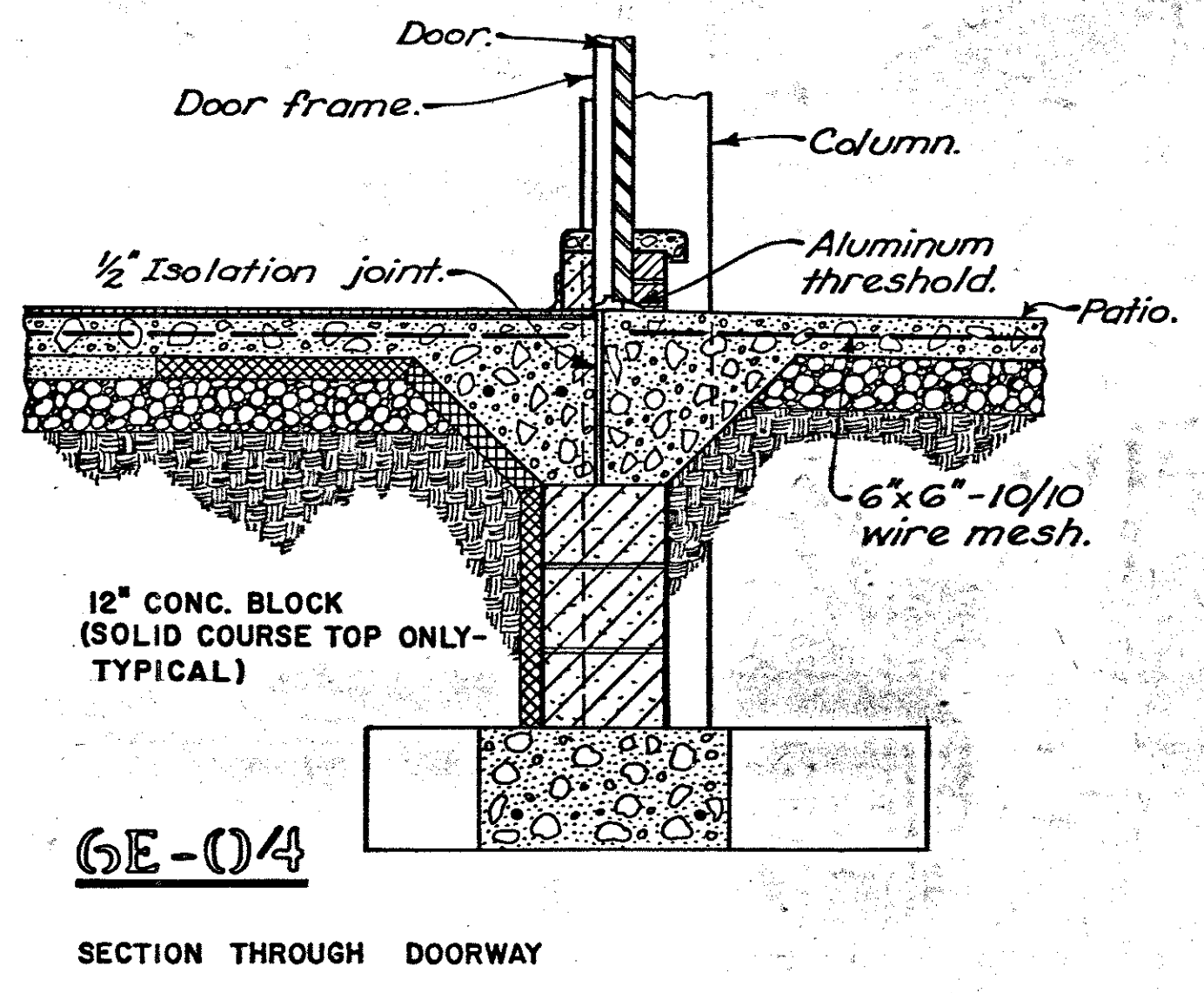
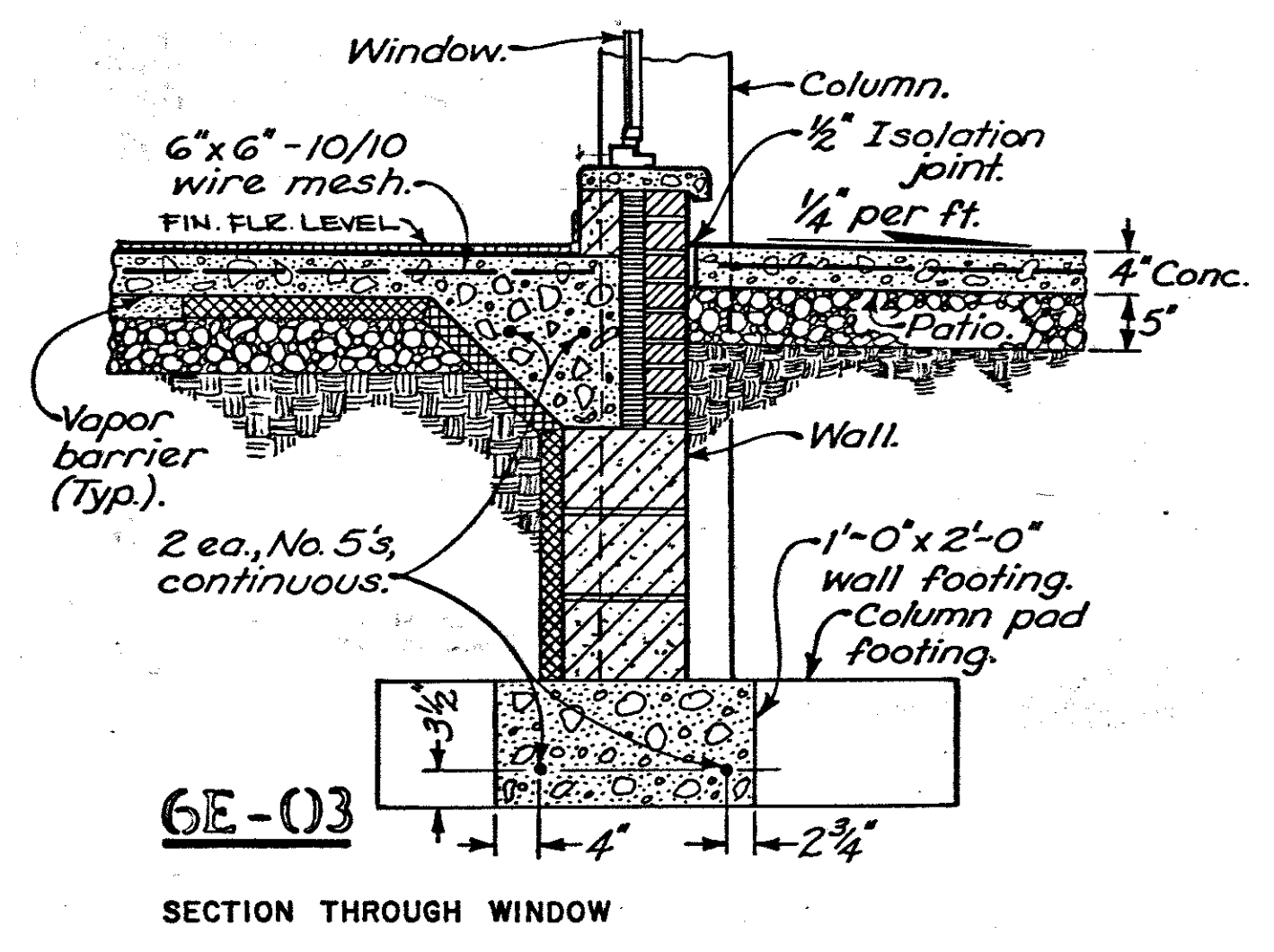
TRUMBULL COUNTY
TRU-80-10.90



NOTE:
ALL HEATING UNITS SHALL HAVE BUILT-IN, VANDAL PROOF THERMOSTATS AS SPECIFIED



NOTE: For details not shown in 6E-02, 6E-03 & 6E-04, see 6B-05.

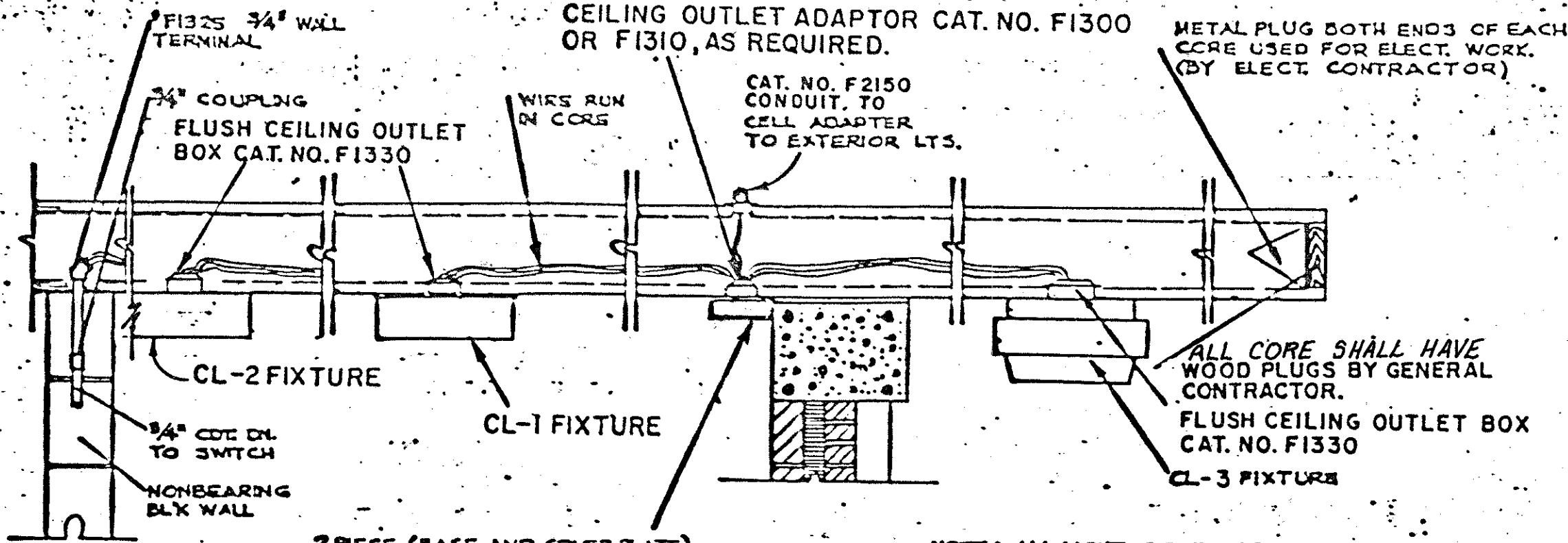


6E-06
FLOOR PLAN HEATING AND VENTILATING
1/4" = 1'-0"

OHIO BUREAU OF DESIGN SERVICES DEPARTMENT OF TRANSPORTATION		SHEET NO. RRA 6E
MOTORIST SERVICES BUILDING & STORAGE UNIT		DATE 9-1-70
PREPARED BY DEPARTMENT OF PUBLIC WORKS associate architects ADAMS, HARDER, KINCHELOE, KOCHER, SWARINGEN		

NOTE: ALL UNDERGROUND CONDUITS INSTALLED WITHIN THE INTERIOR LIMITS OF THE BUILDING SHALL BE INSTALLED WITHIN THE COMPACTED EARTH AREA BELOW THE FINISHED FLOORS. HORIZONTAL CONDUITS SHALL NOT EXTEND INTO THE AGGREGATE OR SAND AREA OR LAY ON THE VAPOR BARRIER. ONLY CONDUIT RISERS SHALL PASS THROUGH OR EXTEND ABOVE THE VAPOR BARRIER.

THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 1" CONDUIT AS PER 713.04 W/3-500 MCM TYPE USE RHH/RHW CONDUCTORS FOR SECONDARY ELECTRICAL SERVICE, 120/240 V., 1-PHASE, 3-WIRE, 60 HZ. FROM OHIO EDISON'S PAD MOUNTED TRANSFORMER. OHIO EDISON SHALL MAKE CONNECTIONS TO TRANSFORMER AND METER TERMINALS AS REQUIRED.



LEGEND

SYMBOL	MEANING	MOUNTING HEIGHT
○	LIGHT OUTLET, CEL.	SEE FIXTURE SCHEDULE
⊕	FLEXIFLOR FITTING CAT. NO. F-2212	FOR EXHAUST FAN ELECT. FEEDS
⊕, ⊕	SWITCH, 3-WAY ETC.	4'-0"
⊕	DUPLEX RECEPTACLE	AS NOTED
⊕	PHOTOELECTRIC CELL	18" ABOVE ROOF
—	WIRING CONCEALED IN CORE OF CEILING	HASH MARKS INDICATE NUMBER OF CONDUCTORS
—	WIRING CONCEALED IN CORE BELOW FLR. SLABS	
⊕	MOTOR OUTLET	AS REQUIRED
⊕	DISCONNECT SWITCH	5'-4" OR AS REQ'D
⊕	STARTER W/ DISC SWITCH BELOW	5'-4" OR AS REQ'D
⊕	F1330 FLUSH CEILING OUTLET BOX WITH BLANK COVER	AS REQUIRED
⊕	Wired JUNCTION	AS REQUIRED
⊕	POWER PANEL "P"	AS REQUIRED
⊕	LIGHTING PANEL "A"	AS REQUIRED

6F-04
 ELECTRICAL DISTRIBUTION METHOD

NOTE: ALL LIGHTING FIXTURES AND RACEWAY SHALL BE SECURED TO STRUCTURE WITH EXPANSION SHIELDS OR SPRINGIN TOGGLE BOLTS AS REQUIRED.

FIXTURE SCHEDULE

FIXT. NO.	MANUFACTURER	CATALOG NO.	LAMP SIZE	REMARKS:
CL-1	MILLER	CP-2192-08	4F40 WWT-12	RAPID START
CL-2	MILLER	CP-2192-04	2F40 WWT-12	"DITTO"
CL-3	PARKPAC	247-CE-120(AS)	S62ME-70	S62 BALLAST

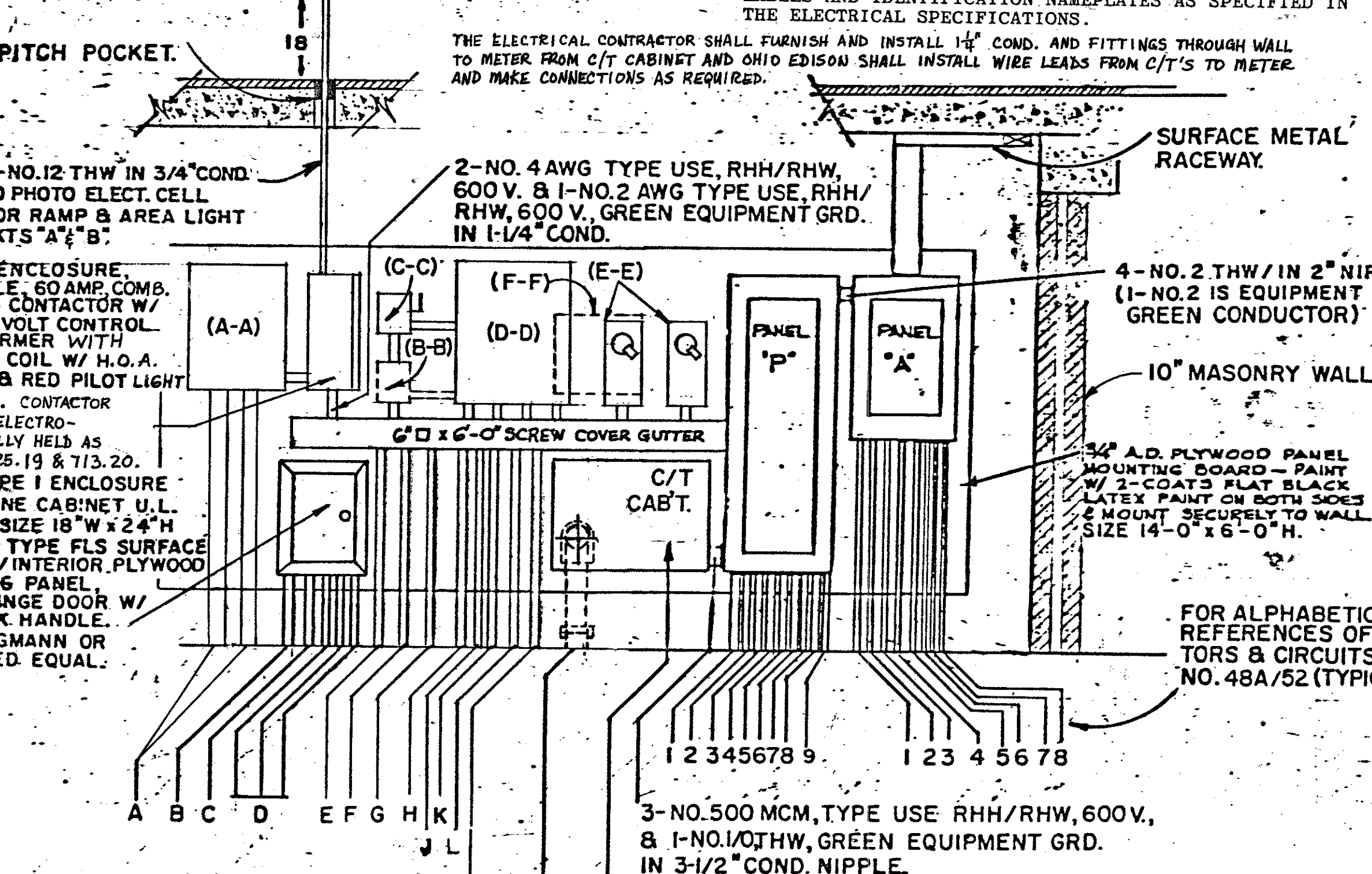
NOTE: FIXTURE NUMBER LETTER PREFIX DENOTES TYPE OF MOUNTING AS FOLLOWS: CL= MOUNT ON CEILING SURFACE
 NOTE: FIXTURES SHOWN ARE GIVEN FOR TYPE AND QUALITY ONLY. OTHER FIXTURE MANUFACTURERS SHALL BE: DEVINE DAYCRITE, MARCO, MATHSEN, SUNBEAM, SWITCRAFT & COLUMBIA.

- (A-A) PICNIC AREA & RAMP LIGHTING PANEL ("P" & "R" PANEL) 120/240 VOLTS/ 1-PHASE, 3-WIRE, 60 HZ, 100 AMPERE MAIN - LUGS W/S/N, 16-POLES BOLT-IN TYPE BREAKERS, SQUARE "D" NQOB-16-3L-100 OR APPROVED EQUAL AS PER SPECIFICATIONS.
- (B-B) ONE (1) AC MAGNETIC STARTER W/ 240 VOLT COIL, 1-POLE, SINGLE PHASE, NEMA SIZE 1, 230 VOLT RATING, 3-HP MAX. IN A NEMA 1 ENCLOSURE, SQUARE "D" CAT. NO. CLASS 8536 TYPE SBG-5 OR APPROVED EQUAL AS PER SPECIFICATIONS. STARTER FOR WELL PUMP IF FURNISHED.
- (C-C) ONE (1) LOCKABLE, SINGLE THROW, NON-FUSIBLE, 2 POLE, 60 AMP. HEAVY DUTY SAFETY SWITCH, VISIBLE BLADES, W/ NEMA 1 ENCLOSURE, FOR WELL PUMP, SQUARE "D" CAT. NO. HU262 OR APPROVED EQUAL AS PER SPECIFICATIONS.

(D-D) THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL ONE (1) NEMA TYPE 1 U.L. LISTED, 14GA. STEEL PANEL ENCLOSURE, HOFFMAN ENGINEERING CO. CAT. NO. A30N24B, SIZE 30" H x 24" W x 8 5/8" D, W/12 GA. STEEL REMOVABLE PANEL SIZE 22" H x 22 1/2" W, W/ BUTT HINGES, FLUSH HANDLE LATCH AND CYLINDER LOCK KIT A-L12B, W/ GREY PRIME FINISH INSIDE & OUT OVER PHOSPHATIZED SURFACE. PANEL SHALL BE WHITE ENAMEL. APPROVED EQUALS SHALL BE AS MANUFACTURED BY E. M. WIEGMANN & CO. INC., PARK OHIO ELECTRIC, INC., SQUARE "D" OR KEYSTONE. THIS ENCLOSURE SHALL BE DESIGNATED AS THE "RESERVOIR & WELL PUMP CONTROL CABINET."

THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL WITHIN THE ABOVE ENCLOSURE ALL OF THE WATER SYSTEM CONTROL COMPONENTS, AS REQUIRED, INCLUDING THE FOLLOWING: (1) DUPLEX PUMP ALTERNATOR, B/W CONTROLS, INC. INDUCTION RELAYS CONSISTING OF (1) LH, (1) RH, (1) 2 LH RELAYS & (1) LEVEL CONTROL POWER RELAY; CONTACTS, THERMAL OVERLOADS PILOT LIGHT DEVICES, TERMINAL BLOCKS, STARTERS, CONDUCTORS, B/W LEADS, AND ETC. AS REQUIRED. THESE ITEMS SHALL BE INSTALLED IN A FACTORY WIRED MANNER AND SHALL HAVE CIRCUIT IDENTIFICATION NUMBER LABELS AND IDENTIFICATION NAMEPLATES AS SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.

FISHER PIERCE MODEL NO. 6330DE2 PHOTOELECTRIC CELL W/ MODEL NO. 2101AFA METER SOCKET ASSEMBLY. APPROVED EQUALS SHALL BE AS PER TORK, G.E., PARAGON, OR AMERICAN ELECTRIC.



- (E-E) TWO (2) NEMA SIZE 2, NON-FUSED DISCONNECT TYPE, LOCKABLE, COMBINATION MOTOR STARTERS W/ 240 VOLT COILS, HAND-OFF-AUTO 3-POSITION SELECTOR SWITCHES W/ PROVISIONS FOR LOCKING THE DISCONNECT SWITCH IN THE OPEN POSITION, IN A NEMA 1 ENCLOSURE, FOR (2) 5-HP RESERVOIR PUMPS.

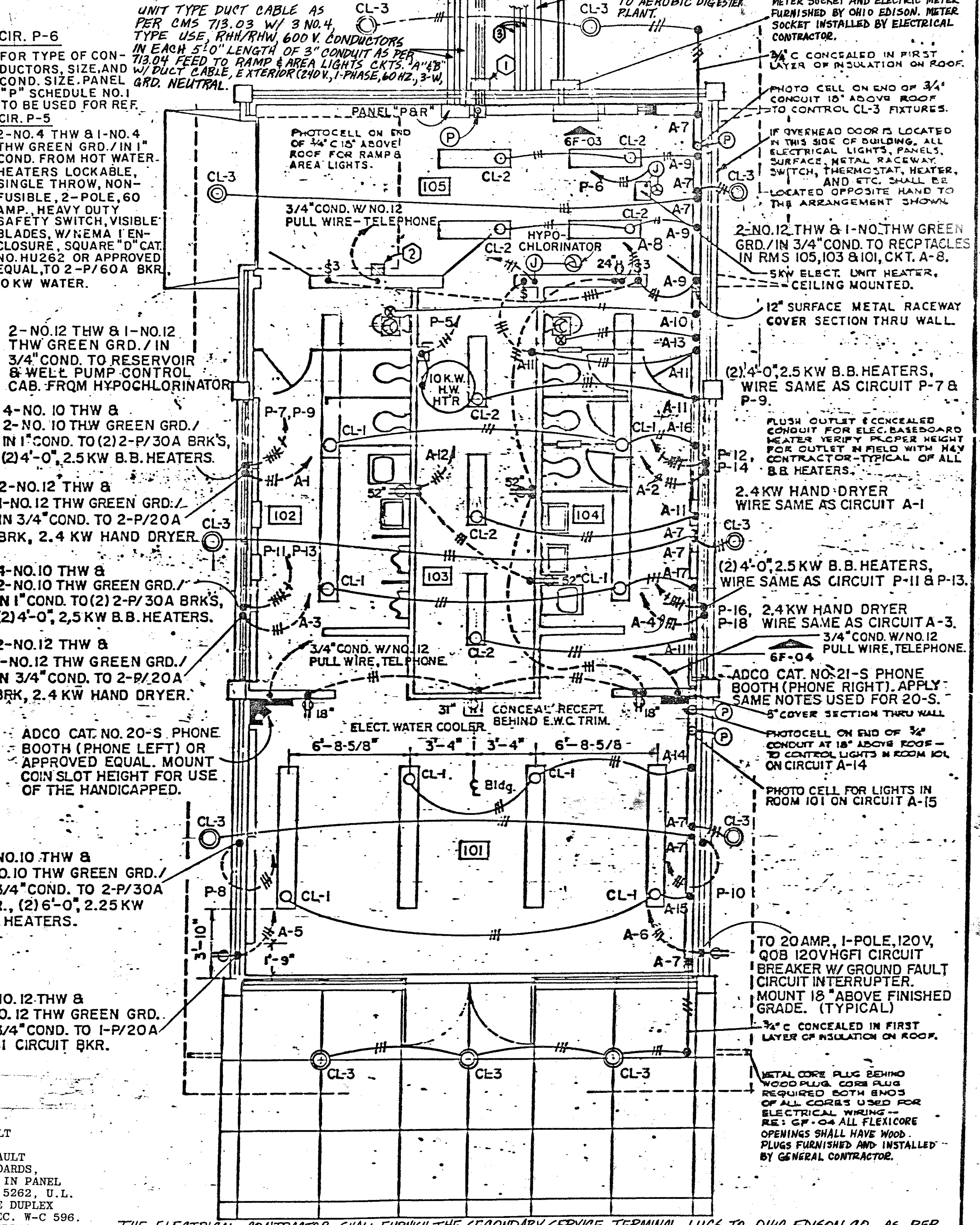
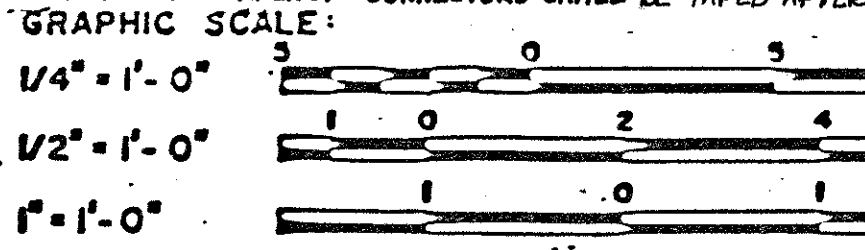
- ① (1) 2" CONDUITS W/ NO. 12 PULL WIRE TO OHIO BELL TELEPHONE CO. SERVICE TERMINAL BOX. MOUNT ON EXTERIOR WALL, CONT. TO TEL. CABINET. (1) 2" COND. W/ NO. 12 PULL WIRE FROM TEL. CABINET TO CONC. TEL. PULL BOX (SPARE FOR FUTURE FEEDS)
- ② STANDARD WALL HUNG TELEPHONE, DIRECT DIAL, FOR CARETAKERS USE ONLY. PROVIDE W/ BLANK COVER IF TELEPHONE IS NOT TO BE INSTALLED.
- ③ FOR REFERENCE TO LINES SHOWN REFER TO DETAIL 6F-03 THIS SHEET. LINES SHALL BE 3" AND GROUND FAULT CIRCUIT A-12

THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL (1) SQUARE D CAT. NO. QOB 120 VHGF GROUND FAULT CIRCUIT BREAKER W/ GROUND FAULT CIRCUIT INTERRUPTER FOR NQOB PANELBOARDS, U.L. LISTED, 20 AMP, 1-POLE, 120 VOLT AC, (22,000) AMPERE RMS RATING, IN PANEL "A". THIS BREAKER SHALL FEED CIRCUIT NO. A-12 TO TWO (2) HUBBELL CAT. NO. 5262, 15 AMP, 125V A.C., 2-POLE, 3-WIRE GROUNDING, STRAIGHT BLADE, DUPLEX RECEPTACLES, U.L. LISTED & MEETING N.E.C. ARTICLE 250-74, EXCEPTION NO. 2 & FED. SPEC. W-C 596. 2-NO. 12 THW & 1-NO. 12 THW GREEN GRD. IN 3/4" COND. TO 1-P/20A GFCI CIRCUIT BKR.

NOTE: IF OVERHEAD DOOR IS RELOCATED TO THE OPPOSITE LOCATION SHOWN, SEE SITE PLAN, THE MAIN SWITCHGEAR SHALL REMAIN ON SAME WALL BUT SHALL BE REVERSED FROM THAT SHOWN IN DETAIL 6F-03 AND SHALL MOVE BACK, OPPOSITE OF DOOR OPENING.

GROUND FAULT CIRCUIT OUTLETS - CIRCUITS A-5 & A-6
 THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL TWO (2) GROUND FAULT CIRCUIT OUTLETS IN LOCATIONS AS SHOWN ON DRAWING AND AS FOLLOWS: FURNISH AND INSTALL TWO (2) SQUARE D CAT. NO. QOB 120 VHGF GROUND FAULT CIRCUIT BREAKERS W/ GROUND FAULT CIRCUIT INTERRUPTER FOR NQOB PANELBOARDS, U.L. LISTED, 20 AMP, 1-POLE, 120 VOLT AC, (22,000) AMPERE RMS RATING, IN PANEL "A". THESE GFCI BREAKERS SHALL FEED SEPARATELY TO A HUBBELL CAT. NO. 5262, U.L. LISTED, 15 AMP, 125V A.C., 2-POLE, 3-WIRE GROUNDING, STRAIGHT BLADE DUPLEX RECEPTACLE MEETING N.E.C. ARTICLE 250-74, EXCEPTION NO. 2 & FED. SPEC. W-C 596. EACH RECEPTACLE SHALL BE FURNISHED W/ A HUBBELL CAT. NO. 5206 WEATHERPROOF, DOUBLE LIFT COVER, CAST ALUMINUM FOR RS BOX. RECEPTACLE SHALL BE MOUNTED IN A HORIZONTAL POSITION W/ LIFT COVER HINGES ON TOP APPROVED EQUAL MANUFACTURERS COVERED UNDER LIKE ITEMS IN THE SPECIFICATIONS.

NOTE: THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) BRUNDY CAT. NO. KS-34 SOLDERLESS SERVICE CONNECTORS OR APPROVED EQUALS BY BLACK&VEATCH OR TELETYPE PENN-UNION. THESE SHALL BE INSTALLED ON PHASE LEGS 1 AND 2 OF THE SECONDARY SERVICE. 1 INSIDE THE C/T CABINET FOR EASE OF THE POWER CO. TO INSTALL THEIR CURRENT TRANSFORMERS. CONNECTORS SHALL BE TAPED AFTER C/T'S ARE INSTALLED.



(1) 1-1/2" & (1) 2" SPARE CONDUITS AS PER 713.04. STUB 5'-0" OUTSIDE BLD'G WALL, 36" BELOW FIN. GRADE & CAP FOR FUTURE USE.

THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL ON THE INTERIOR, BACK WALL OF ROOM NO. 105, AS SHOWN, ONE (1) U.L. LISTED, NEMA 1, 14 GAUGE STEEL, DOUBLE DOOR, CONTINUOUS HINGE TRANSFORMER CABINET, TYPE CT-DD INDOOR W/ 3-POINT T-HANDLE LOCK PLUS HASP, E. M. WIEGMANN & CO. INC. MODEL NO. CT-DD322410, SIZE SHALL BE 32" W x 24" H x 10" D. REFER TO SPECIFICATIONS FOR APPROVED EQUAL MANUFACTURERS.

1-4" CONDUIT, AS PER 713.04 W/ 3/8" RADIUS 90° ELBOW W/ 3-500 MCM TYPE USE RHH/RHW CONDUCTORS, ELECTRICAL SERVICE SECONDARY, TO PAD MOUNTED TRANSFORMER. (120/240 VOLTS, 1-PHASE, 3-WIRE, 60 HZ., 400 AMP. SERVICE.

THE ELECTRICAL CONTRACTOR SHALL FURNISH THE SECONDARY SERVICE TERMINAL LUGS TO OHIO EDISON CO. AS PER THEIR SPECIFICATIONS, AS REQ'D, FOR THE TRANSFORMER AND METER. OHIO EDISON SHALL INSTALL THEM.

6F-03
 MAIN SWITCHGEAR
 1/2" - 1'-0"

6F-01
 ELECTRICAL FLOOR PLAN
 1/4" = 1'-0"

(F-F) OHIO EDISON CO. SHALL FURNISH TO THE ELECT. CONTR. FOR INSTALLATION, ONE (1) 400 AMP, 1-PHASE, 3-WIRE, 300 V. METER MOUNTING DEVICE. MOUNT ON EXTERIOR WALL, 5'-0" ABOVE FIN. GRADE. SERVICE CONDUCTORS SHALL ENTER C/T CABINET, FURNISHED & INSTALLED BY THE ELECT. CONTRACTOR & USING AN APPLETON CAT. NO. LB-400-M, 4" SIZE OR APPROVED EQUAL AS PER SPECIFICATIONS. METER SHALL BE FURNISHED & INSTALLED BY OHIO EDISON CO.

OHIO BUREAU OF DESIGN SERVICES DEPARTMENT OF TRANSPORTATION

MOTORIST SERVICES BUILDING & STORAGE UNIT

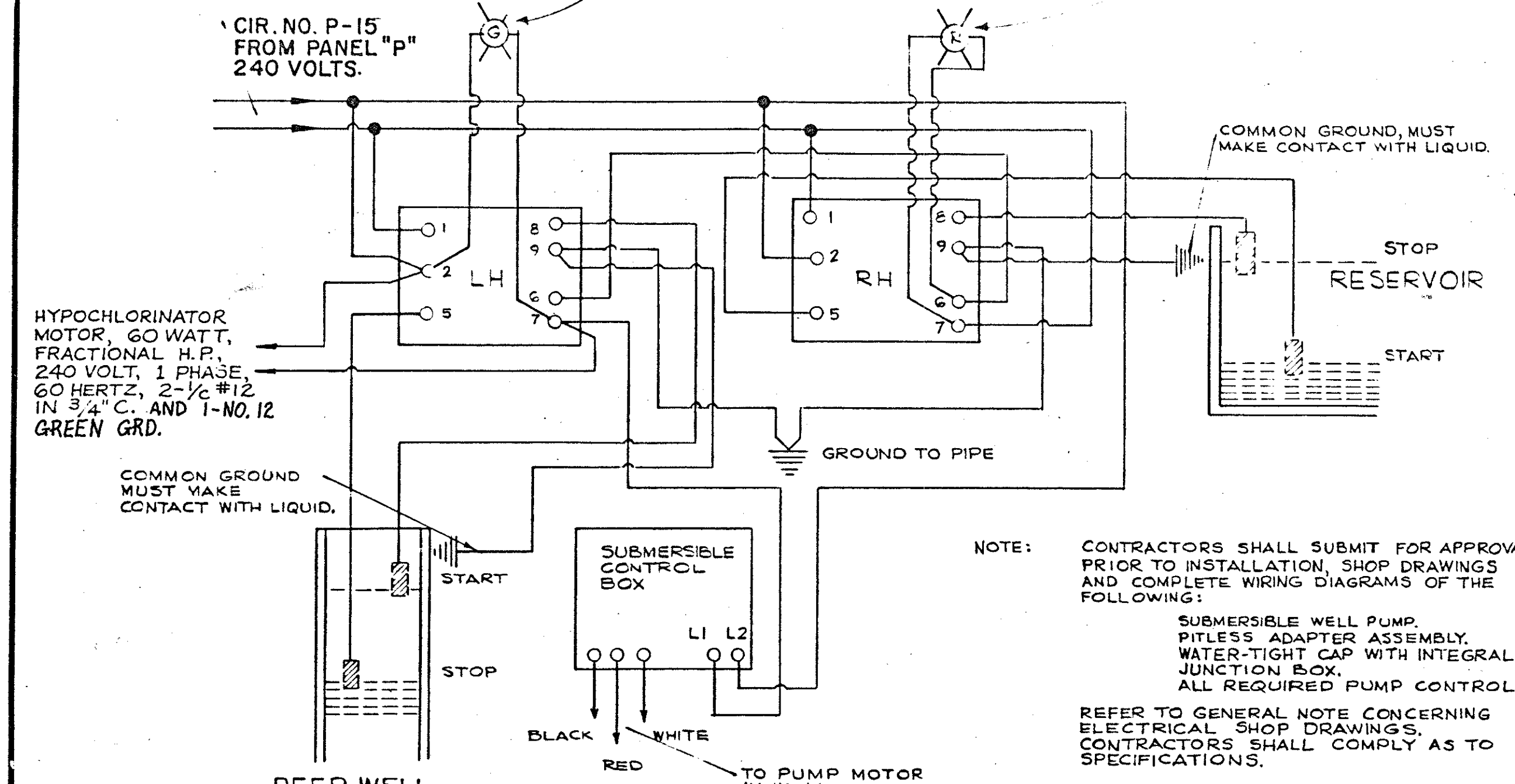
REVISIONS 11-15-82

SHEET NO. RRA 6F

DATE

TRUMBULL COUNTY
TRU-80-10.90

PILOT LIGHT UNIT, ALLEN-BRADLEY
CATALOG NO. 800T-P26G (GREEN)
TRANSFORMER TYPE, 240 VOLT, 60 HZ. OR
APPROVED EQUAL BY FURNAS ELECTRIC,
GENERAL ELECTRIC, OR WESTINGHOUSE.
NAME PLATE SHALL READ "ON-OFF"



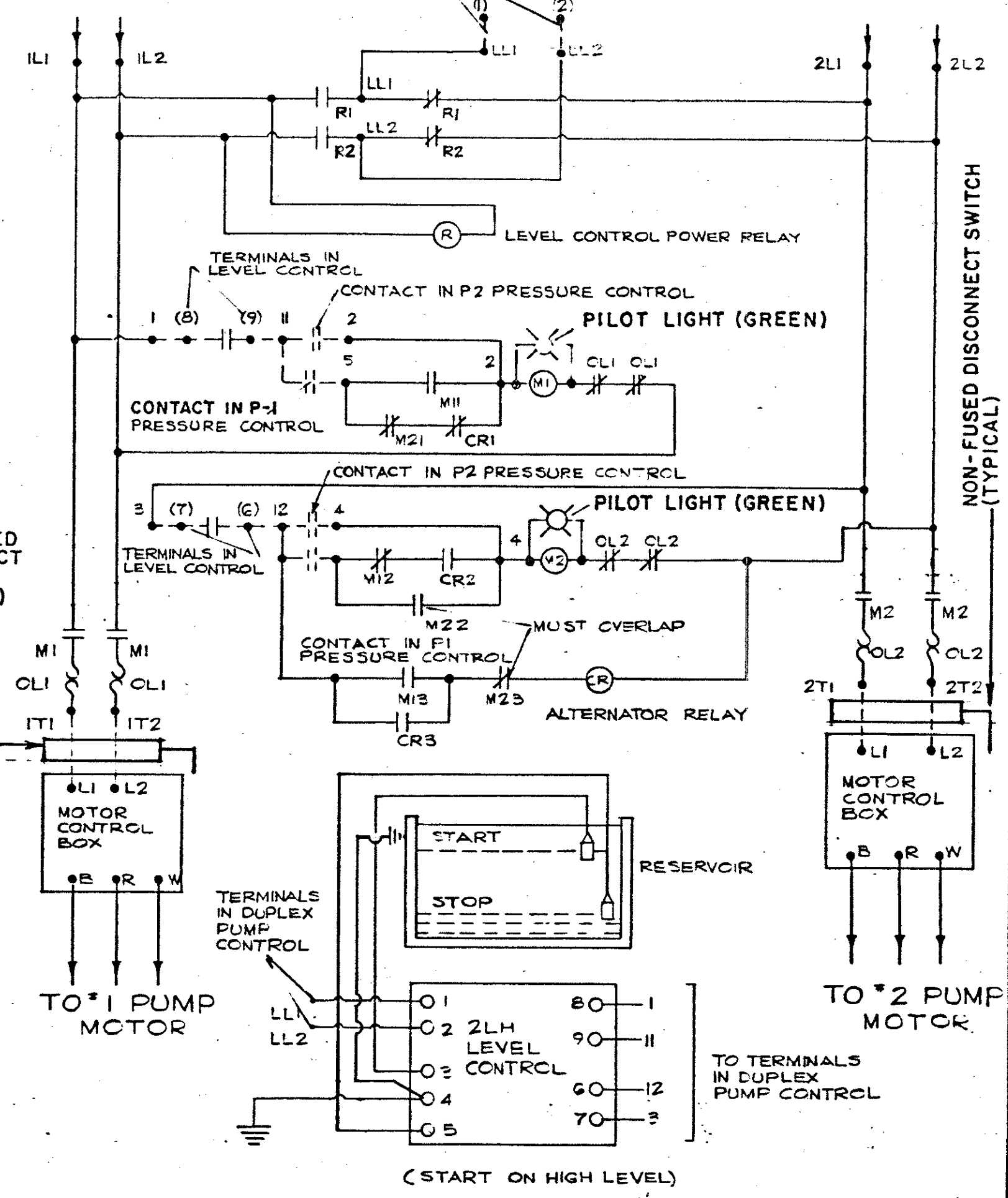
NOTE: CONTRACTORS SHALL SUBMIT FOR APPROVAL PRIOR TO INSTALLATION, SHOP DRAWINGS AND COMPLETE WIRING DIAGRAMS OF THE FOLLOWING:
SUBMERSIBLE WELL PUMP, PITLESS ADAPTER ASSEMBLY, WATER-TIGHT CAP WITH INTEGRAL JUNCTION BOX, ALL REQUIRED PUMP CONTROLS.
REFER TO GENERAL NOTE CONCERNING ELECTRICAL SHOP DRAWINGS.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

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

ALL CONTROLS IN GG-01 & GG-03 SHALL BE INCLOSED IN THE WATER SYSTEM CONTROL CABINET.

GG-01
SCHEMATIC FOR WELL PUMP CONTROL
NOT TO SCALE

CIR. NO. P-3
240 VOLTS



GG-03
SCHEMATIC FOR RESERVOIR & PRESSURE TANK PUMP CONTROL
NOT TO SCALE

PANEL "P" WIRING					
400 AMPS 42-POLES 120/240 VOLTS 1 PHASE 60 HERTZ 3-WIRE S/N (400 AMP MAIN CIRCUIT BREAKER - 2 POLE)					
CIR. NO.	DESCRIPTION	AMPS	DESCRIPTION	AMPS	CIR. NO.
P-1	PANEL "A" 23.8 KW, RM 105	100A	10KW, RM 105 TO RAMP & AREA LIGHT CONTACTOR & PANEL "P&R" P-2	60A	P-2
P-3	RESERVOIR PUMP NO.1 6.7 KW, RM 103	60A	RESERVOIR PUMP NO.2 6.7 KW, RM 103	60A	P-4
P-5	HOT WATER HEATER 10 KW, RM 103	60A	UNIT HEATER 5 KW, RM 105	30A	P-6
P-7	B.B. HEATER 2.5 KW, RM 102	30A	B.B. HEATERS (2) 2.25 KW, RM 101	30A	P-8
P-9	B.B. HEATER 2.5 KW, RM 102	30A	B.B. HEATERS (2) 2.25 KW, RM 101	30A	P-10
P-11	B.B. HEATER 2.5 KW, RM 102	30A	B.B. HEATER 2.5 KW, RM 104	30A	P-12
P-13	B.B. HEATER 2.5 KW, RM 102	30A	B.B. HEATER 2.5 KW, RM 104	30A	P-14
P-15	SUBM. WELL PUMP 1.7 KW, EXTERIOR	20A	B.B. HEATER 2.5 KW, RM 104	30A	P-16
P-17	AEROBIC DIGESTER 16.9 KW, EXTERIOR	60A	B.B. HEATER 2.5 KW, RM 104	30A	P-18
P-19	SPARE	20A	SPARE	20A	P-20
P-21	SPARE	20A	SPARE	20A	P-22
P-23	SPARE	20A	SPARE	20A	P-24

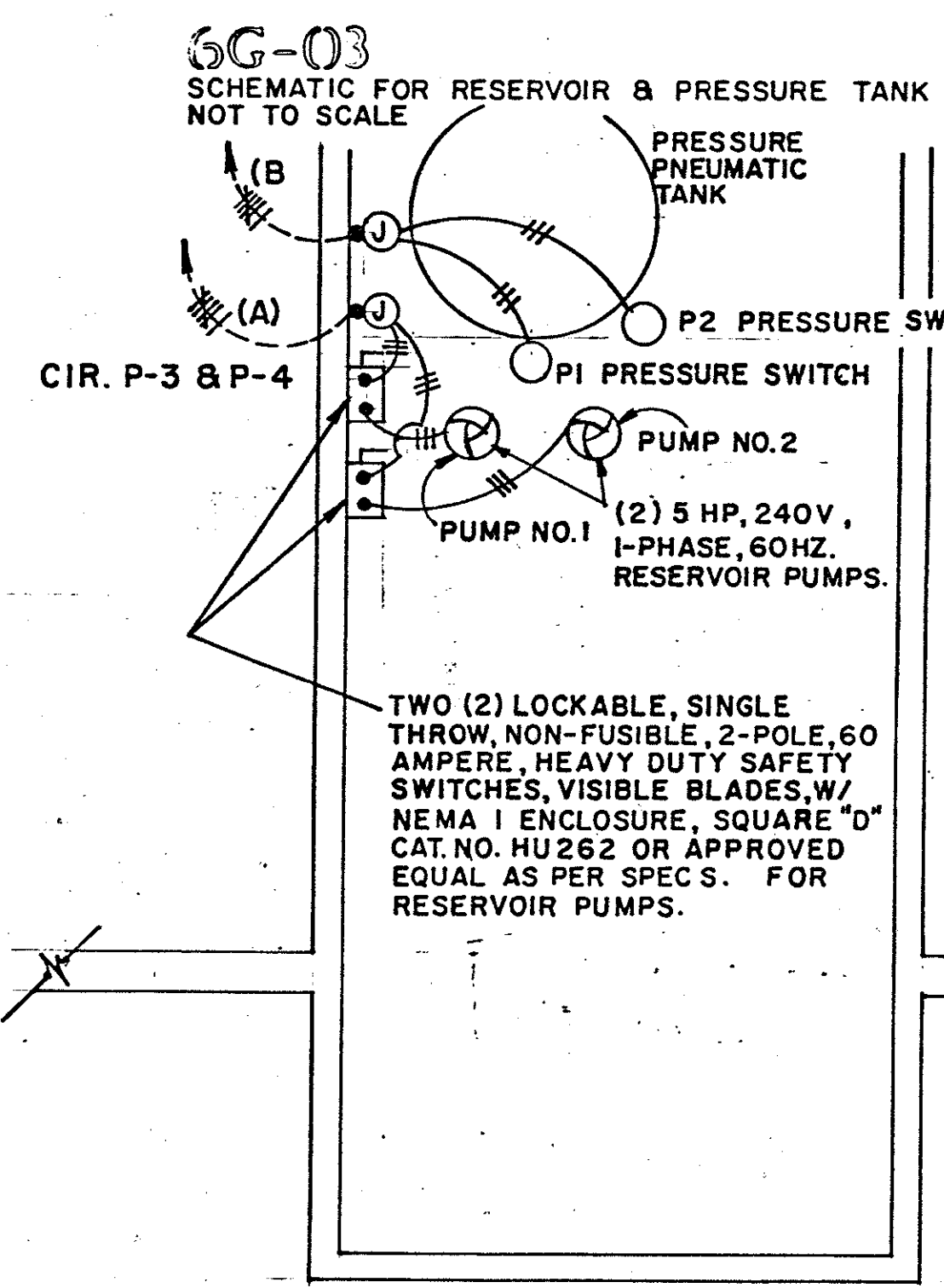
ALL CIRCUIT BREAKERS, INCLUDING SPARES, SHALL BE FURNISHED AND FACTORY INSTALLED IN SEQUENCE, AS SHOWN IN THE PANEL SCHEDULES. (TYPICAL OF ALL PANELS)

- (A) 4-NO. 6 THW & 2-NO. 6 THW GREEN GRD. / IN 1-1/4" COND. TO DUPLEX PUMP CONTROL IN RES. & WELL PUMP CONTROL CABINET. (2) 6.7 KW, CKT. P-3 & P-4, RM 105
- (B) 4-NO. 12 THW & 2-NO. 12 THW GREEN GRD. / IN 1" COND. TO P1 & P2 CONTACTS IN RES. & WELL PUMP CONTROL CABINET, RM 105.

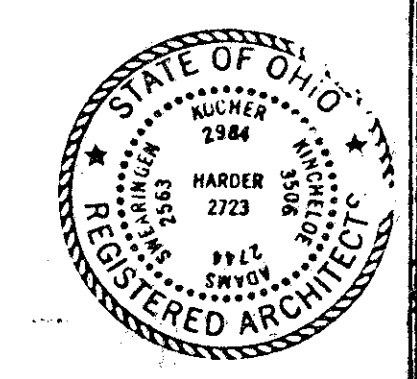
PANEL "A" WIRING					
225 AMPS 24-POLES 120/240 VOLTS 1-PHASE 60 HERTZ 3-WIRE S/N (MAIN LUGS ONLY)					
CIR. NO.	DESCRIPTION	AMPS	DESCRIPTION	AMPS	CIR. NO.
A-1	HAND DRYER 2400 WATTS, RM 102	20A	HAND DRYER 2400 WATTS, RM 104	20A	A-2
A-3	HAND DRYER 2400 WATTS, RM 102	20A	HAND DRYER 2400 WATTS, RM 104	20A	A-4
A-5	DUPLEX RECEPT. TO GRD. FAULT CIR. BKR. EXTERIOR, 2400 WATTS	20A	DUPLEX RECEPT. TO GRD. FAULT CIR. BKR. EXTERIOR, 2400 WATTS, A-6	20A	A-6
A-7	EXTERIOR BLDG. LIGHTS 1056 WATTS	20A	DUPLEX RECEPT. 2400 WATTS	20A	A-8
A-9	EXHAUST FAN RM 105 800 WATTS	20A	EXHAUST FAN RM 102 288 WATTS	20A	A-10
A-11	LIGHTS RM 103 600 WATTS	20A	DUPLEX RECEPT. TO GRD. FAULT CIR. BKR., 2400 WATTS. LIGHTS RM 101	20A	A-12
A-13	EXHAUST FAN RM 104 288 WATTS	20A	LIGHTS RM 101 400 WATTS	20A	A-14
A-15	LIGHTS RM 101 400 WATTS	20A	LIGHTS RM 102 / 104 400 WATTS	20A	A-16
A-17	LIGHTS RM 102 / 104 400 WATTS	20A	SPARE	20A	A-18
A-19	SPARE	20A	SPARE	20A	A-20

LINE 1
11,776 WATTS, CONNECTED

LINE 2
12,056 WATTS, CONNECTED



GG-02
PARTIAL FLOOR PLAN RM 103
1/2" = 1'-0"



OHIO BUREAU OF DESIGN SERVICES DEPARTMENT OF TRANSPORTATION		SHEET NO. RRA	
REVISIONS 11-12-82 1-21-83	MOTORIST SERVICES BUILDING & STORAGE UNIT (W.W.)		GG
PREPARED BY DEPARTMENT OF PUBLIC WORKS associate architects ADAMS, HARDER, KINCHLOE, KOEHLER, SWERINGEN			DATE

TRUMBULL COUNTY
TRU-80-10.90

PANEL "P" SCHEDULE

400 AMPS 42-POLES 120/240 VOLTS I-PHASE 60-HERTZ 3-WIRE S/N (400A.MN.CKT BRKR.-2 POLE)

CIRCUIT NO.	DESCRIPTION	LOCATION	WIRE SIZE	VOLTS	HP/FLA	BREAKER POLES TOTAL AMPS	CONNECTED WATTS
1.	PANEL "A", 23.8 KW	RM 105	2	120/240	99.3	2-100	23,832
2.	TO RAMP & AREA LIGHTING CONTACTOR & "P&R" PANEL, 10KW	RM 105	4	240	41.7	2-60	10,000
3.	RESERVOIR PUMP NO.1, 6.7 KW	RM 103	6	240	28.0	2-60	6,720
4.	RESERVOIR PUMP NO.2, 6.7 KW	RM 103	6	240	28.0	2-60	6,720
5.	HOT WATER HEATER, 10KW	RM 103	4	240	41.7	2-60	10,000
6.	UNIT HEATER, 5 KW.	RM 105	10	240	21.0	2-30	5,000
7.	B.B.HEATER, 2.5 KW	RM 102	10	240	10.4	2-30	2,500
8.	B.B.HEATER,(2) 2.25 KW	RM 101	10	240	18.8	2-30	4,500
9.	B.B.HEATER, 2.5 KW	RM 102	10	240	10.4	2-30	2,500
10.	B.B. HEATER,(2) 2.25 KW	RM 101	10	240	18.8	2-30	4,500
11.	B.B.HEATER, 2.5 KW	RM 102	10	240	10.4	2-30	2,500
12.	B.B.HEATER, 2.5 KW	RM 104	10	240	10.4	2-30	2,500
13.	B.B. HEATER, 2.5 KW	RM 102	10	240	10.4	2-30	2,500
14.	B.B. HEATER, 2.5 KW	RM 104	10	240	10.4	2-30	2,500
15.	SUBM. WELL PUMP, 1.7KW	EXTERIOR	4	240	6.9	2-20	1,656
16.	B.B. HEATER, 2.5 KW	RM 104	10	240	10.4	2-30	2,500
17.	AEROBIC DIGESTER 16.9 KW.	EXTERIOR	4/0	240	70.3	2-60	16,860
18.	B.B. HEATER, 2.5 KW	RM 104	10	240	10.4	2-30	2,500
19.	SPARE					1-20	
20.	SPARE					1-20	
21.	SPARE					1-20	
22.	SPARE					1-20	
23.	SPARE					1-20	
24.	SPARE					1-20	

NOTE: ALL CIRCUIT BREAKERS, INCLUDING SPARES, SHALL BE FURNISHED AND FACTORY INSTALLED IN SEQUENCE, AS SHOWN IN THE PANEL SCHEDULES. (TYPICAL OF ALL PANELS.)

TOTAL CONNECTED WATTS 109,788

PANEL "A" SCHEDULE

225 AMPS 24-POLES 120/240 VOLTS I-PHASE 60-HERTZ 3-WIRE S/N (MAIN LUGS ONLY)

CIRCUIT NO.	DESCRIPTION	LOCATION	WIRE SIZE	VOLTS	HP/FLA	BREAKER POLES TOTAL AMPS	CONNECTED WATTS
1.	HAND DRYER, 2.4 KW	RM 102	12	240	10.0	2-20	2,400
2.	HAND DRYER, 2.4 KW	RM 104	12	240	10.0	2-20	2,400
3.	HAND DRYER, 2.4 KW	RM 102	12	240	10.0	2-20	2,400
4.	HAND DRYER, 2.4 KW	RM 104	12	240	10.0	2-20	2,400
5.	DUPLEX RECEPTACLES TO GRD. FAULT CKT. BREAKER, 2.4 KW	EXTERIOR	12	120	20.0	1-20	2,400
6.	DUPLEX RECEPTACLES TO GRD. FAULT CKT. BREAKER, 2.4 KW	EXTERIOR	12	120	20.0	1-20	2,400
7.	EXTERIOR BLD'G LIGHTS 1.0 KW	EXTERIOR	12	120	8.8	1-20	1,056
8.	DUPLEX RECEPTACLES 2.4KW	RM'S 105,103 & 101	12	120	20.0	1-20	2,400
9.	LIGHTS, 0.8 KW	RM 105	12	120	6.7	1-20	800
10.	EXHAUST FAN, 0.3 KW	RM 102	12	120	2.4	1-20	288
11.	LIGHTS, 0.6 KW	RM 103	12	120	5.0	1-20	600
12.	(2) DUPLEX RECEPTACLES TO GRD. FAULT CKT. BKR., 2.4KW	RM'S 102 & 104	12	120	20.0	1-20	2,400
13.	EXHAUST FAN, 0.3 KW	RM 104	12	120	2.4	1-20	288
14.	LIGHTS, 0.4 KW	RM 101	12	120	3.3	1-20	400
15.	LIGHTS, 0.4 KW	RM 101	12	120	3.3	1-20	400
16.	LIGHTS, 0.4 KW	RM'S 102 & 104	12	120	3.3	1-20	400
17.	LIGHTS, 0.4 KW	RM'S 102 & 104	12	120	3.3	1-20	400
18.	SPARE			120		1-20	
19.	SPARE			120		1-20	
20.	SPARE			120		1-20	

TOTAL CONNECTED WATTS 23,832

OHIO	BUREAU OF DESIGN SERVICES	DEPARTMENT OF TRANSPORTATION
REVISIONS 11-12-82 1-21-83	MOTORIST SERVICES BUILDING & STORAGE UNIT	SHEET NO. RRA 6H
		DATE 3-1-78

R. & A. LIGHTS CIRCUITS

UNIT TYPE DUCT CABLE AS PER CMS 713.03 WITH
 3- NO. 4 AWG, TYPE USE RHH/RHW 600V,
 CONDUCTORS IN EACH 5'0" LENGTH 3" COND. AS PER 713.04.
 FEED TO RAMP & AREA LIGHT CIRCUITS "A" & "B"
 WITH DUCT CABLE. 36" RADIUS 90° ELBOWS AS PER
 713.04 SHALL BE USED TO ENTER BUILDING.

TELEPHONE CIRCUITS

(B) 2" COND. W/ NO. 12 PULLWIRE (TELEPHONE)
 FROM TEL. CABINET TO CONC. PULL BOX
 (FUTURE FEED).

(C) 2" COND. W/ NO. 12 PULLWIRE (TELEPHONE)
 FROM TEL. CABINET TO TEL. CO. TERMINAL
 BOX TO CONC. PULL BOX. (USE FOR TEL.
 SERVICE CONDUCTORS.)

(D) 3 - 3/4" COND'S W/ NO. 12 PULLWIRE (TEL.)
 TO TEL. STATIONS IN RM'S 105 & 101.

CIRCUITS TO 6" x 6" WIREWAY

(E) 4-NO.6 THW & 2-NO.6 THW GREEN GRD./ IN 1-1/4"
 COND. TO DUPLEX PUMP CONTROL IN RES. PUMP CON-
 TROL CABINET, (2) 6.7 KW; CKT. P-3 & P-4, RM 105.
 FROM NON-FUSED SAFETY SWITCHES FOR RESERVOIR
 PUMPS NO. 1 & 2 IN RM 103.

(F) (1)- 1" CONDUIT W/ 2-B/W LEADS AND 1-NO.10 THW
 GREEN GRD./ FROM 2-LH RELAY TO RESERVOIR PUMPS
 START/STOP PUMP ELECTRODES IN RESERVOIR; ALSO
 2-B/W LEADS AND 1-NO.10 THW GREEN GRD./ FROM
 RH RELAY TO RESERVOIR ELECTRODES THAT START/
 STOP WELL PUMP FOR RESERVOIR WATER LEVEL CON-
 TROL.

(G) 2-B/W LEADS AND 1-NO.10 THW GREEN GRD./ IN
 1" COND. TO WELL PUMP START/STOP ELECTRODES
 IN WELL FROM LH RELAY CONTROL.

(H) 2-NO.4 THW AND 1-NO.4 THW GREEN GRD./ IN 1"
 COND. TO WELL PUMP MOTOR FEEDING FROM 2 LH &
 RH RELAYS IN RES. & WELL PUMP CONTROL CABINET.

(J) 4-NO.12 THW & 2-NO.12 THW GREEN GRD./ IN 1"
 COND. FROM P1 & P2 CONTACTS IN RES. & WELL
 PUMP CONTROL CABINET TO P1 & P2 PRESSURE
 SWITCHES IN RM 103.

(K) 2-NO.12 THW & 1-NO.12 THW GREEN GRD./ IN 3/4"
 COND. TO RES. & WELL PUMP CONTROL CABINET
 FROM HYPOCHLORINATOR, RM 105.

(L) UNIT TYPE DUCT CABLE AS PER CMS 713.03 WITH
 3- NO. 4/0 TYPE USE RHH/RHW, 600V. CONDUCTORS
 AND 1-NO.4/0 TYPE USE RHH/RHW, 600V. GREEN
 GRD./ IN 5'0" LENGTH 3" COND. AS PER 713.04.
 BRANCH CIRCUIT FEED TO AEROBIC DIGESTER PLANT.
 36" RADIUS 90° ELBOW AS PER 713.04 SHALL BE
 USED TO ENTER BUILDING.

PANEL "A"

(1) 2 - NO. 12 THW & 1-NO. 12 THW GREEN
 GRD./ IN 3/4" COND. HAND DRYER CKT. A-1,
 RM. 102.

(2) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. HAND DRYER CKT. A-2
 RM. 104.

(3) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. HAND DRYER CKT. A-3
 RM. 102.

(4) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. HAND DRYER CKT. A-4,
 RM. 104.

(5) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. FROM GFCI CKT. BRK.
 TO EXTERIOR DUPLEX RECEPTACLE. CKT. A-5

(6) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. FROM GFCI CKT. BRK.
 TO EXTERIOR DUPLEX RECEPTACLE. CKT. A-6

(7) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. TO RECEPTABLES IN
 RM'S. 105, 103, & 101. CKT. A-8

(8) 2 - NO. 12 THW & 1 - NO. 12 THW GREEN
 GRD./ IN 3/4" COND. FROM GFCI CKT. BRK.
 TO (2) INTERIOR DUPLEX RECEPTABLES IN
 RM'S. 102 & 104. CKT. A-12

PANEL "P"

(1) 2 - NO. 10 THW
 1 - NO. 10 THW GREEN GRD./
 IN 3/4" COND. TO UNIT HEATER,
 5KW, CKT. P-6, RM. 105.

(2) 2 - NO. 4 THW
 1 - NO. 4 THW GREEN GRD./
 IN 1" COND. TO H.W. HEATER,
 10KW, CKT. P-5, RM. 103.

(3) 4 - NO. 10 THW &
 2 - NO. 10 THW GREEN GRD./
 IN 1" COND. TO (2) 2-P/30A BRK'S,
 TO (2) 4'-0", 2.5KW B.B. HEATERS,
 CKT'S P-7 & P-9, RM. 102

(4) 4 - NO. 10 THW &
 2 - NO. 10 THW GREEN GRD./
 IN 1" COND. TO (2) 2-P/30A BRK'S,
 TO (2) 4'-0", 2.5KW B.B. HEATERS,
 CKT'S P-11 & P-13, RM. 102.

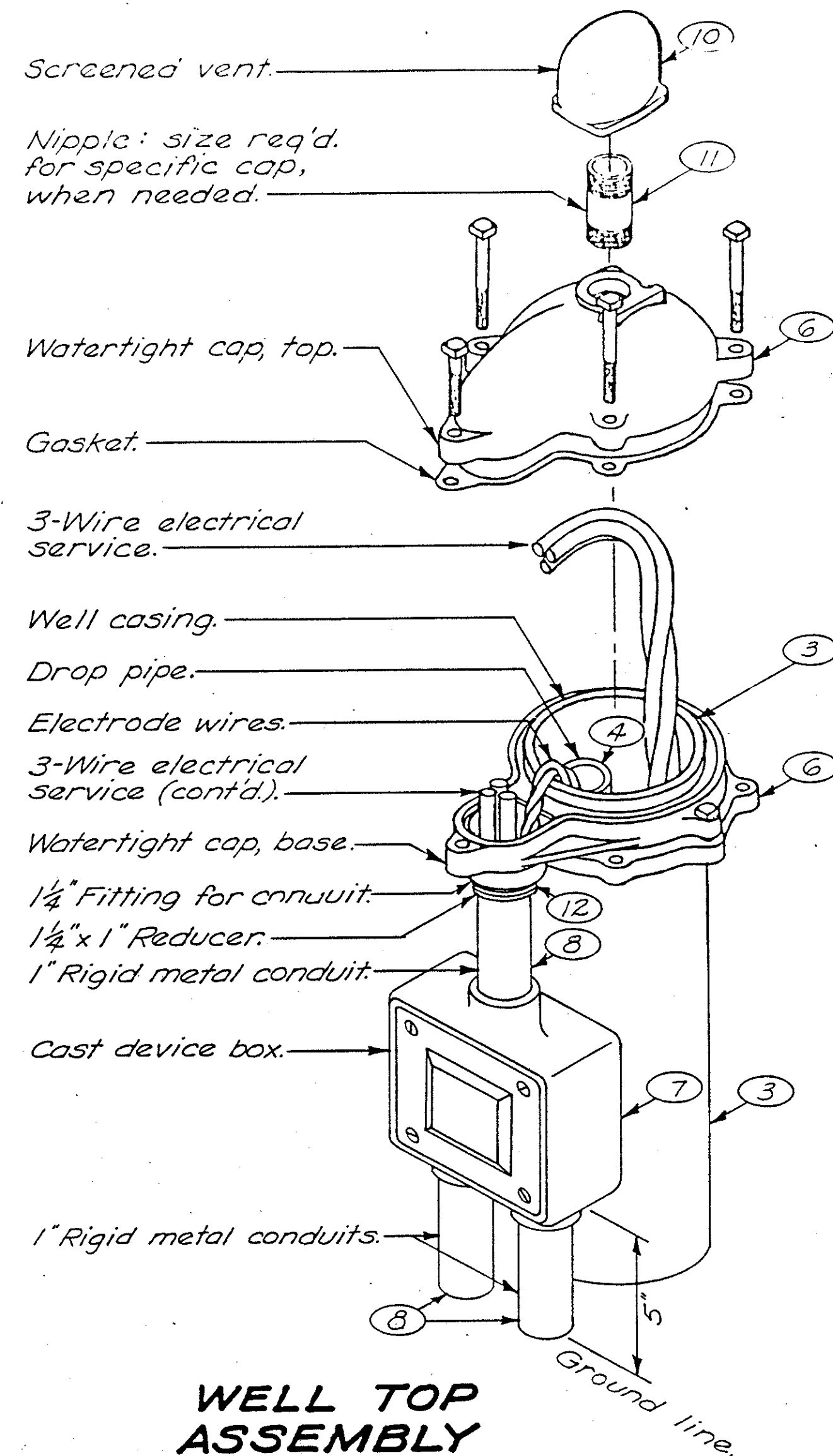
(5) 2 - NO. 10 THW &
 1 - NO. 10 THW GREEN GRD./
 IN 3/4" COND. TO 2-P/30A BRK.,
 (2) 6'-0", 2.25 KW B.B. HEATERS,
 CKT. P-8, RM 101.

(6) 2 - NO.10 THW &
 1 - NO. 10 THW 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

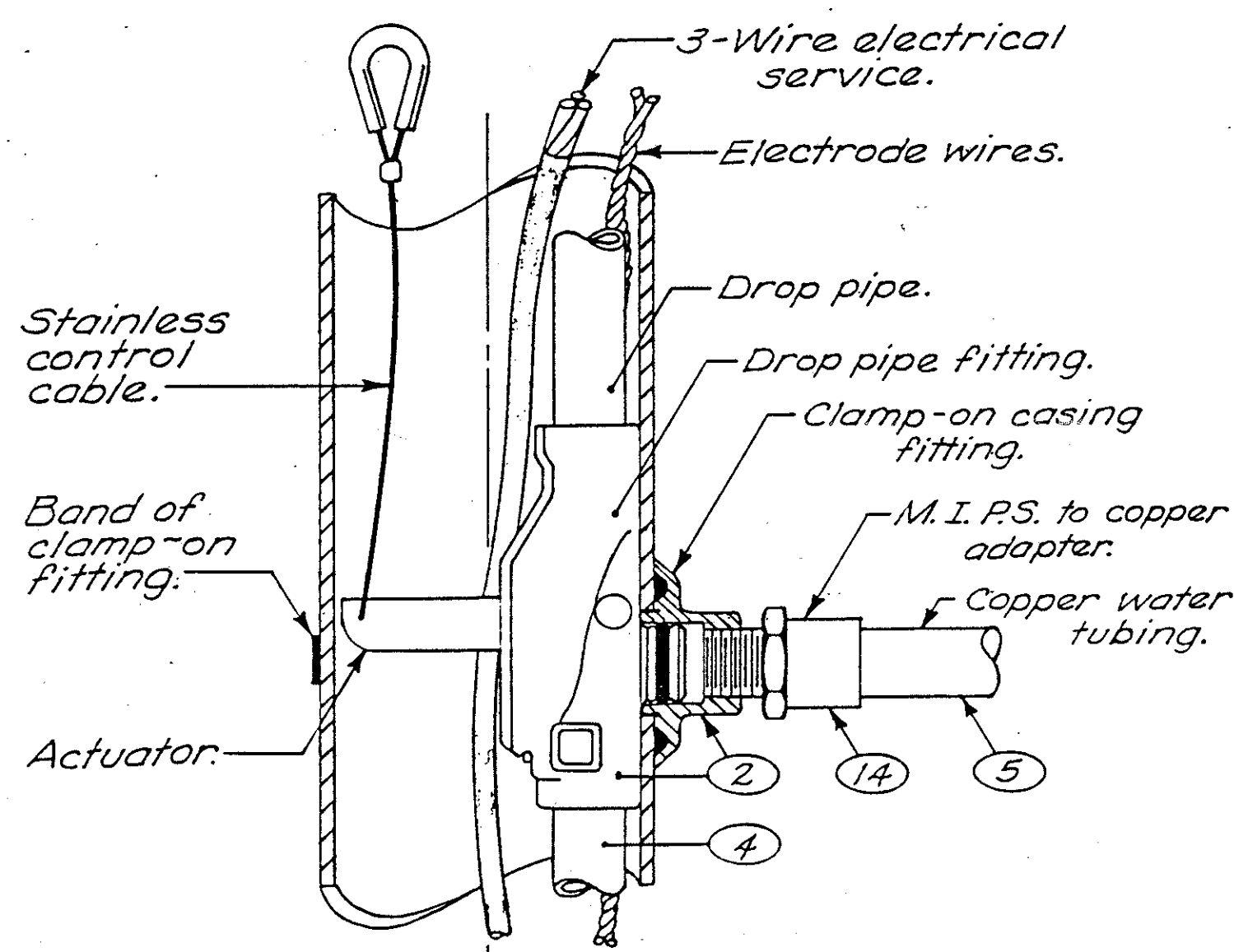
(7) 4 - NO. 10 THW &
 1 - NO. 10 THW GREEN GRD./
 IN 1" COND. TO (2) 2-P/30A BRK'S,
 TO (2) 4'-0", 2.5 KW B.B. HEATERS,
 CKT'S P-12 & P-14, RM. 104.

(8) 4 - NO. 10 THW &
 1 - NO. 10 THW 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-16 & P-18, RM. 104.

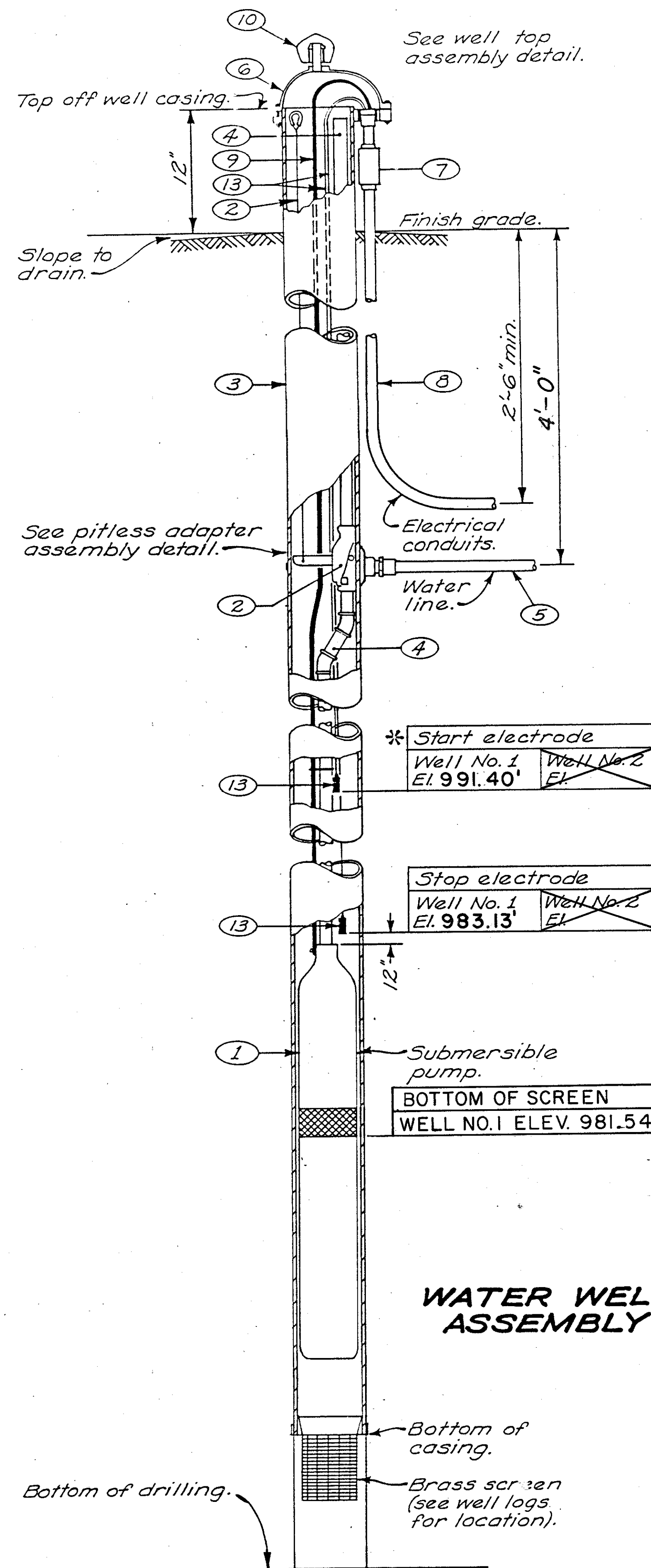
(9) 1- NO.10 THW GREEN GRD./ IN 1" COND.
 THIS CONDUCTOR SHALL BE THE
 SERVICE EQUIPMENT GROUNDING
 ELECTRODE. CONDUIT TO EXTEND TO
 2" COPPER WATER LINE FEEDING RES-
 ERVOIR PUMP NO.1 IN RM 103. STUB
 1" CONDUIT 6" ABOVE FINISHED FLOOR
 ONLY IN RM 103. CLAMP GROUND I/O
 ELECTRODE TO 2" COPPER WATER LINE
 AS PER SPECIFICATIONS, MEETING THE
 NATIONAL ELECTRIC CODE REQUIRE-
 MENTS.



WELL TOP ASSEMBLY



PITLESS ADAPTER ASSEMBLY



WATER WELL ASSEMBLY

WELL LOGS		
WELL No. 1		
West bound Rest Area No. 4-10.		
Sta. 13 + 4400, 40 ft. Lt. of base line.		
Field rate 15 GPM., by bail (*) / pump ()		
Casing length 521.0 ft.		
Strata at full depth GRAY ARENACEOUS CLAY		
Recommended sieve size SHALE N.A.		
Item	Elevation	Depth in feet below original grade
Top of casing	1033.14	
Original grade	1027.64	
Finish grade	1023.00	
Static water level *	1001.40	26.24'
Drawdown		(xx)
Bottom of casing	981.04	
Brass screen	Top N.A.	
	Bottom N.A.	
Total drilled depth	959.40	68.24'
WELL No. 2		
bound Rest Area No. _____		
Sta. _____ + _____, _____ ft. Lt. of E. Rte. _____		
Field rate _____ GPM., by bail () / pump ()		
Casing length _____ ft.		
Strata at full depth _____		
Recommended sieve size _____		
Item	Elevation	Depth in feet below original grade
Top of casing		
Original grade		
Finish grade		
Static water level *		
Drawdown		
Bottom of casing		
Brass screen	Top	
	Bottom	
Total drilled depth		

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

(xx) MAKE PROVISIONS, BY USE OF ELECTRICALLY DRIVEN PUMP, TO PUMP AT A CONSTANT RATE OF 15 GPM FOR EIGHT (8) HOURS, RECORDING WATER LEVEL AT VARIOUS MINUTE TIME INTERVALS TO OBTAIN THE DRAWDOWN OF WELL. IF THERE IS CONSIDERABLE DRAWDOWN, THE SUBM. PUMP SHALL BE LOWERED SO THAT THE BOTTOM OF INTAKE SCREEN OF SUBM. PUMP SHALL BE PLACED AT ELEV. 974.40 AND THE STOP ELECTRODE PLACED AT ELEV. 976.94. SUBMIT COPIES OF PUMPING DATA TO THE ENGINEER FOR APPROVAL AND AUTHORIZATION OF PUMP AND ELECTRODE ELEVATION SETTINGS THAT SHALL BE USED.

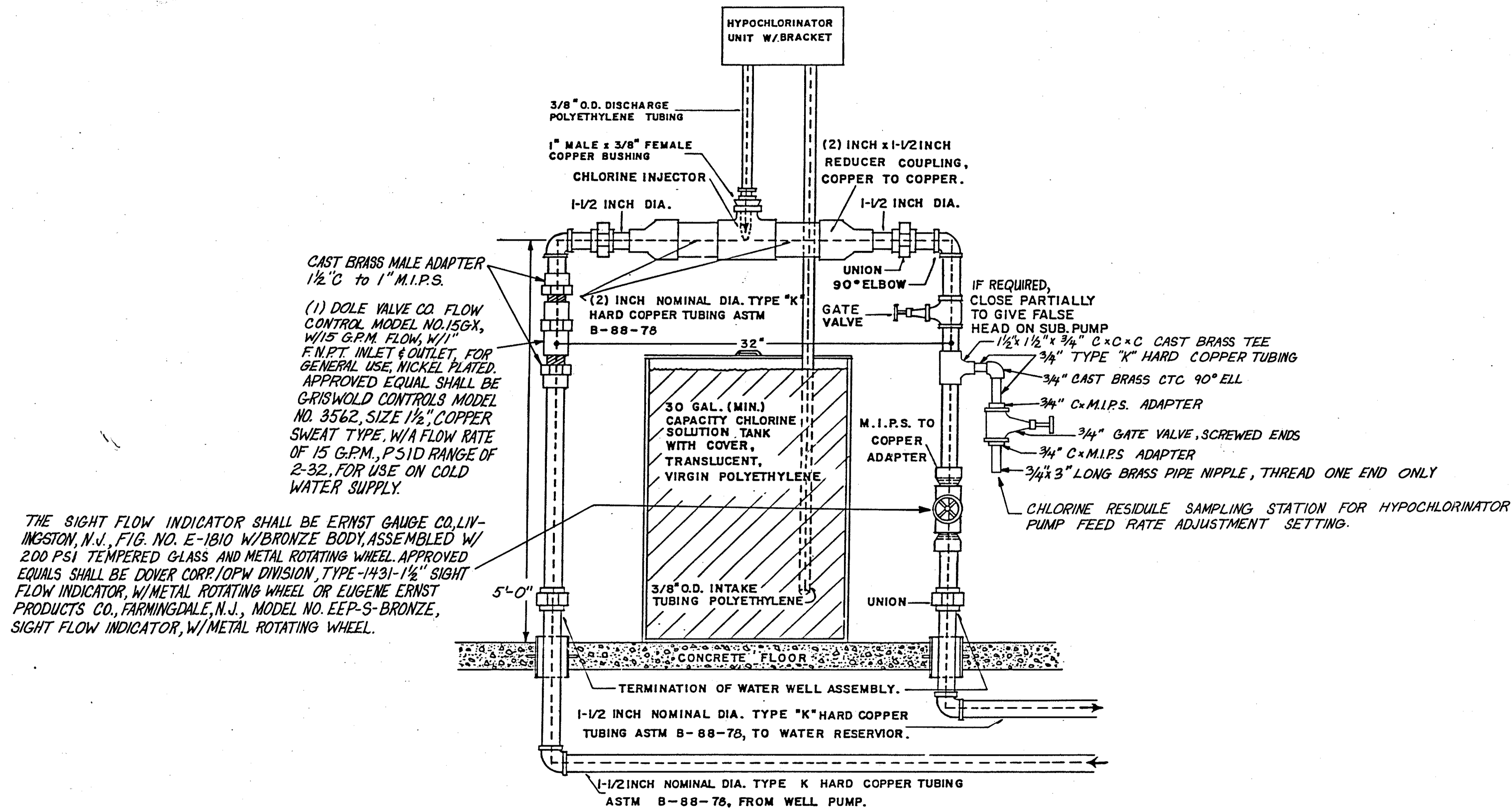
NOTES

- SUBMERSIBLE PUMP SHALL BE TAIT MFG., NO. 7ST315-F OR APPROVED EQUAL BY CRANE CO, DEMING DIVISION: RED JACKET OR RAPIDAYTON PUMP SHALL BE 3/4 H.P., 230 VOLTS, SINGLE PHASE, 60 HZ., (I) 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. (I) F.E. MYERS
- 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. 5PL-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.
- 1/2 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.

Note: The contractor shall provide, at the earliest possible convenience, the required water samples from each well to the Engineer for submission to the Dept. of Health.

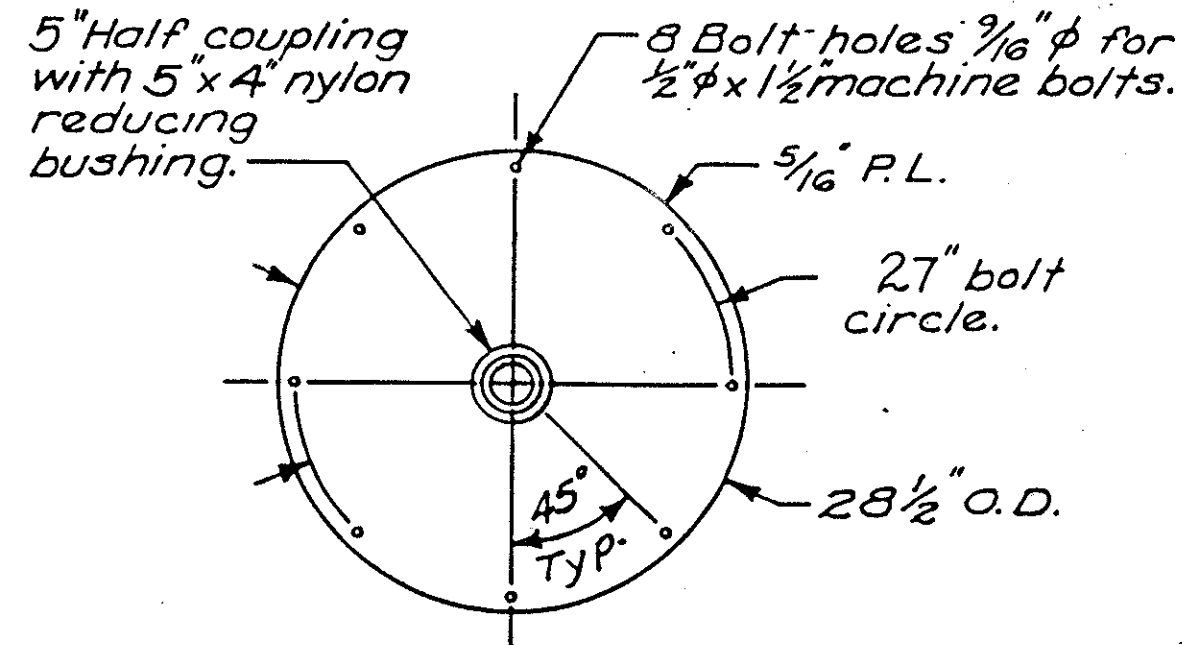
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
DATE 9/2/82	
WATER WELL ASSEMBLY 11-15-82 1-21-83	
RRA-7	
APPROVED <i>[Signature]</i> Engr. of Design Services	

NOTE:
M.I.P.S. TO COPPER ADAPTERS SHALL BE ADJACENT TO ALL VALVES, UNIONS, & SIGHT FLOW INDICATOR. (SEE GENERAL NOTE SELECTION 12, ITEM NO.9 - DOMESTIC COLD WATER SERVICE)

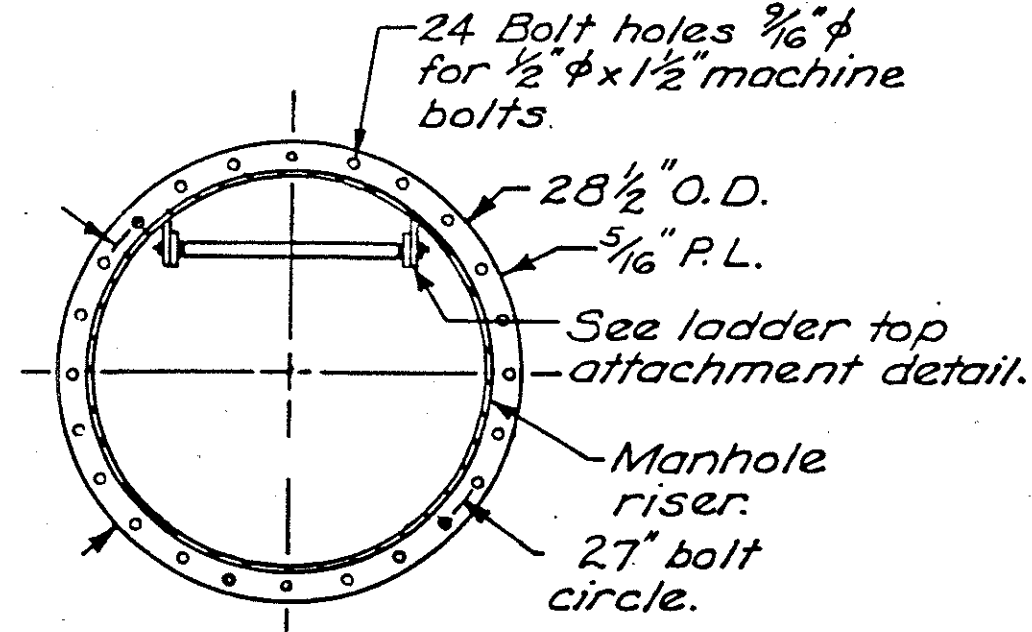


DETAIL OF WATER SYSTEM
HYPOCHLORINATOR (NOT TO SCALE)

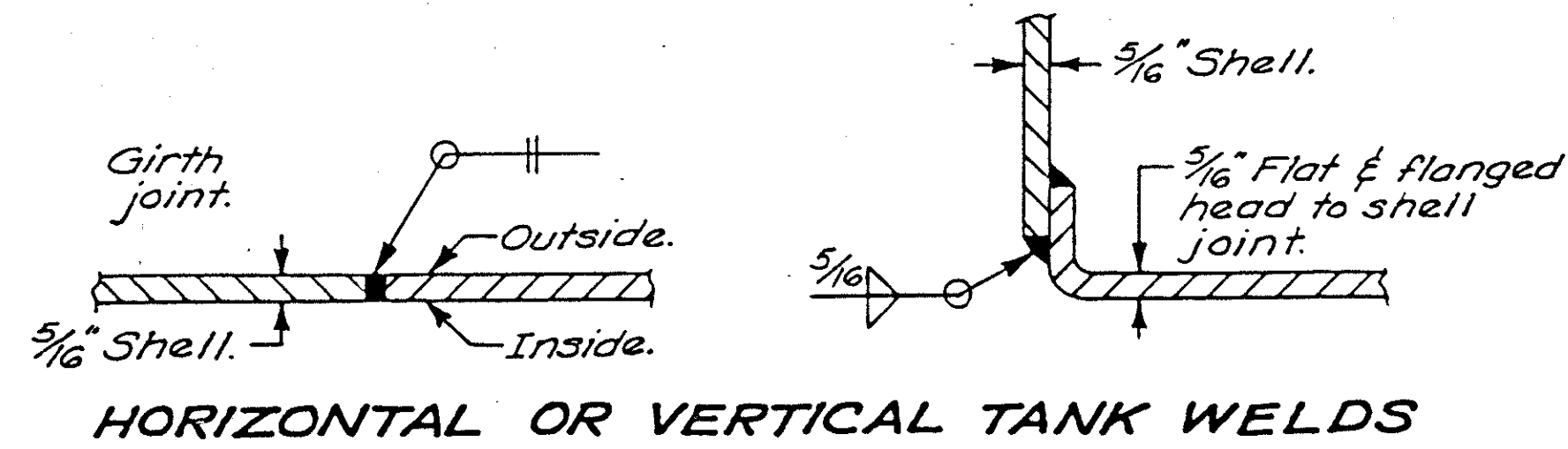
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
WATER SYSTEM HYPOCHLORINATOR	DATE 9/2/82 11/5/82 12/29/82 1/11/82 1-21-83
	RRA-8
APPROVED <i>C. J. DeWitt</i> Engr. of Design Services	



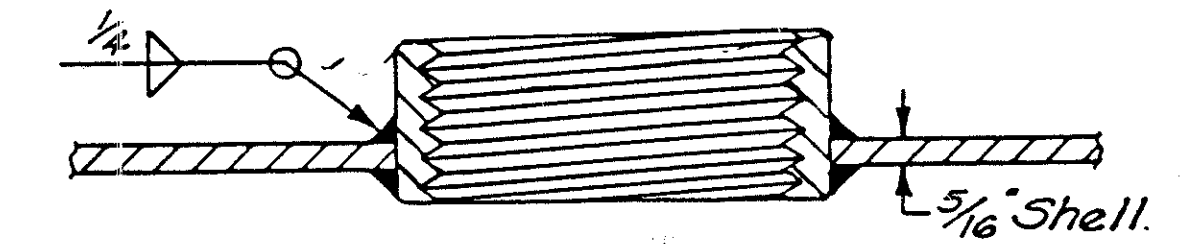
MANHOLE COVER



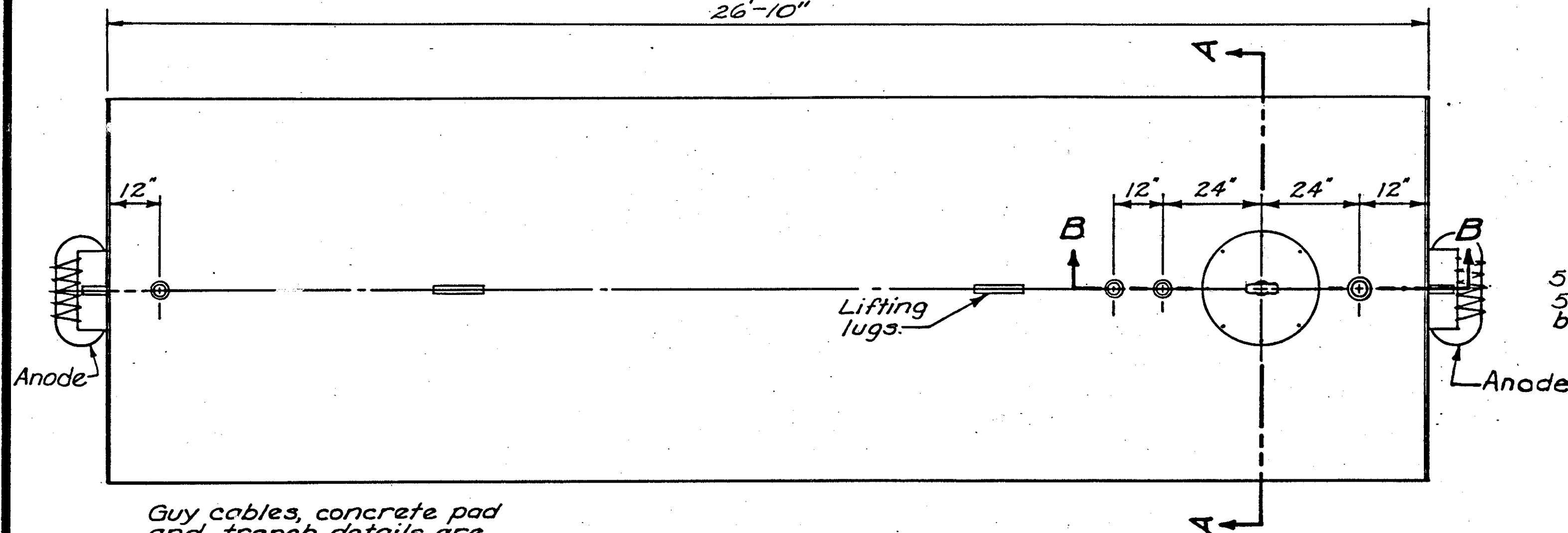
MANHOLE NECK RING



HORIZONTAL OR VERTICAL TANK WELDS



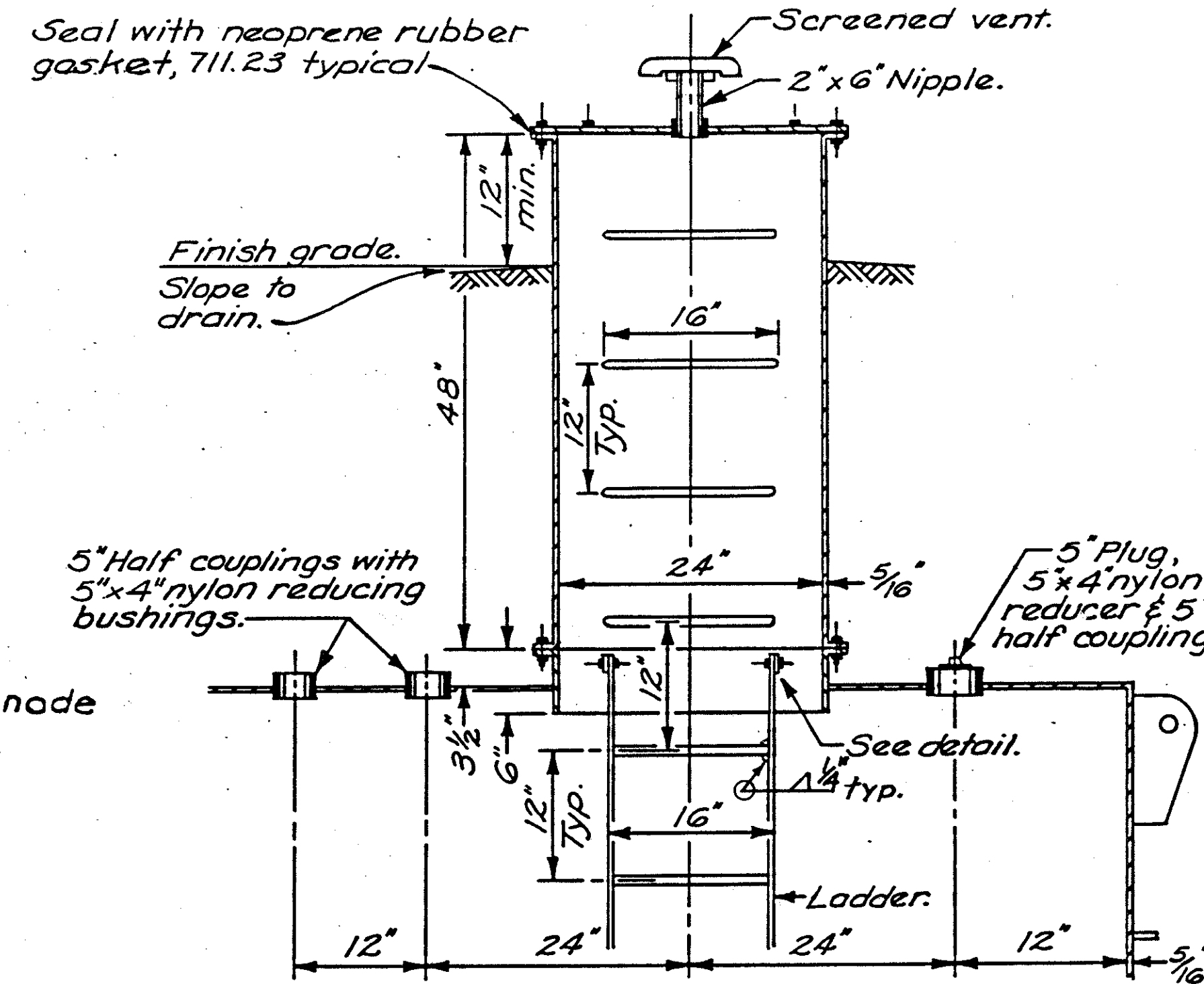
HALF COUPLING WELD



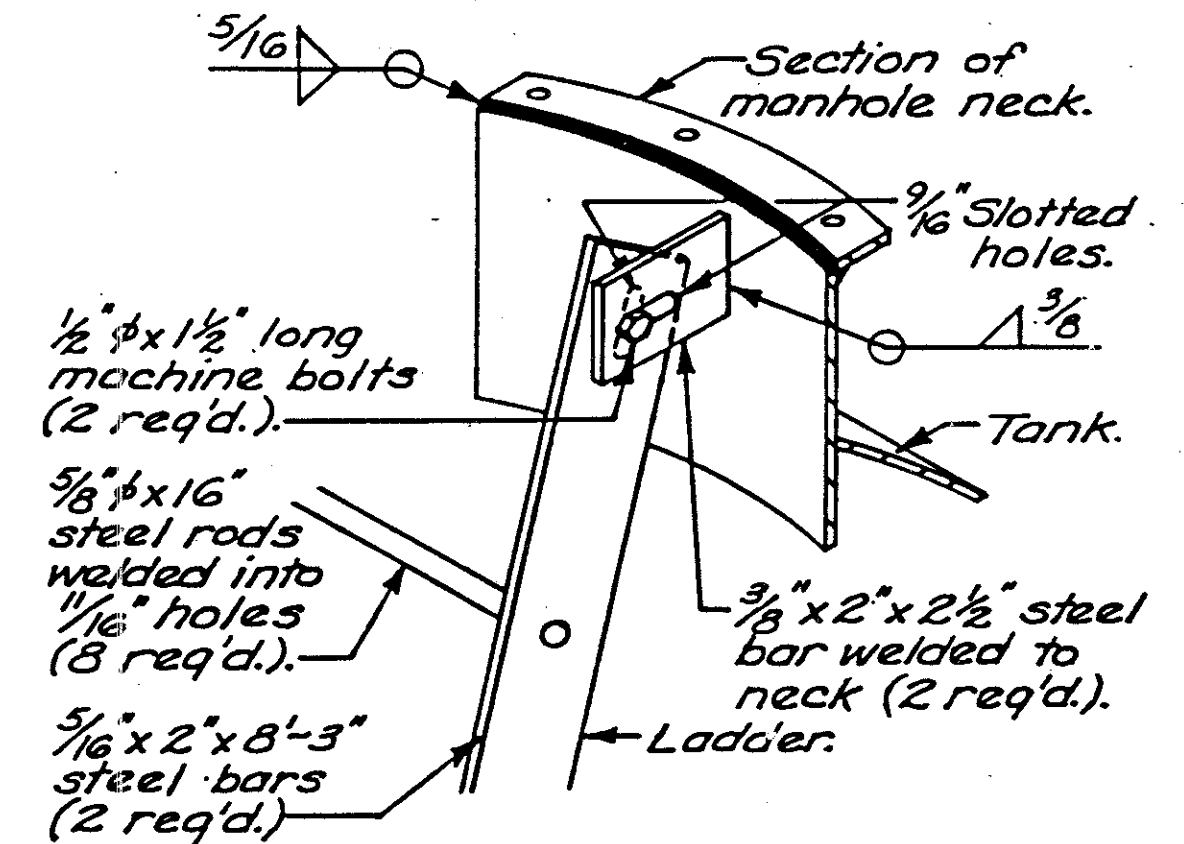
TANK PLAN VIEW

Tank shall be fabricated in conformance with Underwriters Laboratories Standard 58 and shall bear the U.L. label.

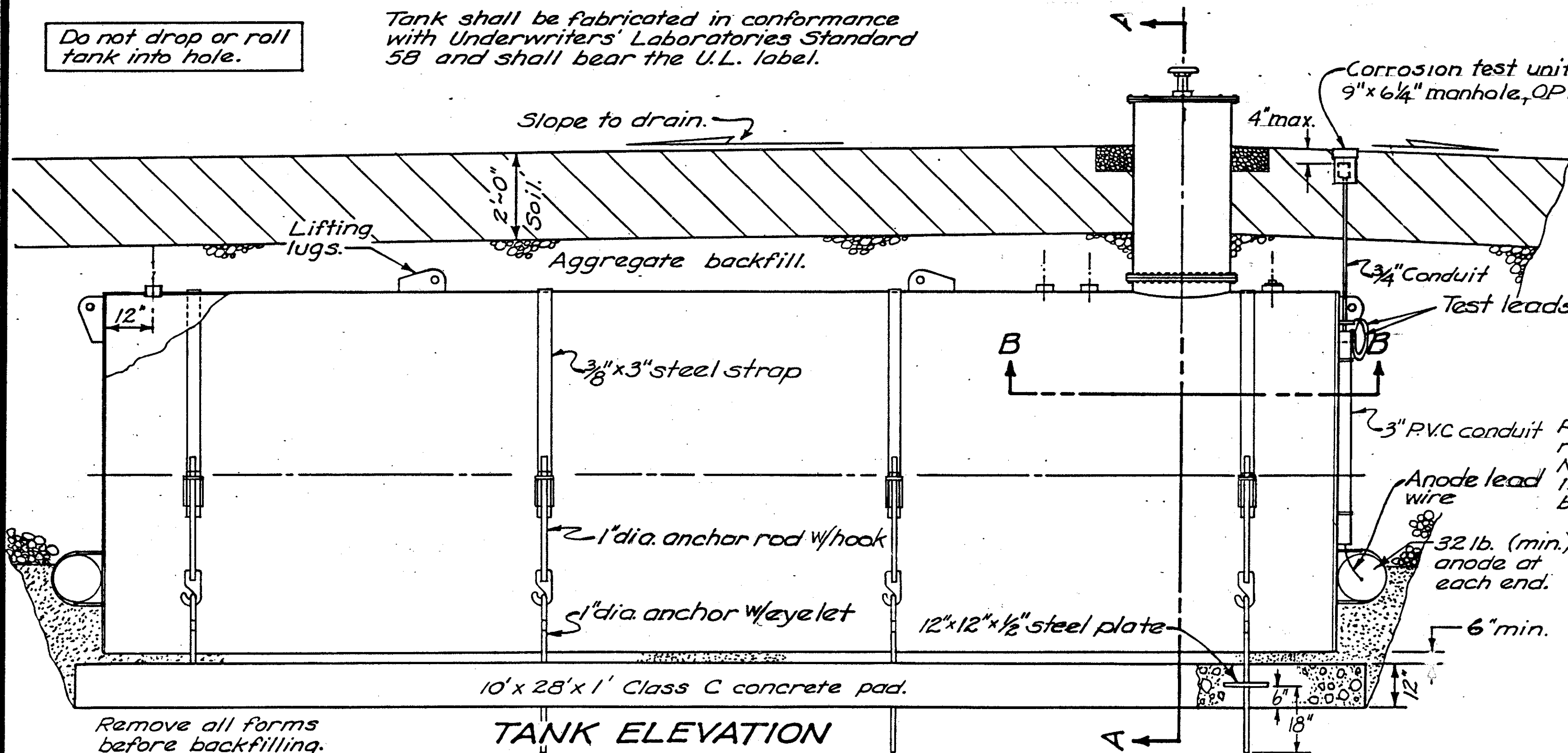
Do not drop or roll tank into hole.



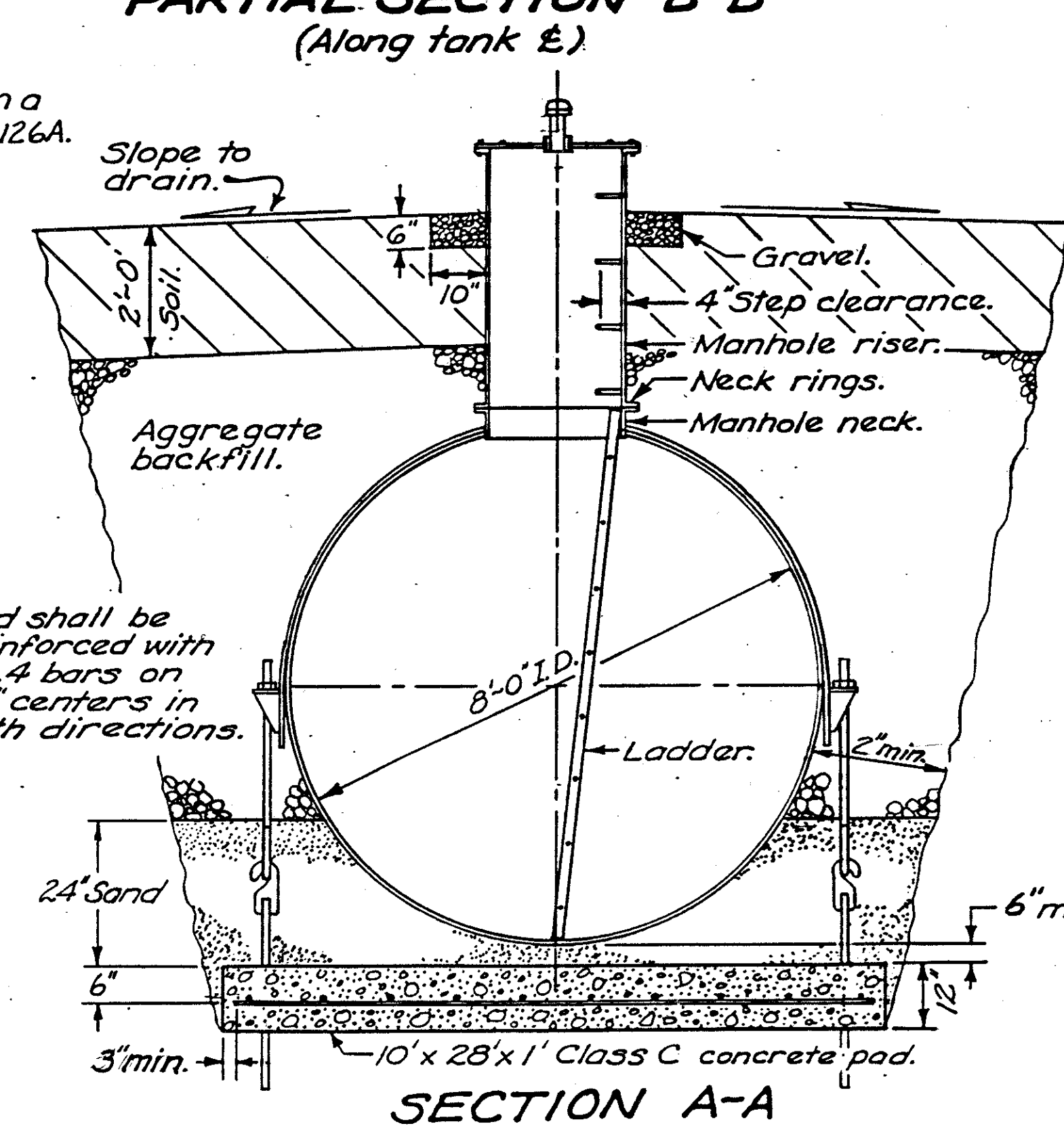
PARTIAL SECTION B-B
(Along tank E)



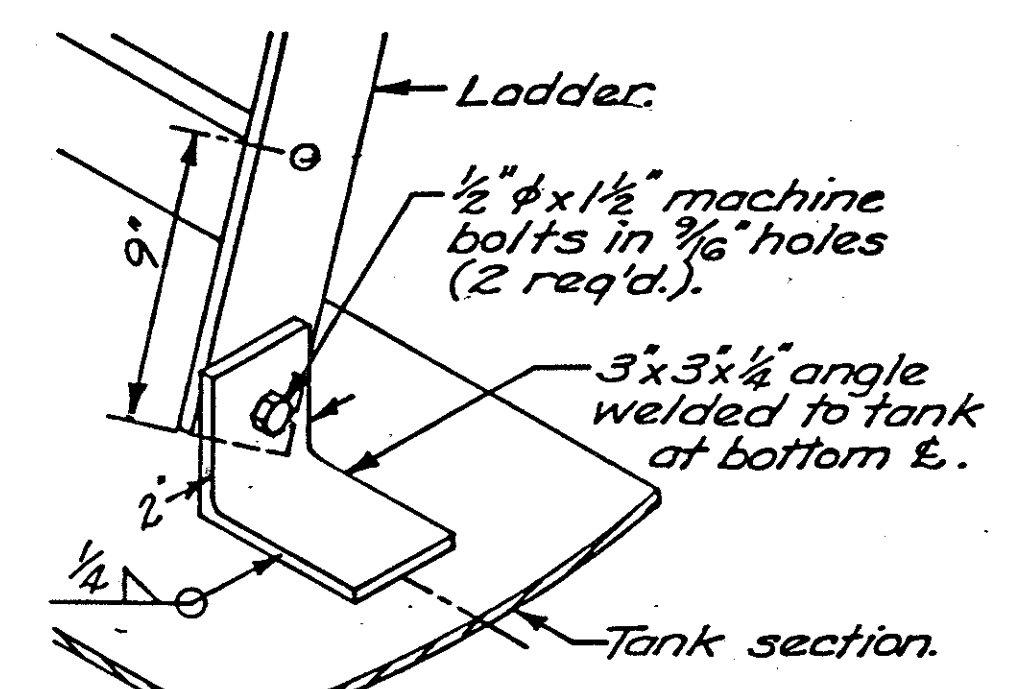
LADDER TOP ATTACHMENT



TANK ELEVATION



SECTION A-A



LADDER BASE ATTACHMENT

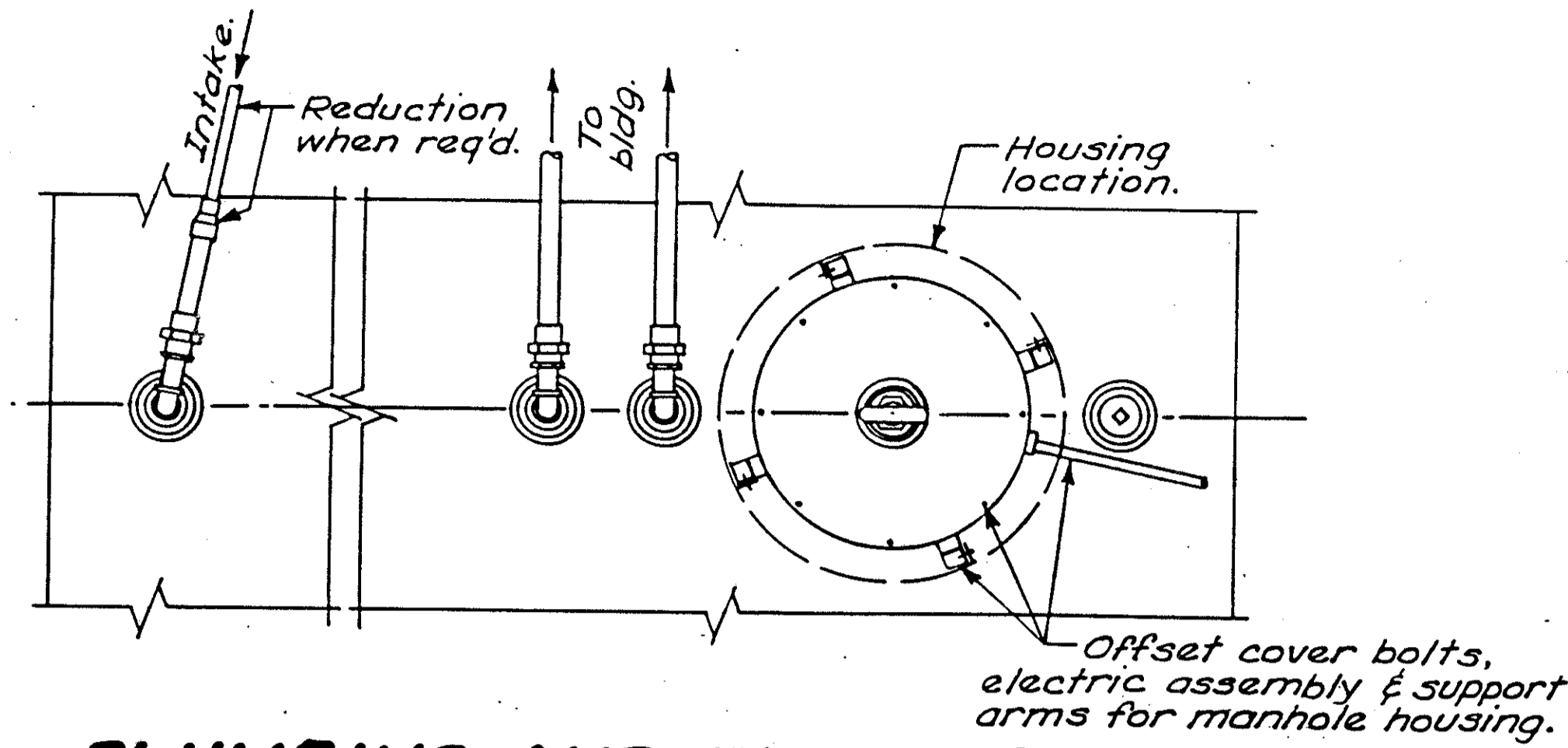
BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

DATE
9/2/82

WATER RESERVOIR TANK

RRA-9

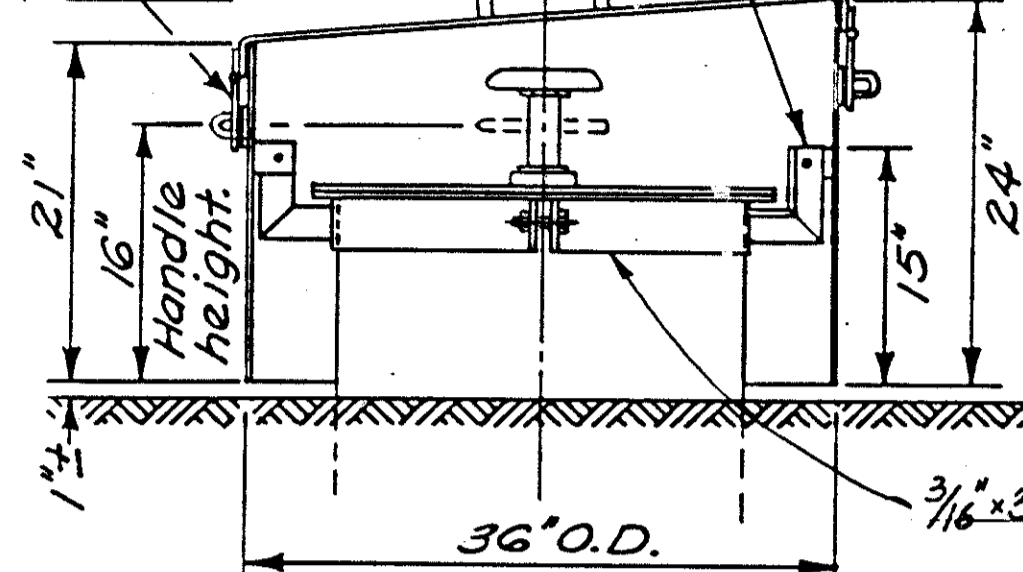
APPROVED *E. J. Schaefer* Engr. of Design Services



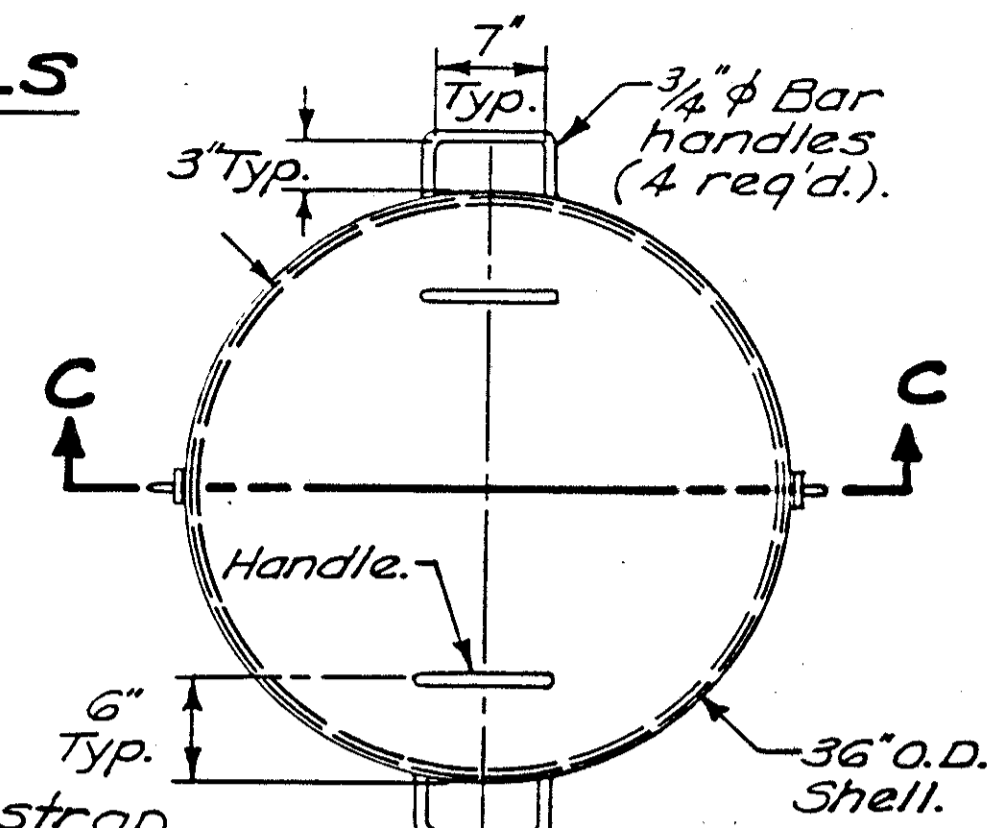
PLUMBING AND ELECTRIC - PLAN

MANHOLE HOUSING DETAILS

Extra heavy strap hasps with rigid case & hardened staples (2 req'd. at 180°).
See Arm Detail (4 req'd. at 90°).



SECTION C-C



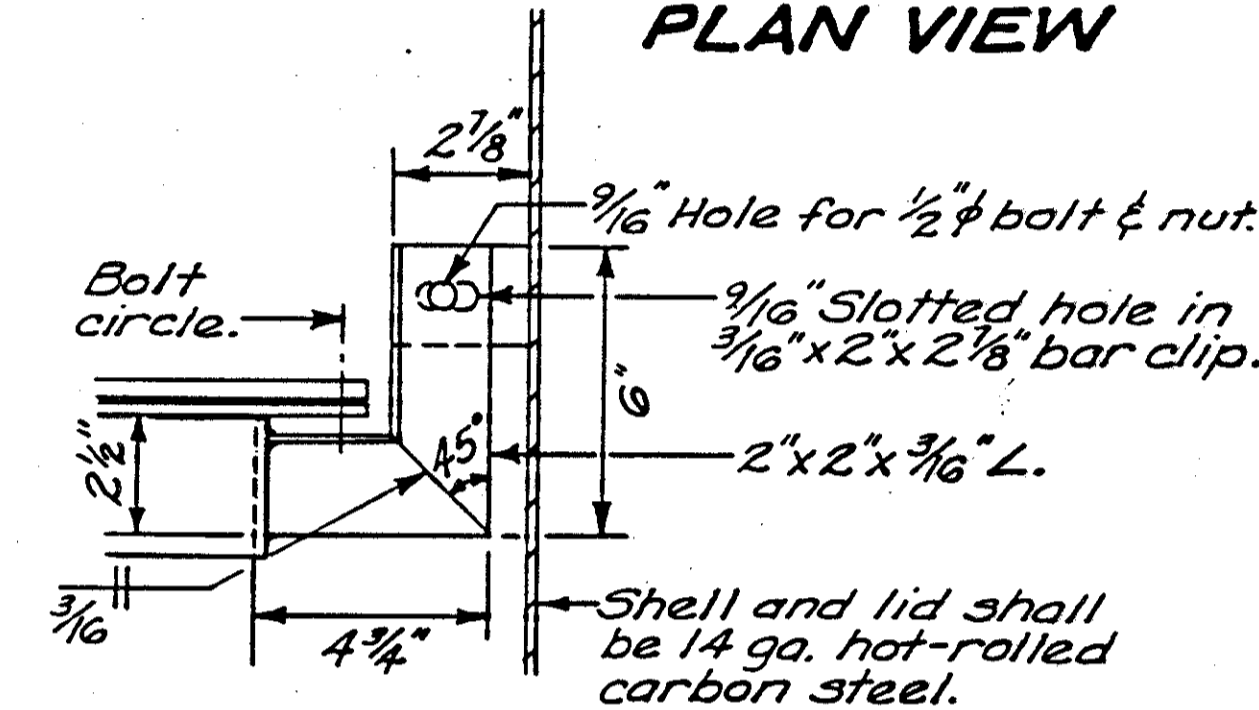
PLAN VIEW

WELDS: Arms, bar clips, handles, hasps and staples shall be fillet welded all around.

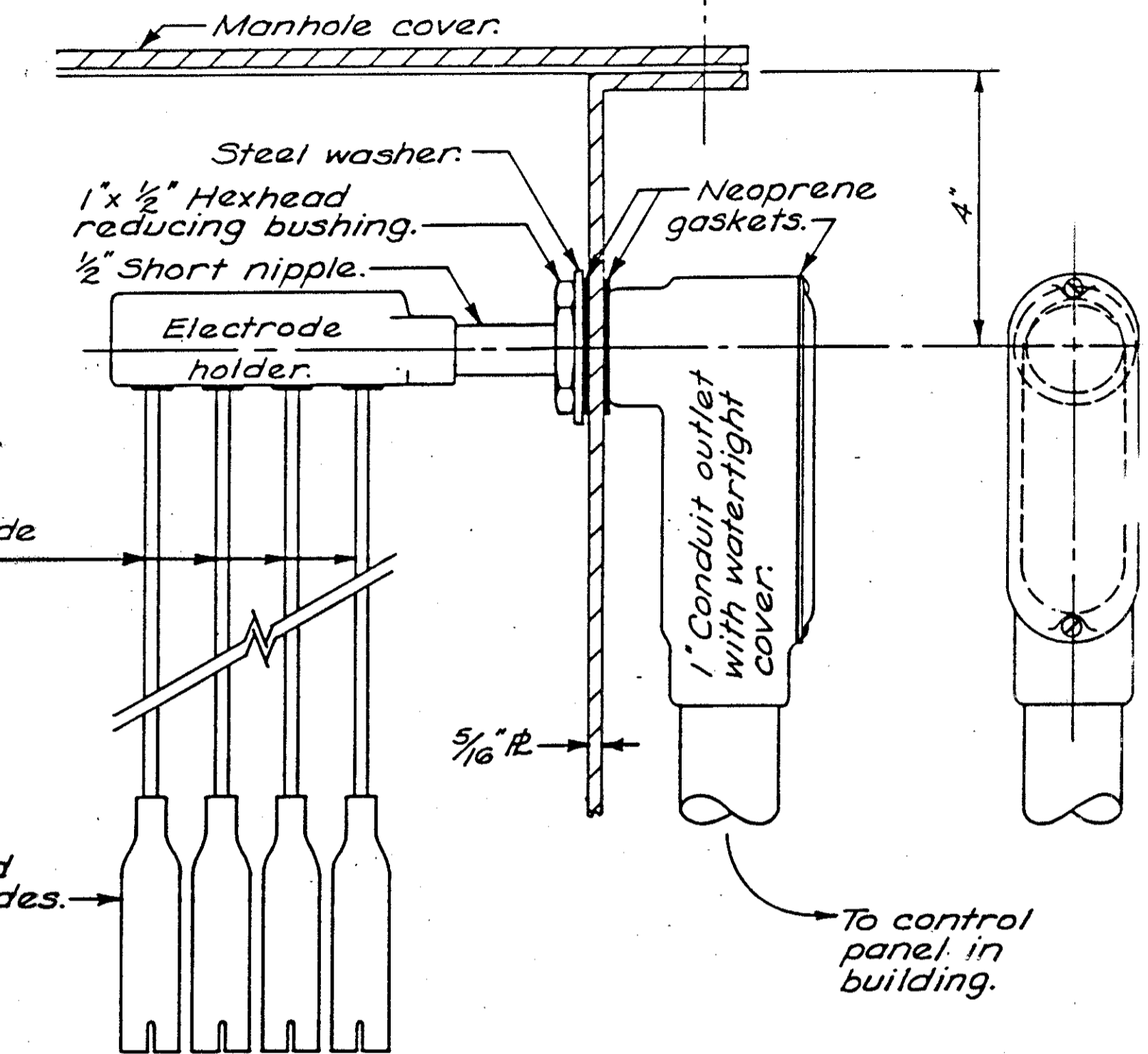
Shell and lid shall be coated inside and outside with red oxide primer (708.19) and green finish paint (708.09).

Arms shall be covered by the same outside coating required on the tank, manhole and manhole cover.

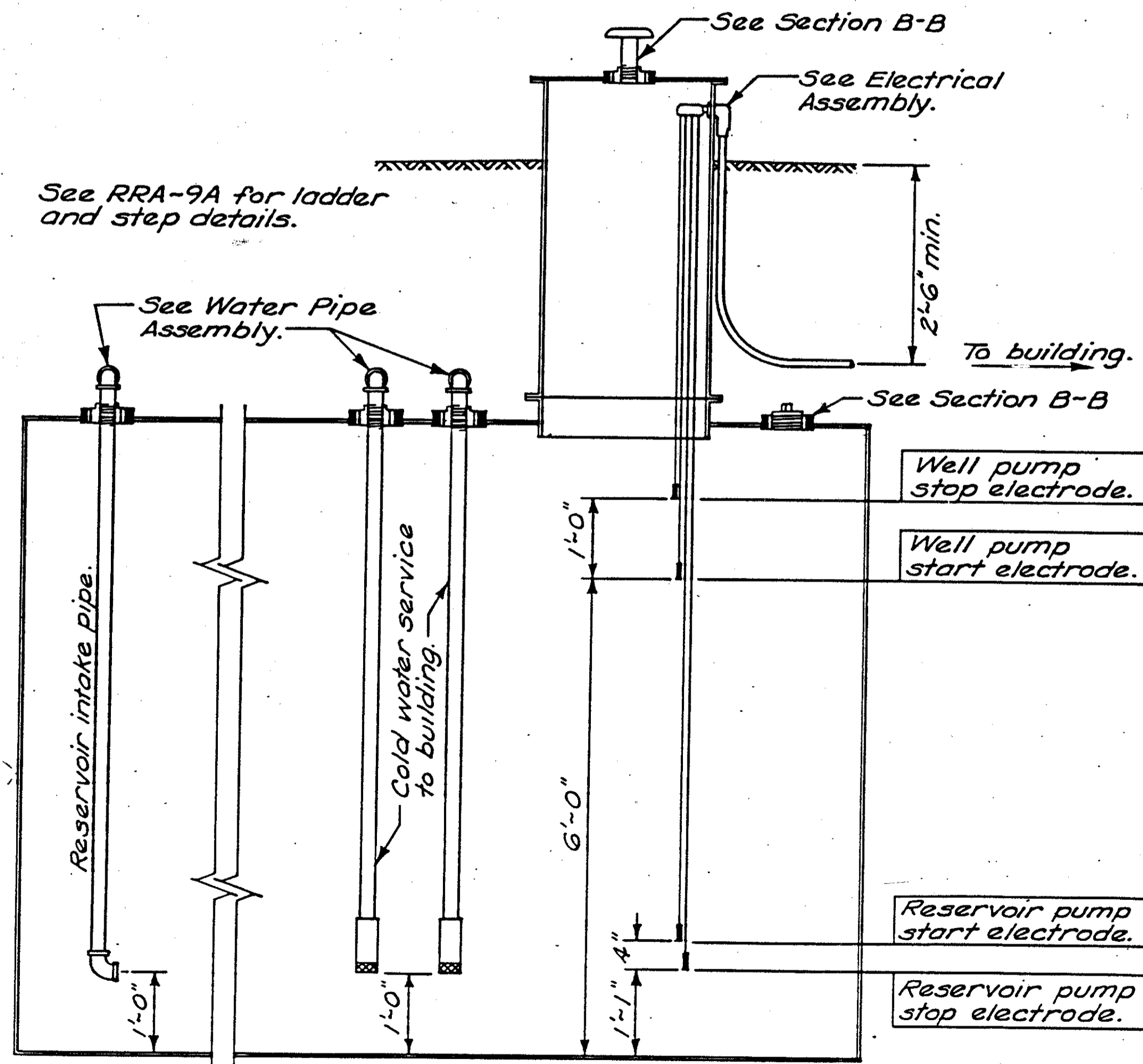
Two padlocks equal to Master No. 4BKA or Wilson Bahannon 660 and meeting the corrosion and keying requirements of 631.08 shall be furnished with each housing.



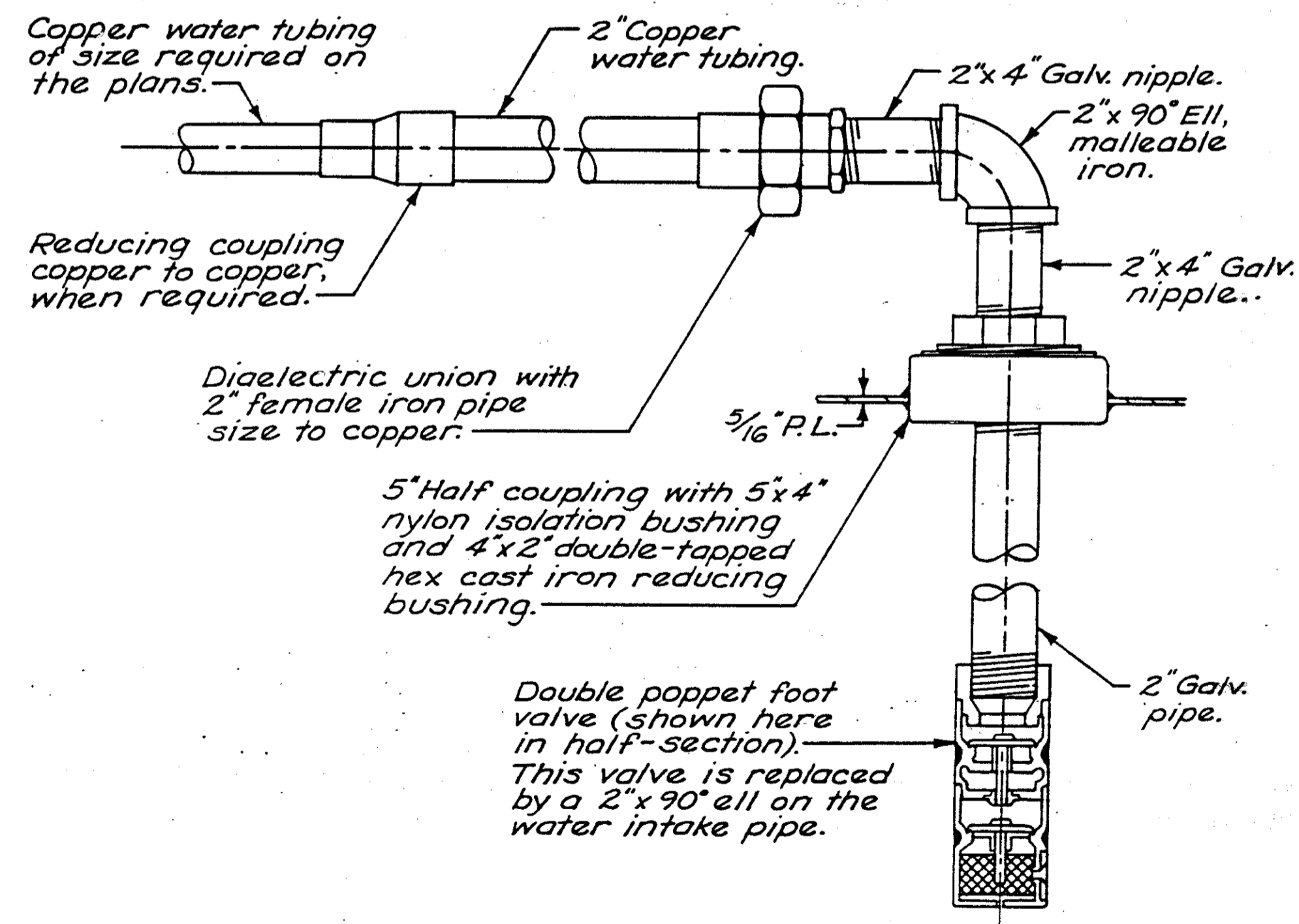
ARM DETAIL



ELECTRICAL ASSEMBLY



PLUMBING AND ELECTRIC - SECTION



WATER PIPE ASSEMBLY

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

DATE
9/2/82

WATER RESERVOIR TANK

RRA-9A

APPROVED *G. J. Schaefer* Engr. of Design Services

DESIGN THIS STRUCTURE IS DESIGNED, IN ACCORDANCE WITH ARTICLE 9 [OAC 4101:2-9] OF THE OHIO BASIC BUILDING CODE, TO WITHSTAND 90 M.P.H. WIND LOADS.

FOOTER AND SLAB

- 1) THE NECESSARY EXCAVATION AND BACK FILLING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 503.
- 2) SUBBASE AGGREGATE SHALL MEET THE REQUIREMENTS OF ITEM 703, GRADE 57.
- 3) REINFORCING BAR TYPE AND PLACEMENT SHALL BE IN ACCORDANCE WITH ITEM 509.
- 4) U-BAR ANCHORS SHALL BE SIMPSON CO., MODEL NO. CB88-HDG OR APPROVED EQUAL.
- 5) CONCRETE SHALL BE CLASS "C" IN ACCORDANCE WITH ITEM 511.

LUMBER

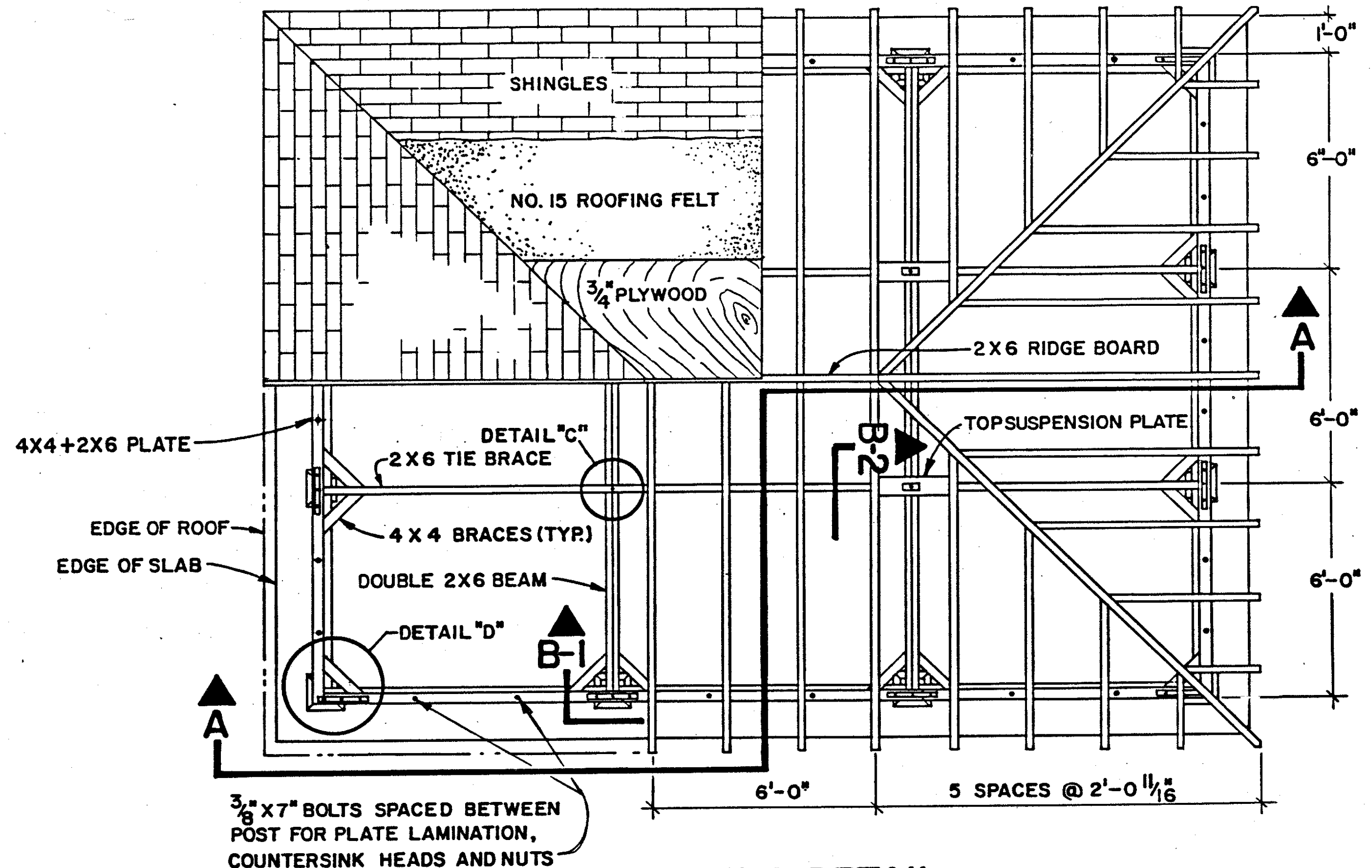
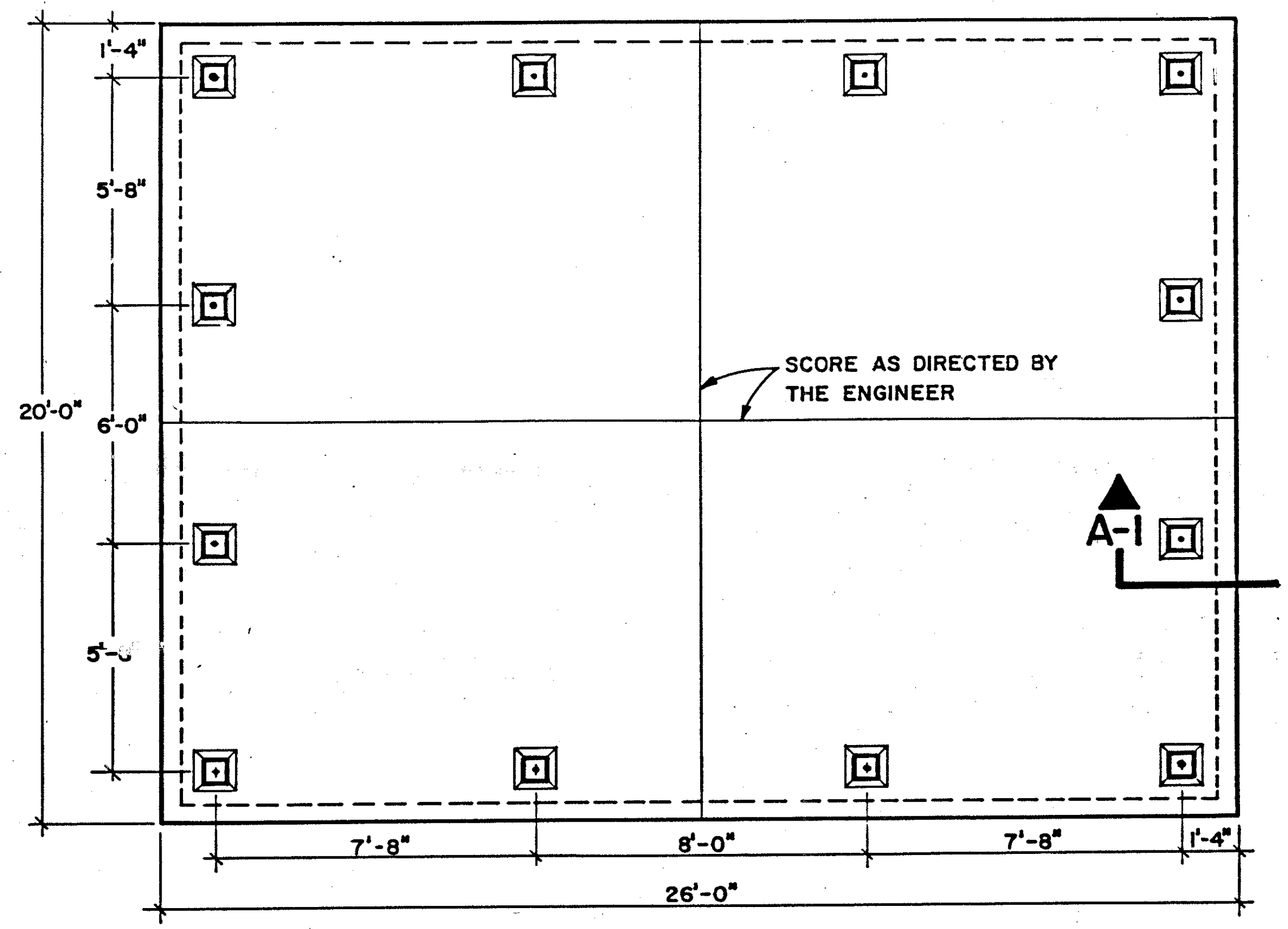
- 1) ALL LUMBER SHALL BE S4S STANDARD KILN DRIED #1 COMMON OR BETTER, SOUTHERN YELLOW PINE OR DOUGLAS FIR, CONSTRUCTION GRADE AS PER SECTION 711.26.
- 2) ALL LUMBER SHALL BE TREATED WITH CCA (CHROMATED COPPER ARSENATE) CONFORMING TO ASSHTO M135, TYPE A, B OR C OR PENTACHLOROPHENOL, AS PER SECTION 712.06.
- 3) AFTER DRILLING ALL BOLT HOLES SHALL BE PAINTED WITH A PENTACHLOROPHENOL 5% (BY WEIGHT) SOLUTION.
- 4) ROOF SHALL BE CONSTRUCTED OF 1 X 6 KILN DRIED SHEATHING BOARD OR 3/4" PLYWOOD SHEATHING. PLYWOOD SHEATHING SHALL BE EXTERIOR TYPE C-C-EXT-APA(4).

HARDWARE

- 1) ALL HARDWARE SHALL HAVE A GOOD QUALITY HOT DIPPED GALVANIZED OR CADMIUM PLATE FINISH.
- 2) LARGE SIZE ("WIDE") WASHERS SHALL BE USED WITH ALL BOLTS, ONE AT EACH END. LOCKWASHERS SHALL BE USED AT THE NUT END. BOLTS SHALL BE CUT OFF 1/4" BEYOND THE NUT AND THEN HAMMERED.
- 3) RIDGE ROLL - THE CONTRACTOR SHALL FURNISH AND INSTALL, BELOW FELT LAYER, ON ALL RIDGES OF THE SHELTER HOUSE, ALUMINUM RIDGE ROLL OF HIGH STRENGTH COMMON ALLOY CONFORMING TO SPECIFICATIONS SET FORTH F.H.A. BULLETINS AND HAVING MINIMUM PROPERTY STANDARDS 33,000 P.S.I. YIELDS, .021 THICKNESS, 14 INCH WIDE, 10 FEET TO EACH SECTION WITH DIAMOND EMBOSSED FINISH. RIDGE ROLL SHALL BE AS MANUFACTURED BY KAISER, ALCOA, REYNOLDS OR APPROVED EQUAL.

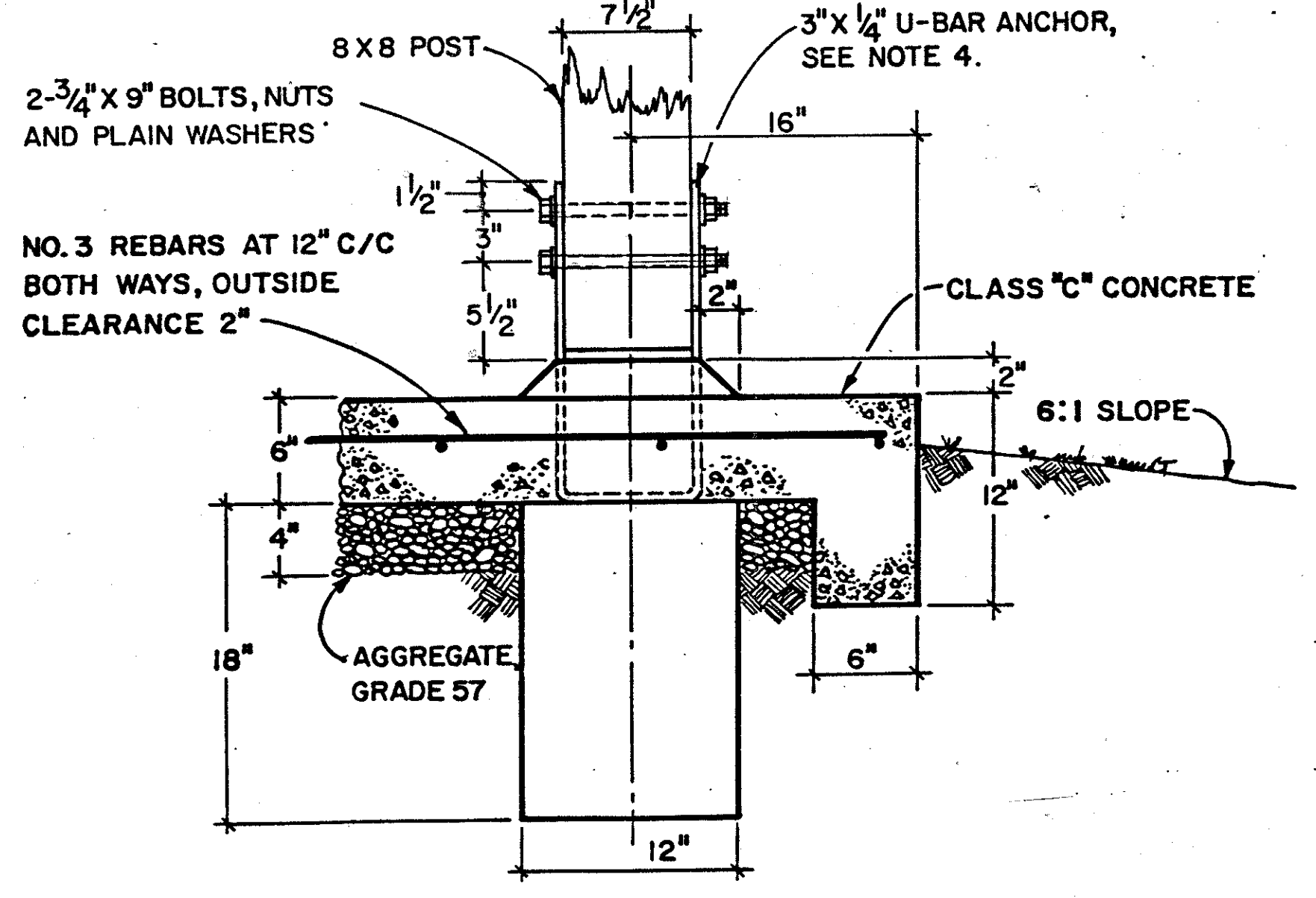
BUREAU OF DESIGN SERVICES
 DIVISION OF HIGHWAYS
 OHIO DEPARTMENT OF TRANSPORTATION

SHELTER HOUSE	DATE
	11-16-81 8-20-82 11-12-82
A 1 of 2	APPROVED <i>E. J. [Signature]</i> Engr. of Design Services

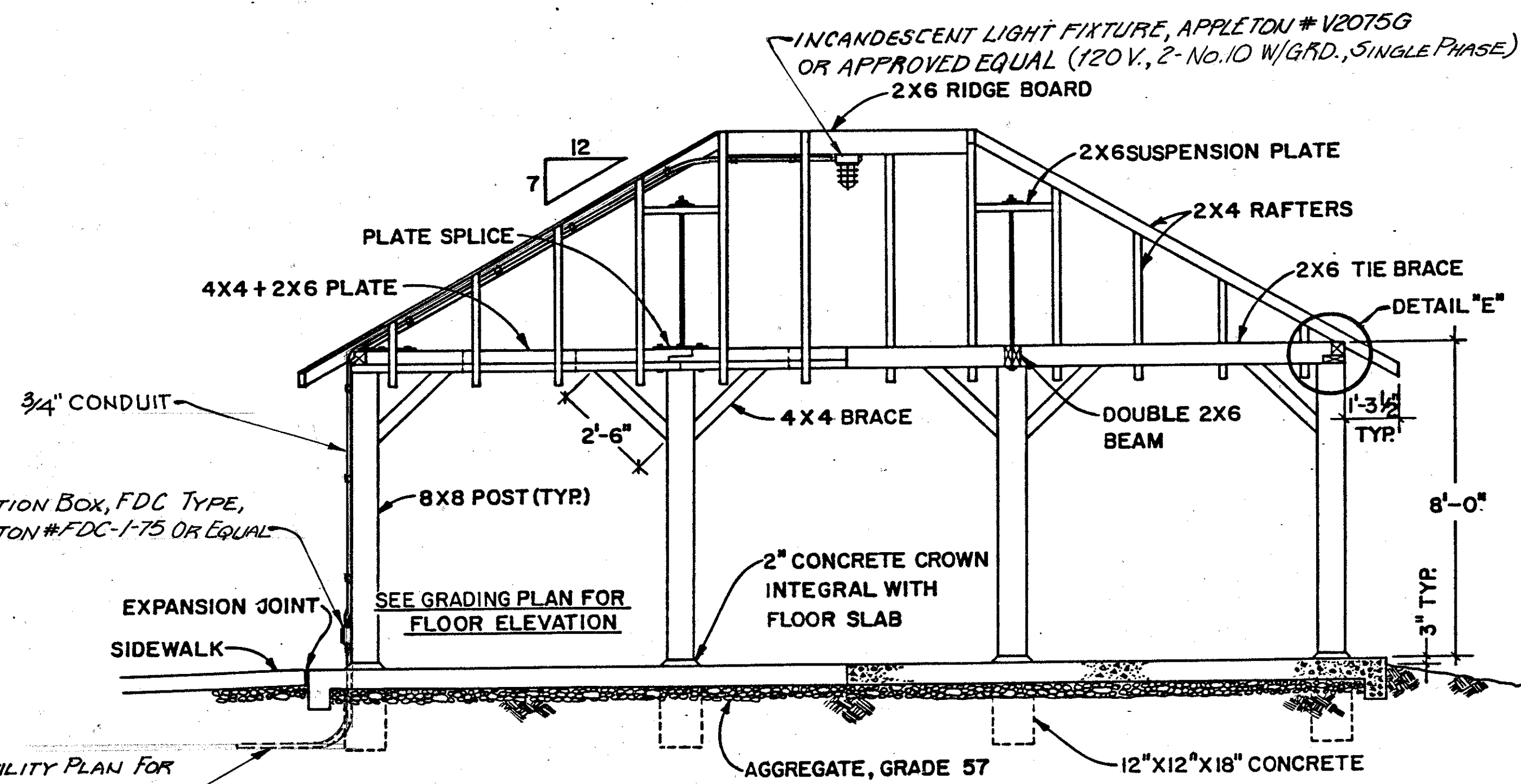


FRAMING DETAIL

FOOTER AND SLAB DETAIL



A-1



SECTION A-A

SEE UTILITY PLAN FOR CONDUIT LOCATION (SHEET NO. 8)

HANDSPLIT SHAKE ROOF

ROOF SHAKES SHALL BE CERTI-SPLIT RED CEDAR HAND SPLIT SHAKES, GRADE NO. 1, 4 TO 14 INCHES WIDE, 18 INCHES LONG, 1/2 TO 3/4 INCH THICK AS DESIGNATED BY THE RED CEDAR SHINGLE AND SHAKE BUREAU AND SHALL BE THE FIRE-RETARDANT CLASSIFICATION OF CLASS "C" AS LISTED BY THE UNDERWRITERS LABORATORIES, INC. SHAKES SHALL BE AS MANUFACTURED BY KOPPER COMPANY, INC., COLONIAL HAND SPLIT SHINGLES, INC., E. C. MILLER CEDAR LUMBER CO. OR APPROVED EQUAL.

SHAKES SHALL BE INSTALLED BY LAYING A 36 INCH WIDE STRIP OF 30 LB. ROOFING FELT OVER THE SHEATHING ALONG EAVE LINE. DOUBLE BOTTOM OR FIRST COURSE AT EAVES USING HANDSPLIT SHAKES AS A UNDER LAYER OF 18 INCH LENGTH. LAY SHAKES 7.5 INCHES TO THE WEATHER, NAILING EACH SHAKE WITH TWO NAILS PLACED APPROXIMATELY 1 INCH ABOVE BUTT LINE OF NEXT HIGHER COURSE AND APPROXIMATELY 1 INCH IN FROM EACH EDGE. DRIVE NAILS FLUSH WITH SHAKE SURFACE, BUT NO FURTHER. AFTER EACH COURSE IS NAILED IN PLACE, APPLY AN 18 INCH WIDE STRIP OF 30 LB. SATURATED ROOFING FELT OF TOP PORTION OF INSTALLED COURSE WITH BOTTOM EDGE OF FELT LOCATED AT A DISTANCE ABOVE THE BUTT EQUAL TO TWICE THE WEATHER EXPOSURE. SPACE SHAKES 1/4 TO 3/8 INCHES APART WITH JOINTS OFF AT LAP JOINTS IN COARSE BELOW NOT LESS THAN 1 1/2 INCHES. DO NOT LINE UP JOINTS IN ALTERNATE COURSES. AT HIP AND RIDGES, APPLY A 12 INCH WIDE STRIP OF SATURATED ROOFING FELT CENTERED OVER HIP AND RIDGES. DOUBLE FIRST COURSE OF HIP AND RIDGE UNITS AND APPLY AT EXPOSURE EQUAL TO ROOF SHAKES. LAY RIDGE UNITS STARTING AT EACH END SO THAT UNITS MEET AT THE MIDDLE OF RIDGE. COVER INTER-SECTIONS WITH MALL SECTION OF UNIT AS A SADDLE.

THE PLACEMENT, NAILING AND OTHER ITEMS OF WORK NOT COVERED HEREIN SHALL BE DONE IN ACCORDANCE WITH GOOD INDUSTRY PRACTICE AND/OR MANUFACTURERS RECOMMENDATIONS.

ASPHALT SHINGLED ROOF

ASHPALT SHINGLES WHEN SPECIFIED FOR SHELTER HOUSE ROOF SHALL BE AS FOLLOWS:

ASHPALT SHINGLES SHALL BE HEAVY-WEIGHT, SELF-SEALING, TEXTURED AND RANDOM-EDGED, MEETING U/L CLASS C FIRE RATING AND U/L WIND RESISTANCE WITH A 25 YEAR LIMITED WARRANTY.

THE DIMENSIONS SHALL BE APPROXIMATELY 36" LONG, 12" WIDE WITH 5" EXPOSURE AND 2" HEAD CAP. THE WEIGHT SHALL BE A MINIMUM OF 330 LBS. PER SQUARE, 80 SHINGLES PER SQUARE WITH HIP AND RIDGE SHINGLES USED WHERE NEEDED.

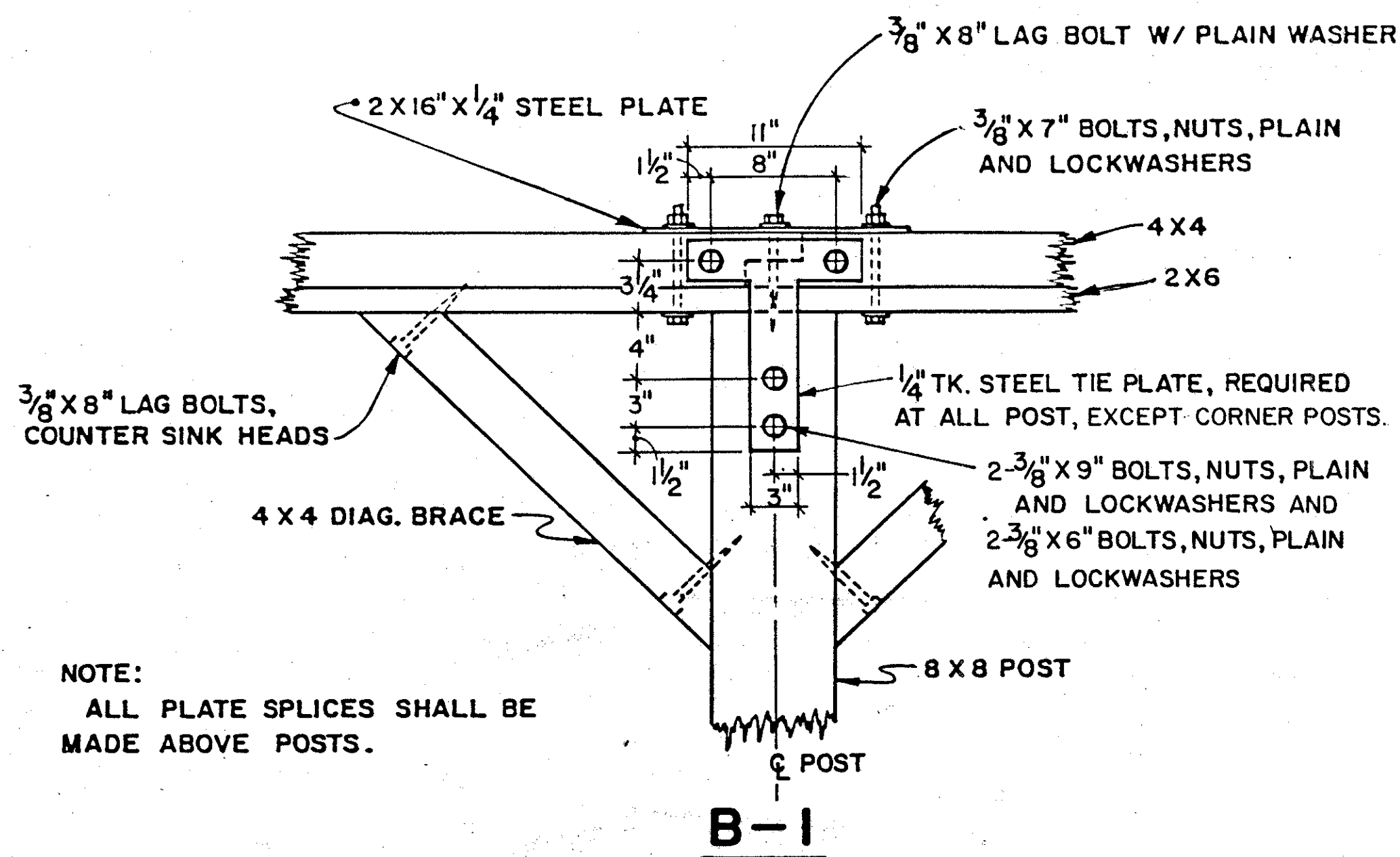
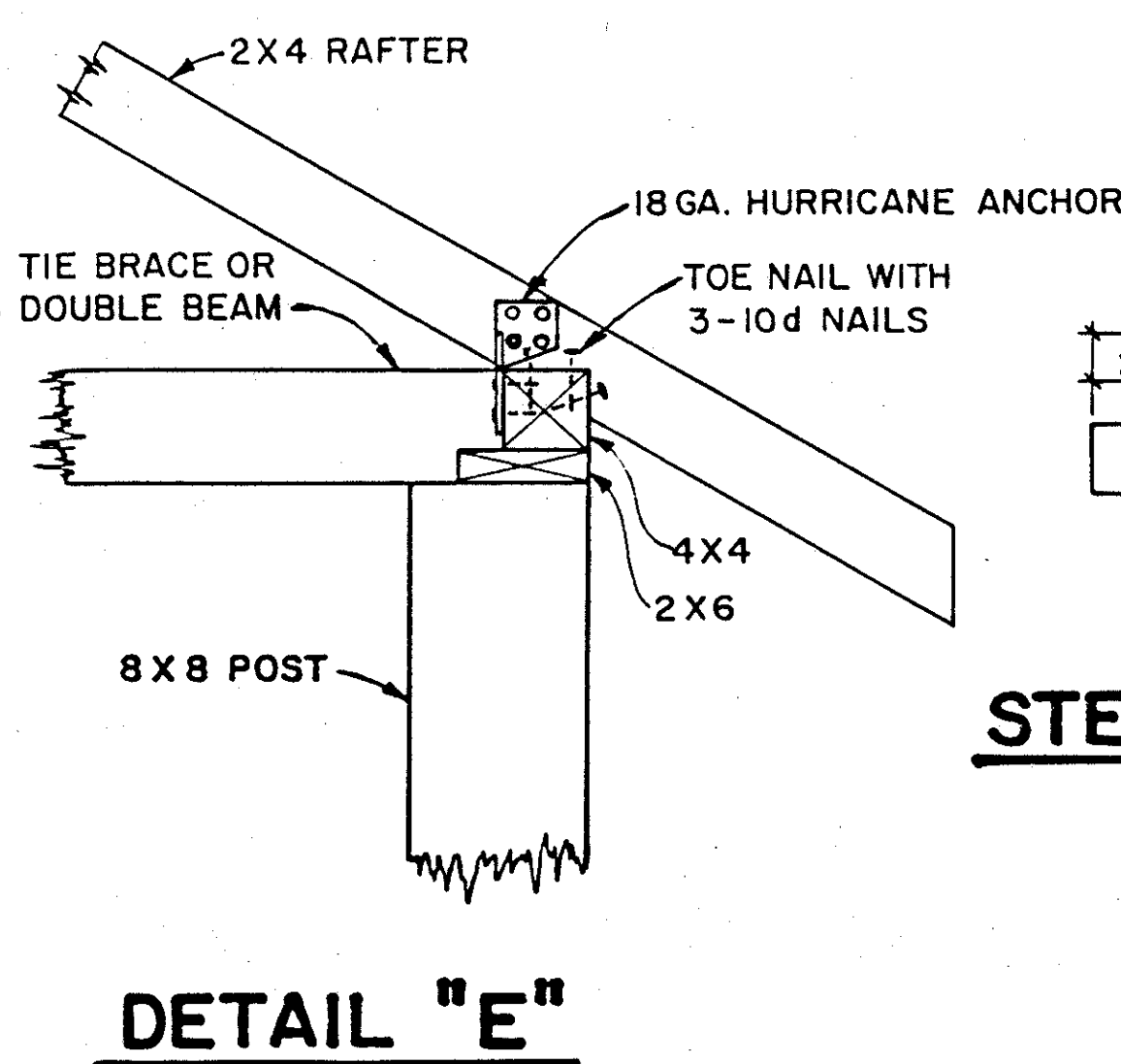
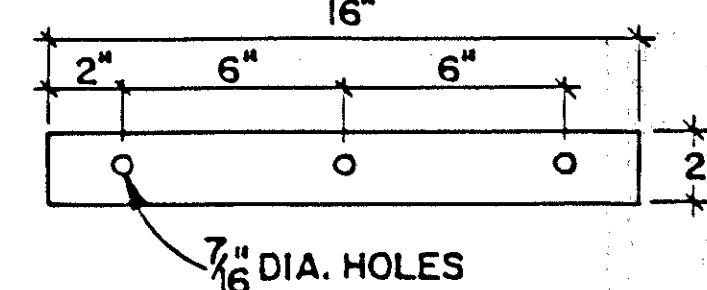
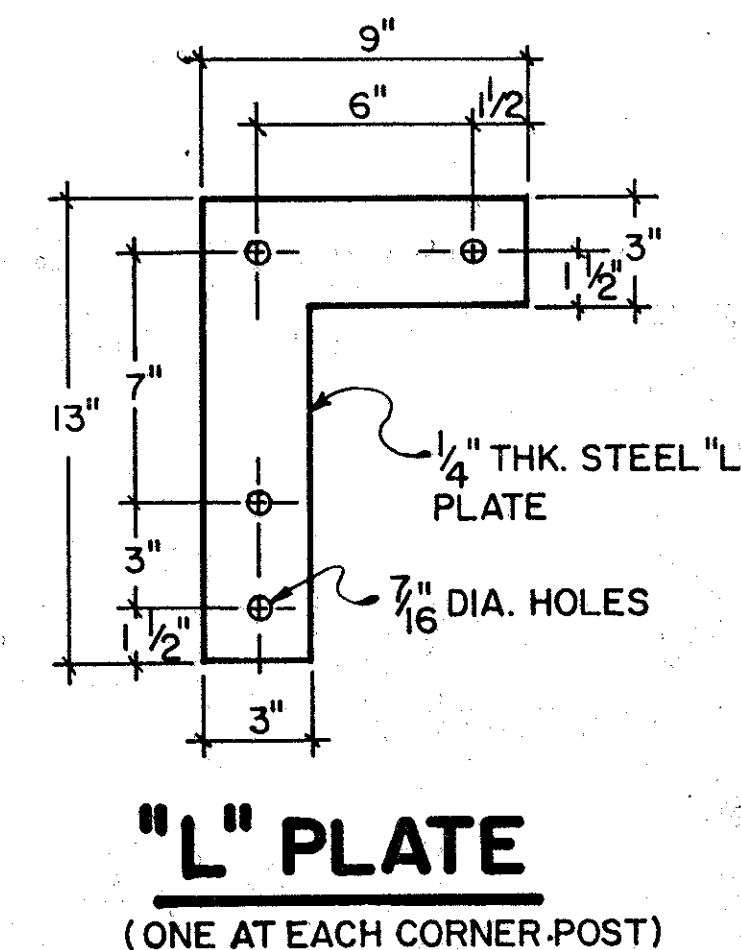
THE SHINGLES SHALL BE AS MANUFACTURED BY BIRD & SONS - "ARCHITECT 70", CERTAINTED - "HALLMARK", GAP - "TIMBERLINE" OR APPROVED EQUAL.

THE UNDERLAYMENT SHALL BE ONE LAYER OF 15 LB. ROOFING FELT, LAPPED 2" TYPICALLY WITH 4" MIN. END LAPS AND 6" MIN. OVERLAPS AT HIP AND RIDGES.

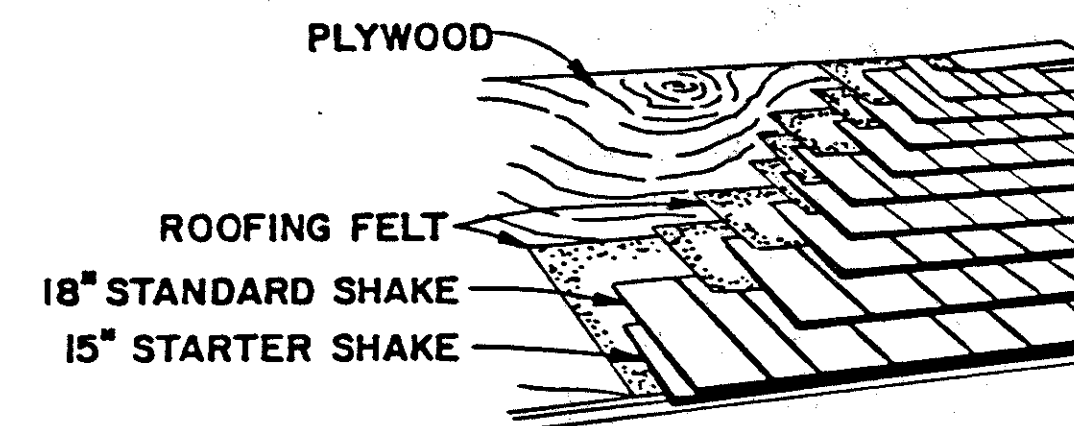
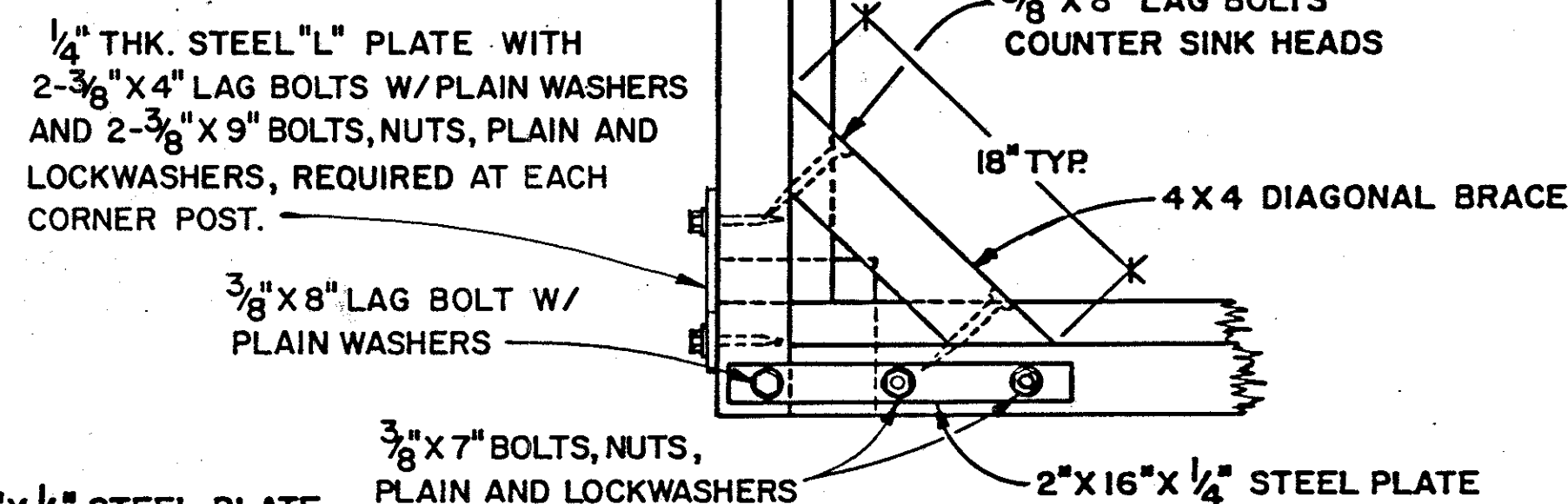
NAILS SHALL BE 12 GAGE HOT DIPPED GALVANIZED OR ALUMINUM WITH 3/8" MIN. DIAMETER HEAD AND A MIN. OF 1 1/2" IN LENGTH.

THE PLACEMENT, NAILING AND OTHER ITEMS OF WORK NOT COVERED HEREIN SHALL BE DONE IN ACCORDANCE WITH GOOD INDUSTRY PRACTICE AND/OR MANUFACTURERS RECOMMENDATIONS.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
DATE	
SHELTER HOUSE	
11-16-81 8-20-82 11-4-82	
B 2 of 2	
APPROVED <i>E. J. [Signature]</i> Engr. of Design Services	



NOTE:
ALL PLATE SPLICES SHALL BE MADE ABOVE POSTS.



STAIN FINISH

ALL EXPOSED SURFACES OF SHELTER HOUSE (INCLUDING SHAKES) SHALL BE STAINED BY APPLYING ONE HEAVY BRUSH OR SPRAY COAT OF THE FOLLOWING MIXTURE: 3 PARTS OF A 5% WATER REPELLENT PENTACHLOROPHENOL SOLUTION, 1 PART BOILED LINSEED OIL AND 1/2 TO 1 PART BURNT UMBER GROUND IN LINSEED OIL TO GIVE A RUSTIC BROWN COLOR. START WITH 1/2 PART OF BURNT UMBER GROUND IN LINSEED OIL AND ADD MORE IF NEEDED TO GIVE COLOR AS APPROVED BY THE ENGINEER.

ACCEPTABLE STAINS ARE AS MANUFACTURED BY DARTWORTH, INC. (CHESTNUT BROWN NO. 75), WOOD PRESERVATIVE BY CUPRINOL (T-W-5726, 3.7) OR APPROVED EQUAL.

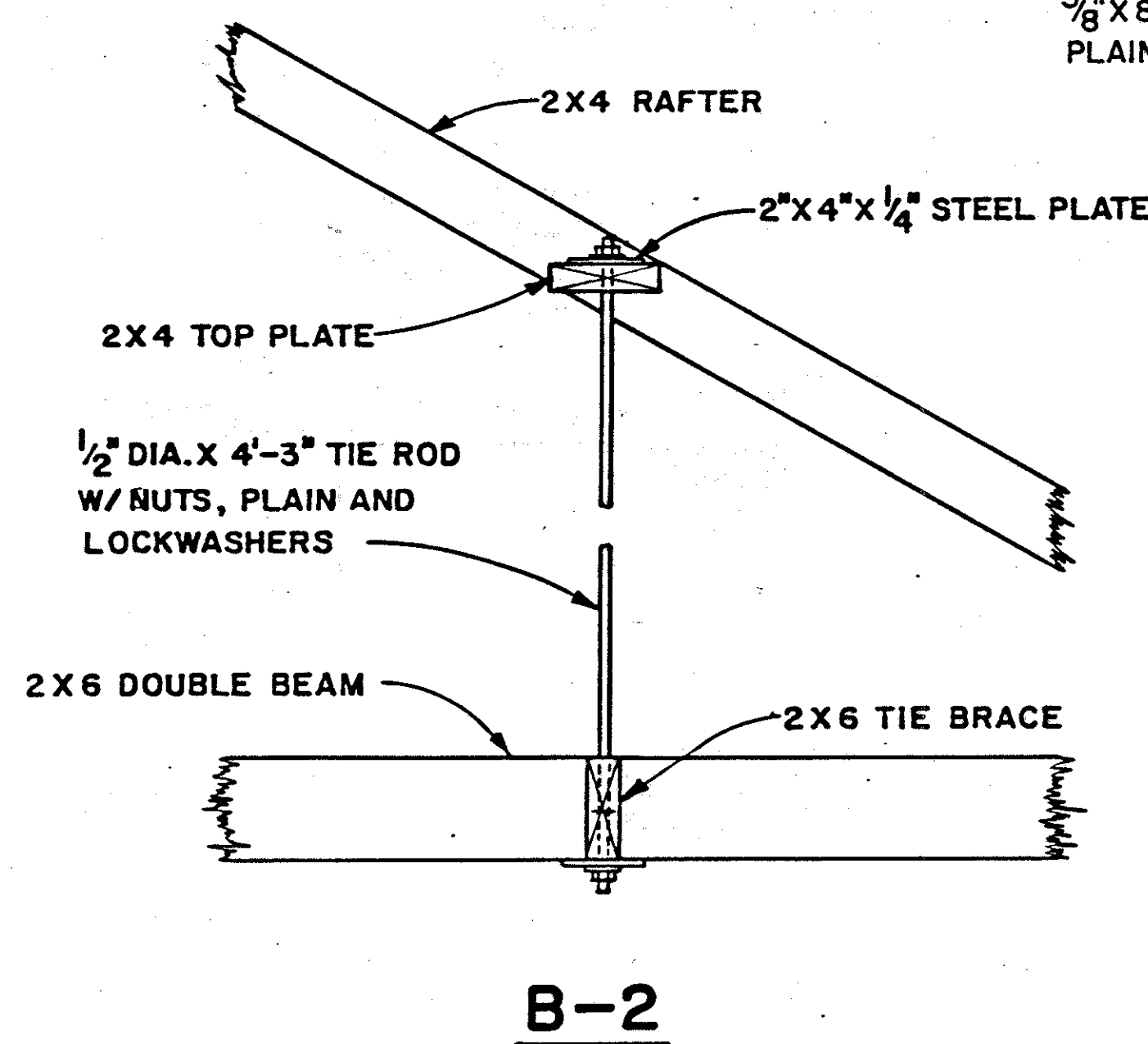
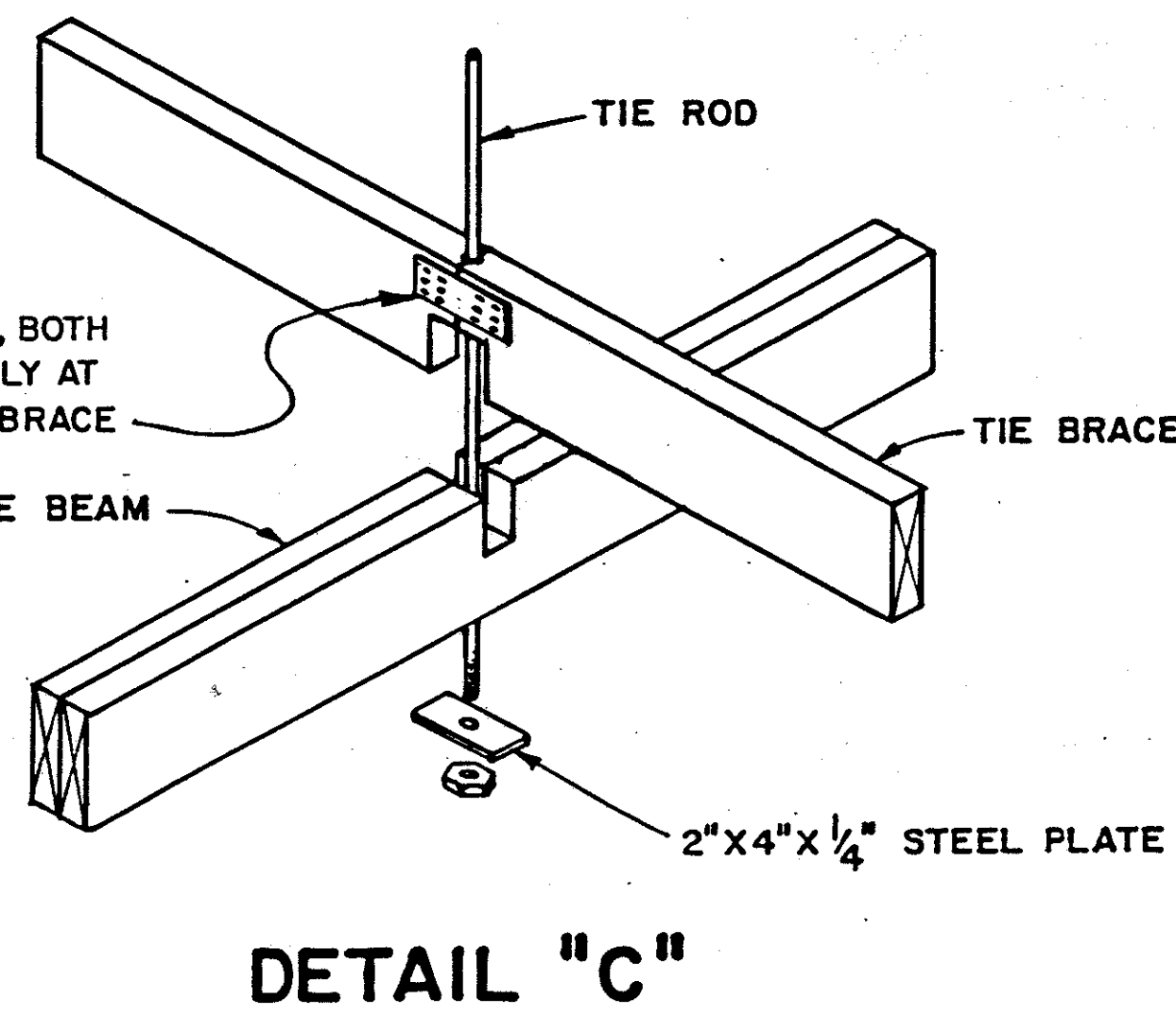
PRECAUTIONS SHALL BE TAKEN TO PREVENT STAINING OF CONCRETE SLAB.

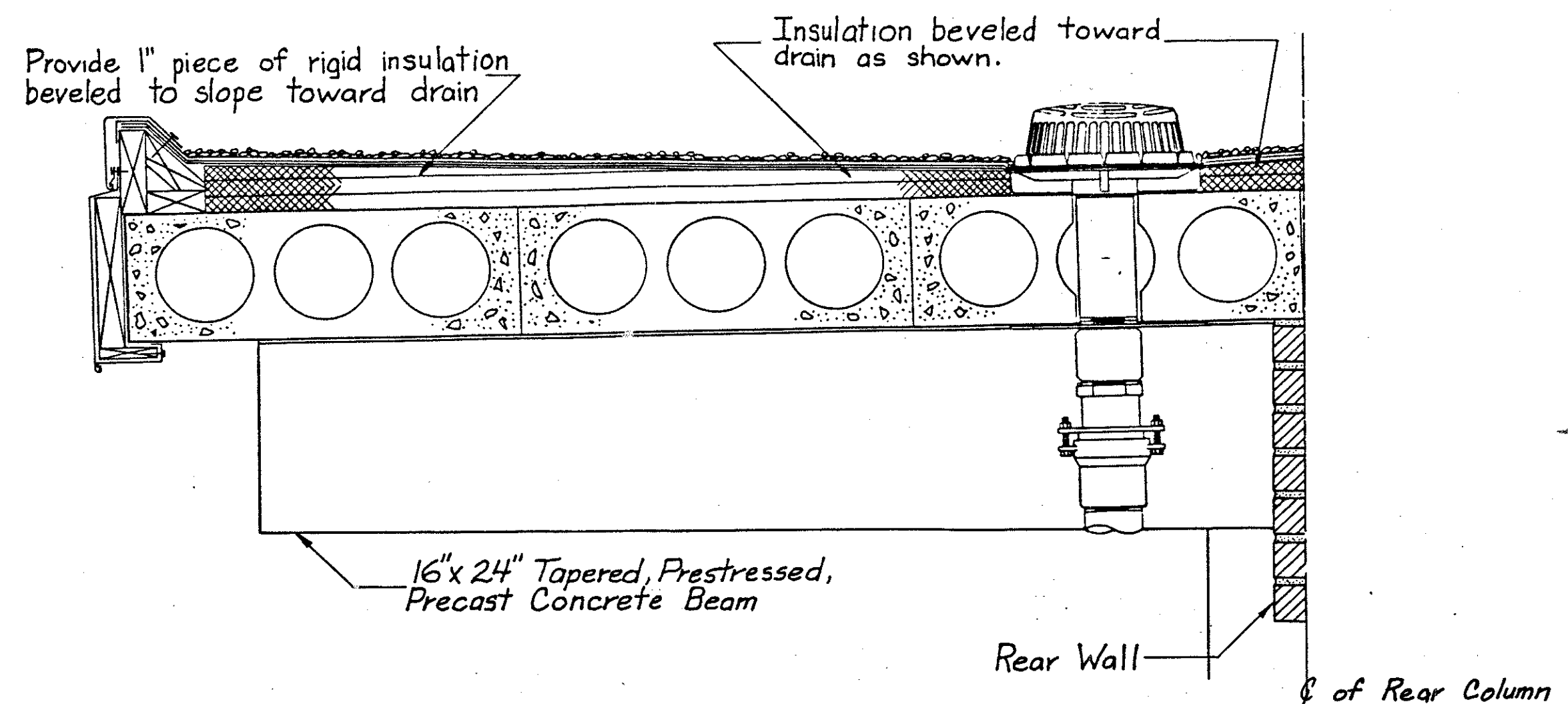
METHOD OF MEASUREMENT

THE QUANTITY WILL BE ONE SHELTER HOUSE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, COMPLETE AND IN PLACE.

BASIS OF PAYMENT

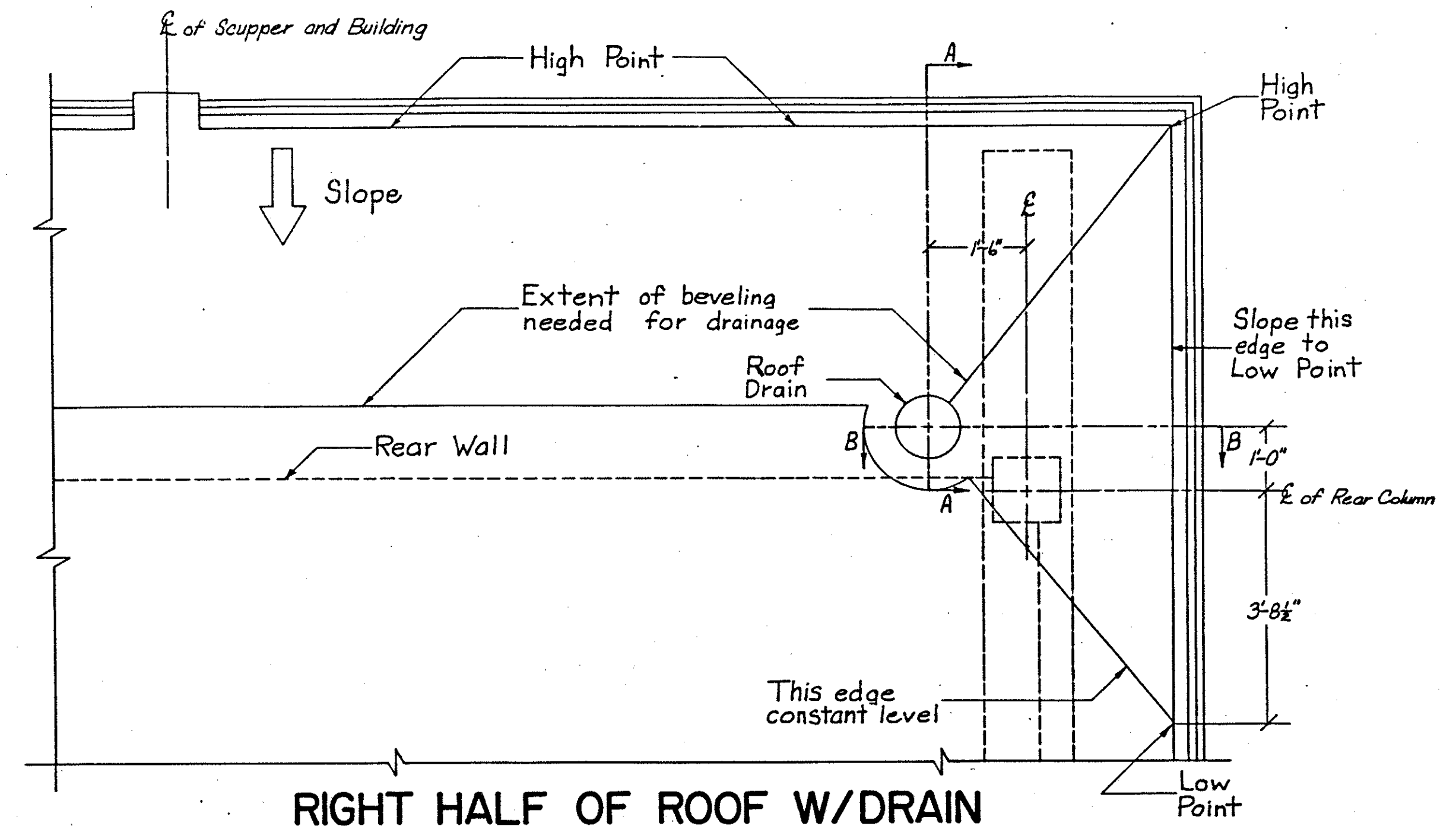
THE COST OF ALL MATERIALS, LABOR AND INCIDENTALS REQUIRED TO CONSTRUCT THE SHELTER HOUSE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "ITEM SPECIAL - SHELTER HOUSE".



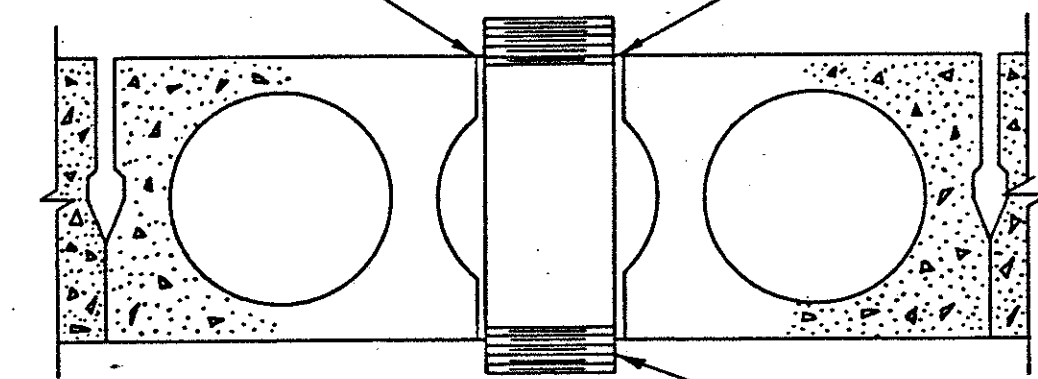
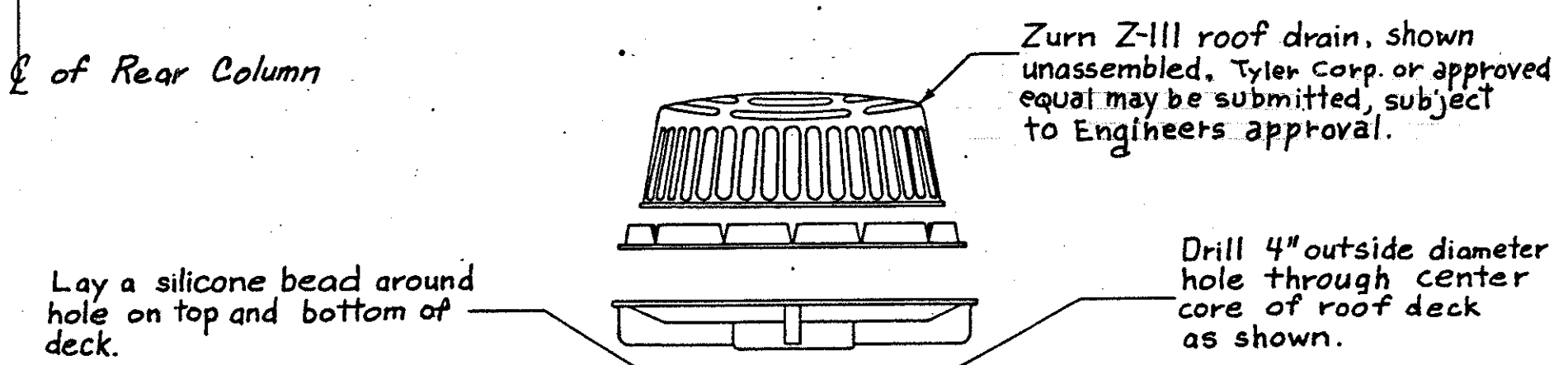


SECTION A-A

NOTE: TWO DRAINS REQUIRED PER BUILDING, LOCATION OF ROOF DRAIN ON LEFT HALF OF ROOF IS TO BE THE SAME AS THAT SHOWN ON THE RIGHT.



RIGHT HALF OF ROOF W/ DRAIN (TOP VIEW)



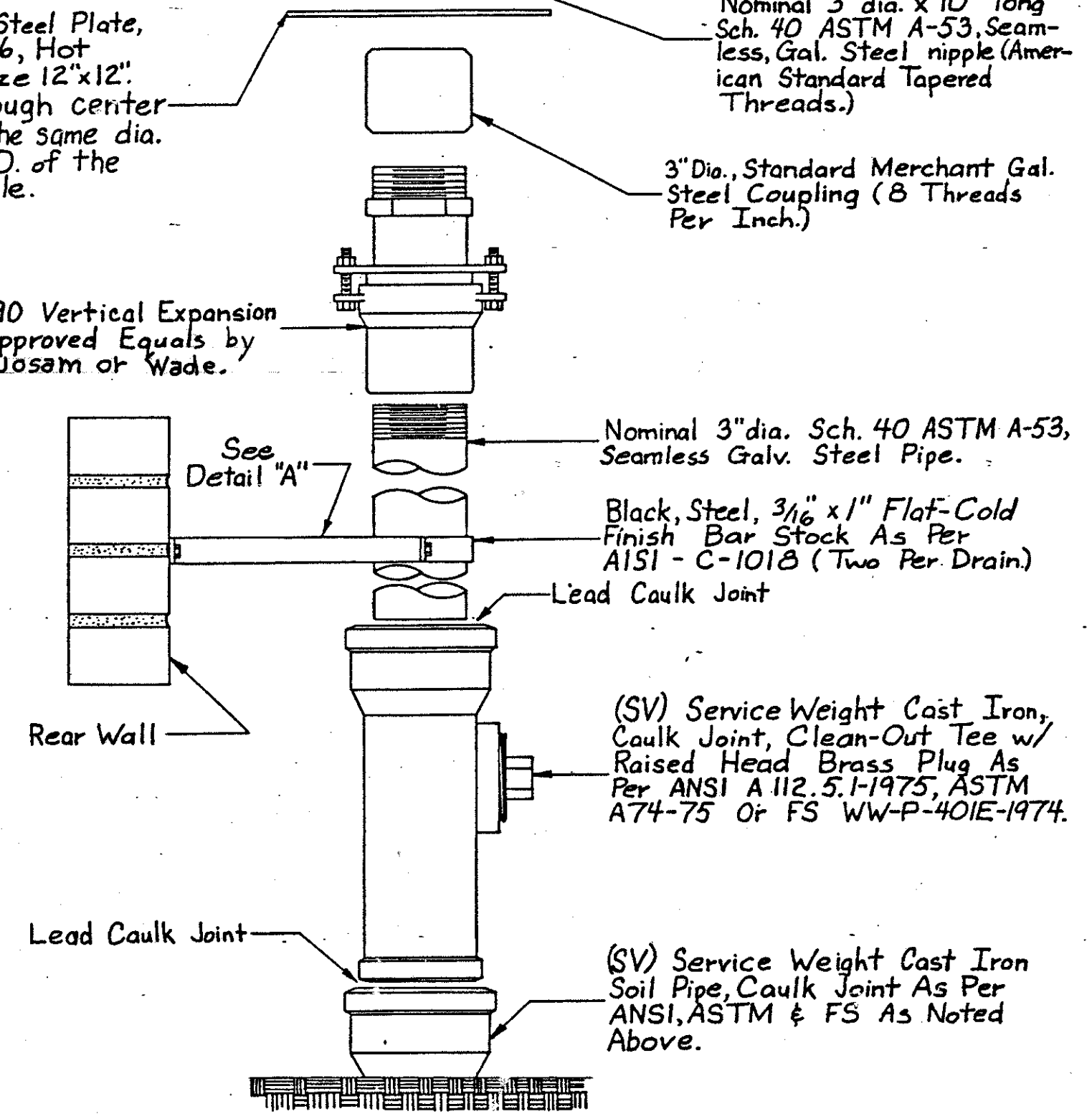
3/16" Black Steel Plate, ASTM-A-36, Hot Rolled, Size 12"x12". Hole through center shall be the same dia. as the O.D. of the pipe nipple.

Nominal 3" dia. x 10" long Sch. 40 ASTM A-53, Seamless, Gal. Steel nipple (American Standard Tapered Threads.)

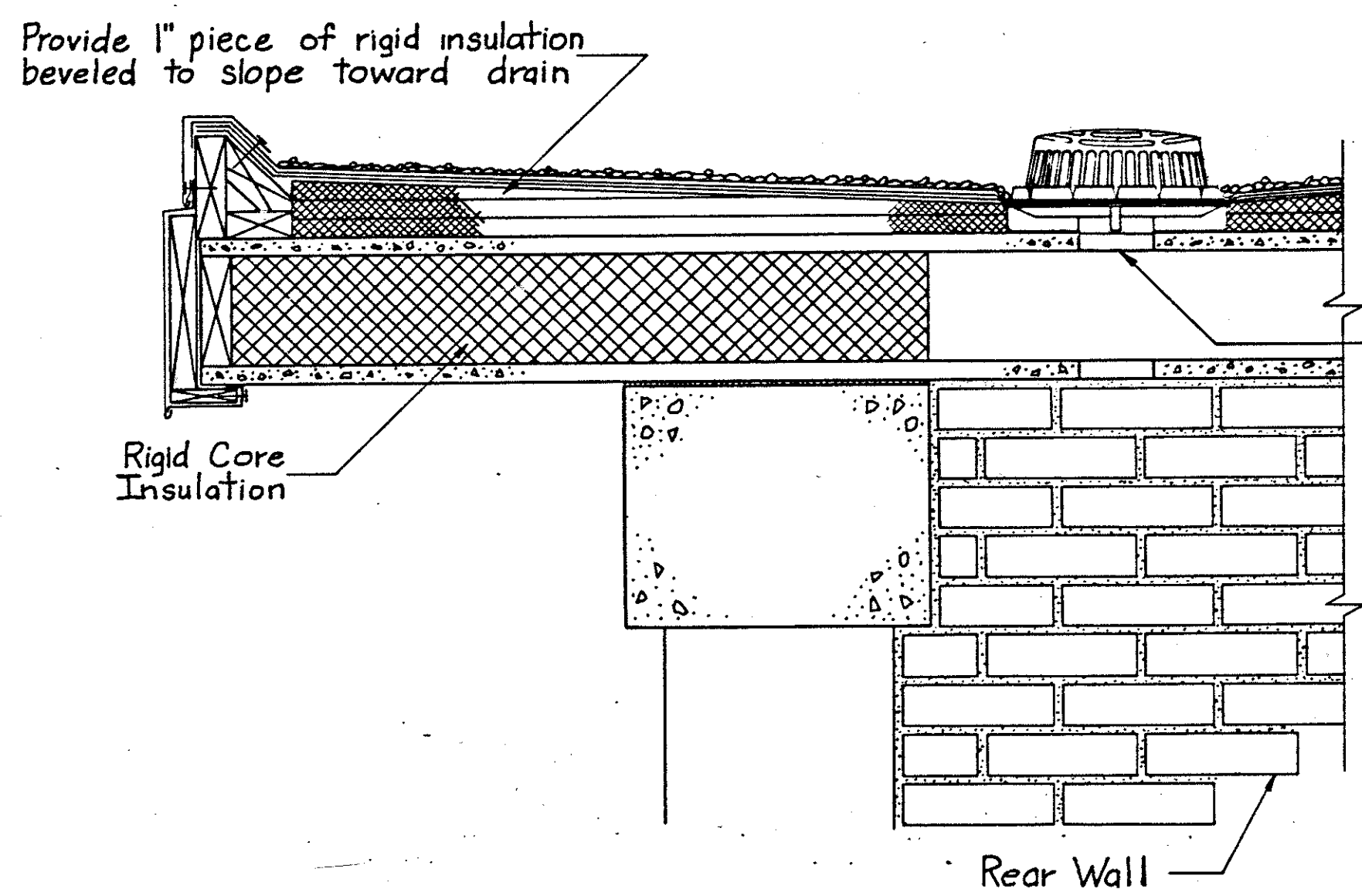
3" Dia., Standard Merchant Gal. Steel Coupling (8 Threads Per Inch.)

4" O.D. hole drilled through roof deck for nominal 3"x10" pipe nipple.

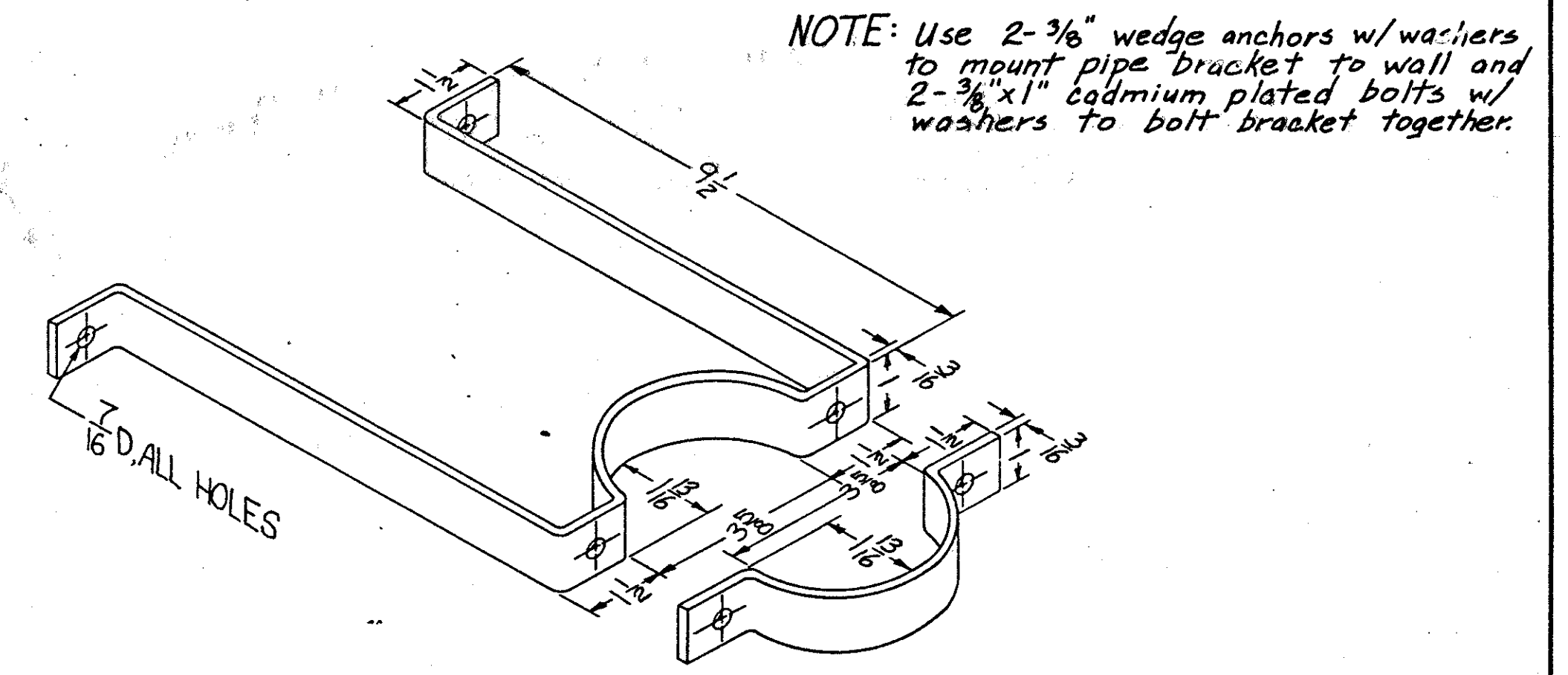
Zurn Z-190 Vertical Expansion Joint, or Approved Equals by Smith, Josam or Wade.



ROOF DRAIN & DOWNSPOUT ASSEMBLY DETAIL

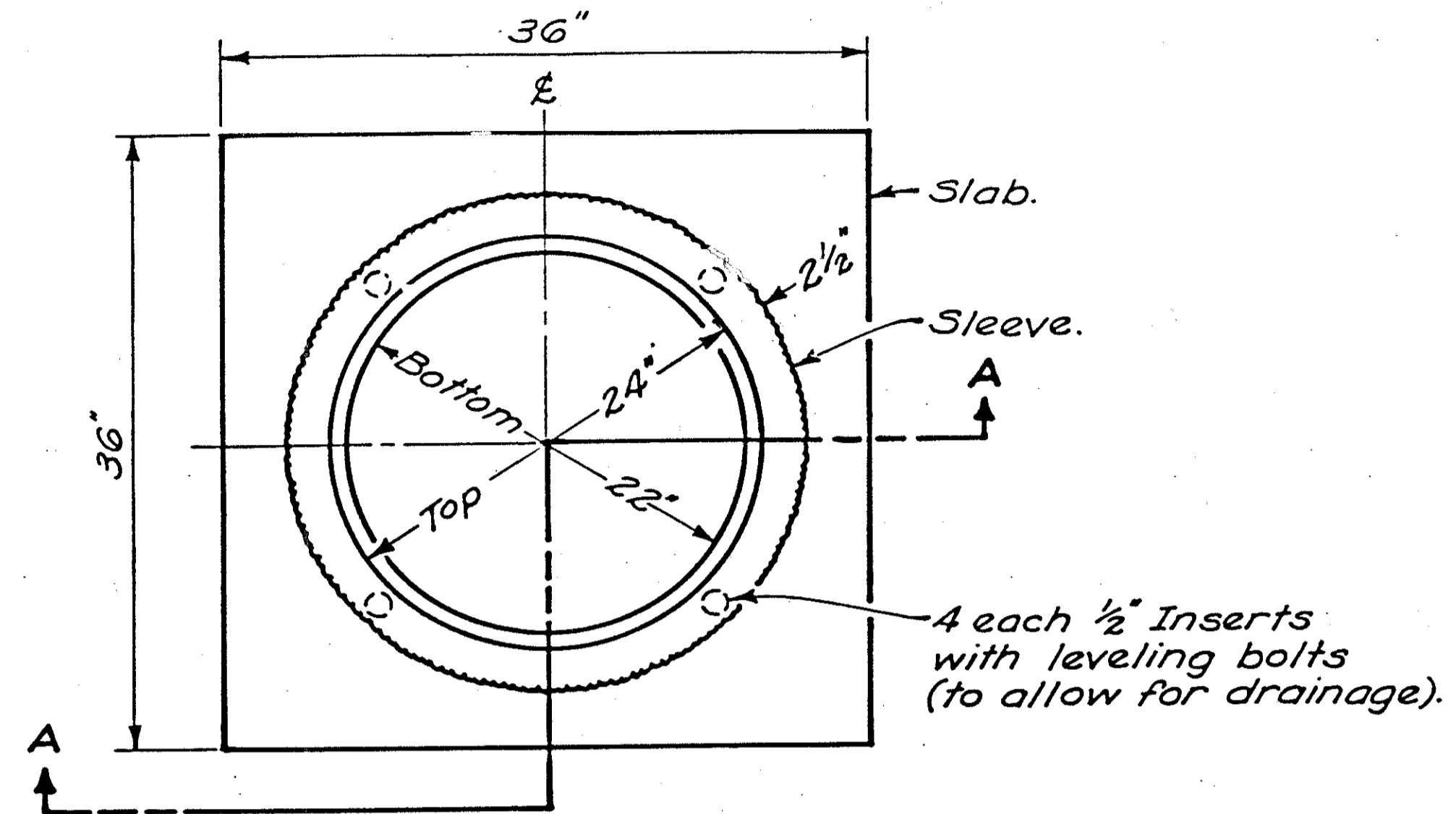


SECTION B-B

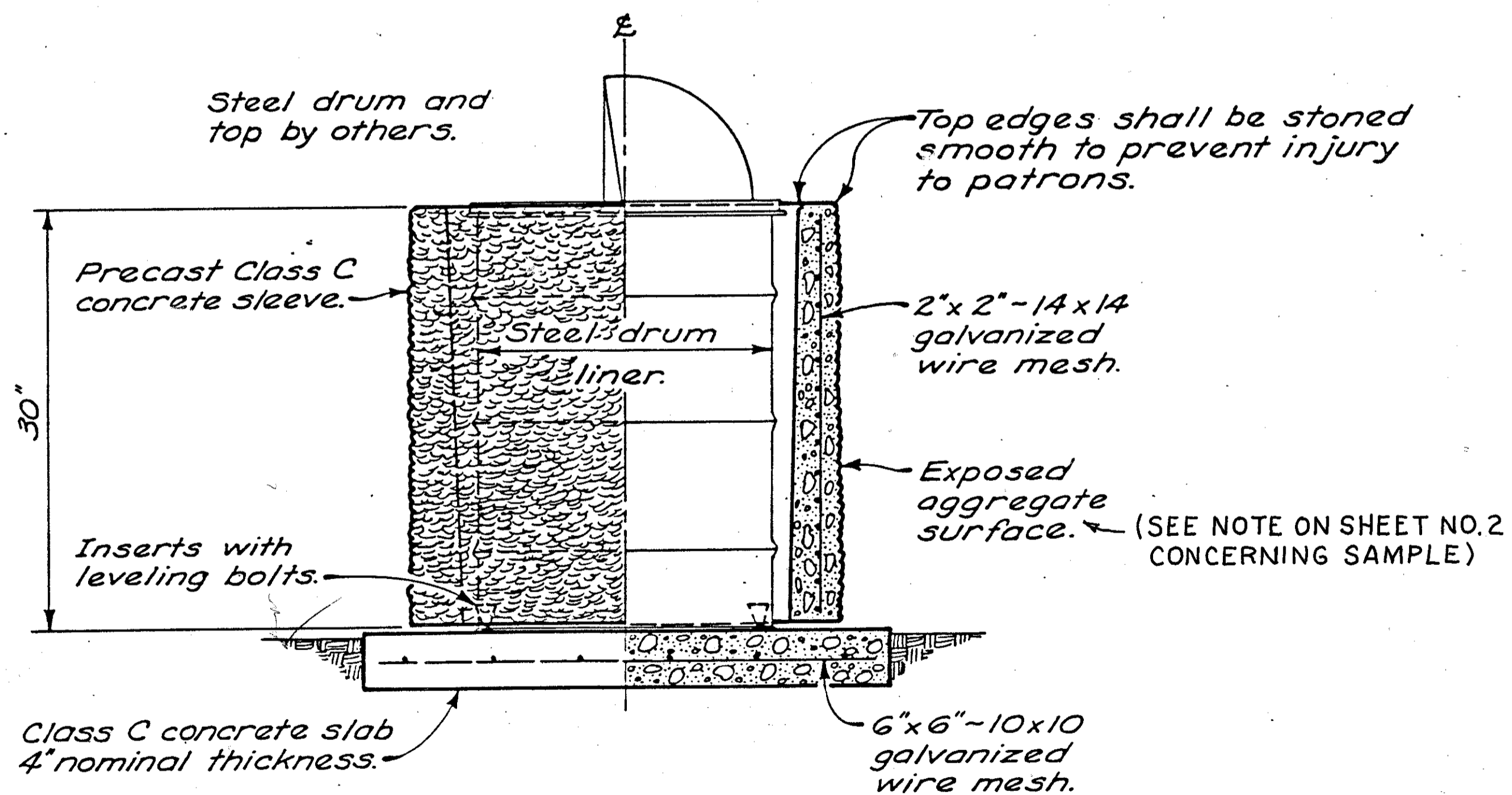


DETAIL "A"

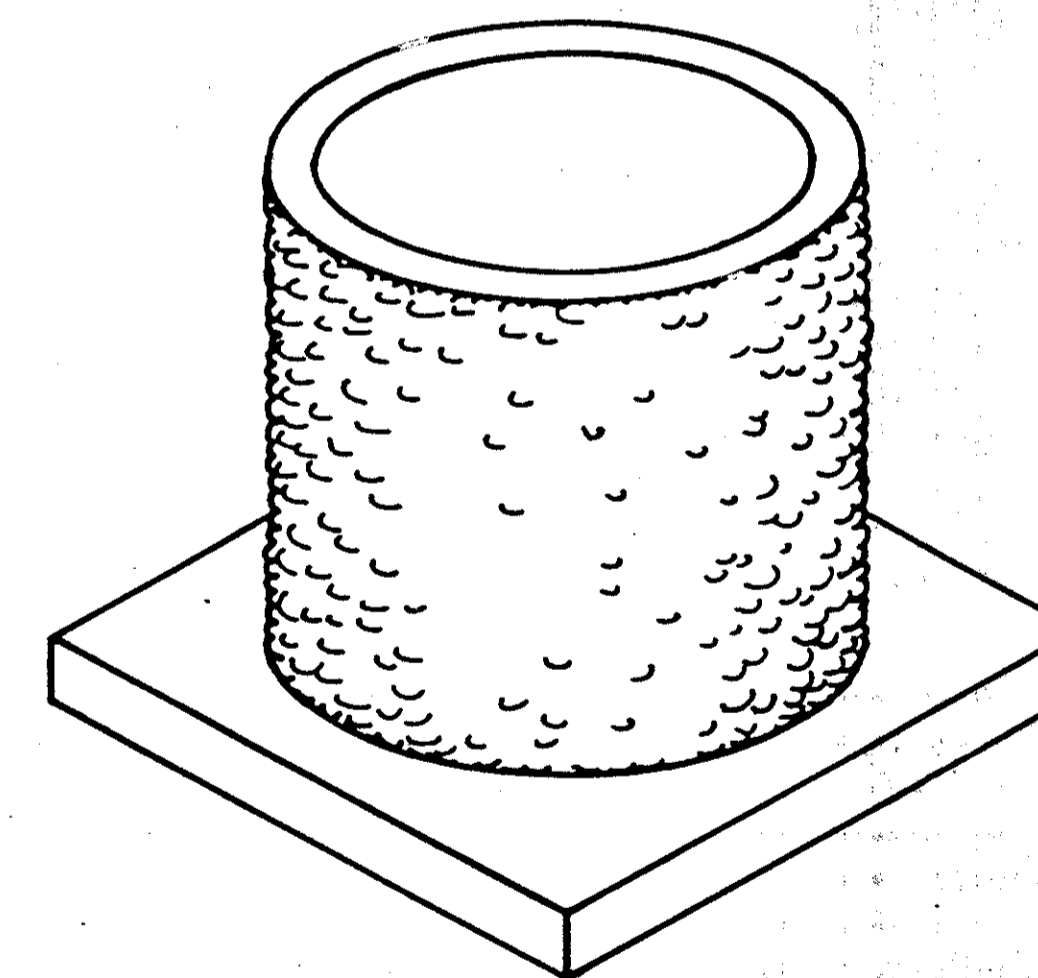
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
LANDSCAPING ROOF DRAIN AND DOWNSPOUT	DATE 9-8-82 7-21-83
APPROVED <i>[Signature]</i> Engr. of Design Services	



PLAN VIEW



SECTION A-A



SLEEVE & SLAB

- Leveling bolts shall be $\frac{1}{2}$ " x 2" galvanized hex-head meeting the requirements of 711.02.
- 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, 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 355 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 260 pounds.
- The slab weighs approximately 450 pounds.
- Concrete volume:
Tapered sleeve 2.36 Cu. Ft. or .087 Cu. Yd.
Uniform sleeve 1.72 Cu. Ft. or .064 Cu. Yd.
Slab 3.00 Cu. Ft. or .111 Cu. Yd.

BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
LANDSCAPING	DATE 12-16-81
WASTE RECEPTACLE SLEEVE	
E. J. Schaffer	