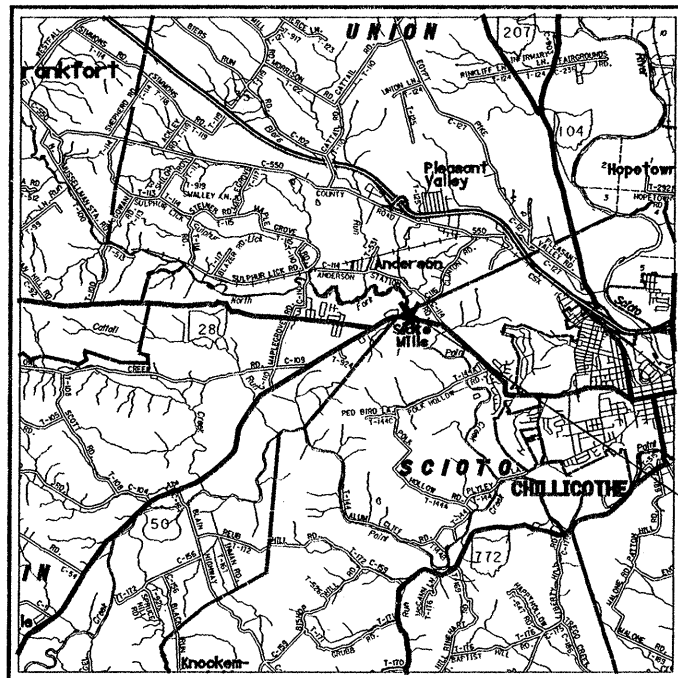
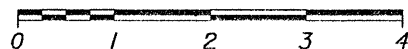




LOCATION MAP

SCALE IN MILES



PORTION TO BE IMPROVED -----
STATE & FEDERAL ROUTES -----
OTHER ROADS -----

ROS-50-1936

INDEX OF SHEETS:

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DESIGN DESIGNATION

CURRENT ADT (1996)	8820
DESIGN YEAR ADT (2016)	14600
DESIGN HOURLY VOLUME (2016)	1460
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	2%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION -
RURAL COLLECTOR

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

TWO WORKING DAYS

BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
DISTRICT NO. 9
OHIO DEPARTMENT OF
TRANSPORTATION



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
ROS-50-19.36
SCIOTO TOWNSHIP
ROSS COUNTY

PROJECT DESCRIPTION

ROS-50-19.36

Repair of existing structure over North Fork of
Paint Creek to include backwall and approach slab
replacement.

RECEIVED

APR 24 1996

PRODUCTION
CHILLICOTHE, OHIO

1995 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE
OF OHIO, DEPARTMENT OF TRANSPORTATION,
INCLUDING CHANGES AND SUPPLEMENTAL SPECI-
FICATIONS 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 TO TRAFFIC OF THE
HIGHWAY, AND THAT PROVISIONS FOR THE
MAINTENANCE AND SAFETY OF TRAFFIC WILL BE
AS SET FORTH IN THE PLANS AND ESTIMATES.

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	2-21-92	AS-1-81	9-15-94	MT-96.11	9-9-88
GR-1.1	5-6-91	EXJ-4-87	1-20-94	MT-96.20	9-9-88
GR-1.2	10-30-92			MT-96.25	9-9-88
GR-1.3	2-21-92			MT-97.10	4-29-88
GR-2.1	5-6-91			MT-99.10	11-14-96
GR-3.4	5-6-91			MT-99.20	4-29-96
MC-9.2	5-6-91			MT-105.10	7-1-92
PCB-9.1	4-24-92			MT-105.11	7-1-92
				TC-52.10	4-3-79
				TC-52.20	4-3-79
				TC-65.10	2-1-90
				TC-65.13	2-1-90

SUPPLEMENTAL SPECIFICATIONS	
802	3/23/95
910	7/17/95
944	3/23/95
815	7/17/95
820	6/14/95

DISTRICT CERTIFIED
PLAN

APPROVED *J. Watkins*
DATE ~~2-14-96~~ DISTRICT DEPUTY DIRECTOR

APPROVED *D. King*
DATE ~~2/21/96~~ DIRECTOR, DEPARTMENT OF
TRANSPORTATION

FEDERAL PROJECT NO.
NON-FEDERALPID NO.
15653

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

ROS-50-19.36

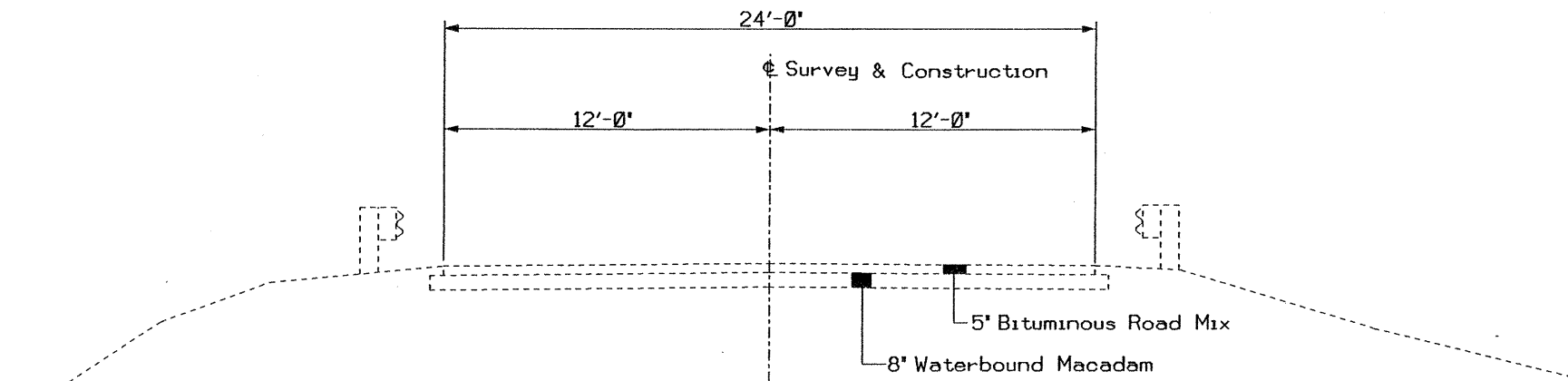
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ROS-50-19.36
960406
18PGS05-22-96
DIST. 09

8-FEB-99

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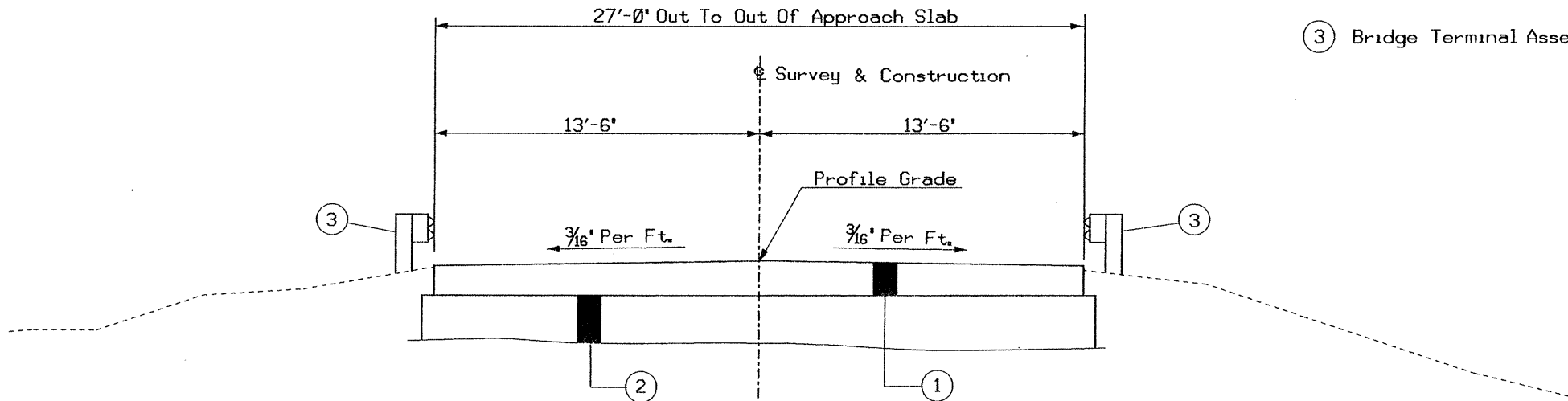
18PGS



TYPICAL SECTION OF EXISTING
ADJOINING PAVEMENT

LEGEND

- ① 611 Reinforced Concrete Approach Slabs, (T=15')
- ② Low Strength Mortar Backfill, Class , LMS-50
- ③ Bridge Terminal Assembly, Type 4



TYPICAL SECTION OF PROPOSED
APPROACH SLAB

LIMITING STATIONS
STA. 1021+42.00 TO STA. 1021+67.00
STA. 1023+79.00 TO STA. 1024+04.00

TYPICAL SECTIONS

ROS-50-19.36

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-I-81. 9-15-94
EXJ-4-87 1-20-94

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY

AND TRANSPORTATION OFFICIALS, 1992, INCLUDING THE 1993 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA:

CONCRETE HIGH PERFORMANCE - COMPRESSIVE STRENGTH 4500 P.S.I.
REINFORCING STEEL - ASTM A615, A616, A617 - GRADE 60 MINIMUM
YIELD STRENGTH 60,000 P.S.I.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, AND 105.02

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING BRIDGE PLANS:

DETAIL DRAWINGS OF THE EXISTING BRIDGES MAY BE INSPECTED IN THE DISTRICT 9 BRIDGE OFFICE IN CHILLICOTHE, OHIO.

CONTINGENCY QUANTITIES:

SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. ESTIMATED QUANTITIES OF MATERIAL SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, PORTIONS OF ABUTMENT BACKWALLS, WINGWALLS AND APPROACH SLABS SHALL BE REMOVED, AS PER PLAN. SUITABLE WASTE MASONRY MAY BE PLACED ON THE SLOPES AS DIRECTED BY THE ENGINEER. ALL OTHER REMOVED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE INDICATED IN THESE PLANS, AND SHALL BE REMOVED FROM THE SITE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 503 - COFFERDAMS, CRIBS AND SHEETING AS PER PLAN:

ANY SHEET PILING REQUIRED TO CONSTRUCT THE ABUTMENT BACKWALLS, SEAT AND APPROACH SLABS HALF WIDTH WHILE MAINTAINING TRAFFIC IN THE ADJACENT LANE SHALL BE INCLUDED IN THIS LUMP SUM BID ITEM.

ITEM 503-UNCLASSIFIED EXCAVATION, AS PER PLAN:

THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL MATERIAL, CLASS LSM-50 WITHIN THE LIMITS OF THE APPROACH SLABS. THE CONTRACTOR ALSO MAY USE THE LSM-50 TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MEET THE FINISHED GRADE. THE AREA FOR THE POROUS BACKFILL WITH FILTER FABRIC SHALL BE FORMED UP PRIOR TO THE PLACEMENT OF THE LSM BACKFILL AND THE FILTER FABRIC, PERFORATED PLASTIC PIPE, AND POROUS BACKFILL SHALL BE PLACED AFTER THE LSM BACKFILL HAS CURED AND THE FORMS HAVE BEEN REMOVED. SEE PROPOSAL NOTE FOR LSM BACKFILL.

THE COST OF ALL LABOR, EQUIPMENT, AND MATERIAL TO PLACE THE LSM BACKFILL AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES.

EPOXY - URETHANE:

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIAL REQUIRED TO SEAL THE CONCRETE SURFACES WITH EPOXY-URETHANE SEALER. THE URETHANE SHALL BE FEDERAL COLOR STANDARD NO. 17778 (OFF-WHITE). THE ESTIMATED QUANTITIES THAT ARE SET UP IN THE PLAN ARE TO BE USED TO SEAL THE BRIDGE CONCRETE SURFACES AS FOLLOWS:

ABUTMENTS: SEAL ALL EXPOSED SURFACES OF THE ABUTMENTS INCLUDING THE BACKWALLS, BRIDGE SEATS AND WINGWALLS DOWN TO THE GROUND LINE AFTER STRUCTURE IS COMPLETE.

GUARDRAIL POSTS & GUARD POST HOLES:

ALL HOLES REMAINING AFTER REMOVAL OF GUARDRAIL POSTS OR GUARD POSTS SHALL BE FILLED WITH GRANULAR MATERIAL. EXCESS MATERIAL RESULTING FROM GUARDRAIL RECONSTRUCTION OR EXCESS MATERIAL FROM BERM RESHAPING. FILL MATERIAL CONTAINING SOD SHALL NOT BE USED. ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER. MATERIAL PLACED IN HOLES SHALL BE THOROUGHLY COMPACTED AND LEVELED OFF AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE GUARDRAIL ITEM.

ITEM 510 - DOWEL HOLES:

THIS ITEM SHALL INCLUDE THE DRILLING OF HOLES INTO CONCRETE OR MASONRY AND THE FURNISHING AND PLACING OF GROUT INTO HOLES. NONSHRINKING GROUT SHALL BE USED IN ACCORDANCE WITH SECTION 705.20 OF THE C.M.S. HOLE SIZE SHALL BE BAR DIAMETER PLUS 1/2" (MAX). PAYMENT SHALL BE PER ITEM 510.

ITEM 615-TEMPORARY PAVEMENT, CLASS A:

THIS MATERIAL SHALL BE LEFT IN PLACE IF ACCEPTABLE TO THE ENGINEER.

UTILITIES:

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

TELEPHONE CHILLICOTHE TELEPHONE CO.
35 SOUTH PAINT STREET
CHILLICOTHE, OHIO 45601
TEL. NO. 614-773-2191

PROTECTION OHIO UTILITIES PROTECTION SERVICE
100 FEDERAL PLAZA EAST, LOWER LEVEL
YOUNGSTOWN, OHIO 44503
(800) 362-2764

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

GENERAL NOTES

ROS-50-19.36

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CHECKED
G.E.C.

GENERAL NOTES

ITEM 614. MAINTAINING TRAFFIC:

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, 615 TEMPORARY PAVEMENT, TEMPORARY SIGNALS, AND TEMPORARY SURFACES USING 404.

PHASE I

THE CONTRACTOR SHALL PLACE THE TRAFFIC CONTROL AND TEMPORARY SIGNALS TO MOVE ALL TRAFFIC TO THE LEFT LANE, AND DO ALL THE PROPOSED WORK TO THE RIGHT LANE AND RIGHT SIDE OF STRUCTURE, AS SHOWN IN THE PLAN.

PHASE II

AFTER THE RIGHT SIDE PROPOSED WORK IS COMPLETED THE CONTRACTOR SHALL CHANGE THE TRAFFIC CONTROL SO AS TO MOVE ALL TRAFFIC TO THE RIGHT LANE. WHEN TRAFFIC IS MOVED THE CONTRACTOR SHALL DO THE PROPOSED WORK TO THE LEFT LANE, AS SHOWN IN THE PLAN.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE TEMPORARY SIGNALS SHALL BE OPERATED BY A CONTROLLER CAPABLE OF PROVIDING EFFICIENT PEAK HOUR PERFORMANCE, OR EQUIPPED WITH MANUAL OVERRIDE. THE SIGNAL TIMING SHALL BE SET AS SHOWN ON STANDARD DRAWING MT-96.20 USING A 4 PHASE ACTUATED CONTROLLER. SIGNAL WIRING SHALL BE PLACED SO NO TRAFFIC IS REQUIRED TO RUN OVER ANY ENERGIZED CONDUCTORS. POWER FOR THE SIGNALS SHALL BE FROM THE POWER COMPANY SERVING THE AREA.

WHEN THE WORK IN THE LEFT LANE IS COMPLETE THE CONTRACTOR SHALL REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES, AND OPEN BOTH LANES TO NORMAL TRAFFIC.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

404, BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC 4 CU. YARDS

SUGGESTED WORK PROCEDURE

1. TRAFFIC SHALL BE MAINTAINED.
2. INSTALL TEMPORARY PRECAST CONCRETE BARRIERS ON THE EXISTING STRUCTURE AND APPROACHES.
3. PLACE TEMPORARY SHEETING TO PERMIT REMOVALS AND CONSTRUCTION.
4. REMOVE THE (RIGHT) PORTION OF THE EXISTING STRUCTURE.
5. CONSTRUCT STAGE I COMPLETE.
6. PLACE AND MAINTAIN TRAFFIC ON STAGE I.
7. REMOVE (LEFT) PORTION OF EXISTING STRUCTURE.
8. CONSTRUCT STAGE II COMPLETE.
9. REMOVE TEMPORARY PRECAST CONCRETE BARRIERS.
10. REOPEN STRUCTURE TO ALL LANES OF TRAFFIC.

ITEM 611 - REINFORCED CONCRETE APPROACH SLAB, (T-15"), AS PER PLAN:

THE APPROACH SLABS SHALL BE CONSTRUCTED PART WIDTH IN ORDER TO MAINTAIN TRAFFIC AS DETAILED IN THE PLANS. THE TRANSVERSE REINFORCING STEEL SHALL BE JOINED WITH MECHANICAL CONNECTORS AT THE CONSTRUCTION JOINT. THE PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE APPROACH SLABS, AS PER PLAN. THE ADDITIONAL WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN ITEM 611-REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN.

MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED FOR WITH APPROACH SLABS FOR PAYMENT.

ITEM 622. PORTABLE CONCRETE BARRIER:

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ITEM 614. BARRIER REFLECTORS:

REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 802 EXCEPT THAT SPACING SHALL BE AS SHOWN ON PROPOSAL NOTE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL:

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

CLEARING AND GRUBBING:

ALTHOUGH THERE ARE NO TREES AND/OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING GRUBBING.

GENERAL NOTES

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CHECKED
G.E.C.

GENERAL NOTES

MECHANICAL CONNECTORS:

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURE'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE 2'-9" FOR #5-BARS AND 5'-7" MAXIMUM FOR #9-BARS

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE PER POUND FOR ITEM 509.

ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN:

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 6 INCH DIAMETER, PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE S. THIS ITEM SHALL INCLUDE ALL ELBOWS, TEES AND END CAPS REQUIRED TO COMPLETE THE ABUTMENT DRAINAGE SYSTEM.

ITEM 518, 6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN:

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 6 INCH DIAMETER, PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE SP.

REMOVALS OVER WATER:

REASONABLE CARE SHALL BE USED BY THE CONTRACTOR TO PREVENT REMOVED MATERIALS FROM FALLING INTO THE WATER. ANY DROPPED MATERIALS SHALL BE IMMEDIATELY RECOVERED AND DISPOSED OF AWAY FROM THE SITE EXCEPT FOR APPROVED MASONRY MATERIAL WHICH MAY BE USED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER.

ITEM 516-REFURBISHING BEARING DEVICES, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLEY ALIGN BEARING AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING AS REQUIRED BY SYSTEM OZEU, REPLACEMENT OF ANY DAMAGED SHEET LEAD (711.19), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. THE CONTRACTOR SHALL BE SURE THAT ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT THE OPTION OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE STATE, NEW BEARINGS OF THE SAME TYPE AS THE EXISTING MAY BE INSTALLED IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516-REFURBISHING BEARING DEVICES, AS PER PLAN.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE THE SUPERSTRUCTURE AT BOTH ABUTMENTS TO ALLOW FOR THE REMOVAL OF THE BEARING DEVICES, TO THEN LOWER SUPERSTRUCTURE ONTO TEMPORARY SUPPORTS AT BOTH ABUTMENTS DURING THE ABUTMENT REPAIRS, AND TO THEN AGAIN RAISE THE SUPERSTRUCTURE TO INSTALL AND REPOSITION THE REFURBISHED BEARING DEVICES ON THE REPAIRED ABUTMENT SEATS TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT PLANS. THREE (3) SETS OF JACKING PLANS, WHICH INCLUDE THE INFORMATION DESCRIBED IN THIS NOTE, SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSIS OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTION JACKING POINTS.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENTYT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATION OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS WILL NOT BE PERMITTED.

THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.

FOR LIFTS GREATER THAN 1 INCH, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.

JACKS SHALL HAVE A SWIVEL LOADS CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.

JACKS ALONE SHALL NOT BE USED TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR SHALL BE USED.

SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.

SPARE EQUIPMENT SHALL BE AVAILABLE ON SITE FOR THE REQUIRED STRUCTURE RAISING TO PROCEED IN THE EVENT OF BREAKDOWN. A LIST OF SPARE EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER.

AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY.

MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN AND ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH OR LESS.

IF DURING THE JACKING OPERATIOPNs, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, THE JACKING OPERATION SHALL IMMEDIATELY CEASE AND APPROVED SUPPORTS SHALL BE INSTALLED. THE CONTRACTOR SHALL THEN ANALYZE THE DAMAGE AND SUBMIT A OF CORRECTION TO THE ENGINEER FOR APPROVAL. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPERATION IN ACCORDANCE WITH THE PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BRIDGE BEARINGS ARE FULLY SEATED BETWEEN ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUITABLE MEANS OF REPAIR, SUBJECT TO THE APPROVAL OF THE ENGINEER, WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE JACKING OPERATION SHALL BE DIRECTED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR. FAILURE TO HAVE A PROFESSIONAL ENGINEER PRESENT SHALL BE CAUSE FOR CEASING JACKING OPERATIONS.

THE CONTRACTOR SHALL REPAIR ALL AREAS OF THE EXISTING OZEU PAINT SYSTEM DAMAGED DURING THESE REPAIR OPERATIONS IN ACCORDANCE WITH FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU SUPPLEMENTAL SPECIFICATION 815.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN AND SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

GENERAL NOTES

ROS-50-19.36

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614 TEMPORARY RAISED PAVEMENT MARKERS

THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTANING, AND SUBSEQUENTLY REMOVING TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S). THE TRPM'S SHALL BE YELLOW OR WHITE, AS DESCRIBED IN THE PLANS.

MATERIAL

ALL UNITS SHALL BE OF SUFFICENT STRENGH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN, OR THE REFLECTORS DISLODGED OR DAMAGED, BY IMPACTS FROM VEHICLE TIRES, INCLUDING HIGH-PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN ONE OR TWO DIRECTIONS ON EACH UNIT AS REQUIRED BY THE USAGE AND SHALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATE FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCH FOR TYPE A OR 3.0 SQUARE INCH FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING:

INCIDENCE ANGLE (DEGREES)	SPECIFIC INTENSITY	
	TYPE A	
	WHITE	YELLOW
0	1.0	0.6
20	0.4	0.24
45	—	—
	TYPE B	
	WHITE	
	0	3.0
	20	1.2
45	0.3	0.2

ANGLE OF INCIDENCE IS FORMED BETWEEN A RAY FROM THE LIGHT SOURCE TO THE MARKER, AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION IS FORMED BETWEEN A RAY FROM THE LIGHT SOURCE TO THE MARKER AND THE RETURN RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT-CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A UNITS ARE INTENDED TO PROVIDE HIGH VISIBILTY BOTH AT NIGHT AND DURING DAYLIGHT. THEIR DAYTIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE, AND COLOR AS FOLLOWS:

1) THE UNITS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.

2) WHEN VIEWED FROM ABOVE, THE UNITS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.

3) WHEN VIEWED FROM THE FRONT PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE UNIT SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 15 SQUARE INCHES.

TYPE B UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETROREFLECTING A VEHICLE'S HEADLIGHTS BACK TO ITS DRIVER.

INSTALLATION EACH UNIT SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD, A BITUMINOUS ADHESIVE, OR OTHER CONSTRUCTION GRADE ADHESIVE (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE FOR ANCHORING THE UNIT. WHEN IT IS NECESSARY TO ATTACH UNITS TO NEW CONCRETE HAVING CURING COMPOUNDS REMAINING ON IT, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD ACCEPTABLE TO THE ENGINEER. ALL UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE AT HIS COST, ANY UNITS WHICH FAIL DUE TO: BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISABILITY IS SIGNIFICANTLY DIMINISHED OR THE HOUSING IS OF AN UNACCEPTABLE COLOR; DETACHED OR BROKEN REFLECTOR; HOUSING DETACHED FROM ADHESIVE; ETC.

TRPM'S ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS; THEREFORE, THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 TO APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK TO AVOID THE NEED TO USE THESE DEVICES DURING THAT PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE TRPM'S DURING THE TIME SPECIFIED AS INAPPROPRIATE FOR THEIR USE AND THEY ARE REMOVED BY SNOW AND ICE CONTROL ACTIVITES, THE CONTRACTOR SHALL IMMEDIATELY AT HIS COST, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM WHICH IS EFFECTIVE DURING LIGHT AND DARK AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE UNITS SHALL BE ACCURATELY PLACED TO FOLLOW LINES BEING SUPPLEMENTED OR TO DEFINE THE INTENDED LOCATIONS OF LINES BEING SIMULATED. UNITS USED TO SUPPLEMENT PAVEMENT MARKINGS MAY BE PLACED ON OR IMMEDIATELY ADJACENT TO THE MARKINGS BEING SUPPLEMENTED; HOWEVER, THEY SHALL NOT BE PLACED DIRECTLY ON PAVMENT MARKINGS IF THAT PLACEMENT WOULD PREVENT ADEQUATE ADHESION OF THE MARKER TO THE PAVEMENT. MARKER LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY AND/OR SIX INCHES LATERALLY TO AVOID PLACEMENT ON JOINTS OR ON CRACKED OR OTHERWISE DETERIORATED PAVEMENT.

APPLICATION

1) WHEN USED TO SUPPLEMENT PAVEMENT MARKINGS, TRPM'S SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A OR B	20' C/C
LANE LINE	A OR B	40' C/C *
CENTER LINE (SINGLE/BROKEN)	A OR B	40' C/C *
CENTER LINE (DOUBLE SOLID)	A OR B	2 UNITS SIDE BY SIDE 4 INCHES APART 20' C/C
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A OR B	10' C/C

• CENTERED IN GAP

2) WHEN USED TO SIMULATE (REPLACE) PAVEMENT MARKINGS, TRPM'S SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A	5' C/C
LANE LINE	A	4 @ 3.33' C/C 30' GAP (40' CYCLE)
CENTER LINE (DOUBLE SOLID)	A	2 UNITS SIDE BY SIDE 5' C/C
CENTER LINE (SINGLE BROKEN)	A	4 @ 3.33' C/C 30' GAP (40' CYCLE)
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A	5' C/C
EDGE LINE (TWO COLOR) (YELLOW/WHITE)	A	BACK TO BACK 5' C/C

YELLOW TRPM'S USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL PROVIDE RETROREFLECTION IN BOTH DIRECTIONS; ANY OTHER TRPM SHALL PROVIDE RETRO-REFLECTION IN ONLY ONE DIRECTION.

REMOVAL

REMOVAL SHALL BE ACCOMPLISHED IN A MANNER SUCH THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT AND PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN, OR SIGNIFICANTLY ROUGHENED.

PAYMENT

BASIS OF PAYMENT SHALL BE THE CONTRACT UNIT PRICE BID FOR EACH TRPM WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE, AND INCIDENTALS REQUIRED TO PERFORM THE WORK. THE CONTRACT UNIT PRICE BID SHALL ALSO INCLUDE REPLACEMENT, WITHOUT COST TO THE STATE OF OHIO, OF ALL TRPM'S WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON OTHER THAN THE FAILURE OF THE PAVEMENT TO WHICH THEY ARE ATTACHED.

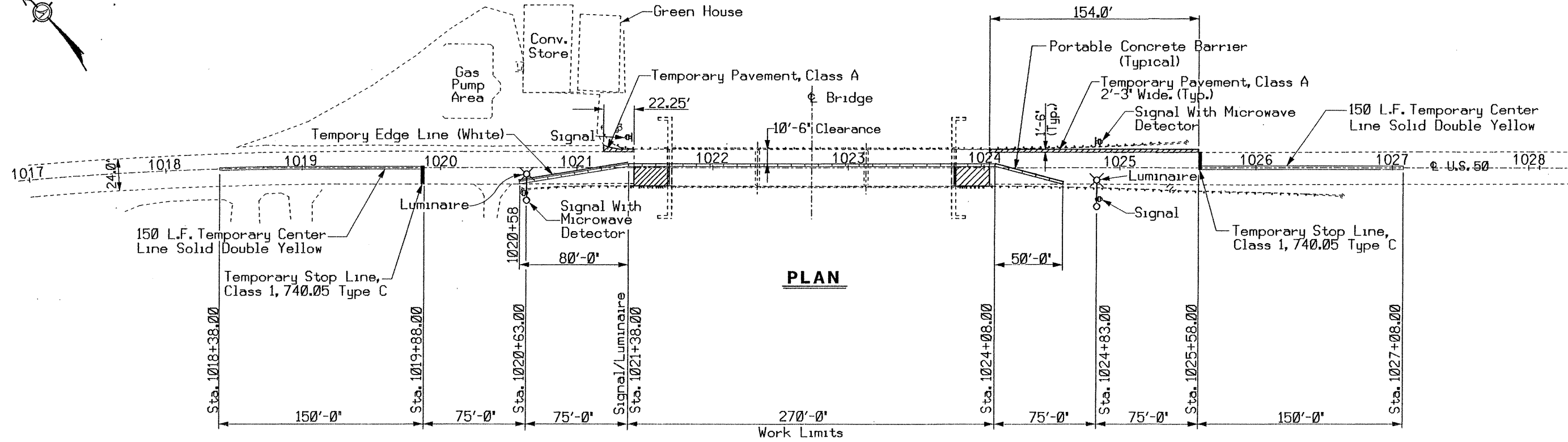
STATIONING (FROM-TO)/(SIDE)	TYPE A			TYPE B			SUPPL	SIMUL	LINE TYPE
	W	Y	Y/Y	W	Y	Y/Y			
STAGE I									
1018+33.00 TO 1019+83.00			18				x		DOUBLE YELLOW @ @
1020+58.00 TO 1021+38.00	5						x		EDGE
1021+38.00 TO 1025+58.00	55	55						x	EDGE
1021+38.00 TO 1024+08.00	15	15					x		@
1025+58.00 TO 1027+08.00			18				x		DOUBLE YELLOW @ @
STAGE II									
1019+83.00 TO 1024+08.00	55	55					x		EDGE
1021+38.00 TO 1024+08.00	15	15						x	EDGE
1024+83.00 TO 1024+58.00	5						x		EDGE
SUB-TOTALS	150	140	36						
TOTALS	326						CARRIED TO SHEET 9		

614 TEMPORARY RAISED PAVEMENT MARKERS

ROS-50-19.36

CALCULATED
N.L.H.
CHECKED
G.E.C.

MAINTENANCE OF TRAFFIC PHASE I



NOTES:

1- FOR ADDITIONAL DETAILS AND SIGNING, SEE STD. DRAWING MT-96.11

2- FOR ADDITIONAL DETAILS OF THE PORTABLE CONCRETE BARRIER AND STRUCTURE, SEE SHEET NO. 16.

SIGNAL DISPLAY CHART

DISPLAY INT.	SIGNAL HEADS				SECONDS
	EAST BOUND RIGHT	EAST BOUND LEFT	WEST BOUND RIGHT	WEST BOUND LEFT	
1	R	R	R	R	10 Sec.
2	R	R	R	R	10 Sec.
3	G	G	R	R	Varies From 10 To 45 Sec.
4	Y	Y	R	R	4 Sec.
5	R	R	R	R	10 Sec.
6	R	R	R	R	10 Sec.
7	R	R	G	G	Varies From 10 To 45 Sec.
8	R	R	Y	Y	4 Sec.

TIMING CHART

INTERVAL	02 *	01 *	04 *	03 *
INITIAL (MINIMUM)	1	10	1	10
MIN. GAP	1	4	1	4
YELLOW CLEARANCE	3	4	3	4
RED CLEARANCE	6	10	6	10
MAXIMUM GREEN	20	45	20	45

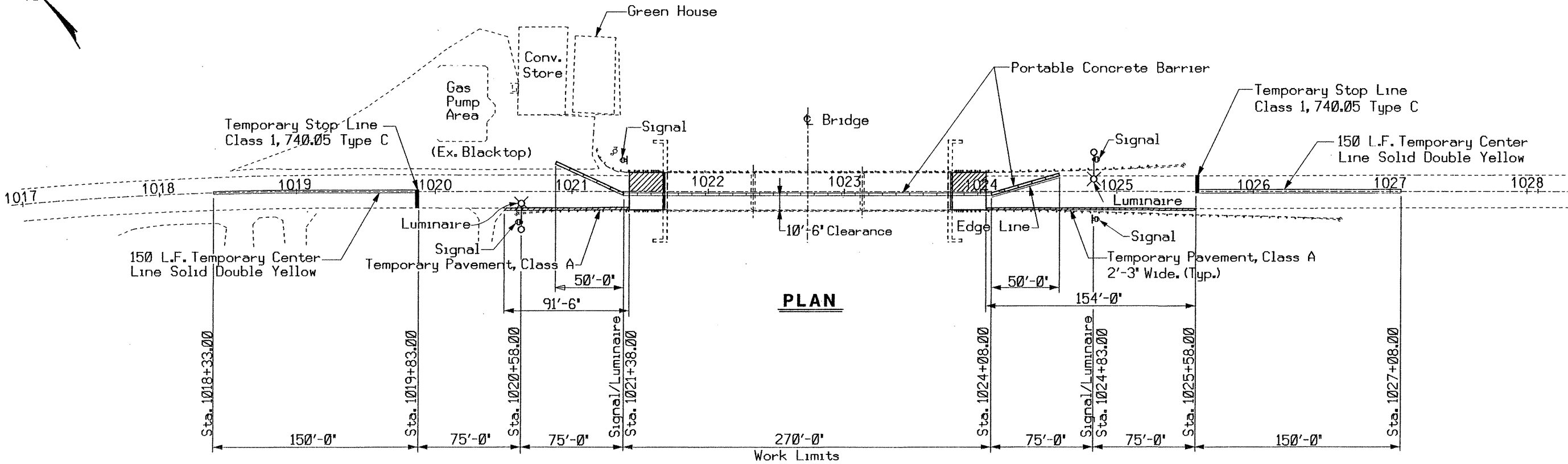
* Set The Controller So It Can Not Skip Phases

MAINTENANCE OF TRAFFIC
PHASE I

ROS-50-19.36

7
18

MAINTENANCE OF TRAFFIC PHASE II



- 1. CLOSE LEFT LANE
- 2. CONSTRUCT LEFT HALF OF APPROACH SLAB, AND BACWALLS

QUANTITIES CARRIED TO GENERAL SUMMARY

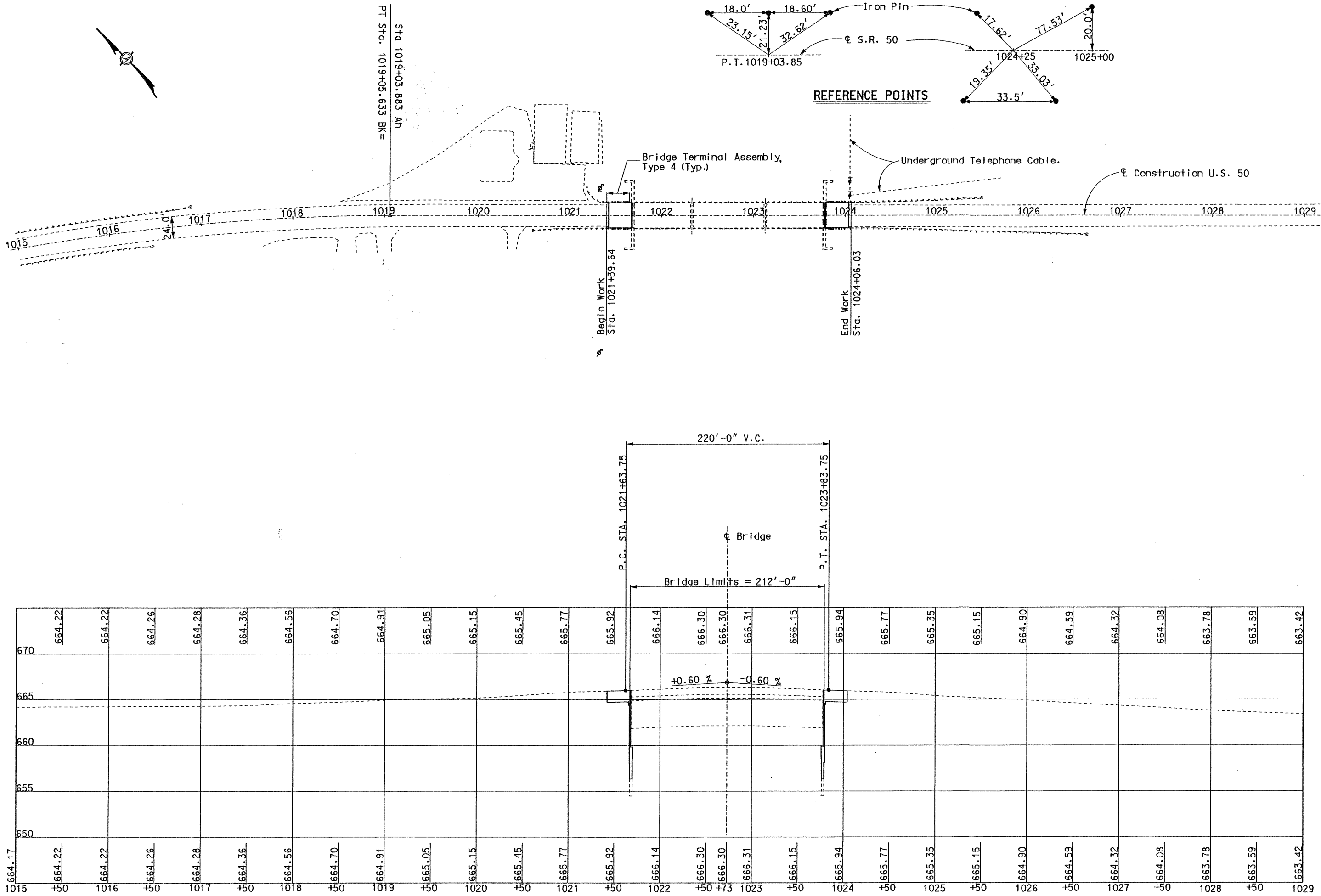
SIGNAL DISPLAY CHART					
DISPLAY INT.	SIGNAL HEADS				SECONDS
	EAST BOUND RIGHT	EAST BOUND LEFT	WEST BOUND RIGHT	WEST BOUND LEFT	
1	R	R	R	R	10 Sec.
2	R	R	R	R	10 Sec.
3	G	G	R	R	Varies From 10 To 45 Sec.
4	Y	Y	R	R	4 Sec.
5	R	R	R	R	10 Sec.
6	R	R	R	R	10 Sec.
7	R	R	G	G	Varies From 10 To 45 Sec.
8	R	R	Y	Y	4 Sec.

TIMING CHART				
INTERVAL	Ø2 *	Ø1 *	Ø4 *	Ø3 *
INITIAL (MINIMUM)	1	10	1	10
MIN. GAP	1	4	1	4
YELLOW CLEARANCE	3	4	3	4
RED CLEARANCE	6	10	6	10
MAXIMUM GREEN	20	45	20	45

* Set The Controller So It Can Not Skip Phases

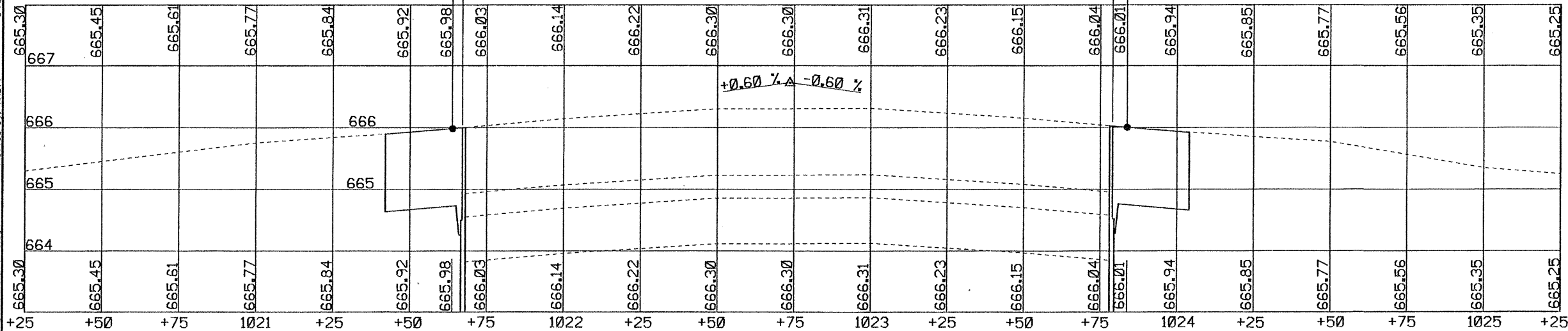
MAINTENANCE OF TRAFFIC
PHASE II

ROS-50-19.36

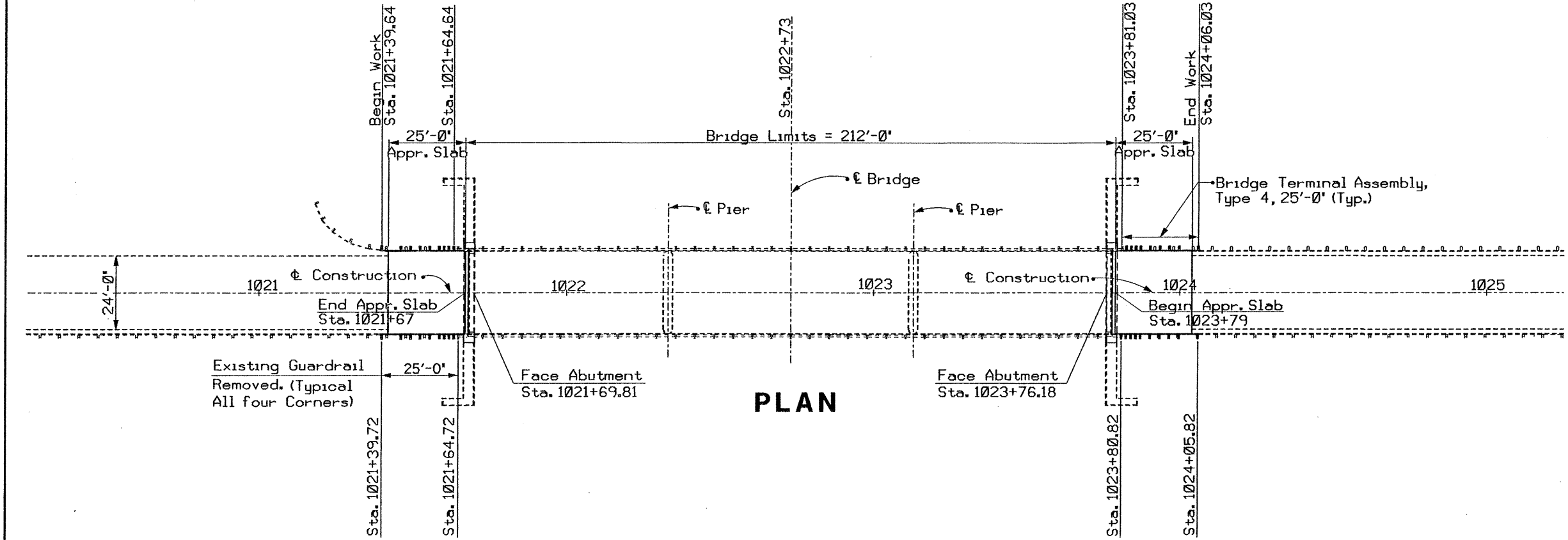


	ROS-50-19.36	SITE PLAN	ROSS COUNTY BRIDGE NO. ROS-50-1936 OVER NORTH FORK CREEK	STA. 1021+63.75 STA. 1023+83.75	DESIGNED N.L.H. CHECKED G.E.C.	DRAWN N.L.H. REVISED	REVIEWED L.A.W. STRUCTURE FILE NUMBER 7103301	DATE 1-8-96	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9

BENCH MARK
U.S.C.&G. B.M. *J-338 ELEVATION=666.57
C & GS DISK IN NORTHEAST WINGWALL,
OF BRIDGE OVER NORTH FORK OF PAINT CR.
STA. 1023+76.85, 14.90' LEFT OF C



PROFILE

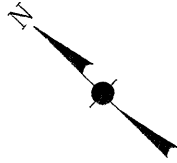


PLAN

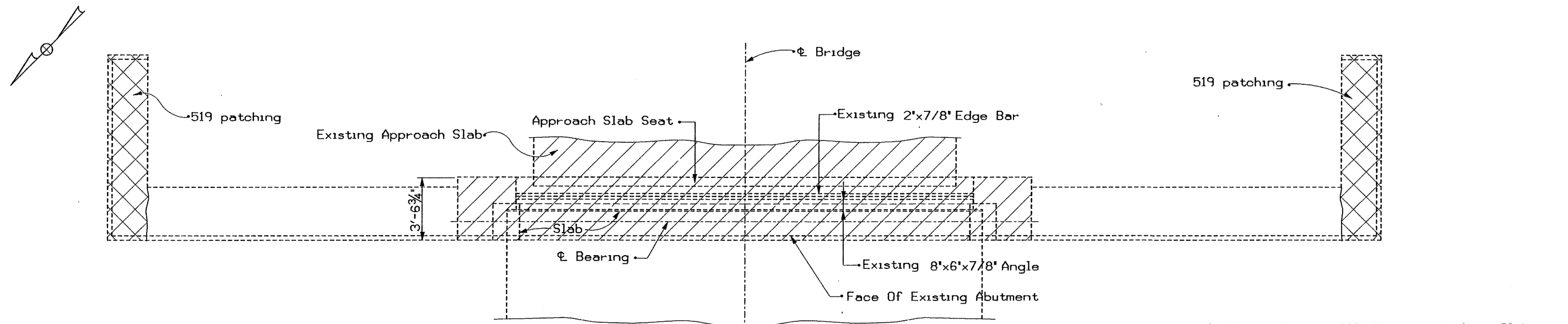
PROPOSED STRUCTURE
TYPE: STEEL DECK GIRDER CONTINUOUS (WITH NEW BACKWALLS AND APPROACH SLABS)
SPAN: 2 @ 61'-9", 1 @ 77'-0"
ROADWAY WIDTH: 26'-0" F/F CURBS
SIDEWALK WIDTH: NONE
DESIGN LOADING: HS 15-32 (NEW FLOOR 1963)
SKEW: 0°
WEARING SURFACE: MONO. CONC./LATEX (1" THICK)
APPROACH SLAB: AS-1-82 (25'-0" LONG)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE

EXISTING STRUCTURE DATA
TYPE: STEEL DECK GIRDER CONTINUOUS
SPAN: 2 @ 61'-9", 1 @ 77'-0"
ROADWAY WIDTH: 26'-0" F/F CURBS
SKEW: 0°
LOAD CAPACITY: HS 15-32 (NEW FLOOR 1963)
TYPE OF FLOOR: CONCRETE 8 3/4" (INCLUDES 1" M.W.S.)
TYPE OF SUBSTRUCTURE: CONCRETE CANTILEVER
DATE BUILT: 1932 (NEW FLOOR & REPAIR 1963)
STRUCTURE FILE NUMBER: 7103301
APPROACH SLAB: AS-1-54 (25'-0" LONG)
WEARING SURFACE: MONO. CONC./LATEX (1" THICK)

TO CHILLICOTHE



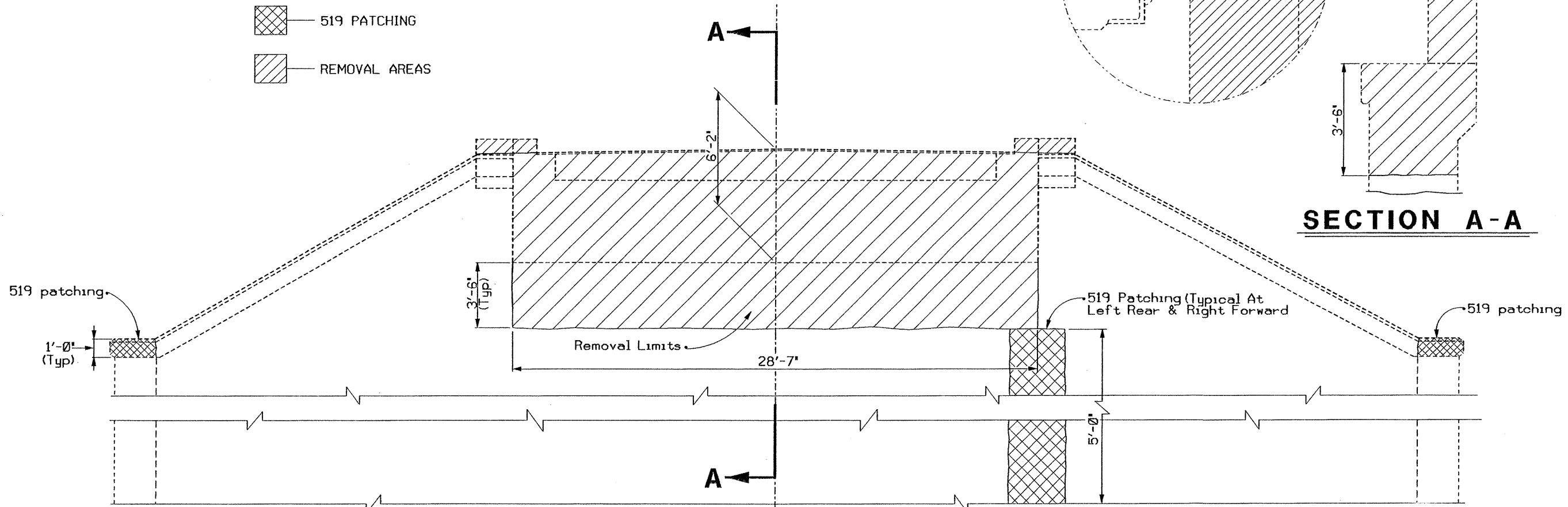
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PLAN

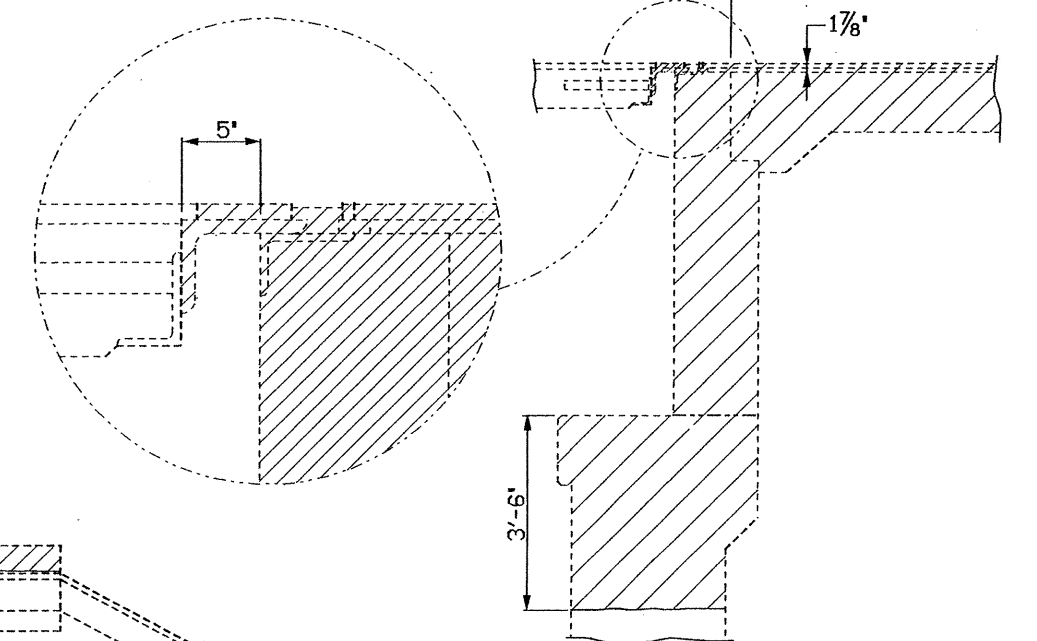
(REAR ABUTMENT SAME, EXCEPT AS SHOWN)

- 519 PATCHING
- REMOVAL AREAS



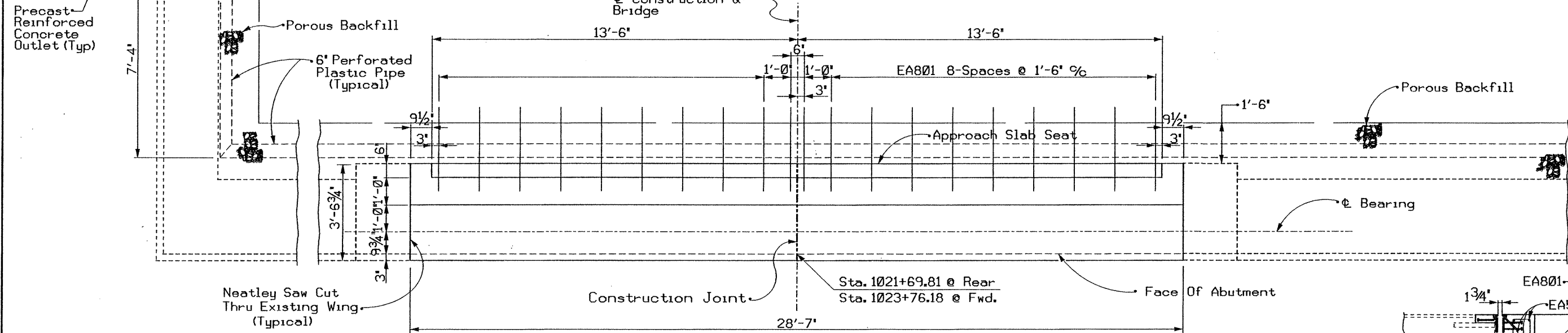
ELEVATION

(REAR ABUTMENT SAME, EXCEPT AS SHOWN)

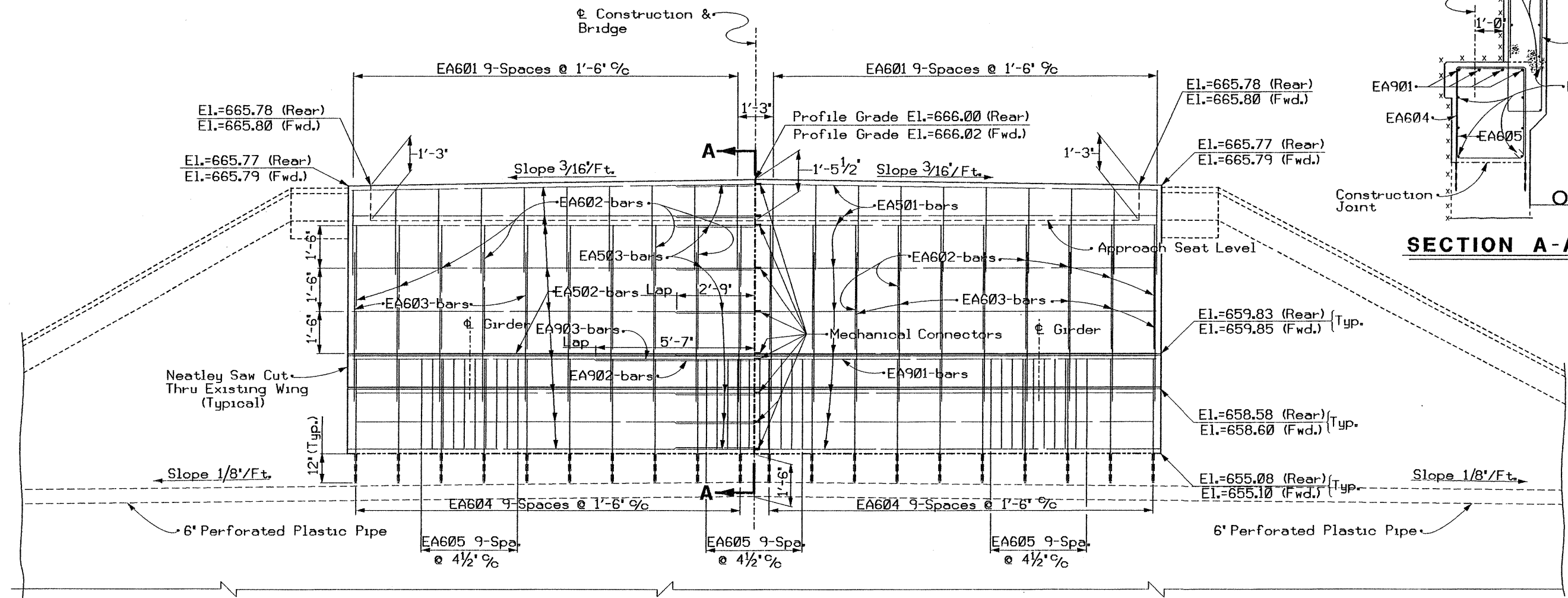
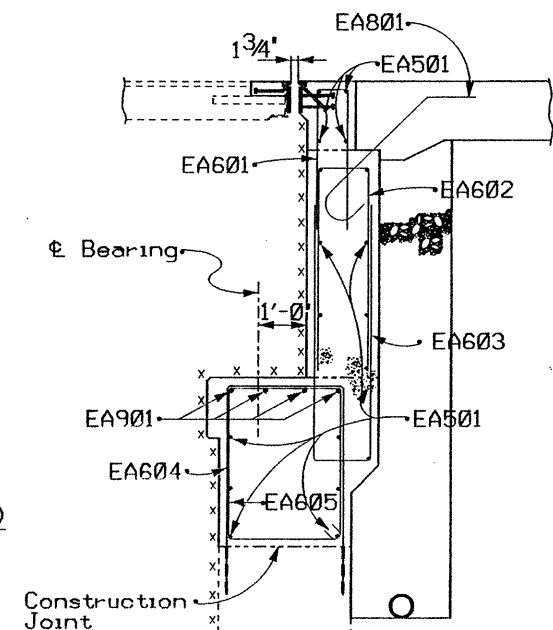


SECTION A-A

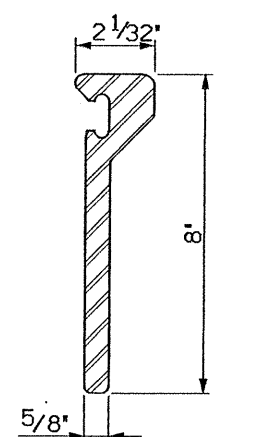
DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9	DATE 1-8-96 STRUCTURE FILE NUMBER 7103301	DESIGNED N.L.H. CHECKED G.E.C.
REVIEWED L.A.W. DRAWN N.L.H. REVISIONS	ABUTMENT REMOVAL BRIDGE NO. ROS-50-1936 OVER NORTH FORK CREEK	ROS-50-19.36 3/8 13/18



XXX-Epoxy Sealer & Urethane Topcoat
Seal All Areas Of Concrete Down To
Bottom Of Existing Ground Line



DESIGN AGENCY	STATE OF OHIO
DEPARTMENT OF TRANSPORTATION	
DISTRICT 9	
DATE	1-8-96
REVIEWED	L.A.W.
STRUCTURE FILE NUMBER	7103301
DRAWN	N.L.H.
CHECKED	REVIS
DESIGNED	G.E.C.
ABUTMENT DETAILS	
BRIDGE NO. ROS-50-1936	
OVER NORTH FORK CREEK	
ROS-50-19.36	
4 / 8	
14	
18	



Technical drawing of a wall cross-section. The drawing shows a vertical wall with a cross-hatched insulation layer. Dimensions include a total width of 13 1/4" at the top, a 6" section for the insulation, and a 1'-0" section for the wall body. A vertical dimension of 3 5/8" (Typ.) is shown for the insulation thickness. A horizontal dimension of 1'-0" is shown for the wall body. A section line A-A is indicated. The label 'Delcrete' is present with an arrow pointing to the insulation layer. The drawing also shows a foundation and a floor slab with reinforcement bars.

EA801 Spa. @ 1'-6" %

Optional Construction Joint

Approach Slab

Porous Backfill

Membrane Waterproofing (Sheet Type 3) Typical

Construction Joint

Filter Fabric

Low Strength Mortar Backfill Class, LMS-50 (F.F.)

* = Prefo Sealer

A = 1 3/4" @ 65° (Typical) (See Detail A Above)

Existing Bridge Deck

EA601 Spa. @ 1'-6" % (Typ.)

EA602 Spa. @ 1'-6" % (Typ.)

1'-0"

EA603 Spa. @ 1'-6" % (Typ.)

⊕ Bearing

EA501 Or EA502 } Spa. @ 1'-6" % (E.F.) (Typ.)

EA901 Or EA902 } Spa. @ 9' % (Typ.)

EA604 Spa. @ 1'-6" %

EA605 Spa. @ 4 1/2" %

3'

EA501 Or EA502 Spa. @ 1'-0" % E.F. (Typ.)

1 1/4" Ø X 1'-8" Swedge Bolts (Proposed)

Face Of Proposed Abutment

(N.F.)

Construction Joint

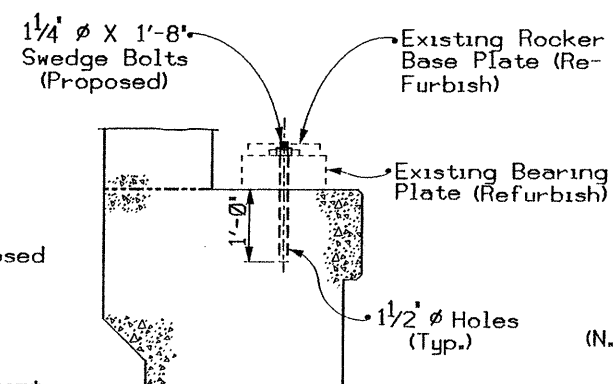
45°

1

1

ω

N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
P.P.C.P.P. = 6" Perforated Polyvinyl Chloride Plastic Pipe
* = Preformed Elastomeric Joint Sealer 705.11



6'-2"

Face Of Proposed Backwall

⌀ Bearing

1'-0"

1'-6"

1'-6"

2'-0 3/4"

2" Clear

3/4" Chamfer (Typ.)

1'-3"

3"

2'-3"

1'-0" (Typ.)

2" Clear

Dowel Holes (Typ.) (N.F.)

2'-9"

2'-1" ±

(F.F.)

45°

1'-0"

6"

1'-5 1/2" (Typ.)

EA801 Spa. @ 1'-6" %

6"

9'-11"

1

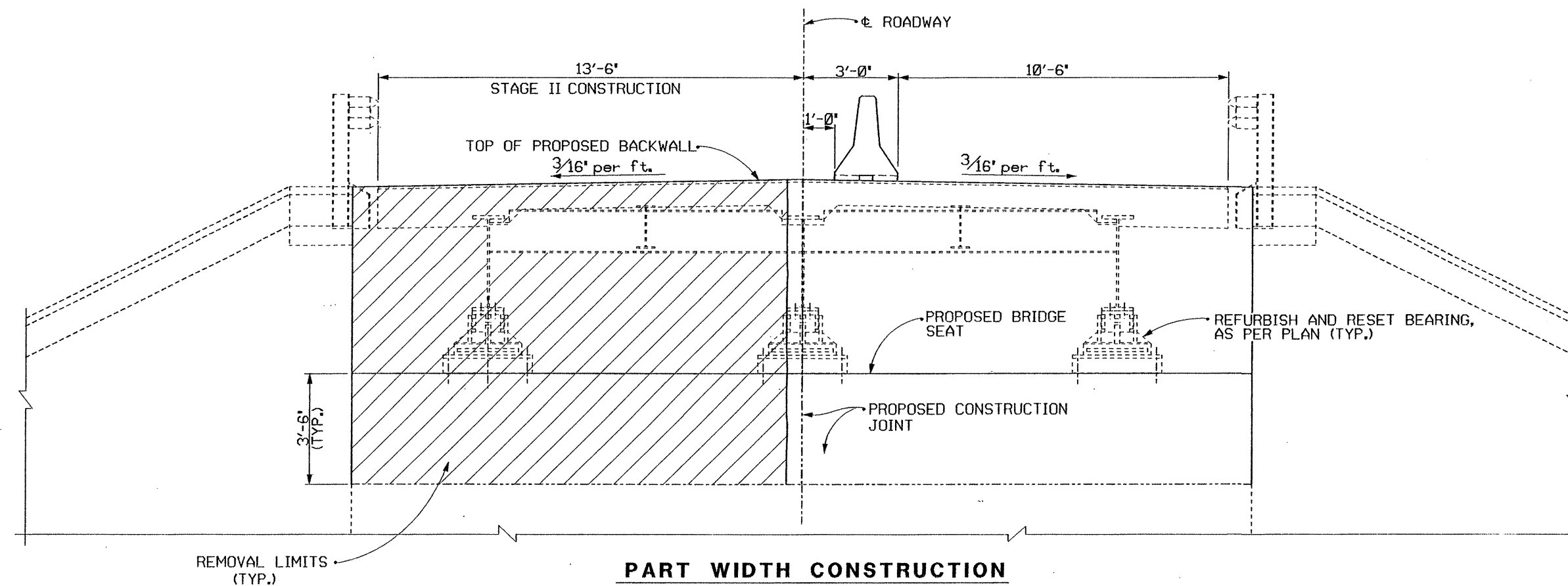
1

Low Strength Mortar Backfill Class, LMS-50

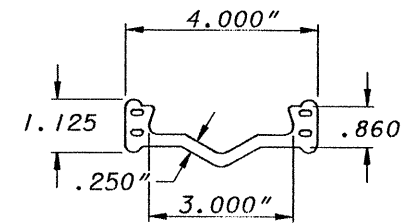
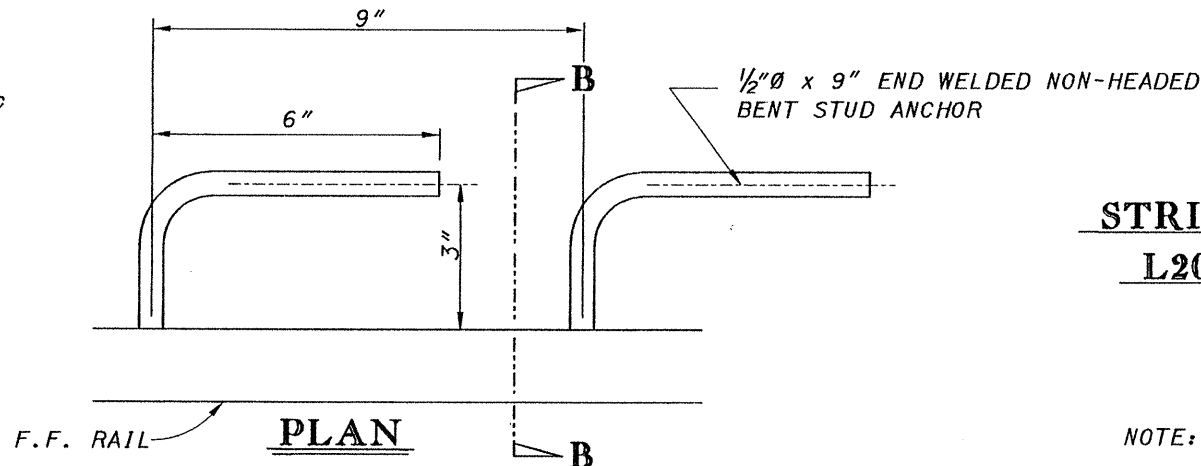
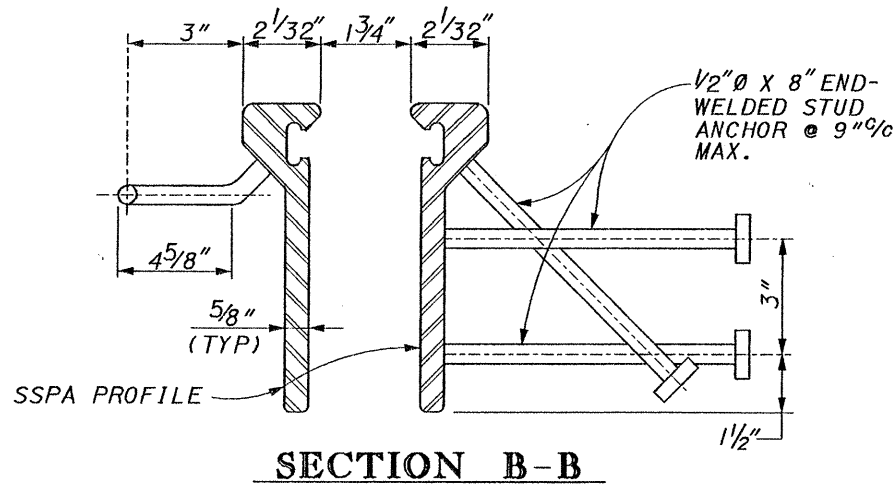
P.P.C.P.P. (Typ.)

SECTION A-A

SECTION A-A



16
18



STRIP SEAL DETAIL FOR "SSPA" L200 (2" MOVEMENT-RATING)

SEAL SIZE	MOVEMENT RATING
200	2"

NOTE: D.S. BROWN EXPANSION JOINT IS DETAILED

STUD ANCHOR PLACEMENT

GENERAL NOTES

THIS ITEM SHALL CONSIST OF THE INSTALLATION OF A STRIP SEAL EXPANSION JOINT ANCHORED TO THE BRIDGE DECK BY WELDING AND WITH ELASTOMERIC CONCRETE SYSTEM TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

MATERIAL:

ELASTOMERIC CONCRETE SYSTEM AS SUPPLIED BY ONE OF THE FOLLOWING OR AN APPROVED EQUAL:

-E-POXY INDUSTRIES, INC.
14 WEST SHORE STREET
RAVENA, NY 12143-1698
PHONE NO. (513) 756-6193
BRAND NAME OF ELASTOMERIC CONCRETE IS CEVACRETE

-D.S. BROWN COMPANY
P.O. BOX 158
NORTH BALTIMORE, OH 45872
PHONE NO. (419) 257-3561
BRAND NAME OF ELASTOMERIC CONCRETE IS DELCRETE

-WATSON-BOWMAN & ACME CORP.
95 PINEVIEW DRIVE
AMHERST, NY 14120
BRAND NAME OF ELASTOMERIC CONCRETE IS WABOCRETE

SEE STD. DWG. EXJ-4-87 FOR ALL OTHER MATERIAL REQUIREMENTS.

BRIDGE DECK PREPARATION:

THE EXISTING 1" LATEX MODIFIED CONCRETE OVERLAY AND CONCRETE DECK SHALL BE SAW CUT AND REMOVED TO FORM THE OPENING AS DETAILED. REMOVE PORTIONS OF THE EXISTING SLIDING PLATE EXPANSION JOINT AS DETAILED.

CLEAN THE EXPOSED CONCRETE AND STEEL SURFACES BY SAND BLASTING OR OTHER METHODS APPROVED BY THE ENGINEER TO REMOVE ALL SURFACE CONTAMINATION THAT WILL INTERFERE WITH THE ADHESION OF THE ELASTOMERIC CONCRETE.

NOTE: THE ELASTOMERIC CONCRETE SUPPLIER MAY RECOMMEND A PRIMER BE APPLIED TO ALL SURFACES COMING IN CONTACT WITH THE ELASTOMERIC CONCRETE.

RETAINER PLACEMENT:

THE RETAINER SHALL BE SET TO GRADE BY WELDING TO THE EXISTING DECK END FINISH ANGLE AS DETAILED, PRIOR TO PLACEMENT OF BACKWALLS. SEE STD. DWG. EXJ-4-87 FOR ADDITIONAL NOTES AND DETAILS.

ELASTOMERIC CONCRETE PLACEMENT:

SECURE NECESSARY FORMS AND PLACE ELASTOMERIC CONCRETE AROUND RETAINER IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL ELASTOMERIC CONCRETE PLACEMENT SHALL BE UNDER THE DIRECTION OF AN EXPERIENCED TECHNICAL REPRESENTATIVE FROM THE MANUFACTURER OF THE ELASTOMERIC CONCRETE.

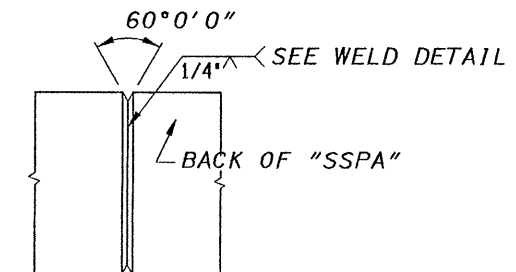
ABUTMENT BACKWALL AND GLAND PLACEMENT:
SEE STD. DWG. EXJ-4-87 NOTES AND DETAILS.

MEASUREMENT:

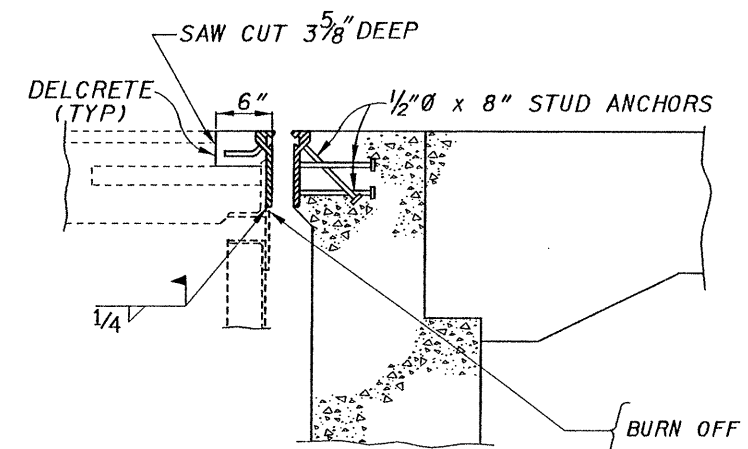
MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE LINEAR FEET OF SEALED JOINT SYSTEM, MEASURED HORIZONTALLY ALONG THE JOINT CENTERLINE AND BETWEEN THE OUTER LIMITS OF THE FABRICATED JOINT, FURNISHED AND PLACED. THIS SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE, WHICH INCLUDES: THE JOINT ARMOR, GLAND, RETAINERS, ANCHORING DEVICES, TEMPORARY SUPPORTS, BRIDGE DECK PREPARATION (OUTLINED ABOVE), AND ELASTOMERIC CONCRETE SYSTEM IN ACCORDANCE WITH THE PLANS, MANUFACTURER'S SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER.

PAYMENT:

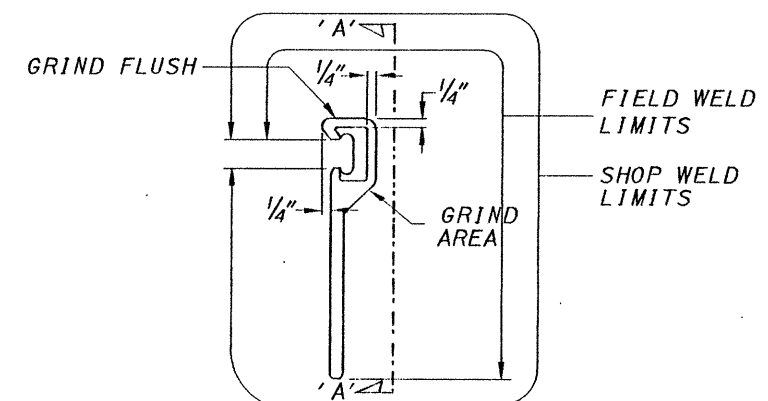
PAYMENT WILL BE MADE PER LINEAR FOOT FOR ITEM 516-STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, AS PER PLAN.



SECTION A-A



SECTION THRU END FINISH



"SSPA" WELD DETAIL

STRUCTURAL EXPANSION JOINT DETAILS

BRIDGE NO. ROS-50-1936
OVER NORTH FORK CREEK

ROS-50-19.36

7/8

17
18

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9

DATE
1-8-96
L.A.W.
STRUCTURE FILE NUMBER
7103301

DESIGNED
N.L.H.
CHECKED
G.E.C.

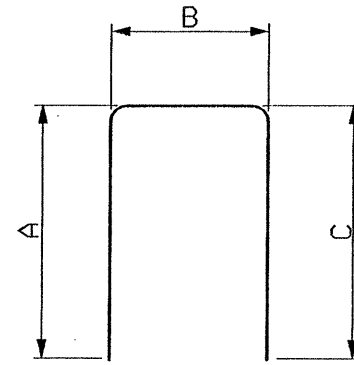
DRAWN
N.L.H.
REVISED

STEEL LIST

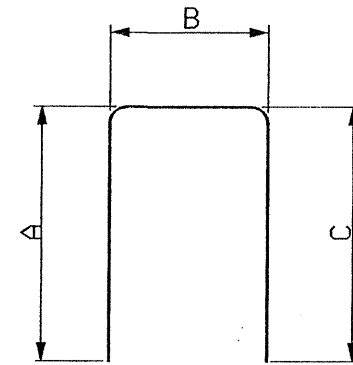
[illegible]

TOTAL = 5,951 Lbs.

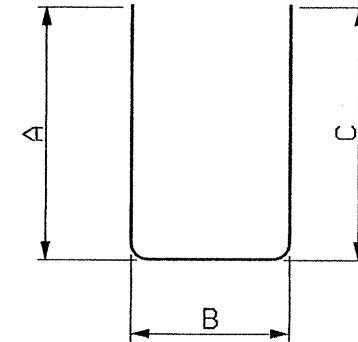
BENDING DIAGRAMS



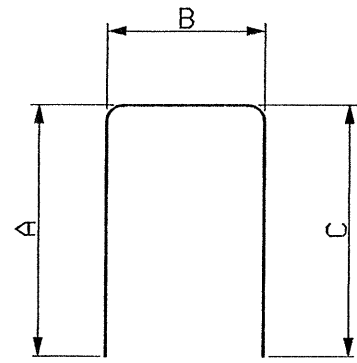
TYPE 1



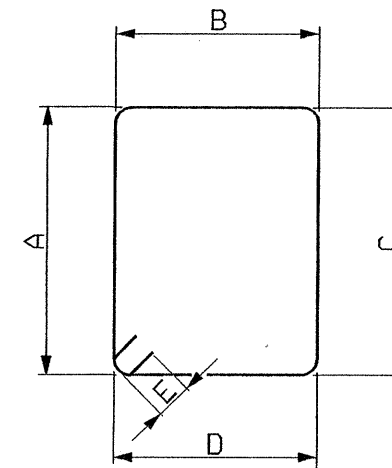
TYPE 2



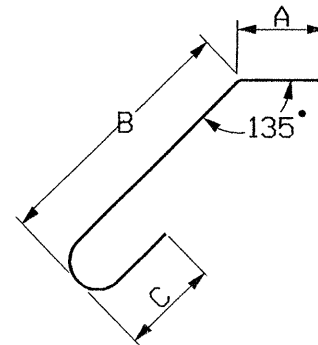
TYPE 3



TYPE 4



TYPE 5



TYPE6

STEEL LIST

BRIDGE NO. ROS-50-1936
OVER NORTH FORK CREEK

ROS-50-19.36

8 / 8

$$\frac{18}{18}$$

DESIGNED	CHECKED
N.L.H.	G.E.C.

DRAWN	REVISED
N.L.H.	

REVIEWED	STRUCTURE	71
L.A.W.		

DATE	1-8-96
FILE NUMBER	101

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9