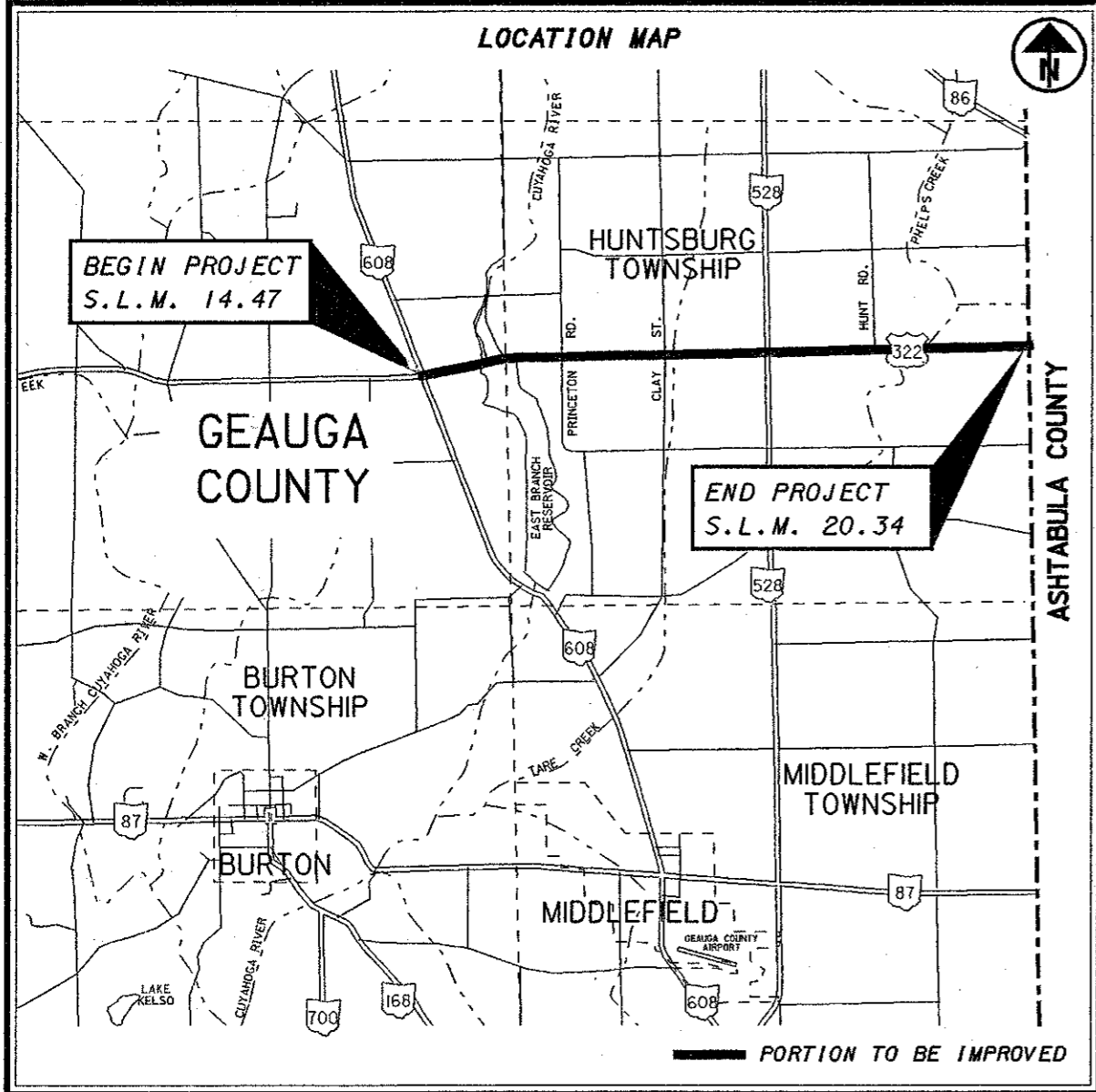


OHIO DEPARTMENT OF TRANSPORTATION

PLAN NO. _____

2 LANE RESURFACING



PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH MILES	CITY	TOWNSHIP
				BEGIN	END			
1	GEA	US-322	14.92-19.62	14.47	20.34	5.87		HUNTSBURG
								CLARIDON

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1995 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 to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved: *Stanley P. Anderson*
 Date: 9/20/96 District Deputy Director of Transportation

Approved: *[Signature]*
 Date: 9/20/96 Director, Department of Transportation

LATITUDE: N 41°32'02" LONGITUDE : W 81°03'32"

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:
 OHIO DEPARTMENT OF
 TRANSPORTATION
 DISTRICT 12
 PRODUCTION

STANDARD DRAWINGS		STANDARD DRAWINGS		STANDARD DRAWINGS	
MC-9.2	5-6-91	TC-71.10	9-10-91	GR-2.1	5-6-91
		TC-82.10	8-29-84	GR-3.4	5-6-91
MT-97.10	4-29-88			GR-3.5	1-31-94
MT-97.11	10-4-89	BP-3.1	2-21-92	GR-4.1	5-6-91
MT-99.10	11-14-86	BP-4.1	2-21-92	GR-4.2	5-6-91
MT-99.20	4-29-88				
		GR-1.1	5-6-91		
TC-65.10	7-7-95	GR-1.2	10-30-92		
TC-65.12	7-7-95	GR-1.3	2-21-92		

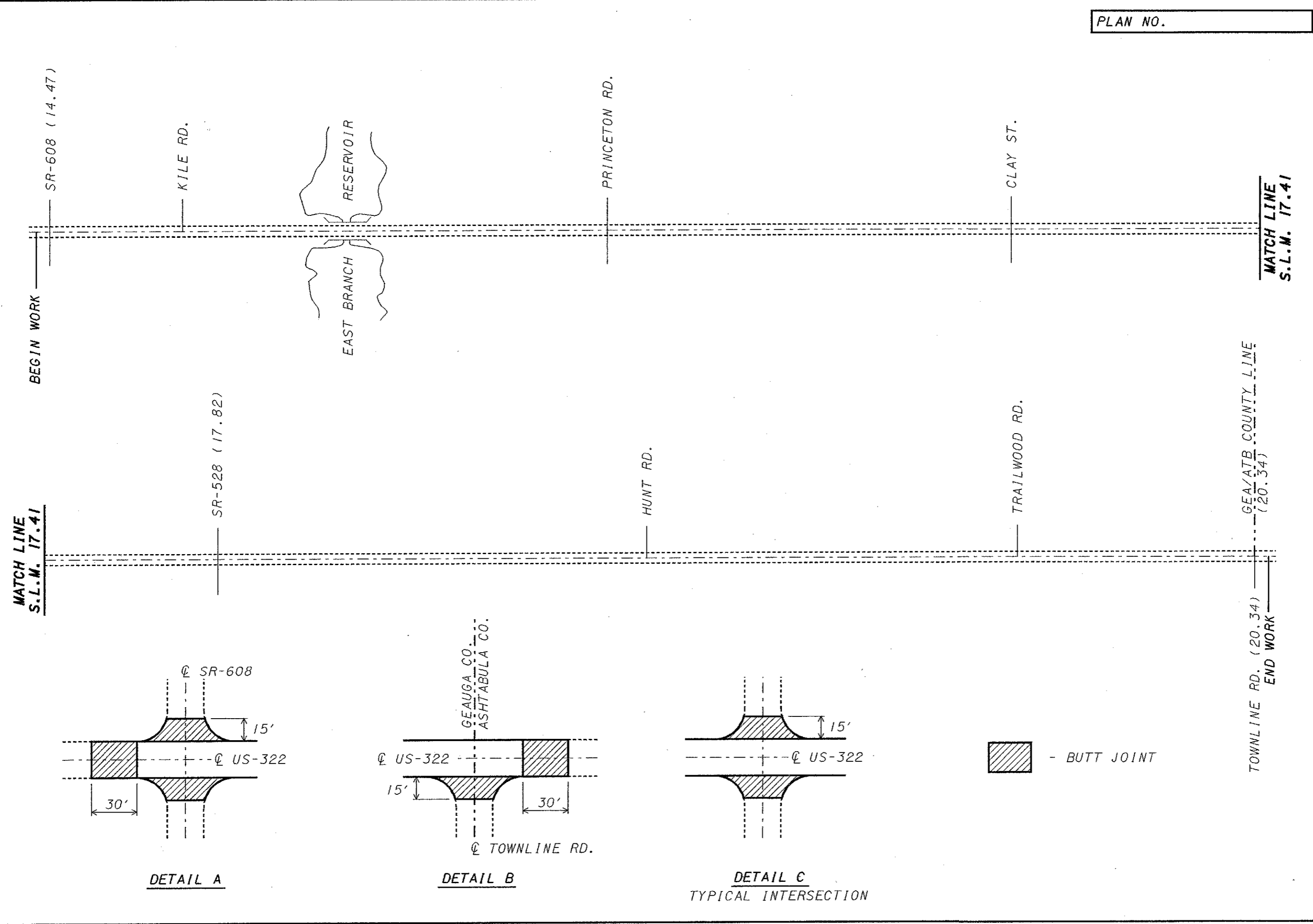
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FEDERAL PROJECT NO. _____
 NON-FEDERAL
 PID NO. 14410
 CONSTRUCTION PROJECT NO. _____
 RAILROAD INVOLVEMENT NONE
 GEAUGA COUNTY
 GEA-322-14.47
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SCOPE OF PROJECT

THE WORK PROPOSED FOR THIS PROJECT CONSISTS OF THE REPAIRING AND RESURFACING OF THE EXISTING ROADWAY. THE ALIGNMENT OF THE PAVEMENT WILL NOT BE CHANGED. THE PROFILE OF THE PROPOSED SURFACE WILL BE SIMILAR TO THAT OF THE EXISTING PAVEMENT EXCEPT THAT IT WILL BE RAISED AN AMOUNT EQUAL TO THE THICKNESS OF THE RESURFACING COURSE OR COURSES SPECIFIED IN THESE PLANS.

UTILITY OWNERSHIP

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE REGISTERED UTILITY PROTECTION SERVICE. THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK, OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREAS IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE LOCATION AND MARKINGS SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

THE FOLLOWING UTILITIES AND OWNERS MAY BE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT :

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12, TRAFFIC DEPARTMENT
5500 TRANSPORTATION BLVD.
GARFIELD HTS., OHIO 44125
(216) 581-2333

EAST OHIO GAS COMPANY
1201 EAST 55TH STREET
CLEVELAND, OHIO 44103
(216) 736-6675

AKRON WATER
565 JOHNSTON ST.
AKRON, OHIO 44311
(216) 375-2420

GEAUGA SANITARY ENGINEERING
237 MAIN ST.
CHARDON, OHIO 44024
(216) 285-2222

THE CLEVELAND ELECTRIC
ILLUMINATING COMPANY
55 PUBLIC SQUARE
CLEVELAND, OHIO 44113
(216) 861-9000

AMERITECH (OHIO BELL)
13630 LORAIN AVENUE-4TH FLOOR
CLEVELAND, OHIO 44111
(216) 476-6142

CABLEVISION OF OHIO
107 WATER ST.
CHARDON, OHIO 44024
1-800-686-2510

THE WESTERN RESERVE TELEPHONE CO.
205 SOUTH HAMB DEN ST.
CHARDON, OHIO 44024
(216) 285-5533

VILLAGE OF CHARDON-WAT/STM/SANT SEW
108 SOUTH HAMB DEN ST.
P.O. BOX 499
CHARDON, OHIO 44024
(216) 285-3585
1-800-362-2764

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIAL OR PERFORM WORK FOR THE PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY.

GENERAL NOTES

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CUY-322-14.47

TYPICAL SECTIONS

TYPICAL SECTIONS HAVE BEEN TAKEN FROM THE RECORDS AND ARE BELIEVED TO REPRESENT THE EXISTING PAVEMENT CONDITIONS, BUT THE STATE OF OHIO WILL NOT GUARANTEE THE ACCURACY OF THE SAME.

PAVEMENT MARKINGS AND PASSING ZONES

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE LOCATIONS OF PAVEMENT MARKINGS AND PASSING ZONES ARE BASED ON "TRUE LINE MILEAGE". THIS SHOULD NOT BE CONFUSED WITH STRAIGHT LINE MILEAGE DESIGNATION USED ELSEWHERE IN THESE PLANS. THE TRUE LINE MILEAGE LOCATIONS FOR PASSING ZONES REPRESENT THOSE AVAILABLE AT THE TIME THIS PLAN WAS PREPARED. THE CONTRACTOR SHALL OBTAIN THE MOST RECENT COPY OF THE CENTER LINE LOG FROM THE DISTRICT TWELVE ROADWAY SERVICES TRAFFIC DEPARTMENT PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS.

PAVING OPERATIONS

THE TIME BETWEEN HEATER RECYCLING AND RESURFACING SHALL BE KEPT TO A MINIMUM. IF, FOR ANY REASON, THIS TIME EXCEEDS TEN DAYS, THE CONTRACTOR SHALL APPLY A FOG SPRAY OF ITEM 407-TACK COAT AT AN APPLICATION RATE OF APPROXIMATELY 0.03 GAL./SQ. YD. THIS RATE MAY BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

ITEM 202-RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN

RAISED PAVEMENT MARKERS SHALL BE REMOVED IN A MANNER THAT PREVENTS DAMAGE TO THE CASTINGS. REMOVED MARKERS SHALL BE COLLECTED AND DELIVERED TO THE ODOT WARRENSVILLE YARD - 25609 EMERY ROAD, WARRENSVILLE HTS. , OHIO, 44128 (SR-175 AT THE INTERSECTION OF I-271 AND EMERY ROAD), BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE PROJECT ENGINEER SHALL GIVE THE TRAFFIC DEPARTMENT (292-5801) 24 HOUR NOTICE PRIOR TO DELIVERY AND THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY TRANSFER DOCUMENTATION WITH ANY DELIVERIES. ALL COSTS ASSOCIATED WITH THE REMOVAL, STORAGE, AND DELIVERY OF THESE MARKERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-RAISED PAVEMENT MARKERS REMOVED FOR STORAGE. SEE PAGE 18 FOR QUANTITIES.

ITEM 202-WEARING COURSE REMOVED

THIS ITEM SHALL BE USED AT ALL BUTT JOINTS SHOWN IN THE PLANS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-3.1. THE TIME BETWEEN WEARING COURSE REMOVAL AND RESURFACING SHALL NOT EXCEED TEN DAYS.

ITEM 202-GUARDRAIL REMOVED

GUARDRAIL POSTS AND MISCELLANEOUS HARDWARE DESIGNATED FOR REMOVAL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-GUARDRAIL REMOVED. SEE PAGE 13 FOR QUANTITIES.

ITEM 203-EMBANKMENT

THIS ITEM IS TO BE USED AT THE FOLLOWING LOCATIONS: SLM 15.71 LEFT SIDE (BACKFILL AT BOX CULVERT), SLM 15.80 LEFT SIDE (BACKFILL AT HEADWALL), SLM 16.48 LEFT SIDE (BACKFILL AT HEADWALL), SLM 16.76 LEFT SIDE (REINFORCE DITCH SLOPE), AND AS DIRECTED BY THE ENGINEER, TO FILL LOW AREAS ADJACENT TO THE PAVED SHOULDER.

A QUANTITY OF 260 CU YD OF ITEM-203 EMBANKMENT HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 251-PARTIAL DEPTH PAVEMENT REPAIR

AN ESTIMATED QUANTITY OF 1152 SQ. YDS., HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR THE PAVED SHOULDERS AND INTERSECTIONS.

DEPTH OF REMOVAL SHALL BE A MINIMUM OF 3 INCHES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ITEM 253-PAVEMENT REPAIR

AN ESTIMATED QUANTITY OF 2500 SQ. YDS., HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR THE TRAVELED ROADWAY.

THE EXISTING PAVEMENT SHALL BE REMOVED TO EITHER A DEPTH OF 6 INCHES OR TO THE CONCRETE BASE WHEN FOUND AT A DEPTH OF LESS THAN 6 INCHES.

GENERAL NOTES

GEAUGA COUNTY
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ITEM 404-BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

A QUANTITY OF ITEM 404 ASPHALT CONCRETE HAS BEEN PROVIDED TO PROTECT THE TRAFFIC FROM OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO, POTHOLES, DRIVEWAYS, INTERSECTIONS, CASTINGS, AND TO MAINTAIN TRAFFIC OVER RUTS AND LOW AREAS WHICH ARE LEFT EXPOSED DUE TO WEARING COURSE REMOVAL OPERATIONS. THE CASTING SHALL NOT PROTRUDE ABOVE THE SURFACE MORE THAN 1" WHEN EXPOSED TO TRAFFIC.

ITEM 404-BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC... 12 CU YD

ITEM 404-ASPHALT CONCRETE, AC-20 (DRIVEWAYS)

THIS ITEM OF WORK IS INTENDED TO PROVIDE A PAVED APRON, PLACED IN A SEPARATE OPERATION. ONLY RESIDENTIAL AND COMMERCIAL DRIVEWAYS LOCATED THROUGHOUT THIS PROJECT THAT EXHIBIT THE GEOMETRIC CHARACTERISTIC SHOWN ON PAGE 12 OR STANDARD DRAWING BP-4.1 SHALL BE PAVED. AGGREGATE DRIVES SHALL BE GRADED AND LEVELED WITH ITEM 411 IF NECESSARY PRIOR TO PAVING. ITEMS 407 AND 411 SHALL BE USED, AS DIRECTED BY THE ENGINEER, TO PREPARE THESE DRIVES PRIOR TO PAVING.

ITEM SPECIAL-ASPHALT CONCRETE WITH SBS POLYMER, TYPE 1 (TYPE 446)

THIS WORK SHALL CONSIST OF CONSTRUCTING AN EXPERIMENTAL ASPHALT CONCRETE SURFACE COURSE OF AGGREGATE AND A SBS POLYMER MODIFIED ASPHALT CEMENT MIXED IN A CENTRAL PLANT AND SPREAD AND COMPACTED ON A PREPARED SURFACE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES AND TYPICAL SECTIONS SHOWN ON THE PLAN OR ESTABLISHED BY THE ENGINEER.

THE REQUIREMENTS OF 441 AND 446 SHALL APPLY; DEVIATIONS FROM THESE ARE AS SHOWN.

THE BITUMINOUS MATERIAL SHALL CONSIST OF A STYRENE BUTADIENE STYRENE POLYMER BLOCK COPOLYMER (SBS POLYMER) BLENDED INTO AN ASPHALT CEMENT BEFORE DELIVERY TO THE ASPHALT PLANT. THE SUPPLIER OF THE SBS POLYMER MODIFIED ASPHALT CEMENT SHALL BE PRE-APPROVED BY THE LABORATORY.

THE SBS POLYMER MODIFIED ASPHALT CEMENT SHALL BE SMOOTH, HOMOGENEOUS AND MEET THE FOLLOWING PROPERTIES:

PROPERTY	ASTM TEST METHOD	SPECIFICATION TOLERANCES
SBS POLYMER, % BY WEIGHT OF ASPHALT CEMENT, 60°C, POISE		NOTE 1
VISCOSITY OF ORIGINAL ASPHALT CEMENT, 60°C, POISE	D-2171	NOTE 1
PENETRATION, 25°C, 100 GRAMS, 5 SEC.	D-5	50-75
VISCOSITY, 60°C, POISE	D-2171	5000 MIN.
VISCOSITY, 135°C, CST	D-2070	2000 MAX.
RING & BALL SOFTENING POINT, °C	D-36	54.4 MIN.
FLASH POINT, °C	D-92	232 MIN.
SOLUBILITY IN TRICHLOROETHYLENE, %	D-2042	99.0 MIN.
SEPARATION OF POLYMER, °C	NOTE 2	14.4 MAX.
FORCE RATIO, F / F	NOTE 3	0.3 MIN.
PENETRATION, 4°C 200 GRAMS, 60 SEC.	NOTE 4	10 MIN.
ELASTIC RECOVERY, %	NOTE 4 & 5	Z60 MIN.

NOTES:

- (1) REPORT RESULTS OF TEST.
- (2) ABSOLUTE DIFFERENCE IN RING AND BALL (ASTM D - 36) TEST FROM TOP TO BOTTOM TESTED ON MATERIAL STORED AT 171°C FOR 48 HOURS.
- (3) THE FORCE RATIO IS DEFINED AS THE FORCE AT 300 MM ELONGATION (F2) DIVIDED BY THE MAXIMUM FORCE AT THE INITIAL PEAK (F1) WHEN THE SBS POLYMER MODIFIED ASPHALT CEMENT IS TESTED IN ACCORDANCE WITH ASTM D-113 WITH THE FOLLOWING

GENERAL NOTES

GEAUGA COUNTY CUY-322-14.47

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CONDITIONS AND MODIFICATIONS:

- A) THE TESTING TEMPERATURE SHALL BE 4°C.
- B) THE RATE OF TRAVEL SHALL BE 50 MM/MINUTE.
- C) THE STANDARD V-SHAPED SIDES FOR THE SPECIMEN MOLD ARE REPLACED BY STRAIGHT-SIDED INSERTS OF THE SAME LENGTH, SUCH THAT THE SPECIMEN WILL CONTAIN A SECTION OF 10 MM * 10 MM * 30MM.D . A CLIBRATED FORCE ADAPTER IS PLACED ON ONE END OF THE SPECIMEN MOLD, SO THE TENSILE FORCE CAN BE DETERMINED AT ANY POINT DURING THE ELONGATION.

(4) TEST ON RESIDUE FROM ROLLING THIN FILM OVEN TEST.

(5) THE SBS POLYMER MODIFIED ASPHALT CEMENT IS TESTED IN ACCORDANCE WITH ASTM D-113. THE DUCTILOMETER AND SPECIMEN SHOULD BE CONDITIONED AT 25°C. THEN PLACE THE CONDITIONED SPECIMEN IN THE DUCTILOMETER AND PROCEED TO ELONGATE THE SPECIMEN TO 100 MM AT A RATE OF PULL OF 50 MM/MINUTE. AFTER REACHING THE 100 MM ELONGATION, STOP THE DUCTILOMETER AND HOLD THE SAMPLE IN THE ELONGATED POSITION FOR 5 MINUTES. THEN CLIP THE SAMPLE APPROXIMATELY IN HALF WITH A SUITABLE CUTTING DEVICE. LET THE SAMPLE REMAIN IN THE DUCTILOMETER IN AN UNDISTURBED CONDITION FOR 1 HOUR. THEN RETRACT THE HALF SAMPLE UNTIL THE 2 CUT ENDS TOUCH AND MEASURE THE ELONGATION IN MILLIMETERS (E). THE ELASTIC RECOVERY, IN PERCENT, IS EQUAL TO ((100 - E)/100) * 100.

WHEN THE CONTRACTOR SUBMITS THE PROPOSED JMF TO THE LABORATORY, THE JMF SUBMITTAL SHALL INCLUDE THE MANUFACTURER'S CERTIFIED TEST DATA THAT THE SBS POLYMER MODIFIED ASPHALT CEMENT MEETS THE ABOVE SPECIFICATION REQUIREMENTS IN ACCORDANCE WITH 101.061.

THE SBS POLYMER MODIFIED ASPHALT CEMENT SHALL BE SHIPPED AT 177°C (350°F) AND STORED AT 160° TO 165°C (320° TO 325°F).

NO PAVING OF THE SURFACE COURSE AFTER OCTOBER 31 SHALL BE ALLOWED.

NO RECLAIMED PAVEMENT WILL BE PERMITTED.

ALL AGGREGATE SHALL CONFORM TO 703.05 EXCEPT FINE AGGREGATE GRADATION IS WAIVED FOR 441 MIXES PER 441.02. THE COARSE AGGREGATE WILL BE LIMITED TO AIR COOLED BLAST FURNACE SLAG. NEITHER OPEN HEARTH NOR BASIC OXYGEN SLAG (STEEL SLAG) WILL BE PERMITTED FOR COARSE OR FINE AGGREGATE USAGE.

A MINIMUM OF 50 PERCENT OF VIRGIN FINE AGGREGATE SHALL BE SAND MANUFACTURED FROM STONE, GRAVEL OR AIR-COOLED SLAG. IF THE SAND IS MANUFACTURED FROM GRAVEL, IT SHALL BE CRUSHED FROM GRAVEL MATERIAL RETAINED ON THE 3/8 INCH SIEVE.

TYPE I GRADATION AND SPECIFICATION SHALL APPLY. (TYPE 1H GRADATION AND SPECIFICATION SHALL NOT APPLY.)

FOR DESIGN AND QUALITY CONTROL, THE MARSHALL SPECIMENS SHALL BE COMPACTED AT 149°C (300°F).

THE REQUIREMENTS OF 441 AND 446 SHALL APPLY, DEVIATIONS FROM THESE ARE FOLLOWS:

1. A MINIMUM OF ONE SET OF THREE (3) MARSHALL SPECIMENS SHALL BE MADE AN ANALYZED EVERY FOUR (4) HOURS OF PRODUCTION. THE RUNNING AVERAGE OF THREE (3) CONSECUTIVE AIR VOID DETERMINATIONS SHALL BE MAINTAINED WITHIN 3.0 TO 5.0 PERCENT AIR VOIDS. NO SINGLE AIR VOID DETERMINATION SHALL BE LESS THAN 3.0 PERCENT OR GREATER THAN 5.0 PERCENT. IN THE EVENT THE SINGLE AIR VOID FALL LESS THAN 3.0 PERCENT OR OVER 5.0 PERCENT, THE CONTRACTOR SHALL CEASE OPERATIONS. PRODUCTION MAY RESUME WHEN APPROVED BY THE MONITORING TEAM AFTER CORRECTIVE ACTION IS TAKEN. THE RANGE FOR THREE (3) TESTS (MOVING AVERAGE) SHALL BE RECORDED (BITUMEN CONTENT, - INCH SIEVE, NO. 4 SIEVE, AND NO. 8 SIEVE) UNDER THE APPROPRIATE RUNNING AVERAGE POINT ON THE CHART. IN THE EVENT THE MOVING AVERAGE CHARTS ENTER THE WARNING BAND LIMITS, THE MONITORING TEAM SHALL BE NOTIFIED (SEE TABLE C OF SECTION 441.10 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.)

2. TWO CONSECUTIVE TEST RESULTS VARYING BY GREATER THAN 1.5% FOR AIR VOIDS SHALL BE CONSIDERED OUT OF SPECIFICATION AND THE CONTRACTOR SHALL CEASE OPERATION. PRODUCTION MAY RESUME WHEN APPROVED BY THE MONITORING TEAM AFTER CORRECTIVE ACTION IS TAKEN.

3. DURING PRODUCTION, SHOULD MIX SPECIFICATION DEFICIENCIES CONTINUE, THE DISTRICT ENGINEER OF TESTS MAY RECOMMEND TO THE LABORATORY THAT WORK STOP AND THE MIX BE REDESIGNED. THIS DESIGN CHANGE WILL INCLUDE ANY MATERIAL CHANGE NECESSARY, IN THE OPINION OF THE LABORATORY, TO ACHIEVE SATISFACTORY PRODUCTION AND PLACEMENT PROPERTIES. A NEW DESIGN SHALL BE SUBMITTED FOR APPROVAL. NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR THIS MIX DESIGN CHANGE.

THE PROPOSED JMF SHALL BE A DESIGN WHICH HAS BEEN PROPERLY MODIFIED TO INCORPORATE THE SBS POLYMER MODIFIED ASPHALT CEMENT.

THE ASPHALT CONCRETE WITH SBS POLYMER SHALL BE A MINIMUM OF 149 C (300 F) WHEN DELIVERED TO THE PAVER. ANY MIX AT THE PLANT OR PROJECT OVER 171°C (340°F) SHALL BE REJECTED.

ACCEPTANCE SHALL BE IN ACCORDANCE WITH 446, EXCEPT AS NOTED.

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GENERAL NOTES

GEAUGA COUNTY
CUY-322-14.47

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PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE FOR EACH LOT CORED AT THE CONTRACT PRICE OR AT THE CONTRACT PRICE AS MODIFIED IN THE FOLLOWING TABLE:

MEAN OF 10 CORES*	PAY FACTOR
97.0% OR GREATER	**
96.0% TO 96.9%	0.88
95.0% TO 95.9%	0.98
91.0% TO 94.9%	1.00
90.0% TO 90.9%	0.94
89.0% TO 89.9%	0.88
LESS THAN 89.0%	**

- * MEAN OF 10 CORES AS PERCENT OF AVERAGE MSG FOR PRODUCTION DAY
- ** THE DIRECTOR WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR SUCH MATERIAL ALLOWED TO REMAIN IN PLACE WILL BE 0.65 .

ITEM	UNIT	DESCRIPTION
SPECIAL	CU.YD.	ASPHALT CONCRETE WITH SBS POLYMER, SURFACE COURSE, TYPE 1

ADJUSTING CASTINGS TO GRADE

ALL CASTINGS, EXCEPT THOSE OWNED BY PRIVATE COMPANIES, SHALL BE ADJUSTED BY THE CONTRACTOR. THE TIME BETWEEN ADJUSTMENT OF CASTINGS AND RESURFACING SHALL NOT EXCEED TEN DAYS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THIS WORK:

- ITEM 604-CATCH BASIN ADJUSTED TO GRADE 14 EACH
- ITEM 604-MONUMENT BOX ADJUSTED TO GRADE 4 EACH

ITEM 604-CATCH BASINS RECONSTRUCTED TO GRADE

THE PROJECT ENGINEER SHALL FIELD CHECK ALL EXISTING CATCH BASINS WITHIN THE PROJECT LIMITS. ANY CATCH BASIN FOUND THAT EXHIBITS SUBSTANTIAL DETERIORATION AND REQUIRES MORE THAN WHAT IS SPECIFIED UNDER CASTINGS ADJUSTED TO GRADE, SHALL BE RECONSTRUCTED TO GRADE AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PROVIDE FOR THIS CONTINGENCY.

- ITEM 604-CATCH BASIN RECONSTRUCTED TO GRADE 2 EACH

ITEM SPECIAL-MISCELLANEOUS METAL

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTING AT THE EXPENSE OF THE CONTRACTOR.

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, THROUGH NO FAULT OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTON. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

- ITEM SPECIAL-MISCELLANEOUS METAL 3500 LBS

ITEM 606-GUARDRAIL, TYPE 5

THE LOCATIONS OF GUARDRAIL RUNS ARE SUBJECT TO ADJUSTMENTS TO ASSURE THAT THE PLANNED INSTALLATION WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC. THE INTENT IS TO UPGRADE AND REPLACE GUARDRAIL, GENERALLY AT EXISTING LOCATIONS. LOG POINTS OF THE PROPOSED END TREATMENTS ARE APPROXIMATE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE AND READY FOR INSTALLATION. INSTALLATION OF THE NEW RAIL SHALL BEGIN IMMEDIATELY AFTER THE REMOVAL OPERATION HAS TAKEN PLACE. THE MAXIMUM GAP LENGTH IN ANY RAIL RUN SHALL BE 50 FEET. NO GAPS WILL BE LEFT OPEN AT THE END OF THE WORK PERIOD. BARRELS MAY NOT BE SUBSTITUTED FOR GUARDRAIL. FAILURE TO COMPLY WITH THESE REQUIREMENTS SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED COMPLIANCE.

GENERAL NOTES

GAUGA COUNTY
 CUY-322-14.47

ITEM SPECIAL-RESHAPING BERM

BERMS WHERE NEW GUARDRAIL IS TO BE ERECTED SHALL BE RESHAPED AS DIRECTED BY THE ENGINEER TO INSURE A SMOOTH SURFACE FREE OF ALL IRREGULARITIES. EXCESS EXCAVATION RESULTING FROM RESHAPING BERMS SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER. ANY ADDITIONAL EMBANKMENT MATERIAL REQUIRED SHALL BE PROVIDED AS PER 203.07. PAYMENT FOR RESHAPING BERMS AS DESCRIBED SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER LINEAL FOOT FOR ITEM SPECIAL, RESHAPING BERM. SEE SHEET 13 FOR QUANTITIES.

ITEM 606-ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN ET-2000, OPTION "B" GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 216-545-4373).

THE LENGTH OF THE ET-2000 SYSTEM IS CONSIDERED TO BE 50', INCLUSIVE OF TWO 25' LONG RAIL ELEMENTS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 606, EACH, ANCHOR ASSEMBLY, TYPE E AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. SEE PAGE 13 FOR QUANTITIES.

ITEM 614-MAINTAINING TRAFFIC

THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN TRAFFIC AT ALL TIMES. ALL MAINTENANCE OF TRAFFIC SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PLAN DETAILS, STD. DRAWINGS, THE OHIO MAUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND TO THE SATISFACTION OF THE ENGINEER. NO NIGHTTIME WORK OF TRAFFIC MAINTENANCE ACTIVITIES WILL BE PERMITTED.

WITH THE EXCEPTION OF ITEMS PAID FOR SEPARATELY, ALL WORK REQUIRED FOR TRAFFIC MAINTENANCE AS DESCRIBED HEREIN AND IN THE PLAN DETAILS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.

ITEM 614-WORK ZONE MARKING SIGNS

A QUANTITY OF 22 WORK ZONE MARKING SIGNS (11 - 'NO EDGE LINES' OW-167 AND 11 - 'UNMARKED NO PASSING ZONES' OW-168) ARE CARRIED TO THE GENERAL SUMMARY. THE CONTRACTOR SHALL ERECT THE WORK ZONE MARKING SIGNS AND PROVIDE TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH STD. DRAWING MT-99.10, AND AS DIRECTED BY THE ENGINEER.

ITEM 621-RAISED PAVEMENT MARKER

RAISED PAVEMENT MARKERS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ITEM 621, AND STANDARD DRAWINGS TC-65.10 AND TC-65.12. SEE PAGE 18 FOR QUANTITIES.

ITEM 622-CONCRETE BARRIER, AS PER PLAN

IN CONJUNCTION WITH BRIDGE TERMINAL ASSEMBLY, TYPE 1, THIS ITEM IS TO BE USED ADJACENT TO THE BRIDGE PARAPETS ON STRUCTURE 1515. REFER TO PLAN SHEET 14A FOR DETAILS.

ITEM 622-PORTABLE CONCRETE BARRIER, 32"

A QUANTITY OF 80 LINEAR FEET OF ITEM 622-PORTABLE CONCRETE BARRIER, 32" HAS BEEN PROVIDED AND IS TO BE USED AS PROTECTION DURING CONSTRUCTION OF ITEM 622-CONCRETE BARRIER, AS PER PLAN.

ITEM 644-STOP LINES

THIS ITEM IS TO BE USED AS DIRECTED BY THE ENGINEER AT INTERSECTIONS.

ITEM 642-CENTER LINES, TYPE 2

THE CONTRACTOR SHALL LAY OUT ALL CENTER LINES USING THE MOST RECENT COPY OF THE CENTER LINE LOG. COPIES OF THE CENTER LINE LOG MAY BE OBTAINED FROM THE DISTRICT 12 ROADWAY SERVICES TRAFFIC DEPARTMENT.

CENTER LINE QUANTITIES AT THE TIME OF CONSTRUCTION MAY VARY FROM PLAN QUANTITIES DUE TO REVISIONS AND UPDATES OF THE CENTER LINE LOG.

GENERAL NOTES

GAUGA COUNTY
CUY-322-14.47

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PLOT SUBMITTED: 20-SEP-1996 10:13

PLAN NO.

FLK
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ITEM 625-TRENCH

IF REPLACEMENT LOOP DETECTORS ARE REQUIRED, THE INTENT OF THIS PLAN IS TO UTILIZE EXISTING CONDUIT RUNS FROM THE PAVEMENT TO THE CLOSEST PULL BOX. IF THE EXISTING CONDUIT RUNS CANNOT BE USED, THE CONTRACTOR SHALL INSTALL A NEW CONDUIT RUN FROM THE PAVEMENT TO THE CLOSEST PULL BOX IN ACCORDANCE WITH T.C. 82.10. NO COMPENSATION FOR THE WORK WILL BE DUE TO THE CONTRACTOR UNLESS THE LENGTH OF CONDUIT EXCEEDS 15 FEET. THE CONTRACTOR SHALL THEN BE COMPENSATED FOR CONDUIT AND TRENCH FOR THE QUANTITIES EXCEEDING 15 FEET.

EXTREME CARE MUST EXERCISED WHEN TRYING TO REUSE A CONDUIT RUN WHERE TWO LOOP DETECTORS ENTER A CONDUIT. SHOULD THE CONTRACTOR CAUSE ANY DAMAGE TO THE EXISTING GOOD LOOPS HE SHALL REPLACE THE LOOPS AT HIS OWN COST. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

- ITEM 625-TRENCH 50 LIN FT
- ITEM 625-CONDUIT, 1", 713.04 50 LIN FT

ITEM SPECIAL-PLASTIC CAUTION TAPE

THE LOCATION OF CONDUIT IN TRENCH SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THAT TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL APPROXIMATELY 6" WIDE COMPOSED OF POLYETHYLENE PLASTIC AND SHALL BE HIGHLY RESISTANT TO ALKALIS, ACIDS OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TYPE SHALL BE RED WITH THE WORDS "ELECTRIC LINE BURIED BELOW" PRINTED IN BLACK LETTERS ON ONE SIDE ONLY. IT SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED FOR THE FULL LENGTH OF THE TAPE. THE CONTRACTOR SHALL BURY THE TAPE IN TRENCH WITH ONE STRIP APPROXIMATELY DOWN THE CENTER LINE AND 8" TO 12" BELOW THE FINAL GRADE. IT SHALL BE PLACED IN THE TRENCH WITH THE PRINTED SIDE UP AND SHALL ESSENTIALLY BE PARALLEL TO THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE ANY NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILLING. THE TAPE SHALL BE "TERRA TAPE", "ALLEN SYSTEM'S" OR AN EQUAL, AS APPROVED BY THE ENGINEER IN ADVANCE. THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

- ITEM SPECIAL-PLASTIC CAUTION TAPE 50 LIN FT

ITEM 632-LOOP DETECTOR PAVEMENT CUTTING
ITEM 632-LOOP DETECTOR WIRE, TYPE E

QUANTITIES ON PAGES 19 AND 20 HAVE BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER IF THE EXISTING LOOP DETECTOR BECOMES DAMAGED IN ANY WAY DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR'S RECYCLING OR GRINDING OPERATIONS MAY DAMAGE EXISTING PAVEMENT LOOP DETECTORS, LOCATIONS OF WHICH ARE NOTED IN THE PLANS. PRIOR TO DAMAGING ANY OF THE PAVEMENT LOOPS, THE CONTRACTOR SHALL PROVIDE A TWO WORKING DAY NOTICE TO THE DISTRICT 12 ROADWAY SERVICES TRAFFIC ENGINEER AT (216) 581-2333, EXTENSION 297, SO THAT ADJUSTMENTS TO THE EXISTING TRAFFIC SIGNAL OPERATION CAN BE SCHEDULED.

THE DISTRICT 12 ROADWAY SERVICES TRAFFIC OFFICE WILL ASSIST THE CONTRACTOR IN THE LAYOUT OF THE REPLACEMENT LOOP DETECTOR(S) THAT MAY BE REQUIRED. IF ANY OF THE EXISTING PAVEMENT LOOPS ARE DAMAGED THE CONTRACTOR IS TO PROVIDE AT LEAST A TWO-WORKING DAY NOTICE SO THAT THE REVIEW AND LAYOUT OF THE REPLACEMENT LOOP DETECTORS CAN BE SCHEDULED.

ITEM 632-LOOP DETECTOR TIE-IN

THIS WORK SHALL CONSIST OF MAKING CONNECTIONS TO EXISTING LOOP DETECTOR LEAD-IN WIRE EITHER UNDERGROUND OR AERIAL. INCLUDED IN THIS ITEM IS THE CONNECTOR KIT OR CABLE SPLICE KIT (CONFORMING TO 713.15) THAT MUST BE USED IN MAKING THESE CONNECTIONS. THIS ITEM IS ONLY NEEDED WHEN A TIE-IN SITUATION EXISTS. PAYMENT FOR THIS ITEM WILL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED TO PROVIDE FOR THE LOOP DETECTOR TIE-IN OPERATION. SEE PAGES 19 AND 20 FOR QUANTITIES.

ROADSIDE

THE FOLLOWING QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER WHERE ROADSIDE VEGETATION HAS BEEN DAMAGED OR DESTROYED.

- ITEM 653-TOPSOIL FURNISHED AND PLACED..... 200 CU YD
- ITEM 659-SEEDING AND MULCHING..... 3600 SQ YD
- ITEM 659-COMMERCIAL FERTILIZER..... 0.35 TON

THIS ITEM SHALL BE USED TO REPAIR "NORMAL" DAMAGE TO THE ROADSIDE. "EXCESSIVE" DAMAGE BY THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

GENERAL NOTES

GEAUGA COUNTY
CUY-322-14.47

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PLOT SUBMITTED: 20-SEP-1996 10:13

PLAN NO.

DESIGN
FLK
CHECKED
JL

ITEM 202-PORTIONS OF STRUCTURES REMOVED

THIS ITEM SHALL CONSIST OF THE REMOVAL OF OBVIOUSLY LOOSE CONCRETE ON THE BRIDGE COMPONENTS TO BE SEALED. REMOVAL SHALL BE PERFORMED WITH A PNEUMATIC HAMMER NO LARGER THAN THE 10 POUND CLASS OR HAND-HELD HAMMERS. THIS WORK WILL BE PAID FOR AS A LUMP SUM ITEM.

ITEM SPECIAL-SEALING CONCRETE SURFACES (EPOXY/URETHANE)

THIS ITEM SHALL BE AS PER THE PROPOSAL NOTE. THE URETHANE TOP COAT SHALL BE GRAY IN COLOR AND SHALL BE APPLIED TO THE FOLLOWING AREAS:

1. PARAPET, DECK EDGE, AND DECK BOTTOM EXTENDING TO THE LIMITS AS SHOWN IN THE PLANS.
2. ABUTMENTS INCLUDING WINGWALLS EXTENDING DOWN TO THE GROUND LINE OR WATER LINE.
3. PIERS INCLUDING CAPS.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM

THE ENGINEER SHALL IDENTIFY ALL NON-STANDARD MAILBOX SUPPORTS. A STANDARD SUPPORT IS DESCRIBED AS FOLLOWS:

1. MAXIMUM 4"x4" SQUARE OR 4.5" DIAMETER TIMBER.
2. MAXIMUM 2" DIAMETER STANDARD STRENGTH STEEL PIPE.
3. ANY MATERIAL WITH BREAKAWAY CROSS SECTION CHARACTERISTICS EQUIVALENT TO 1. AND 2. ABOVE.

IF POSSIBLE, AS DIRECTED BY THE ENGINEER, NON-STANDARD MAILBOX SUPPORTS SHOULD BE MODIFIED TO MEET STANDARD BREAKAWAY CROSS SECTIONS. IF THE ENGINEER DETERMINES MAILBOX SUPPORT MODIFICATION IS NOT SUITABLE, THEN THE CONTRACTOR SHALL REPLACE AND RESET ALL NON-STANDARD MAILBOX SUPPORTS WITH PRESSURE TREATED 4"x4" NOMINAL TIMBER POSTS, MEETING AASHTO-M-133-86 AWTA-P8.A. HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL. POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03 AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE. SUPPORT HARDWARE SHALL ACCOMODATE NO MORE THAN A DOUBLE MAILBOX INSTALLATION ON A SINGLE POST. IN THE ABSCENCE OF A NEW MAILBOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING MAILBOX AND MOUNT IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXTENDED IN SUCH AN OPERATION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY MAILBOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL POSTMASTER TO DETERMINE THE PROPER HEIGHT, DEPTH OF EMBEDMENT AND LOCATION OF SUPPORTS.

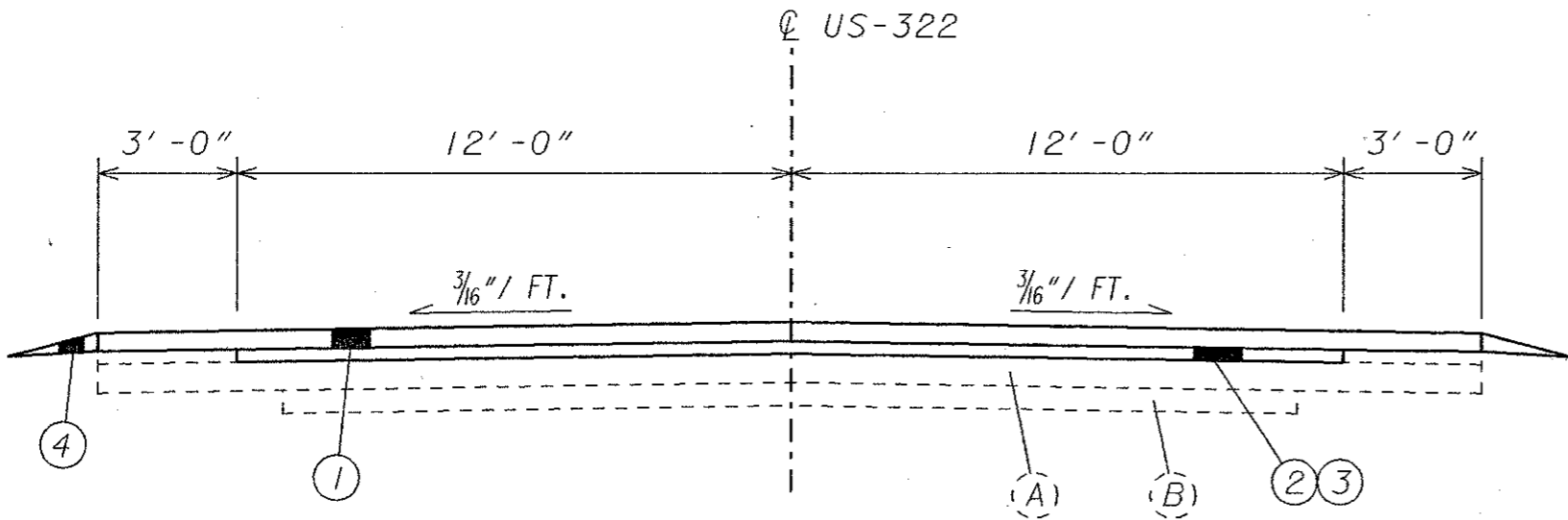
ALL MATERIAL, EQUIPMENT, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE MODIFICATION OF EXISTING MAILBOX SUPPORTS OR TO COMPLETE THE REMOVAL OF THE EXISTING MAILBOX SUPPORTS, RESETTNG NEW POSTS AND MOUNTING THE MAILBOXES ON THE POSTS SHALL BE INCLUDED IN THE UNIT PRICE BID ITEM SPECIAL-MAILBOX SUPPORT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY SHEET TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL-MAILBOX SUPPORTS 6 EACH

GENERAL NOTES

GEAUGA COUNTY
CUY-322-14.47



TYPICAL SECTION

S.L.M. 14.47 TO S.L.M. 20.34

- EXISTING**
- (A) EXISTING ASPHALT CONCRETE
 - (B) EXISTING SUB-BASE
- PROPOSED**
- (1) ITEM SPECIAL-ASPHALT CONCRETE W/ SBS POLYMER, SURFACE COURSE, TYPE I
 - (2) ITEM SPECIAL-ASPHALT REJUVENATING AGENT
 - (3) ITEM SPECIAL-ASPHALT CONCRETE PAVEMENT SURFACE HEATER RECYCLING
 - (4) ITEM 617-COMPACTED AGGREGATE, TYPE A, (TYP.)

PAVEMENT DATA

PART	COUNTY	ROUTE	TRUE LINE MILEAGE		PAVEMENT WIDTH (FT.)	LENGTH		PAVEMENT AREA SQ. YD.	SPECIAL	SPECIAL	407	SPECIAL		202
			FROM	TO		ASPHALT CONCRETE SURFACE HEATER RECYCLING	ASPHALT REJUVENATING AGENT		TACK COAT @ 0.10 GAL./S.Y.	ASPHALT CONCRETE W/ SBS POLYMER, SURFACE COURSE, TYPE I		WEARING COURSE REMOVED		
						SQ. YD.	GALLON		GALLON	THICK. INCHES	CU. YD.	SQ. YD.		
1	GEAUGA	US-322	14.47	20.34	24	5.87	30994	82650	8265			1 1/4	2870	200
QUANTITY FOR INTERSECTIONS					VAR.			1147			115	1 1/4	40	1147
TOTAL									82650	8265	115		2910	1347

PAVEMENT DATA

GEAUGA COUNTY
GEA-322-14.47

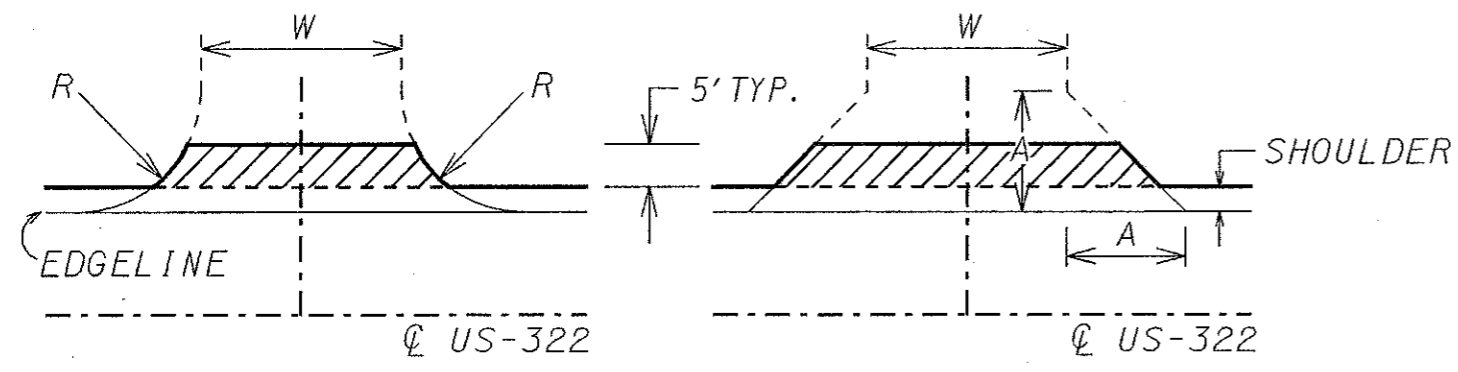
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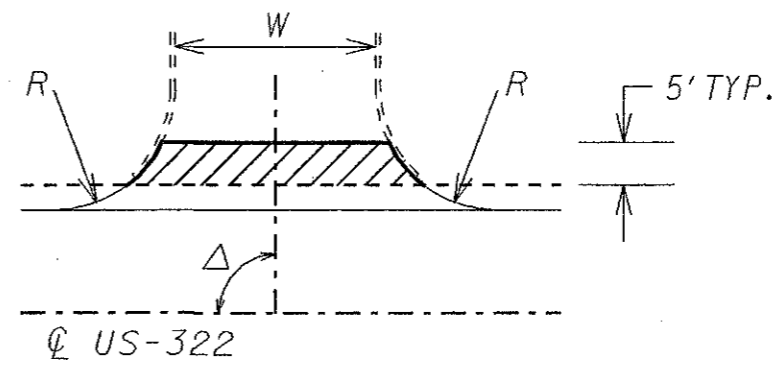
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W = 35 FT. MAXIMUM
 R = 25 FT. MINIMUM
 A = 25 FT. MAXIMUM
 Δ = 70° TO 90° (TWO WAY OPERATION)

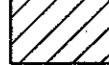
PLAN NO.



UNCURBED DRIVEWAY



CURBED DRIVEWAY

 - FEATHER JOINT, WITH ITEM 404-ASPHALT CONCRETE, AC-20, (DRIVEWAYS)

NOTE: SEE STD. DWG. BP 4.1 FOR DRIVEWAYS AND MAILBOX APPROACHES.

SHOULDER DATA

PART	COUNTY	ROUTE	TRUE LINE MILEAGE		LENGTH		WIDTH (FT.)	SHOULDER AREA	404	407	411	SPECIAL		617		
			FROM	TO	MILE	LIN. FT.			ASPHALT CONCRETE (DRIVEWAYS)	TACK COAT @ 0.10 GAL./S.Y.	STABILIZED CRUSHED AGGREGATE	ASPHALT CONCRETE W/ SBS POLYMER, SURFACE COURSE, TYPE I		COMPACTED AGGREGATE TYPE A		
									CU. YD.	GALLON	CU. YD.	THICK. INCHES	CU. YD.	CU. YD.		
1	GEAUGA	US-322	14.47	20.34	5.87	30994	3	20663		2067		1 1/4	718	205		
QUANTITY FOR DRIVEWAYS AND MAIL BOX TURNOUTS								VAR.	117	596	47	1 1/4	90			
TOTAL									23245	117	2663	47	808	205		

SHOULDER DATA

GEAUGA COUNTY
 GEA-322-14.47

GUARDRAIL DATA

PART	COUNTY	ROUTE	STARTING LOG POINT	SIDE	ITEM 202		ITEM 606-GUARDRAIL				ANCHOR ASSEMBLY			BRIDGE TERMINAL ASSEMBLY		RESHAPING BERM	ITEM 622	FLARED END SECTION
					GUARDRAIL REMOVED	GUARD RAIL, TYPE 5	CURVED RAIL ELEMENTS		TYPE A (GR-4.1)	TYPE T (GR-4.2)	TYPE E	TYPE 1 (GR-3.1)	TYPE 4 (GR-3.4)	CONCRETE BARRIER, AS PER PLAN				
							LENGTH	RADIUS							LIN. FT.		LIN. FT.	
1	GEAUGA	US-322	15.07	R	393.75	331.25					1	1	393.75	14				
			15.11	L	118.75	106.25				1		1	118.75	14				
			15.16	R	756.25	693.75					1	1	756.25	14				
			15.16	L	700	637.5					1	1	700	14				
			15.41	R	137.5	37.5					2		137.5					
			15.41	L	125	25					2		125					
			16.62	R	87.5						2		100					
			16.62	L	87.5						2		100					
			17.03	L	100						2		100					
			17.03	R	100						2		100					
			17.95	R	275	175					2		275					
			17.95	L	237.5	137.5					2		237.5					
			18.80	L	93.75	18.75	25	16	1	1	1		93.75					
			18.83	L	306.25	231.25	25	16	1	1	1		306.25					
			18.86	R	237.5	137.5					2		237.5					
			19.27	R	612.5	562.5					1	1	612.5					
			19.38	L	131.25	56.25	25	16		1	1		131.25		1			
			19.40	L	137.5	112.5	25	16		1		1	137.5		1			
			19.42	R	168.75	118.75					1	1	168.75					
			19.42	L	350	300					1	1	350					
			19.54	L	100						2		100					
TOTAL					5256.25	3681.25		100		2	5	29	4	4	5281.25	56	2	

GUARDRAIL DATA

GEAUGA COUNTY
GEA-322-14.47

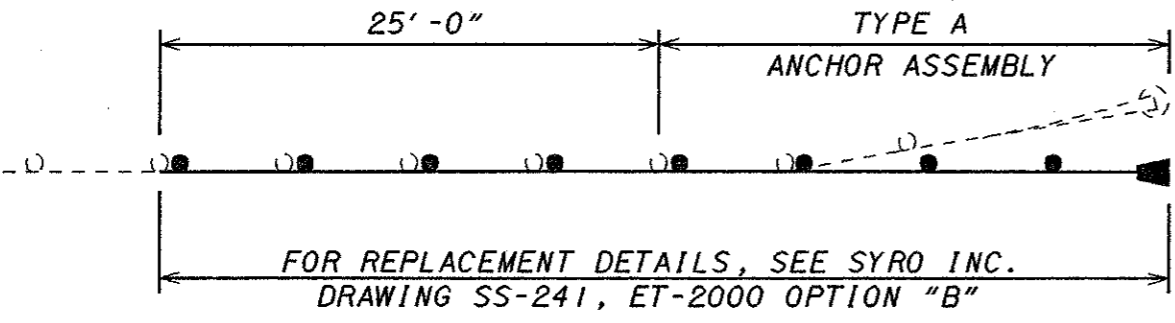
SEE SHEETS 14-14A FOR DETAILS

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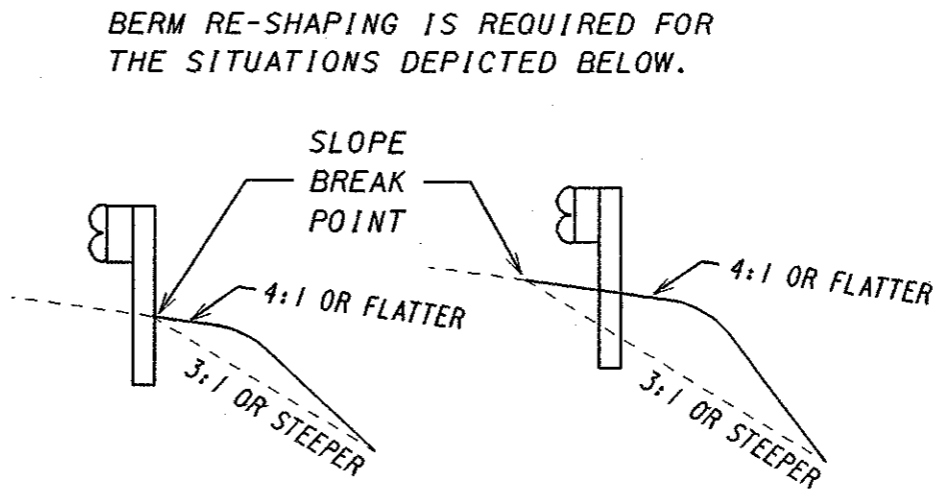
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PLAN NO.

DRAWN
 FLK
 CHECKED
 JL



TYPICAL TYPE A ANCHOR ASSEMBLY REMOVAL
 WITH TYPE E ANCHOR ASSEMBLY REPLACEMENT



BERM RE-SHAPING IS REQUIRED FOR THE SITUATIONS DEPICTED BELOW.

ANY INSTALLATION WHERE FORESLOPES ARE 3:1 OR STEEPER AND THE SLOPE BREAK POINT IS AT, OR IN FRONT OF, THE BACK OF THE POSTS.

GUARDRAIL DATA

GEAUGA COUNTY
 GEA-322-14.47

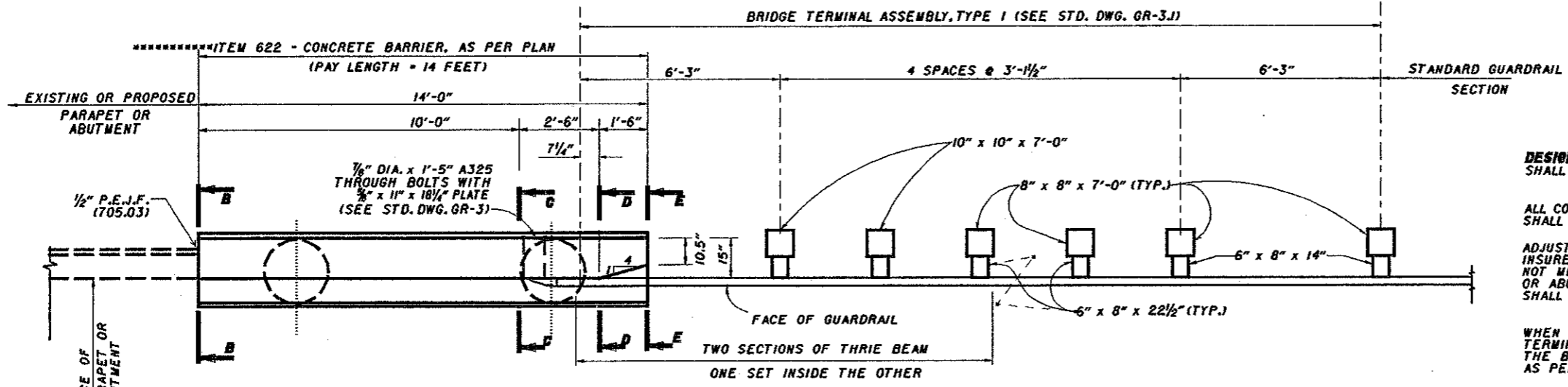


NO SCALE

DESIGNED LDH
CHECKED ENF

32"/32" GUARDRAIL/BARRIER TRANSITION
VERTICAL FACE WITHOUT CURB

GEAUGA COUNTY
GEA-322-14.47



PLAN

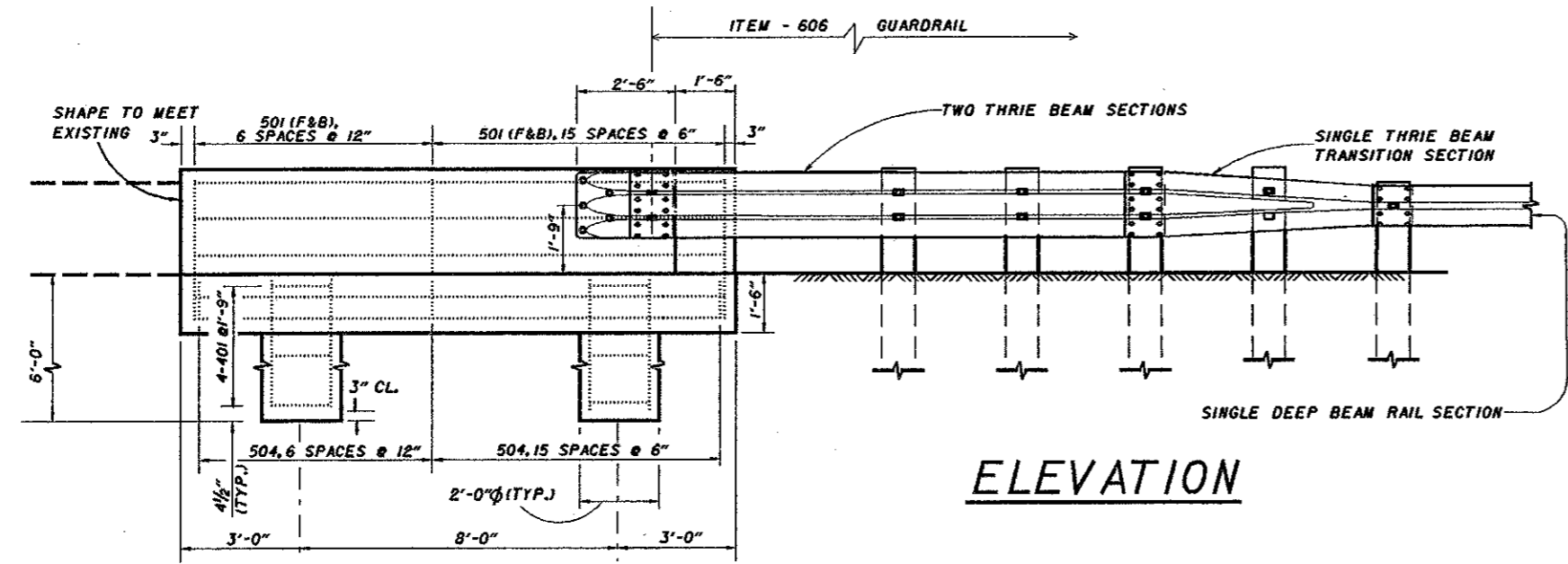
GENERAL NOTES

DESIGN DATA CONCRETE SHALL BE CLASS C. REINFORCING STEEL SHALL BE GRADE 60

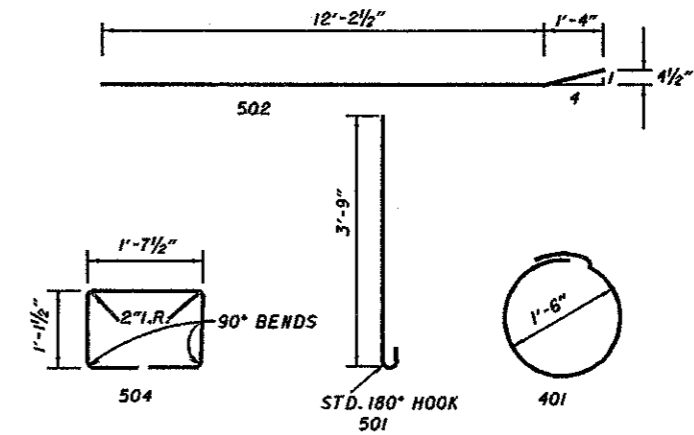
ALL COSTS FOR EXCAVATION AND EMBANKMENT SHALL BE PAID FOR SEPARATELY UNDER LINEAR GRADING.

ADJUST NORMAL GUARDRAIL OFFSET TO INSURE THAT FACE OF BARRIERS ALIGN. IF NOT MEETING EXISTING OR PROPOSED PARAPET, OR ABUTMENT THE NORMAL GUARDRAIL OFFSET SHALL BE USED.

WHEN THE PLANS INDICATE A TYPE J BRIDGE TERMINAL ASSEMBLY AT THE TRAILING END OF THE BARRIER WALL INSTALL A CONCRETE INSERT AS PER GR-1.



ELEVATION

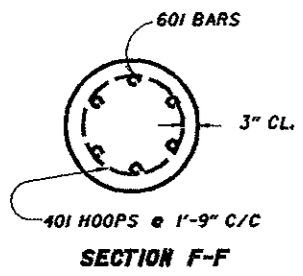


BENDING DIAGRAMS

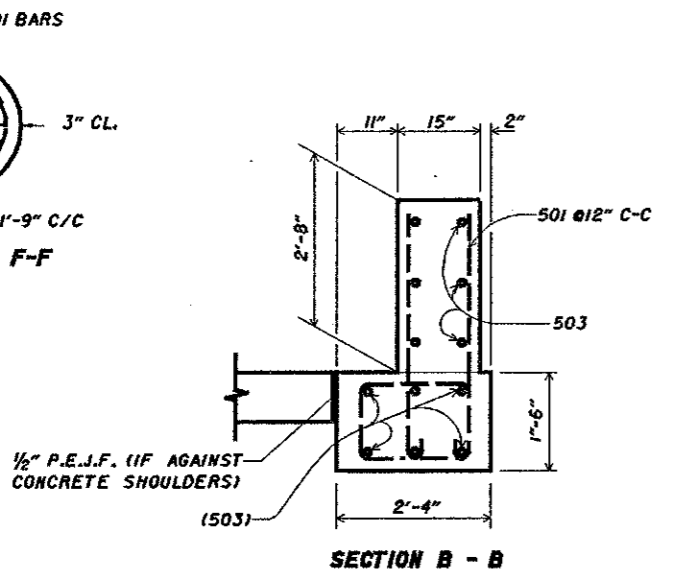
REINFORCING BAR LIST

MARK	NO.	LENGTH	TYPE
401	8	6'-0"	BT.
501	44	4'-4"	BT.
502	5	13'-7"	BT.
503	7	13'-7"	STR.
504	22	5'-0 1/2"	BT.
601	12	5'-6"	STR.

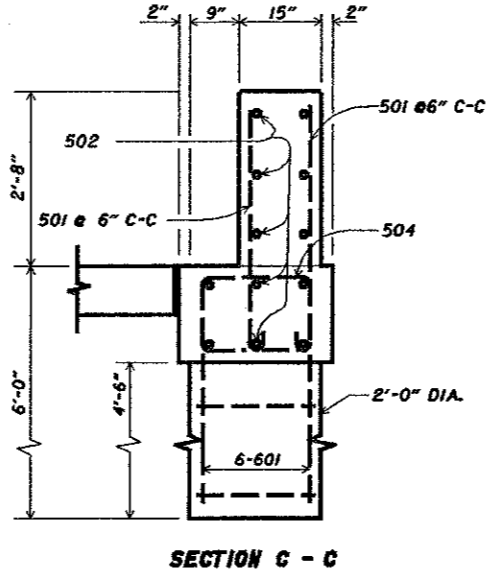
ALL REINFORCING BARS SHALL BE EPOXY COATED



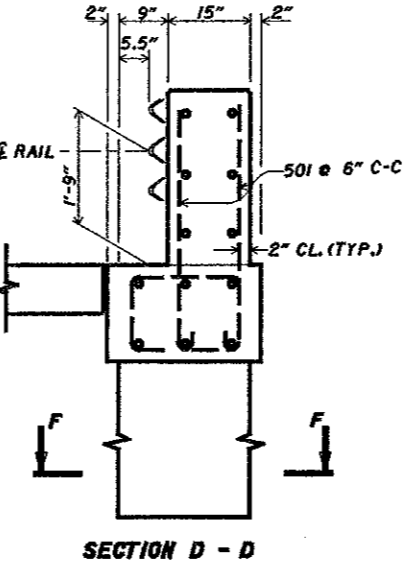
SECTION F-F



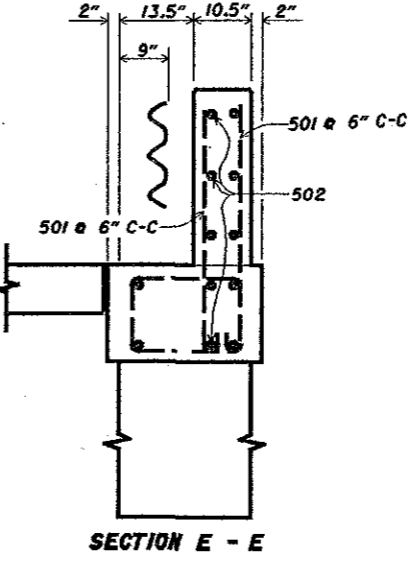
SECTION B - B



SECTION C - C



SECTION D - D



SECTION E - E

MARCH 26, 1990
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 12 LOCATION & DESIGN

32"/32" GUARDRAIL/BARRIER
TRANSITION,
VERTICAL FACE
WITHOUT CURB

DESIGNED	TRACED	CHECKED	REVIEWED	REVISED
LDH	JAG	ENF		
DATE	DATE	DATE	DATE	SHEET

PLOT SUBMITTED: 18-SEP-1996 10:26

BRAILLE.DGN

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PLOTTED FROM: j:\tr\konopka\res\fc\p14410\brail

CENTER LINE SUB-SUMMARY (1 OF 2)

PART	COUNTY	ROUTE	LINE MILEAGE		ITEM 642-CENTER LINE (MILES)			REMARKS
			FROM	TO	TOTAL	DASHED	SOLID	
1	GEAUGA	US-322	14.43	14.49	0.06	0.00	0.12	BEGIN PART 1, DOUBLE YELLOW
			14.49	14.65	0.16	0.16	0.16	
			14.65	14.80	0.15	0.00	0.30	DOUBLE YELLOW
			14.80	14.97	0.17	0.17	0.17	
			14.97	15.18	0.21	0.21	0.00	
			15.18	15.33	0.15	0.15	0.15	
			15.33	15.37	0.04	0.04	0.00	
			15.37	15.49	0.12	0.12	0.12	
			15.49	15.50	0.01	0.01	0.00	
			15.50	15.65	0.15	0.15	0.15	
			15.65	15.67	0.02	0.00	0.04	DOUBLE YELLOW
			15.67	15.87	0.20	0.20	0.20	
			15.87	15.94	0.07	0.07	0.00	
			15.94	16.09	0.15	0.15	0.15	
			16.09	16.11	0.02	0.02	0.00	
			16.11	16.24	0.13	0.13	0.13	
			16.24	16.33	0.09	0.09	0.00	
			16.33	16.50	0.17	0.17	0.17	
			16.50	16.73	0.23	0.00	0.46	DOUBLE YELLOW
			16.73	16.81	0.08	0.08	0.08	
			16.81	16.96	0.15	0.15	0.00	
			16.96	17.06	0.10	0.10	0.10	
			17.06	17.45	0.39	0.39	0.00	
			17.45	17.61	0.16	0.16	0.16	
			17.61	17.77	0.16	0.00	0.32	DOUBLE YELLOW
			17.77	17.93	0.16	0.16	0.16	
			17.93	18.76	0.83	0.83	0.00	
SUB-TOTAL					4.33	3.71	3.14	

PAVEMENT MARKING SUB-SUMMARY

GEAUGA COUNTY
GEA-322-14.47

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CENTER LINE SUB-SUMMARY (2 OF 2)

PART	COUNTY	ROUTE	TRUE LINE MILEAGE		ITEM 642-CENTER LINE (MILES)			REMARKS
			FROM	TO	TOTAL	DASHED	SOLID	
1	GEAUGA	US-322	18.76	18.80	0.04	0.04	0.04	
			18.80	18.81	0.01	0.01	0.00	
			18.81	18.87	0.06	0.06	0.06	
			18.87	19.00	0.13	0.13	0.00	
			19.00	19.15	0.15	0.15	0.15	
			19.15	19.20	0.05	0.00	0.10	DOUBLE YELLOW
			19.20	19.38	0.18	0.18	0.18	
			19.38	19.49	0.11	0.11	0.00	
			19.49	19.64	0.15	0.15	0.15	
			19.64	19.65	0.01	0.01	0.00	
			19.65	19.80	0.15	0.15	0.15	
			19.80	20.30	0.50	0.50	0.00	
SUB-TOTAL					1.54	1.49	0.83	
TOTAL					5.87	5.20	3.97	

PAVEMENT MARKING SUB-SUMMARY

GEAUGA COUNTY
GEA-322-14.47

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EDGE LINE SUB-SUMMARY

PART	COUNTY	ROUTE	TRUE LINE MILEAGE		ITEM 642-WHITE EDGE LINE, TYPE 2			REMARKS
			FROM	TO	TOTAL MILES	HIGHWAY MILES		
1	GEAUGA	US-322	14.47	20.34	11.74	5.87		FROM SR-608 TO ASHTABULA COUNTY LINE
TOTAL					11.74	5.87		

AUXILIARY MARKING SUB-SUMMARY

PART	COUNTY	ROUTE	TRUE LINE MILEAGE		ITEM 644-THERMOPLASTIC MATERIAL					REMARKS	
			FROM	TO	24" STOP LINES LIN. FT.	CROSSWALK LINES LIN. FT.	96" WORD ON PAVEMENT "SCHOOL" EACH	LANE ARROW EACH			CHANNELIZING LINES LIN. FT.
								TURN	COMBINATION		
	GEAUGA	US-322	14.47	20.34		680	2				
	GEAUGA	US-322	* VARIOUS		240						
TOTAL					240	680	2				

* TO BE USED "AS DIRECTED BY THE ENGINEER" WHERE DESIGNATED IN THE PLANS OR WHERE BUTT JOINTS AT INTERSECTING ROADS DAMAGE STOP BARS

PAVEMENT MARKING SUB-SUMMARY

GEAUGA COUNTY
GEA-322-14.47

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PLAN NO.

DRAWN
FLK
CHECKED
JL

RAISED PAVEMENT MARKER SUB-SUMMARY

PART	ROUTE	S.L.M./ LOCATION		202	ITEM 621 - RAISED PAVEMENT MARKERS					
				RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN	ONE WAY REFLECTORS		TWO WAY REFLECTORS			
					EACH	WHITE	YELLOW	W/R	Y/R	W/W
FROM	TO									
1	US-322	SR-608		36	16					11
		14.62	17.66	196						196
		SR-528		84	32					22
		17.98	20.34	160						160
1	SR-608	US-322		4	2					2
1	SR-528	US-322		4	2					2
TOTAL				484	52					393

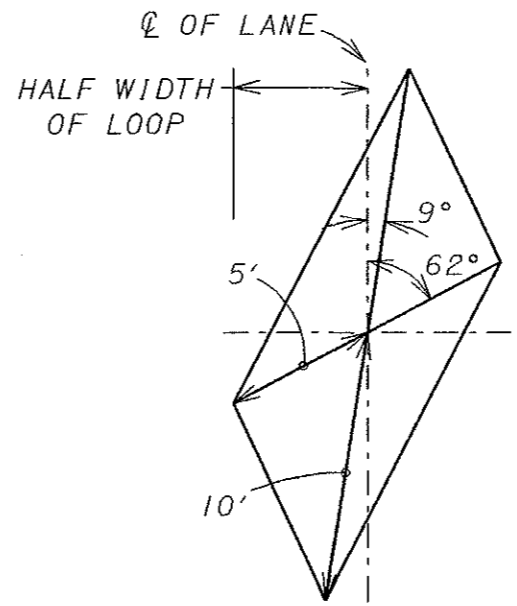
RAISED PAVEMENT MARKER SUB-SUMMARY

GEAUGA COUNTY
GEA-322-14.47

U.S. 322 & S.R. 608

PLAN NO.

CALCULATED
JL
CHECKED
FLK

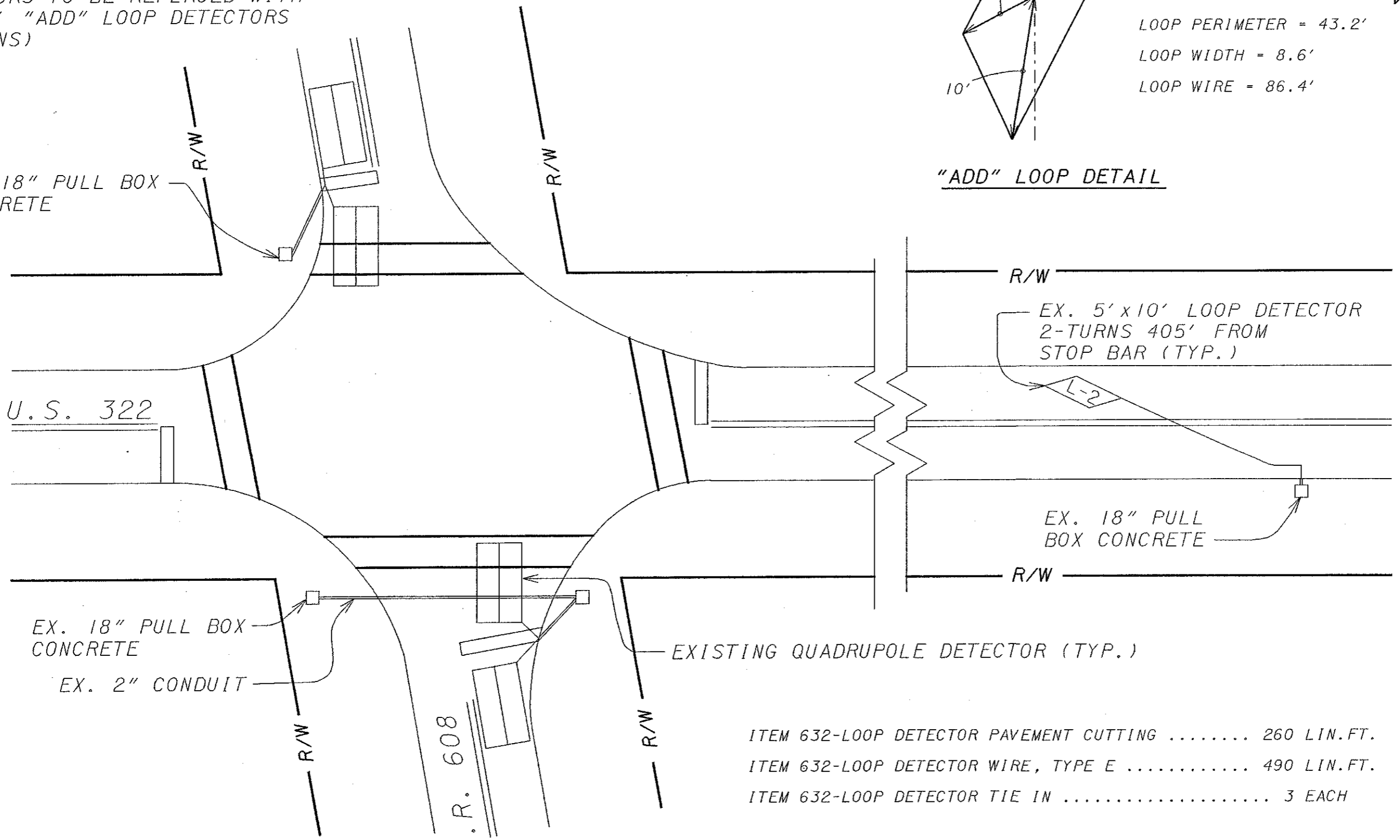


LOOP PERIMETER = 43.2'
 LOOP WIDTH = 8.6'
 LOOP WIRE = 86.4'

"ADD" LOOP DETAIL

IF DAMAGED, EXISTING QUADRUPOLE DETECTORS TO BE REPLACED WITH 5' X 10' "ADD" LOOP DETECTORS (2 TURNS)

EX. 18" PULL BOX CONCRETE



U.S. 322

S.R. 608

EXISTING QUADRUPOLE DETECTOR (TYP.)

EX. 18" PULL BOX CONCRETE

EX. 5' x 10' LOOP DETECTOR 2-TURNS 405' FROM STOP BAR (TYP.)

EX. 18" PULL BOX CONCRETE

EX. 2" CONDUIT

- ITEM 632-LOOP DETECTOR PAVEMENT CUTTING 260 LIN.FT.
- ITEM 632-LOOP DETECTOR WIRE, TYPE E 490 LIN.FT.
- ITEM 632-LOOP DETECTOR TIE IN 3 EACH

NOT TO SCALE

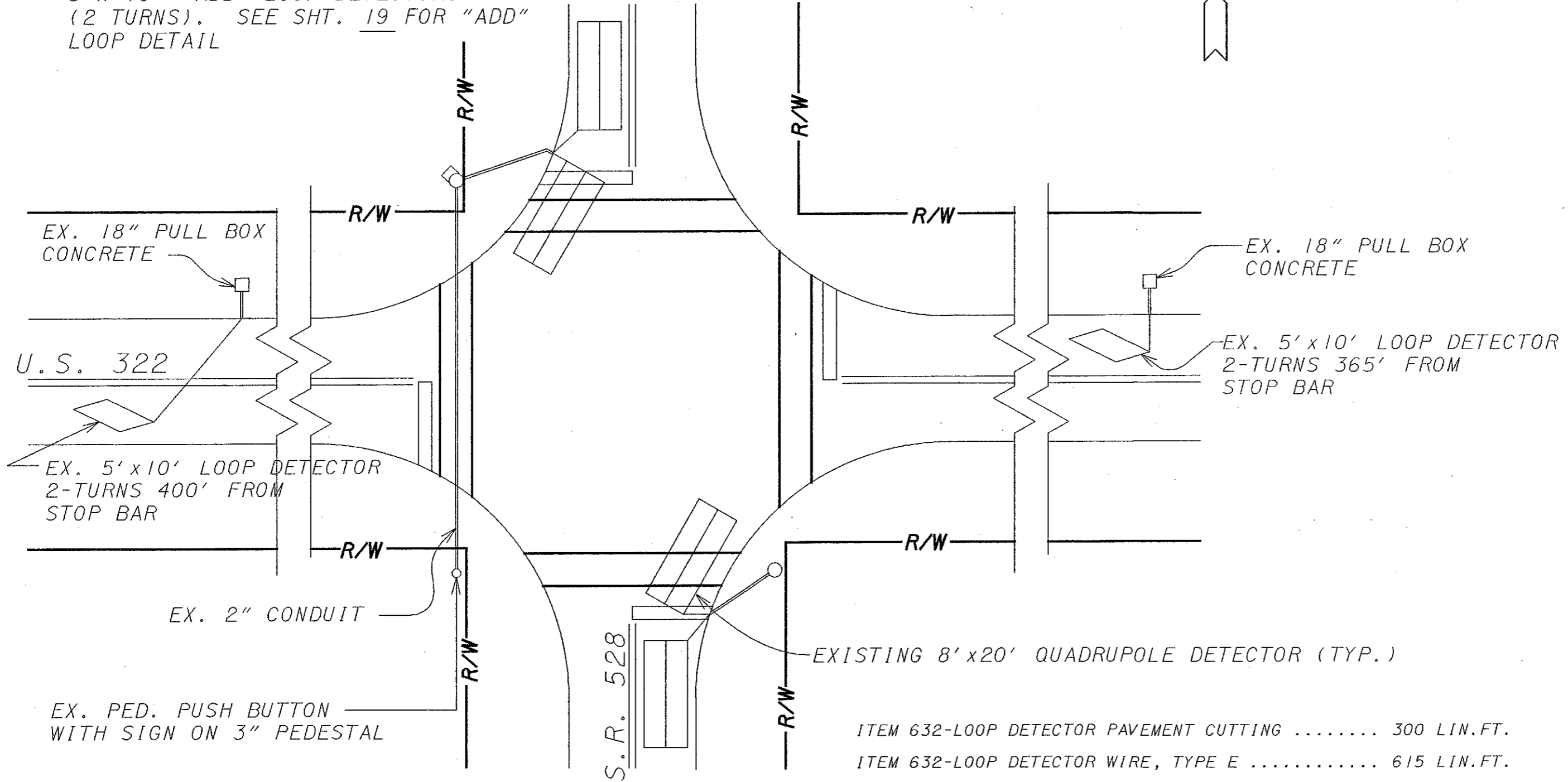
LOOP DETECTOR DETAILS

GEAUGA COUNTY
GEA-322-14.47

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U.S. 322 & S.R. 528

IF DAMAGED, EXISTING QUADRUPOLE DETECTORS TO BE REPLACED WITH 5' X 10' "ADD" LOOP DETECTORS (2 TURNS). SEE SHT. 19 FOR "ADD" LOOP DETAIL



ITEM 632-LOOP DETECTOR PAVEMENT CUTTING	300 LIN.FT.
ITEM 632-LOOP DETECTOR WIRE, TYPE E	615 LIN.FT.
ITEM 632-LOOP DETECTOR TIE IN	3 EACH

NOT TO SCALE

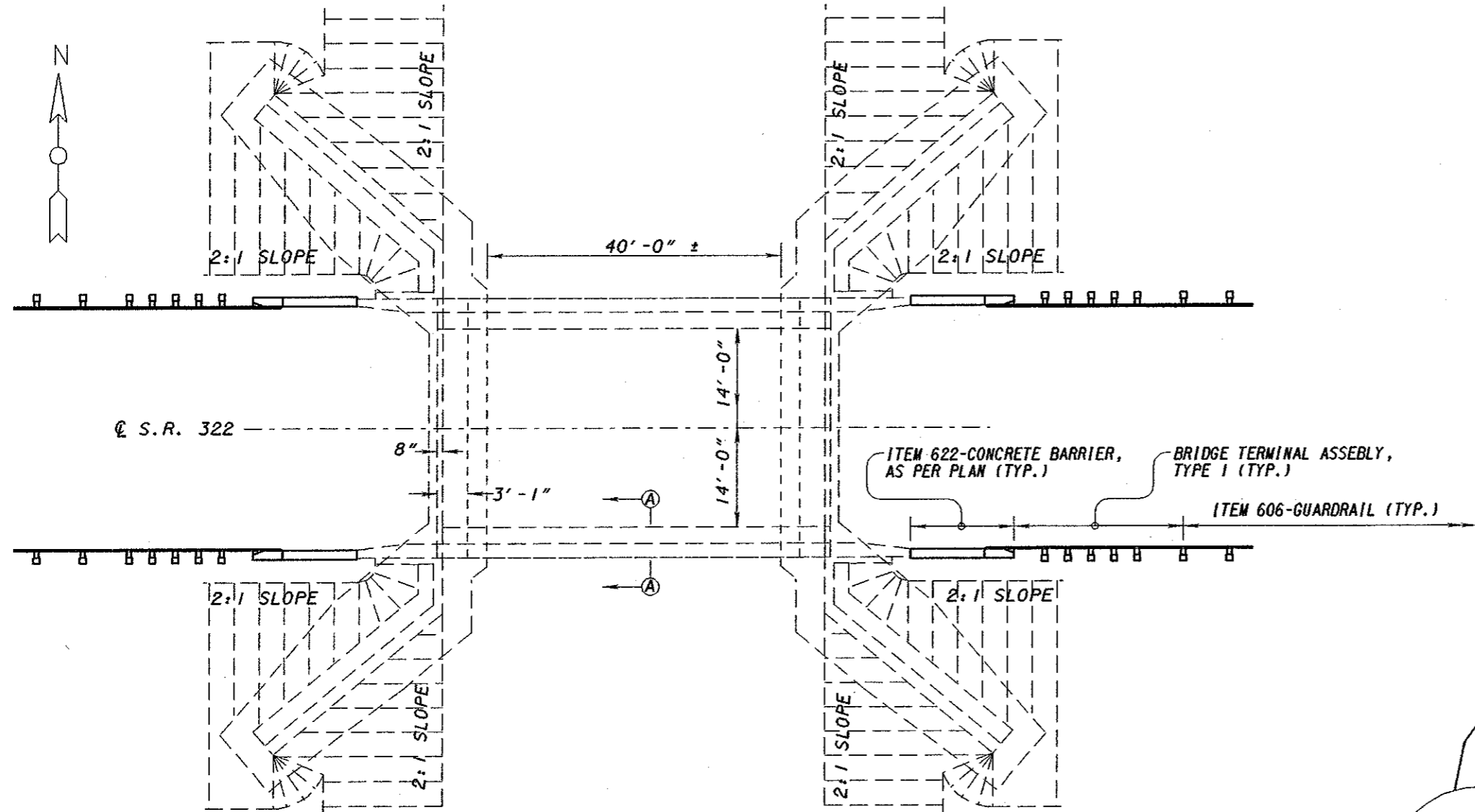
LOOP DETECTOR DETAILS

GEAUGA COUNTY
GEA-322-14.47

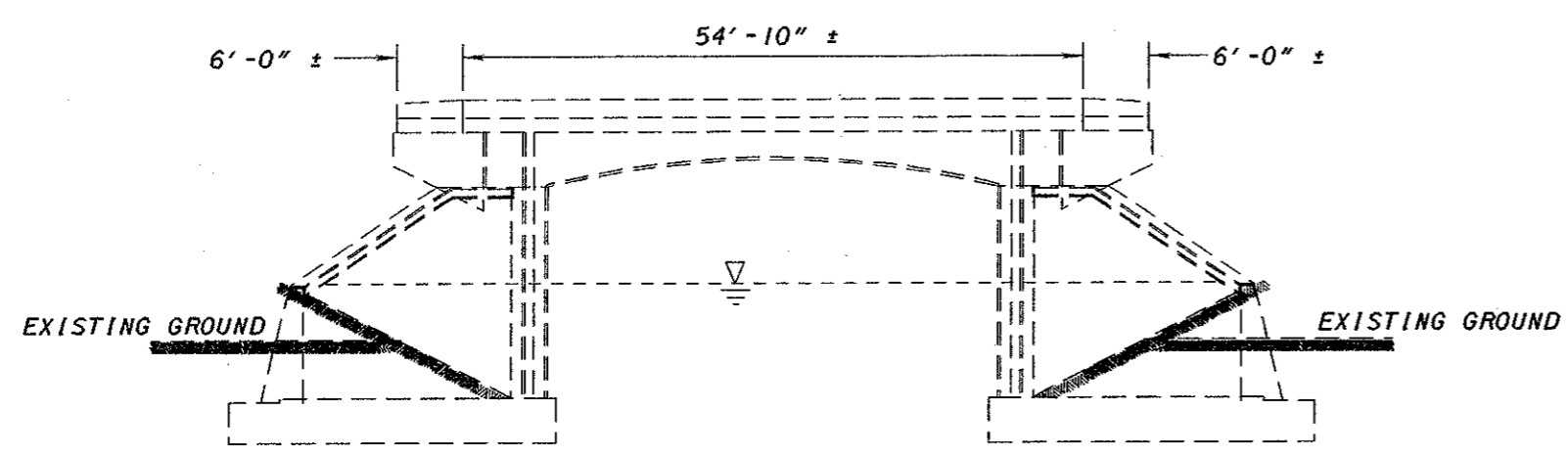
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GENERAL PLAN

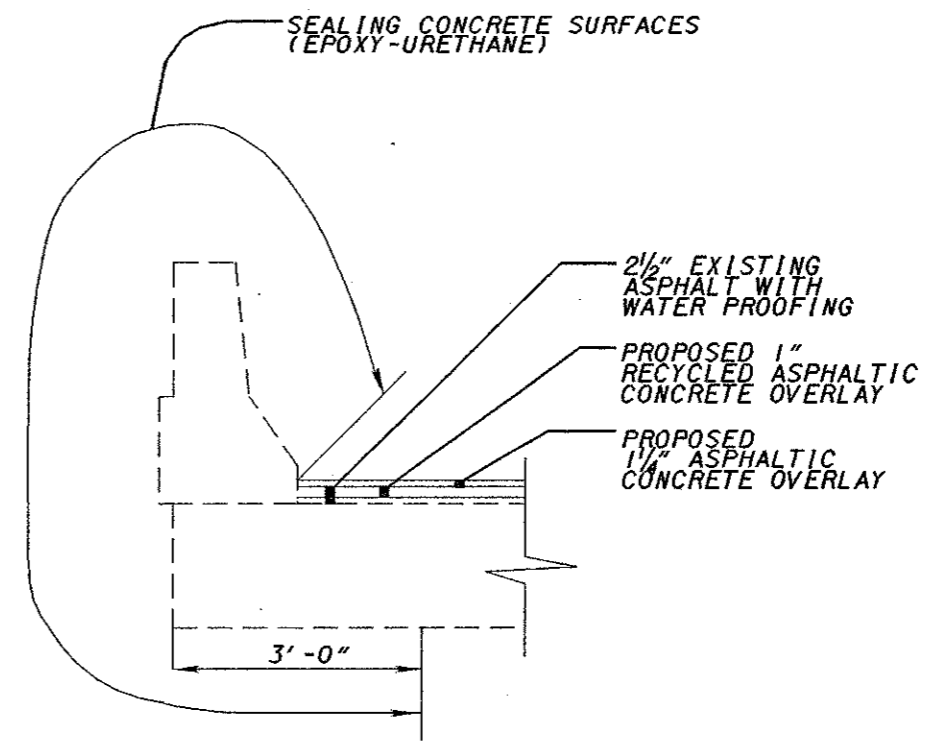


ELEVATION

PROPOSED WORK

- 1) TREAT BRIDGE DECK WEARING SURFACE AS PER THE ROADWAY.
- 2) REMOVE LOOSE CONCRETE AND SEAL CONCRETE BRIDGE COMPONENTS.

SEALING CONCRETE STRUCTURES	
COMPONENT	SQ. YDS.
PARAPETS	102
DECK EDGE	47
ABUTMENTS	49
WINGWALL	65
TOTAL	263



SECTION A-A

OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12 PRODUCTION DEPT.

DATE 9-9-96
 STRUCTURE FILE NUMBER 2801477
 REVIEWED DWL
 DRAWN FLK
 DESIGNED BGT
 CHECKED GLC

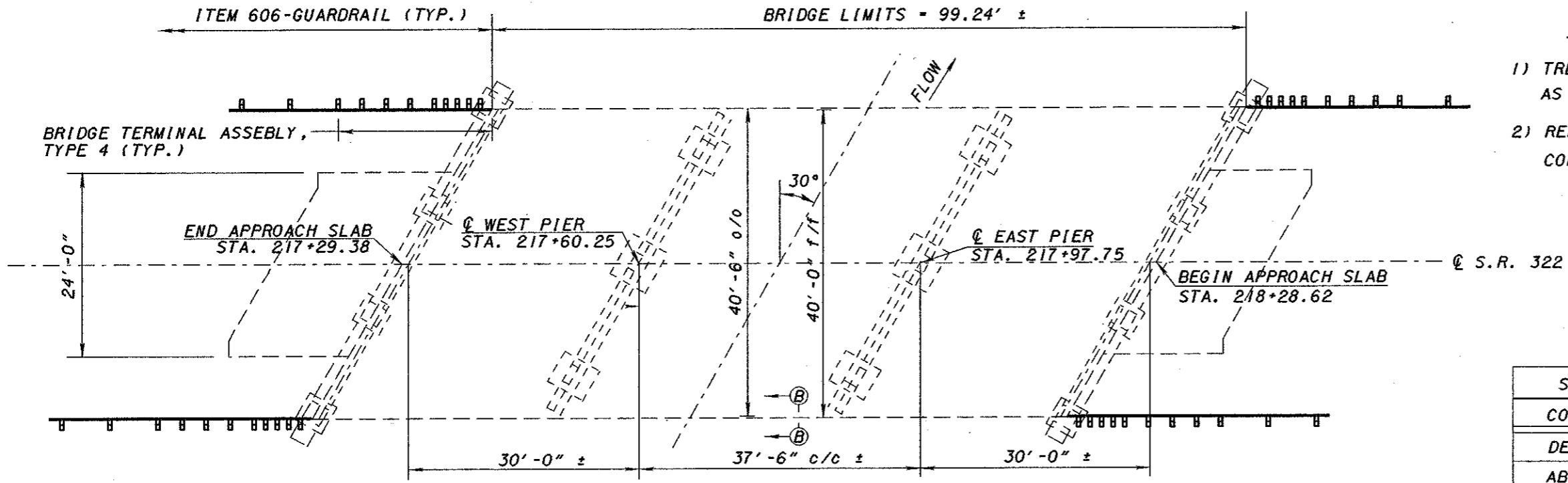
GENERAL PLAN AND ELEVATION
 BR. NO. GEA-322-1515
 OVER EAST BRANCH RESERVOIR

GEAUGA COUNTY
 GEA-322-14.47

PLOT SUBMITTED: 19-SEP-1996 07:42

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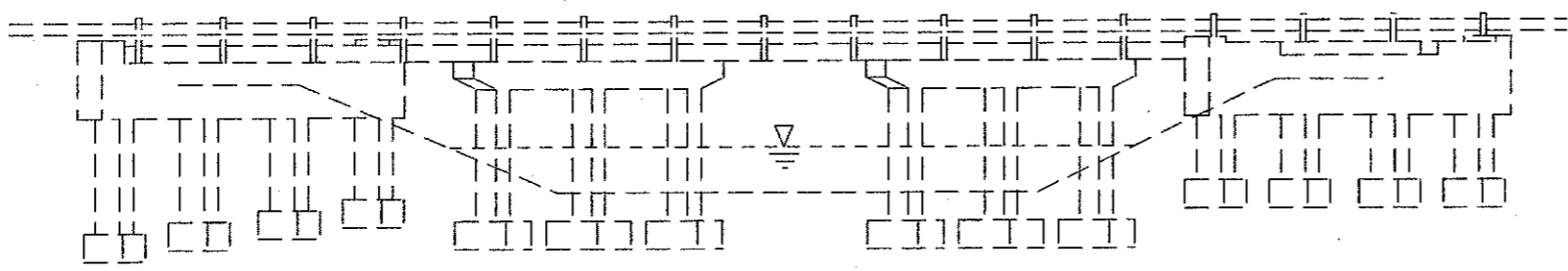


GENERAL PLAN

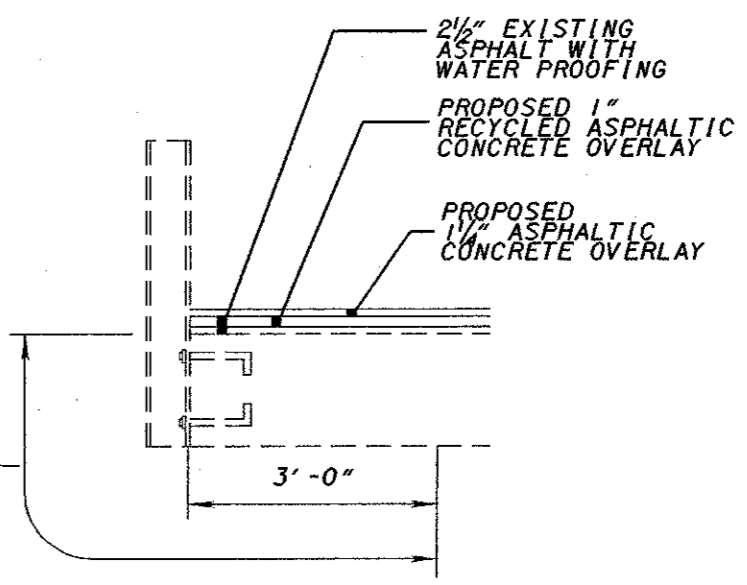
PROPOSED WORK

- 1) TREAT BRIDGE DECK WEARING SURFACE AS PER THE ROADWAY.
- 2) REMOVE LOOSE CONCRETE AND SEAL CONCRETE BRIDGE COMPONENTS.

SEALING CONCRETE STRUCTURES	
COMPONENT	SQ. YDS.
DECK EDGE	94
ABUTMENTS including wingwalls	36
PIERS	160
TOTAL	290



ELEVATION



SECTION B-B

OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12 PRODUCTION DEPT.

DATE 9-9-96
 REVIEWED DML
 DRAWN FLK
 CHECKED BGT
 GLC
 STRUCTURE FILE NUMBER 2801477

GENERAL PLAN AND ELEVATION
 BR. NO. GEA-322-1940
 OVER PHELPS CREEK

GEAUGA COUNTY
 GEA-322-14.47

CALCULATED
JL
CHECKED
FLK

PART I

ITEM	4	5	7	8	9	11	12	13	18	19	20	21	22	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
202						1347								202	23500	1347	SQ.YD.	WEARING COURSE REMOVED
202									484					202	54101	484	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN
202					LUMP									202	11200	LUMP	LUMP	PORTIONS OF STRUCTURES REMOVED
202								5256.25						202	38000	5256.25	LIN.FT.	GUARDRAIL REMOVED
203	260													203	20000	260	CU.YD.	EMBANKMENT
251	1152													251	01000	1152	SQ.YD.	PARTIAL DEPTH PAVEMENT REPAIR
253	2500													253	01000	2500	SQ.YD.	PAVEMENT REPAIR
404							117							404	25000	117	CU.YD.	ASPHALT CONCRETE, AC-20, (DRIVEWAYS)
404		12												404	35000	12	CU.YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
SPEC						82650								SPEC	40465000	82650	SQ.YD.	ASPHALT CONCRETE PAVEMENT SURFACE HEATER RECYCLING
SPEC						8265								SPEC	40466000	8265	GALLON	ASPHALT REJUVENATING AGENT
411							47							411	10000	47	CU.YD.	STABILIZED CRUSHED AGGREGATE
407						115	2663							407	10000	2778	GALLON	TACK COAT
SPEC						2910	808							SPEC	44819000	3718	CU.YD.	ASPHALT CONC. W/SBS POLYMER, SURF. COURSE, TYPE I
SPEC												290	263	SPEC	51267510	553	SQ.YD.	SEALING CONCRETE SURFACES (EPOXY-URETHANE)
604			14											604	09000	14	EACH	CATCH BASIN ADJUSTED TO GRADE
604			4											604	39500	4	EACH	MONUMENT BOX ADJUSTED TO GRADE
604			2											604	09500	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE
SPEC														SPEC	60450000	3500	POUNDS	MISCELLANEOUS METAL
606								2						606	20000	2	EACH	FLARED END SECTION
606								29						606	26100	29	EACH	ANCHOR ASSEMBLY, TYPE E
606								5						606	26500	5	EACH	ANCHOR ASSEMBLY, TYPE T
606								2						606	25000	2	EACH	ANCHOR ASSEMBLY, TYPE A
606								4						606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE I
606								4						606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4
606								3681.25						606	13000	3681.25	LIN.FT.	GUARDRAIL, TYPE 5
622								56						622	25001	56	LIN.FT.	CONCRETE BARRIER, AS PER PLAN
622				80										622	40020	80	LIN.FT.	PORTBLE CONCRETE BARRIER, 32"
SPEC								5281.25						SPEC	60650000	2000	LIN.FT.	RESHAPING BERM
617							205							617	10100	205	CU.YD.	COMPACTED AGGREGATE, TYPE A
621									445					621	00100	445	EACH	RAISED PAVEMENT MARKER
632										3	3			632	27200	6	EACH	LOOP DETECTOR TIE IN
632										260	300			632	27500	560	LIN.FT.	LOOP DETECTOR PAVEMENT CUTTING
632										490	615			632	64900	1105	LIN.FT.	LOOP DETECTOR WIRE, TYPE E
625						50								625	25100	50	LIN.FT.	CONDUIT, 1", 713.04
625						50								625	29000	50	LIN.FT.	TRENCH
SPEC						50								SPEC	62536000	50	LIN.FT.	PLASTIC CAUTION TAPE

GENERAL SUMMARY (SHEET 1 OF 2)

GEAUGA COUNTY
GEA-322-14.47

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PART 1

ITEM	8	9	10	16	17						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
642				5.87							642	00302	5.87	MILE	CENTER LINE, TYPE 2
642					11.74						642	00102	11.74	MILE	EDGE LINE, TYPE 2
644					240						644	00500	240	LIN.FT.	STOP LINE, 24"
644					680						644	00600	680	LIN.FT.	CROSSWALK LINE
644					2						644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"
644											644	30020	2	EACH	REMOVAL OF PAVEMENT MARKING, 'SCHOOL' MARKING
653		200									653	10000	200	CU.YD.	TOPSOIL FURNISHED AND PLACED
659		3600									659	10000	3600	SQ.YD.	SEEDING AND MULCHING
659		0.35									659	20000	0.35	TON	COMMERCIAL FERTILIZER
SPEC				6							SPEC	69050000	6	EACH	MAILBOX SUPPORT
614											614	11000	LUMP	LUMP	MAINTAINING TRAFFIC
614											614	21400	12	MILE	TEMPORARY CENTER LINE, CLASS II
614	22										614	12460	22	EACH	WORK ZONE MARKING SIGN
619											619	15000	LUMP	LUMP	FIELD OFFICE, TYPE A
624											624	10000	LUMP	LUMP	MOBILIZATION
SPEC											SPEC	61925000	LUMP	LUMP	COMPUTER EQUIPMENT FOR TYPE A FIELD OFFICE

GENERAL SUMMARY (SHEET 2 OF 2)

GEAUGA COUNTY
GEA-322-14.47

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