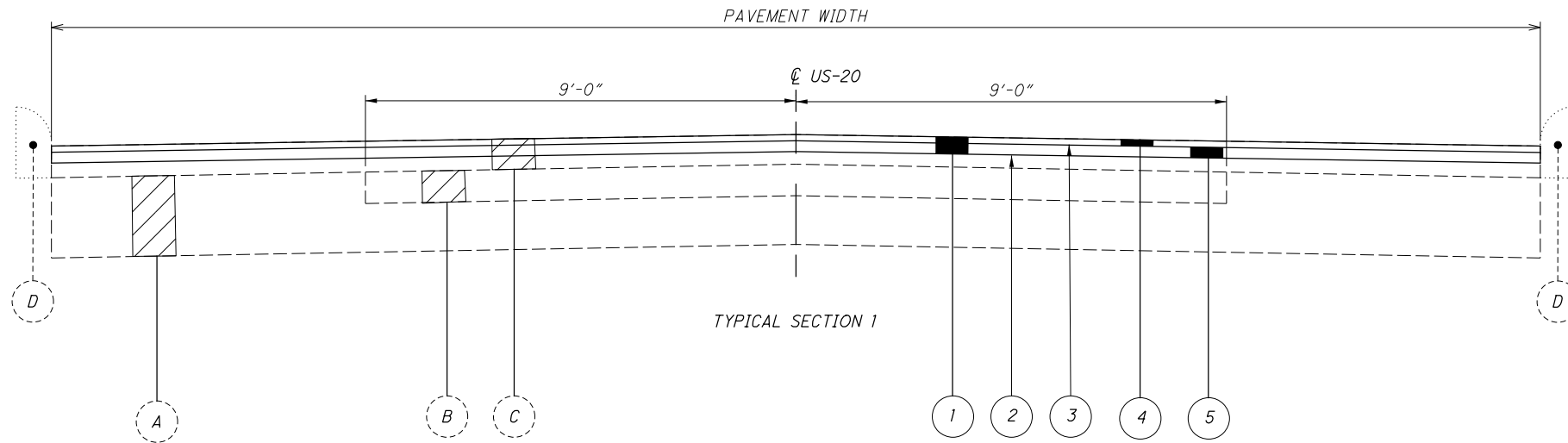


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TYPICAL SECTION 1

TYPICAL SECTION				
ROUTE	SLM		PAVEMENT WIDTH (FT)	LENGTH (MILES)
	FROM	TO		
20	21.86	23.02	41	1.16
20	23.82	24.21	41	0.39
20	24.21	24.85	36	0.64
20	24.85	24.89	38	0.04
20	24.89	24.97	47 (AVG.)	0.08
20	24.97	25.49	39	0.52
20	25.49	25.61	46	0.12
20	25.65	25.74	50	0.09
20	25.74	25.77	43	0.03
20	25.77	25.85	48	0.08
20	25.85	25.93	35	0.08

LEGEND

- 1 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")
- 2 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
- 3 407, NON-TRACKING TACK COAT @ 0.06 GAL/SY
- 4 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AS PER PLAN (PG70-22M) (448) (T=1 1/4")
- 5 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448) (T=1 3/4")

- A EXISTING CONCRETE BASE
- B EXISTING BRICK BASE
- C EXISTING ASPHALT CONCRETE SURFACE
- D EXISTING CURB

NOTE: ABANDONED STREET CAR STEEL RAILS IN PAVEMENT AT APPROX. SLM 24.28 TO SLM 25.75

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

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.

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

CEI The Illuminating Company
ATTN: John Zassick
6896 Miller Road
Brecksville, Ohio 44141
440-546-8706
216-538-1580 Cell
imzassick@firstenergycorp.com

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS:

ROUTE	S.L.M. TO	S.L.M.	LANE WIDTH
US-20	21.86	23.02	12'
US-20	23.82	25.93	12'

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. FOR ANY LOCATIONS THAT PAVEMENT MARKING DETAILS HAVE NOT BEEN MADE AVAILABLE TO THE CONTRACTOR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PUT BACK NEW PAVEMENT MARKINGS IN THE ORIGINAL LOCATIONS.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION (FOR PAVEMENT REPAIR) 84 CU YD

CATCH BASINS & MANHOLE

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

ALL NEW MANHOLE CASTINGS AND LIDS SHALL BE PROVIDED BY THE CITY OF CONNEAUT.

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, 3 EACH
ITEM 611 - CATCH BASIN ADJUSTED TO GRADE, 9 EACH
ITEM 611 - CATCH BASIN RECONSTRUCTED TO GRADE, 3 EACH

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 441 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 5 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

251, PARTIAL DEPTH PAVEMENT REPAIR (441), 2,000 SQ. YD.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AS PER PLAN (PG70-22M) (448)

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

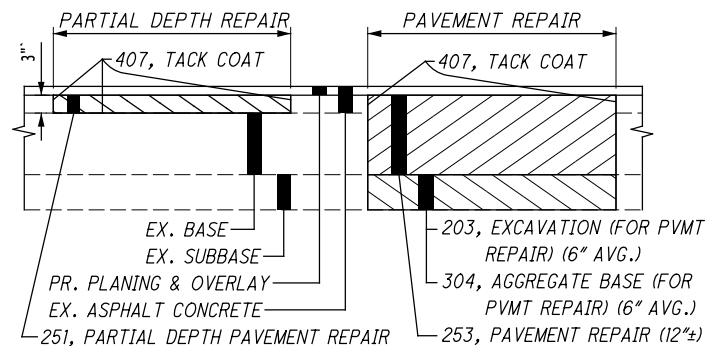
CURB RAMPS / DETECTABLE WARNINGS

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, INSTALLATION OF THE CURB RAMPS / DETECTABLE WARNINGS WILL BE PERFORMED PRIOR TO MAINLINE RESURFACING.

ITEM 253 - PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 5 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

253, PAVEMENT REPAIR, 500 SQ YD
255, FULL DEPTH PAVEMENT SAWING, 2,700 FT



ITEM 304 - AGGREGATE BASE (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE (FOR PAVEMENT REPAIR) 84 CU YD

SIDEWALK

THE ITEM LISTED BELOW SHALL BE USED AS DIRECTED BY THE ENGINEER.

ITEM 608, 4" CONCRETE WALK, 200 SF

DRIVEWAYS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE ASPHALT SURFACE COURSE AND THE EXISTING DRIVEWAYS. IF APPROVED BY THE ENGINEER, AN ASPHALT WEDGE WITH A MINIMUM WIDTH OF 2' MAY BE PLACED EITHER ON THE ROADWAY SHOULDER OR DRIVEWAY DEPENDENT UPON WHICH SIDE IS HIGH. A QUANTITY OF MAINLINE SURFACE COURSE ASPHALT HAS BEEN PROVIDED IN THE CALCULATIONS AND GENERAL SUMMARY TO PERFORM THIS ITEM OF WORK.

IN THE EVENT THAT THE ENGINEER DETERMINES ADDITIONAL WORK IS NECESSARY TO PROPERLY ADDRESS FIELD CONDITIONS, AN ITEM FOR WEARING COURSE REMOVED HAS BEEN PROVIDED. THE REMOVAL DEPTH IS DEPENDENT UPON THE ELEVATION DIFFERENCE AND ALLOW FOR 1"-2" OF COMPACTED ASPHALT MATERIAL TO BE PLACED.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN
ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN
ITEM 638 - VALVE BOX ADJUSTED TO GRADE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, 623.05 FOR MONUMENT BOXES, OR 638.18 FOR VALVE BOXES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE THE CASTING) AND REMOVE AND DISCARD THE EXISTING CASTING. INSTALL A NEW CASTING TO GRADE (ACCORDING TO TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN REPLACED.

CMS 499 CLASS QCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION AND FURNISHING OF A NEW CASTING, AND ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

ALL NEW MANHOLE CASTINGS AND LIDS SHALL BE PROVIDED BY THE CITY OF CONNEAUT. ALL WORK SHALL BE AS DIRECTED BY THE ENGINEER.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN, 28 EACH
ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN, 21 EACH
ITM 638 - VALVE BOX ADJUSTED TO GRADE, AS PER PLAN, 22 EACH

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GENERAL NOTES

ATB-20/531-21.86/22.11 PART 3

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. ON 2 AND 3 LANE SECTIONS: A MINIMUM OF ONE TEN FOOT BIDIRECTIONAL LANE SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

ON 4 LANE SECTIONS: A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE (1) MILE.

5. ONLY DURING OFF-PEAK PERIODS (i.e. ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

6. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

7. A QUANTITY OF 50 CU YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

8. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

9. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28; W8-11 [UNEVEN LANES] PER OMUCTD 6F.45; AND W6-3 [TWO-WAY TRAFFIC] PER OMUTCD 6F.32. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614-MAINTAINING TRAFFIC. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE PLANS PER CMS 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I - PLANED SURFACE - ATB-20:
614, WORK ZONE CENTER LINE, CLASS I, 6.18 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS I, 8", 808 FEET
614, WORK ZONE LANE LINE, CLASS I, 4", 3.04 MILE
614, WORK ZONE STOP LINE, CLASS I, 331 FEET
614, WORK ZONE MARKING SIGN (ALL PHASES), 30 EACH

PHASE II - INTERMEDIATE COURSE - ATB-20:
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 6.18 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT, 808 FT
614, WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT, 3.04 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT, 331 FEET

PHASE III - SURFACE COURSE - ATB-20:
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 6.18 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT, 808 FT
614, WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT, 3.04 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT, 331 FEET

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

TIME LIMITATION, TRAFFIC ON A MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE 5 CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$2,000 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMIT.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

IN GENERAL LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 100 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

PAVING PARAMETERS

THE CONTRACTOR SHALL NOT BEGIN RESURFACING OF US-20 UNTIL CALENDAR YEAR 2022 UNLESS WRITTEN PERMISSION IS RECEIVED FROM THE DISTRICT CONSTRUCTION ENGINEER.

DROPOFFS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE ASPHALT SURFACE COURSE AND SIDE STREET APPROACHES/DRIVEWAYS GREATER THAN 1.25 INCH. THE CONTRACTOR SHALL PLACE A 12:1 ASPHALT WEDGE FOR ALL RESULTING ELEVATION DIFFERENCES GREATER THAN 1.25 INCH PRIOR TO OPENING TO TRAFFIC. THE PAVING OF INTERSECTION APPROACHES AND DRIVEWAYS, PER THE NOTES ON SHEET 3/34, SHALL BE PERFORMED WITHIN 7 DAYS OF MAINLINE SURFACE COURSE BEING APPLIED AND A DROPOFF BEING CREATED BETWEEN THE NEW SURFACE COURSE AND THE MILLED/EXISTING SIDE ROAD OR DRIVEWAY SURFACE. THE CONTRACTOR MAY ELECT TO PLACE A 12:1 ASPHALT WEDGE IN LIEU OF COMPLETING THE PAVING, HOWEVER THE ASPHALT CONCRETE USED FOR THE WEDGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC AND SHALL INCLUDE THE REMOVAL OF THE WEDGE BEFORE THE INTERSECTION/DRIVEWAY IS PAVED.

ITEM 614, MAINTAINING TRAFFIC (WINTER TIME LIMITATIONS)

ALL EXISTING LANES, INCLUDING RAMPS, SHALL BE OPEN AND AVAILABLE TO TRAFFIC IN THE ORIGINAL OR PROPOSED FINAL ALIGNMENT BETWEEN OCTOBER 15 AND APRIL 1. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$10,000 PER CALENDAR DAY.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

ATB-20/531-
21.86/22.11
PART 3

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL (ATB-531-2211)

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN BELOW AND TRAFFIC SCDS MT-96.11, 96.20 AND 96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE SIGNAL WILL BE USED TO MAINTAIN TRAFFIC DURING THE RAILING REPLACEMENT FROM SLM 22.06 TO SLM 22.16. THE SIGNAL SHALL BE MAINTAINED FOR 60 CONSECUTIVE DAYS.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

PHASE 1/2 [NO SKIP]	TIMING PLAN (SECONDS)
SR-531 EB ALL RED	11
SR-531 EB YELLOW	4
SR-531 EB MIN GREEN	32
SR-531 EB MAX GREEN	62
PHASE 3/4	TIMING PLAN (SECONDS)
SR-531 WB ALL RED	11
SR-531 WB YELLOW	4
SR-531 WB MIN GREEN	32
SR-531 WB MAX GREEN	62
PHASE 5/6	TIMING PLAN (SECONDS)
GIBSON WAY ALL RED	3
GIBSON WAY YELLOW	4
GIBSON WAY MIN GREEN	7
GIBSON WAY MAX GREEN	10
PHASE 7/8	TIMING PLAN (SECONDS)
CHESTNUT ST. ALL RED	3
CHESTNUT ST. YELLOW	4
CHESTNUT ST. MIN GREEN	7
CHESTNUT ST. MAX GREEN	10
PHASE 9/10	TIMING PLAN (SECONDS)
DRIVEWAY ALL RED	3
DRIVEWAY YELLOW	4
DRIVEWAY MIN GREEN	7
DRIVEWAY MAX GREEN	10

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

ITEM SPECIAL WORK ZONE TRAFFIC SIGNAL (ATB-531-2211)

THIS PROJECT REQUIRES THE CONSTRUCTION OF A WORK ZONE TRAFFIC SIGNAL. DETAILS FOR THE CONSTRUCTION OF THE WORK TRAFFIC SIGNAL INCLUDING THE TIMINGS ARE SHOWN IN THE PLANS. THE CONTRACTOR SHALL ENSURE THAT THE WORK ZONE TRAFFIC SIGNAL SUPPORTS ARE NOT IN CONFLICT WITH EXISTING OR RELOCATED UTILITY LINES. ALL COSTS ASSOCIATED WITH THE WORK ZONE TRAFFIC SIGNALS INCLUDING INSTALLATION AND OPERATION SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR MAINTAINING TRAFFIC.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 800 FEET AND 650 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL [IN ACTIVE CELLULAR AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.07. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, 8 SIGN MONTH

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H13), SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
ROAD & RAMP CLOSURE	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

WILL BE
CLOSED
FOR _____ DAYS
INFO: (330)-786-2208

W20-H13-60

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVEABLE PAVEMENT DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTICE TO OFFICE OF COMMUNICATIONS TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO OFFICE OF COMMUNICATIONS
RAMP & RAMP CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL) 10 EACH
ITEM 614, OBJECT MARKER, TWO-WAY 10 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

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CALCULATED
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CHECKED
MJA

MAINTENANCE OF TRAFFIC GENERAL NOTES

ATB-20/531-
21.86/22.11
PART 3

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ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON SIGNALIZED CLOSURE)

ALL LANES ON SR 531 SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS FOR THE RAILING REPLACEMENT ON STRUCTURE ATB-531-2211 FROM SLM 22.06 TO SLM 22.16 (15 CONSECUTIVE CALENDAR DAYS PER RAILING AND 15 CONSECUTIVE CALENDAR DAYS FOR THE STRUCTURE EXTENSION WORK). ALL WORK SHALL BE COMPLETED PRIOR TO REMOVAL OF THE SIGNALIZED CLOSURE.

THE SIGNALIZED CLOSURE SHALL TAKE PLACE BETWEEN JULY 4 AND THE D-DAY RE-ENACTMENT IN THE 2021 CALENDAR YEAR.

THE PEDESTRIAN WALKWAY SHALL BE OPEN WHILE THE RAILING REPLACEMENT IS BEING COMPLETED ON THE SOUTH END OF THE BRIDGE.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$2,000 FOR EACH CALENDAR DAY THE SIGNALIZED CLOSURE REMAINS IN PLACE BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS FOURTH OF JULY
NEW YEAR'S LABOR DAY
MEMORIAL DAY THANKSGIVING
D-DAY CONNEAUT

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY TIME ALL LANES
OR EVENT MUST BE OPEN TO TRAFFIC

SUNDAY 12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY 12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY 12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY 12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY 12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY (THANKSGIVING ONLY)
6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY 12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY 12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

CONNEAUT TOWNSHIP PARK

ACCESS TO CONNEAUT TOWNSHIP PARK FROM ITS TWO ENTRANCE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.

TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED ALONG PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT CONNEAUT TOWNSHIP PARK AND THE PUBLIC.

APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF CONNEAUT TOWNSHIP PARK OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS.

THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT, THE CITY OF CONNEAUT AND CONNEAUT TOWNSHIP PARK PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

CALCULATED
CMR
CHECKED
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MAINTENANCE OF TRAFFIC GENERAL NOTES

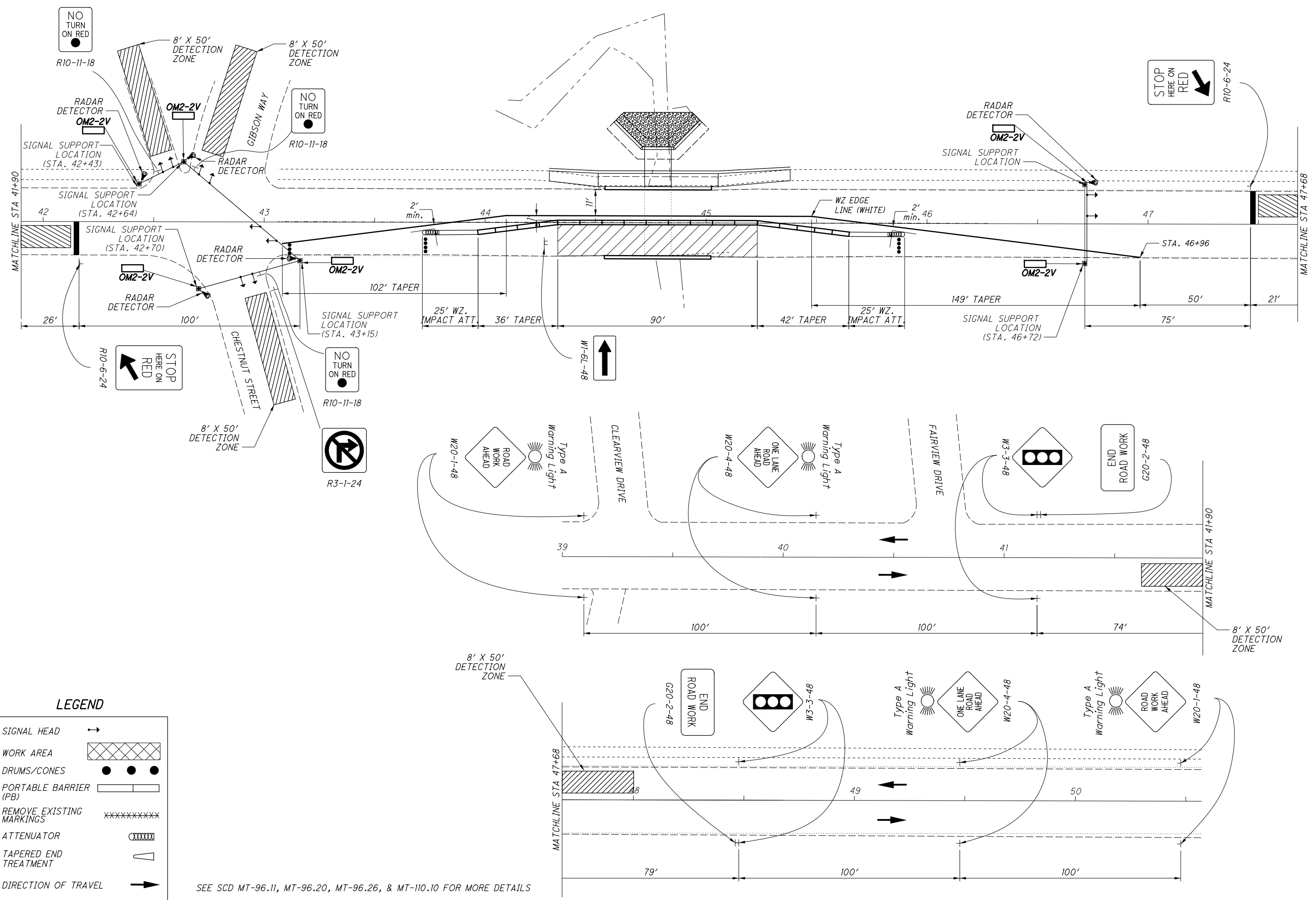
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21.86/22.11
PART 3

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SIGNALIZED CLOSURE PLAN (ATB-531-22.11 EB LANE)

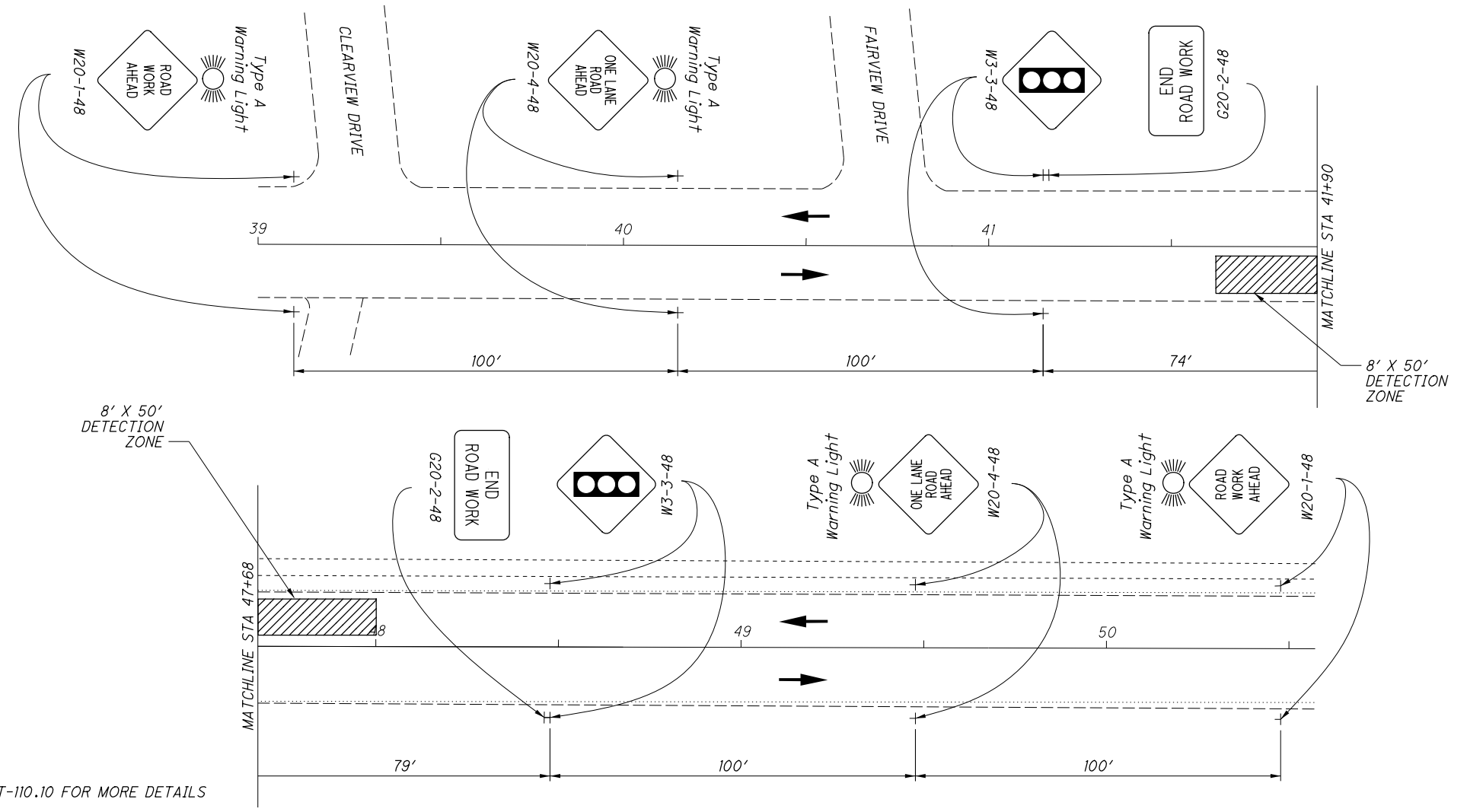
ATB-20/531-21.86/22.11 PART 3



LEGEND

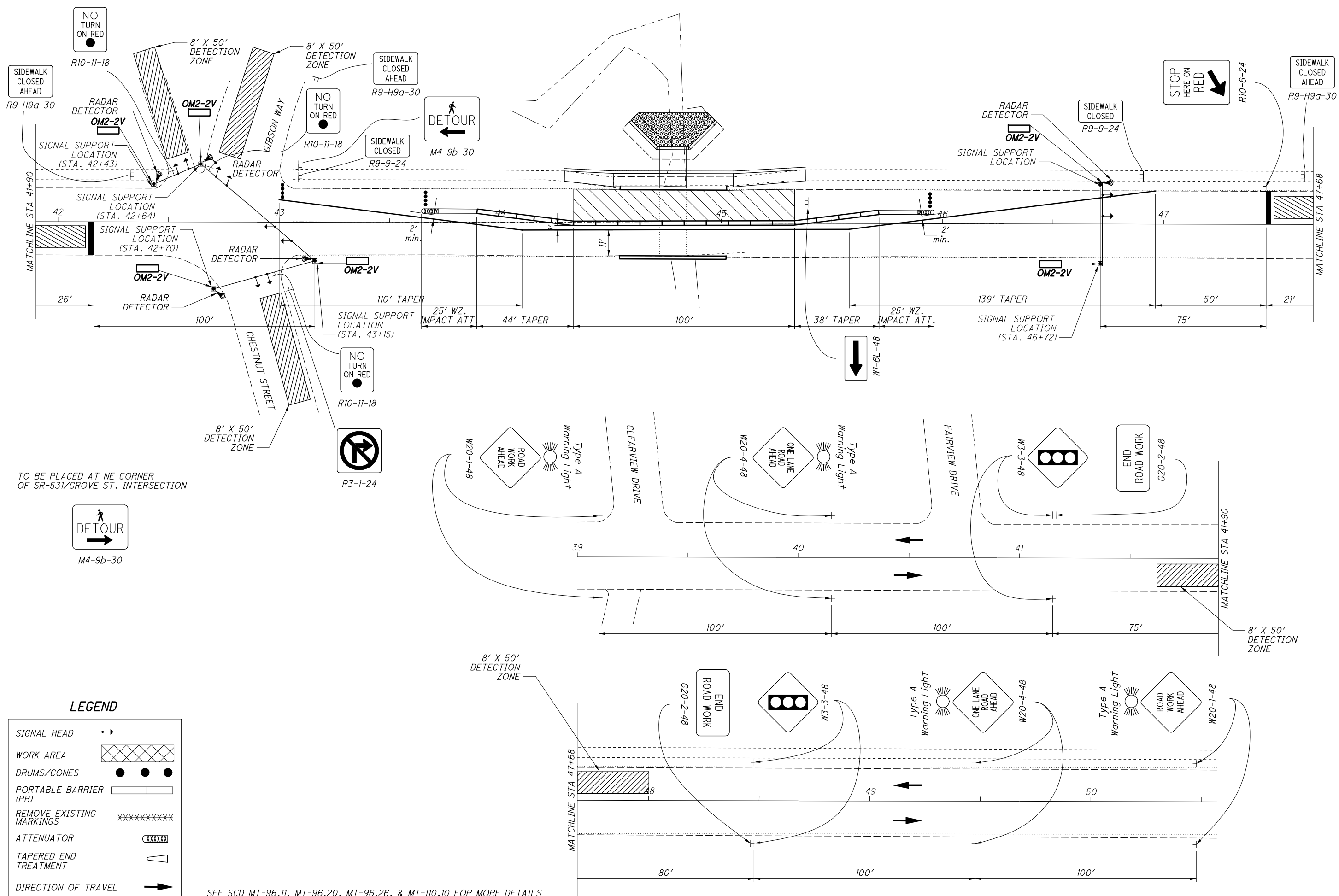
- SIGNAL HEAD →
- WORK AREA [Hatched Box]
- DRUMS/CONES ● ● ●
- PORTABLE BARRIER (PB) [Double Line]
- REMOVE EXISTING MARKINGS [Dashed Line]
- ATTENUATOR [Wavy Line]
- TAPERED END TREATMENT [Tapered Triangle]
- DIRECTION OF TRAVEL →

SEE SCD MT-96.11, MT-96.20, MT-96.26, & MT-110.10 FOR MORE DETAILS



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TO BE PLACED AT NE CORNER OF SR-531/GROVE ST. INTERSECTION



M4-9b-30

LEGEND

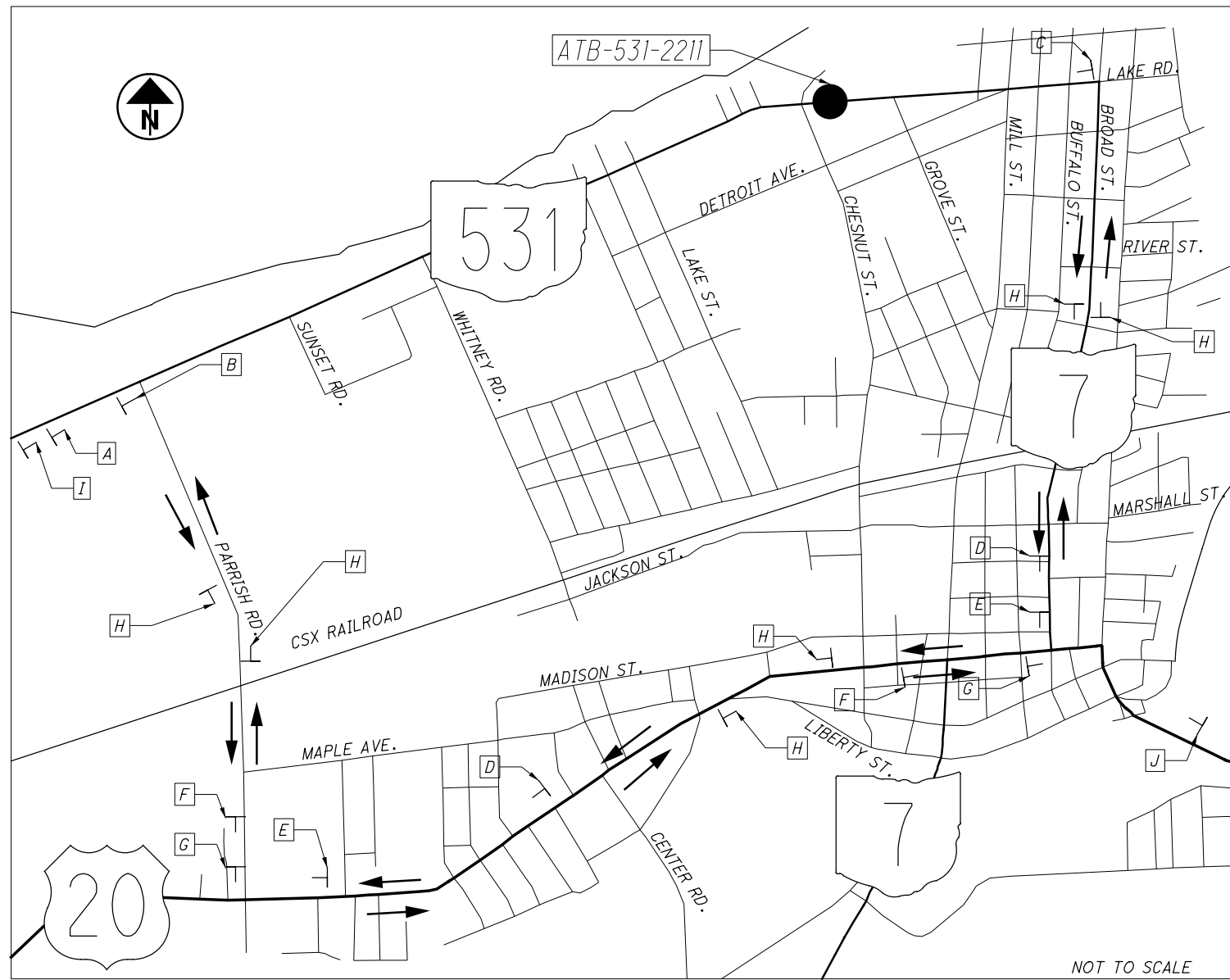
SIGNAL HEAD	→
WORK AREA	▨
DRUMS/CONES	● ● ●
PORTABLE BARRIER (PB)	▬
REMOVE EXISTING MARKINGS	XXXXXXXXXX
ATTENUATOR	▨
TAPERED END TREATMENT	▽
DIRECTION OF TRAVEL	→

SEE SCD MT-96.11, MT-96.20, MT-96.26, & MT-110.10 FOR MORE DETAILS

SIGNALIZED CLOSURE PLAN (ATB-531-22.11 WB LANE)

ATB-20/531-21.86/22.11 PART 3

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TRUCK DETOUR ROUTE FOR STRUCTURE: ATB-531-2211

DETOUR ROUTE: SR 531 / PARRISH RD. / US 20 / SR 7

CLOSED TO TRUCKS

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

DETOUR PLAN FOR STRUCTURE: ATB-531-2211

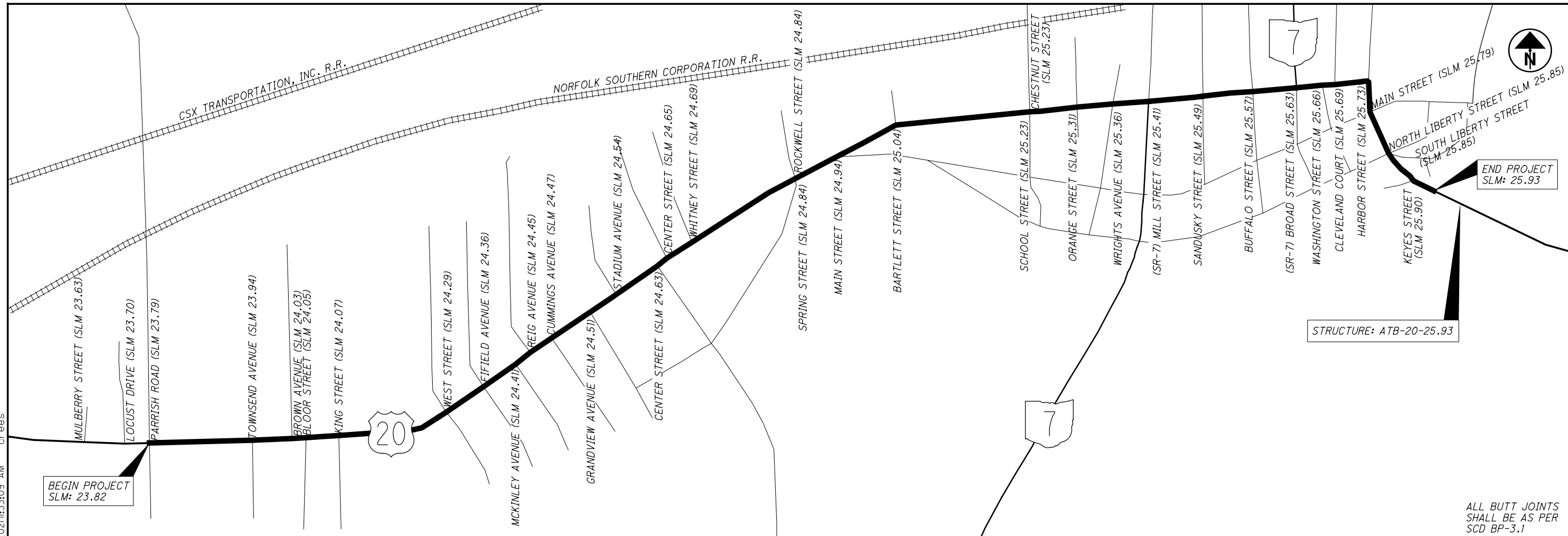
<p>A</p> <p>TRUCK M4-4-24</p> <p>DETOUR 1500 FT W20-2-36</p>	<p>D</p> <p>TRUCK M4-4-24</p> <p>DETOUR M4-8-24</p> <p>531 M1-4-24-3</p> <p> M5-1-21</p>	<p>G</p> <p>TRUCK M4-4-24</p> <p>DETOUR M4-8-24</p> <p>531 M1-4-24-3</p> <p> M6-1-21</p>
<p>B</p> <p>TRUCK M4-4-24</p> <p>ROAD CLOSED TO THRU TRAFFIC R11-4-60</p> <p>DETOUR M4-10R-48</p>	<p>E</p> <p>TRUCK M4-4-24</p> <p>DETOUR M4-8-24</p> <p>531 M1-4-24-3</p> <p> M6-1-21</p>	<p>H</p> <p>TRUCK M4-4-24</p> <p>DETOUR M4-8-24</p> <p>531 M1-4-24-3</p> <p> M6-3-21</p>
<p>C</p> <p>TRUCK M4-4-24</p> <p>ROAD CLOSED TO THRU TRAFFIC R11-4-60</p> <p>DETOUR M4-10L-48</p>	<p>F</p> <p>TRUCK M4-4-24</p> <p>DETOUR M4-8-24</p> <p>531 M1-4-24-3</p> <p> M5-1-21</p>	<p>I PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES:</p> <ol style="list-style-type: none"> TRUCKS USE PARRISH RD TO US 20 E TO RT 7 N
		<p>J PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES:</p> <ol style="list-style-type: none"> RT 531 CLOSED TO TRUCKS TRUCKS USE US 20 W TO PARRISH RD

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SHEET NUM.												PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
3	4	5	6	7	8	12	13	14	15	19	26	03/NHS/P V/CONN	04/NHS/O T/CONN	05/S<2/B R							
																		ROADWAY			
						24	48					72			202	23500	72	SY	WEARING COURSE REMOVED		
								3,060	5,531				8,591		202	30000	8,591	SF	WALK REMOVED		
								98	192				290		202	32000	290	FT	CURB REMOVED		
										94				94	202	35100	94	FT	PIPE REMOVED, 24" AND UNDER		
										1				1	202	58100	1	EACH	CATCH BASIN REMOVED		
84													84		203	10000	84	CY	EXCAVATION		
							5						5		203	40000	5	CY	BORROW		
200													200		608	10000	200	SF	4" CONCRETE WALK		
						2,665	5,561						8,226		608	52000	8,226	SF	CURB RAMP		
21												21			623	39501	21	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	3	
										3			3		625	31600	3	EACH	PULL BOX, MISC.: ADJUSTED TO GRADE	15	
																		EROSION CONTROL			
							5						5		659	10000	5	SY	SEEDING AND MULCHING		
												4,800			832	30000	4,800	EACH	EROSION CONTROL		
																		DRAINAGE			
										6				6	611	04400	6	FT	12" CONDUIT, TYPE B		
										36				36	611	07400	36	FT	18" CONDUIT, TYPE B		
										1				1	611	98470	1	EACH	CATCH BASIN, NO. 2-2B		
9												9			611	98630	9	EACH	CATCH BASIN ADJUSTED TO GRADE		
3													3		611	98634	3	EACH	CATCH BASIN RECONSTRUCTED TO GRADE		
							3	3					6		611	99654	6	EACH	MANHOLE ADJUSTED TO GRADE		
28												28			611	99655	28	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	3	
3													3		611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE		
																		PAVEMENT			
2,000													2,000		251	01000	2,000	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)		
500													500		253	01000	500	SY	PAVEMENT REPAIR		
						28,420	50,504						78,924		254	01000	78,924	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T = 3")		
84													84		304	20000	84	CY	AGGREGATE BASE		
						4,264	7,577						11,839		407	20000	11,841	GAL	NON-TRACKING TACK COAT		
															441	50101	2,777	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)	3	
						999	1,778						3,837		441	50300	3,838	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)		
						1,382	2,456						290		609	26000	290	FT	CURB, TYPE 6		
								98	192												
																		WATER WORK			
										1			1		638	10800	1	EACH	VALVE BOX ADJUSTED TO GRADE		
22												22			638	10801	22	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	3	
																		TRAFFIC CONTROL			
										3.04			3.04		646	10100	3.04	MILE	LANE LINE, 4"		
										6.18			6.18		646	10200	6.18	MILE	CENTER LINE		
										808			808		646	10300	808	FT	CHANNELIZING LINE, 8"		
										331			331		646	10400	331	FT	STOP LINE		
										1,170			1,170		646	10500	1,170	FT	CROSSWALK LINE		
															646	10600	345	FT	TRANSVERSE/DIAGONAL LINE		
										345			246		646	20200	246	FT	PARKING LOT STALL MARKING		
										3			3		646	20300	3	EACH	LANE ARROW		
																		STRUCTURE REPAIRS			
																		FOR ATB-531-2211 ESTIMATED QUANTITIES		26	
																		MAINTENANCE OF TRAFFIC			
	100											100			614	11110	100	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
														1	SPECIAL	61411300	1	EACH	WORK ZONE TRAFFIC SIGNAL		
														2		614	12380	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	6
														LS		614	12420	LS		DETOUR SIGNING	
	30											30				614	12460	30	EACH	WORK ZONE MARKING SIGN	
	50											50				614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
														10		614	13310	10	EACH	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	
														10		614	13360	10	EACH	OBJECT MARKER, TWO WAY (BIDIRECTIONAL)	
														4		614	18600	8	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	

GENERAL SUMMARY

ATB-20/531-21.86/22.11 PART 3



SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	202		254		407		407		441		441						
									WEARING COURSE REMOVED SY		PAVEMENT PLANING, ASPHALT CONCRETE (T = 3") SY		NON-TRACKING TACK COAT @ 0.06 GAL/SY GAL		NON-TRACKING TACK COAT @ 0.09 GAL/SY GAL		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M) (T = 1 1/4") CY		ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (T = 1 3/4") CY						
US 20																									
23.82	TO	24.21	1	L/R	2059.20	41.00	9380.80			9380.80		562.85		844.27		325.72		456.01							
24.21	TO	24.85	1	L/R	3379.20	36.00	13516.80			13516.80		811.01		1216.51		469.33		657.07							
24.85	TO	24.89	1	L/R	211.20	38.00	891.73			891.73		53.50		80.26		30.96		43.35							
24.89	TO	24.97	1	L/R	422.40	47.00	2205.87			2205.87		132.35		198.53		76.59		107.23							
24.97	TO	25.49	1	L/R	2745.60	39.00	11897.60			11897.60		713.86		1070.78		413.11		578.36							
25.49	TO	25.61	1	L/R	633.60	46.00	3238.40			3238.40		194.30		291.46		112.44		157.42							
25.65	TO	25.74	1	L/R	475.20	50.00	2640.00			2640.00		158.40		237.60		91.67		128.33							
25.74	TO	25.77	1	L/R	158.40	43.00	756.80			756.80		45.41		68.11		26.28		36.79							
25.77	TO	25.85	1	L/R	422.40	48.00	2252.80			2252.80		135.17		202.75		78.22		109.51							
25.85	TO	25.93	1	L/R	422.40	35.00	1642.67			1642.67		98.56		147.84		57.04		79.85							
DRIVEWAYS					2.00	VARIABLES		645.33	48.00							24.00									
INTERSECTIONS					10.00	VARIABLES		2080.00		2080.00		124.80		187.20		72.22		101.11							
SUBTOTALS									48.00		50503.47	0.00	3030.21	0.00	4545.31	0.00	1777.59	0.00	2455.03	0.00	0.00	0.00	0.00	0.00	
TOTALS CARRIED TO GENERAL SUMMARY									48		50504	0	3031	0	4546	0	1778	0	2456	0	0	0	0	0	0

ALL BUTT JOINTS SHALL BE AS PER SCD BP-3.1

STRUCTURE: ATB-20-25.93

END PROJECT SLM: 25.93

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MAIN ROUTE	INTERSECTING ROUTE	QUADRANT RL=REAR LT, RR=REAR RT FL=FWD LT, FR=FWD RT (LOOKING UPSTATION)	CURB RAMP TYPE (SCD BP-7.1, SHEET 2/3)	202	202	203	608	609	611	638	625	659	NOTES
				WALK REMOVED	CURB REMOVED	BORROW	CURB RAMP	CURB, TYPE 6	MANHOLE ADJUSTED TO GRADE	VALVE BOX ADJUSTED TO GRADE	PULL BOX, MISC.: ADJUSTED TO GRADE	SEEDING AND MULCHING	
				SF	FT	CY	SF	FT	EACH	EACH	EACH	SY	
20	GRIFTON AVE.	FR	A2-1	25.00	2.00		25.00	2.00					TRUNCATED DOME SLAB ONLY
20	TOWNSEND AVE.	FR	A2-3	65.00	2.00		65.00	2.00					
		RR	A2-3	45.00	2.00		45.00	2.00					
20	BROWN AVE.	FL	A2-3	70.00	2.00		70.00	2.00					
		RL	A2-1	50.00	2.00		50.00	2.00					
20	BLOOR ST.	FR	A2-3	65.00	2.00		65.00	2.00					
		RR	A2-3	60.00	2.00		60.00	2.00					
20	KING ST.	FR	A2-3	55.00	2.00		55.00	2.00					
		RR	A2-3	55.00	2.00		55.00	2.00					
20	WEST ST.	FR	A2-3	65.00	2.00		65.00	2.00	1.00				
		RR	A2-3	55.00	2.00		55.00	2.00					
		FL	A2-3	55.00	2.00		55.00	2.00					
		RL	A2-3	138.00	2.00	0.50	108.00	2.00				0.50	REMOVE ATB-20 CROSSING
20	FIFIELD AVE.	FR	A2-3	95.00	10.00	0.50	60.00	10.00	1.00			0.50	REMOVE ATB-20 CROSSING
		RR	A2-3	48.00	2.00		48.00	2.00					
		FL	A2-3	55.00	2.00		55.00	2.00					
		RL	A2-3	95.00	10.00	0.50	55.00	10.00				0.50	REMOVE ATB-20 CROSSING
20	MCKINLEY AVE.	FR	A2-3	78.00	2.00		78.00	2.00	1.00				
		RR	A2-3	84.00	2.00		84.00	2.00					
20	REIG AVE.	FL	D-A1	110.00	2.00	0.50	50.00	2.00				0.50	REMOVE ATB-20 CROSSING
		RL	D-A1	170.00	2.00	0.50	110.00	2.00				0.50	REMOVE ATB-20 CROSSING
20	CUMMINS AVE.	FR	A2-3	72.00	2.00		72.00	2.00					
		RR	A2-3	78.00	2.00		78.00	2.00					
20	GRANDVIEW AVE.	FR	A2-5	113.50	2.00		113.50	2.00					REPLACE BOTH RAMPS
		RR	A2-3	65.00	2.00		65.00	2.00					
		FL	A2/C2	55.00	2.00		55.00	2.00					
20	STADIUM AVE.	FL	A2-1	40.00	2.00		40.00	2.00					
		RL	A2-3	45.00	2.00		45.00	2.00					
20	CENTER RD.	FR	A2-3	70.00	2.00		70.00	2.00					
		RR	A2-1	60.00	2.00		60.00	2.00					
20	CENTER ST.	FL	A2-3	90.00	2.00	0.50	60.00	2.00				0.50	REMOVE ATB-20 CROSSING
		RL	A2-3	90.00	2.00	0.50	60.00	2.00				0.50	REMOVE ATB-20 CROSSING
20	WHITNEY ST.	FL	A2-3	85.00	2.00	0.50	55.00	2.00				0.50	REMOVE ATB-20 CROSSING
		RL	A2-3	95.00	2.00		65.00	2.00					
20	ROCKWELL ST.	FL	A2-3	105.00	2.00		105.00	2.00					
		RL	A2-5	125.00	2.00		125.00	2.00					REPLACE BOTH RAMPS
		RR	A2/C2	55.00	2.00		55.00	2.00					
20	MAIN ST.	FR	A2-1	50.00	2.00		50.00	2.00					
		RR	A2-1	78.00	2.00		78.00	2.00					
		RL	A2-1	50.00	2.00		50.00	2.00					
		FL	A2-1	50.00	2.00		50.00	2.00					
		-	-	50.00		0.50					0.50	REMOVAL OF NON CURB RAMP RAMPS - US -20 @ MAIN STREET	
SUBTOTALS				3059.50	98.00	4.50	2664.50	98.00	3.00	0.00	0.00	4.50	0.00
TOTALS CARRIED TO GENERAL SUMMARY				3060	98	5	2665	98	3	0	0	5	0

UPDATED

CURB RAMP SUBSUMMARY

ATB-20/531-21.86/22.11 PART 3

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MAIN ROUTE	INTERSECTING ROUTE	QUADRANT RL=REAR LT, RR=REAR RT FL=FWD LT, FR=FWD RT (LOOKING UPSTATION)	CURB RAMP TYPE (SCD BP-7.1, SHEET 2/3)	202	202	203	608	609	611	638	625	659	NOTES	
				WALK REMOVED	CURB REMOVED	BORROW	CURB RAMP	CURB, TYPE 6	MANHOLE ADJUSTED TO GRADE	VALVE BOX ADJUSTED TO GRADE	PULL BOX, MISC.: ADJUSTED TO GRADE	SEEDING AND MULCHING		
				SF	FT	CY	SF	FT	EACH	EACH	EACH	SY		
20	BARTLETT ST.	FL	A2-3	80.00	2.00		80.00	2.00					LANDING PAD WHERE THE SIDE ROAD SIDEWALK MEETS THE MAIN ROAD SIDEWALK	
		RL	A2-3	84.00	2.00		84.00	2.00						
20	CHESTNUT ST.	FR	A2-5	119.00	2.00		119.00	2.00					REPLACE BOTH RAMPS	
		RR	A2-5	144.00	2.00		144.00	2.00					REPLACE BOTH RAMPS	
		FL	D-A1	121.00	2.00		121.00	2.00					REPLACE BOTH RAMPS	
		RL	A2-5	144.00	2.00		144.00	2.00					REPLACE BOTH RAMPS	
20	ORANGE ST.	FR	A2-5	132.00	2.00		132.00	2.00					REPLACE BOTH RAMPS	
		RR	A2-5	131.00	2.00		131.00	2.00					REPLACE BOTH RAMPS	
		RL	A2-5	50.00	2.00		50.00	2.00					REPLACE BOTH RAMPS	
20	WRIGHTS AVE.	FR	A2-3	50.00	2.00		50.00	2.00						
		RR	A2-5	110.00	2.00		110.00	2.00						
		FL	A2-3	60.00	2.00		60.00	2.00						
		RL	A2-5	70.00	2.00		100.00	2.00					ADD ATB-20 CROSSING	
20	MILL ST. / SR 7	FR	D-B2	100.00	2.00		100.00	2.00						
		RR	D-B2	110.00	2.00		110.00	2.00						
		FL	A2-5	162.00	2.00		162.00	2.00					REPLACE BOTH RAMPS	
		RL	A2-5	177.00	2.00		177.00	2.00					REPLACE BOTH RAMPS	
20	SANDUSKY ST.	FR	A2-5	131.00	2.00		131.00	2.00					REPLACE BOTH RAMPS	
		RR	A2-5	113.00	2.00		113.00	2.00					REPLACE BOTH RAMPS	
		FL	A2-5	90.00	2.00		90.00	2.00					REPLACE BOTH RAMPS	
		RL	A2-5	177.00	2.00		177.00	2.00					REPLACE BOTH RAMPS	
20	BUFFALO ST.	FR	A2-5	128.00	2.00		128.00	2.00					REPLACE BOTH RAMPS	
		RR	A2-5	125.00	2.00		125.00	2.00					REPLACE BOTH RAMPS	
		FL	A2-5	95.00	2.00		95.00	2.00					REPLACE BOTH RAMPS	
		RL	A2-5	70.00	2.00		70.00	2.00					REPLACE BOTH RAMPS	
20	BROAD ST. / SR 7	FR	A2-5	99.00	8.00		99.00	8.00	1.00					
		FR	A2/C2	70.00	8.00		70.00	8.00						
		RR	D-B2	133.00	16.00		133.00	16.00						
		FL	B2	170.00	10.00		170.00	10.00	1.00		2.00			REPLACE BOTH RAMPS
		FL	A2/C2	80.00	10.00		80.00	10.00						REPLACE BOTH RAMPS
20	CLEVELAND CT.	RL	D-A1	196.00	20.00		196.00	20.00		1.00	1.00			
		FL	B2	110.00	10.00		110.00	10.00						
		RL	A2-3	99.00	10.00		99.00	10.00					LANDING PAD WHERE THE SIDE ROAD SIDEWALK MEETS THE MAIN ROAD SIDEWALK	
20	HARBOR ST.	RR	A1/C1	110.00	2.00		110.00	2.00						
		FL	A1/C1	25.00	2.00		25.00	2.00						
		RL	D-A1	159.00	2.00		159.00	2.00						
20	MAIN ST.	FR	A2-3	158.00	5.00		158.00	5.00					REPLACE BOTH RAMPS	
		FR	A2/C2	200.00	5.00		200.00	5.00					REPLACE BOTH RAMPS	
		RR	B2	156.00	5.00		156.00	5.00					REPLACE BOTH RAMPS	
		RR	A2/C2	120.00	5.00		120.00	5.00					REPLACE BOTH RAMPS	
		FL	D-A1	195.00	10.00		195.00	10.00					REPLACE BOTH RAMPS	
		RL	D-A1	380.00	10.00		380.00	10.00	1.00				REPLACE BOTH RAMPS	
20	KEYES ST.	FR	B1	153.00	2.00		153.00	2.00						
		RR	A2/C2	145.00	2.00		145.00	2.00						
SUBTOTALS				5531.00	192.00		5561.00	192.00	3.00	1.00	3.00	0.00	0.00	
TOTALS CARRIED TO GENERAL SUMMARY				5531	192		5561	192	3	1	3	0	0	

CURB RAMP SUBSUMMARY

ATB-20/531-21.86/22.11 PART 3

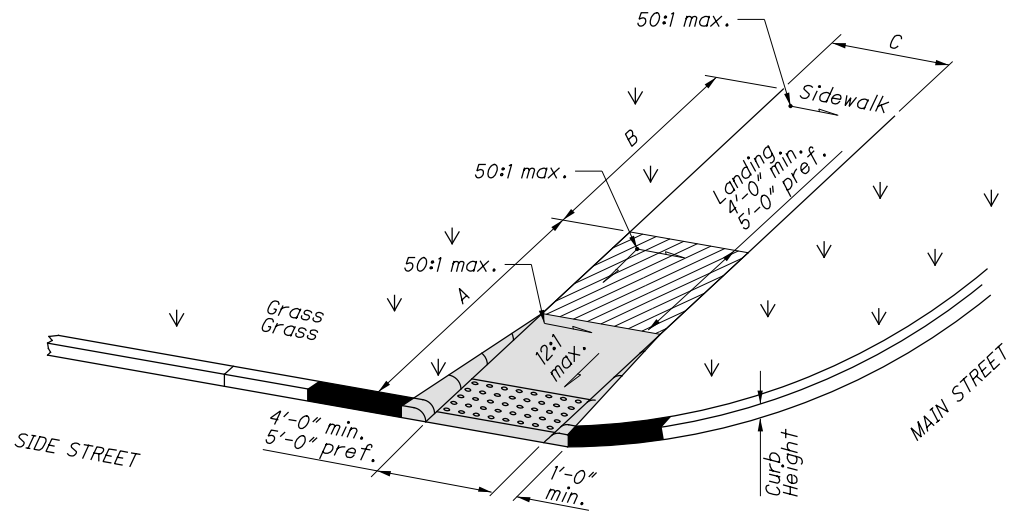
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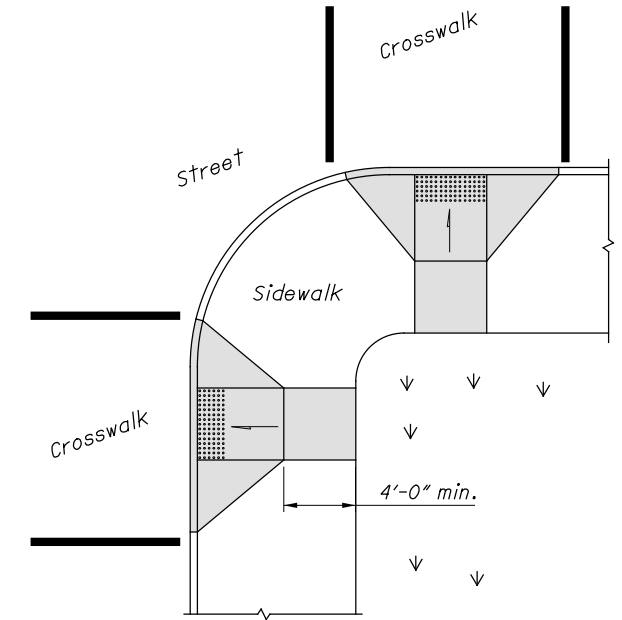
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					A	B	C	D	E	F						A	B	C	D	E	F	
20	GRIFTON AVE.	17	FR	A2-1	5		5				20	BARTLETT ST.	17	FL	A2-3	14	5			5		
													18	RL	A2-3	9	5			6		
20	TOWNSEND AVE.	17	FR	A2-3	8	5				5										5	12	
		17	RR	A2-3	4	4				5	20	CHESTNUT ST.	17	FR	A2-5	6	5			5	11	
													17	RR	A2-5	6	5			5	11	
20	BROWN AVE.	17	FL	A2-3	9	5				5			18	FL	D-A1	5	5	5	5	5	9	
		17	RL	A2-1	10		5						17	RL	A2-5	6	5			5	11	
20	BLOOR ST.	17	FR	A2-3	8	5				5	20	ORANGE ST.	17	FR	A2-5	7	5			5	12	
		17	RR	A2-3	7	5				5			17	RR	A2-5	6	5			5	12	
													17	RL	A2-5	10	5			5		
20	KING ST.	17	FR	A2-3	6	5				5												
		17	RR	A2-3	6	5				5	20	WRIGHTS AVE.	17	FR	A2-3	10		5			5	10
													17	RR	A2-5	7	5			5	10	
20	WEST ST.	17	FR	A2-3	8	5				5												
		17	RR	A2-3	6	5				5				17	FL	A2-3	6		5			
		17	FL	A2-3	6	5				5				17	RL	A2-5	10	5			5	10
		17	RL	A2-3	13	6				5	20	MILL ST. / SR 7	18	FR	D-B2	5			20			
													18	RR	D-B2	5			22			
20	FIFIELD AVE.	17	FR	A2-3	7	5				5				17	FL	A2-5	16	6			6	11
		17	RR	A2-3	7	5				4				17	RL	A2-5	16	6			5	13
		17	FL	A2-3	7	5				5												
		17	RL	A2-3	5	4				5	20	SANDUSKY ST.	17	FR	A2-5	5	5				5	13
													17	RR	A2-5	8	5			5	8	
20	MCKINLEY AVE.	17	FR	A2-3	8	5				6				17	FL	A2-5	4	5			5	4
		17	RR	A2-3	9	5				6				17	RL	A2-5	4	5			5	6
20	REIG AVE.	17	FL	D-A1	10	5					20	BUFFALO ST.	17	FR	A2-5	6	5			5	3	
		17	RL	D-A1	10	5							17	RR	A2-5	4	5			5	5	
													17	FL	A2-5	3	5			5	6	
20	CUMMINS AVE.	17	FR	A2-3	7	5				6				17	RL	A2-5	3	5			5	2
		17	RR	A2-3	8	5				6												
20	GRANDVIEW AVE.	17	FR	A2-5	7	5			4	5	7			17	FR	A2-5	3	4			14	
		17	RR	A2-3	8	5				5				18	FR	A2/C2	3	4			10	
		17	FL	A2/C2	6	5				5				18	RR	D-B2	9			14		
													17	FL	B2	10			17			
20	STADIUM AVE.	17	FL	A2-1	10		5							18	FL	A2/C2		3	5			10
		17	RL	A2-3	6	4				5				18	RL	D-A1		3	5			14
20	CENTER RD.	17	FR	A2-3	9	5				5	20	CLEVELAND CT.	17	FL	B2	5		22				
		17	RR	A2-1	12		5						17	RL	A2-3	5	20			5		
20	CENTER ST.	17	FL	A2-3	7	5				5				17	RR	A1/C1		8	5			10
		17	RL	A2-3	7	5				5				18	FL	A1/C1	5	5				
													18	RL	D-A1		5	5				10
20	WHITNEY ST.	17	FL	A2-3	6	5	5			5	20	MAIN ST.	17	FR	A2-3	5	15				8	
		17	RL	A2-3	6	4	5			5				18	FR	A2/C2	5	15			10	
													17	RR	B2	8		20				
20	ROCKWELL ST.	17	FL	A2-3	10	5				5				18	RR	A2/C2	5	10			8	
		17	RL	A2-5	10	5				5	10			18	FL	D-A1		10	5			15
		17	RR	A2/C2	6	5				5				18	RL	D-A1		14	5			20
20	MAIN ST.	17	FR	A2-1	10		5				20	KEYES ST.	18	FR	B1	9	17					
		17	RR	A2-1	13		6							17	RR	A2/C2	6	5	5	7	6	
		17	RL	A2-1	10		5															
		17	FL	A2-1	10		5															

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CURB RAMP DIMENSIONS	
ATB-20/531-21.86/22.11 PART 3	
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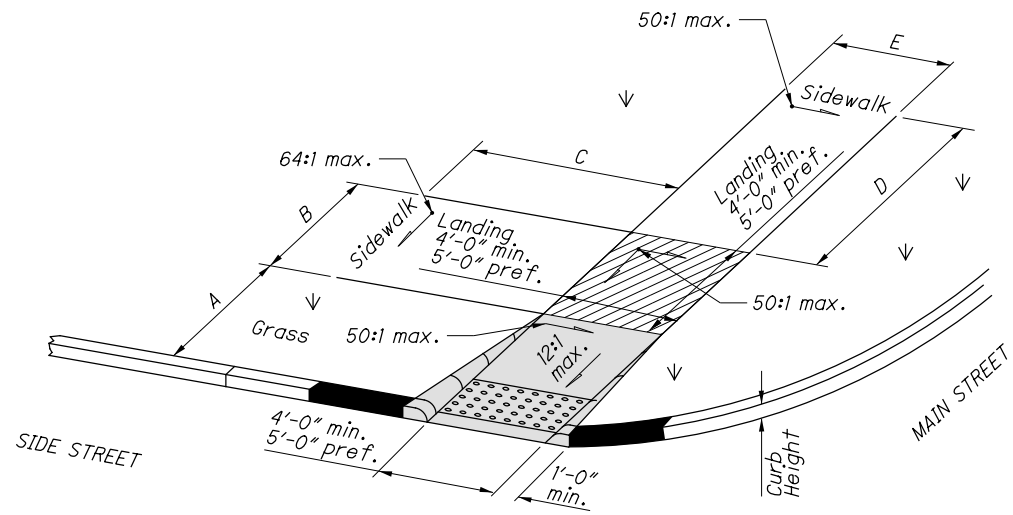
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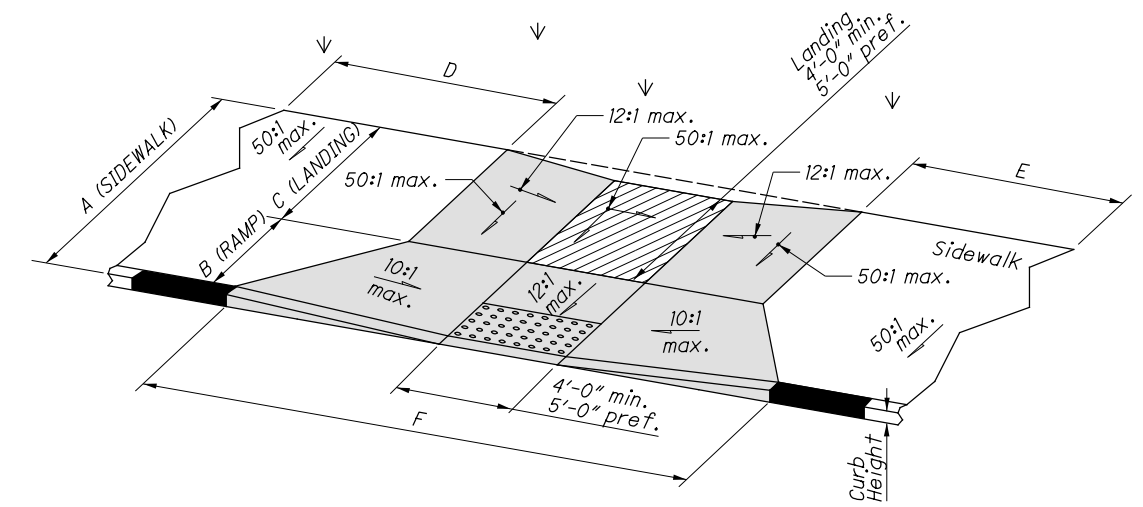
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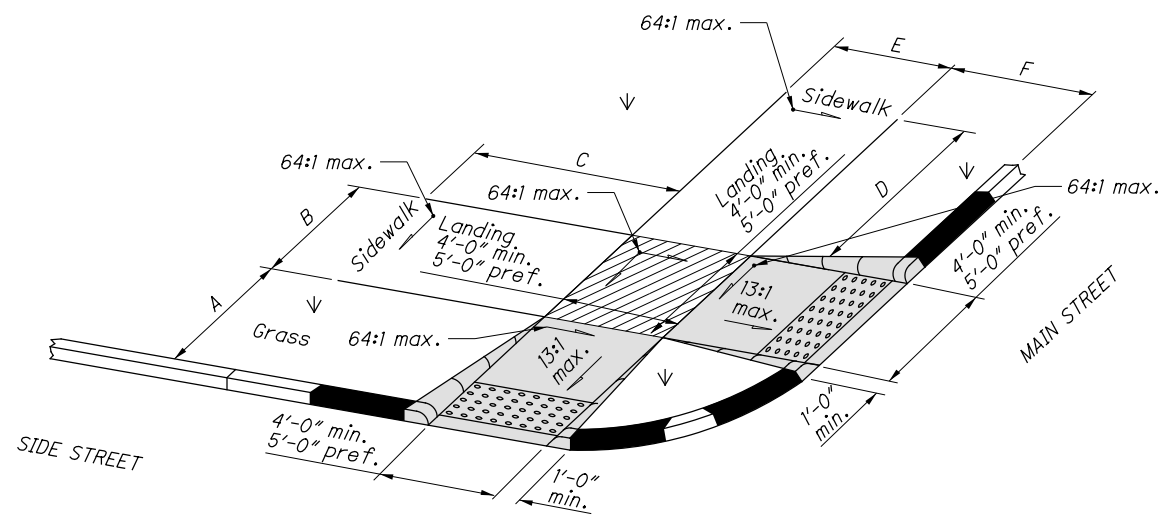
TYPE A1/C1 - PERPENDICULAR CURB RAMPS



Type A2 - 3



Type A1/C1



Type A2 - 5

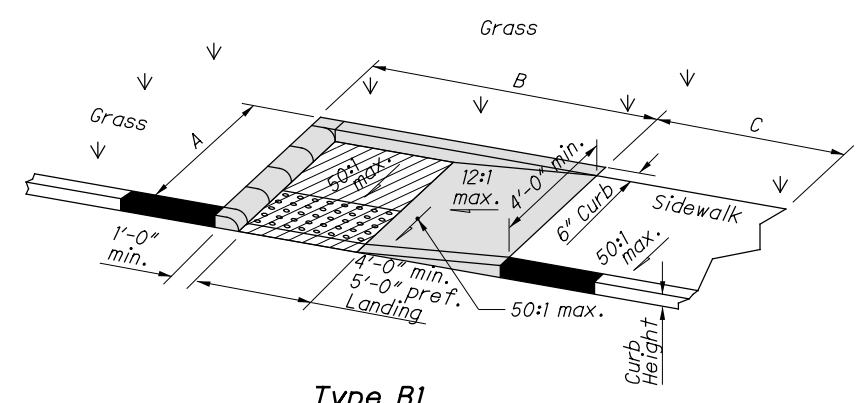
- CONCRETE WALK
- LANDING PAD
- CURB RAMP
- CURB

* SEE SHEET 16 FOR DIMENSIONS
 * SEE SCD BP-7.1 FOR ALL OTHER DETAILS

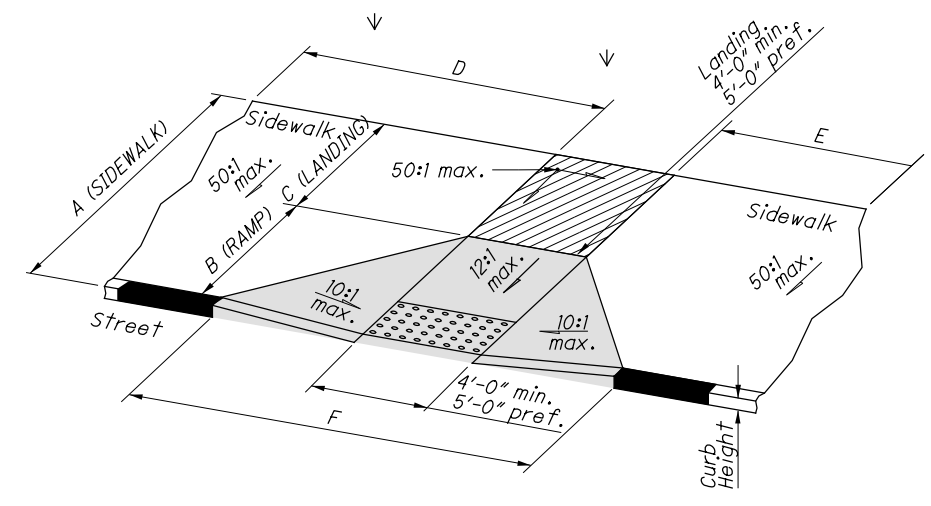
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CURB RAMPS - TYPE A

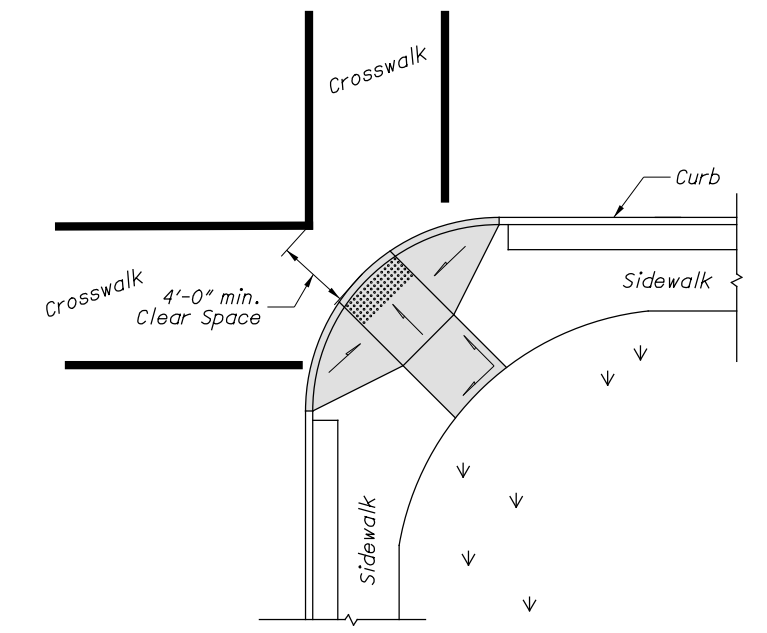
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 21.86/22.11
 PART 3



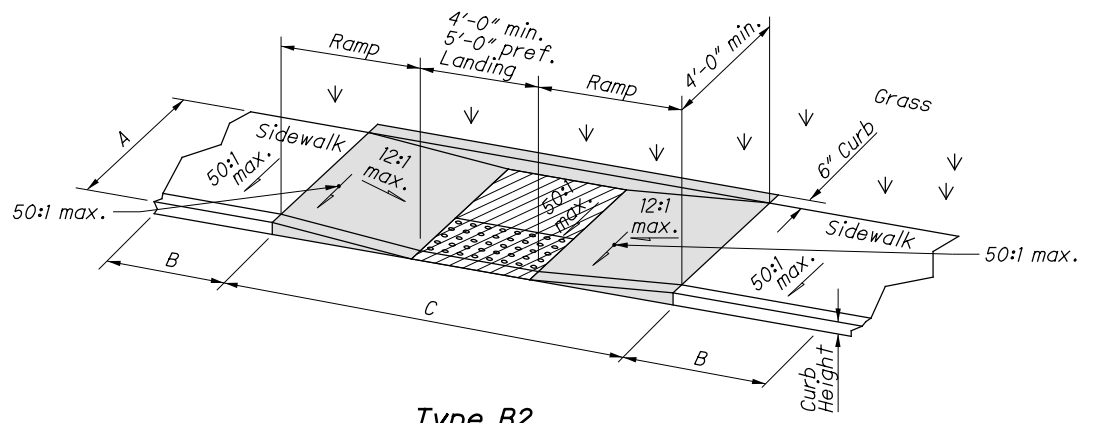
Type B1



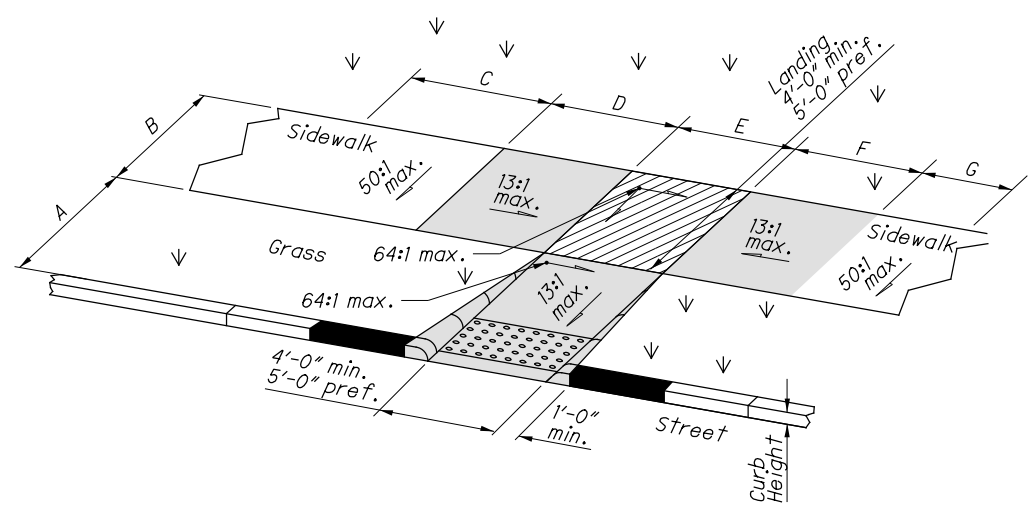
Type A1



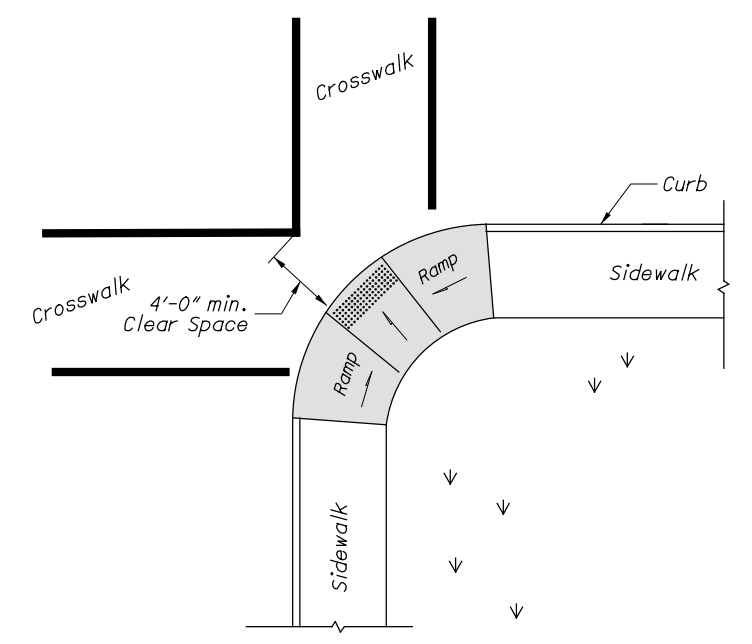
Type D - DIAGONAL CURB RAMP (TYPE A1)



Type B2



Type A2/C2

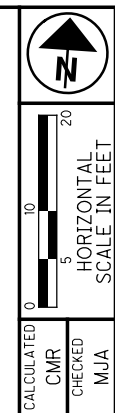


Type D - PARALLEL CURB RAMP (TYPE B2)

- CONCRETE WALK
- LANDING PAD
- CURB RAMP
- CURB

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* SEE SHEET 16 FOR DIMENSIONS
* SEE SCD BP-7.1 FOR ALL OTHER DETAILS



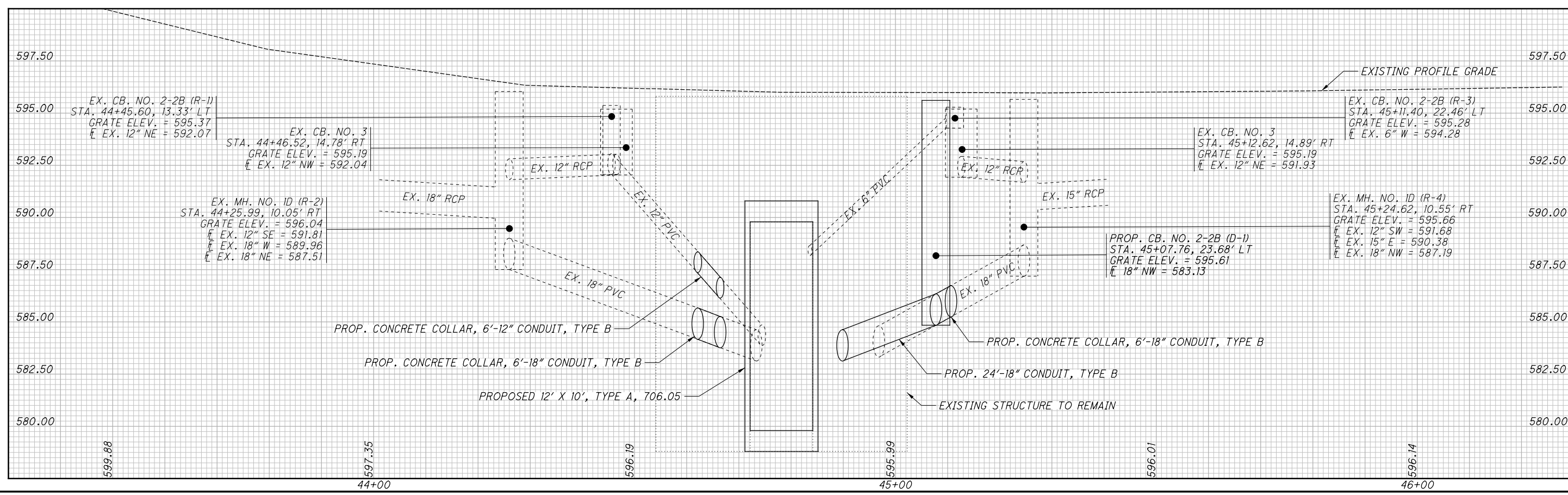
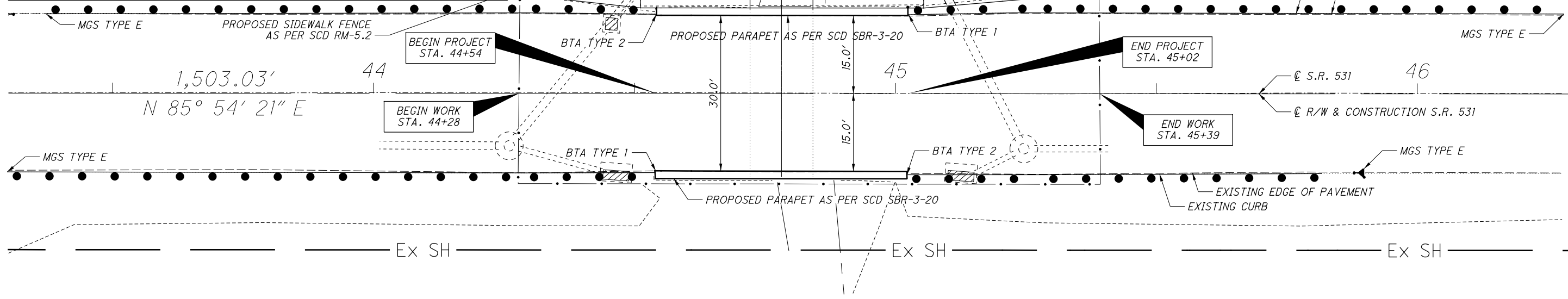
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PLAN AND PROFILE
ATB-531-2211

ATB-20/531-
21.86/22.11
PART 3

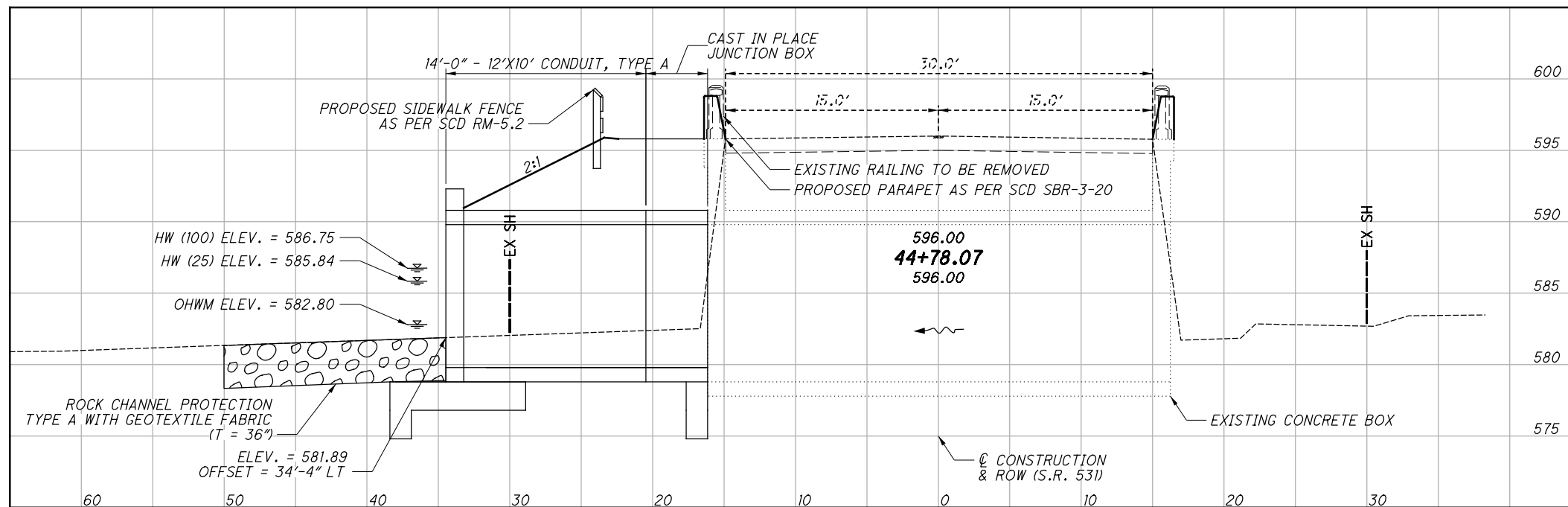
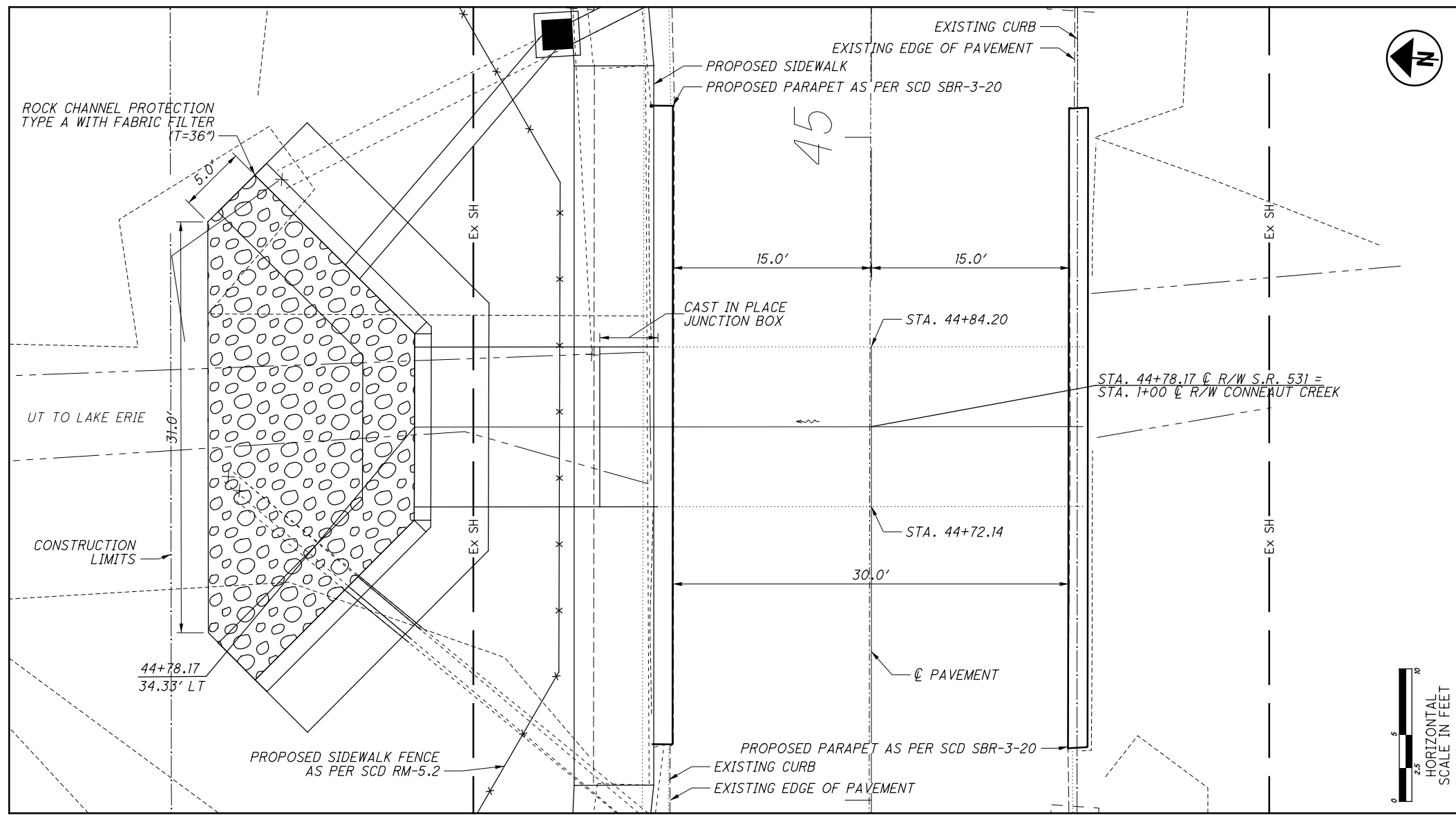
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REF NO.	STATION	SIDE	OFFSET	FLOW LINE ELEVATION	GRATE ELEVATION	202 PIPE REMOVED, 24" AND UNDER	202 CATCH BASIN REMOVED	611 12" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 CATCH BASIN, NO. 2-2B
						FT	EACH	FT	FT	EACH
D-1	45+07.76	LT	23.68	583.13	595.61				30	1
R-1	44+45.60	LT	13.33	592.07	595.37	19		6		
R-2	44+25.99	RT	22.07	587.51	596.04	17			6	
R-3	45+11.40	LT	22.46	594.28	595.28	27	1			
R-4	45+24.62	RT	10.55	587.19	595.66	31				
TOTALS CARRIED TO GENERAL						94	1	6	36	1



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BENCHMARK DATA			
BM #1 STA.	38+53.22	ELEV.	625.39, OFFSET 21.08, LT
BM #1 STA.	44+34.97	ELEV.	596.10, OFFSET 24.49, LT
BM #1 STA.	52+70.54	ELEV.	622.04, OFFSET 22.70, RT
BM #1 STA.	45+05.50	ELEV.	595.52, OFFSET 21.11, LT

NOTES
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
 2021 ADT = 3,100 2021 ADTT = 62
 2041 ADT = 3,100 2041 ADTT = 62
 DIRECTIONAL DISTRIBUTION = 0.50

LEGEND
 - ROCK CHANNEL PROTECTION, TYPE B

HYDRAULIC DATA
 DRAINAGE AREA = 1.89 SQ. MILES
 Q (25) = 320 CFS V (25) = 13.84 FT/S
 Q (100) = 418 CFS V (100) = 15.12 FT/S
 PH = 8.1
 NON ABRASIVE

EXISTING STRUCTURE
 TYPE: 12'X11' CONCRETE SLAB SIMPLE SPAN
 SPANS: 12'-0"
 ROADWAY: 30'-0" F/F SAFETY CURB
 LOADING: H-15
 SKEW: 00°01'59"
 STRUCTURAL FILE NUMBER: 0406813
 DATE BUILT: 07/01/1900
 DISPOSITION: TO REMAIN

PROPOSED STRUCTURE
 TYPE: 12'X10' CONDUIT, TYPE A, 706.05
 WITH FULL HEIGHT HEADWALLS (MORE THAN 2' COVER)
 LENGTH: 18'-4" EXTENSION
 SPANS: 12'-0"
 ROADWAY: 30'-0" T/T PARAPET
 LOADING: HL-93 EXTENSION
 SKEW: 00°01'59"
 APPROACH SLABS: NONE
 COORDINATES: LATITUDE 41°57'39"
 LONGITUDE 80°33'55"

DESIGN AGENCY: ODOT --- DISTRICT 4
 PLANNING & ENGINEERING

DATE: MM/DD/YY
 REVIEWED: MJA
 STRUCTURE FILE NUMBER: 0406813

DRAWN: CMR
 CHECKED: MJA

COUNTY: STA. 44+72.14
 STA. 44+84.20

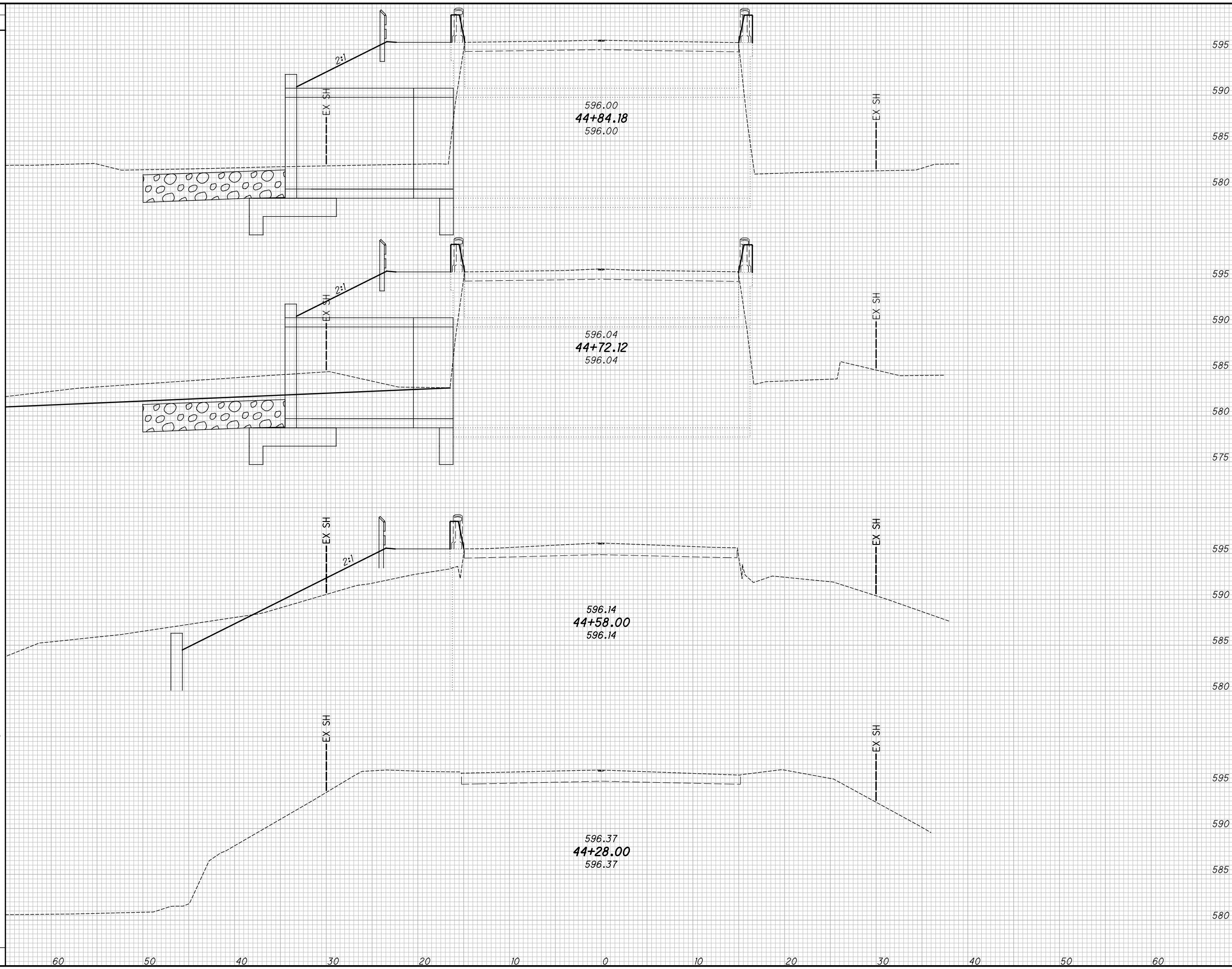
SITE PLAN
 ATB-531-2211
 UT TO LAKE ERIE

ATB-20/531-21.86 / 22.11
PART 3
 PID No. 98903

1 / 15

21 / 36

SEEDING
 END SO.
 WIDTH YDS.
 49 87
 12
 16
 12
 29
 25
 42
 0
 49 87
 60 50 40 30 20 10 0 10 20 30 40 50 60



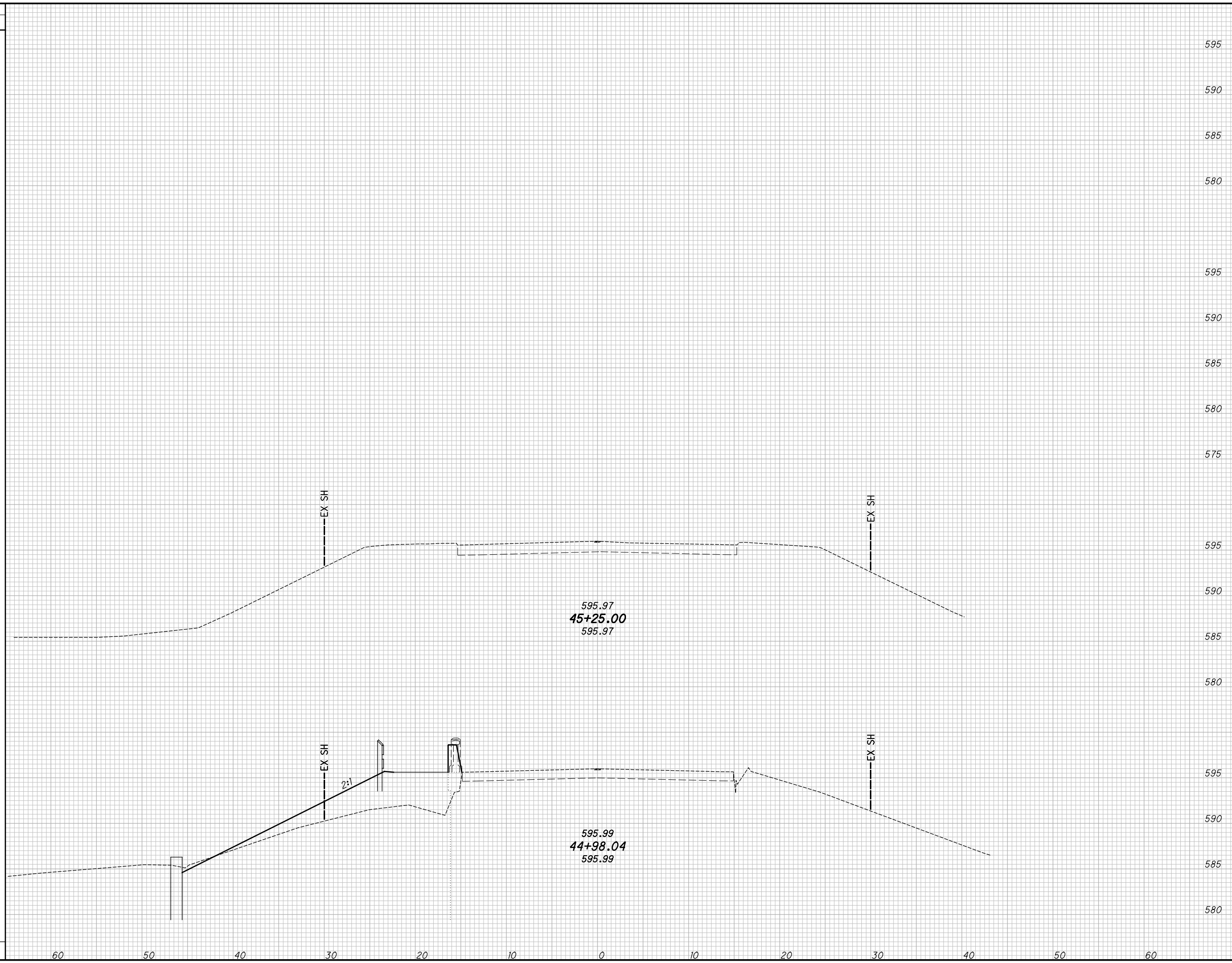
END	AREA		VOLUME	
	CUT	FILL	CUT	FILL
595	0	61	0	28
590	0	61	0	51
585	0	44	0	25
580	0	0	0	104
595	0	166	0	104

CALCULATED
 CMR
 CHECKED
 MJA
**CROSS SECTIONS
 44+58.20 AND 44+98.04**
 ATB-20/531-
 21.86/22.11
 PART 3
 22
 36

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SEEDING	
END WIDTH	SO. YDS.
26	69
30	30
26	39
0	0



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	61	0	63
0	0	0	31
0	61	0	32

CROSS SECTIONS
44+58.20 AND 44+98.04

ATB-20/531-
21.86/22.11
PART 3

CALCULATED
 CMR
 CHECKED
 MJA

23
 36

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING THE 2015 & 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING

HL-93 FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION OF BACKFILL SOIL, $\phi_{bf}=30^\circ$
 TOTAL UNIT WEIGHT OF BACKFILL SOIL =120 PCF
 INTERNAL ANGLE OF FRICTION (DRAINED), FOUNDATION SOIL, $\phi_s=28^\circ$
 UNDRAINED SHEAR STRENGTH (COHESIVE), FOUNDATION SOIL, $S_u=1500$ PSF
 UNIT WEIGHT OF CONCRETE = 150 PCF
 SLOPE OF BACKFILL = 2:1 (TYPE A & B HEADWALLS)
 HEIGHT OF LIVE LOAD SURCHARGE = 2 FT (TYPE C HEADWALLS)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI
 (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617
 GRADE 60 MINIMUM YIELD STRENGTH
 60,000 PSI (ALL REINFORCING SHALL BE
 EPOXY COATED)

SURVEYING PARAMETERS

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
 GEOID: 2012a

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011)
 ELLIPSOID: GRS80
 MAP PROJECTION: LAMBERT CONFORMAL CONIC
 COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE (3401)
 COMBINED SCALE FACTOR: 1.00003653984

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING
 CONVERSION FACTOR: 1 METER = 3.280833333 SURVEY FEET

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL 18 CU. YD.

659, SEEDING AND MULCHING 156 SQ. YD.

659, REPAIR SEEDING AND MULCHING 9 SQ. YD

659, COMMERCIAL FERTILIZER 0.02 TON

659, LIME 0.03 ACRES

659, WATER 1 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

PREFORMED EXPANSION JOINT FILLER

PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING, BETWEEN THE SIDES OF THE BOX CULVERT, AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

UNSUITABLE SOILS

THE FOLLOWING ITEMS AND QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO ADDRESS UNSUITABLE SOILS ENCOUNTERED IN THE AREA UNDER THE PROPOSED BOX CULVERT.

- ITEM 203 - EXCAVATION, 35 CU YD
- ITEM 203 - GRANULAR MATERIAL, TYPE C (703.16), 35 CU YD
- ITEM 204 - GEOTEXTILE FABRIC, TYPE D, 70 SQ YD

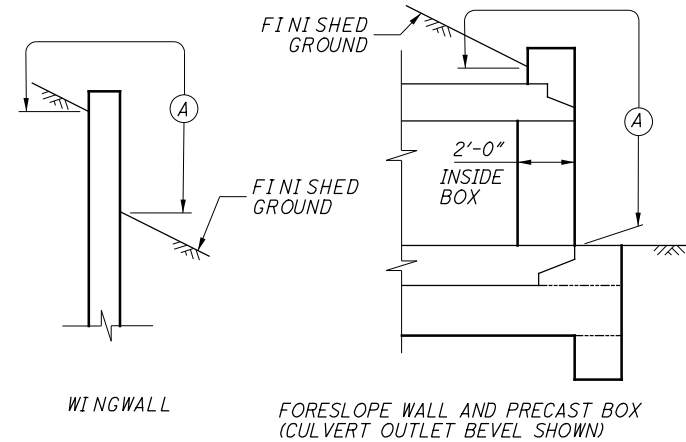
ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

SEALING OF FORESLOPE WALL, WINGWALLS, AND PARAPETS

ALL EXPOSED FORESLOPE WALL, WINGWALL, AND PARAPET CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS OF THE FORESLOPE WALL AND WINGWALL SEALING SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

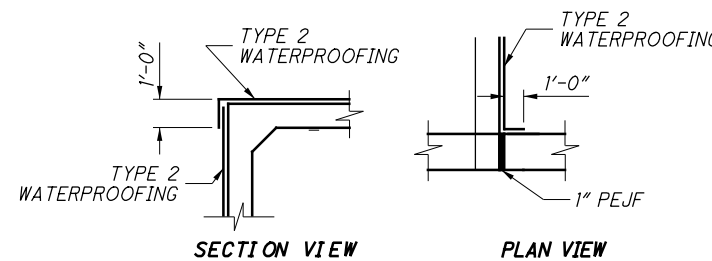


(A) - SEAL ENTIRE CONCRETE SURFACE AREA (INCLUDING ENDS)

WATERPROOFING

TYPE 2 WATERPROOFING, PER CMS 512.08 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT AND THE CAST-IN-PLACE SECTION WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.

IF PAVEMENT IS NOT PLACED DIRECTLY ON TOP OF THE CULVERT, TYPE 2 WATERPROOFING, PER CMS 512.08 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS (INCLUDING CAST-IN-PLACE SECTION) AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.



BACKFILL LIMITATION

WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT, THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

FORESLOPE WALL ANCHOR DOWELS

ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH SPECIFIED ON SHEET 9/13. PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

THREADED INSERTS OR NON-PROTRUDING MECHANICAL CONNECTORS CAPABLE OF DEVELOPING AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCEMENT SHOWN ARE AN ACCEPTABLE ALTERNATIVE TO RESIN BONDING. MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS SHALL HAVE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. THE DEPARTMENT WILL CONSIDER PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS AS INCIDENTAL TO ITEM 611.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 611 - 12' X 10' CONDUIT, TYPE A, 706.05, AS PER PLAN

INCLUDED IN THIS PLAN IS THE CAST IN PLACE SECTION CONNECTING THE PROPOSED PRECAST BOX SECTION WITH THE EXISTING BOX SECTION. CONNECTION WILL BE SMOOTH. NO TONGUE AND GROOVE WILL BE PROVIDED FOR THE CONNECTION. ALL REINFORCING STEEL REQUIRED TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE REINFORCED CONCRETE BOX. REFER TO SHEET 10/11 FOR THE PRECAST BOX SECTION REINFORCING.

SIDEWALK CORRECTIONS

THE ITEMS LISTED FOR STRUCTURE ATB-531-2211 SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPLACE THE EXISTING CURB AND SIDEWALK AT THE APPROACHES OF THE STRUCTURE.

- ATB-531-2211
- ITEM 202, WALK REMOVED, 243 SF
- ITEM 202, CURB REMOVED, 61 FT
- ITEM 608, 4" CONCRETE WALK, 623 SF
- ITEM 609, CURB, TYPE 6, 61 FT

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ATB-20/531-21.86/22.11 PART 3 PID No. 98903	STRUCTURE GENERAL NOTES ATB-531-2211 OVER CONNEAUT CREEK	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING	DATE MM/DD/YY MJA	REVIEWED MJA STRUCTURE FILE NUMBER 0406813	DRAWN CMR REVISIONS CMR	DESIGNED CMR CHECKED MJA
4 / 15	24 / 36					

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GUARDRAIL (ATB-531-221I)

THE FOLLOWING QUANTITIES FOR THE STRUCTURE ATB-531-221I SHALL BE USED TO INSTALL NEW GUARDRAIL RUNS AT ALL FOUR CORNERS OF THE STRUCTURE.

FORWARD RIGHT

ITEM 606, GUARDRAIL, TYPE MGS WITH LONG POSTS, 37.5 FT
ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, 1 EACH

FORWARD LEFT

ITEM 606, GUARDRAIL, TYPE MGS WITH LONG POSTS, 87.5 FT
ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, 1 EACH

REAR RIGHT

ITEM 606, GUARDRAIL, TYPE MGS WITH LONG POSTS, 87.5 FT
ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, 1 EACH

REAR LEFT

ITEM 606, GUARDRAIL, TYPE MGS WITH LONG POSTS, 75 FT
ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, 1 EACH

EACH CORNER

ITEM 203, BORROW, 2.5 CU YD
ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016), 1 EACH
ITEM 626, BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL, 2 EACH
ITEM 659, SEEDING AND MULCHING, 33 SY
ITEM 659, COMMERCIAL FERTILIZER, 0.01 TON
ITEM 659, LIME, 0.01 ACRE
ITEM 659, WATER, 0.2 MGAL

TOTAL

ITEM 203, BORROW, 10 CU YD
ITEM 606, GUARDRAIL, TYPE MGS WITH LONG POSTS, 287.5 FT
ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016), 4 EACH
ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, 2 EACH
ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, 2 EACH
ITEM 626, BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL, 8 EACH
ITEM 659, SEEDING AND MULCHING, 132 SY
ITEM 659, COMMERCIAL FERTILIZER, 0.04 TON
ITEM 659, LIME, 0.04 ACRE
ITEM 659, WATER, 0.8 MGAL

POROUS BACKFILL WITH GEOTEXTILE FILTER FABRIC

1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC TYPE A SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK SHALL CONSIST OF REMOVING PART OF THE EXISTING STRUCTURE. THE LIMITS OF THIS REMOVAL SHALL INCLUDE THE EXISTING PEDESTRIAN BRIDGE AND THE EXISTING CONCRETE CRIBBING. THE REMOVAL OF THE EXISTING PEDESTRIAN BRIDGE AND CONCRETE CRIBBING WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF BRIDGE NO. ATB-531-221I (SFN 0406813) OVER CONNEAUT CREEK FOR STRUCTURE EXTENSION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

TIM FISCHER
OHIO EPA/DAPC
NORTHEAST DISTRICT OFFICE (NEDO)
2110 E. AURORA RD
TWINSBURG, OH 44087
(330) 963-1200
FAX: (330) 487-0769

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306

BASIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ATB-531-221I)

THE PARAPETS CONSTRUCTED ON ATB-531-221I SHALL BE FORM LINED ON BOTH SIDES USING MOLDS THAT PROVIDE THE APPEARANCE OF ASHLAR CUT STONE WITH A MAXIMUM RELIEF OF 1". THIS FORM LINED SURFACE SHALL BE IN ADDITION TO THE NORMAL BARRIER SHAPE. ACCEPTABLE FORM LINERS ARE AS FOLLOW:

- 1) SCOTT SYSTEMS, INC. #167C, ASHLAR STONE
- 2) CUSTOM ROCK INTERNATIONAL #11003, RUSTIC ASHLAR
- 3) FITZGERALD FORMLINERS #16999, GEORGIA ASHLAR
- 4) GREENSTREAK FORMLINERS #330, ASHLAR STONE
- 5) APPROVED EQUAL, ASHLAR CUT STONE FORMLINER, 1" MAX. RELIEF

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN.

PAVEMENT (ATB-531-221I)

THE CONTRACTOR SHALL PRESERVE THE PAVEMENT ON ATB-531-221I DURING THE REPLACEMENT OF THE PARAPETS. ANY PAVEMENT DAMAGED DURING THE PARAPET REMOVAL AND/OR INSTALLATION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO ODOT.

ITEM 607 - FENCE, MISC.: WOOD FENCE

THIS ITEM SHALL FOLLOW THE SPECIFICATIONS OF ITEM 607 AS WELL AS ODOT STANDARD CONSTRUCTION DRAWING RM-5.2 FOR BIKEWAY RAILING. SEE SHEET 20/36 FOR LOCATIONS.

THE CONTRACTOR SHALL USE A 10 FOOT MAX POST SPACING CENTERED ACROSS THE WIDTH OF THE EXISTING CULVERT SO THAT 6"X6" WOOD POSTS ARE EMBEDDED AT 3' DEPTH TOWARDS THE OUTER SIDES OF THE CULVERT. THE PROPOSED BIKEWAY RAILING SHALL NOT PROTRUDE THROUGH THE TOP OF THE CULVERT. THE FENCE SHALL BE PLACED A DISTANCE OF 1.5' FEET FROM THE SIDEWALK.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

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

STRUCTURE GENERAL NOTES ATB-531-221I OVER CONNEAUT CREEK	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING
STRUCTURE GENERAL NOTES ATB-531-221I OVER CONNEAUT CREEK	DATE MM/DD/YY STRUCTURE FILE NUMBER 0406813
DESIGNED CMR CHECKED MJA	REVIEWED MJA STRUCTURE FILE NUMBER 0406813
DRAWN CMR REVISED CMR	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING
ATB-20/531-21.86 / 22.11 PART 3 PID No. 98903	5 / 15 <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 25 36 </div>

I:\ProjectData\ATB\98903_531-22\Design\Roadway\Sheets\Structure\98903_5000.dgn Sheet 3/1/2021 11:35:41 AM crees

CALC: MJA DATE: 10/15/2020
 CHECKED: DATE:

ESTIMATED QUANTITIES (05/S<2/BR)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN				LS	2/13
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				LS	2/13
202	30000	243	SF	WALK REMOVED			243		
202	32000	61	FT	CURB REMOVED			61		
203	10000	35	CY	EXCAVATION				35	
203	20000	167	CY	EMBANKMENT				167	
203	35120	35	CY	GRANULAR MATERIAL, TYPE C				35	
203	40000	10	CY	BORROW			10		
204	50000	70	SY	GEOTEXTILE FABRIC				70	
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING				LS	
503	21300	LS		UNCLASSIFIED EXCAVATION				LS	
509	10001	8037	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN			1810	6227	2/13
510	10000	270	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT			208	62	
511	46010	18	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING				18	
511	46510	42	CY	CLASS QC1 CONCRETE, FOOTING				42	
511	34449	12	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			12		3/13
511	53012	10	CY	CLASS QC2 CONCRETE, MISC.: CAST-IN-PLACE JUNCTION				10	
512	10100	137	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			72	65	
512	33000	86	SY	TYPE 2 WATERPROOFING				86	
516	13600	34	SF	1" PREFORMED EXPANSION JOINT FILLER				34	
518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC				LS	
601	32004	49	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC				49	
606	15100	287.5	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS			287.5		
606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)			4		
606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1			2		
606	35102	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2			2		
607	98000	77	FT	FENCE, MISC.: WOODEN FENCE			77		
608	10000	623	SF	4" CONCRETE WALK			623		
609	26000	61	FT	CURB, TYPE 6			61		
611	96201	14	FT	12' X 10' CONDUIT, TYPE A, 706.05, AS PER PLAN				14	2/13
626	00110	8	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL			8		
659	00300	18	CY	TOPSOIL				18	
659	10000	288	SY	SEEDING AND MULCHING			132	156	
659	14000	9	SY	REPAIR SEEDING AND MULCHING				9	
659	20000	0.06	TON	COMMERCIAL FERTILIZER			0.04	0.02	
659	31000	0.07	ACRE	LIME			0.04	0.03	
659	35000	1.8	MGAL	WATER			0.8	1	

DESIGN AGENCY
 ODOT --- DISTRICT 4
 PLANNING & ENGINEERING

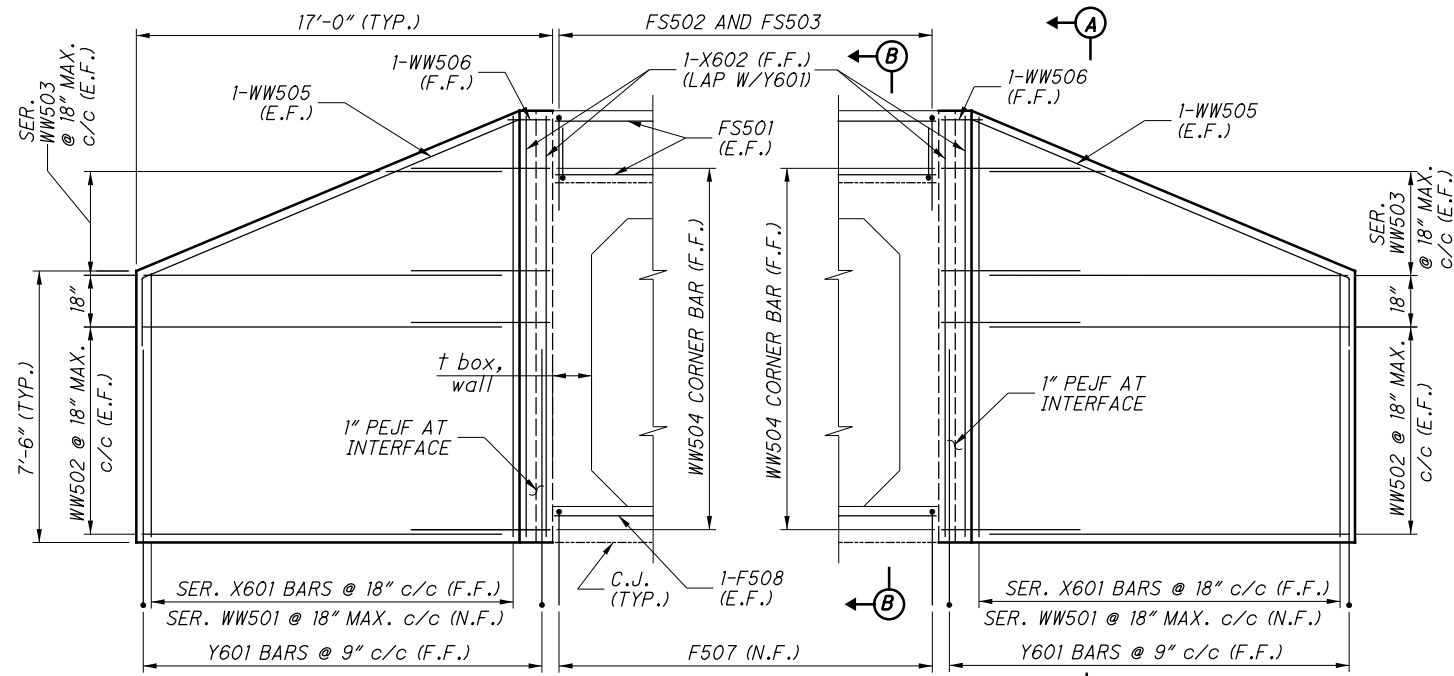
DATE
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 STRUCTURE FILE NUMBER
 0406813

DRAWN
 MJA
 REVISION
 CMR

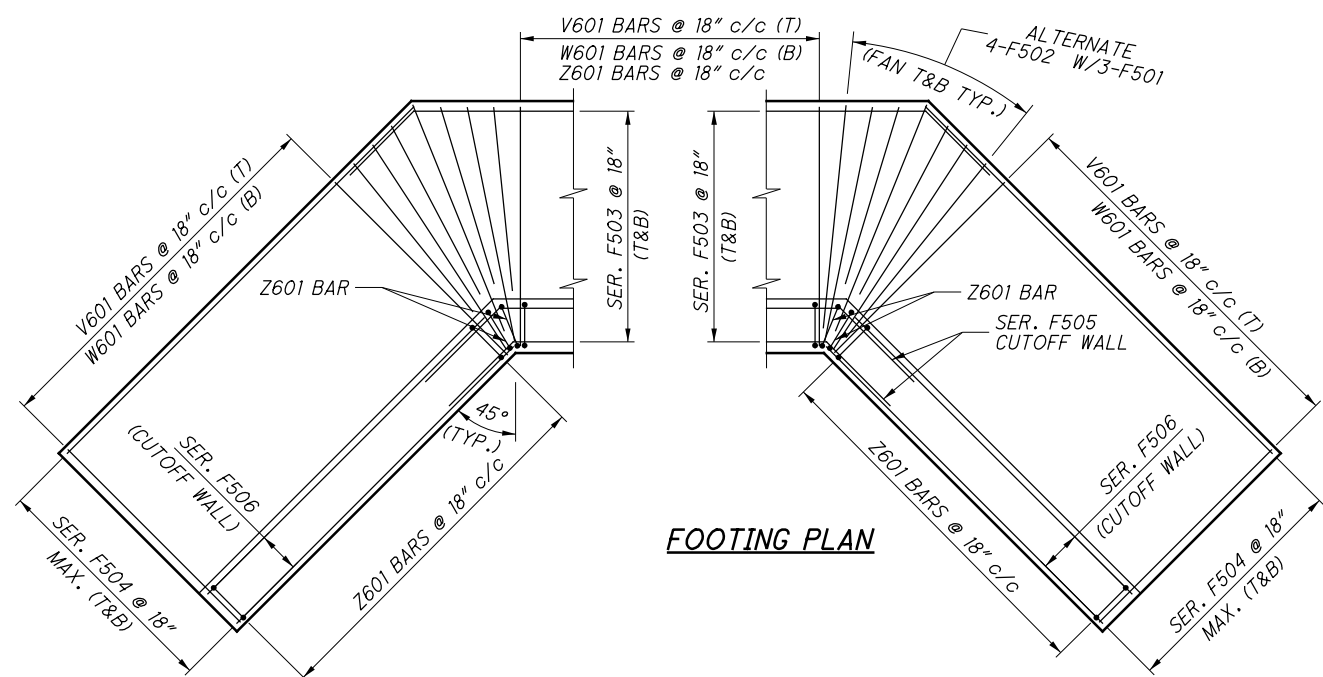
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STRUCTURE ESTIMATED QUANTITIES
 ATB-531-2211
 OVER CONNEAUT CREEK

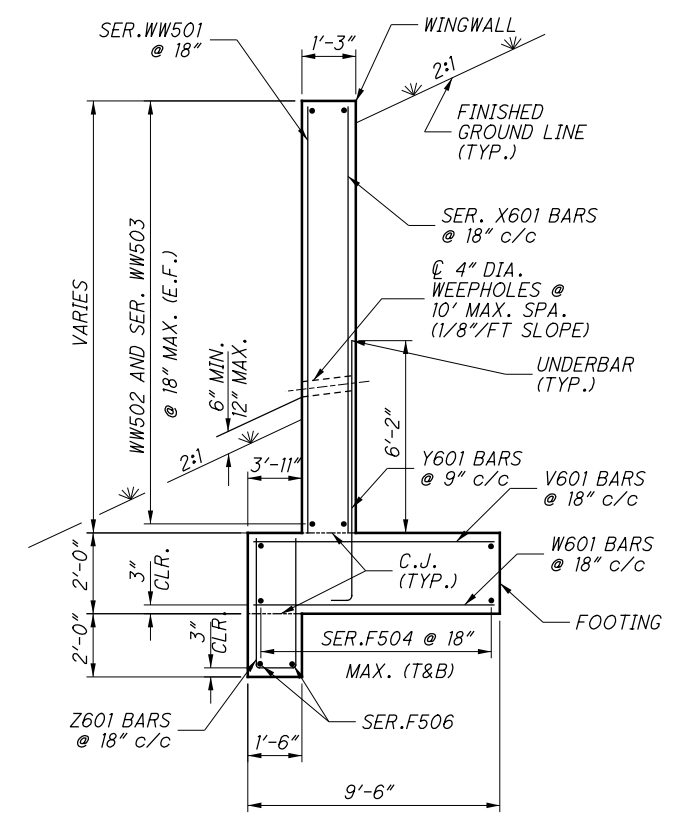
ATB-20/531-21.86/22.11
PART 3
 PID No. 98903



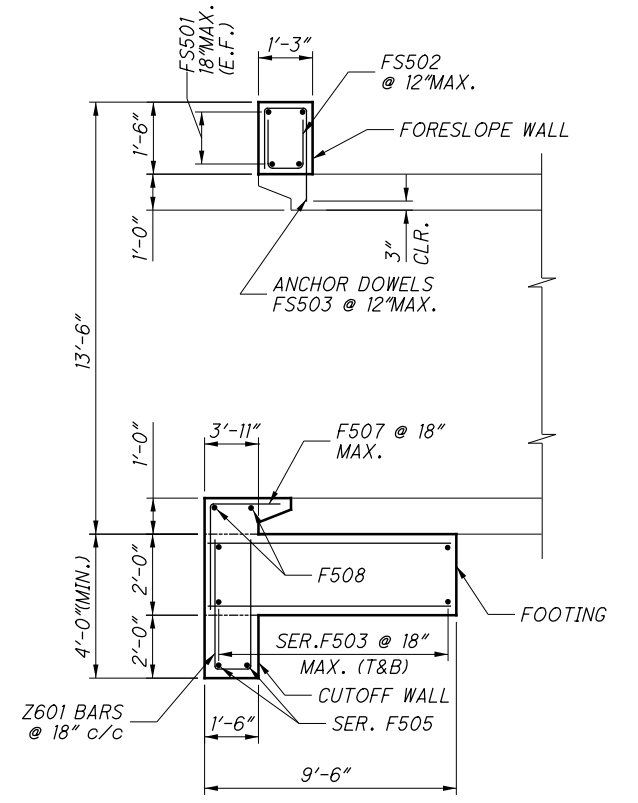
WINGWALL ELEVATION
(FOOTING NOT SHOWN)



FOOTING PLAN



SECTION A-A
(POROUS BACKFILL NOT SHOWN FOR CLARITY)



SECTION B-B
(CULVERT INLET BEVEL SHOWN)

- NOTES**
1. FOR CULVERT LOCATION PLAN, SEE SHEET 1/13.
 2. FOR PRECAST BOX CULVERT DETAILS, SEE SHEET 1/13.
 3. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, WW501 IS A NO.5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 4. THE LAP SPLICE LENGTHS USED IN THESE DETAILS ARE AS FOLLOWS: 2'-5" FOR #5 BARS; 2'-11" FOR #6 BARS.

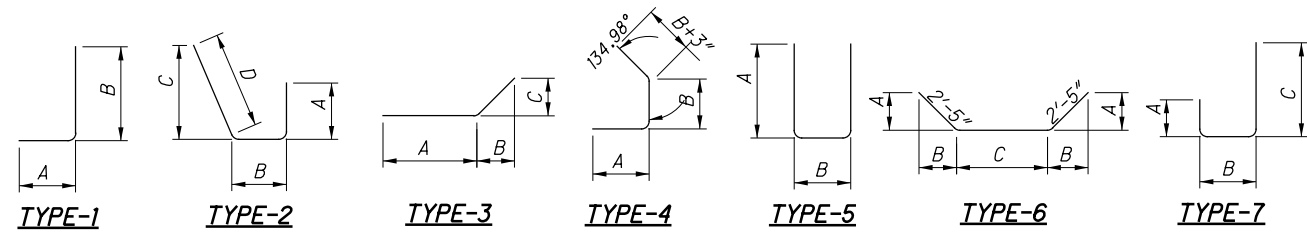
LEGEND:

C.J.	CONSTRUCTION JOINT	N.F.	NEAR FACE
CLR.	CLEAR	SER.	SERIES
DIA.	DIAMETER	STR.	STRAIGHT
E.F.	EACH FACE	(T)	TOP
F.F.	FAR FACE	(B)	BOTTOM
MAX.	MAXIMUM	T&B	TOP AND BOTTOM
MIN.	MINIMUM	TYP.	TYPICAL
PEJF	PREFORMED EXPANSION JOINT FILLER	INC.	INCREMENT

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TYPE A HEADWALL REINFORCING SCHEDULE

BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS				INC.	
					A	B	C	D		
WINGWALLS										
X601	SERIES	2	7'- 4''							
	of 13		13'- 4''							0'- 6''
X602		4	13'- 4''	STR.						
Y601		52	8'- 3''	1	0'- 6''	7'- 11''				
WW501	SERIES	2	7'- 4''							
	of 13		13'- 4''							0'- 6''
WW502		20	16'- 8''	STR.						
		4	4'- 2''							
WW503	SERIES									4'- 2''
	of 4		16'- 8''							
WW504		18	3'- 11''	2	0'- 10''	0'- 3 1/4''	2'- 1''	2'- 11 1/4''		
WW505		4	20'- 1''	3	2'- 5''	5'- 10''	16'- 8''			
WW506		2	1'- 6''	4	0'- 10''	0'- 3 1/4''				
FOOTING & CUTOFF WALL										
V601		33	9'- 2''	STR.						
W601		33	9'- 2''	STR.						
Z601		37	8'- 0''	5	3'- 7''	1'- 2''				
F501		12	8'- 3''	STR.						
F502		16	6'- 5''	STR.						
		2	16'- 0''				11'- 3/4''			
F503	SERIES									
	of 8		23'- 7''		1'- 9''	1'- 9''	TO			1'- 1 1/8''
		4	15'- 3''				18'- 8''			
F504	SERIES									0'- 6 1/2''
	of 8		19'- 0''							
		1	16'- 0''				11'- 3/4''			
F505	SERIES									
	of 2		17'- 0''		1'- 9''	1'- 9''	TO			0'- 11 3/4''
		2	15'- 3''				12'- 1/2''			
F506	SERIES									0'- 5''
	of 2		15'- 8''							
F507		11	6'- 7''	1	4'- 0''	2'- 8''				
F508		2	13'- 8''	STR.						
FORESLOPE WALL										
FS501		4	13'- 8''	STR.						
FS502		15	3'- 0''	5	1'- 2''	0'- 11''				
FS503		15	3'- 11''	7	1'- 2''	0'- 11''	2'- 1''			
			TOTAL							4,937



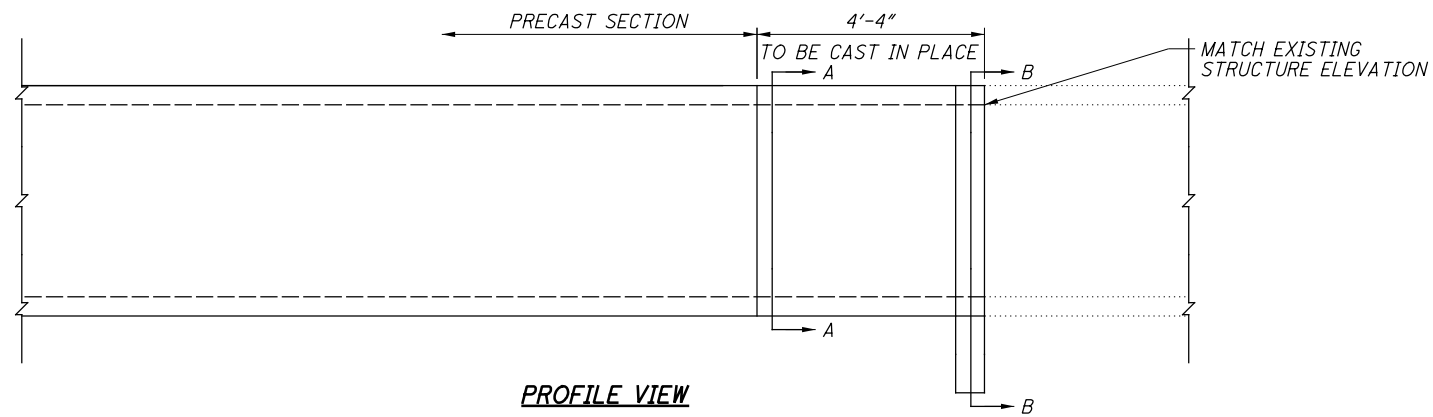
NOTES

1. REINFORCING IS FOR ONE HEADWALL.
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, WW501 IS A NO.5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. FORESLOPE WALL REINFORCING IS SHOWN FOR INFORMATION ONLY. BARS WILL BE INCLUDED WITH THE PRICE OF THE BOX. BOX AND FORESLOPE WALL WILL BE CAST-IN-PLACE IN THE SHOP.

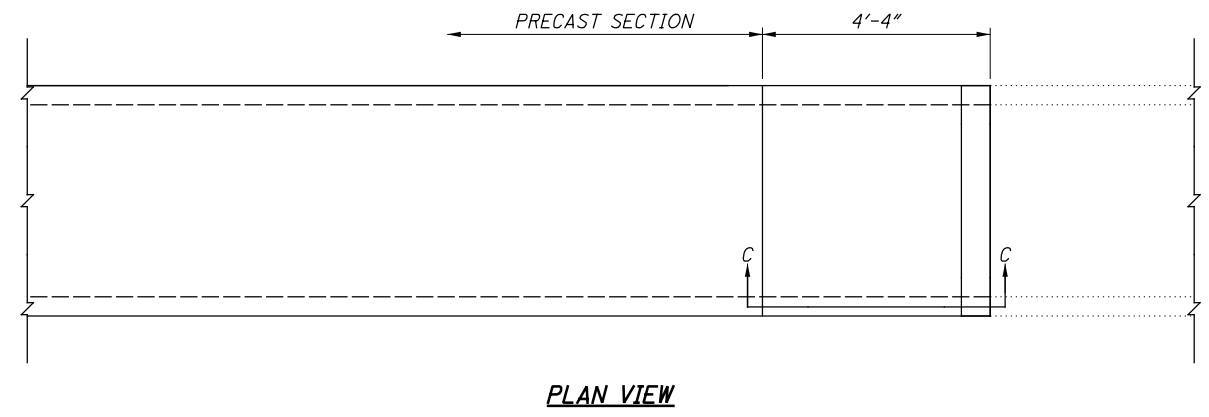
BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTING, CUTOFF WALL, WINGWALLS AND FORESLOPE WALL SHALL BE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING AND ITEM 511 - CLASS QC1 CONCRETE, FOOTING. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

DESIGNED CMR	CHECKED MJA	DRAWN CMR	REVISED CMR	REVIEWED MJA	DATE MM/DD/YY	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING
STRUCTURE DETAILS				STRUCTURE FILE NUMBER 0406813		
ATB-531-2211				OVER CONNEAUT CREEK		
ATB-20/531-21.86/22.11				PART 3		
PID No. 98903				9/15		
29				36		

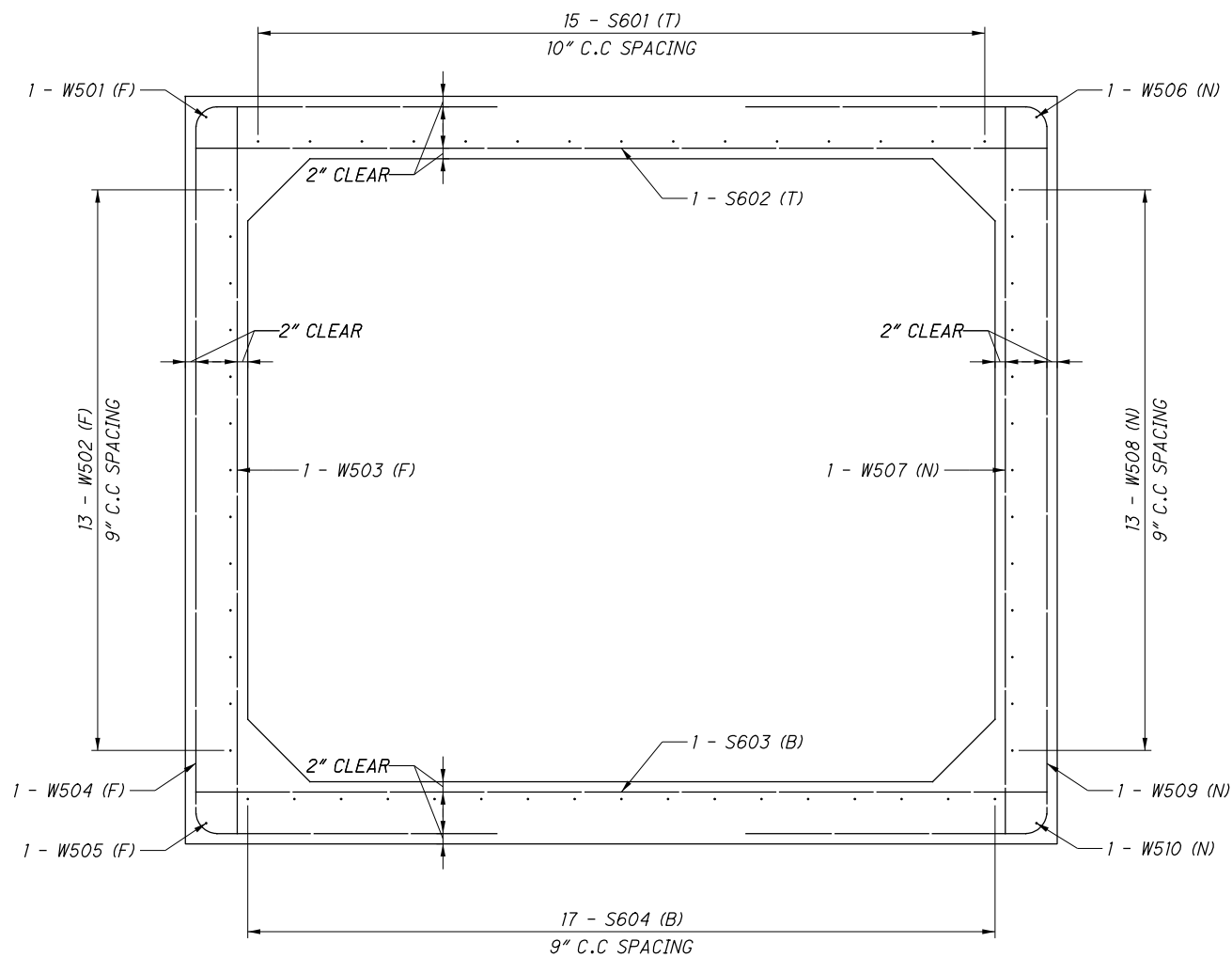
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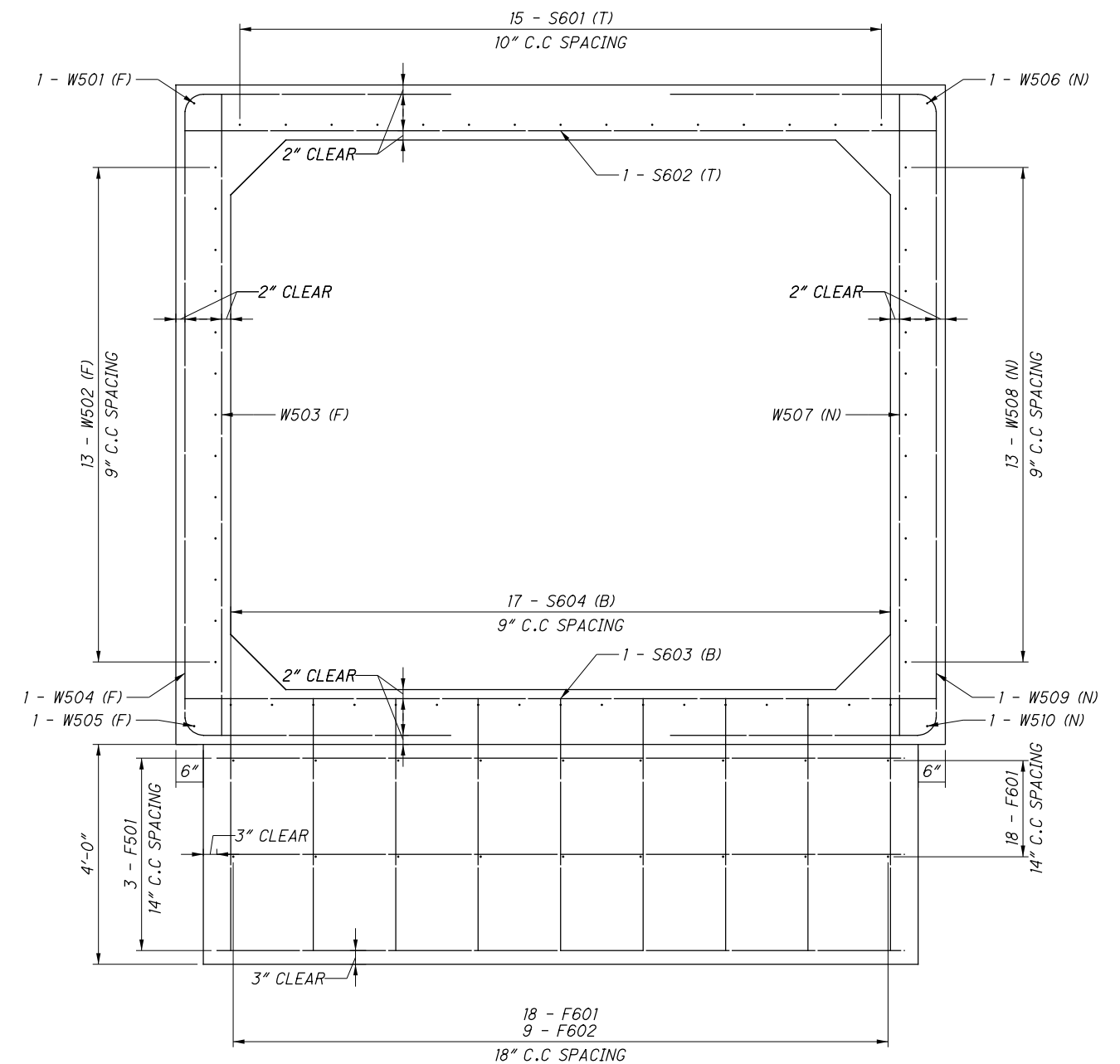
PROFILE VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

LEGEND

- (T) - TOP
- (B) - BOTTOM
- (N) - NEAR
- (F) - FAR
- # - DOWEL HOLE WITH NONSHRINK NONMETALLIC GROUT
- MIN 4" OF COVER REQUIRED
- ALL DOWEL HOLES TO BE A DEPTH OF 12"

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

REVIEWED DATE
MJA MM/DD/YY
STRUCTURE FILE NUMBER
0406813

DRAWN CMR
REVISOR CMR

DESIGNED CMR
CHECKED MJA

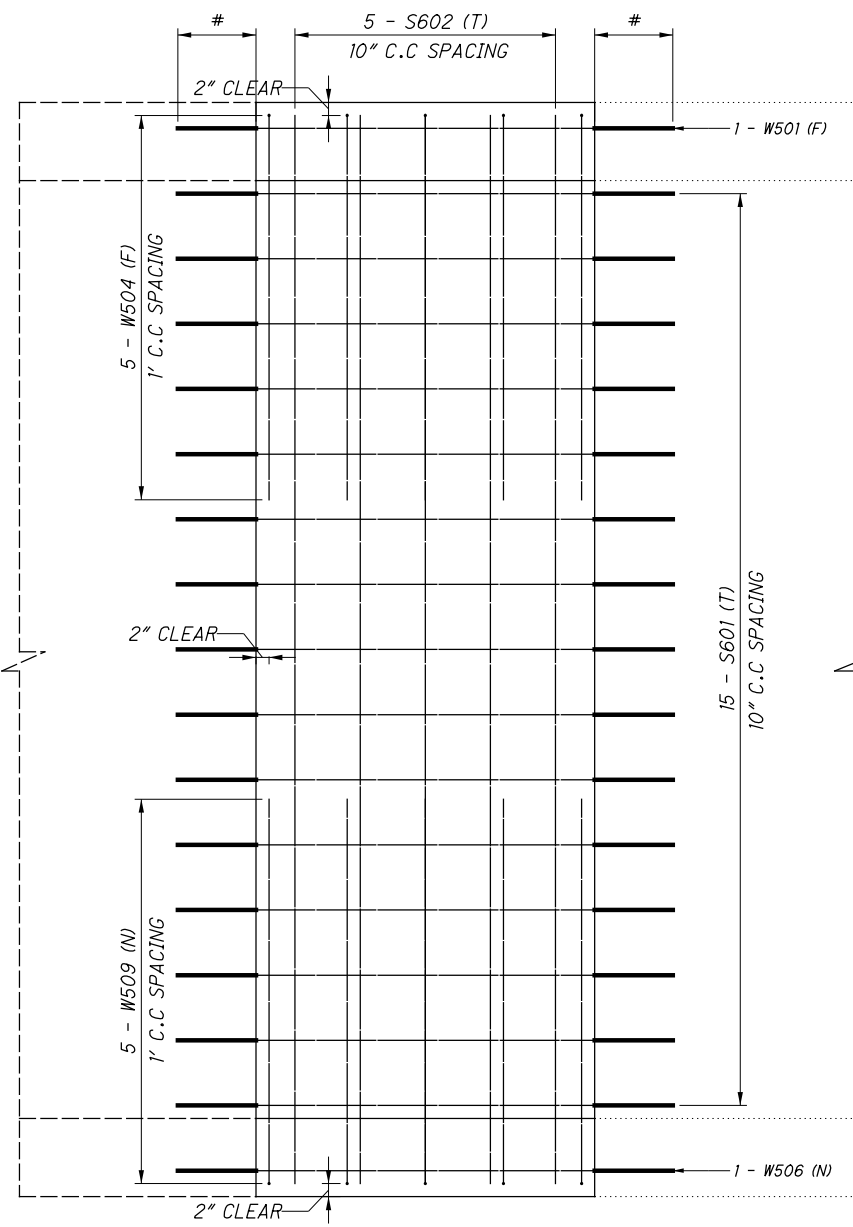
CAST IN PLACE JUNCTION DETAILS
ATB-531-2211
OVER CONNEAUT CREEK

ATB-20/531-21.86/22.11
PART 3
PID No. 98903

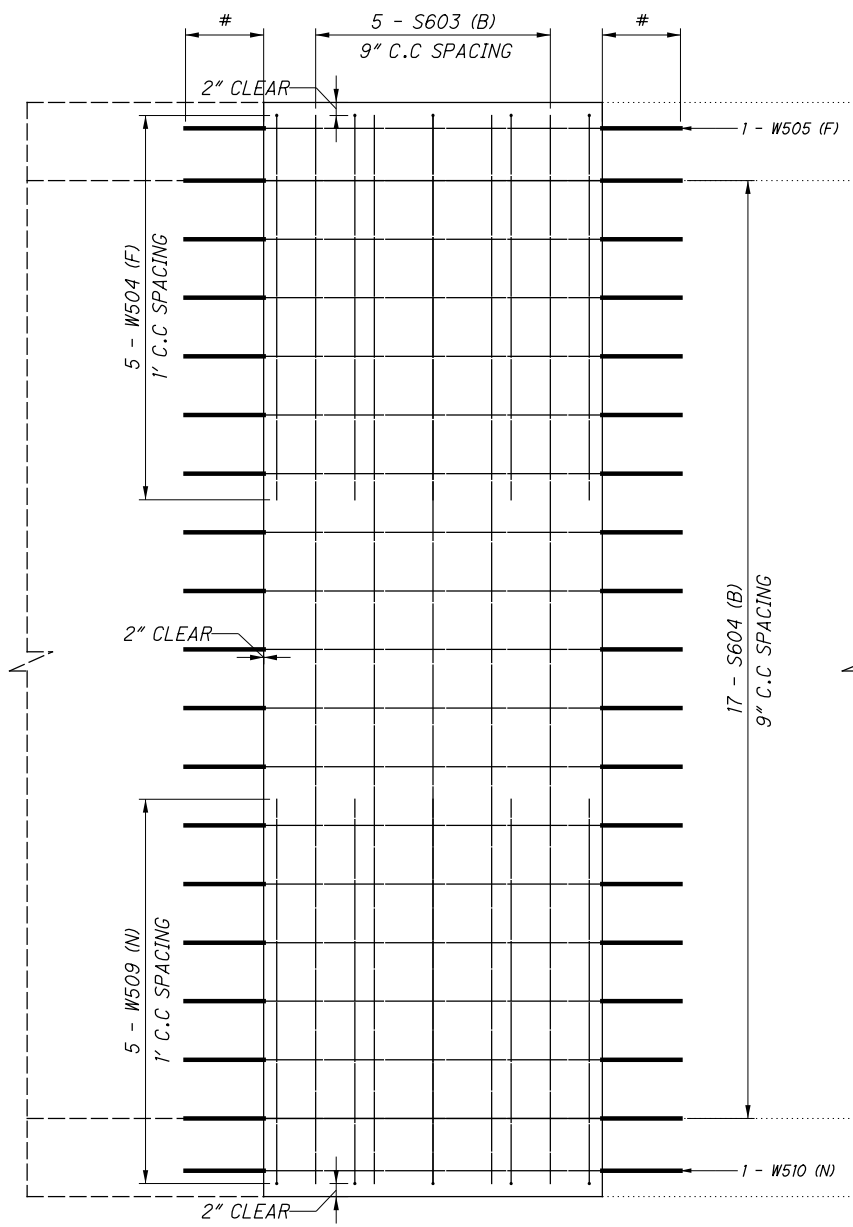
10 / 15

30
36

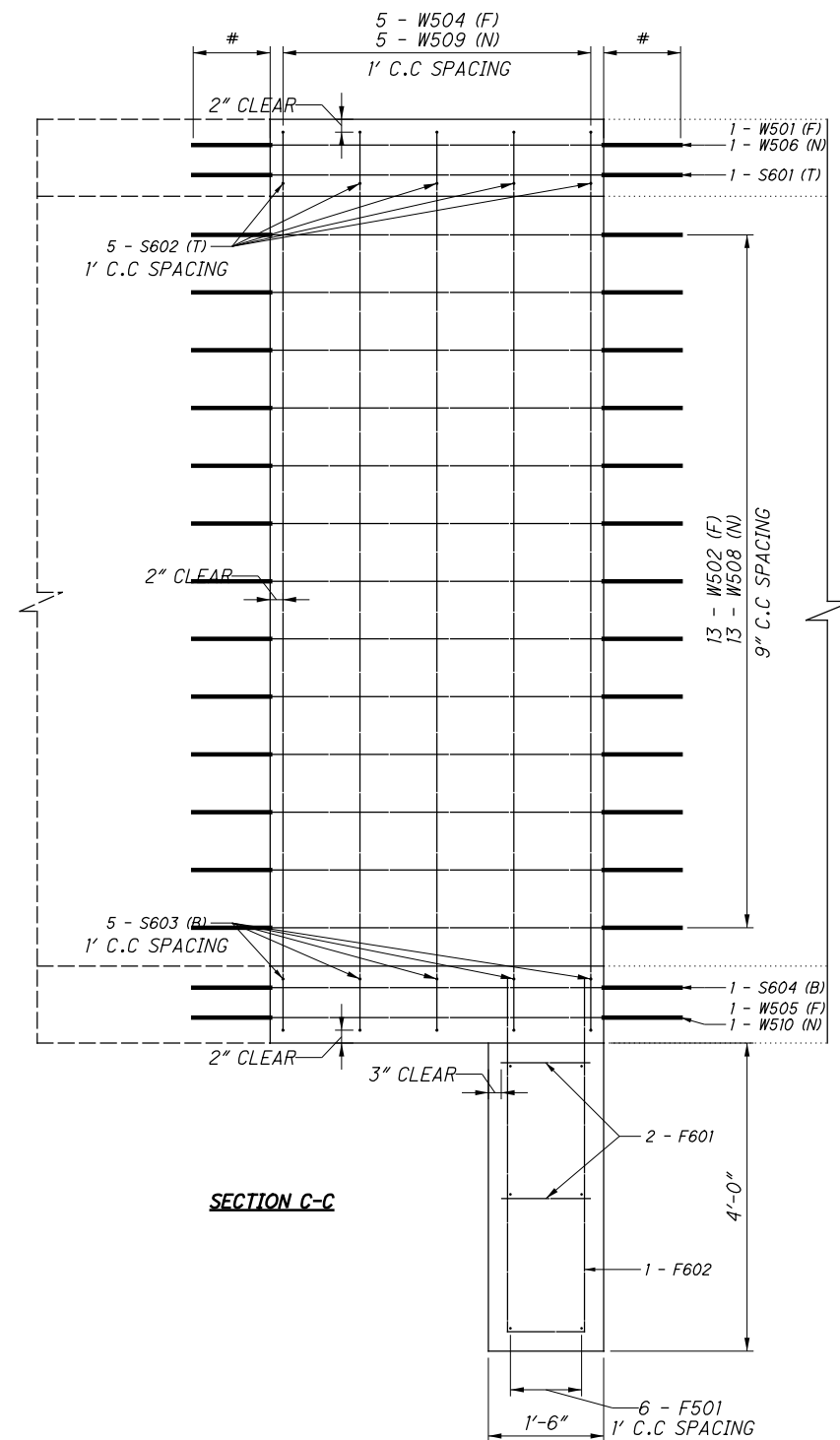
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PLAN VIEW - TOP



PLAN VIEW - BOTTOM



SECTION C-C

LEGEND

- (T) - TOP
- (B) - BOTTOM
- (N) - NEAR
- (F) - FAR
- # - DOWEL HOLE WITH NONSHRINK NONMETALLIC GROUT
 - MIN 4" OF COVER REQUIRED
 - ALL DOWEL HOLES TO BE A DEPTH OF 12"

DESIGNED	DRAWN	REVIEWED	DATE
CMR	CMR	MJA	MM/DD/YY
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA	CMR	0406813	

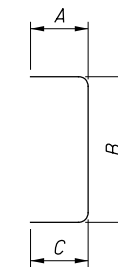
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MARK	NUMBER						LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS				
	TOP SLAB	BOTTOM SLAB	NEAR SLAB	FAR SLAB	FOOTER SLAB	TOTAL				A	B	C	D	E
S601	15					15	6'-4"	143	STR					
S602	5					5	13'-8"	103	STR					
S603		5				5	13'-8"	103	STR					
S604		17				17	6'-4"	162	STR					
SLAB SUB-TOTAL								511						
W501				1		1	6'-4"	7	STR					
W502				13		13	6'-4"	86	STR					
W503				5		5	11'-8"	61	STR					
W504				5		5	21'-6"	113	1	4'-11"	11'-8"	4'-11"		
W505			1			1	6'-4"	7	STR					
W506				1		1	6'-4"	7	STR					
W507			5			5	11'-8"	61	STR					
W508			13			13	6'-4"	86	STR					
W509			5			5	21'-6"	113	1	4'-11"	11'-8"	4'-11"		
W510			1			1	6'-4"	7	STR					
WALL SUB-TOTAL								534						
F501					6	6	12'-6"	79	STR					
F601					18	18	1'-0"	28	STR					
F602					9	9	10'-2"	138	2	4'-7"	1'-0"	4'-7"		
FOOTER SUB-TOTAL								245						
GRAND TOTAL								1290						

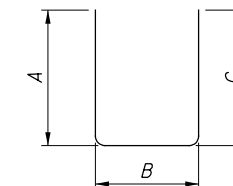
THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL IS TO BE EPOXY COATED.

BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE CAST-IN-PLACE JUNCTION BOX SHALL BE INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, MISC.: CAST-IN-PLACE JUNCTION PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.



TYPE-1



TYPE-2

CAST IN PLACE JUNCTION DETAILS

ATB-20/531-21.86/22.11
PART 3
PID No. 98903

12 / 15

32
36

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

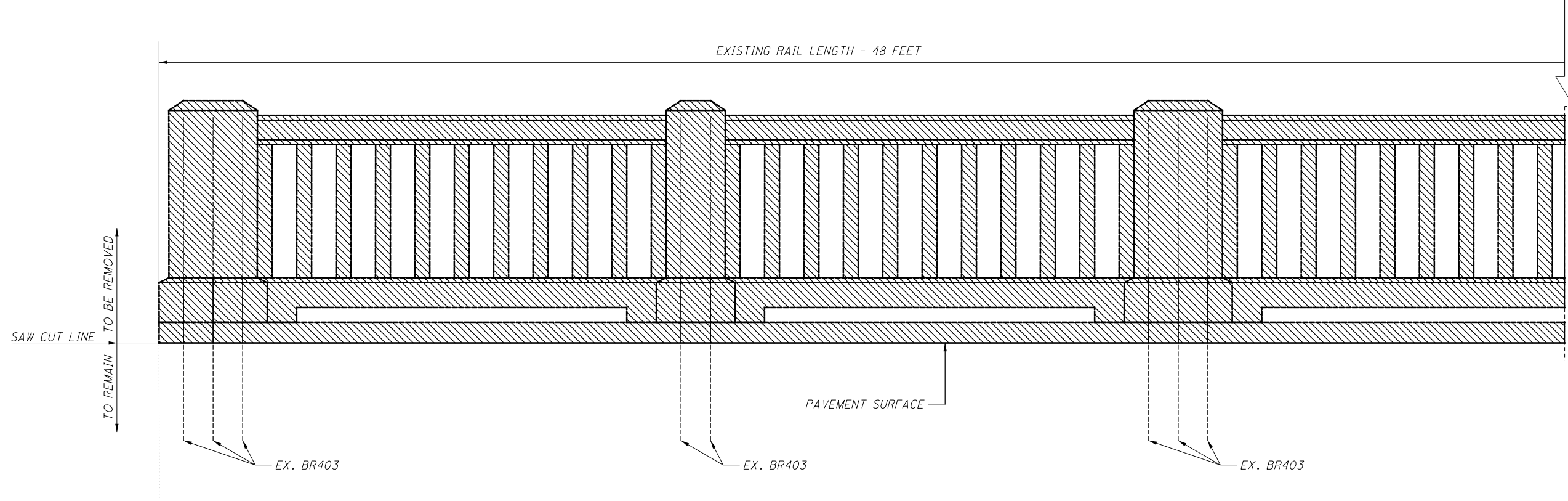
REVIEWED
DATE MM/DD/YY
MJA
STRUCTURE FILE NUMBER
0406813

DESIGNED
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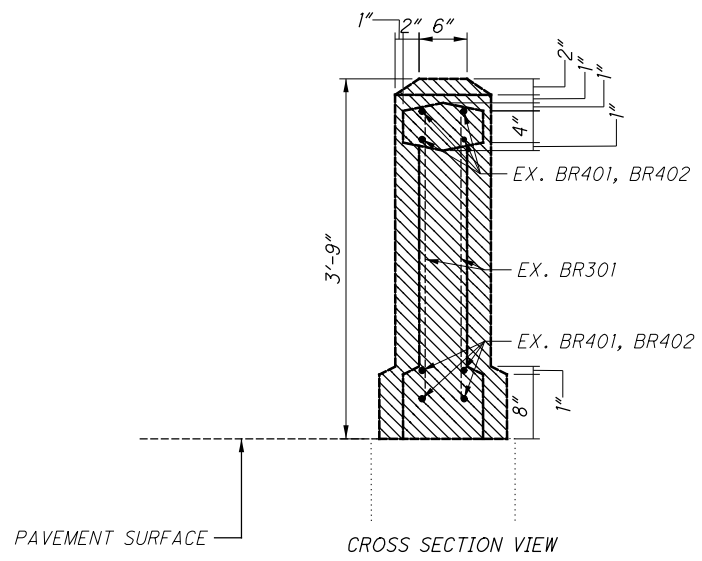
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ATB-531-2211
OVER CONNEAUT CREEK

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PROFILE VIEW

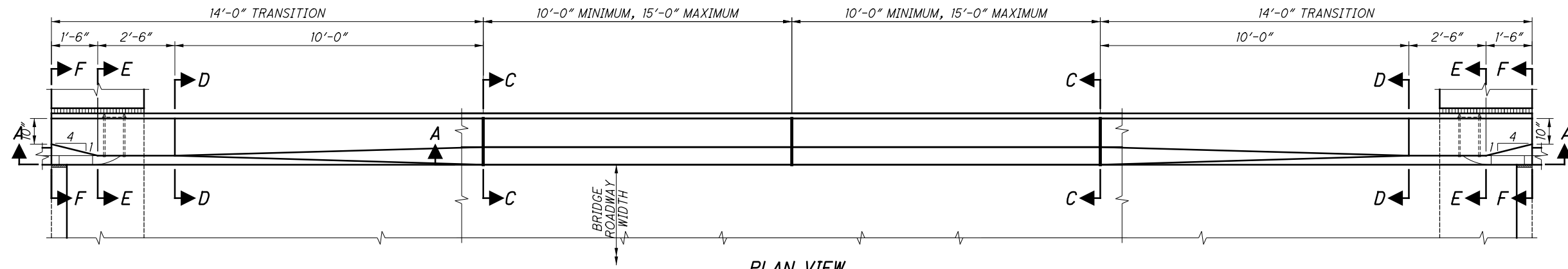


CROSS SECTION VIEW

 TO BE REMOVED

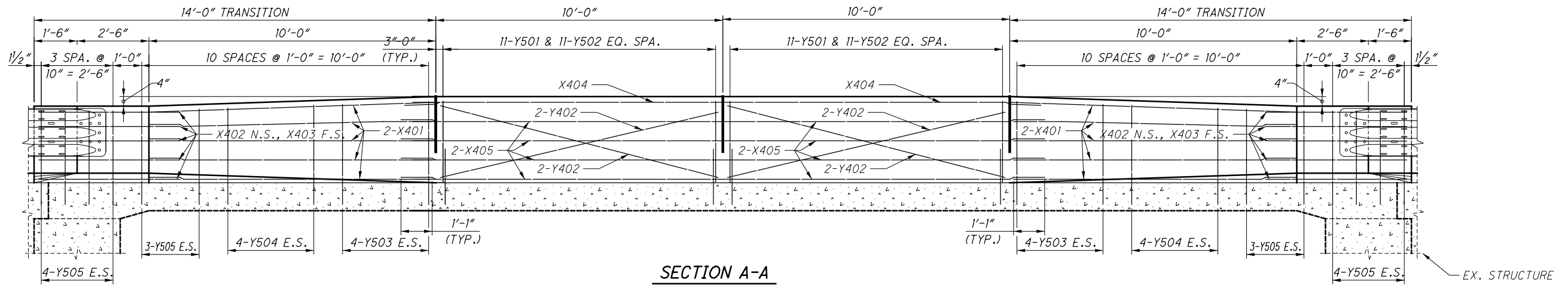
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13 / 15		33 36						

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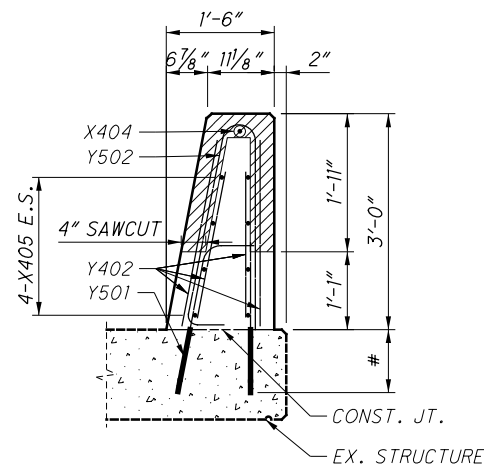


PLAN VIEW

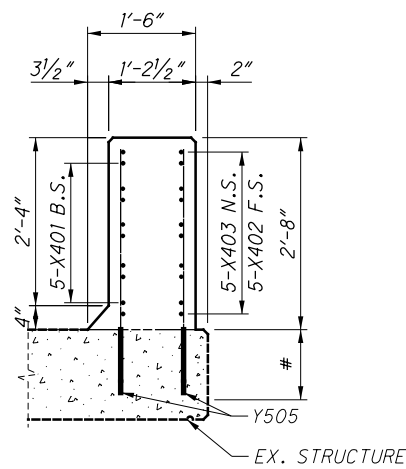
36" SBR-3 TRANSITION MOUNTED ON BRIDGE SHOWN WITH SEMI-INTEGRAL ABUTMENT (INTEGRAL ABUTMENT AND CAPPED PILE ABUTMENT SIMILAR)



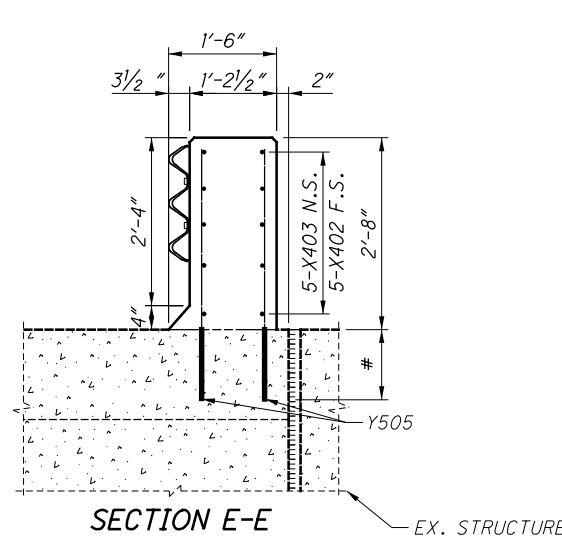
SECTION A-A



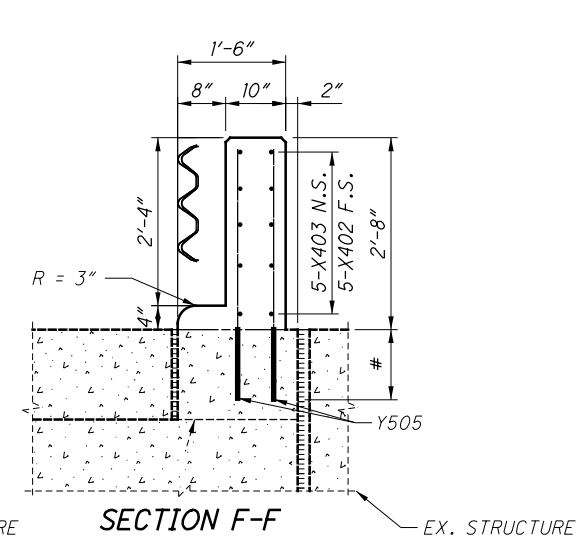
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

LEGEND:

- N.S. = NEAR SIDE
- F.S. = FAR SIDE
- E.S. = EACH SIDE
- B.S. = BOTH SIDE
- # - DOWEL HOLE WITH NONSHRINK NONMETALLIC GROUT
- ALL DOWEL HOLES TO BE A DEPTH OF 12"

DESIGNED	MJA	CHECKED	MJA
DRAWN	MJA	REVISED	CMR
REVIEWED	MJA	STRUCTURE FILE NUMBER	0406813
DATE	MM/DD/YY	DESIGN AGENCY	ODOT --- DISTRICT 4
			PLANNING & ENGINEERING
RAILING DETAILS			
ATB-531-2211 OVER CONNEAUT CREEK			
ATB-20/531-21.86/22.11	PART 3	PID No. 98903	
14/15	34	36	

SEE SCD SBR-3-20 FOR MORE DETAILS
SEE NOTE ON PAGE 3/13 FOR FORM LINER INFORMATION

NORTH SIDE PARAPET

MARK	NUMBER				LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS				
	REAR ABUT	FWD ABUT	SUPER	TOTAL				A	B	C	D	E
X401			20	20	10'-0"	134	STR					
X402			10	10	6'-4"	43	1	2'-6"	2'-5"	1'-5"	1-1/2"	5"
X403			10	10	5'-1"	34	STR					
X404			2	2	10'-0"	14	STR					
X405			16	16	10'-0"	107	STR					
Y402			8	8	10'-0"	54	STR					
Y501			22	22	6'-7"	152	2	1'-0"	1'-0"	4'-7"		
Y502			22	22	6'-2"	142	3	6"	2'-11"	2'-9"		
Y503			16	16	3'-8"	62	4	1'-0"	2'-8"			
Y504			16	16	3'-7"	60	4	1'-0"	2'-7"			
Y505			28	28	3'-6"	103	4	1'-0"	2'-6"			
GRAND TOTAL						905						

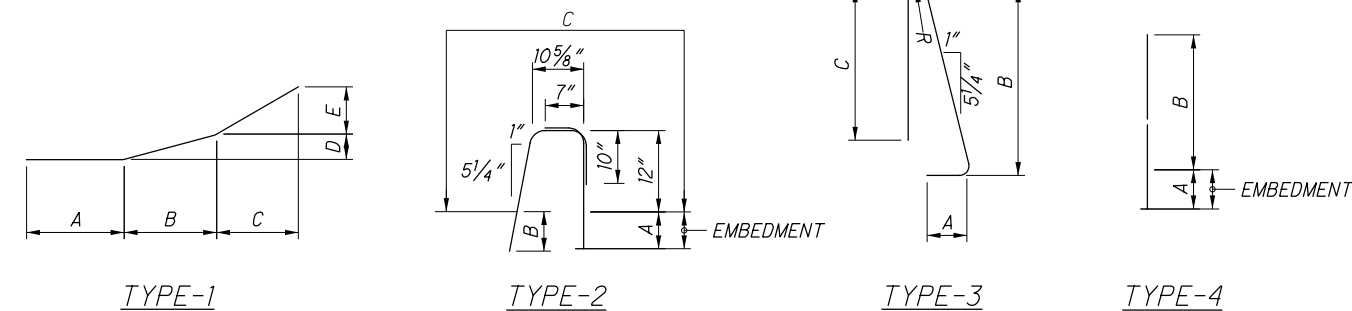
SOUTH SIDE PARAPET

MARK	NUMBER				LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS				
	REAR ABUT	FWD ABUT	SUPER	TOTAL				A	B	C	D	E
X401			20	20	10'-0"	134	STR					
X402			10	10	6'-4"	43	1	2'-6"	2'-5"	1'-5"	1-1/2"	5"
X403			10	10	5'-1"	34	STR					
X404			2	2	10'-0"	14	STR					
X405			16	16	10'-0"	107	STR					
Y402			8	8	10'-0"	54	STR					
Y501			22	22	6'-7"	152	2	1'-0"	1'-0"	4'-7"		
Y502			22	22	6'-2"	142	3	6"	2'-11"	2'-9"		
Y503			16	16	3'-8"	62	4	1'-0"	2'-8"			
Y504			16	16	3'-7"	60	4	1'-0"	2'-7"			
Y505			28	28	3'-6"	103	4	1'-0"	2'-6"			
GRAND TOTAL						905						

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL IS TO BE EPOXY COATED.

BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE NORTH AND SOUTH SIDE PARAPET SHALL BE INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.



RAILING DETAILS
ATB-531-2211
OVER CONNEAUT CREEK

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

REVIEWED
DATE
MM/DD/YY
MJA
STRUCTURE FILE NUMBER
0406813

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MJA
REVISED
CMR

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