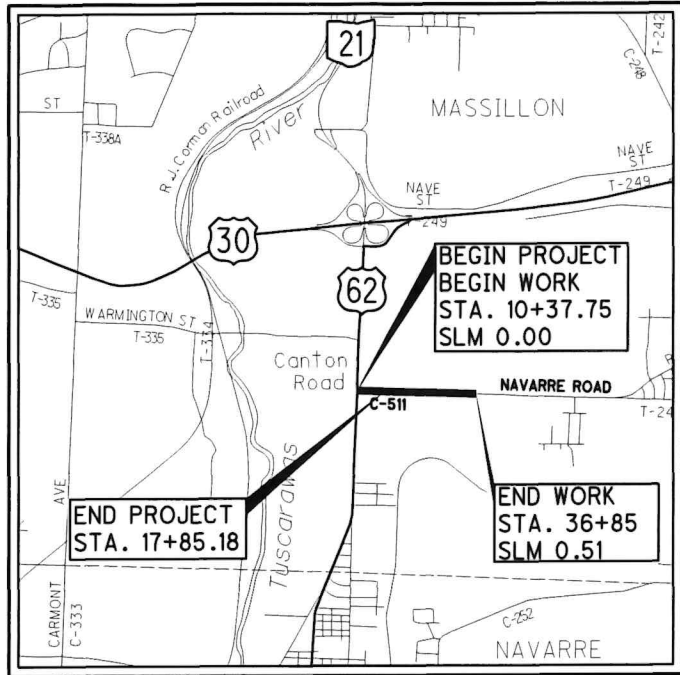




LOCATION MAP

LATITUDE: N 40°44'51" LONGITUDE: W 81°31'01"



PORTION TO BE IMPROVED.....
INTERSTATE HIGHWAY.....
FEDERAL ROUTES.....
STATE ROUTES.....
COUNTY & TOWNSHIP ROADS.....
OTHER ROADS.....

DESIGN DESIGNATION

CURRENT ADT (2019)..... 7454
DESIGN YEAR ADT (2019)..... 7454
TRUCKS (24 HOUR B&C)..... NA
DESIGN SPEED..... 45
LEGAL SPEED..... 45
DESIGN FUNCTIONAL CLASSIFICATION:..... URBAN MINOR ARTERIAL
NHS PROJECT..... NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
W. E. QUICKSALL AND ASSOCIATES, INC.
CIVIL ENGINEERS
554 West High Ave.
New Philadelphia, Ohio

ENGINEER'S SEAL:

SIGNED: *Nathan W. Quicksall*
DATE: 3/8/2022

STARK COUNTY, OHIO
OFFICE OF COUNTY ENGINEER
**NAVARRE ROAD
WIDENING**
PERRY TOWNSHIP
STA-CR511-0.00

INDEX OF SHEETS:

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-1.1	7/28/00	CB-2-2A	7/16/21	MT-95.31	7/19/19	TC-41.20	10/18/13
BP-2.1	1/21/22	CB-3A	7/16/21	MT-95.50	7/21/17	TC-42.20	10/18/13
BP-2.2	1/15/21	CB-2-3	7/16/21	MT-97.11	1/20/17	TC-52.10	10/18/13
BP-2.5	1/21/22	MH-3	7/16/21	MT-99.20	4/19/19	TC-52.20	1/15/21
BP-3.1	1/21/22			MT-101.90	7/17/20	TC-71.10	7/16/21
BP-3.2	1/18/19			MT-105.10	7/17/20	TC-82.10	7/19/19
BP-4.1	7/19/13						
BP-5.1	1/21/22						
RM-1.1	1/15/21	DM-1.1	7/17/20				
		DM-2.1	1/18/13				
		DM-4.3	1/15/16				
		DM-4.4	1/15/16				

PROJECT DESCRIPTION

THE PROJECT WILL ADD A 500 FOOT WESTBOUND RIGHT TURN LANE ON C.R. 511 (NAVARRE RD.) FOR TRAFFIC APPROACHING U.S. 62/S.R. 21. THE PROJECT WILL MILL AND RESURFACE C.R. 511 (NAVARRE RD.) FROM U.S. 62/S.R. 21 TO THE WHEELING-LAKE ERIE RAILROAD TRACKS APPROXIMATELY 0.51 MILES EAST OF INTERSECTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.27 Ac.
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 Ac.
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ COUNTY ENGINEER

ADOPTED BY THE STARK COUNTY BOARD OF COMMISSIONERS
PER RESOLUTION DATED _____

FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
-

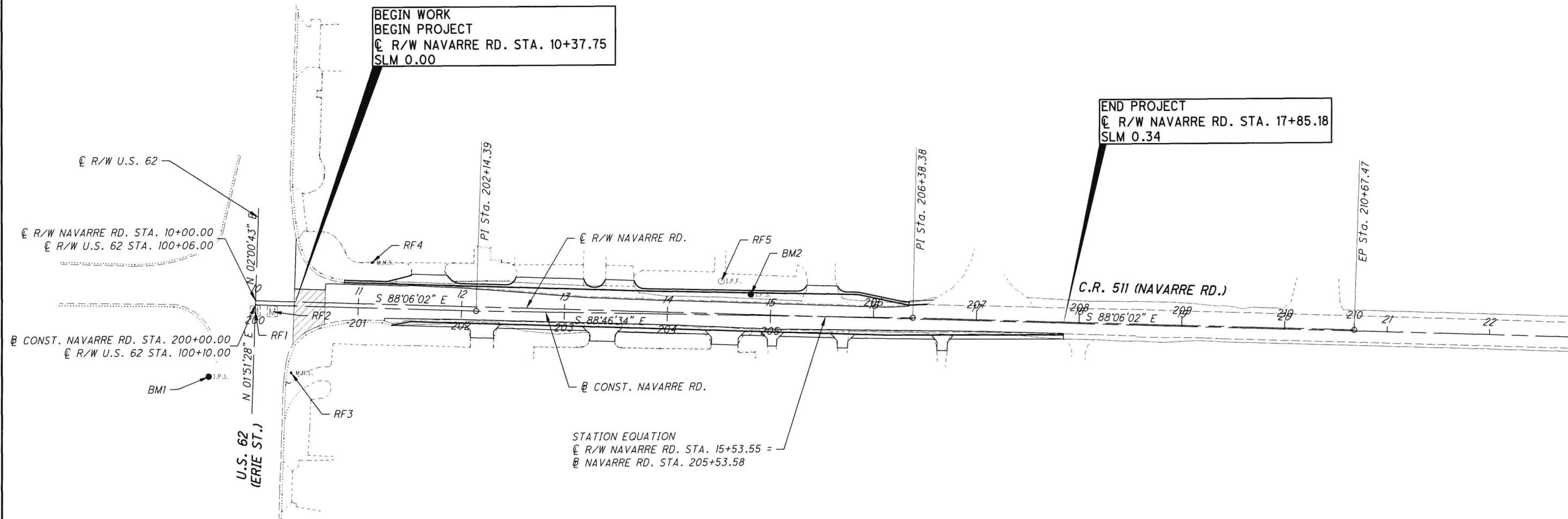
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

STA-CR511-0.00

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HORIZONTAL AND VERTICAL CONTROL						
REF.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
BM1	*99+34.98	*43.11' LT.	395195.2680	2241004.1960	983.62	5/8" REBAR SET W/SCE CAP
BM2	14+80.38	19.47' LT.	395272.3600	2241530.5070	980.98	5/8" REBAR SET W/SCE CAP
RF1	*99+98.97	*0.011' LT.	395258.8555	2241049.3952	982.632	MONUMENT FOUND
RF2	10+16.78	10.36' RT.	395258.2735	2241066.1879	982.226	MONUMENT FOUND
RF3	10+36.97	69.02' RT.	395198.6138	2241084.4053	982.807	MAG NAIL SET
RF4	11+12.06	40.15' LT.	395305.2330	2241163.0720	983.543	MAG NAIL SET
RF5	14+51.46	31.44' LT.	395285.4753	2241502.0077	980.058	IRON PIN FOUND

* STATION/OFFSET RELATIVE TO C R/W U.S. 62

25

50

100

HORIZONTAL SCALE IN FEET

CALCULATED

DAC

CHECKED

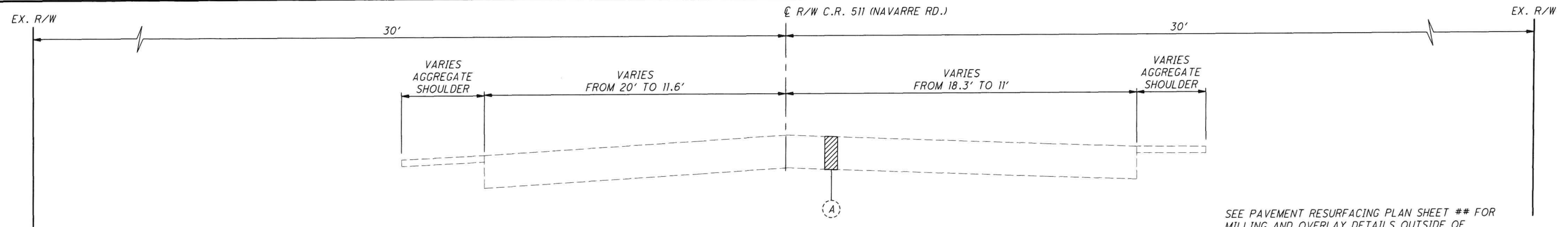
NWO

SCHEMATIC PLAN

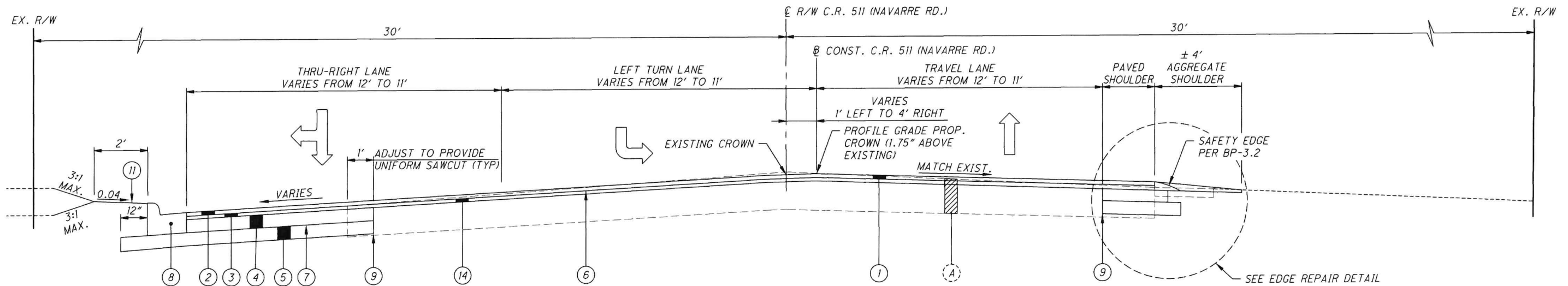
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TYPICAL SECTION - C.R. 511 (NAVARRE ROAD) - EXISTING
STA. 10+37.75 TO STA. 36+85.00



TURN LANE WIDENING
STA. 10+37.75 TO STA. 16+34.39 LT.

TYPICAL SECTION - C.R. 511 (NAVARRE ROAD) - PROPOSED
STA. 10+37.75 TO STA. 17+85.18

PAVEMENT PLANING

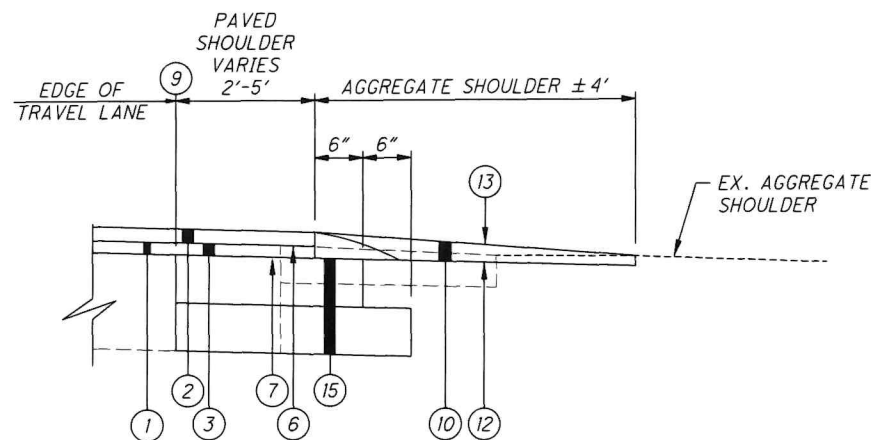
VARIABLE DEPTH PLANING TO BE COMPLETED BETWEEN THE @ CONSTRUCTION CR511 (NAVARRE RD.) AND THE WEST BOUND EDGE OF PAVEMENT AT A DEPTH TO ACHIEVE THE WESTBOUND EDGE OF PAVEMENT PROFILE GRADES AS SHOWN ON THE PLAN AND PROFILE SHEETS. PAVEMENT PLANING OF 1 1/2" TO BE COMPLETED FROM @ CONSTRUCTION CR511 (NAVARRE RD.) TO EASTBOUND EDGE OF PAVEMENT WITHIN THE PROJECT LIMITS AND FULL PAVEMENT WIDTH OUTSIDE OF PROJECT LIMITS.

PAVED SHOULDER

THE ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SHALL BE LEFT IN-PLACE TO FORM THE BASE OF THE SOUTH (EASTBOUND) PAVED SHOULDER.

EXCAVATION

REMOVAL OF EXISTING ASPHALT CONCRETE PAVEMENT SHOULDER AND DRIVEWAYS REQUIRED FOR PAVEMENT WIDENING SHALL BE INCLUDED IN THE COST OF ITEM 203 - EXCAVATION, PER CUBIC YARD.



EDGE REPAIR DETAIL
STA. 11+26.00 TO STA. 17+85.18 RT.
STA. 16+34.39 TO STA. 16+57.54 LT.

LEGEND

- | | | | |
|---|---|---|--|
| ① | ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1 1/2" DEPTH) | ⑧ | ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2 |
| ② | ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE 12.5 mm, TYPE A (448) | ⑨ | ITEM 252 - FULL-DEPTH PAVEMENT SAWING |
| ③ | ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE 19mm, TYPE A (448) | ⑩ | ITEM 617 - COMPACTED AGGREGATE |
| ④ | ITEM 302 - 6" ASPHALT CONCRETE BASE, PG64-22 | ⑪ | ITEM 659 - SEEDING AND MULCHING |
| ⑤ | ITEM 304 - 6" AGGREGATE BASE | ⑫ | ITEM 617 - SHOULDER PREPARATION |
| ⑥ | ITEM 407 - TACK (.040 GAL/SY) | ⑬ | ITEM 408 - PRIME COAT (10.40 GAL./SY) |
| ⑦ | ITEM 407 - TACK (.075 GAL/SY) | ⑭ | ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE DEPTH) |
| | | ⑮ | ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A |
| | | Ⓐ | EXISTING ASPHALT CONCRETE (BUILD-UP UNKNOWN) |

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UTILITIES

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

AQUA OHIO OHIO EDISON (FIRST ENERGY)
870 3RD ST NW 1910 W. MARKET ST., BLDG 1
MASSILLON, OH 44647 AKRON, OH 44313
(330)-832-5764 (330)-830-7092
ATT: JACOB FLANARY

ODOT DISTRICT 4 MASSILLON CABLE TV
2088 SOUTH ARLINGTON RD 814 CABLE CT NW
AKRON, OH 44306 MASSILLON, OH 44647
(330)-786-3146 (330)-833-4134
ATT: DAVID C. KONEVAL ATT: LARRY McELROY

STARK COUNTY SANITARY ENG DOMINION ENERGY OHIO
P.O. BOX 9972 SUITE 320
1701 MAHONING RD NE 320 SPRINGSIDE DR.
CANTON, OH 44711 AKRON, OH 44333
(330)-451-2356 (330)-664-2409
ATT: JAMES F. TROIKE, P.E. ATT: 2ND FLOOR RELOCATION DESIGN

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.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

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.

ITEM 201 - CLEARING AND GRUBBING

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

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR'S ATTENTION SHOULD NOTE CMS SECTION 105.08, THAT AT ANY TIME, THE COUNTY MAY CONTRACT FOR OTHER WORK ON OR NEAR THE PROJECT.

SEPARATE CONTRACTORS WORKING WITHIN THE LIMITS OF THE PROJECT SHALL CONDUCT THEIR WORK WITHOUT INTERFERING WITH OR HINDERING THE PROGRESS OR COMPLETION OF WORK BEING PERFORMED BY OTHER CONTRACTORS AND SHALL COOPERATE WITH EACH OTHER AS DIRECTED BY THE ENGINEER.

ENVIRONMENTAL

ALL PROPOSED WORK SHALL BE COMPLETED WITHIN EXISTING RIGHT-OF-WAY AND NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY WETLANDS, STREAMS OR OTHER WATERS OF THE UNITED STATES. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTORS STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS, STREAMS OR WATERS OF THE UNITED STATES.

ITEM 202 - REMOVAL, MISC.: BOLLARDS AND BOULDERS REMOVED

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM INCLUDES THE REMOVAL, STORAGE, AND SUBSEQUENT REINSTALLATION OF NUMEROUS SANDSTONE BOULDERS AND WOODEN BOLLARDS ALONG THE SOUTH SHOULDER. UPON APPROVAL BY THE ENGINEER, THE CONTRACTOR MAY REMOVE THE ITEMS IF THE ITEMS ARE DEEMED TO BE A PUBLIC SAFETY RISK OR IN CONFLICT WITH THE PROPOSED WORK TO BE COMPLETED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 - REMOVAL, MISC.: BOLLARDS AND BOULDERS REMOVED 1 LUMP SUM

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING:

ITEM 204 - PROOF ROLLING 1 HR

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF ITEM 254 PAVEMENT PLANING, THE ENGINEER SHALL EXAMINE AND MARK AREAS FOR PAVEMENT REPAIR. THE DEPTH OF THESE REPAIRS SHALL BE 6 INCHES. THE WORK SHALL CONSIST OF REMOVING DETERIORATED PAVEMENT AND REPLACING THE REMOVED MATERIAL WITH A SINGLE 6 INCH LIFT OF ITEM 302 ASPHALT CONCRETE BASE, PG64-22, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. 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. PAYMENT INCLUDES SAW CUTTING, EXCAVATION, AND PROVIDING AND PLACING ITEM 302.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY:

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN 20 SQ YD

ITEM 254 - PATCHING PLANED SURFACE, AS PER PLAN

THE QUANTITY FOR ITEM 254 PATCHING PLANED SURFACE IS TO BE USED AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY:

ITEM 254-PATCHING PLANED SURFACE, AS PER PLAN 100 SQ YD

ITEM 611 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN

ALL PROVISIONS IN THE ODOT CONSTRUCTION MATERIAL SPECIFICATIONS (2019) SHALL APPLY EXCEPT AS MODIFIED HEREIN.

PRIOR TO ANY ASPHALT PAVING WORK, THE CONTRACTOR SHALL SCHEDULE A MEETING WITH THE ENGINEER TO IDENTIFY THE CATCH BASINS THAT REQUIRE ADJUSTING TO GRADE.

ALL NECESSARY MATERIAL, TESTING, LABOR AND EQUIPMENT SHALL BE INCIDENTAL TO THE PAYMENT OF THIS ITEM. THIS ITEM SHALL ALSO INCLUDE THE NECESSARY EXCAVATION AND RESTORATION, INCLUDING ANY INCIDENTALS REQUIRED TO READJUST EACH BASIN INCLUDING ANY CURB & GUTTER REPAIR.

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

ITEM 611-CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN 2 EACH

ITEM 638 - VALVE BOX ADJUSTED TO GRADE

THE QUANTITY FOR ITEM 638 VALVE BOX ADJUSTED TO GRADE IS TO BE USED AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY:

ITEM 638 - VALVE BOX ADJUSTED TO GRADE 5 EACH

WATERSTOP SPECIFICATIONS:

THE WATERSTOP MUST MEET ALL OF THE FOLLOWING PHYSICAL REQUIREMENTS:

SPECIFIC GRAVITY - SHALL BE 1.55 +/- 5% WHEN TESTED IN ACCORDANCE WITH ASTM D-71.

VOLATILE MATTER - SHALL NOT EXCEED 1% WHEN TESTED IN ACCORDANCE WITH ASTM D-6.

APPLICATION TEMPERATURE - MUST BE ABLE TO BE APPLIED FROM -10 DEGREES F TO 125 DEGREES F AS A MINIMUM.

SERVICE TEMPERATURE - MUST BE ABLE TO FUNCTION PROPERLY IN SERVICE FROM -30 DEGREES F TO 180 DEGREES F AS A MINIMUM.

EXCAVATION AND EMBANKMENT:

PLAN SHEET	203		659
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING
	CU.: YD.	CU.: YD.	SQ.: YD.
14	34	0	35
15	130	4	36
16	123	36	113
17	53	11	17
TOTALS	340*	51*	201*

* - TOTALS CARRIED TO THE GENERAL SUMMARY
* - TOTALS CARRIED TO SEEDING AND MULCHING NOTE

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST 2 EACH
659, TOPSOIL 22 CU. YD.
659, SEEDING AND MULCHING 201 SQ. YD.
659, REPAIR SEEDING AND MULCHING 10 SQ. YD
659, INTER-SEEDING 10 SQ. YD
659, COMMERCIAL FERTILIZER 0.03 TON
659, LIME 0.04 ACRES
659, WATER 1.14 MGAL

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 OF RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT (IF APPLICABLE). QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM 690 - SPECIAL - MAILBOX REMOVED AND RESET

THE CONTRACTOR SHALL REMOVE, STORE, AND SUBSEQUENTLY REINSTALL BEHIND THE BACK OF CURB ALL EXISTING MAILBOXES IN CONFLICT WITH THE PROPOSED WORK. THE CONTRACTOR SHALL TAKE CARE TO ENSURE NO DAMAGE TO THE MAILBOXES DURING REMOVAL, STORAGE OR REINSTALLATION OCCURS. IF SUCH DAMAGE OCCURS, THE CONTRACTOR SHALL REPLACE THE MAILBOX IN-KIND WITH COMPARIBLE MAILBOX AT NO ADDITIONAL COST.

THE FOLLOWING ESTIMATED QUANTITY OF MAILBOXES TO BE REMOVED AND RESET HAS BEEN PROVIDED BELOW AND CARRIED TO THE GENERAL SUMMARY:

ITEM 690 - MAILBOX REMOVED AND RESET 8 EACH

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED AT THE STARK COUNTY ENGINEER'S OFFICE.

ITEM 202 - REMOVAL, MISC.: ABANDONDED DRAINAGE STRUCTURE REMOVED

ABANDONED DRAINAGE STRUCTURES IDENTIFIED IN THE PLANS TO BE REMOVED ARE TO BE REMOVED WITHIN THE PROVISIONS OF 202.10 OF THE ODOT C&MS 2019. IN ADDITION, TO THE ACTIVITIES INCLUDED IN THE COSTS OUTLINED IN SECTION 202, ITEM 202 - REMOVAL, MISC.: ABANDONED DRAINAGE STRUCTURE REMOVAL SHALL NOT ONLY INCLUDE LOCATING THE BURIED STRUCTURE, ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO TO REMOVE THE EXISTING STRUCTURE BUT ALSO THE FITTINGS (TEES, BENDS, BRANCHES, AND WYES) NECESSARY TO CONNECT THE EXISTING AND PROPOSED CONDUITS, AS APPLICABLE, CONVERGING AT THE EXISTING STRUCTURE BEING REMOVED, PER EACH.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN

ALL PROVISIONS IN THE ODOT CONSTRUCTION MATERIAL SPECIFICATIONS (2019) SHALL APPLY EXCEPT AS MODIFIED HEREIN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN 2 EACH

- CUT AND REMOVE THE ASPHALT PAVEMENT, AROUND THE EXISTING MANHOLE CASTING, IN A CIRCULAR FASHION WITH A MINIMUM DIAMETER OF 54" AND CENTERED ABOUT THE FRAME. DISPOSE OF ALL ASPHALT, CONCRETE, BRICK AND ROAD DEBRIS.
- REMOVE THE CASTING (MANHOLE RIM AND COVER) FROM THE TOP OF THE MANHOLE. INSPECT THE RIM AND COVER FOR DEFECTS. IF DEFECTS ARE PRESENT, REPLACE WITH NEW RIM/COVER AS NEEDED. IF DEFECTS ARE NOT PRESENT, CLEAN & RETAIN FOR USE IN RECONSTRUCTION.
- CONCRETE MANHOLE**
REMOVE ALL ADJUSTING RINGS TO THE TOP OF THE CONCRETE CONE DISPOSE OF THIS MATERIAL
MASONRY MANHOLE
REMOVE MASONRY TO THE LEVEL SPECIFIED IN FIG. 2.M. DISPOSE OF THIS MATERIAL.
- REMOVE ALL AGGREGATE AROUND THE MANHOLE THAT HAS BEEN EXPOSED BY THE ASPHALT REMOVAL AND DISPOSE OF THIS AGGREGATE. THE AGGREGATE MUST BE REMOVED TO A MINIMUM OF 3" BELOW THE LEVEL OF THE TOP OF THE CONCRETE CONE/REMAINING MASONRY.
- CONCRETE MANHOLE**
CLEAN AND INSPECT THE TOP SURFACE OF THE CONCRETE CONE SECTION. THE SURFACE SHOULD BE SMOOTH AND FREE OF BUMPS AND PITS THAT MAY PREVENT A GOOD WATER TIGHT SEAL. GRIND THE SURFACE AS NEEDED TO REMOVE PROTRUSIONS. UTILIZE COMPRESSED AIR TO BLOW DUST AND DEBRIS FROM THE SURFACE AFTER GRINDING. UTILIZE A HYDRAULIC CEMENT, ACCORDING TO MANUFACTURERS RECOMMENDATIONS, TO FILL IN DEPRESSIONS.
MASONRY MANHOLE
CLEAN AND INSPECT THE TOP SURFACE OF THE MASONRY. THE SURFACE MUST BE STRUCTURALLY SOUND. UTILIZE COMPRESSED AIR TO BLOW DUST AND DEBRIS FROM THE SURFACE. THE ENGINEER SHALL INSPECT THE MASONRY MANHOLE FOR STRUCTURAL INTEGRITY.
- BRING THE AREA AROUND THE CONE/MASONRY BACK TO FLUSH WITH THE TOP OF THE MASONRY USING ODOT 703.01 #57 AGGREGATE.
- APPLY MORTAR TO THE TOP OF THE MASONRY AND IMMEDIATELY INSTALL A CONCRETE COLLAR/ADJUSTING RING (2" MIN. THICKNESS) ON TOP OF THE MORTAR. THE CONCRETE COLLAR/ADJUSTING RING MUST HAVE AN INSIDE DIAMETER OF 24 INCHES. THE OUTSIDE DIAMETER MUST BE SUCH THAT THERE IS A MINIMUM OF 3 INCHES OF THE CONCRETE COLLAR/ADJUSTING RING BEARING ON MASONRY ALL THE WAY AROUND THE MANHOLE. (MASONRY MANHOLES ONLY)
- A PVC PIPE SHALL BE USED AS A CHIMNEY LINER (SEE CHIMNEY LINER SPECIFICATIONS) AND MUST BE CUT TO THE EXACT PROFILE OF THE ROAD IN ALL DIRECTIONS SUCH THAT WHEN THE MANHOLE RIM AND COVER ARE RESTING ON TOP OF THE LINER, THE TOP OF THE CASTING SHALL BE EXACTLY 0.25" BELOW FLUSH WITH THE PAVEMENT SURFACE IN ALL DIRECTIONS.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN (CONT'D)

- THE LINER SHALL BE MARKED IN SUCH A WAY, UPON COMPLETION OF THE CUTTING PROCESS, THAT ROTATION DOES NOT OCCUR, WHICH COULD BE DETRIMENTAL TO THE END PRODUCT. THE TOP AND/OR BOTTOM OF THE LINER SHALL ALSO BE MARKED TO PREVENT THE LINER FROM BEING INSTALLED UP SIDE DOWN, WHICH COULD BE DETRIMENTAL TO THE END PRODUCT.
- APPLY A LIBERAL AMOUNT OF SEALANT TO THE BOTTOM OF THE LINER AND SET IN PLACE ON TOP OF THE CONCRETE COLLAR/ADJUSTING RING WHILE MAKING SURE IT IS PROPERLY ALIGNED. THIS WILL CREATE A WATER TIGHT SEAL BETWEEN THE LINER AND THE CONCRETE COLLAR/ADJUSTING RING.
- APPLY A LIBERAL AMOUNT OF SEALANT TO THE TOP OF THE LINER. SET THE MANHOLE RIM CASTING ON THE LINER WHILE MAKING SURE IT IS PROPERLY ALIGNED. THIS WILL CREATE A WATER TIGHT SEAL BETWEEN THE LINER AND THE MANHOLE RIM CASTING.
- PLACE THE MANHOLE LID ON THE RIM CASTING TO LESSEN THE POSSIBILITY OF DEBRIS ENTERING THE MANHOLE.
- PLACE EPOXY COATED #3 REBARS AS SHOWN IN FIG. 3.C & 3.M. THE CIRCULAR SHAPED REBARS SHALL HAVE A 6" MINIMUM OVERLAP.
- APPLY WATERSTOP AS SHOWN IN FIG. 3.C & 3.M AND SPECIFIED IN THIS STANDARD DRAWING. THIS WILL ADD AN ADDITIONAL WATER TIGHT SEAL WHERE THE LINER MEETS THE CONCRETE COLLAR/ADJUSTING RING.
- UTILIZE ODOT-CLASS C CONCRETE WITH BLACK DYE TO CAST A CONCRETE COLLAR AROUND THE RIM CASTING AND LINER. THE SURFACE OF THE CONCRETE SHALL BE FINISHED FROM FLUSH WITH THE PAVEMENT TO FLUSH WITH THE RIM CASTING. THE EDGE OF THE CONCRETE SHALL BE ROUNDED (1/4" RADIUS) WHERE IT MEETS THE ASPHALT. THIS WILL CREATE A SMALL GROOVE FOR A JOINT SEALER AT THIS LOCATION.
- FILL THE GROOVE WITH A COLD POUR CRACK SEALER. THIS WILL PREVENT WATER FROM ENTERING THE CIRCULAR SEAM WHERE THE CONCRETE COLLAR MEETS THE ASPHALT.
- APPLY AN ACRYLIC POLYMER CONCRETE CURING AND SEALING COMPOUND TO THE SURFACE OF THE CONCRETE COLLAR.
- BARRICADE THE AREA AROUND THE CONCRETE TO PROTECT IT UNTIL THE CONCRETE ATTAINS A MODULUS OF RUPTURE OF 400 POUNDS PER SQUARE INCH. A CHEMICAL ADMIXTURE THAT ACTS AS A CONCRETE ACCELERATOR MAY BE USED TO SPEED UP THE PROCESS IF THE ROADWAY NEEDS TO BE OPENED SOONER.
- IN ORDER TO MINIMIZE INCONVENIENCE TO MOTORISTS, THE CONTRACTOR PERFORMING THE WORK DESCRIBED IN THIS SPECIFICATION MUST BE CAPABLE OF PERFORMING ALL OF BOTH STEPS OF THIS SPECIFICATION IN 1.5 HOURS OR LESS.
- THE CONTRACTOR SHALL WARRANT THE RECONSTRUCTED MANHOLE CHIMNEY TO BE LEAK FREE AND STRUCTURALLY SOUND FOR A MINIMUM OF 5 YEARS FROM THE DATE OF RECONSTRUCTION.

CHIMNEY LINER SPECIFICATIONS:

THE CHIMNEY LINER MUST BE MADE FROM POLYVINYL CHLORIDE COMPOUNDS WHICH COMPLY WITH THE REQUIREMENTS FOR A MINIMUM CELL CLASSIFICATION OF 12364 AS DEFINED BY ASTM D-1784.

THE CHIMNEY LINER MUST ALSO MEET ALL THE FOLLOWING PHYSICAL REQUIREMENTS:

PIPE STIFFNESS - MINIMUM PIPE STIFFNESS SHALL BE 46 PSI WHEN TESTED IN ACCORDANCE WITH ASTM D-2412

IMPACT RESISTANCE - NO VISUAL CRACKING OR SPLITTING OF THE WATERWAY WALL SHALL BE EVIDENCED WHEN TESTED IN ACCORDANCE WITH ASTM D-2444 WITH A 20 LB. WEIGHT, TUP B, FLAT PLATE HOLDER B TO A LEVEL OF 220 FT. LBS.

CHIMNEY LINER SPECIFICATIONS (CONT'D):

FUSION QUALITY - THERE SHALL BE NO SIGN OF FLAKING OR DISINTEGRATION WHEN IMMERSED IN ANHYDROUS ACETONE FOR 20 MINUTES AS DESCRIBED IN ASTM D-2152.

DUCTILITY - THERE SHALL BE NO EVIDENCE OF CRACKING OR SPLITTING WHEN PIPE IS FLATTENED IN A CIRCUMFERENTIAL ORIENTATION BETWEEN TWO FLAT PLATES BY SIXTY PERCENT (60%) OF THE ORIGINAL DIAMETER.

AIR TIGHTNESS - EACH LENGTH OF PIPE SHALL PASS A FACTORY 3.5 PSI AIR TEST AS DESCRIBED IN ASTM F-1803.

EXISTING MANHOLE (SECTIONAL VIEW)

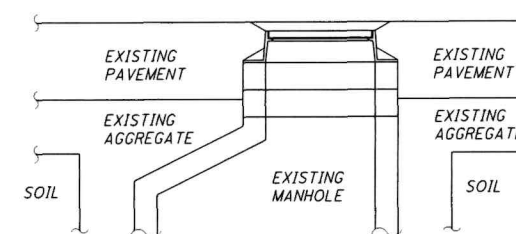


FIGURE 1.C

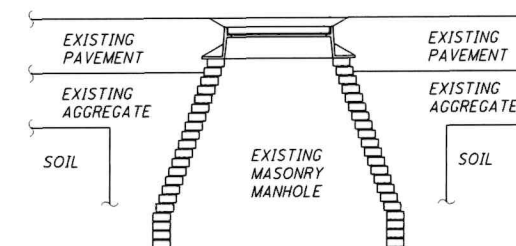


FIGURE 1.M

LEGEND
[Symbol] = CONCRETE
[Symbol] = MASONRY

CHIMNEY REMOVED (SECTIONAL VIEW)

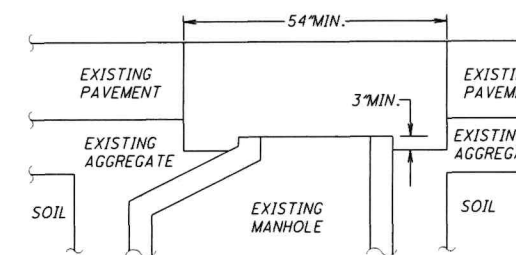


FIGURE 2.C

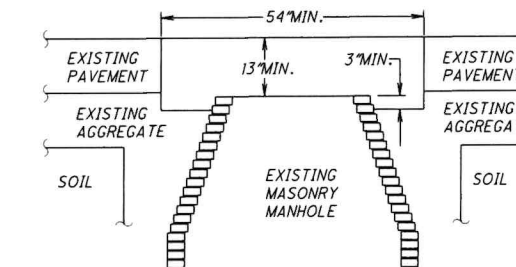


FIGURE 2.M

CHIMNEY RECONSTRUCTION (SECTIONAL VIEW)

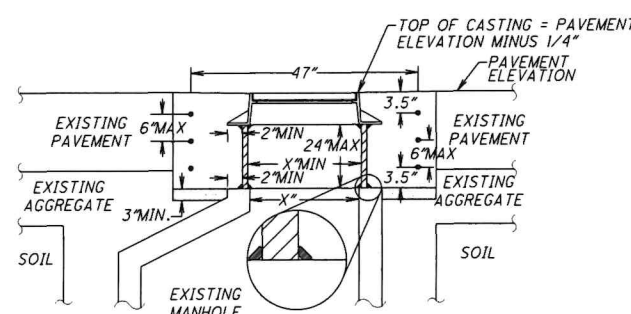


FIGURE 3.C

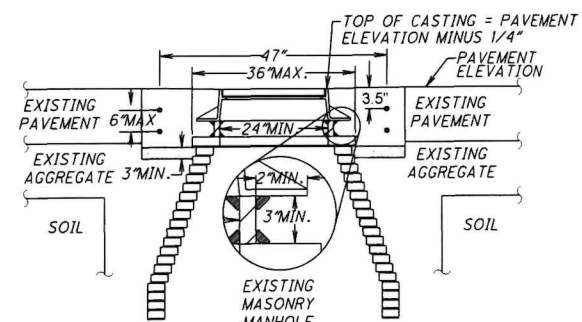


FIGURE 3.M

LEGEND
[Symbol] = CONCRETE
[Symbol] = EPOXY COATED #3 REBAR
[Symbol] = PVC PIPE
[Symbol] = ODOT #57 AGGREGATE
[Symbol] = WATERSTOP
[Symbol] = MASONRY

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ITEM 614. MAINTAINING TRAFFIC

MAINTAIN TRAFFIC AT ALL TIMES ON THE PROJECT IN ACCORDANCE WITH ITEM 614 AND AS DESCRIBED HEREIN.

NIGHT TIME PAVING REQUIREMENT - ALL PAVEMENT MILLING, RESURFACING, PAVEMENT FOR MAINTAINING TRAFFIC AND PAVEMENT MARKINGS SHALL OCCUR AT NIGHT BETWEEN THE HOURS OF 8 PM AND 8 AM. AT THE CONCLUSION OF THE NIGHT, LANES OPEN TO TRAFFIC SHALL BE CLEARLY MARKED AND FREE OF OBSTRUCTIONS, BOTH TEMPORARY AND PERMANENT, AND CONSTRUCTION EQUIPMENT.

MAINTAIN A MINIMUM OF ONE 10' LANE IN EACH DIRECTION ON C.R. 511 (NAVARRE RD.) AT ALL TIMES BY USE OF EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND/OR ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC (AS PER PLAN) IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLAN SHEETS, OR AS DIRECTED OR APPROVED BY ENGINEER. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE PROVIDED AT ALL TIMES ON C.R. 511 (NAVARRE RD.). NO LANE CLOSURES ARE PERMITTED ALONG U.S. 62 (ERIE ST.) OR C.R. 511 (NAVARRE RD.) UNLESS APPROVED BY ENGINEER.

WHEN CONSTRUCTION OCCURS AT A BUSINESS DRIVEWAY, WORK SHALL EITHER BE PERFORMED DURING OFF BUSINESS HOURS OR IN A MANNER THAT WILL STILL PERMIT ACCESS TO THE BUSINESS THROUGH PARTIAL CLOSURE OR OTHER MEASURES AS SPECIFIED BY THE CONTRACTOR UPON ENGINEERING APPROVAL.

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

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND STARK COUNTY MAINTENANCE OF TRAFFIC PLANS DETAILING WORK SEQUENCE AND LANE CLOSURES. MILLING AND RESURFACING OPERATIONS MAY OCCUR AS A ROLLING CONSTRUCTION ZONE WITH LANE CLOSURES OCCURRING IN AREAS WHERE WORK IS BEING PERFORMED. TRAFFIC SHALL BE PERMITTED ON PLANED SURFACE AS WELL AS INTERMEDIATE SURFACE COURSE AS LONG AS LANES ARE CLEARLY DELINEATED AND UPON ENGINEERS APPROVAL.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTAINING OF TRAFFIC, FOR INTERSECTIONS, DRIVEWAYS, STORM SEWER TRENCHES OR ANY OTHER LOCATION DEEMED PRACTICAL BY THE ENGINEER DURING CONSTRUCTION:

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 20 CU. YD.

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

WORK ZONE MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS, CLASS 1, PER THE REQUIREMENTS OF SECTION 614 OF THE ODOT C&MS (2019).

ITEM 614, WORK ZONE EDGE LINE 2.0 MILES
ITEM 614, WORK ZONE STOP LINE 50 FEET
ITEM 614, WORK ZONE CENTER LINE 1.0 MILES
ITEM 614, WORK ZONE CHANNELIZING LINE 176.5 FEET
ITEM 614, WORK ZONE ARROWS 10 EACH

ITEM 614. LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

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 C&MS 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).

IN ADDITION TO THE REQUIREMENT OF C&MS 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) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INTITAL 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).

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 ZONES.

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

600 TEMPORARY TRAFFIC CONTROL TRAFFIC ENG. MANUAL
REVISED OCTOBER 15, 2021 OCTOBER 23, 2002 6-167

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. 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.

ITEM 614. LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (CONT'D)

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

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. 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 QUANTITES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 24 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 A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC.
AS PER PLAN
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC.
CLASS A. AS PER PLAN

ALL PROVISIONS OF ITEM 615 - ROADS FOR MAINTAINING TRAFFIC AND ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC SHALL APPLY TO THIS PAY ITEM WITH THE FOLLOWING EXCEPTION:

1. THE PAVEMENT INSTALLED FOR MAINTAINING TRAFFIC IN PHASE 1 MAY BE PERMANENTLY LEFT IN PLACE, AS DIRECTED BY THE ENGINEER.

ALL MAINTENANCE REQUIRED OR ADJUSTMENTS DIRECTED TO MADE BY THE ENGINEER PRIOR TO FINAL ACCEPTANCE ON THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE COSTS OF THE FOLLOWING ITEMS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN: 1 LUMP SUM

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN 259 SQ YD

DROP-OFFS IN WORK ZONES

SINCE LOCAL ACCESS WILL NEED TO BE MAINTAINED FOR BUSINESSES, DROP-OFFS THAT DEVELOP DURING CONSTRUCTION ACTIVITIES SHALL BE TREATED AS SHOWN IN SCD MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, AND MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS NECESSARY, THEY SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 614 - MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY DUST CONTROL AS DIRECTED BY ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES.

ITEM 616 - WATER 1 M. GAL.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

ITEM 614 - BUSINESS ENTRANCE (M4-H15) SIGN

THE BUSINESS ENTRANCE (M4-H15) SIGN SHOULD BE PROVIDED AT EACH TEMPORARY RELOCATED COMMERCIAL DRIVEWAY FOR WHICH THE RELOCATION IS NOT OBVIOUS TO THE MOTORIST. THE PROJECT ENGINEER SHALL DETERMINE WHETHER OR NOT THE DRIVEWAY RELOCATION IS, OR IS NOT, OBVIOUS AND WHETHER OR NOT A SIGN SHOULD BE PROVIDED. ONLY ONE SIGN PER BUSINESS SHALL BE PERMITTED. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETROREFLECTIVE SHEETING. THE SIGN LEGEND SHALL BE PLACED ON BOTH SIDES OF THE SIGN (BACK TO BACK). THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND WITH THE WORD "BUSINESS" ON THE TOP LINE, EXCEPT UNDER UNUSUAL CIRCUMSTANCES WHERE IT MAY NOT BE INTUITIVE THAT A DRIVEWAY SERVES A SPECIFIC BUSINESS. IN SUCH UNUSUAL CASES, THE ACTUAL BUSINESS NAME MAY BE SUBSTITUTED FOR THE WORD "BUSINESS".

THE SIGN SHALL BE MOUNTED ON TWO NO. 3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH SCD MT-105.10 AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE SIGN SHALL BE CLEARLY VISIBLE AND SHALL CLEARLY IDENTIFY THE LOCATION OF THE DRIVEWAY. THE SIGN SHOULD BE POSITIONED AT 90 DEGREES TO THE DIRECTION(S) OF TRAFFIC. THE SIGN MAY NEED TO BE MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGN, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT PRICE PER EACH FOR ITEM 614-BUSINESS ENTRANCE SIGN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY, FOR USE AS DIRECTED BY ENGINEER:

ITEM 614 BUSINESS ENTRANCE SIGN 6 EACH

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CONSTRUCTION SEQUENCE

THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION ACTIVITIES AS WELL AS THE SAFETY AND WELL-BEING OF THE PUBLIC WITHIN THE PROJECT WORK ZONES WHERE TRAFFIC IS MAINTAINED. THE CONSTRUCTION SEQUENCING NOTE IS TO BE USED AS A GENERAL OUTLINE OF HOW THE PROJECT MAY BE CONSTRUCTED. REGARDLESS OF WHETHER THE CONTRACTOR USES THE SEQUENCING OUTLINED HEREIN, CONTRACTOR IS TO PROVIDE THE COUNTY WITH A DETAILED MAINTENANCE OF TRAFFIC PLAN INCLUDING SEQUENCING, AND PHASING SCHEDULES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS FOR THEIR APPROVAL.

PRE-PHASE 1

THE PRE-PHASE 1 CONSTRUCTION PHASE WILL CONSIST OF THE PREPARATION OF ROADWAY FOR THE PHASE 1 CONSTRUCTION PHASE AND EROSION CONTROL AND PREVENTION FOR THE CONSTRUCTION PERIOD.

THE CONTRACTOR SHALL PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES PER MT-97.11 AND FIGURE 6H-10 OF THE OMUTCD (2012) FOR THE USE OF FLAGGERS PRIOR TO PLANING, TEMPORARY DRIVEWAY WORK, AND TEMPORARY SHOULDER IMPROVEMENTS THAT RESTRICT TRAFFIC TO ONE (1) TRAVEL LANE .

PRE-PHASE 1 CONSTRUCTION ACTIVITIES MAY INCLUDE THE FOLLOWING:

1. PLANING OF 1.5" OF THE ENTIRE PROJECT LIMITS AND ADDING ASPHALT CONCRETE FOR MAINTAINING TRAFFIC (ITEM 614) TO COMMERCIAL AND RESIDENTIAL DRIVEWAYS THROUGHOUT.
2. VARIABLE DEPTH PAVEMENT PLANING FOR FUTURE WESTBOUND LEFT AND THRU-RIGHT LANES. THE CROWN DIVIDING THE EASTBOUND THRU AND WESTBOUND LEFT, ALONG THE @ CONSTRUCTION C.R. 511 (NAVARRE RD.) WILL BE FORMED IN THIS STEP.
3. REMOVAL OF EXISTING PAVEMENT, TREATED SHOULDER, AND DRIVEWAYS REQUIRED FOR INSTALLING PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (ITEM 615).
4. PREPARATION AND TREATMENT OF THE SUBGRADE REMOVED IN PREVIOUS STEP AND INSTALLATION OF THE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (ITEM 615).
5. INSTALL TEMPORARY PAVEMENT MARKINGS AND SIGNAGE TO MAINTAIN PHASE 1 TRAFFIC.

PHASE 1

WORK WILL BE COMPLETED WITHIN THE NORTH WORK ZONE OF THE PROJECT LIMITS ON C.R. 511 (NAVARRE RD.). WORK IN THIS PHASE INCLUDES THE UPGRADE OF NEW STORM SEWER STRUCTURES AND CONDUITS, WIDENING OF PAVEMENT FOR THE FUTURE THRU-RIGHT LANE, INSTALLATION OF CURB AND GUTTER, DRIVEWAY IMPROVEMENTS TO TIE-IN TO THE FUTURE WESTBOUND EDGE OF PAVEMENT PROFILE.

CONTRACTOR SHALL MAINTAIN ONE (1) LANE OF TRAFFIC IN EACH DIRECTION THROUGHOUT PHASE 1 UNLESS APPROVED BY ENGINEER. EASTBOUND TRAFFIC MAY UTILIZE THE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (ITEM 615). IF SPACE PERMITS, LANES MAY BE CONFIGURED TO THE FUTURE-USE OF THE INTERSECTION LEG: EASTBOUND THRU LANE, WESTBOUND LEFT LANE, AND WESTBOUND THRU-RIGHT LANE. PHASE 1 CONSTRUCTION ACTIVITIES MAY INCLUDE THE FOLLOWING:

1. REMOVAL OF EXISTING PAVEMENT, DRIVEWAYS, AND SHOULDERS ALONG THE NORTH SIDE OF C.R. 511 (NAVARRE RD.).
2. INSTALLATION OF PROPOSED DRAINAGE SYSTEM.
3. INSTALLATION OF SUBBASE, AGGREGATE BASE COURSE, AND ASPHALT CONCRETE BASE COURSE FOR THE THRU-RIGHT WIDENING SECTION.
4. INSTALLATION OF ASPHALT CONCRETE BASE AND INTERMEDIATE COURSE FOR THE WIDENING AND FOR THE WESTBOUND
5. GRADING, SEEDING AND MULCHING BEHIND THE CURB AND GUTTER WITHIN THE WORK ZONE.

CONSTRUCTION SEQUENCE (CONT'D)

PHASE 2

WORK WILL BE COMPLETED WITHIN THE SOUTH WORK ZONE OF THE PROJECT LIMITS ON C.R. 511 (NAVARRE RD.). WORK IN THIS PHASE INCLUDES REMOVAL OF THE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (ITEM 615) INSTALLED IN THE PRE-PHASE 1 PHASE OF CONSTRUCTION, INSTALLATION OF THE FULL-DEPTH PAVEMENT SHOULDER, SAFETY-EDGE AND AGGREGATE SHOULDER, AND UPGRADE OF DRIVEWAY APRONS.

CONTRACTOR SHALL MAINTAIN ONE (1) LANE OF TRAFFIC IN EACH DIRECTION THROUGHOUT PHASE 2 UNLESS APPROVED BY ENGINEER. LANES MAY BE CONFIGURED TO THE FUTURE-USE OF THE INTERSECTION LEG: EASTBOUND THRU LANE, WESTBOUND LEFT LANE, AND WESTBOUND THRU-RIGHT LANE. OBLITERATE EXISTING PAVEMENT MARKING AND COVER SIGNS THAT CONFLICT WITH PHASE 2 MAINTENANCE OF TRAFFIC.

PHASE 2 CONSTRUCTION ACTIVITIES MAY INCLUDE THE FOLLOWING:

1. REMOVE PAVEMENT FOR MAINTAINING TRAFFIC PLACED IN PRE-PHASE 1 PHASE OF CONSTRUCTION.
2. CONSTRUCT THE FULL-DEPTH SHOULDER, SAFETY-EDGE, AGGREGATE SHOULDER, AND DRIVEWAY APRONS.

PHASE 3

PHASE 3 CONSTRUCTION PHASE WILL CONSIST OF FINAL PAVING COURSES (INTERMEDIATE AND SURFACE, LOOP-DETECTOR INSTALLATION, AND FINAL PAVEMENT MARKINGS AND SIGNAGE.

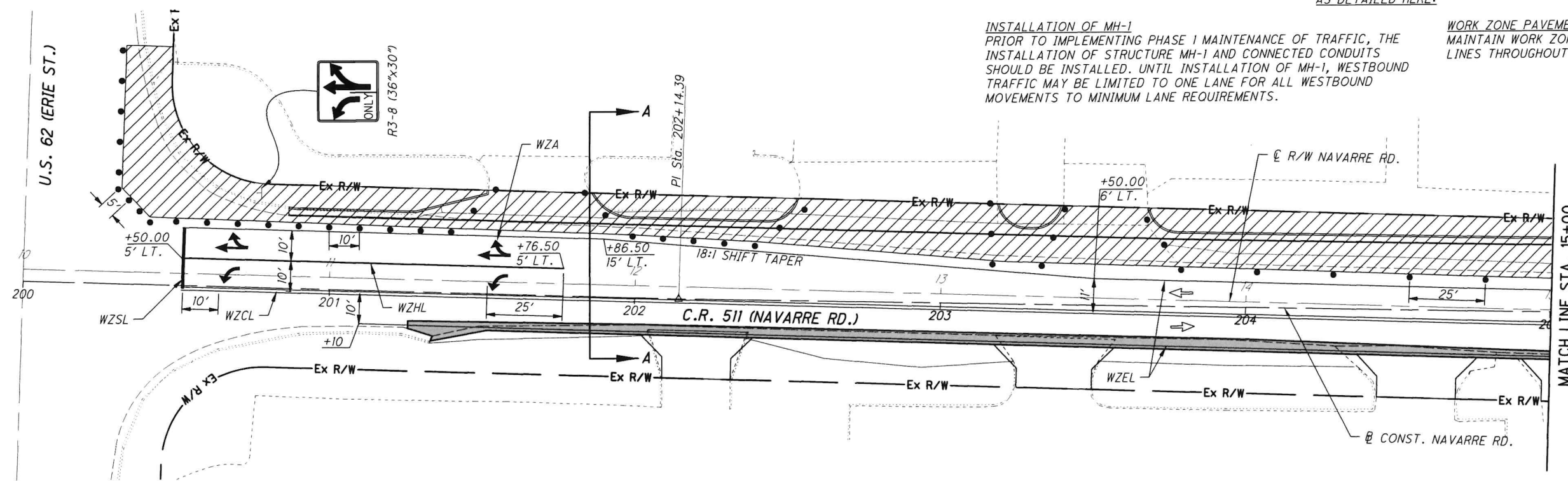
THE CONTRACTOR SHALL PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES PER MT-97.11 AND FIGURE 6H-10 OF THE OMUTCD (2012) FOR THE USE OF FLAGGERS PRIOR TO PHASE 3 ACTIVITIES THAT RESTRICT TRAFFIC TO ONE (1) TRAVEL LANE.

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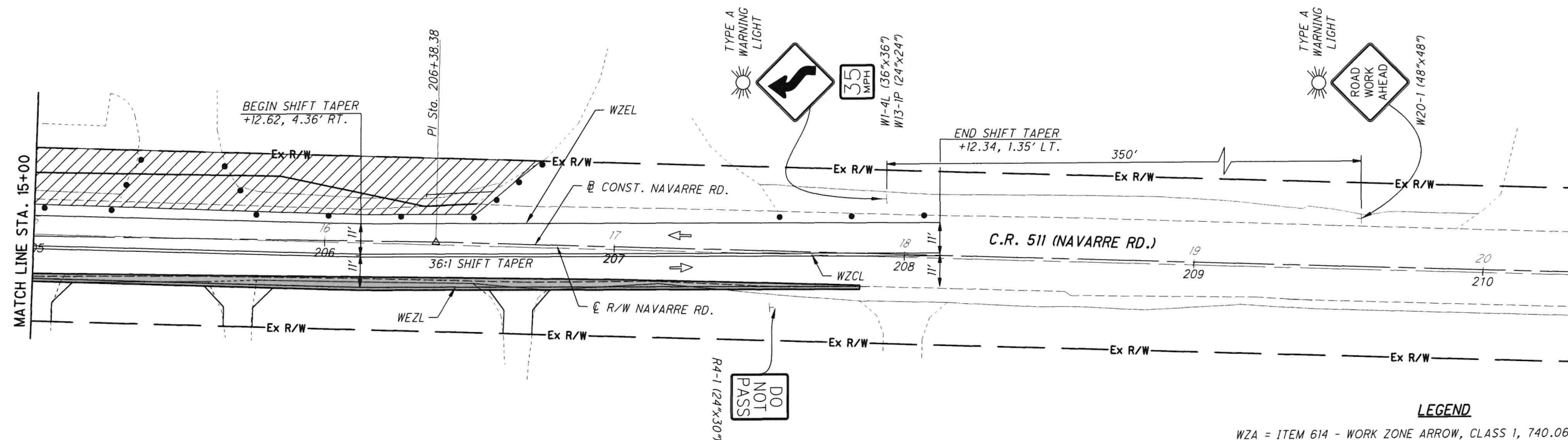
AS DETAILED HERE:

INSTALLATION OF MH-1
PRIOR TO IMPLEMENTING PHASE I MAINTENANCE OF TRAFFIC, THE
INSTALLATION OF STRUCTURE MH-1 AND CONNECTED CONDUITS
SHOULD BE INSTALLED. UNTIL INSTALLATION OF MH-1, WESTBOUND
TRAFFIC MAY BE LIMITED TO ONE LANE FOR ALL WESTBOUND
MOVEMENTS TO MINIMUM LANE REQUIREMENTS.

WORK ZONE PAVEMENT MARKINGS
MAINTAIN WORK ZONE EDGE LINES AND WORK ZONE CENTER
LINES THROUGHOUT ENTIRE WORK LIMITS



ALL STATION/OFFSET REFERENCES
FROM C R/W NAVARRE RD.

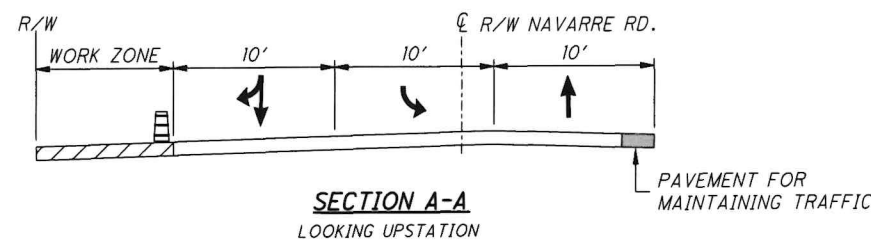


MINIMUM SHIFTING TAPER LENGTH CALCULATION

$$\frac{5.5' \times 45^2}{60} = 185.6 \text{ FT.}$$

TAPER LENGTH PROVIDED: 200 FT.

* NOTE: FOR SPEEDS < 50 mph, MINIMUM SHIFTING TAPER RATES =
 $\frac{1}{2}$ SPEED LIMIT = $\frac{1}{2} \times 45 = 22.5:1$



LEGEND

- WZA = ITEM 614 - WORK ZONE ARROW, CLASS 1, 740.06, TYPE 1
WZHL = ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1
WZEL = ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, 6" 740.06, TYPE 1
WZSL = ITEM 614 - WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE 1
WZCL = ITEM 614 - WORK ZONE CENTERLINE, CLASS 1, 740.06, TYPE 1

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

PHASE 1 WORK ZONE

DIRECTION OF TRAVEL

CONSTRUCTION BARRELS

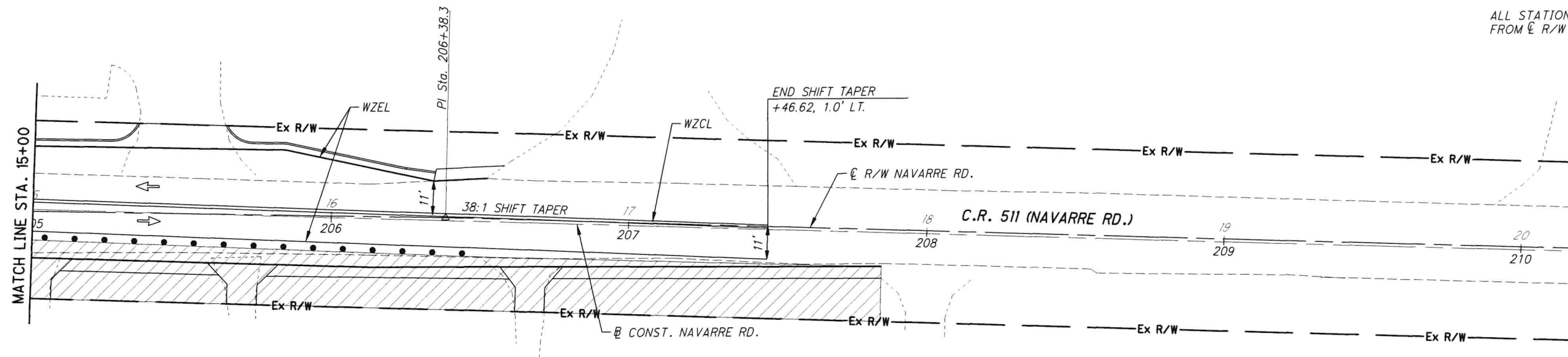
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC IS TO
BE COMPLETED PRIOR TO PHASE I MAINTENANCE OF
TRAFFIC SEQUENCING.

MAINTENANCE OF TRAFFIC PHASE 1

STA-CR511-0.00

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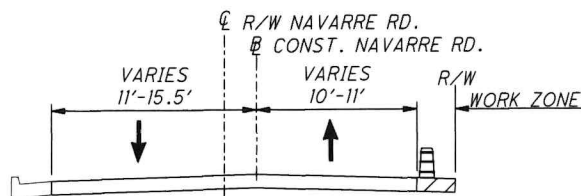


MINIMUM SHIFTING TAPER LENGTH CALCULATION

$$\frac{9' \times 45^2}{60} = 303.80 \text{ FT.}$$

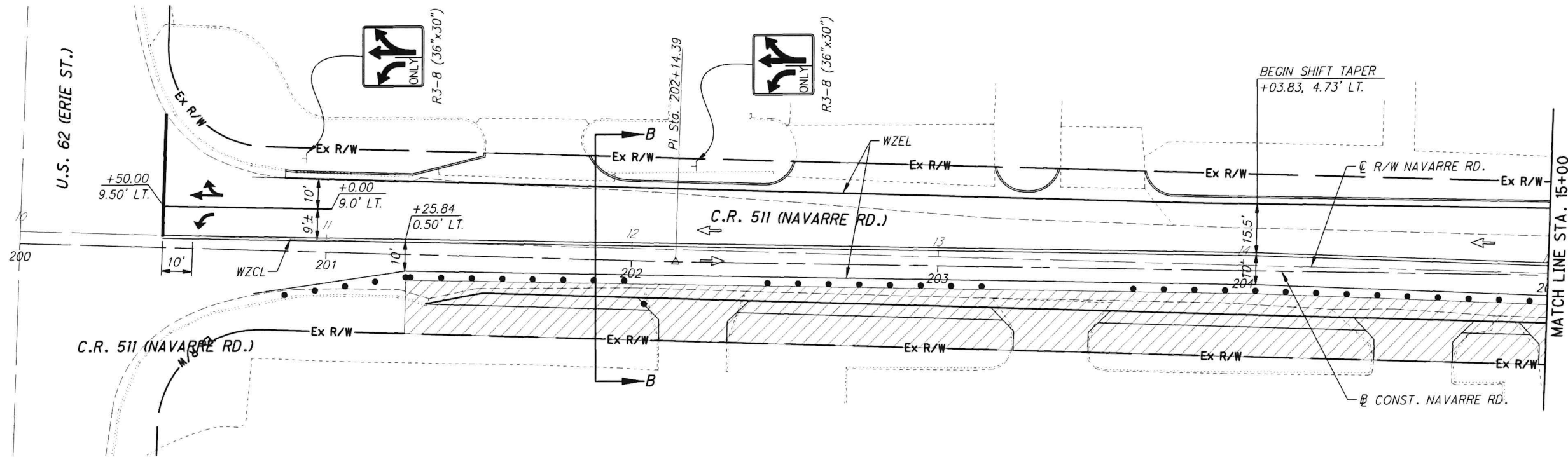
TAPER LENGTH PROVIDED: 342 FT.

* NOTE: FOR SPEEDS < 50 mph, MINIMUM SHIFTING TAPER RATES = $\frac{1}{2}$ SPEED LIMIT = $\frac{1}{2} \times 45 = 225:1$



SECTION B-B
LOOKING UPSTATION

- LEGEND**
- WZA = ITEM 614 - WORK ZONE ARROW, CLASS 1, 740.06, TYPE 1
 - WZHL = ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1
 - WZEL = ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1
 - WZSL = ITEM 614 - WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE 1
 - WZCL = ITEM 614 - WORK ZONE CENTERLINE, CLASS 1, 740.06, TYPE 1
 - PHASE 2 WORK ZONE
 - DIRECTION OF TRAVEL
 - CONSTRUCTION BARRELS



WESTBOUND DRUMS & EDGE LINES

AT ENGINEER'S DISCRETION, THE USE OF DRUMS AND EDGE LINE FOR WESTBOUND TRAFFIC MAY BE ADJUSTED TO NARROW TRAVEL LANE WIDTH. VARIATIONS FROM PLAN DO NOT NECESSARILY WARRANT ADDITIONAL PAYMENT TO CONTRACTOR.

ALL STATION/OFFSET REFERENCES FROM C.R. 511 NAVARRE RD.

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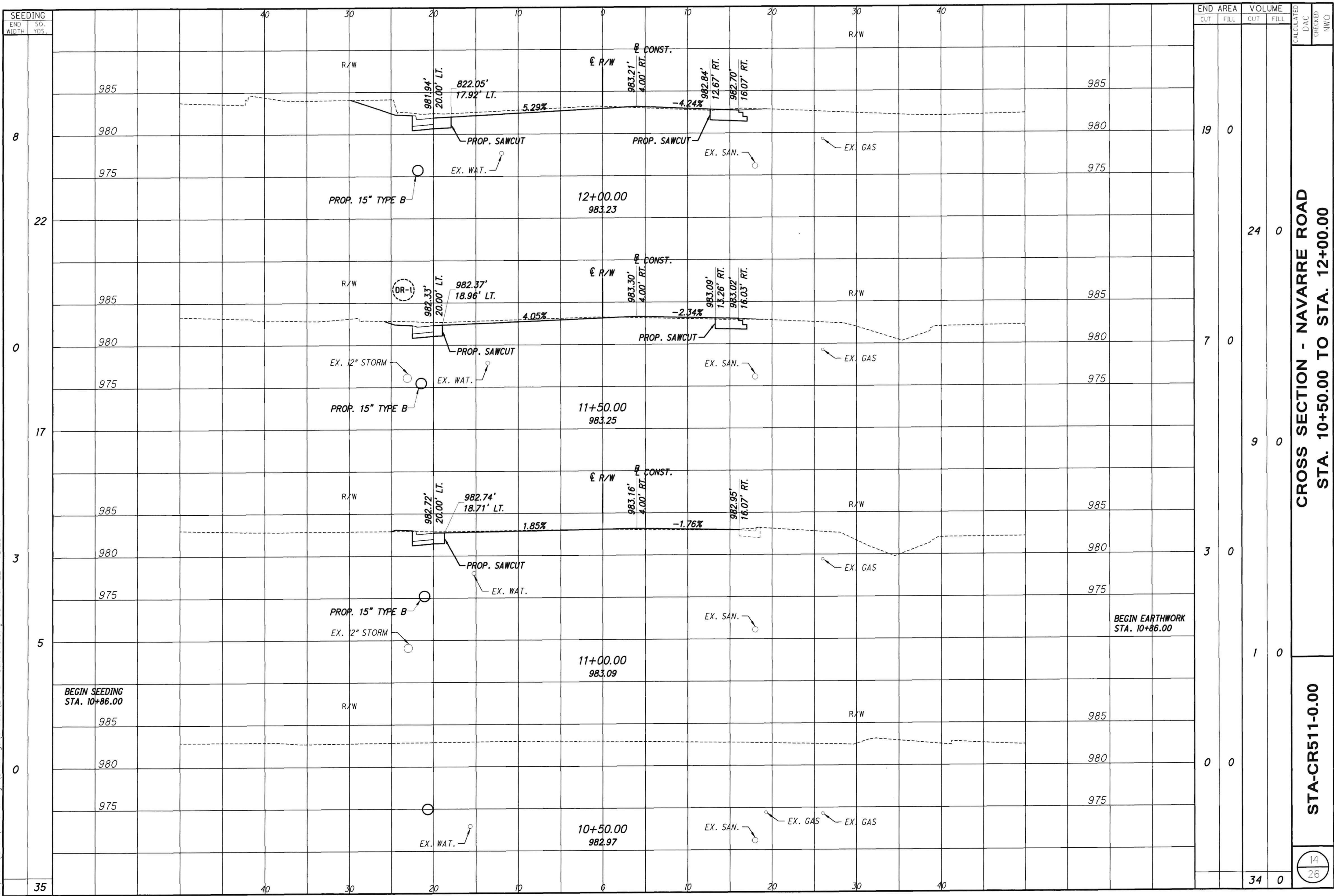
SHEET NUM.														PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
		4		20	23		26							LOCAL SHARE/ OPWC		EXT	TOTAL			
		LS		338			52 41							LS	201	11000	LS		ROADWAY	4
														338	202	23000	338	SY	CLEARING AND GRUBBING	
														52	202	32000	52	FT	PAVEMENT REMOVED	
														41	202	32500	41	FT	CURB REMOVED	
																			CURB AND GUTTER REMOVED	
					673									673	202	35100	673	FT	PIPE REMOVED, 24" AND UNDER	
														4	202	58100	4	EACH	CATCH BASIN REMOVED	
		LS			4									LS	202	98000	LS		REMOVAL MISC.: BOLLARDS AND BOULDERS REMOVED	4
														2	202	98100	2	EACH	REMOVAL MISC.: ABANDONED DRAINAGE STRUCTURE REMOVED	4
		340			2									340	203	10000	340	CY	EXCAVATION	
		51												51	203	20000	51	CY	EMBANKMENT	
				333			728							1,061	204	10000	1,061	SY	SUBGRADE COMPACTION	
		1												1	204	45000	1	hour	PROOF ROLLING	
		8												8	SPECIAL	69050350	8	EACH	MAILBOX REMOVED AND RESET	4
																			EROSION CONTROL	
		2												2	659	00100	2	EACH	SOIL ANALYSIS TEST	
		22												22	659	00300	22	CY	TOPSOIL	
		201												201	659	10000	201	SY	SEEDING AND MULCHING	
		10												10	659	14000	10	SY	REPAIR SEEDING AND MULCHING	
		10												10	659	15000	10	SY	INTER-SEEDING	
		.03												0.03	659	20000	0.03	TON	COMMERCIAL FERTILIZER	
		.04												0.04	659	31000	0.04	ACRE	LIME	
		1.14												1.14	659	35000	1.14	MGAL	WATER	
														10,000	832	30000	10,000	EACH	EROSION CONTROL	
																			DRAINAGE	
					5									5	611	01800	5	FT	8" CONDUIT, TYPE B	
					16									16	611	04400	16	FT	12" CONDUIT, TYPE B	
					503									503	611	05900	503	FT	15" CONDUIT, TYPE B	
					111									111	611	07400	111	FT	18" CONDUIT, TYPE B	
					38									38	611	07600	38	FT	18" CONDUIT, TYPE C	
					4									4	611	98180	4	EACH	CATCH BASIN, NO. 3A	
					1									1	611	98370	1	EACH	CATCH BASIN, NO. 6	
					2									2	611	98450	2	EACH	CATCH BASIN, NO. 2-2A	
		2												2	611	98631	2	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	4
					1									1	611	99574	1	EACH	MANHOLE, NO. 3	
																			PAVEMENT	
							1,338							1,338	252	01500	1,338	FT	FULL DEPTH PAVEMENT SAWING	
		20												20	253	01001	20	SY	PAVEMENT REPAIR, AS PER PLAN	4
							6,214							6,214	254	01000	6,214	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1-1/2"	
							1,080							1,080	254	01000	1,080	SY	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH	
		100												100	254	01601	100	SY	PATCHING PLANED SURFACE, AS PER PLAN	4
				15										15	301	48000	15	CY	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	
							83							83	302	46000	83	CY	ASPHALT CONCRETE BASE, PG64-22	
				59			121							180	304	20000	180	CY	AGGREGATE BASE	
				4			952							956	407	10000	956	GAL	TACK COAT	
							88							88	408	10000	88	GAL	PRIME COAT	
					7									7	441	50400	7	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)	
							354							354	442	20000	354	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
							413							413	442	20200	413	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
				164										164	452	12010	164	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
							290							290	609	12000	290	FT	COMBINATION CURB AND GUTTER, TYPE 2	
				117										117	609	26000	117	FT	CURB, TYPE 6	
							24							24	617	10100	24	CY	COMPACTED AGGREGATE	
							220							220	617	20000	220	SY	SHOULDER PREPARATION	
		5												5	638	10800	5	EACH	VALVE BOX ADJUSTED TO GRADE	
																			SANITARY SEWER	
		2												2	611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	4, 5

GENERAL SUMMARY

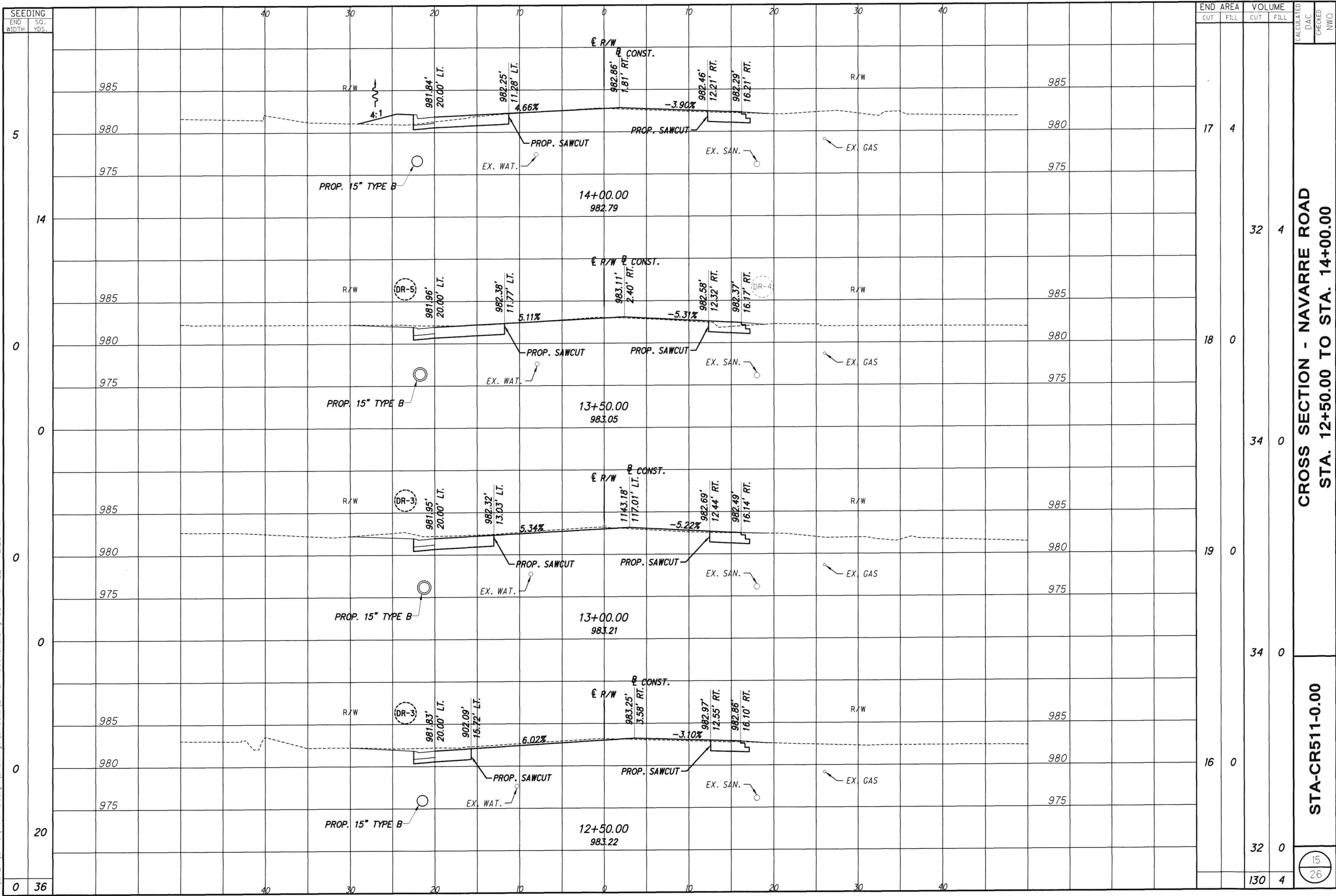
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SHEET NUM.															PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
			6		25									LOCAL SHARE/ OPWC	ITEM	EXT	TOTAL					
																					TRAFFIC CONTROL	
					48										48	630	03100	48	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
					43										43	630	80101	43	SF	SIGN, FLAT SHEET, AS PER PLAN	24	
					1										1	630	85100	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
					1.0										1.0	644	00100	1.0	MILE	EDGE LINE, 4"		
					0.5										0.5	644	00300	0.5	MILE	CENTER LINE		
					490										490	644	00400	490	FT	CHANNELIZING LINE, 8"		
					79										79	644	00500	79	FT	STOP LINE		
					1										1	644	01000	1	EACH	RAILROAD SYMBOL MARKING		
					11										11	644	01300	11	EACH	LANE ARROW		
																					TRAFFIC SIGNALS	
					2										2	632	27005	2	EACH	LOOP DETECTOR UNIT, AS PER PLAN	24	
																					MAINTENANCE OF TRAFFIC	
			24												24	614	11110	24	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
			20												20	614	13000	20	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
			1												1	614	21200	1	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I		
			2												2	614	22210	2	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I		
			176.5												177	614	23400	177	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I		
			50												50	614	26400	50	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I		
			10												10	614	30000	10	EACH	WORK ZONE ARROW, CLASS I		
			6												6	614	40050	6	EACH	BUSINESS ENTRANCE SIGN		
			LS												LS	615	10001	LS		ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	6	
			259												259	615	20001	259	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	6	
			1												1	616	10000	1	MGAL	WATER		
																					INCIDENTALS	
			LS												LS	614	11000	LS		MAINTAINING TRAFFIC		
															4	619	16000	4	MNTH	FIELD OFFICE, TYPE A		
															LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
															LS	624	10000	LS		MOBILIZATION		

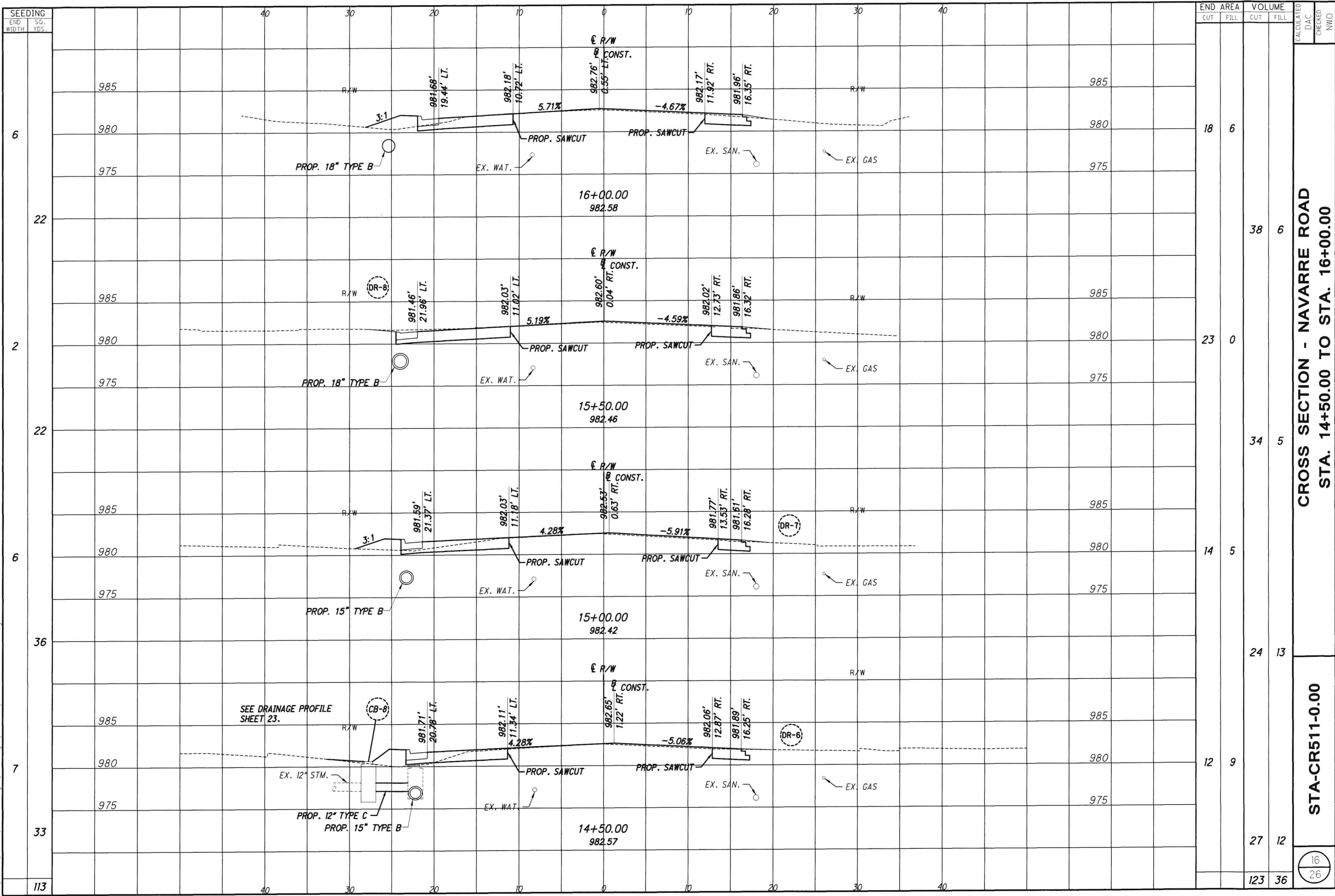
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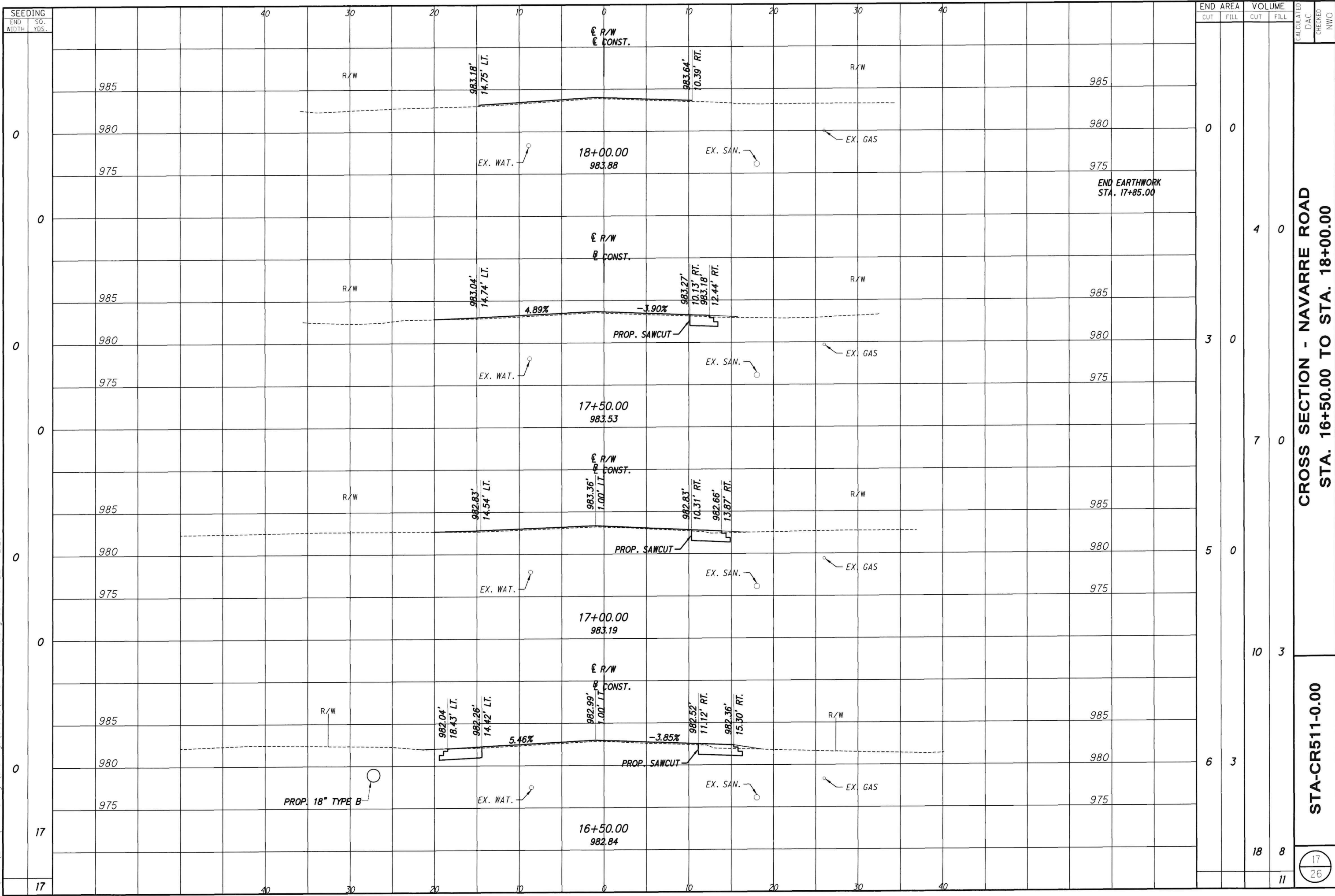
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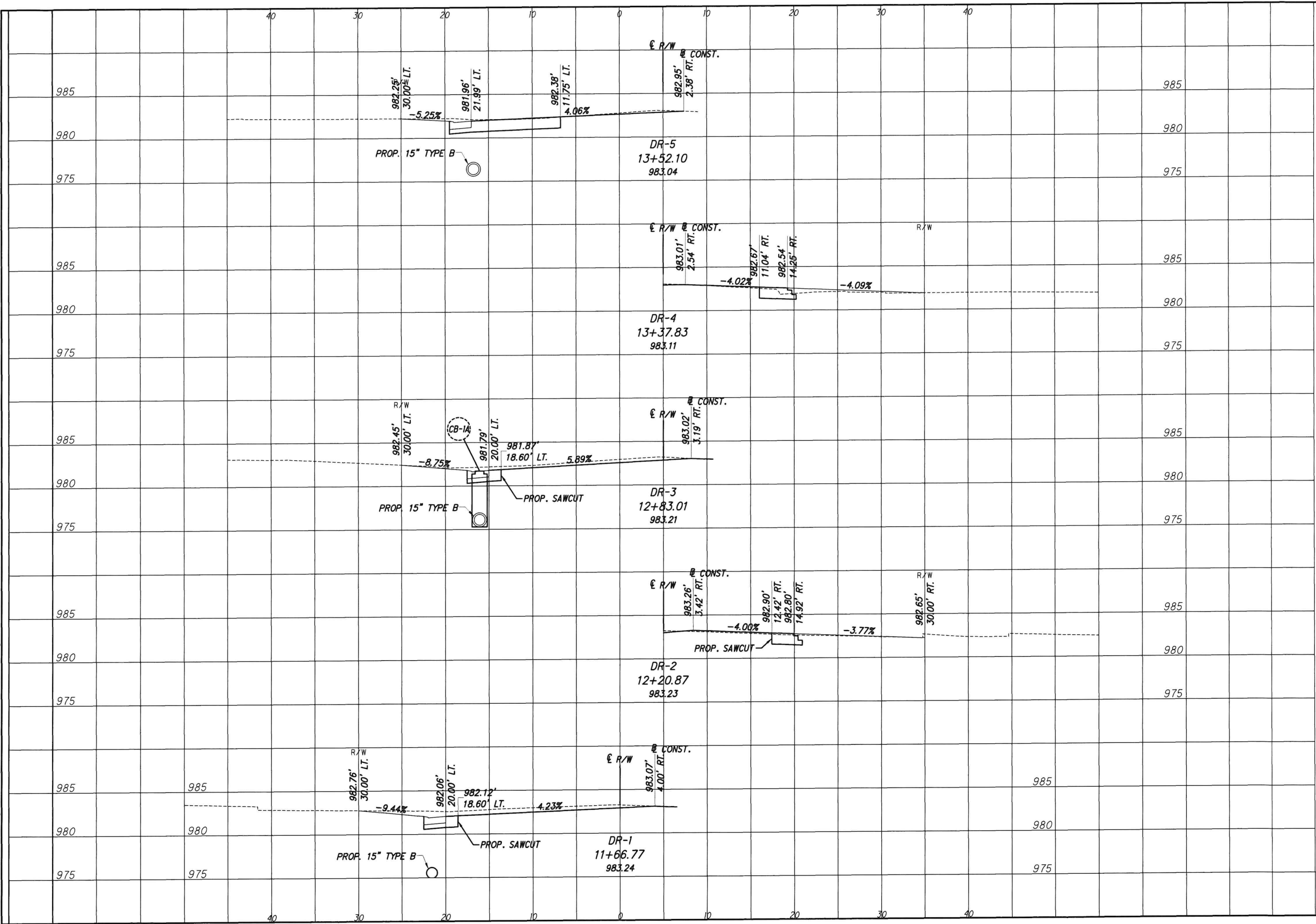


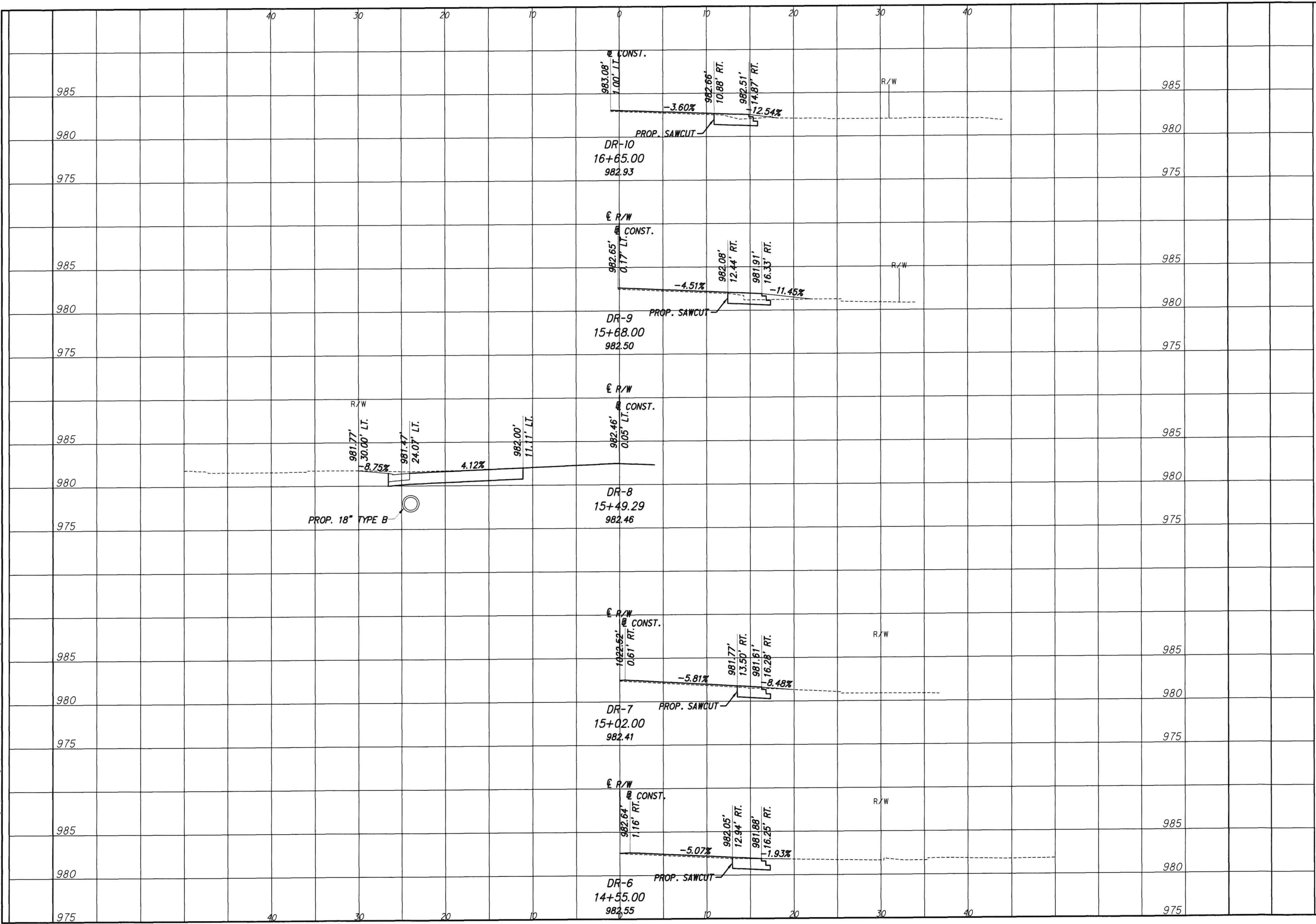
CROSS SECTION - NAVARRE ROAD
STA. 16+50.00 TO STA. 18+00.00

STA-CR511-0.00

17
26

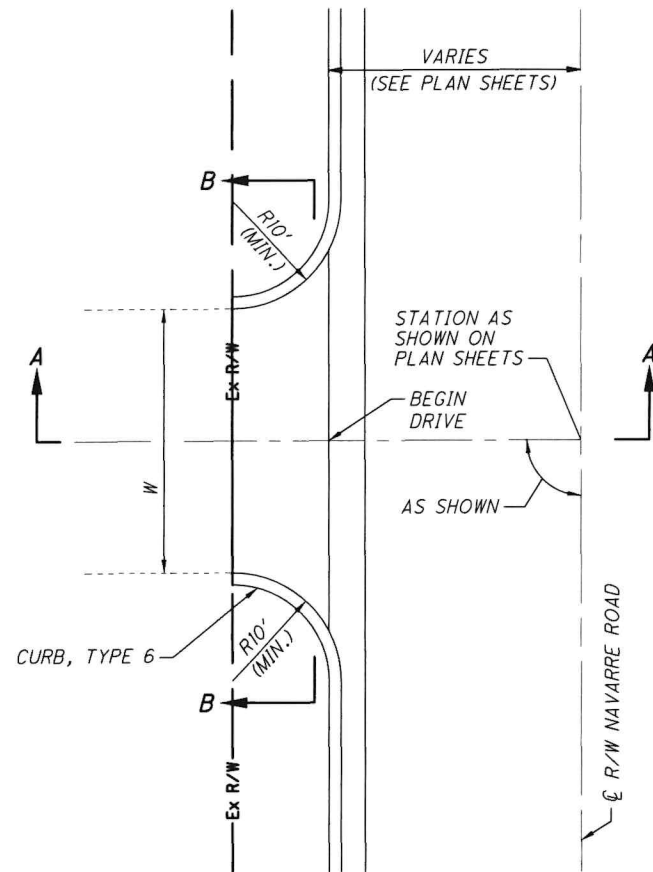
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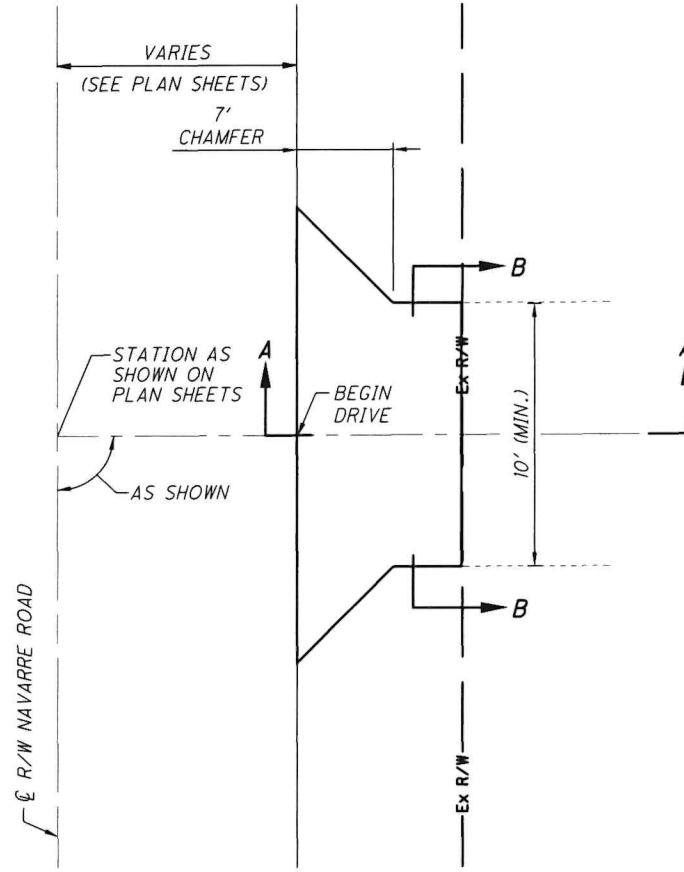


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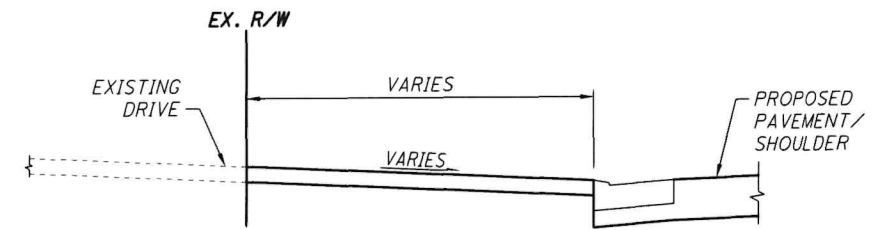
W = EXISTING DRIVE WIDTH



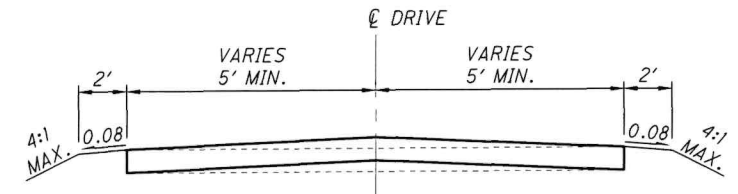
COMMERCIAL DRIVE DETAIL
(ON NORTH SIDE OF ROAD)



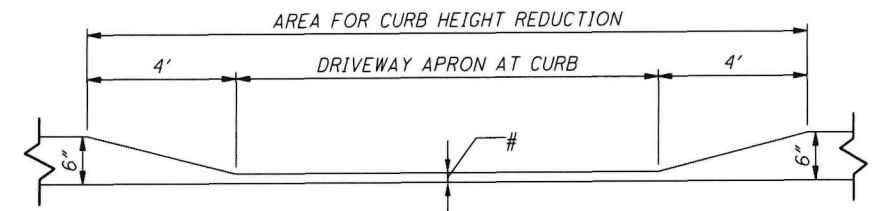
COMMERCIAL AND RESIDENTIAL DRIVE DETAIL
(ON SOUTH SIDE OF ROAD)



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE



TAPERED APRON DETAIL
NOT TO SCALE

DRIVEWAY ESTIMATED QUANTITIES

REF. NO.	SHEET NO.	STATION	SIDE	DRIVE TYPE	EX. DRIVE MATERIAL	DRIVE ANGLE	LENGTH "L"	WIDTH "W"	CAD GENERATED APRON AREA "CA"	202	204	301	304	407	441	441	452	609
										PAVEMENT REMOVED [CAD GENERATED]	SUBGRADE COMPACTION [CAD GENERATED]	5" ASPHALT CONCRETE BASE COURSE, PG 64-22 (DRIVEWAYS)	6" AGGREGATE BASE COURSE	TACK COAT (0.040 GAL/SY)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), (DRIVEWAYS)	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), (DRIVEWAYS)	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P [CA / 9]	CURB, TYPE 6
						DEG	FT	FT	SQ FT	SQ YD	SQ YD	CU YD	CU YD	GAL	CU YD	CU YD	SQ YD	FT
DR-1	12	11+66.77	LT	COMM.	CONC.	90	8	34	370	41	41		7.2				41.1	41
DR-2	12	12+21.00	RT	COMM.	CONC.	90	14	22	361	41	40		7.1				40.1	
DR-3	12	12+83.00	LT	COMM.	CONC.	90	7	67	512	57	57		9.9				56.9	27
DR-4	12	13+38.00	RT	COMM.	ASPH.	90° 16' 29"	14	25	393	42	44	6.1	7.7	1.7		1.52		
DR-5	12	13+53.42	LT	COMM.	CONC.	90	7	26	234	24	26		4.7				26.0	27
DR-6	12	14+56.10	RT	COMM.	ASPH.	90	14	26	402	54	45	6.2	7.8	1.8		1.55		
DR-7	12,13	15+02.40	RT	RES.	ASPH.	90	14	10	172	20	19		3.6		1.10			
DR-8	13	15+49.50	LT	COMM.	ASPH.	90	5	29	174	18	19	2.7	3.5	0.8		0.67		22
DR-9	13	15+70.80	RT	RES.	AGG.	90	14	10	185	18	21		3.8		1.10			
DR-10	13	16+67.50	RT	RES.	ASPH.	90	14	10	191	23	21		3.9		1.20			
SUBTOTAL															3.4	3.7		
TOTALS CARRIED TO GENERAL SUMMARY										338	333	15	59	4	7		164	117

DRIVE PAVEMENT BUILDUPS

RESIDENTIAL DRIVES (ASPHALT)

ITEM 304 - 6" AGGREGATE BASE COURSE

ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), (DRIVEWAYS)

COMMERCIAL DRIVES (CONCRETE)

ITEM 304 - 6" AGGREGATE BASE COURSE

ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS

COMMERCIAL DRIVES (ASPHALT)

ITEM 304 - 6" AGGREGATE BASE COURSE

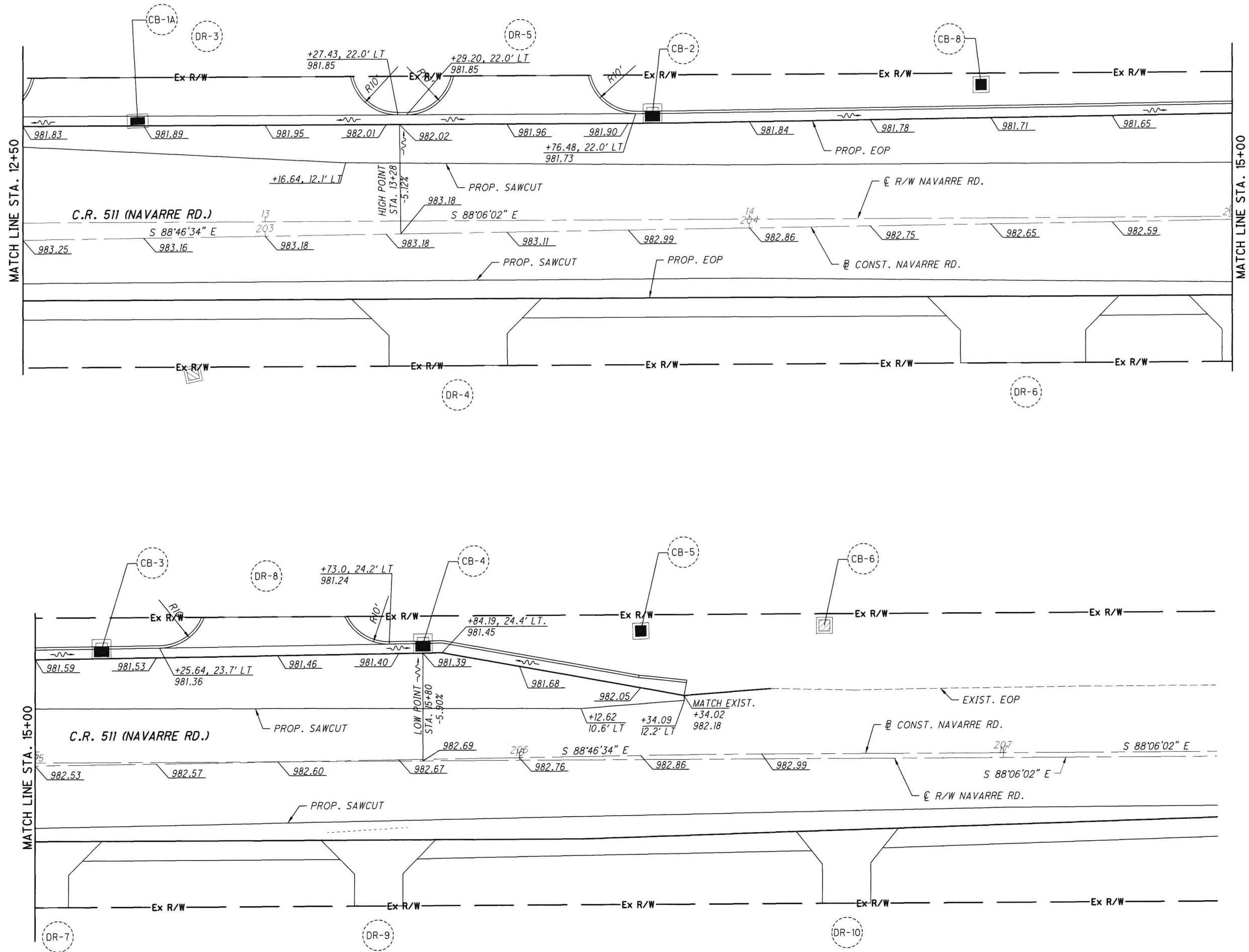
ITEM 301 - 5" ASPHALT CONCRETE BASE COURSE, PG64-22

ITEM 407 - TACK COAT (0.040 GAL/SY)

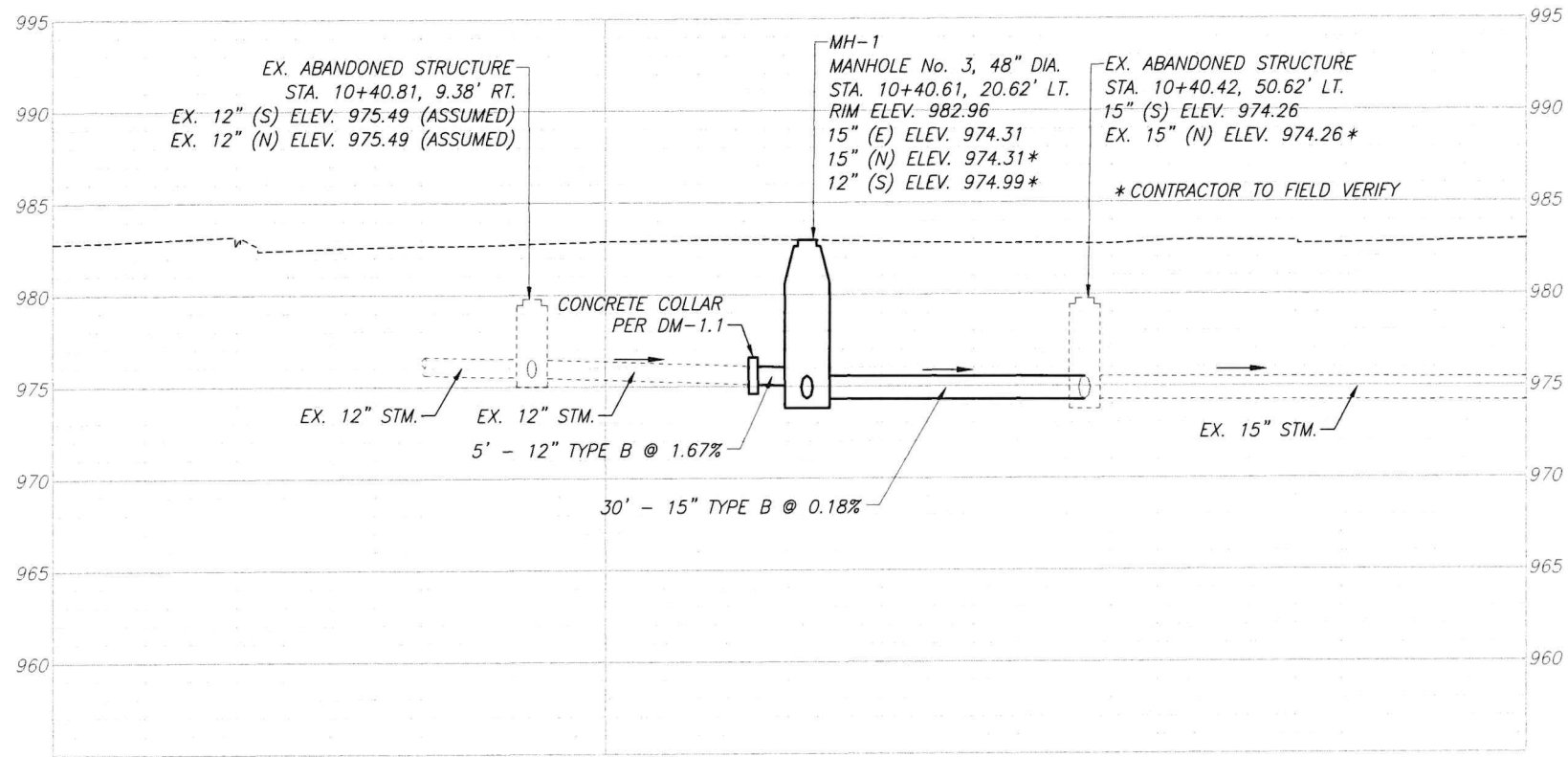
ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), (DRIVEWAYS)



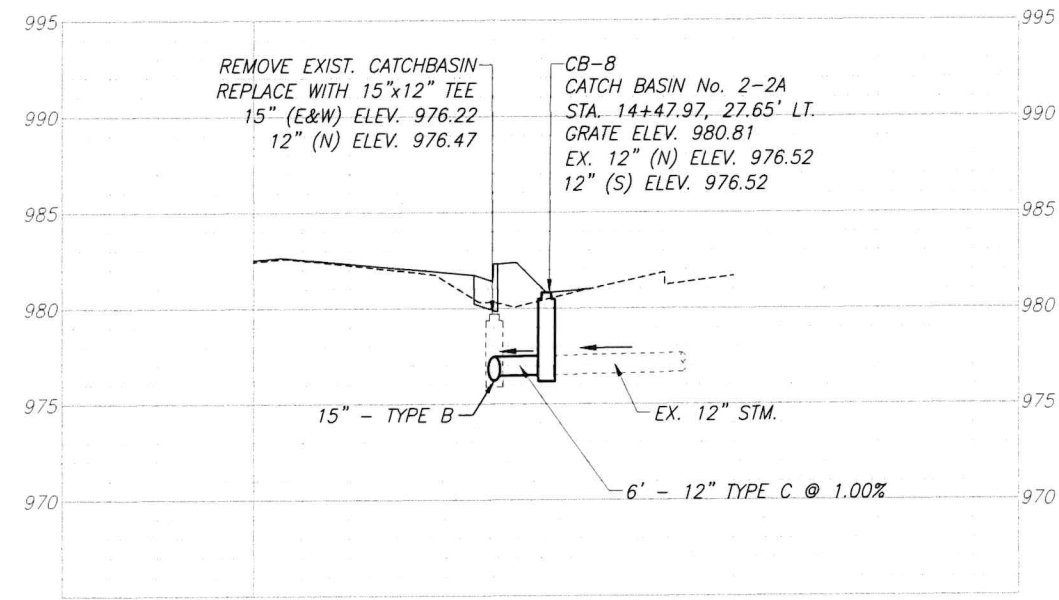
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DRAINAGE PROFILE MH-1
LOOKING WESTBOUND

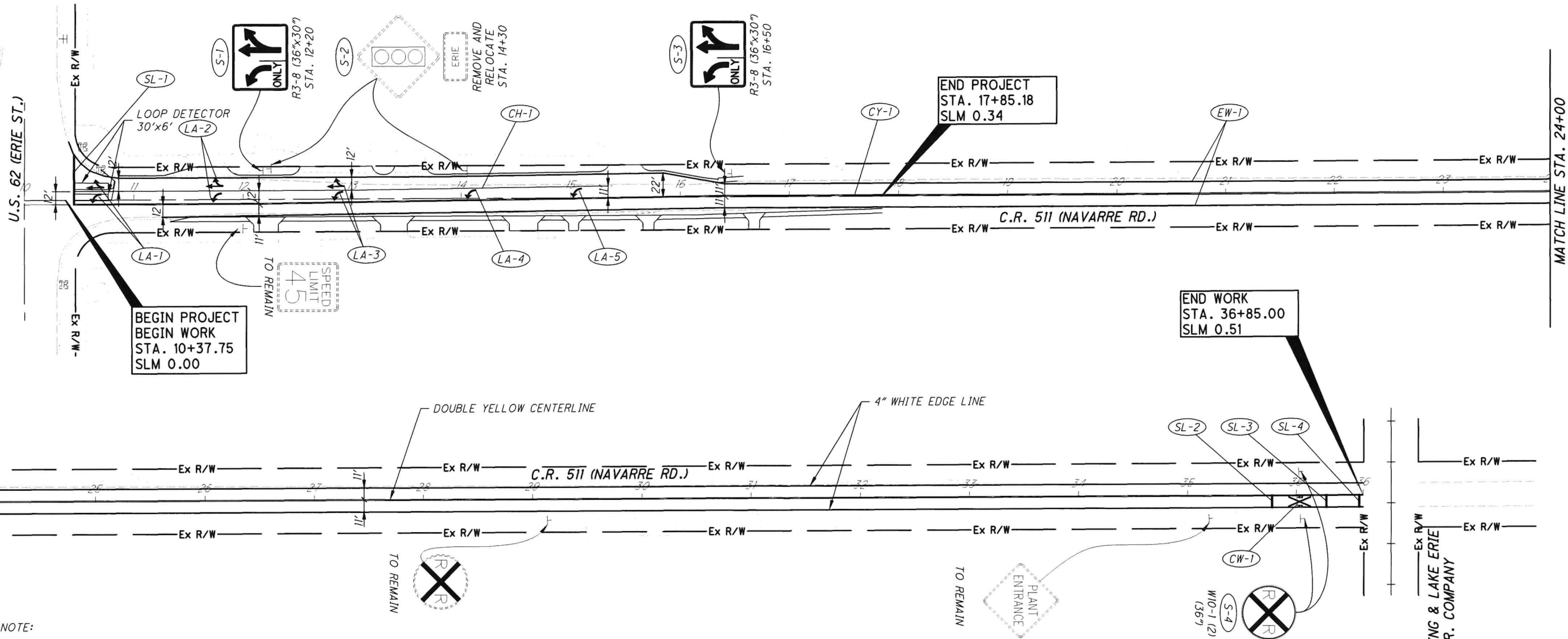


DRAINAGE PROFILE CATCHBASIN CB-8
LOOKING WESTBOUND

DRAINAGE ESTIMATED QUANTITIES																
REF. NO.	SHEET NO.	STATION		SIDE	202			611								
					PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	REMOVAL MISC.: ABANDONED DRAINAGE STRUCTURE REMOVED	8" CONDUIT, TYPE B	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 2-3	CATCH BASIN, NO. 2-2A	MANHOLE, NO. 3 (48")
		FROM	TO		FT	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH
MH-1	12, 23	100+25.19*	100+60.67*	RT	35		1		5	30						1
CB-1	12	10+40.61	12+23.00	LT	187	1		5		182			1			
CB-1A	12	12+23.00	12+78.00											1		
CB-2	12	12+78.00	13+80.00	LT	162				5	157			1			
CB-3	13	13+80.00	15+13.68	LT	134		1			134			1			
CB-4	13	15+13.68	15+80.00	LT	66						66		1			
CB-5	13	15+80.00	16+25.00	LT	45						45				1	
CB-6	13	16+25.00	16+62.92	LT	38							38				
CB-7	LEFT BLANK															
CB-8	12, 23	14+47.97		LT	6				6						1	
TOTALS CARRIED TO GENERAL SUMMARY					673	1	2	5	16	503	111	38	4	1	2	1

*STATIONING BASED OFF OF CENTERLINE R/W U.S. 62

MATCH LINE STA. 24+00



NOTE:

1. CONTINUE STRIPING TO THE END OF WORK, SLM 0.51
2. INSTALL STRIPING FOR EASTBOUND AT GRADE RAIL CROSSING IN ACCORDANCE WITH OMTCD FIGURE 8B-6.

ITEM 630 - SIGN, FLAT SHEET, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 630.04, THE REFLECTORIZED SHEETING AND LEGEND SHALL BE ON ONE SIDE. FURNISH ASTM TYPE IX REFLECTIVE SHEETING FOR ALL SIGNS. USE FLUORESCENT YELLOW COLOR FOR ALL WARNING SIGNS, AND FLUORESCENT YELLOW-GREEN FOR ALL SCHOOL ZONE SIGNS OR PORTIONS OF SCHOOL ZONE SIGNS THAT REQUIRE A YELLOW RETROREFLECTIVE BACKGROUND.

ALL SHEETING MATERIAL SPECIFICATIONS, (INCLUDING BUT NOT LIMITED TO, THE MANUFACTURER, BRAND AND SERIES NUMBER, SHALL BE SUBMITTED AND APPROVED BY THE STARK COUNTY ENGINEER'S OFFICE PRIOR TO FABRICATION. ANY SIGN SHEETING INSTALLED PRIOR TO APPROVAL BY THE ENGINEER WILL NOT BE ACCEPTED.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE MADE AT THE BID PRICE PER SQUARE FEET OF ITEM 630 - SIGN, FLAT SHEET, AS PER PLAN.

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THE CONTRACTOR SHALL CONTACT THE DISTRICT 4 OFFICE (330-786-3146) THREE (3) WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE INTERSECTION OF SR-21 (ERIE AVE.) AND NAVARRE RD. LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED.

ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWERHEAD CONFIGURATION SHOWN ON SCD TC-82.10 UNLESS OTHERWISE SPECIFIED. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE SPECIFIED BELOW. THE LOCATION OF THESE LOOPS SHALL BE SUCH THAT THE POWERHEAD IS LOCATED AT THE STOP LINE, NOT PAST IT. ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON THE TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10 AND THE LOOP SHALL BE PLACED AT THE SAME LOCATION AS THE EXISTING LOOPS.

THE QUANTITIES LISTED BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO 725.15E) THAT MUST BE USED IN MAKING THESE CONNECTIONS. ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.

ITEM 632 - DETECTOR LOOP, AS PER PLAN 2 EACH

SR-21 (ERIE AVE)/NAVARRE RD

1 EACH (POWERHEAD, 6'x30')
1 EACH (RECTANGULAR, 6'x30')

TRAFFIC CONTROL PLAN

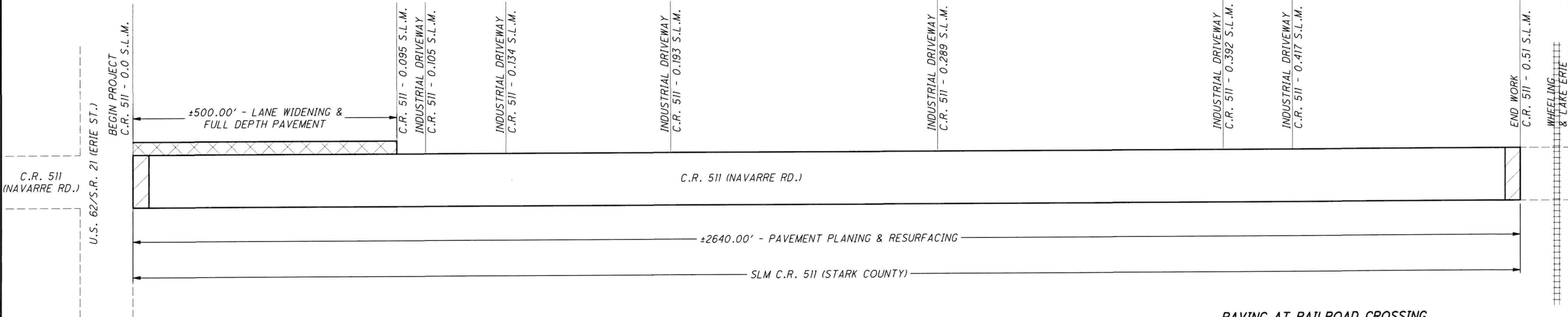
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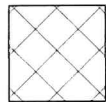
SIGNAL ESTIMATED QUANTITIES			
ITEM	QTY	UNITS	DESCRIPTION
632	2	EA	LOOP DETECTOR UNIT, AS PER PLAN

SIGNING AND PAVEMENT MARKING ESTIMATED QUANTITIES											
REFERENCE NO.	STATION		SIDE	630			644				
				GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN, FLAT SHEET, AS PER PLAN	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	STOP LINE, 24"	CHANNELIZING LINE, 8"	LANE ARROW	EDGE LINE, 4"	CENTERLINE, DOUBLE YELLOW
	FROM	TO		FT	SF	EA	FT	FT	EA	MILE	MILE
CH-1	10+45.00	15+35.00	LT					490			
SL-1	10+45.00	-	LT				46				
SL-2	35+78.00	-	RT				11				
SL-3	36+28.00	-	RT				11				
SL-4	26+58.00	-	RT				11				
LA-1	10+60.00	-	LT						3		
LA-2	11+70.00	-	LT						3		
LA-3	12+80.00	-	LT						3		
LA-4	13+90.00	-	LT						1		
LA-5	15+00.00	-	LT						1		
CY-1	10+45.00	36+85.00	RT/LT								0.5
EW-1	10+40.00	36+85.00	RT/LT							1.0	
CW-1	36+03.00	-	RT								1
S-1	12+20.00	-	LT	12	7.5						
S-2	12+25.00	14+30.00	LT			1					
S-3	16.50.00	-	LT	12	7.5						
S-4	36+03.00	-	RT/LT	24	28						
TOTALS CARRIED TO GENERAL SUMMARY				48	43	1	79	490	11	1.0	0.5
											1

PAVEMENT ESTIMATED QUANTITIES																					
STATION		DESCRIPTION	SIDE	PAVED AREA (CALCULATED)	PAVED AREA *CAD GENERATED	202		204	252	254		302	304	407		408	442		609	617	
						CURB REMOVED [CAD GENERATED]	CURB AND GUTTER REMOVED [CAD GENERATED]	SUBGRADE COMPACTION	FULL DEPTH PAVEMENT SAWING	PAVEMENT PLANING, ASPHALT CONCRETE (1-1/2")	PAVEMENT PLANING, ASPHALT CONCRETE (VAR. DEPTH)	6" ASPHALT CONCRETE BASE COURSE, PG64-22 [(AREA x 6" / 27)]	6" AGGREGATE BASE [(4.5' x LENGTH x 6" / 27)]	TACK COAT (0.04 GAL/SQ YD)	TACK COAT (0.075 GAL/SQ YD)	PRIME COAT (0.40 GAL/SQ YD)	1.50" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448)	1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM TYPE A, (448)	COMBINATION CURB AND GUTTER, TYPE 2	SHOULDER PREPARATION	COMPACTED AGGREGATE (4")
FROM	TO			SQ FT	SQ FT	FT	FT	SQ YD	FT	SY	SY	CU YD	CU YD	GAL	GAL	GAL	CU YD	CU YD	FT	SY	CY
10+37.75	16+51.80	WESTBOUND TURN LANE WIDENING	LT		6552	52	41	728	671			83	121	29.1	54.6	4	30	35	290	9	1
11+25.98	17+85.18	EASTBOUND PAVED SHOULDER	RT		2331				667					10.4	19.4		11	13			
10+37.75	16+51.80	EXISTING PAVEMENT WB LANE	LT		9717						1080			43.2	81.0		45	52			
10+37.75	16+51.80	EXISTING PAVEMENT EB LANE	RT		7128					792				31.7	59.4		33	39			
11+25.98	17+85.18	EASTBOUND AGGREGATE SHOULDER	RT		1896											84	9	10		211	23
16+51.80	36+85.00	EXISTING PAVEMENT	LT/RT	48797						5422				216.9	406.6		226	264			
														331.2	621.0						
SUBTOTALS																					
TOTALS CARRIED TO GENERAL SUMMARY						52	41	728	1338	6214	1080	83	121	952		88	354	413	290	220	24



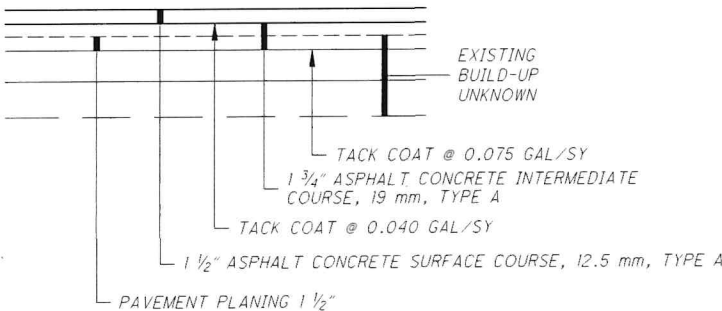
LEGEND



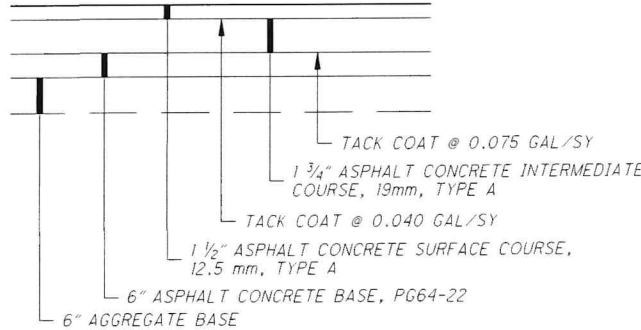
FULL DEPTH PAVEMENT REPLACEMENT



BUTT-JOINT PER ODOT SCD BP-3.1



PAVEMENT PLANING & RESURFACING



FULL DEPTH PAVEMENT

PAVING AT RAILROAD CROSSING

WORK THE CROWN OUT OF THE PROPOSED PAVEMENT ON THE WEST SIDE OF THE RAILROAD CROSSING, BEGINNING 50 FEET FROM THE NEAREST RAIL, BY RAISING THE EDGES OF THE NEW PAVEMENT TO MEET THE PLATFORM ELEVATION.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY (WITH A UNIFORM THICKNESSES AS SHOWN ON THE TYPICAL SECTIONS).

*NOTE: VARIABLE PAVEMENT PLANING FOR WESTBOUND LANES WITHIN THE WIDENING LIMITS PER TYPICAL SECTION.