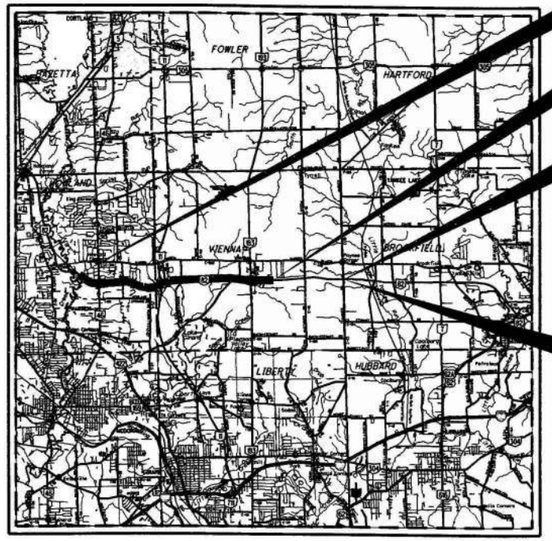


BEGIN PROJECT
SLM: 17.36

SUSPEND PROJECT
SLM: 22.74

RESUME PROJECT
SLM: 24.46

END PROJECT
SLM: 24.53

LOCATION MAP

LATITUDE: N41°13'47" LONGITUDE: W80°42'22"

SCALE IN MILES
0 2 4 6 8

N

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

DESIGN DESIGNATION

	S.R. 82 17.36-20.13	S.R. 82 20.13-22.74
DESIGN FUNCTIONAL CLASSIFICATION:	FREEWAYS AND EXPRESSWAYS	OTHER PRINCIPAL ARTERIAL
NHS PROJECT	YES	YES

DESIGN EXCEPTIONS

NONE

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

TRU-11/82-9.34/(17.36) (24.46)

HOWLAND & VIENNA TOWNSHIPS

TRUMBULL COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

RESURFACING. MINOR BRIDGE WORK. INCLUDES A LEFT TURN LANE AT BOTH NILES-VIENNA ROAD AND WARNER ROAD.

PROJECT EARTH DISTURBED AREA:	3.89 ACRES
ESTIMATED CONTRACTOR EDA:	1.00 ACRES
NOTICE OF INTENT EDA:	N/A (NOI NOT REQUIRED)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 9-10, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED
DATE 11/2/15 DISTRICT DEPUTY DIRECTOR

APPROVED
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

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

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:
ODOT - DISTRICT 4 PLANNING & ENGINEERING
2088 SOUTH ARLINGTON RD.
AKRON, OHIO 44306

ENGINEERS SEAL:

STATE OF OHIO
MATTHEW A CHANEY
E-78423
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Matt Chaney
DATE: 11-02-15

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	MGS-5.3	7/19/13	MT-101.70	1/17/14		
BP-9.1	7/19/13	MGS-6.1	7/19/13	MT-101.90	7/17/15		
		MGS-6.2	1/18/13	MT-105.10	7/19/13		
DM-1.1	1/18/13						
DM-1.2	1/18/13	RM-1.1	7/18/14	TC-41.20	10/18/13		
DM-1.4	1/18/13	RM-4.1	7/19/13	TC-42.10	10/18/13		
DM-4.3	7/19/13			TC-52.10	10/18/13		
DM-4.4	7/20/12	EXJ-4-87	7/19/02	TC-52.20	7/18/14		
				TC-65.10	1/17/14		
MGS-1.1	7/19/13	MT-95.30	7/18/14	TC-65.11	7/18/14		
MGS-2.1	7/19/13	MT-95.40	7/18/14	TC-71.10	1/17/14		
MGS-3.1	7/18/14	MT-98.10	7/18/14	TC-72.20	7/18/14		
MGS-3.2	1/18/13	MT-98.11	7/18/14	TC-82.10	7/17/15		
MGS-4.2	7/19/13	MT-98.20	7/18/14				
MGS-4.3	1/18/13	MT-98.22	7/18/14				
MGS-5.2	7/19/13	MT-99.20	7/19/13				

SUPPLEMENTAL SPECIFICATIONS

800-2013	7/15/16
821	4/20/12
832	1/17/14
843	4/18/03
902	12/31/12
921	4/20/12

SPECIAL PROVISIONS

WPC	9/18/15

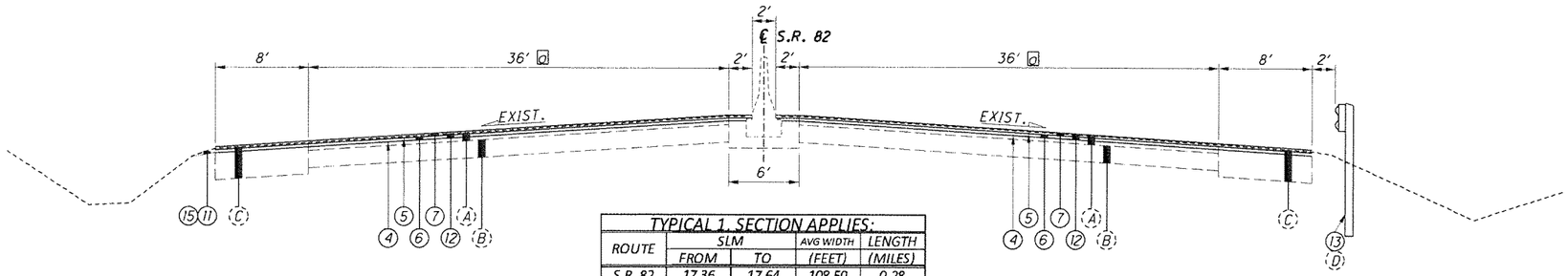
FEDERAL PROJECT NO. E150 (933)

PID NO. 92654

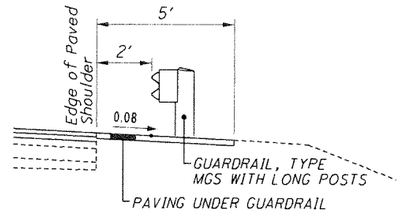
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

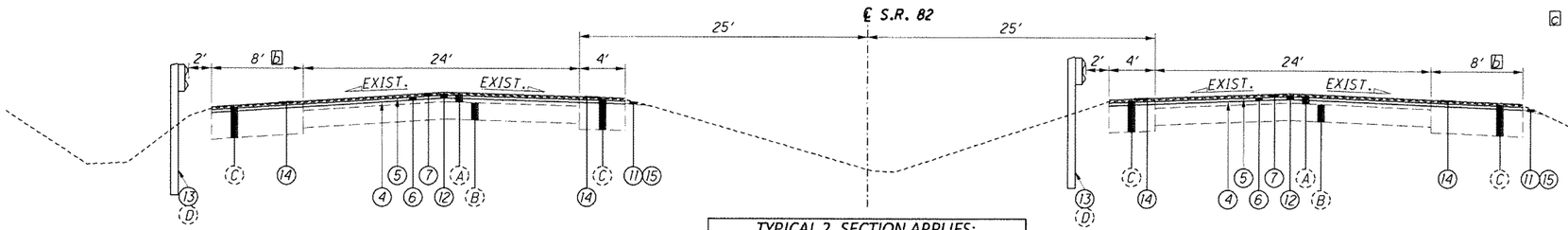
TRU-11/82-9.34/(17.36) (24.46)



TYPICAL 1 SECTION APPLIES:				
ROUTE	SLM FROM	SLM TO	AVG WIDTH (FEET)	LENGTH (MILES)
S.R. 82	17.36	17.64	108.50	0.28
S.R. 82	17.64	17.92	92.00	0.28
S.R. 82	17.92	18.29	68.00	0.37
		TOTAL =		0.93



TYPICAL GUARDRAIL SECTION



TYPICAL 2 SECTION APPLIES:				
ROUTE	SLM FROM	SLM TO	AVG WIDTH (FEET)	LENGTH (MILES)
S.R. 82	18.29	19.59	76.00	1.30 ◻c
S.R. 82	19.59	19.80	76.00	0.21
S.R. 82	19.80	22.74	72.00	2.94
		TOTAL =		4.45

◻a VARIES 52.5′ AVG, SLM 17.36 TO 36′, SLM 17.64 24′, SLM 17.92 TO SLM 18.29

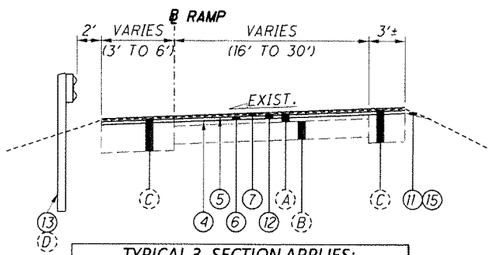
◻b OUTSIDE SHOULDER 10′ AVG, SLM 18.29 TO SLM 19.75

◻c RUMBLE STRIPS SLM 19.21 TO SLM 22.74

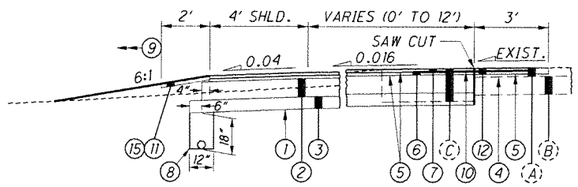
LEGEND

1. 204, SUBGRADE COMPACTION
2. 302, ASPHALT CONCRETE BASE, PG64-22 (T=9")
3. 304, AGGREGATE BASE, AS PER PLAN (T=6")
4. SPECIAL, TACK COAT, TRACKLESS TACK @ 0.1 GAL/SY
5. SPECIAL, TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
6. 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (T=1¾")
7. 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M (T=1½")
8. 605, 4" BASE PIPE UNDERDRAINS WITH FABRIC WRAP
9. 659, SEEDING AND MULCHING
10. SPECIAL, MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS (Center Over Saw Cut)
11. 617, COMPACTED AGGREGATE, AS PER PLAN (2" AVG.)
12. 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=2½" MAINLINE, 3¼" @ OVERHEAD BRIDGES)
13. 606, GUARDRAIL, TYPE MGS WITH LONG POSTS
14. 618, RUMBLE STRIPS, (ASPHALT CONCRETE) ◻c
15. 408, PRIME COAT @ 0.40 GAL/SY

(A) EXISTING 4"± ASPHALT CONCRETE SURFACE
(B) EXISTING 9" REINFORCED CONCRETE PAVEMENT
(C) EXISTING 15"± ASPHALT CONCRETE SHOULDER
(D) EXISTING GUARDRAIL



TYPICAL 3 SECTION APPLIES:			
ROUTE	AVG WIDTH (FEET)	LENGTH (MILES)	
RAMP "I" @ S.R. 46	33	0.08	OPP. HAND
RAMP "G" @ S.R. 46	28-34	0.08	
RAMP "F" @ S.R. 46	25	0.21	OPP. HAND
RAMP "R" @ S.R. 46	25-36	0.21	
RAMP "R" @ S.R. 193	25	0.10	OPP. HAND
RAMP "N" @ S.R. 193	25	0.11	
RAMP "B" @ S.R. 193	25	0.17	OPP. HAND
RAMP "A" @ S.R. 193	25	0.17	
	TOTAL =	1.13	



PAVEMENT WIDENING DETAIL

* NILES-VIENNA ROAD, 967+16 (SLM 21.59) TO 970+66 (SLM 21.67) = 350′ (OPP. HAND)
WARNER ROAD, 1115+35 (SLM 24.46) TO 1118+85 (SLM 24.53) = 350′ (⑫ 3¼" PLANING)

* PLANING INCLUDED WITH MAINLINE OPERATION

TYPICAL SECTIONS

TRU-11/82-9.34/(17.36) (24.46)

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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, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-3145 KEN GREENE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

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.

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.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL
WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

PAVEMENT MARKING LANE WIDTHS
THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS (AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS):

ROUTE	S.L.M. TO	S.L.M.	LANE WIDTH
S.R. 82	17.36	22.74	12'

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

INTERSECTIONS
INTERSECTIONS WILL BE RESURFACED 25 FT. BEYOND THE EDGE LINE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED IN THE PLAN. INTERSECTIONS SHALL BE PAVED AFTER COMPLETION OF THE SURFACE COURSE. A BUTT JOINT, AS PER STANDARD CONSTRUCTION DRAWING BP-3.1, SHALL BE USED TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING PAVEMENT. USE THE SAME ASPHALT CONCRETE AS THE MAINLINE PAVEMENT UNLESS SHOWN OTHERWISE ON THE ASPHALT CONCRETE CALCULATIONS SHEET. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH THIS WORK SHALL BE INCLUDED IN THE COST OF THE PERTINENT BID ITEM.

PAVEMENT MARKING DETAILS
THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

ITEM 304 - AGGREGATE BASE, AS PER PLAN
GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALLBE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-½"	100
¾"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

WETLANDS IMPACTS/AVOIDANCE:
UNDER THE DIRECTION OF THE PROJECT ENGINEER, THE CONTRACTOR MAY IMPACT/PLACE PERMANENT FILLS IN THE FOLLOWING WETLANDS:

WETLAND B (NORTH SIDE)-TRU-82-21.14: 0.002 ACRE

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING WETLANDS DELINEATED BEYOND THE ESTIMATED PROJECT CONSTRUCTION LIMITS. THE WETLAND LOCATION/IMPACT MAPPING IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS WITHIN THESE WETLAND AREAS. TO PROTECT AND DELINEATE THE BOUNDARY OF THE EXISTING REMAINING WETLANDS, A FILTER FABRIC FENCE AND TEMPORARY CONSTRUCTION FENCE, PER SUPPLEMENTAL SPECIFICATION 832, SHALL BE INSTALLED AT THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS AND ADJACENT AREA, INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES, AND MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION AND SHALL BE REMOVED BY THE CONTRACTOR UPON PROJECT COMPLETION.

COMMUNITY NOTIFICATION:
THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY LANE RESTRICTIONS. THE ODOT PROJECT ENGINEER WILL FORWARD THE INFORMATION TO THE ODOT, DISTRICT 4 OFFICE OF PUBLIC INFORMATION FOR USE TO NOTIFY EMERGENCY SERVICES AND COMMUNITY A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS.

RIPARIAN HABITAT:
EXISTING RIPARIAN HABITAT ZONES ALONG THE STREAM CHANNEL(S) SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE DURING PROJECT CONSTRUCTION.

STREAM CHANNEL EXCAVATION/IN STREAM WORK:
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNELS. THIS PERTAINS TO ANY EXCAVATION OPERATION SUCH AS, FOUNDATION, PIER OR ABUTMENT EXCAVATION, CHANNEL CLEAN OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

CONSTRUCTION AND DEMOLITION DEBRIS:
THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING WETLANDS AND STREAM(S). ANY DEBRIS THAT DOES FALL INTO WETLANDS AND/OR STREAM(S) SHALL BE REMOVED AS SOON AS POSSIBLE WITHIN 72 HOURS.

MECHANICAL EQUIPMENT OPERATION AT STREAM CHANNELS:
THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK AUTHORIZED HEREIN SHALL BE OPERATED IN A MANNER TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

AREAS DISTURBED BY EQUIPMENT ACTIVITIES:
ANY AREAS DISTURBED BY EQUIPMENT ACTIVITIES MUST BE SEEDED WITH AN APPROPRIATE PRAIRE SEED MIX AND MULCHED DURING CONSTRUCTION TO ENCOURAGE ESTABLISHMENT OF BENEFICIAL VEGETATIVE COVER FOR POLLINATORS AND DECREASE OR PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE UNITED STATES.

CONSTRUCTION EQUIPMENT AND MATERIALS STAGING AREAS:
CONSTRUCTION EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM STREAMS AND WETLANDS TO THE MAXIMUM EXTENT PRACTICABLE. ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 107.10 (PROTECTION AND RESTORATION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS/WETLANDS.

MATERIALS REMOVED FROM DITCHES, STREAMS, AND/OR WETLANDS:
ALL MATERIALS REMOVED FROM THE DITCHES, STREAMS OR WETLANDS MUST BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E., SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. IMMEDIATE REMOVAL IS DEFINED BY THE UNITED STATES ARMY CORPS OF ENGINEERS AS DEPOSITING THE REMOVED MATERIALS DIRECTLY INTO A TRUCK AND REMOVING THE MATERIAL FROM THE SITE; PLACEMENT OF REMOVED MATERIALS INTO A WETLAND OR ON THE BANKS OF A STREAM EVEN TEMPORARILY IS CONSIDERED A FILL AND REQUIRES A PERMIT ACTION.

TREE CUTTING RESTRICTIONS:
UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CUT/REMOVE ANY TREES PRIOR TO OR DURING CONSTRUCTION OF THE PROJECT.

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

TRU-11/82-
9.34/(17.36) (24.46)

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ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.
   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.
   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

PAVING UNDER GUARDRAIL
THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:
1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE 1 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B
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.

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.

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

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

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.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES
WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES
BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

CALCULATED RCB CHECKED MAC

GENERAL NOTES

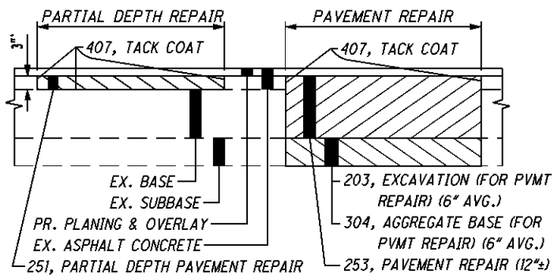
TRU-11/82-9.34/(17.36) (24.46)

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR
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 448 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 7 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	500 SQ. YD.

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 7 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	100 SQ YD



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)	17 CU YD

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)	17 CU YD

ITEM SPECIAL - MISC.: VERTICAL CLEARANCE
AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LECENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES:
TRU-11-0956 L&R
THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

SPECIAL - MISC.: VERTICAL CLEARANCE	2 EACH

LINEAR GRADING
SHOULDER WIDTH BEYOND THE LIMITS OF THE COMPACTED AGGREGATE WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND WILL BE PERFORMED ONLY IN THE AREAS NECESSARY. THIS WORK WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. THE AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. THESE ITEMS OF WORK WILL BE PERFORMED AFTER THE PLACEMENT OF ITEM 617 - COMPACTED AGGREGATE. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF, OR ADDITION OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. EXCESS MATERIAL WILL BE WINDROWED ON THE SHOULDER. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

209, LINEAR GRADING	160 STA.
659, SEEDING AND MULCHING	16612 SQ YD
659, COMMERCIAL FERTILIZER	2.24 TON
659, LIME	3.43 ACRES
659, WATER	90 M. GAL.

BARRIER REFLECTORS
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS DIRECTED BY THE ENGINEER FOR INSTALLING/REPLACING BARRIER REFLECTORS ON ALL EXISTING BARRIER RUNS WITHIN THE PROJECT LIMITS.

202, REMOVAL MISC.: BARRIER REFLECTOR	113 EACH
626, BARRIER REFLECTOR, TYPE B	126 EACH

UNRECORDED STORM WATER DRAINAGE
FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	20 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	20 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	20 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	200 FT.

EXISTING SUBSURFACE DRAINAGE
PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT, TYPE 1	6 SQ. YD.
605, 4" UNCLASSIFIED PIPE UNDERDRAINS	120 FT.
605, AGGREGATE DRAINS	60 FT.
611, 4" CONDUIT, TYPE F	120 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	3 EACH

ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN
ADJUSTABLE MONUMENT ASSEMBLIES AS SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 WILL BE PLACED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION.

THE CONTRACTOR WILL BE PROVIDED A LOCATION LIST OF EXISTING MONUMENTATION WHICH IS TO BE REPLACED WITH NEW ADJUSTABLE MONUMENT BOX ASSEMBLIES AT THE PRE-CONSTRUCTION MEETING. THIS LIST MAY INCLUDE BOTH EXPOSED AND BURIED MONUMENTATION AND MAY ALSO INCLUDE SOME TIES TO AID IN RECOVERY.

PAYMENT FOR THE REMOVAL OF ANY EXISTING MONUMENT ASSEMBLIES SHALL ALSO BE INCLUDED IN THIS ITEM.

QUANTITY THAT WILL BE CARRIED TO THE GENERAL SUMMARY:

623, MONUMENT ASSEMBLY, AS PER PLAN	1 EACH

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

TRU-11/82-9.34/(17.36) (24.46)

ITEM SPECIAL - TACK COAT, TRACKLESS TACK

ITEM SPECIAL - TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE

DESCRIPTION: THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH A TRACKLESS TACK ASPHALT EMULSION.

FURNISH MATERIALS ACCORDING TO THE DEPARTMENT'S APPROVED LIST.

MEET ALL REQUIREMENTS OF ITEM 407 TACK COAT IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRED BY THE CONTRACT, EXCEPT AS NOTED BELOW.

MATERIAL: MEET ALL PROPERTIES OF THE APPROVED MANUFACTURER'S TRACKLESS TACK SPECIFICATION REQUIREMENTS ON FILE WITH THE LABORATORY AT TIME OF PLACEMENT.

ACCEPTANCE AND SAMPLING OF MATERIALS: SUPPLY CERTIFIED TEST DATA TO THE ENGINEER AND TO THE DISTRICT LABORATORY DEMONSTRATING THE TRACKLESS TACK SUPPLIED WAS TESTED FOR AND MEETS ALL MATERIAL PROPERTIES SHOWN ON THE DEPARTMENT'S APPROVED LIST.

DURING CONSTRUCTION, ODOT PERSONNEL WILL SAMPLE FROM THE DISTRIBUTOR AND SUPPLY TO THE DISTRICT TEST LAB A MINIMUM OF ONE QUART OF TRACKLESS TACK FOR EVERY 25,000 GALLONS USED ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE PROPER PLASTIC QUART SAMPLING CONTAINER. CLEARLY MARK ON THE SAMPLE WITH THE MANUFACTURER'S NAME, PROJECT NUMBER, AND THE WORDS "TRACKLESS TACK".

EQUIPMENT: FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF PREVIOUSLY USED MATERIAL CHARGE IS DIFFERENT THAN THE PROPOSED MATERIAL.

APPLICATION OF ASPHALT MATERIAL: UNIFORMLY APPLY THE TRACKLESS TACK WITH A DISTRIBUTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. IF TRACKLESS TACK IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.

ENSURE ALL NOZZLES AND SPRAY PATTERNS ARE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. PLACE THE ANGLE OF THE NOZZLE AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.1 GALLONS PER SQUARE YARD. DO NOT DILUTE TRACKLESS TACK. RECOMMENDED APPLICATION TEMPERATURE IS 160 □F TO 180 □F. DO NOT EXCEED 180 □F. THE ENGINEER WILL APPROVE THE QUANTITY, RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TRACKLESS TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

PERFORMANCE OF TRACKLESS TACK: DETERMINE THE TIME TO SET FOR THE MATERIAL TO BECOME TRACKLESS. THE ENGINEER WILL REPORT ANY ISSUES WITH EXCESSIVE TIME TO SET, OR AFTER SET ISSUES WITH STICKINESS, OR PICKUP OF THE TACK TO THE DISTRICT TESTING ENGINEER AND NEW PRODUCT ENGINEER, BRAD YOUNG 614-351-2882.

IF THE CERTIFIED TEST DATA FAILS TO MEET THE LAB TESTING CRITERIA, OR FIELD SAMPLES FAIL TO MEET THE LAB TEST CRITERIA, OR THE TRACKLESS TACK FAILS TO PERFORM SATISFACTORILY IN THE FIELD, AS NOTED ABOVE, THE CONTRACTOR WILL BE REQUIRED TO REPLACE AND SUPPLY ANOTHER APPROVED TRACKLESS TACK PRODUCT FOR THE REMAINDER OF THE PROJECT AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY FAILING TRACKLESS TACK PRODUCT WILL BE REMOVED FROM THE DEPARTMENT'S APPROVED LIST.

ITEM SPECIAL - MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS

DESCRIPTION:
THIS WORK CONSISTS OF PLACEMENT OF A SELF ADHESIVE GLASS FIBER MESH OVER JOINTS DESIGNATED IN THE PLAN AND/OR BY THE ENGINEER PRIOR TO PLACEMENT OF ASPHALT CONCRETE.

MATERIAL:
FURNISH GLASGRID KNITTED GLASS FIBER STRAND MESH MEETING THE FOLLOWING PROPERTIES:

PROPERTIES	*GlasGrid No. 0260*
Material Width	*5 ft.*
Material - Self Adhesive fiberglass strand coated with elastomeric polymer per ASTM 4963	*25% minimum dry pickup*
Tensile Strength per G.R.I. GG 1-87	*1120 lbs/in, 560 lbs/in*
Elongation at break (min)	*<5%*
Melting Point (min) ASTM D276	*>425 °F*
Mass/ Unit Area (min) ASTM D5261-92	*16 oz/sq yd*
Grid pattern	*0.5 in x 0.5 in*

BEFORE INSTALLATION SUBMIT A LETTER TO THE PROJECT ENGINEER WITH A STATEMENT CERTIFYING MATERIAL RECEIVED MEETS THE ABOVE PROPERTIES. SUBMIT TO THE PROJECT ENGINEER ACTUAL DATED (SALES FLYER DATA NOT ACCEPTABLE) TEST DATA WITH THE CERTIFICATION LETTER.

CONSTRUCTION:
PERFORM ALL REQUIRED REPAIRS PRIOR TO PLACING MESH.

ENSURE ALL AREAS WHERE MESH IS TO BE PLACED ARE FREE OF ALL DIRT AND OTHER LOOSE MATERIALS BY SWEEPING OR OTHER APPROVED METHOD. PLACE TACK COAT FOR INTERMEDIATE COURSE AT A RATE OF 0.02 GAL./SQ. YD. AND WAIT 2 HOURS BEFORE PLACING THE MESH ON A PAVEMENT SURFACE THAT IS BETWEEN 40° F AND 140° F.

PLACE MESH UNDER TENSION TO PREVENT RIPPLING. REMOVE RIPPLES BY PULLING, OR IF NECESSARY (IN CURVES FOR EXAMPLE), BY CUTTING AND FLATTENING THE MESH. OVERLAP TRANSVERSE JOINTS OF THE MESH 3 TO 6 INCHES. OVERLAP LONGITUDINAL JOINTS OF THE MESH BY 1 INCH MINIMUM. ROLL THE MESH SURFACE 2 PASSES WITH A RUBBER COATED DRUM ROLLER, RUBBER TIRED ROLLER OR OTHER METHOD ACCEPTABLE TO THE MANUFACTURER. CLEAN RUBBER ROLLER IF BUILDUP ON THE RUBBER SURFACE INTERFERES WITH MESH PLACEMENT. DO NOT USE A STEEL DRUM ROLLER. PLACED MESH WILL HANDLE SPEED CONTROLLED EMERGENCY OR CONSTRUCTION TRAFFIC BUT DAMAGED SECTIONS MUST BE REMOVED AND/ OR REPAIRED, AT THE CONTRACTOR'S EXPENSE. DO NOT ALLOW MUD OR OTHER MATERIAL TO COLLECT ON THE MESH PRIOR TO ASPHALT CONCRETE PLACEMENT. COVER MESH WITH ASPHALT CONCRETE THE SAME DAY UNLESS WEATHER BECOMES UNSUITABLE.

MEASUREMENT:
MEASURE MESH PLACEMENT BY THE LINEAL FEET OF JOINT COVERED. DO NOT ALLOW FOR MESH OVERLAP.

PAYMENT:
THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES, COMPLETED IN PLACE, AT THE CONTRACT PRICES, AS DESCRIBED ABOVE, AS FOLLOWS:

ITEM	*UNIT*	*DESCRIPTION*
SPECIAL	*FT.*	*MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS*

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

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ITEM 611 - PIPE CULVERTS, SEWERS, AND DRAINS

THIS WORK SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER. A 12 INCH , TYPE F, CONDUIT SHALL BE CONSTRUCTED WITH ITEM 707.42 PERFORATED POLYVINYL CHLORIDE CORRUGATED SMOOTH INTERIOR PIPE. 12 INCH, TYPE F DRAINS SHALL BE A MINIMUM OF 36 INCHES BELOW THE TOP OF SUBGRADE OR TO THE TOP OF BEDROCK. AGGREGATE BACKFILL SHALL BE #8 WASHED RIVER GRAVEL (FREE OF CARBONATES) AND EXTENDED TO THE FINAL OUTLET OR DRAINAGE STRUCTURE. ITEM 302 ASPHALT CONCRETE BASE SHALL BE USED IN TRENCHED ROADWAY AREAS OVER #8 GRAVEL TO MATCH PROPOSED MILLED SURFACE. BACKFILL IN NON-ROADWAY AREAS ACCORDING TO 203 EMBANKMENT, ABOVE #8 GRAVEL.

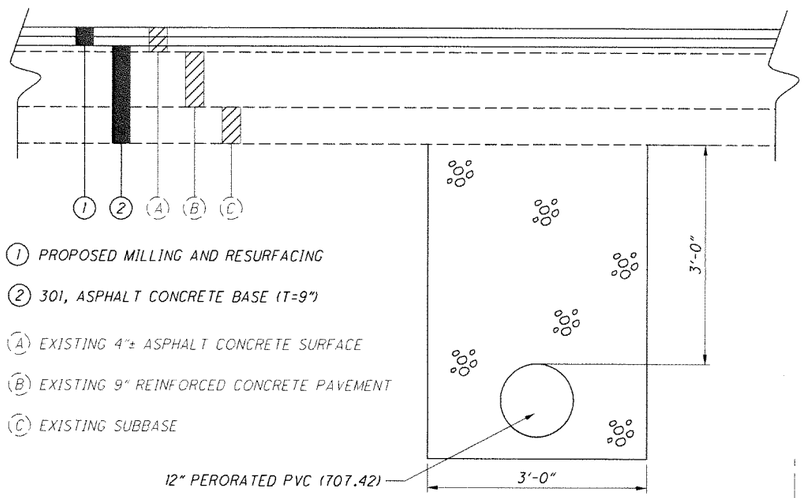
ALL TRENCH, CLEANOUTS, END CAPS, TOOLS, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 611 - 12 INCH, TYPE F CONDUIT, AS PER PLAN.

ITEM 611 - 12 INCH, TYPE F CONDUIT, AS PER PLAN	504 FT
ITEM 302 - ASPHALT CONCRETE BASE, PG64-22	18 CY
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C	1 CY

ITEM 255 - FULL DEPTH PAVEMENT SAWING

THIS ITEM SHALL NOT BE DONE UNTIL THE EXISTING PAVEMENT HAS BEEN PLANNED. A QUANTITY SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PERFORMED IN AREAS WHERE ITEM 611 CONDUIT IS TO BE PLACED CUTTING FROM THE BOTTOM OF THE PLANED SURFACE TO THE TOP OF SUBBASE.

ITEM 255 - FULL DEPTH PAVEMENT SAWING	240 FT



(1) PROPOSED MILLING AND RESURFACING

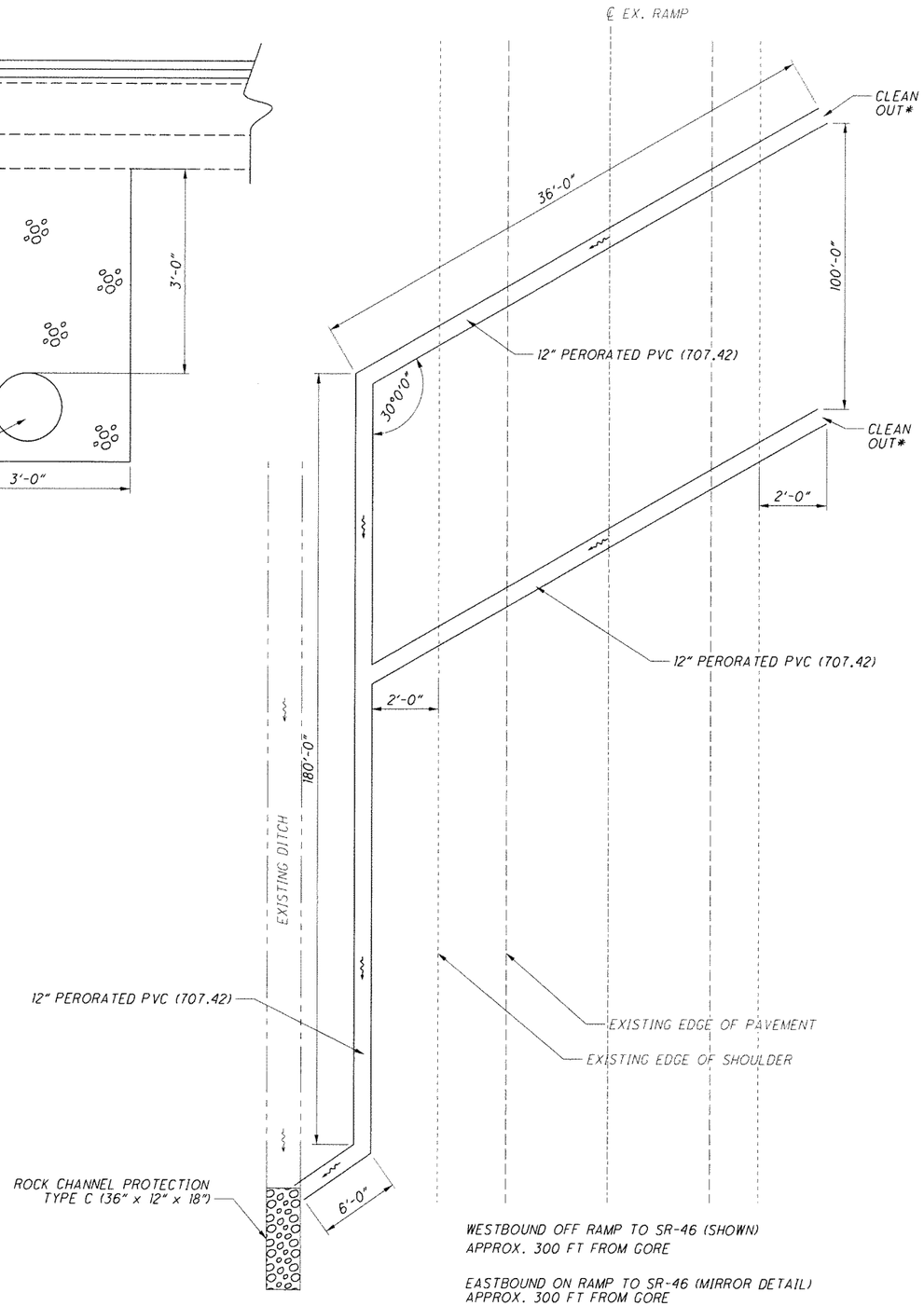
(2) 301, ASPHALT CONCRETE BASE (T=9")

(A) EXISTING 4"± ASPHALT CONCRETE SURFACE

(B) EXISTING 9" REINFORCED CONCRETE PAVEMENT

(C) EXISTING SUBBASE

* FLUSH AT FORESLOPE AND REMOVABLE END CAP.



WESTBOUND OFF RAMP TO SR-46 (SHOWN)
APPROX. 300 FT FROM GORE

EASTBOUND ON RAMP TO SR-46 (MIRROR DETAIL)
APPROX. 300 FT FROM GORE

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

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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. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT 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. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PRO- TECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

5. 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.

6. ONLY DURING OFF-PEAK PERIODS (ie 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.

7. 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.

8. A QUANTITY OF 30 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.

9. 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.

10. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 (BUMP), W8-11 (UNEVEN LANES). THESE QUANTITIES SHALL BE AS PER 614.04.

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

PHASE I & II - PLANED & INTERMEDIATE SURFACE
- 614, WORK ZONE CENTER LINE, CLASS I, 0.02 MILE
- 614, WORK ZONE LANE LINE, CLASS I, 23.94 MILE
- 614, WORK ZONE STOP LINE, CLASS I, 380 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS I, 9454 FT
- 614, WORK ZONE MARKING SIGN, 34 EACH (ALL PHASES)

PHASE III - SURFACE COURSE
- 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT 0.01 MILE
- 614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 11.97 MILE
- 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 190 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 4727 FT

TO BE USED AS DIRECTED BY THE ENGINEER
- 614, WORK ZONE EDGE LINE, CLASS III, 23.96 MILE

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. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

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.

LANE CLOSURES (SR 11)

DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT: http://plcm.dot.state.oh.us

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF $2,500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

TIME LIMITATION, TRAFFIC ON PLANED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE ON A PLANED SURFACE SHALL BE 7 CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINSENTIVE IN THE AMOUNT OF $1500 PER DAY THAT TRAFFIC IS PLACED ON A MILLED SURFACE 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 YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

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:

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $3000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE (330-786-3146) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE INTERSECTION OF SR 82 AND SR 46. 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 TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS 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 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.

632 DETECTOR LOOP, AS PER PLAN, 3 EACH

SR 82 AND SR 42

DECRIPITION	LOCATION	SIZE
RAMP R	2.5' BEHIND STOP BAR	RECT. (20')
RAMP R	2' BEHIND STOP BAR	RECTM. (20')
RAMP G	2' IN FRONT OF STOPLINE	POWERHEAD (30')

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 UN- COMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

DETOUR NOTIFICATION (ODOT/ TRUMBULL COUNTY ENGINEERS)

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND TRUMBULL COUNTY ENGINEERS (330-675-2640) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

CALCULATED CNC CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-11/ 82-9.34/(17.36) (24.46)

7
27

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (RAMPS D AND F AT SR 82 AND SR 11)

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON RAMP D (SR 82 WEST TO SR 11 SOUTH0 AND RAMP F (SR 82 EAST TO SR 11 NORTH) , EXCEPT FOR A PERIOD NOT TO EXCEED 1 NIGHT (7PM TO 6AM DAILY) WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN IN THE CHART "RAMP DETOURS" BELOW. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. 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 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.

W20-H14-60

NILES-VIENNA RD AND WARNER RD WORK ZONE QUANTITES

THE FOLLOWING QUANTITES HAVE BEEN TAKEN FROM THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR NILES-VIENNA RD AND WARNER RD INTERSECTIONS AND CARREID TO THE GENERAL SUMMARY.

ITEM 622, PORTABLE BARRIER 50", 610 FT
ITEM 614, WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL) 4 EACH
ITEM 614, BARRIER REFLECTORS, 6 EACH

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.

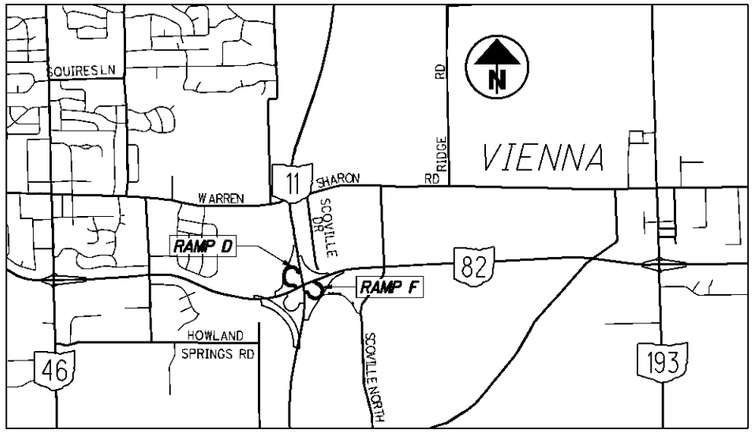
BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT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

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION) (LEFT TURN LANES INSTALLATION)

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AS SHOWN ON SHEETS 9-10, TO COMPLETE THE LEFT TURN LANES AT SR-82 AND WARNER RD AND SR-82 AND NILES-VIENNA RD, FOR A PERIOD NOT TO EXCEED 10 CONSECUTIVE CALENDAR DAYS FOR EACH INTERSECTION.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $1500 FOR EACH CALENDAR DAY THE LANES REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

DETAIL A



RAMP DETOURS

RAMP DESIGNATION	RAMP DESCRIPTION	DURATION	DETOUR ROUTE	APPROX. NUMBER OF PCMS	REFERENCE
RAMP D	SR 82 WESTBOUND TO SR 11 SOUTHBOUND	1 NIGHT (7PM TO 6AM DAILY)	SR 82 WEST / SR 46 / SR 82 EAST	3	DETAIL A
RAMP F	SR 82 EASTBOUND TO SR 11 NORTHBOUND	1 NIGHT (7PM TO 6AM DAILY)	SR 82 EAST / SR 193 / SR 82 WEST	3	DETAIL A
USE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) TO POST DETOUR ROUTES.					

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 650 FEET AND 475 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 ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

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. 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 AND. 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, 6 SIGN MONTH

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

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.

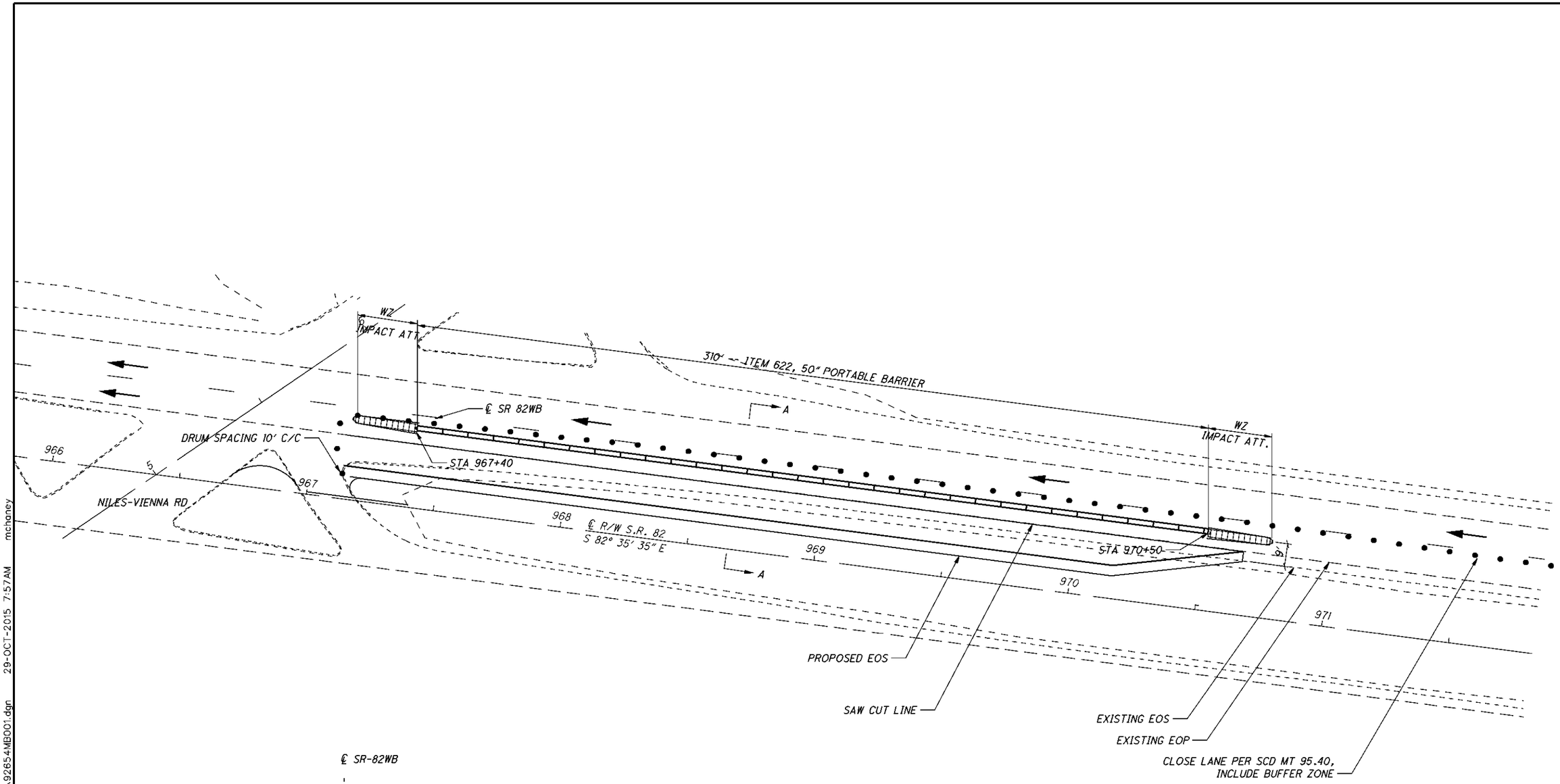
THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

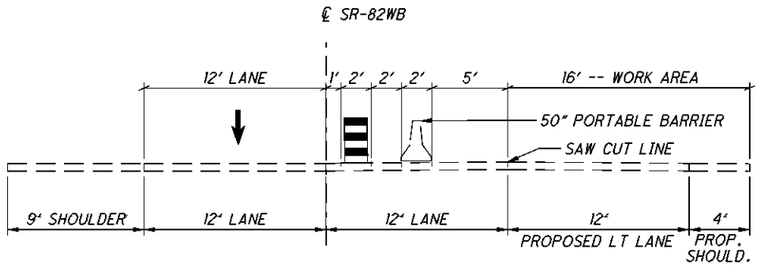
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY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

CALCULATED
CNC
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-11/82-9.34/(17.36)(24.46)





TYPICAL SECTION SR 82 WEST AT NILES-VIENNA RD

SECTION A-A

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED HKS
CHECKED

MAINTENANCE OF TRAFFIC
SR 82 WB & NILES-VIENNA RD

TRU-11/82-9.34/(17.36)(24.46)

9
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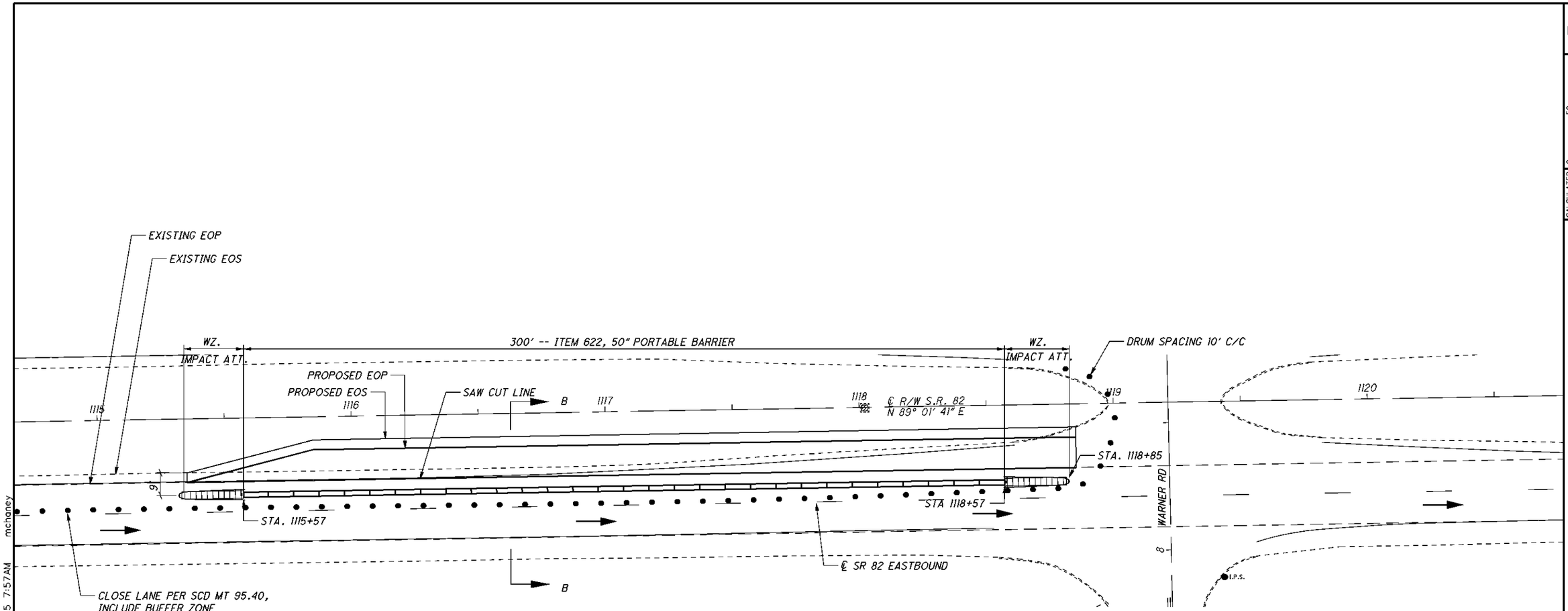

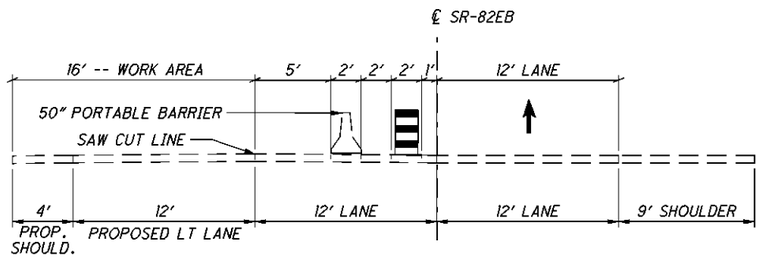

TYPICAL SECTION SR 82 EAST AT WARNER RD

SECTION B-B

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED HKS
CHECKED

MAINTENANCE OF TRAFFIC
SR 82 EB & WARNER RD

TRU-11/82-9.34/(17.36)(24.46)

10
27

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6A	5	13	14	15	16	17	18	19	20	21	22	01/NHS/PV							
																		ROADWAY	
					1073				419			1492		202	32000	1,492	FT	CURB REMOVED	
		13516										13516		202	38000	13,516	FT	GUARDRAIL REMOVED	
	113											113		202	98100	113	EACH	REMOVAL MISC.: BARRIER REFLECTOR	5
							135	83		88	135	441		203	10000	441	CY	EXCAVATION	
	17											17		203	10000	17	CY	EXCAVATION (FOR PAVEMENT REPAIR)	
							91	85		44	12	232		203	20000	232	CY	EMBANKMENT	
						1317						1317		204	10000	1,317	SY	SUBGRADE COMPACTION	
						1						1		204	45000	1	HOUR	PROOF ROLLING	
	160											160		209	60200	160	STA	LINEAR GRADING	
		139										139		209	60201	139	STA	LINEAR GRADING, AS PER PLAN	4
		12407										12407		606	15100	12,407	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
		175										175		606	15200	175	FT	GUARDRAIL, TYPE MGS HALF POST SPACING WITH LONG POSTS	
		50										50		606	15550	50	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
		8										8		606	26050	8	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
		9										9		606	26150	9	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
		16										16		606	26550	16	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
		7										7		606	35002	7	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
		4										4		606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
		2										2		606	60012	2	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
	1											1		623	38501	1	EACH	MONUMENT ASSEMBLY, AS PER PLAN	5
	2											2		SPECIAL	69098000	2	EACH	MISC.: VERTICAL CLEARANCE	5
						747						747		SPECIAL	69098100	747	FT	MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS	6
																		EROSION CONTROL	
	6											6		601	21050	6	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
1												1		601	32204	1	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	
	16612				1099				1133			18844		659	10000	18,844	SY	SEEDING AND MULCHING	
	2.24				0.15				0.15			2.54		659	20000	2.54	TON	COMMERCIAL FERTILIZER	
	3.43				0.23				0.23			3.89		659	31000	3.89	ACRE	LIME	
	90				6				6			102		659	35000	102	MGAL	WATER	
												32000		832	30000	32,000	EACH	EROSION CONTROL	
																		DRAINAGE	
	120											120		605	05200	120	FT	4" UNCLASSIFIED PIPE UNDERDRAINS	
			171									171		605	05210	171	FT	4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP	
			447									447		605	06000	447	FT	4" BASE PIPE UNDERDRAINS	
	60											60		605	31100	60	FT	AGGREGATE DRAINS	
	120											120		611	00406	120	FT	4" CONDUIT, TYPE F	
			18									18		611	00410	18	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
	20											20		611	00900	20	FT	6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
	20											20		611	01100	20	FT	6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
	20											20		611	01400	20	FT	6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	
	200											200		611	01500	200	FT	6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	
504												504		611	05201	504	FT	12" CONDUIT, TYPE F, AS PER PLAN	6A
					1							1		611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
	3											3		611	99710	3	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
	500											500		251	01000	500	SY	PARTIAL DEPTH PAVEMENT REPAIR	
	100											100		253	01000	100	SY	PAVEMENT REPAIR	
					287891		117					288008		254	01000	288,008	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
240												240		255	20000	240	FT	FULL DEPTH PAVEMENT SAWING	
18						306						324		302	46000	324	CY	ASPHALT CONCRETE BASE, PG64-22	
	17											17		304	20000	17	CY	AGGREGATE BASE (FOR PAVEMENT REPAIR)	
						211						211		304	20001	211	CY	AGGREGATE BASE, AS PER PLAN	3
					28790							28790		SPECIAL	40720500	28,790	GAL	TACK COAT, TRACKLESS TACK	6
					11516		105					11621		SPECIAL	40720510	11,621	GAL	TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE	6
					10291							10291		408	10001	10,291	GAL	PRIME COAT, AS PER PLAN	3
					11996		55					12051		441	50101	12,051	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M	3
					13995		64					14059		441	50200	14,059	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	

CALCULATED RCB
CHECKED MAC

GENERAL SUMMARY

TRU-11/82-
9.34/(17.36) (24.46)

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
					5	7	8	13	14	17	23	01/NHS/PV							
								420				420		441	50701	420	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	4
												1406		617	10101	1,406	CY	COMPACTED AGGREGATE, AS PER PLAN	3
												16		618	40600	16	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)	
																		TRAFFIC CONTROL	
									1064			1064		621	00100	1,064	EACH	RPM	
									958			958		621	54000	958	EACH	RAISED PAVEMENT MARKER REMOVED	
					126			174				300		626	00100	300	EACH	BARRIER REFLECTOR	
										216		216		630	03100	216	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										14		14		630	08600	14	EACH	SIGN POST REFLECTOR	
										42.5		42.5		630	80100	42.50	SF	SIGN, FLAT SHEET	
										13		13		630	85100	13	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
										12		12		630	86002	12	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
											23.96	23.96		646	10000	23.96	MILE	EDGE LINE, 4"	
											11.97	11.97		646	10100	11.97	MILE	LANE LINE, 4"	
											0.01	0.01		646	10200	.01	MILE	CENTER LINE	
											3841	3841		646	10300	3,841	FT	CHANNELIZING LINE, 8"	
											7845	7845		646	10310	7,845	FT	CHANNELIZING LINE, 12"	
											190	190		646	10400	190	FT	STOP LINE	
											452	452		646	10800	452	SF	ISLAND MARKING	
											39	39		646	20300	39	EACH	LANE ARROW	
											7953	7953		646	20504	7,953	FT	DOTTED LINE, 6"	
																		TRAFFIC SIGNALS	
						3						3		632	26501	3	EACH	DETECTOR LOOP, AS PER PLAN	7
																		STRUCTURE REPAIRS	
																		FOR TRU-11-0927L ESTIMATED QUANTITIES	26
																		FOR TRU-11-0956L ESTIMATED QUANTITIES	26
																		FOR TRU-11-0956R ESTIMATED QUANTITIES	26
																		FOR TRU-82-1805 ESTIMATED QUANTITIES	26
																		FOR TRU-82-1952R ESTIMATED QUANTITIES	26
																		FOR TRU-82-2114 ESTIMATED QUANTITIES	26
																		FOR TRU-82-2212L ESTIMATED QUANTITIES	26
																		FOR TRU-82-2212R ESTIMATED QUANTITIES	26
																		MAINTENANCE OF TRAFFIC	
							4					4		614	12338	4	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
						LS						LS		614	12420	LS		DETOUR SIGNING	
						34						34		614	12460	34	EACH	WORK ZONE MARKING SIGN	
						30						30		614	13000	30	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
							6					6		614	13100	6	EACH	BARRIER REFLECTOR	
							6					6		614	18600	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
						23.94						23.94		614	20000	23.94	MILE	WORK ZONE LANE LINE, CLASS I	
						11.97						11.97		614	20550	11.97	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
						0.02						0.02		614	21000	.02	MILE	WORK ZONE CENTER LINE, CLASS I	
						0.01						0.01		614	21550	.01	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
						23.96						23.96		614	22350	23.96	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
						9454						9454		614	23000	9,454	FT	WORK ZONE CHANNELIZING LINE, CLASS I	
						4727						4727		614	23680	4,727	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
						380						380		614	26000	380	FT	WORK ZONE STOP LINE, CLASS I	
						190						190		614	26610	190	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
							610					610		622	41010	610	FT	PORTABLE BARRIER, 50"	
																		INCIDENTALS	
												LS		614	11000	LS		MAINTAINING TRAFFIC	
												6		619	16020	6	MNTH	FIELD OFFICE, TYPE C	
												LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS		624	10000	LS		MOBILIZATION	

CALCULATED RCB
CHECKED MAC

GENERAL SUMMARY

TRU-11/82-
9.34/(17.36)(24.46)

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SLM		SIDE	202		203	209	301	441	609	606										622				626		COMMENTS
			GUARDRAIL REMOVED	REMOVAL MISC.: BARRIER REFLECTOR	EXCAVATION	LINEAR GRADING, AS PER PLAN	ASPHALT CONCRETE BASE, PG64-22	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	CURB, TYPE 4-C	GUARDRAIL, TYPE MGS WITH LONG POSTS	GUARDRAIL, TYPE MGS HALF POST SPACING WITH LONG POSTS	GUARDRAIL, BARRIER DESIGN, TYPE MGS	ANCHOR ASSEMBLY,			MGS BRIDGE TERMINAL ASSEMBLY,		BRIDGE TERMINAL ASSEMBLY,		IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	CONCRETE BARRIER,				BARRIER REFLECTOR		
													MGS TYPE B	MGS TYPE E	MGS TYPE T	TYPE 1	TYPE 2	TYPE 4	TYPE BR-1		SINGLE SLOPE, TYPE D	END SECTION, TYPE D	END SECTION, TYPE D, REINFORCED	END ANCHORAGE, REINFORCED, TYPE D	TYPE A	TYPE B	
FROM	TO		FT	EACH	CY	STA	CY	CY	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	
17.34	17.38	RT	162.5			1.63		5.02		112.5			1		1										3		
17.35	17.38	LT	150			1.5		4.63		100			1		1										3		
17.50	17.97	RT	2475			24.75		76.39		2425			1		1										26		RAMP G @ SR 46
17.57	17.97	LT	2100			21		64.81		2050			1		1										22		RAMP I @ SR 46
17.93	17.97	RT	225			2.25		6.17		162.5			1			1									4		
17.92	17.97	LT	244			2.44		7.52		231.25					1		1								4		
18.01	18.16	RT	768.75			7.69		23.73		756.25					1		1								9		
18.01	18.17	LT	868.75			8.69		26.04		793.75				1		1									10		
18.94	18.98	LT	200			2		6.17		137.5				1	1										3		
19.15	19.21	RT MED	287.5			2.88		8.87		225				1	1										4		
19.18	19.21	RT	150			1.5		4.63		75	12.5			1	1										3		ALIGN SIGN SUP & MGS .5
19.29	19.43	RT	712.5			7.13		21.99		662.5				1											9		SPLICE
19.34	19.43	RT MED	437.5			4.38		13.5		387.5				1											6		SPLICE
19.59	19.75	RT MED	500			8		24.69		787.5					1										9		SPLICE
19.60	19.75	RT	775			7.75		23.92		612.5	150				1										9		SPLICE, MGS .5 @ PIERS
19.75	19.81	LT	306.25			3.13		8.87		237.5				1		1									5		
19.76	19.79	LT MED	125			1.25		3.86		62.5	12.5		1		1										3		ALIGN SIGN SUP & MGS .5
19.93	19.97	LT	175			1.75		5.4		125			1		1										3		
19.93	20.01	LT MED	387.5			3.88		11.96		337.5			1		1										5		
22.04	22.13	LT	475			4.75		14.66		462.5					1		1								6		
22.04	22.13	RT	456.5			4.56		13.31		381.25				1		1									6		
22.10	22.13	RT MED	182.67			1.83		3.86		100		25				1				1					4		
22.17	22.29	LT	625			6.25		18.52		550				1		1									8		
22.17	22.20	LT MED	170.17			1.7		3.47		87.5		25				1				1					3		
22.17	22.28	RT	556.25			5.56		17.17		543.75					1		1								7		
TO GENERAL SUMMARY			13516	0	0	139	0	420	0	12407	175	50	8	9	16	7	4	0	0	2	0	0	0	0	174	0	

CALCULATED RCB
CHECKED MAC

GUARDRAIL SUBSUMMARY

TRU-11/82-9.34/(17.36)(24.46)

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mchaney
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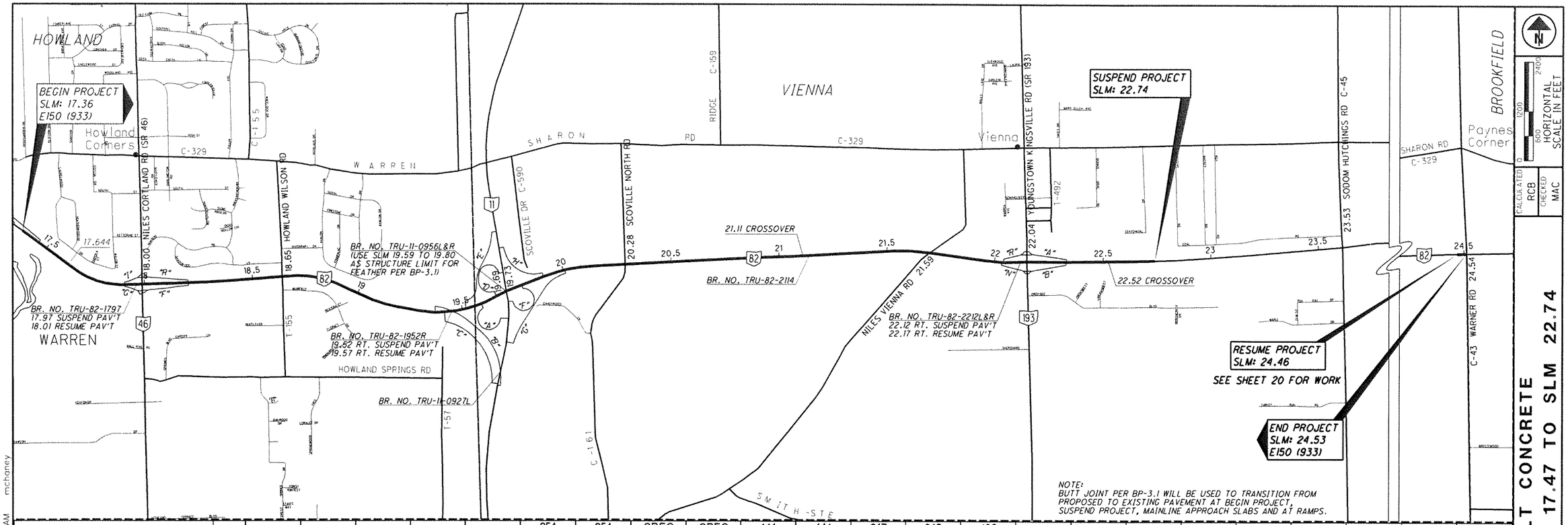
REF NO.	SHEET NO.	STATION TO STATION					BEGIN ELEVATION	END ELEVATION	OUTLET BEGIN ELEVATION	OUTLET BEGIN OFFSET	OUTLET STATION SHALLOW UNDERDRAIN OUTLET	OUTLET STATION OUTLET TO DRAINAGE STRUCTURE	OUTLET END ELEVATION	OUTLET END OFFSET	601 TIED CONCRETE BLOCK MAT, TYPE 1	605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP	605 4" BASE PIPE UNDERDRAINS	611 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY TEE	45° BEND	90° BEND	END CAP
															SY	FT	FT	FT	EACH				EACH	EACH	EACH	EACH
U1	16-17	967+16.00	LT MED	TO	970+66.00	LT MED	1128.50	1130.85	1128.35	8.56		967+51.44	1126.85	0		36	314	9					1			2
U2	20	1115+35.00	RT MED	TO	1118+02.20	RT MED	1099.80	1094.27	1094.27	8.5		1118+02.20	1094.22	0		135	133	9							1	1
TOTALS CARRIED TO GENERAL SUMMARY															0	171	447	18	0	0	0	0	1	0	1	3

LOCATION COUNTY	ROUTE	SECTION (S.L.M.) FROM	TO					621 RPM, LOW PROFILE, YELLOW/YELLOW	621 RPM, LOW PROFILE WHITE/RED	621 RPM, LOW PROFILE, WHITE	621 RPM, LOW PROFILE YELLOW/RED	621 RPM, LOW PROFILE, YELLOW	621 RAISED PAVEMENT MARKER REMOVED	REMARKS
								EACH	EACH	EACH	EACH	EACH	EACH	
TRU	82	17.36	20.13						273					SR 82 EB AND WB LANE LINE @ 120' SPACING
		20.13	22.74						357					SR 82 EB AND WB LANE LINE @ 80' SPACING
									5	4	6			@ SR 46 RAMP "I"
									37	3	5			@ SR 46 RAMP "G"
									7		14			@ SR 46 RAMP "F"
									12	13	14			@ SR 46 RAMP "R"
									78	32				@ HOWLAND WILSON RD
												32		@ HOWLAND WILSON RD - MEDIAN EDGE LINE (STOP APPROACH W/ YELLOW RPM)
									11					@ SR 11 RAMP "B" GORE
									25					@ SR 11 RAMP "C" GORE
									5					@ SR 11 RAMP "E" GORE
									7					@ SR 11 RAMP "A" GORE
									15					@ SR 11 RAMP "D" GORE
									13					@ SR 11 RAMP "F" GORE
									13					@ SR 11 RAMP "H" GORE
									9					@ SR 11 RAMP "G" GORE
									13		8			@ SR 193 RAMP "N"
									6		8			@ SR 193 RAMP "R"
									11		12			@ SR 193 RAMP "A"
									4		12			@ SR 193 RAMP "B"
			SUBTOTALS	0	0	0	0	0	901	52	79	32	958	
			TOTALS CARRIED TO GENERAL SUMMARY	0	0	0	0			1064			958	

CALCULATED RCB
CHECKED MAC

UNDERDRAIN & RPM SUBSUMMARY

TRU-11/82-9.34/(17.36)(24.46)



SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA (A)	254 PAVEMENT PLANING, ASPHALT CONCRETE, 2½" A	254 PAVEMENT PLANING, ASPHALT CONCRETE, 3¼" A	SPEC TACK COAT, TRACKLESS TACK Ax0.1	SPEC TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE Ax0.04	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M , 1½" Ax1.5/36	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), 1¾" Ax1.75/36	617 COMPACTED AGGREGATE, AS PER PLAN (Dx2)/9x #sides x2/36	618 RUMBLE STRIPS, (ASPHALT CONCRETE) D/5280 x #sides	408 PRIME COAT, AS PER PLAN (Dx2)/9x #sides x0.40									
					FT	FT	SQ YD	SQ YD	SY	SY	GAL	GAL	CY	CY	CY	MILE	GAL										
17.36	TO	17.64	1	LT/RT	1478.40	108.50	17822.93		17822.93		1782.29	712.92	742.62	866.39	36.50		262.83										
17.64	TO	17.92	1	LT/RT	1478.40	92.00	15112.53		15112.53		1511.25	604.50	629.69	734.64	36.50		262.83										
17.92	TO	18.29	1	LT/RT	1953.60	68.00	14760.53		14760.53		1476.05	590.42	615.02	717.53	48.24		347.31										
18.29	TO	19.59	2	LT/RT	6864.00	76.00	57962.67		57962.67		5796.27	2318.51	2415.11	2817.63	338.96	1.52	2440.53										
19.59	TO	19.80	2	LT/RT	1108.80	76.00	9363.20			9363.20	936.32	374.53	390.13	455.16	54.76	2.36	394.24										
19.80	TO	22.74	2	LT/RT	15523.20	72.00	124185.60		124185.60		12418.56	4967.42	5174.40	6036.80	766.58	11.76	5519.36										
DEDUCT FOR STRUCTURES								-4169.33	-4169.33		-416.93	-166.77	-173.72	-202.68	-23.58	-0.27											
INTERSECTION, TURN LANE, ACCEL/DECEL & CROSSOVER PAVEMENT								33753	33753.00		3375.30	1350.12	1406.38	1640.77													
RAMP "I" @ S.R. 46			3		413	33		1567	1567.00		156.70	62.68	65.29	76.17	10.20		73.42										
RAMP "G" @ S.R. 46			3		396	28-34		1505	1505.00		150.50	60.20	62.71	73.16	9.78		70.40										
RAMP "F" @ S.R. 46			3		1097	25		3150	3150.00		315.00	126.00	131.25	153.13	27.09		195.02										
RAMP "R" @ S.R. 46			3		1104	25-36		3965	3965.00		396.50	158.60	165.21	192.74	27.26		196.27										
RAMP "R" @ S.R. 193			3		554	25		1693	1693.00		169.30	67.72	70.54	82.30	13.68		98.49										
RAMP "N" @ S.R. 193			3		604	25		1820	1820.00		182.00	72.80	75.83	88.47	14.91		107.38										
RAMP "B" @ S.R. 193			3		913	25		2732	2732.00		273.20	109.28	113.83	132.81	22.54		162.31										
RAMP "A" @ S.R. 193			3		902	25		2667	2667.00		266.70	106.68	111.13	129.65	22.27		160.36										
SUBTOTALS									278526.93	9363.20	28789.01	11515.61	11995.42	13994.66	1405.69	15.37	10290.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTALS CARRIED TO GENERAL SUMMARY									278527	9364	28790	11516	11996	13995	1406	16	10291	0	0	0	0	0	0	0	0	0	

CALCULATED: RCB
CHECKED: MAC

HORIZONTAL SCALE IN FEET
0 600 1200 2400

ASPHALT CONCRETE
S.R. 82 - SLM 17.47 TO SLM 22.74
TRU-11/82-9.34/(17.36)(24.46)

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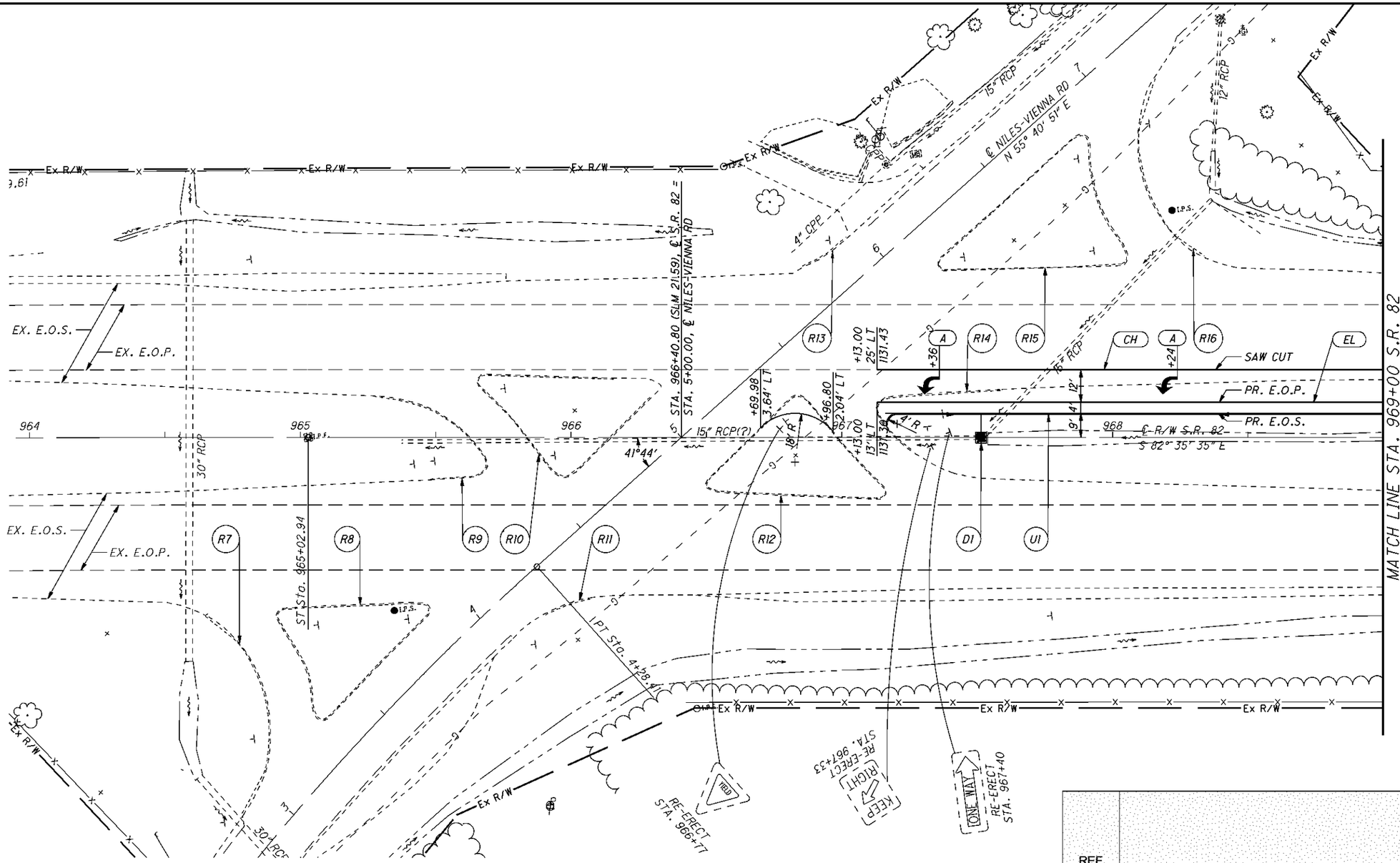

SEEDING AND MULCHING (NILES-VIENNA RD.)

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

659, SEEDING AND MULCHING	*1099 SQ. YD.*
659, COMMERCIAL FERTILIZER	*0.15 TON*
659, LIME	*0.23 ACRES*
659, WATER	*6 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.

(A) *ARROW*
(EL) *EDGE LINE*
(CH) *CHANNELIZING LINE*

FOR PAVEMENT MARKINGS QUANTITIES SEE SHEET 23
FOR PAVEMENT & SIGNING QUANTITIES SEE SHEET 17
FOR UNDERDRAIN QUANTITIES SEE SHEET 14
SEE CROSS SECTIONS FOR ADDITIONAL PAVEMENT DETAILS, SHEETS 18-19

REF NO.	STATION TO STATION					202 CURB REMOVED FT	611 CATCH BASIN RECONSTRUCTED TO GRADE EACH
R7	964+65.00	RT	TO	964+89.00	RT	85	
R8	964+91.00	RT	TO	965+48.00	RT	161	
R9	965+27.00	MED	TO	965+69.00	MED	75	
R10	965+65.00	MED	TO	966+34.00	MED	169	
R11	965+78.00	RT	TO	966+08.00	RT	20	
R12	966+49.00	MED	TO	967+17.00	MED	167	
R13	966+85.00	LT	TO	967+02.00	LT	20	
R14	967+12.00	MED	TO	967+59.00	MED	86	
R15	967+35.00	LT	TO	968+06.00	LT	196	
R16	968+09.00	LT	TO	968+34.00	LT	94	
D1	967+51.44	MED					1
TOTALS CARRIED TO GENERAL SUMMARY						1073	1

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED RCB
CHECKED MAC

WIDENING DETAIL - S.R. 82 & NILES-VIENNA RD.
STA. 964+00 TO STA. 969+00

TRU-11/82-9.34/(17.36) (24.46)

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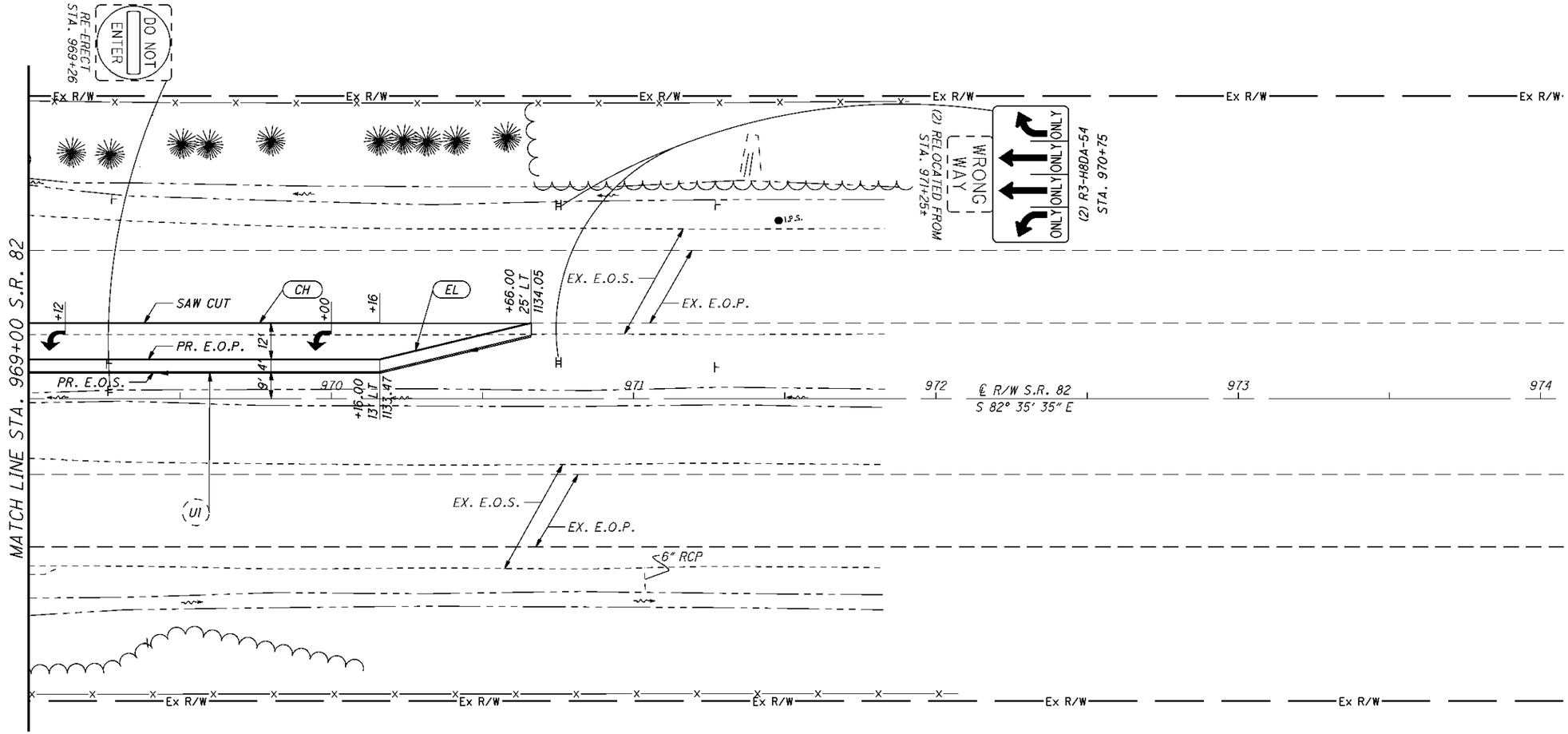

A ARROW
EL EDGE LINE
CH CHANNELIZING LINE

FOR PAVEMENT MARKINGS QUANTITIES SEE SHEET 21
FOR UNDERDRAIN QUANTITIES SEE SHEET 12
SEE CROSS SECTIONS FOR ADDITIONAL PAVEMENT DETAILS, SHEETS 16-17

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA (A)	204 SUBGRADE COMPACTION A	204 PROOF ROLLING A/2000	254 PAVEMENT PLANING, ASPHALT CONCRETE, 2½" A	302 ASPHALT CONCRETE BASE, PG64-22, 9" Ax9/36	304 AGGREGATE BASE, AS PER PLAN, 6" Ax6/36	SPEC TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE Ax0.04	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M , 1½" Ax1.5/36	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), 1¾" Ax1.75/36	SPEC MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS D
					FT	FT	SQ YD	SQ YD	SY	HOUR	SY	CY	CY	GAL	CY	CY	FT
NILES VIENNA RD LEFT TURN LANE (SLM 21.59 TO 21.67)																	
966+69.98	TO	970+66.00		LT	396.02	16.00		605.32						48.43	25.22	29.43	396.02
302						16.33		619.61				154.90					
304						16.83		640.93					106.82				
204						17.50		669.21	669.21	0.33							
WARNER RD LEFT TURN LANE (SLM 24.46 TO 24.53)																	
1115+35.00	TO	1118+85.00		RT	350.00	19.00		705.12			116.67			56.41	29.38	34.28	350.00
302						16.33		601.47				150.37					
304						16.83		620.99					103.50				
204						17.50		647.02	647.02	0.32							
								SUBTOTALS	1316.23	0.66	116.67	305.27	210.32	104.84	54.60	63.70	746.02
								TOTALS CARRIED TO GENERAL SUMMARY	1317	1	117	306	211	105	55	64	747

STATION	SIDE	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 SIGN POST REFLECTOR (RED)	630 SIGN, FLAT SHEET	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
		FT	EACH	SF	EACH	EACH
966+77.00	LT	13.5	1		1	1
967+33.00	RT	12.5			1	1
967+40.00	LT	11			1	1
969+26.00	LT	13/13	2		1	2
970+75.00	LT	12.5/12.5	2	11.25	1	1
970+75.00	LT	12.5/12.5	2	11.25	1	1
1115+60.00	RT	12.5/12.5	2	10	1	1
1115+60.00	RT	12.5/12.5	2	10	1	1
1117+80.00	RT	13/13	2		1	1
1118+83.00	RT	14.5	1		3	1
1118+88.00	RT	12.5			1	1
TOTALS TO GEN SUM		216	14	42.5	13	12

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED RCB
CHECKED MAC

WIDENING DETAIL - S.R. 82 & NILES-VIENNA RD.
STA. 969+00 TO STA. 974+00

TRU-11/82-9.34/(17.36)(24.46)

17/27

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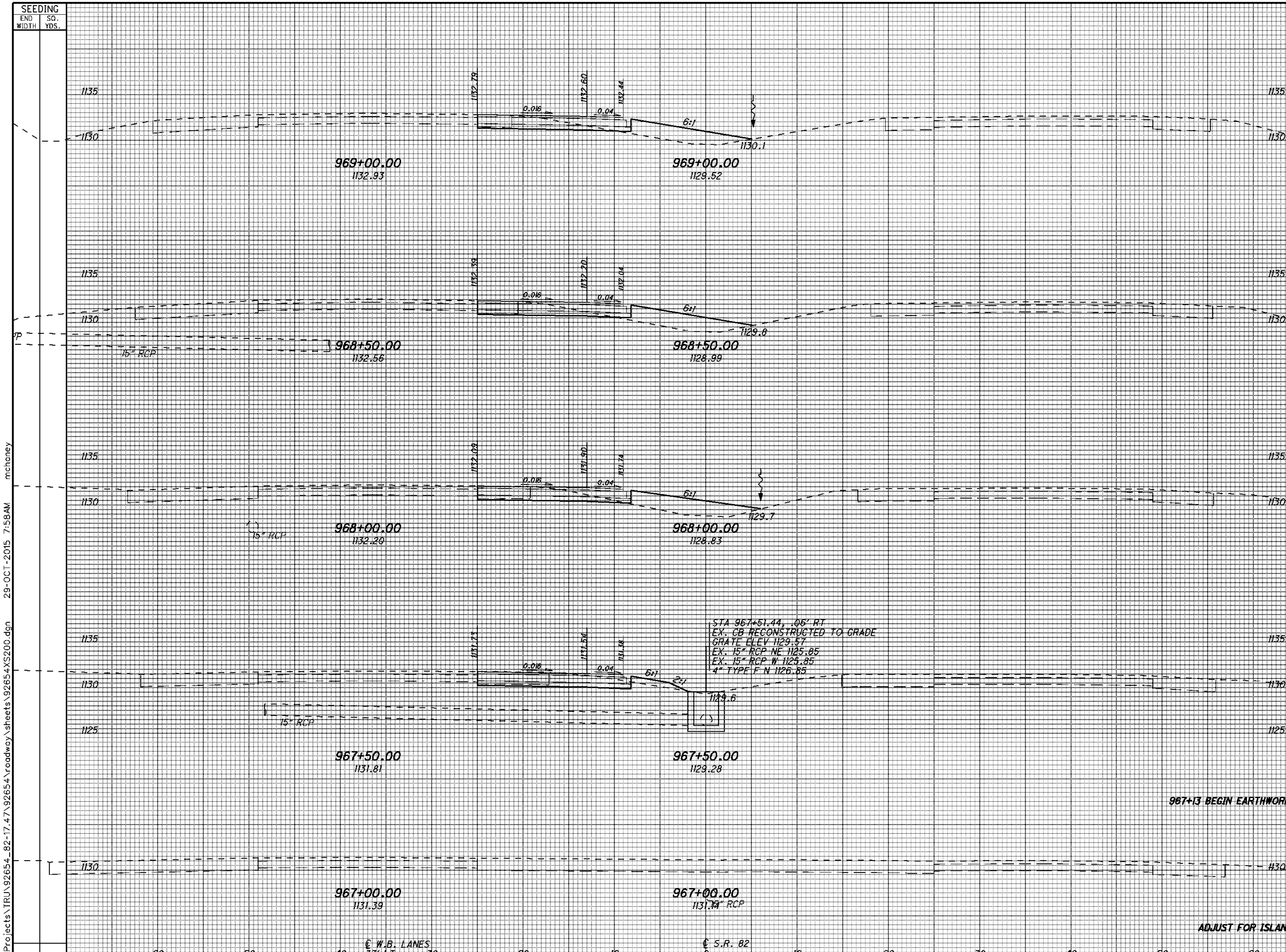

SEEDING END WIDTH	SEEDING SQ. YDS.	Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		969+00.00	15	18		
					28	34
		968+50.00	15	19		
					31	34
		968+00.00	18	18		
					38	19
		967+50.00	23	3		
					32	4
		967+13 BEGIN EARTHWORK	23	3		
		ADJUST FOR ISLAND			6	0
					135	91

CALCULATED RCB
CHECKED MAC

CROSS SECTIONS S.R. 82 (NILES-VIENNA RD.)
STA. 967+00.00 TO STA. 969+00.00

TRU-11/82-
9.34/(17.36) (24.46)

18
27

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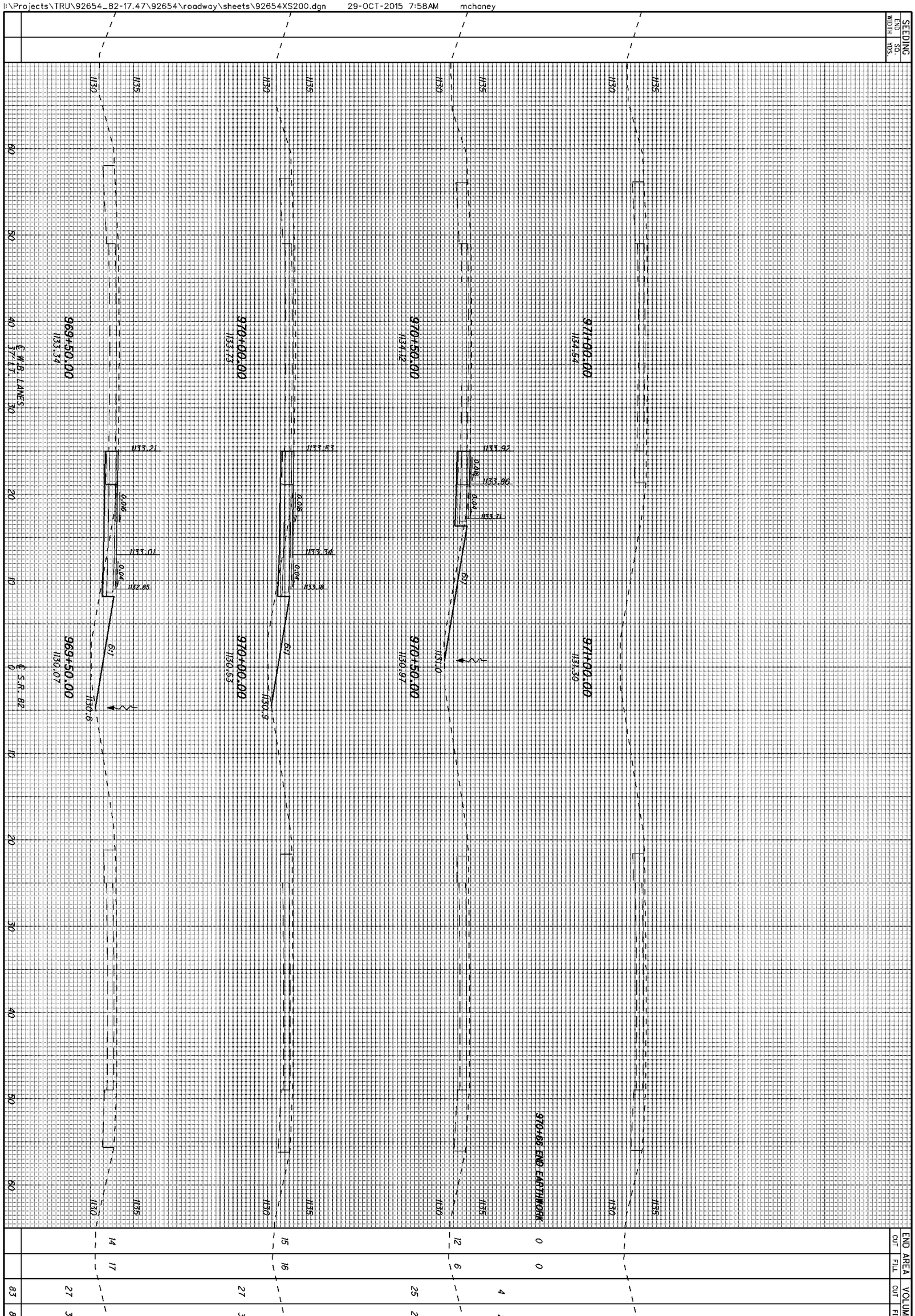
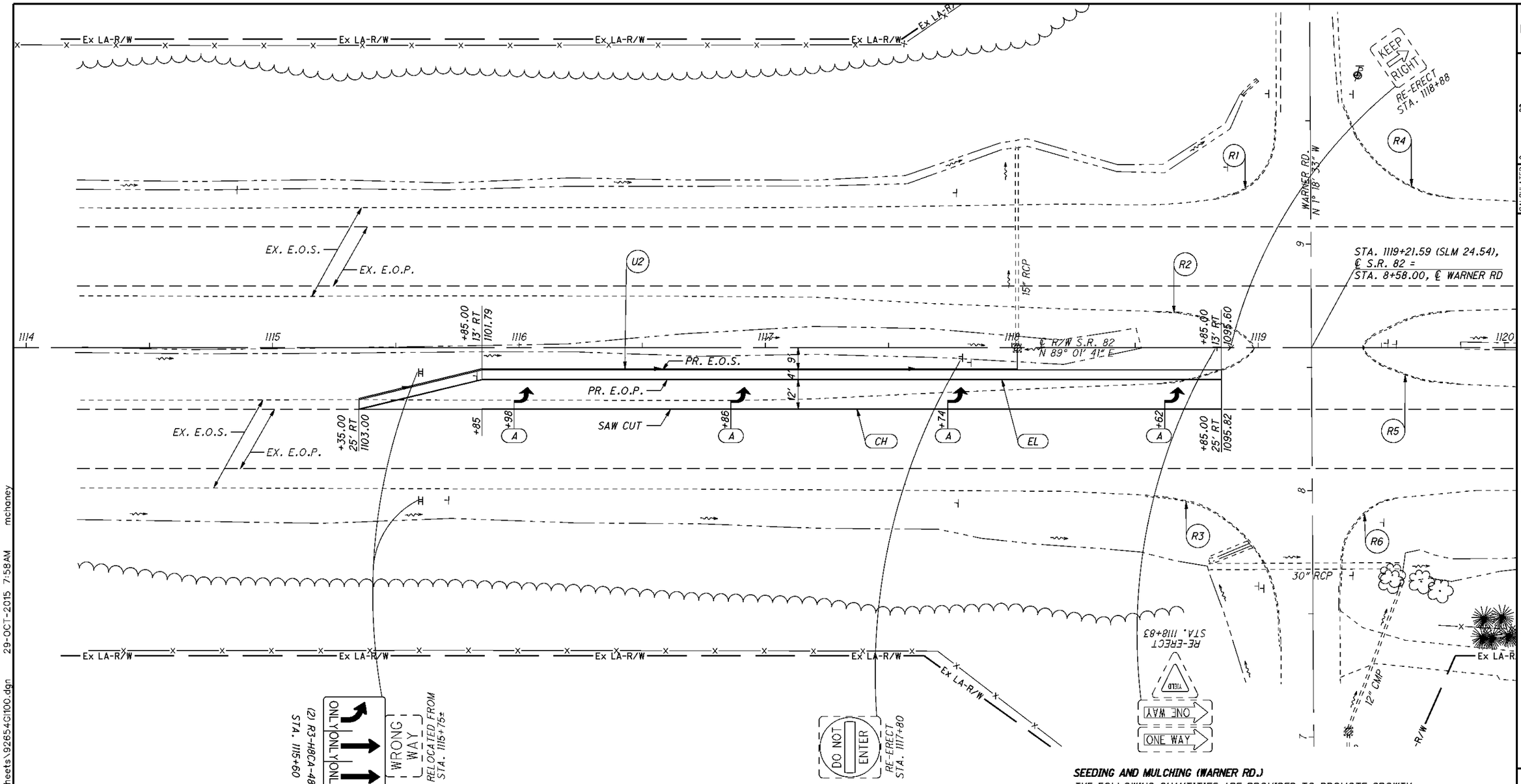


19/27	TRU-11/82-9.34/(17.36) (24.46)	CROSS SECTIONS S.R. 82 (NILES-VIENNA RD.) STA. 969+50.00 TO STA. 971+00.00

CALCULATED RCB
CHECKED MAC



REF NO.	STATION TO STATION					202 CURB REMOVED FT				
R1	1118+83.00	LT	TO	1119+08.00	LT	48				
R2	1118+59.00	MED	TO	1118+99.00	MED	85				
R3	1118+54.00	RT	TO	1119+10.00	RT	94				
R4	1119+34.00	LT	TO	1119+78.00	LT	62				
R5	1119+42.00	MED	TO	1119+82.00	MED	84				
R6	1119+33.00	RT	TO	1119+56.00	RT	46				
TOTALS CARRIED TO GENERAL SUMMARY						419	0	0	0	0

(A) ARROW
(EL) EDGE LINE
(CH) CHANNELIZING LINE

SEEDING AND MULCHING (WARNER RD.)

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

659, SEEDING AND MULCHING	*1133 SQ. YD.*
659, COMMERCIAL FERTILIZER	*0.15 TON*
659, LIME	*0.23 ACRES*
659, WATER	*6 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.

FOR PAVEMENT MARKINGS QUANTITIES SEE SHEET 23
FOR PAVEMENT & SIGNING QUANTITIES SEE SHEET 17
FOR UNDERDRAIN QUANTITIES SEE SHEET 14
SEE CROSS SECTIONS FOR ADDITIONAL PAVEMENT DETAILS, SHEETS 21-22

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED RCB
CHECKED MAC

WIDENING DETAIL - S.R. 82 & WARNER RD.
STA. 1114+00 TO STA. 1120+00

TRU-11/82-9.34/(17.36) (24.46)

20
27

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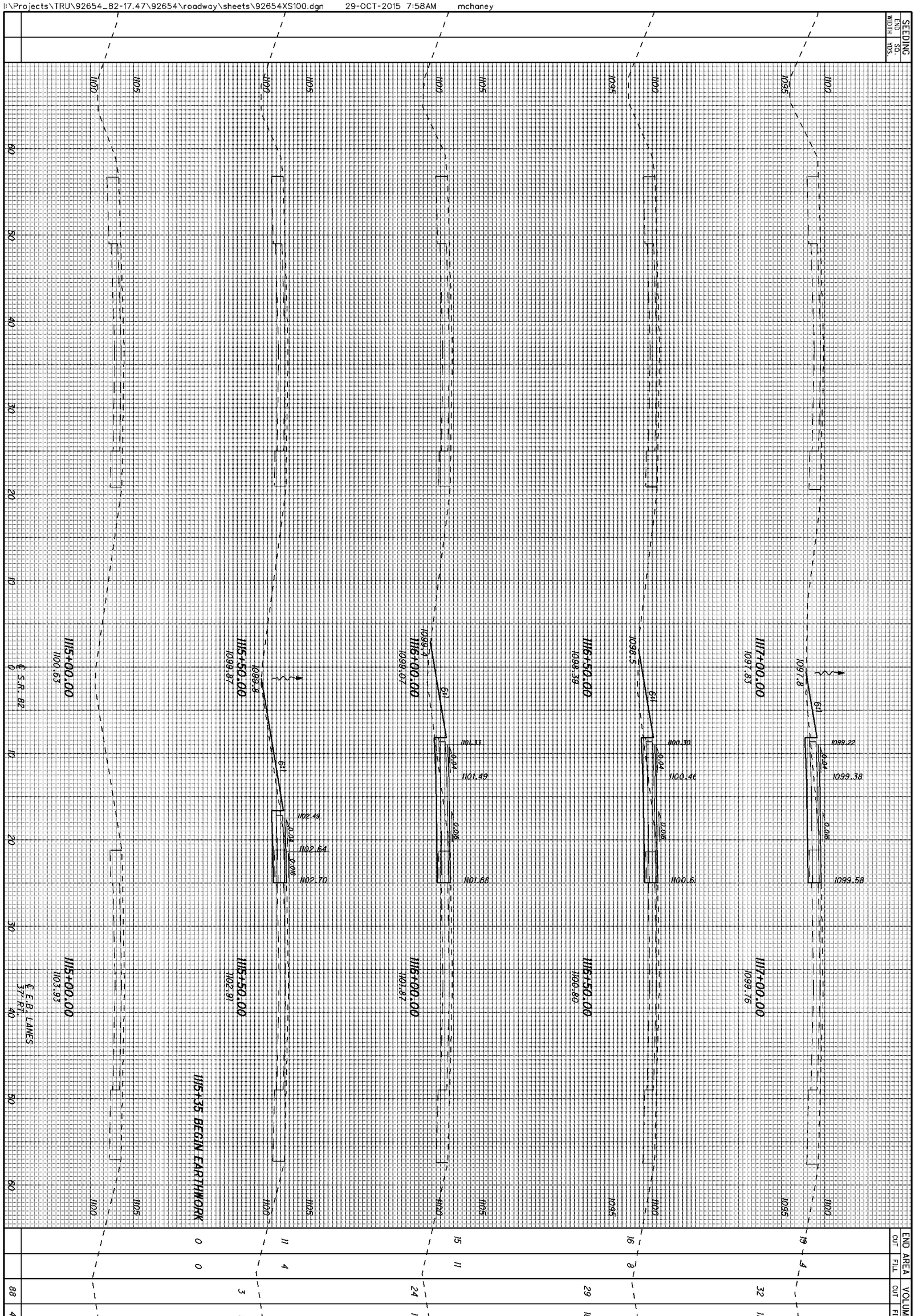

21/27

TRU-11/82-9.34/(17.36) (24.46)

CROSS SECTIONS S.R. 82 (WARNER RD.)
STA. 1115+00.00 TO STA. 1117+00.00

CALCULATED RCB

CHECKED MAC

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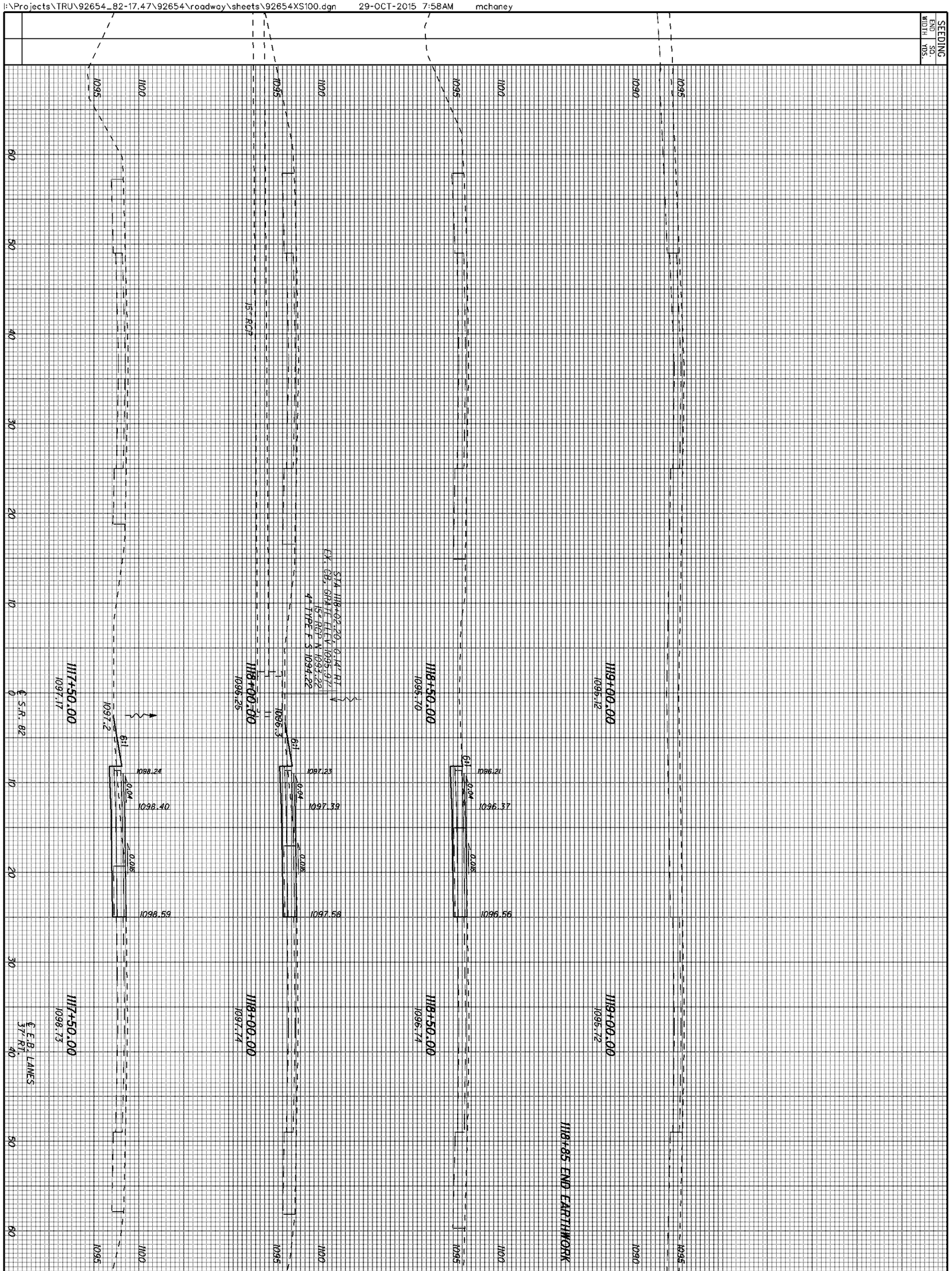

22/27

TRU-11/82-9.34/(17.36) (24.46)

CROSS SECTIONS S.R. 82 (WARNER RD.)
STA. 1117+50.00 TO STA. 1119+00.00

CALCULATED RCB
CHECKED MAC

GENERAL SPEC: 640
MATERIAL TYPE: 646

CALCULATED TJD CHECKED

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	6" WHITE EDGE LINE TOTAL	6" WHITE EDGE LINE HIGHWAY	6" WHITE EDGE LINE RAMP	6" YELLOW EDGE LINE TOTAL	6" YELLOW EDGE LINE HIGHWAY	6" YELLOW EDGE LINE RAMP	COMMENTS
TRU	82	17.38	0.5 MILE EAST OF MARKET ST.	22.75	0.5 MILE EAST OF SR 193	11.97	10.74	1.23	11.97	10.74	1.23	
TRU	82	21.69	SR 82 @ NILES-VIENNA RD. EB	21.69	SR 82 @ NILES-VIENNA RD. WB	0.02		0.02				CROSSOVER @ NILES-VIENNA RD.
TOTAL						11.99	10.74	1.25	11.97	10.74	1.23	

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	6" LANE LINE DASHED	6" LANE LINE SOLID	COMMENTS
TRU	82	17.38	0.5 MILE EAST OF MARKET ST.	22.75	0.5 MILE EAST OF SR 193	11.97			
TOTAL						11.97			

CENTER LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
TRU	82	21.69	SR 82 @ NILES-VIENNA RD. EB	21.69	SR 82 @ NILES-VIENNA RD. WB	0.01	0.01	
TOTAL						0.01	0.01	

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE 8"	CHANNEL LINE 12"	STOP LINE	TRANSVERSE DIAGONAL LINES WHITE	TRANSVERSE DIAGONAL LINES YELLOW	ISLAND MARKING	SYMBOL MARKINGS RxR	SYMBOL MARKINGS SCHOOL 72"	SYMBOL MARKINGS SCHOOL 96"	LANE ARROWS TURN LEFT	LANE ARROWS TURN RIGHT	LANE ARROWS THRU	LANE ARROWS COMB.	WORD ON PVMT ONLY 72"	WORD ON PVMT ONLY 96"	DOTTED LINE	COMMENTS
			8"	12"	FT	FT	FT	SQ FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	6"	
TRU	SR 82 EB OFF RAMP TO SR 46	18.060	152	1540	18														
TRU	SR 82 WB ON RAMP FROM 46	18.110		204															
TRU	SR 82 EB ON RAMP FROM 46	18.240		480														770	
TRU	SR 82 WB OFF RAMP TO 46	18.280	860	440	28							4	3		4			670	
TRU	SR 82 @ HOWLAND-WILSON	18.710	2829		108			452				10	10						
TRU	SR 82 @ NILES-VIENNA	21.641		303								4							
TRU	SR 82 EB OFF RAMP TO SR 193	22.060		480	18													680	
TRU	SR 82 WB ON RAMP FROM 193	22.040		350														830	
TRU	SR 82 EB ON RAMP FROM 193	22.330		240														885	
TRU	SR 82 WB OFF RAMP TO 193	22.340		390	18													620	
TRU	SR 82 @ WARNER	24.542		300								4							
TRU	SR 82 EB OFF RAMP TO SB 11	19.476		922														500	
TRU	SR 82 WB ON RAMP FROM NB 11	19.500		176														500	
TRU	SR 82 WB ON RAMP FROM SB 11	19.539		176														500	
TRU	SR 82 EB ON RAMP FROM SB 11	19.711		237														525	
TRU	SR 82 WB OFF RAMP TO SB 11	19.731		530														400	
TRU	SR 82 EB OFF RAMP TO NB 11	19.872		488															
TRU	SR 82 WB OFF RAMP TO NB 11	19.948		424														573	
TRU	SR 82 EB ON RAMP FROM NB 11	20.126		165														500	
TOTAL			3841	7845	190			452				22	13		4			7953	

PAVEMENT MARKING SUB-SUMMARY

TRU-11/82-
9.34/(17.36) (24.46)

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

EXJ-4-87 DATED/REVISED 7/19/02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 4/18/03

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION , INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

TRU-11-0927L (OVER RAMP, SR-11 NB TO SR 82 WB)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-11-0956L (OVER TRU-82-19.74)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-11-0956R (OVER TRU-82-19.77)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-82-1805 (OVER TRU-46-0731)
-PATCH ALL VISIBLY UNSOUND AREAS OF THE CONCRETE WEARING SURFACE AND APPROACH SLABS
-SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH GRAVITY FED RESIN TREATMENT
-INSTALL NEW ELASTOMERIC STRIP SEAL JOINTS
-PATCH MEDIAN CONCRETE WALL AND PARAPETS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF SUBSTUCTURE AND PARAPETS
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-82-1952R (OVER RAMP, SR-11 NB TO SR-82 WB)
-SEAL WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-82-2114 (OVER BRANCH LITTLE CREEK)
-REPAIR EROSION AT FORWARD LEFT WING WALL
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-82-2212L (OVER TRU-193-06.66)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-82-2212R (OVER TRU-193-06.65)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STRUCTURE IDENTIFICATION SIGNS

SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURE(S) TRU-82-1805, TRU-82-2212L, AND TRU-82-2212R WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 601 - DUMPED ROCK FILL, TYPE A

THIS WORK WILL CONSIST OF REPAIRING EROSION BY PLACING DUMPED ROCK FILL, TYPE A. THE PRICE WILL INCLUDE THE COST OF LABOR, EQUIPEMTN, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

LOCATION: TRU-82-2114, FORWARD LEFT

ITEM 601 - DUMPED ROCK FILL, TYPE A, 3 CU. YD.

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MMS		TJP	10-20-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE GENERAL NOTES

TRU-11-0927L, TRU-11-0956L, TRU-11-0956R, TRU-82-1805, TRU-82-1952R, TRU-82-2114, TRU-82-2112L, TRU-82-2112R

TRU-11/82-9.34/(17.36)(24.46)
PID No. 92654

1 / 4

24
27

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

TRU-11-0927L (1 APPROACH)
TRU-11-0956L (1 APPROACH)
TRU-11-0956R (1 APPROACH)
TRU-82-1952R (1 APPROACH)
TRU-82-2114 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

TRU-82-1805 (2 APPROACHES)
TRU-82-2212L (1 APPROACH)
TRU-82-2212R (1 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATION SIGNS.

STRUCTURE TRU-11-0956L (SFN:7801866) THE EXISTING SIGN SHOWS 0957. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0956.

STRUCTURE TRU-11-0956R (SFN:7801890) THE EXISTING SIGN SHOWS 0957. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0956.

STRUCTURE TRU-82-1805 (SFN:7804652) THE EXISTING SIGN SHOWS 1807. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1805.

STRUCTURE TRU-82-2114 (SFN:7804733) THE EXISTING SIGN SHOWS 2112. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 2114.

STRUCTURE TRU-82-2212L (SFN:7804741) THE EXISTING SIGN SHOWS 2214. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 2212L.

STRUCTURE TRU-82-2212R (SFN:7804776) THE EXISTING SIGN SHOWS 2214. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 2212R.

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MMS		TJP	10-20-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE GENERAL NOTES
TRU-11-0927L, TRU-11-0956L, TRU-11-0956R, TRU-82-1805, TRU-82-1952R, TRU-82-2114, TRU-82-2112L, TRU-82-2112R

TRU-11/82-
9.34/(17.36)(24.46)
PID No. 92654

CALC:	MMS	DATE:	6/29/2015
CHECKED:	TJP	DATE:	10/20/2015

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
TRU-11-0927L 7801831 02/NHS/BR	TRU-11-0956L 7801866 02/NHS/BR	TRU-11-0956R 7801890 02/NHS/BR	TRU-82-1805 7804652 03/BRO/BR	TRU-82-1952R 7804687 02/NHS/BR	TRU-82-2114 7804733 02/NHS/BR	TRU-82-2212L 7804741 02/NHS/BR	TRU-82-2212R 7804776 02/NHS/BR					
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	201	11000		CLEARING AND GRUBBING	
			1790			50	50	512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
1278	2518	2409		1162		811	811	512	10400	SY	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
			1467					512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
			1657					512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
			117					516	01301	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN	
			200			200	200	519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	
25	30	25	50			25	25	SPEC	51912304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
			50			50	50	SPEC	53000800	SY	STRUCTURE, MISC.: CONCRETE SPALL REMOVAL	
					3			601	25000	CY	DUMPED ROCK FILL, TYPE A	
7.5	7.5	7.5	42	7.5	15	21	21	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
			12			6	6	630	80100	SF	SIGN, FLAT SHEET	
1	1	1	2	1	2	1	1	630	80100	SF	SIGN, FLAT SHEET, 730.20	
1	1	1	6	1	2	3	3	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
1	1	1	4	1	2	2	2	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
			100			100	100	843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MMS	MMS	TJP	10-20-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE ESTIMATED QUANTITIES
TRU-11-0927L, TRU-11-0956L, TRU-11-0956R, TRU-82-1805,
TRU-82-1952R, TRU-82-2114, TRU-82-2112L, TRU-82-2112R

TRU-11/82-
9.34/(17.36)(24.46)
PID No. 92654

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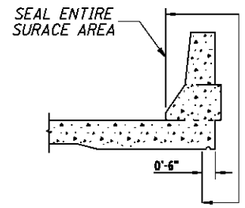
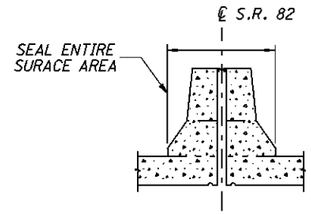
CONCRETE SEALING DETAILS:

BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
TRU-82-1805	CONCRETE SLAB CONTINUOUS	SEAL PARAPETS PER DETAIL A SEAL MEDIAN PARAPET PER DETAIL B SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT WINGWALLS SEAL ALL EXPOSED CONCRETE AT PIERS SEAL ALL EXPOSED CONCRETE AT PIER CAPS SEAL ALL SPALL REMOVAL AREAS OF DECK FLOOR	PER CMS				1790	1790
TRU-82-2212L	CONCRETE SLAB CONTINUOUS	SEAL ALL SPALL REMOVAL AREAS OF DECK FLOOR	PER CMS				50	50
TRU-82-2212R	CONCRETE SLAB CONTINUOUS	SEAL ALL SPALL REMOVAL AREAS OF DECK FLOOR	PER CMS				50	50



DETAIL A
CONCRETE SLAB DECK WITH DEFLECTOR PARAPET



DETAIL B
MEDIAN DEFLECTOR PARAPET

SUPERSTRUCTURE DETAILS:

BRIDGE NUMBER	BRIDGE DECK LENGTH (BRIDGE LIMITS) FT	BRIDGE WIDTH FT	DECK AREA SQ YD		512 TREATING OF CONCRETE BRIDGE DECK WITH SRS SQ YD	512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN SQ YD	APPROACH SLABS LENGTH (APPROACH SLABS) FT	APPROACH SLAB WIDTH FT	APPROACH SLAB AREA SQ YD	APPROACH (FORWARD / REAR)		512 TREATING OF CONCRETE BRIDGE DECK WITH SRS SQ YD	512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN SQ YD
TRU-11-0927L	298.50	33.00	1094.50		1094.50		25.00	33.00	91.67	REAR		91.67	
							25.00	33.00	91.67	FWD		91.67	
TRU-11-0956L	330.00	59.50	2181.67		2181.67		25.00	60.00	166.67	REAR		166.67	
							25.00	61.00	169.44	FWD		169.44	
TRU-11-0956R	278.00	66.50	2054.11		2054.11		25.00	68.50	190.28	REAR		190.28	
							25.00	59.00	163.89	FWD		163.89	
TRU-82-1805	202.50	55.50	1248.75			1248.75	20.00	49.00	108.89	REAR			108.89
							20.00	49.00	108.89	FWD			108.89
TRU-82-1952R	187.50	44.00	916.67		916.67		25.00	44.00	122.22	REAR		122.22	
							25.00	44.00	122.22	FWD		122.22	
TRU-82-2212L	193.50	31.50	677.25		677.25		25.00	24.00	66.67	REAR		66.67	
							25.00	24.00	66.67	FWD		66.67	
TRU-82-2212R	193.50	31.50	677.25		677.25		25.00	24.00	66.67	REAR		66.67	
							25.00	24.00	66.67	FWD		66.67	

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CONCRETE SEALING & SUPERSTRUCTURE DETAILS

TRU-11-0927L, TRU-11-0956L, TRU-11-0956R, TRU-82-1805, TRU-82-1952R, TRU-82-2114, TRU-82-2112L, TRU-82-2212R

TRU-11/82-9.34/(17.36)(124.46)
PID No. 92654

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SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: TRU-SR 82-17.47

PID: 92654

Date: 09/18/2015

1. Waterway Permit Time Restrictions:

Regional General Permit (RGP) Section B (Maintenance) is authorized for TRU-SR82-17.47 PID 92654. A copy of the RGP shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: **September 18, 2015**. The permit expires: **October 24, 2019.**

For permitted work in aquatic resources (including, but not limited to: streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit end date based on project constraints. In order to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit end date. The Engineer will submit the request for a time extension to ODOT-OES-WPU for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR).

2. Deviations From Permitted Construction Activities

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or working drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Stream 1 (Liberty Lake Stream)	TRU-82-21.14	No Restrictions

In-stream work has been defined as the placement and/or removal of fill materials (permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection and temporary work pads**.

****NOTE: temporary impacts are not authorized in the stream for this project. Additional permitting is required if temporary impacts are necessary.**

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources on this project for permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Cultural Resources

If archeological sites or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section the Engineer shall also contact the Trumbull County Sheriff's Office at (330) 675-2540.

6. Aquatic Resource Demarcation:

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. Specifically, only 0.002 acre of Wetland B, 9 feet (includes permanent only) of Stream 1 (Liberty Lake Stream), and 10 feet (includes permanent only) of Ditch 1 can be impacted.

The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify Engineer, in writing, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

9. Bridge Inspection:

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of

birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-OES-WPU (614-466-7100).

10. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

11. Temporary Access Fills (Stream and River Crossings and Fills)

Temporary impacts to streams are not authorized for this project. Temporary fill activities can include, but are not limited to, causeways, work pads, coffer dams, sheet piling, and construction equipment. Any unauthorized temporary impacts that occur will be in violation of Section 404 and 401 of the Clean Water Act.

12. Excavation Activities:

Excavated material will be placed at the upland site and disposed of in such a manner that sediment and runoff to streams and other waters is controlled and minimized. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).