CUY - IR 90-07.58/VAR Slope
200467 PID - 103161
Dist 12 10/1/2020

Contract Proposal available @
www.contracts.dot.state.oh.us

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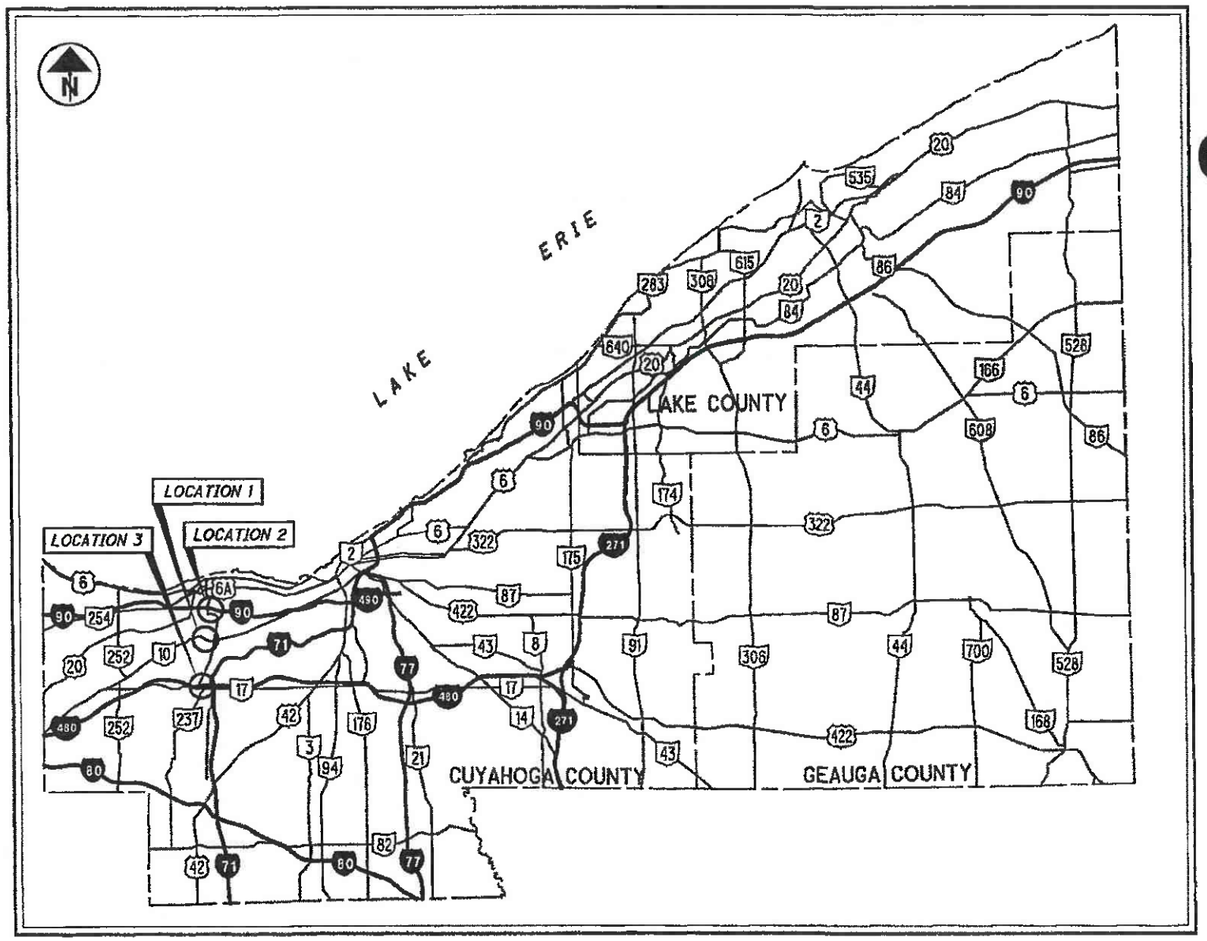


LOCATION MAP

(NOTE: FOR COORDINATES PER LOCATION, SEE SHEET 2

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

CUY-90-07.58/VAR. SLOPE

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	CITY	TOWNSHIP	VILLAGE
1	CUY-10-0869	1801325	FAIRVIEW PARK		
2	CUY-90-0758	1808567	ROCKY RIVER/LAKEWOOD		
3	CUY-480-0647	1812831	CLEVELAND/FAIRVIEW PARK		

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING DRAINAGE; SLOPE PROTECTION REPAIR; AND OTHER SCOUR REPAIRS.

EARTH DISTURBED AREA

SEE SHEET 2

2019 SPECIFICATIONS

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

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

APPROVED _____
DATE 6/25/20 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 6/26/2020 DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD OHIO 44902
PHONE: (419) 524-0074 FAX: (419) 524-1812

ENGINEERS SEAL:

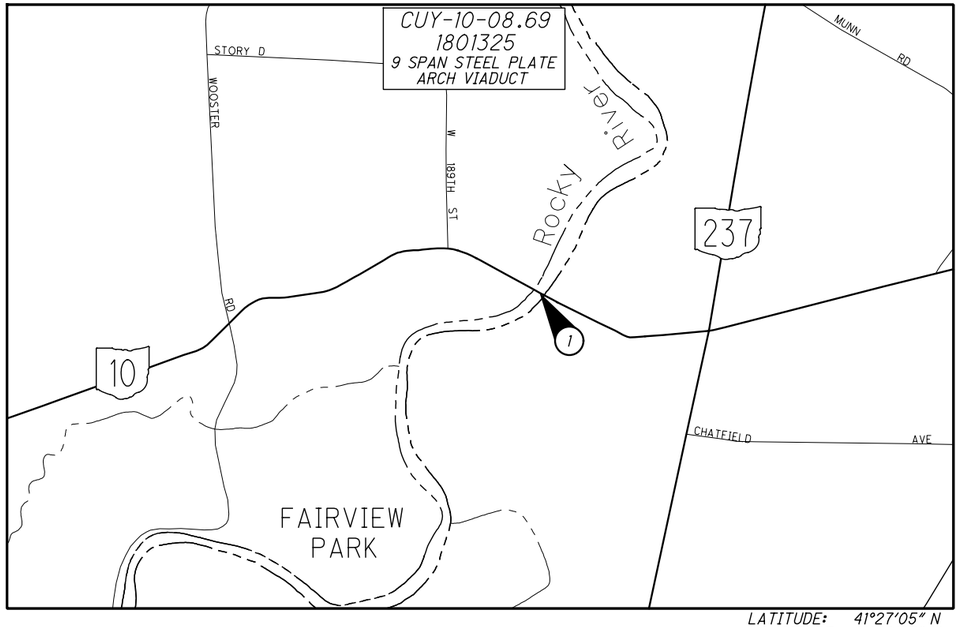
STATE OF OHIO PATRICK SCHWAN 61571 REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 6-23-2020

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	1-17-20	MT-95.30	7-19-19							SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
		MT-95.31	7-19-19							800 7-17-20	WATERWAY PERMIT CONDITIONS 2-26-2020
F-1.1	7-19-13	MT-95.32	4-19-19							838 4-15-05	
		MT-95.45	1-17-20							902 7-19-19	
RM-4.2	10-24-19	MT-95.50	7-21-17							832 10-19-18	
		MT-97.10	4-19-19								
CB-3.1	1-15-16	MT-99.60	7-15-16								
CB-3.2	1-15-16	MT-101.60	1-17-20								
		MT-101.90	7-21-17								
DM-1.1	7-21-17	MT-102.20	4-19-19								
DM-1.2	1-18-13	MT-102.30	10-16-15								
DM-4.4	1-15-16	MT-103.10	1-19-18								
		MT-105.10	1-17-20								
MH-1.2	1-15-16	MT-110.10	7-19-13								
HW-2.1	7-20-18										

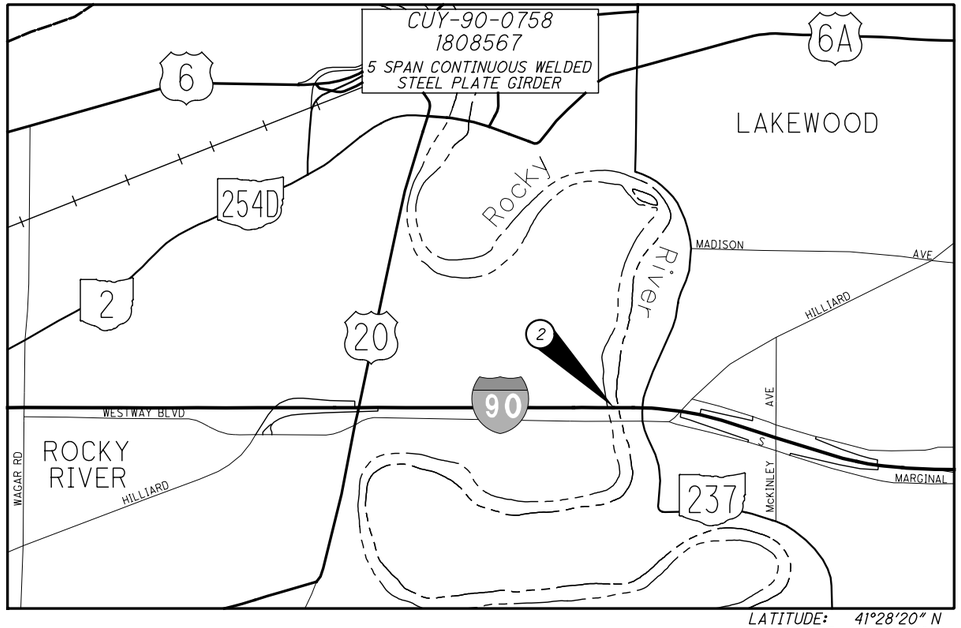
FEDERAL PROJECT NO. E190(248)
PID NO. 103161
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
CUY-90-07.58/VAR. SLOPE PID NO. 103161
1 / 34



LATITUDE: 41°27'05" N
LONGITUDE: 81°49'27" W

MAP FOR LOCATION 1

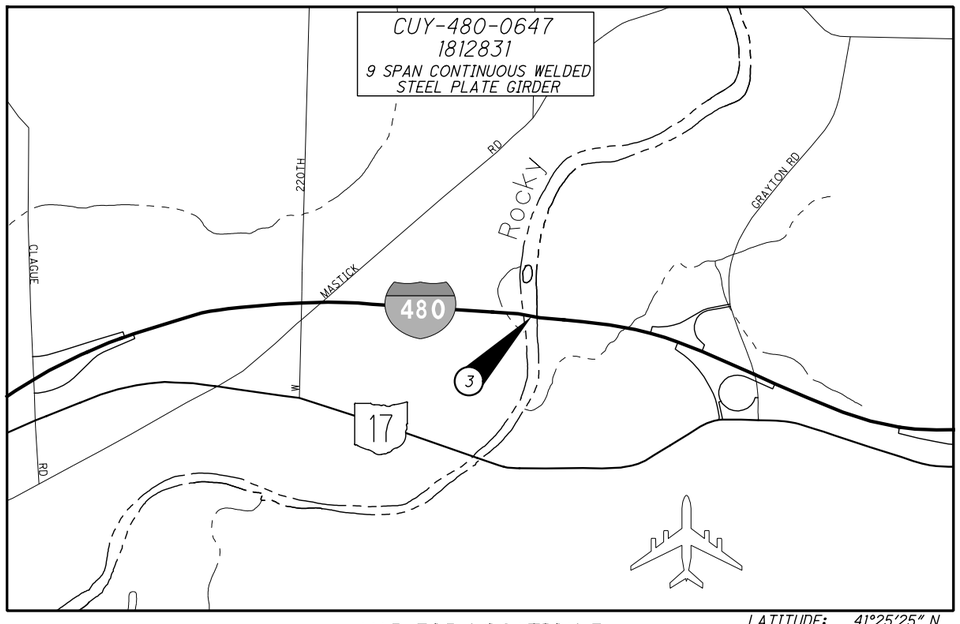
PROPOSED WORK ⟨1⟩
SLOPE EROSION REPAIR
DRAINAGE CLEANOUT



LATITUDE: 41°28'20" N
LONGITUDE: 81°49'30" W

MAP FOR LOCATION 2

PROPOSED WORK ⟨1⟩
SLOPE EROSION REPAIR
REPAIR PIER COLUMNS SCOUR
DRAINAGE IMPROVEMENTS



LATITUDE: 41°25'25" N
LONGITUDE: 81°51'20" W

MAP FOR LOCATION 3

PROPOSED WORK ⟨1⟩
SLOPE EROSION REPAIR
REPAIR PIER COLUMNS SCOUR
DRAINAGE IMPROVEMENTS

EARTH DISTURBED AREA:

CUY-10-0869
PROJECT EARTH DISTURBED AREA = 0.36 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.63 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA = N/A (NOI NOT REQUIRED)*

CUY-90-0758
PROJECT EARTH DISTURBED AREA = 1.73 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.63 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA = N/A (NOI NOT REQUIRED)*

CUY-480-0647
PROJECT EARTH DISTURBED AREA = 3.65 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.63 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA = 4.28 ACRES

*ROUTINE MAINTENANCE PROJECT

⟨1⟩ WORK SHOWN IS REPRESENTATIVE AND DOES NOT INCLUDE ALL WORK REQUIRED.

CALCULATED PS | CHECKED TF

LOCATION MAP

CUY-90-07.58 / VAR. SLOPE
PID NO. 103161

UTILITIES

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

WATER

CITY OF CLEVELAND
DIVISION OF WATER
1201 LAKESIDE AVENUE, 2nd FLOOR
CLEVELAND, OHIO 44114
ATTN: FRED ROBERTS
PHONE: (216) 664-2444, EXT. 75590
FAX: (216) 664-2838

SEWER

CITY OF CLEVELAND
DIVISION OF WATER
POLLUTION CONTROL
12302 KIRBY ROAD
CLEVELAND, OHIO 44108
ATTN: RACHID ZOGHAIB
PHONE: (216) 664-3785

GAS

DOMINION ENERGY OHIO
320 SPRINGSIDE DR. SUITE 320
AKRON, OHIO 44333
ATTN: MICHEAL R. ANTONIUS
PHONE: (330) 664-2481

CABLE

CHARTER COMMUNICATIONS
8179 DOW CICLE
STRONGSVILLE, OHIO 44136
SUPERVISOR: GARY NAUMANN
PHONE: (216) 575-8016, EXT. 5033
FIELD ENGINEER: RICK PALENCAR
PHONE: (216) 575-8016
EXT. 2165555032
FAX: (440) 826-2940

ELECTRIC

CEI, FIRST ENERGY
6896 MILLER RD. #101
BRECKSVILLE, OHIO 44141
ATTN: JOHN M. ZASSICK
PHONE: (440) 546-8706

COMMUNICATIONS

AT & T OHIO
13630 LORAIN AVENUE 2ND FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS
PHONE: (216) 476-6142
FAX: (216) 476-6013

COX COMMUNICATIONS
12221 PLAZA DRIVE
PARMA, OH 44130
ATTN: CRAIG J. SMITH
PHONE: (216) 535-3356

CENTURYLINK
4000 CHESTER AVENUE
CLEVELAND. OH 44103
ATTN: DOUG HOLLOWAY
PHONE: (216) 906-6284

VERIZON (XO COMMUNICATIONS)
12300 RIDGE ROAD
NORTH ROYALTON, OH 44133
ATTN: DAN ARZ
PHONE: (440) 457-4832

LIGHTING

ODOT DISTRICT 12
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OHIO 44125
ROADWAY SERVICES LIGHTING
ATTN: ANTHONY TOTH
PHONE: (216) 584-2220

SIGNALS

CITY OF CLEVELAND, DIVISION
OF TRAFFIC ENGINEERING
601 LAKESIDE AVENUE, RM 25
CLEVELAND, OHIO 44114
ATTN: ANDREW R. CROSS
PHONE: (216) 644-3197

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT IS NOT ANTICIPATED TO AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

RESTORATION AND CLEAN UP

RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO THAT EXISTING PRIOR TO WHEN THE WORK WAS STARTED PER C&MS 104.04.

REMOVE ANY BROKEN GLASSWARE FOUND BY CREWS IN THE WORK AREA. DISPOSE OF ANY BROKEN GLASS IN REGULAR RUBBISH DISPOSAL UNITS. DISPOSE OF ALL REMOVED MATERIALS OFF OF THE RIGHT OF WAY AND PARK PROPERTY. PAYMENT FOR RESTORATION WORK IS INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN VALLEY PARKWAY IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. AT THE COMPLETION OF CONSTRUCTION, VALLEY PARKWAY SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR CONSTRUCTION ACCESS AT NO ADDITIONAL COST TO THE STATE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY OR EASMENTS OR WITHIN STATE AND/OR CLEVELAND METROPARKS PROPERTY. SEE COORDINATION WITH CLEVELAND METROPARKS NOTE ON SHEET 5 AND SHEET 10 FOR ADDITIONAL INFORMATION.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED DURING NON-WORKING HOURS AS APPROVED BY THE ENGINEER. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

RESTRICTION TIMES:

7:00PM TO 8:00AM MONDAY THROUGH SATURDAY
ALL-DAY SUNDAYS
ALL HOLIDAYS

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

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

A PAINT CONTAINMENT SYSTEM WILL BE IN PLACE AND OTHER CONTRACTORS MAY BE WORKING AT THE PROJECT SITE DURING CONSTRUCTION AT LOCATION 1: CUY-10-0869. IT IS ANTICIPATED THAT THE PAINT CONTAINMENT SYSTEM WILL BE IN PLACE THROUGH AUGUST 2022.

A PAINT CONTAINMENT SYSTEM WILL BE IN PLACE AND OTHER CONTRACTORS MAY BE WORKING AT THE PROJECT SITE DURING CONSTRUCTION AT LOCATION 3: CUY-480-0647. IT IS ANTICIPATED THAT THE PAINT CONTAINMENT SYSTEM WILL BE IN PLACE THROUGH AUGUST 2021.

THE PAINT CONTAINMENT SYSTEMS ARE ANCHORED INTO THE EXISTING ABUTMENT BACKWALLS AT APPROXIMATELY THE BEARING ELEVATION LEVEL. ACCESS TO THE SLOPE MAY BE RESTRICTED BY THE TEMPORARY PAINT CONTAINMENT PLATFORMS DURING CONSTRUCTION DUE TO SAG IN THE PLATFORM AND CABLES.

EXISTING DIMENSIONS

ALL DIMENSIONS ARE APPROXIMATE (±).

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING LIMITATIONS:

1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO MAINTENANCE OF TRAFFIC NOTES SHEETS WITHIN THIS PLAN).

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION, NO STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT-OF-WAY WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER AND OBTAINING AN ODOT R/W PERMIT FROM THE D12 ROADWAY SERVICES. ALL RESTORATION WILL BE AT NO COST TO THE STATE.

CONTINGENCY QUANTITIES

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

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

PORTIONS OF THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 189' AT BRIDGE 1 (CUY-10-0869) / 106' AT BRIDGE 3 (CUY-480-0647) IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FROM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

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.

PROFILE AND ALIGNMENT

THE INTENT OF THE PROPOSED PAVEMENT IS TO UTILIZE THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT UNLESS OTHERWISE DETAILED IN THE PLANS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO SECTIONS 102.05, 105.02 AND 513.04 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PROCESS UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:

OHIO DEPARTMENT OF TRANSPORTATION
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125

OR

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX

STAGING AREA ON/WITHIN STATE RIGHT-OF-WAY

THERE ARE NO SPECIFIC AREAS GIVEN IN THE PLANS FOR THE CONTRACTOR TO USE AS STAGING AREA(S). IF THE CONTRACTOR WANTS TO USE AN AREA(S) FOR STAGING, REGARDLESS IF IT FALLS WITHIN THE PROJECT LIMITS OR NOT, THE CONTRACTOR IS TO CONTACT MELVIN STAFFORD AT 216-584-2137 AT DISTRICT 12 IN ORDER TO APPLY FOR A PERMIT PER SECTION 107.02 OF THE C&MS. IF A PERMIT IS GRANTED, ALL CONDITIONS OF THE PERMIT SHALL BE MET IN ADDITION TO THE REQUIREMENTS OF 104.04 OF THE C&MS, AT NO COST TO THE STATE. IF THE PROJECT ENGINEER DEEMS THAT ALL THE CONDITIONS OF THE PERMIT WERE NOT MET, THEN 10% OF THE CONTRACT BID AMOUNT FOR MOBILIZATION SHALL BE WITHHELD UNTIL ALL CONDITIONS OF THE PERMIT ARE SATISFIED. THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT OR MATERIALS SHALL NOT TAKE PLACE OUTSIDE PROPOSED CONSTRUCTION LIMITS THAT ARE WITHIN THE DEFINED BOUNDARIES OF THE 4(F) PROPERTY.

CALCULATED PS CHECKED TF

GENERAL NOTES - 1

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

4
34

ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE

PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL ERECT AND MAINTAIN, THROUGHOUT THE DURATION OF THE PROJECT, ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE. THE FENCE SHALL BE ERECTED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-4.4 SUPPLEMENTED WITH A PLASTIC/NYLON CONSTRUCTION FENCE AT LOCATIONS SHOWN IN THE PLANS. THE FENCE IS REQUIRED TO PROTECT THE PUBLIC. PLASTIC NYLON CONSTRUCTION FENCE SHALL BE BRIGHT ORANGE AND SHALL BE SECURELY FASTENED TO THE WOOD STIFFENER STAKES AT NO MORE THAN 6 FOOT SPACING. THE CONSTRUCTION FENCE SHALL BE NOMINALLY 4 FEET HIGH AT THE TOP EDGE AND SHALL NOT SAG BELOW 36 INCHES (12 INCH SAG). THE CONSTRUCTION FENCE SHALL BE MAINTAINED IN GOOD CONDITION AS APPROVED BY THE ENGINEER EXCEPT REPAIR AND MAINTENANCE WILL BE AT NO ADDITIONAL PROJECT COST. SECTIONS OF THE SUPPLEMENTAL CONSTRUCTION FENCE WITH EXTENSIVE BROKEN SLATS OR HOLES GREATER THAN 12" X 12" SHALL BE REPAIRED OR REPLACED AS APPROVED BY THE ENGINEER. THE CONTRACTOR'S EMPLOYEES AND EQUIPMENT WILL NOT BE PERMITTED PAST THE FENCE ON THE OPPOSITE SIDE OF THE PROPOSED CONSTRUCTION. AT THE CONCLUSION OF THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL REMOVE THE FENCE AND WOOD STIFFENER STAKES. ALL MATERIAL, LABOR, EQUIPMENT, COORDINATION AND INCIDENTALS TO PERFORM THIS ITEM OF WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE, FOOT.

ITEM 611 - CATCH BASIN NO. 4, AS PER PLAN

A NEW CONCRETE APRON IN ACCORDANCE WITH CB-3.1 SHALL BE CONSTRUCTED ON THE EXISTING CATCH BASIN AS APPROVED BY THE ENGINEER. THE EXISTING CATCH BASIN SHALL NOT BE DISTURBED. ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS TO REMOVE THE EXISTING APRON, GRADE, PREPARE THE LOCATION, CONNECT THE NEW APRON TO THE EXISTING CATCH BASIN AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THIS ITEM.

ITEM 611 - DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE STRUCTURES SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL STRUCTURES SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE STRUCTURE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 611 - DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

IN ADDITION TO ALL REQUIREMENTS OF ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, THIS ITEM SHALL INCLUDE REGRADING OF EXISTING SLOPES. THIS ITEM SHALL INCLUDE ALL NECESSARY EARTHWORK NEEDED TO REGRADE THE SLOPES TO MEET THE PLAN REQUIREMENTS. THIS ITEM SHALL ALSO INCLUDE ALL NECESSARY COMPACTION REQUIREMENTS TO CONSTRUCT THE SLOPE.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

CRUSHED AGGREGATE SLOPE PROTECTION SHALL BE USED AS A TRANSITION ELEMENT BETWEEN THE EXISTING GRADE AND THE PROPOSED GABION MATTRESSES. ALL VOIDS NOT COVERED BY THE GABION TREATMENT SHALL BE FILLED WITH CRUSHED AGGREGATE SLOPE PROTECTION.

THE FOLLOWING QUANTITY OF ITEM 203 - EXCAVATION AND ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE AS APPROVED BY THE ENGINEER.

ITEM 203 - EXCAVATION 393 CY

IR 90Δ

STA. 580+69.65 RT. TO STA. 582+72.41 RT.
((202.76' + 191.80') / 2) x 66.45' x (1" / 12) x 1.12 SLOPE / 27 = 45.32 CY

STA. 580+57.72 LT. TO STA. 582+71.45 LT.
((213.73' + 202.26') / 2) x 66.45' x (1" / 12) x 1.12 SLOPE / 27 = 47.78 CY

IR 480Δ

STA. 442+28.90 RT. TO STA. 445+77.41 RT.
((348.73' + 320.22') / 2) x 74.74' x (1" / 12) x 1.12 SLOPE / 27 = 86.42 CY

STA. 442+64.37 LT. TO STA. 446+04.51 LT.
((340.14' + 311.62') / 2) x 70.25' x (1" / 12) x 1.12 SLOPE / 27 = 79.14 CY

STA. 454+75.38 RT. TO STA. 457+41.16 RT.
((265.78' + 259.40') / 2) x 74.07' x (1" / 12) x 1.12 SLOPE / 27 = 67.23 CY

STA. 454+69.27 LT. TO STA. 457+41.26 LT.
((271.99' + 265.78') / 2) x 71.82' x (1" / 12) x 1.12 SLOPE / 27 = 66.76 CY

TOTAL = 392.65 CY
USE 393.00 CY

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN 393 CY

IR 90Δ

STA. 580+69.65 RT. TO STA. 582+72.41 RT.
((202.76' + 191.80') / 2) x 66.45' x (1" / 12) x 1.12 SLOPE / 27 = 45.32 CY

STA. 580+57.72 LT. TO STA. 582+71.45 LT.
((213.73' + 202.26') / 2) x 66.45' x (1" / 12) x 1.12 SLOPE / 27 = 47.78 CY

IR 480Δ

STA. 442+28.90 RT. TO STA. 445+77.41 RT.
((348.73' + 320.22') / 2) x 74.74' x (1" / 12) x 1.12 SLOPE / 27 = 86.42 CY

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((340.14' + 311.62') / 2) x 70.25' x (1" / 12) x 1.12 SLOPE / 27 = 79.14 CY

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((265.78' + 259.40') / 2) x 74.07' x (1" / 12) x 1.12 SLOPE / 27 = 67.23 CY

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((271.99' + 265.78') / 2) x 71.82' x (1" / 12) x 1.12 SLOPE / 27 = 66.76 CY

TOTAL = 392.65 CY
USE 393.00 CY

PRIOR TO PLACING THE CRUSHED AGGREGATE SLOPE PROTECTION THE SLOPE SHALL BE LEVELED OF ALL SHARP BREAKS, MOUNDS AND GULLEY (EXCAVATE AND USE CRUSHED AGGREGATE SLOPE PROTECTION AS NECESSARY). THE SLOPE MAY VARY FROM 2:1 (NORMAL) TO 1.5:1 (NORMAL). PAYMENT FOR LEVELING THE SURFACE SHALL BE INCLUDED IN ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION , AS PER PLAN.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, AS PER PLAN

IN ADDITION TO ALL REQUIREMENTS OF ITEM 601 - ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, THIS ITEM SHALL INCLUDE PLACING PROPOSED ROCK ON SLOPES. THIS ITEM SHALL BE PLACED UNDER BRIDGE CUY-480-0647 AT THE REAR AND FORWARD SLOPES IN ORDER TO FILL LARGE CREVICES IN ORDER TO BUILD UP TO THE PROPOSED SLOPE THAT IS NOT CONSIDERED STANDARD INSTALLATION OF THIS ITEM.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 601 - ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 601 - DUMPED ROCK FILL, TYPE B, AS PER PLAN

IN ADDITION TO ALL REQUIREMENTS OF ITEM 601 - DUMPED ROCK FILL, TYPE B, THIS ITEM SHALL INCLUDE PLACING PROPOSED ROCK ON SLOPES. THIS ITEM SHALL BE PLACED UNDER BRIDGE CUY-10-0869 AT THE EAST SLOPE IN ORDER TO FILL LARGE CREVICES IN ORDER TO BUILD UP TO THE PROPOSED SLOPE THAT IS NOT CONSIDERED STANDARD INSTALLATION OF THIS ITEM.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 601 - DUMPED ROCK FILL, TYPE B, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 659 - SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES AND WITHIN THE CONSTRUCTION LIMITS. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS.

659, SEEDING AND MULCHING	1275	SYΔ
659, TOPSOIL	142	CYΔ
659, COMMERCIAL FERTILIZER	0.17	TONΔ
659, LIME	0.26	ACREΔ
659, WATER	7	MGALΔ
659, REPAIR SEEDING AND MULCHING	64	SYΔ
659, SOIL ANALYSIS TEST	2	EACHΔ

CALCULATIONS FOR THE ABOVE QUANTITIES SHOWN ON SHEET NO. 18

LEGEND

Δ 01/IMS/BR

* 02/BRO/BR

ITEM SPECIAL: SITE ACCESS

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROVIDE ACCESS TO THE SLOPE EROSION REPAIR, DRAINAGE CLEANOUT, PIER COLUMN SCOUR REPAIR, AND DRAINAGE REPAIR LOCATIONS:

LOCATION (CUY-10-0869): ACCESS FROM PARKING AREA UNDER THE BRIDGE, SPAN 7.

LOCATION (CUY-90-0758): ACCESS ALONG THE MAINLINE SHOULDER FROM STA. 574+18.00 LT./RT. TO STA. 574+50.00 LT./RT. AND FROM 583+00.00 LT. TO 586+00.00 LT.

LOCATION (CUY-480-0647): ACCESS ALONG THE MAINLINE SHOULDER FROM STA. 439+35.00 LT./RT. TO STA. 443+00.00 LT./RT. AND FROM STA. 457+00.00 LT./RT. TO STA. 460+43.00 LT./RT.

THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO, EARTHWORK, CLEARING AND GRUBBING, FENCE WORK, GUARDRAIL, SIGN REMOVAL AND REERECTION, CRUSHED AGGREGATE SLOPE PROECTION, ETC. TEMPORARY EROSION CONTROL ITEMS SHALL BE PAID FOR PER ITEM 832. THIS ITEM SHALL INCLUDE ALL RESTORATION WORK NECESSARY TO RESTORE ANY DISTURBED AREAS TO AS GOOD AS OR BETTER THAN THEIR ORIGINAL CONDITION. WHEN ACCESSING THE SPECIFIC LOCATIONS AND SLOPES 3:1 OR STEEPER ARE ENCOUNTERED, THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO PREVENT FUTURE EROSION PROBLEMS.

ALL SLOPES 3:1 OR STEEPER SHALL HAVE ITEM 670-SLOPE PROTECTION INSTALLED. ALL DISTRUBED VEGETATED DITCHES SHALL HAVE ITEM 670-DITCH EROSION PROTECTION INSTALLED. ALL DISTURBED ROCK CHANNEL PROTECTION AND PAVED GUTTERS SHALL BE REPLACED PER THE CURRENT SPECIFICATIONS UNDER THIS ITEM, AT NO ADDITIONAL COST TO THE STATE.

THIS ITEM SHALL ALSO INCLUDE SEEDING, FERTILIZING, AND WATERING PER ITEM 659 FOR ALL DISTURBED AREAS. IT SHALL ALSO INCLDUE THE ADDITION OF 3 INCHES OF TOPSOIL FOR ALL DISTURBED AREAS. THE CONTRACTOR SHALL ENSURE A GOOD STAND OF GRASS AS DESCRIBED PER 659.23. THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS AS APPROVED BY THE ENGINEER FOR THE SLOPE EROSION REPAIR AND DRAINAGE REPAIR LOCATIONS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL: SITE ACCESS.

ITEM 832 - EROSION CONTROL

THE CONDITION OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PERMIT) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION.

THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF EROSION CONTROL ITEMS SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE AS PER SUPPLEMENTAL SPECIFICATION 832.04.

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 14 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH CONSTRUCTION SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

PRIOR TO CONSTRUCTION, THE CONTRACTOR IS TO IDENTIFY APPROPRIATE LOCATIONS FOR EROSION CONTROL ITEMS.

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

CUY-480-0647

ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN	LSΔ	
ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS	LSΔ	
ITEM 832 - STORM WATER POLLUTION INSPECTION SOFTWARE	LSΔ	

CUY-10-0869
CUY-90-0758
CUY-480-0647

ITEM 832 - EROSION CONTROL	35000	EACH
	(25000 EACHΔ)	(10000 EACH*)

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 - DITCH EROSION PROTECTION AS SPECIFIED IN THE PLANS.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

CALCULATED PS CHECKED TF

GENERAL NOTES - 3

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A 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 DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATION AND WORK LIMITS FOR THOSE LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. ASSUMED PCMS LOCATIONS ARE SR 10 MAINLINE, IR 90 MAINLINE, BEFORE VALLEY PARKWAY DETOUR AND IR 480 MAINLINE. 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 CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

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

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 24 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE-CONSTRUCTION CONFERENCE. 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 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, DEACTIVATED 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 PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

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.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN — 18 — SIGN MONTH (16 SIGN MONTHS$^{\Delta}$) (2 SIGN MONTHS*)

ASSUMING 6 PCMS SIGN(S) FOR 3 MONTH(S)

ITEM 616 - DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER — 5 — MGAL (4 MGAL$^{\Delta}$) (1 MGAL*)

MAINTENANCE OF CANOE TRAFFIC

CANOE TRAFFIC SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION OF THE PROJECT EITHER THROUGH EXISTING RIVER CHANNEL OR THROUGH PORTAGE TRAIL APPROVED BY THE ENGINEER. THE TIMEFRAME FOR UTILIZATION OF A PORTAGE TRAIL SHALL BE LIMITED TO THE ACTUAL TIME TO PREFORM THE WORK AT EACH BRIDGE AS APPROVED BY THE ENGINEER.

ADEQUATE SIGNING BOTH UPSTREAM AND DOWNSTREAM SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR. THE FOLLOWING TYPE SIGNS ARE CONSIDERED TO BE MINIMUM TREATMENT:

1. APPROXIMATELY ONE-QUARTER MILE UPSTREAM, ADVANCED WARNING TYPE SIGNS ON BOTH BANKS;
2. APPROXIMATELY 300 FEET UPSTREAM, SIGNS SPECIFYING ACTIONS REQUIRED OF CANOEIST ON BOTH BANKS;
3. APPROXIMATELY ONE-QUARTER MILE DOWNSTREAM, ADVANCE WARNING TYPE SIGNS ON BOTH BANKS; AND
4. APPROXIMATELY 300 FEET DOWNSTREAM, SIGNS SPECIFYING ACTIONS REQUIRED OF CANOEIST OF BOTH BANKS.

THE ABOVE SIGNING SHALL BE MOUNTED IN SUCH A WAY AS TO BE A MINIMUM OF 4 FEET ABOVE THE WATER LEVEL, UNOBSTRUCTED BY TREE BRANCHES, AND PROPERLY ANGLED FOR MAXIMUM VISIBILITY FROM THE MAIN CLEAR CHANNEL. THE METHOD OF SUPPORTING THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. UPON COMPLETION OF THE PROJECT, THE SIGNS AND SUPPORT SYSTEMS SHALL BE COMPLETELY REMOVED FROM THE RIVER CHANNEL. THE CONTRACTOR SHALL NOTIFY LOCAL CANOE LIVERIES USING THIS PORTION OF THE RIVER AT LEAST 10 DAYS PRIOR TO ANY CHANGES AFFECTING CANOE TRAFFIC.

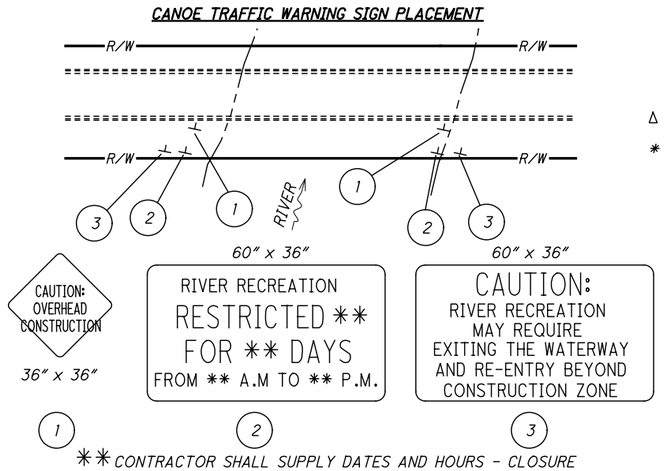
PORTAGE TRAILS IF USED SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR WITH THE LEAST POSSIBLE DISTURBANCE TO THE SURROUNDING AREA. THE TRAIL SHALL BE ADEQUATELY MARKED IN BOTH DIRECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE RIGHT-OF-WAY FOR THE PORTAGE TRAILS IF REQUIRED.

IN THE EVENT PIPES ARE USED TO DIVERT OR CARRY RIVER WATER, BOTH THE INLET AND OUTLET ENDS SHALL BE ADEQUATELY PROTECTED BY GRATES OR FENCE SO THAT PEOPLE OR CANOES ARE NOT DRAWN THROUGH OR HELD BY THEM.

THE ODNR'S DIVISION OF PARKS AND WATERCRAFT SHOULD BE NOTIFIED 2 WEEKS IN ADVANCE OF THE CONSTRUCTION START DATE IF RECREATIONAL IMPACTS ARE ANTICIPATED. COORDINATION AND NOTIFICATION SHOULD BE THROUGH TOM ARBOUR AT (614)-265-6575 OR thomas.arbour@dnr.state.oh.us.

THE CONTRACTOR SHALL PLACE AND MAINTAIN WARNING SIGNS NEAR CANOE LAUNCHES IN COORDINATION WITH THE CLEVELAND METROPARK. ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO MAINTAIN CANOE TRAFFIC SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC MISC.: CANOE TRAFFIC.

CANOE TRAFFIC WARNING SIGN PLACEMENT



LEGEND

$^{\Delta}$ 01/IMS/BR

* 02/BRO/BR

** CONTRACTOR SHALL SUPPLY DATES AND HOURS - CLOSURE SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

NOTE:

1. CONTRACTOR SHALL COVER ALL RIVER RECREATION CLOSURE/RECREATION WARNING SIGNS WHEN NOT APPLICABLE.
2. SEE MOT GENERAL NOTES FOR COORDINATION DURING CONSTRUCTION.
3. ALL SIGNS SHALL BE BLACK ON FLOURESCENT ORANGE AS PER 614 AND MOUNTED ON BREAKAWAY SUPPORTS, COST INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO INSTALL, MAINTAIN AND REMOVE THE SIGNS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC MISC.: CANOE WARNING SIGNS.

DESIGNATED HAUL ROUTE

A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE "DESIGNATED HAUL ROUTE." THIS ROUTE IS SHOWN ON SHEET NO. 11 . ALL HAUL ROADS TO BE USED FOR THE PROJECT WILL BE VIDEOTAPED PRIOR TO USE INCIDENTAL TO ITEM 614 MAINTAINING TRAFFIC. UPON COMPLETION OF THE VIDEO, THE CONTRACTOR SHALL PROVIDE ALL RECORDINGS (DVDS AND CASES) AND SHALL BE PROPERLY IDENTIFIED BY RECORDING NUMBER, LOCATION, AND PROJECT NAME IN A MANNER ACCEPTABLE TO THE DEPARTMENT. AT THE CONCLUSION OF THE PROJECT THE DESIGNATED HAUL ROADS WILL BE RESTORED TO A MINIMUM OF THE CONDITION PRIOR TO CONSTRUCTION AS APPROVED BY THE DEPARTMENT. DURING THE TIME THAT CONSTRUCTION TRAFFIC WILL USE THIS ALTERNATE ROUTE, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DESIGNATED HAUL ROUTE UTILIZATION IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED HAUL ROUTE AND METRO PARK TRAILS SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTALLY RESTORE THE DESIGNATED HAUL ROUTE AND METRO PARK TRAILS AT THE CONSTRUCTION ACCESS LOCATIONS.

ITEM 202 - PAVEMENT REMOVED, ASPHALT	185	SY (112 SY$^{\Delta}$) (73 SY*)
ITEM 253 - PAVMENT REPAIR	3547	SY (1867 SY$^{\Delta}$) (1680 SY*)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE	35467	SY (18667 SY$^{\Delta}$) (16800 SY*)
ITEM 304 - AGGREGATE BASE	42	CY (29 CY$^{\Delta}$) (13 CY*)
ITEM 407 - NON-TRACKING TACK COAT	3192	GAL (1680 GAL$^{\Delta}$) (1512 GAL*)
ITEM 411 - STABILIZED CRUSHED AGGREGATE	4	CY$^{\Delta}$
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22	1495	CY (788 CY$^{\Delta}$) (707 CY*)
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS	256	SY$^{\Delta}$
ITEM 255 - FULL DEPTH SAWING	954	FT$^{\Delta}$
ITEM 617 - COMPACTED AGGREGATED	276	CY (145 CY$^{\Delta}$) (131 CY*)
ITEM 617 - SHOULDER PREPARATION	4935	SY (2579 SY$^{\Delta}$) (2356 SY*)
ITEM 611 - MANHOLE ADJUSTED TO GRADE	16	EACH (13 EACH$^{\Delta}$) (3 EACH*)
ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE	1	EACH*
ITEM 638 - VALVE BOX ADJUSTED TO GRADE	1	EACH$^{\Delta}$
ITEM 642 - EDGE LINE, 4", TYPE 1	5.38	MILE (2.99 MILE$^{\Delta}$) (2.39 MILE*)
ITEM 642 - CENTER LINE, TYPE 1	2.69	MILE (1.50 MILE$^{\Delta}$) (1.19 MILE*)
ITEM 642 - STOP LINE, TYPE 1	159	FT (112 FT$^{\Delta}$) (47 FT*)
ITEM 642 - CHANNELIZING LINE, 8", TYPE 1	215	FT$^{\Delta}$
ITEM 642 - CROSSWALK LINE, TYPE 1	1217	FT (776 FT$^{\Delta}$) (441 FT*)
ITEM 642 - LANE ARROW, TYPE 1	8	EACH$^{\Delta}$
ITEM 642 - SHARED LANE MARKING, TYPE 1	6	EACH (3 EACH$^{\Delta}$) (3 EACH*)
ITEM 630 - GROUND MOUNTED SUPPORT, NO 3 POST	127.5	FT (71.1 FT$^{\Delta}$) (56.4 FT*)
ITEM 630 - SIGN POST REFLECTOR	3	EACH (2 EACH$^{\Delta}$) (1 EACH*)
ITEM 630 - SIGN, FLAT SHEET	75.0	SF (42.0 SF$^{\Delta}$) (33.0 SF*)
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	45	CY$^{\Delta}$

DESIGNATED HAUL ROUTE

THE ABOVE QUANTITIES SHALL BE USED FOR RESTORATION AND REPAIR OF THE EXISTING HAUL ROUTE. THE ENTIRE LENGTH OF THE DESIGNATED HAUL ROUTES SHOWN ON SHEET SHALL BE MILLED 1½", ITEM 407 NON-TRACKING TACK COAT PLACED ON MILLED SURFACE AND RESURFACED WITH ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE. APPROXIMATELY 10% OF THE HAUL ROUTE AREAS ARE ESTIMATED TO NEED ITEM 253 PAVEMENT REPAIR. THIS REPAIR WILL INCLUDE 3" ITEM 441 ASPHALT CONCRETE SURFACE COURSE, ITEM 407 NON-TRACKING TACK COAT, 6" ITEM 301 ASPHALT CONCRETE BASE COURSE, AND 6" ITEM 304 AGGREGATE BASE, ALL OF WHICH IS INCLUDED FOR THE BID PRICE FOR ITEM 253 PAVEMENT REPAIR. ITEM 617 COMPACTED AGGREGATE SHOULDERS WILL BE PLACED ALONG ALL RESURFACING AREAS ON BOTH SIDES OF THE ROAD. TRAIL LOCATIONS THAT ARE IMPACTED DURING THE PROPOSED WORK SHALL ALSO BE REPAIRED. THIS WORK SHALL INCLUDE ITEM 202 PAVEMENT REMOVED, 3" OF ITEM 441 ASPHALT CONCRETE SURFACE COURSE, AND 6" OF ITEM 304 AGGREGATE BASE.

CALCULATED PS CHECKED TF

MAINTENANCE OF TRAFFIC NOTES - 3

CUY-90-07.58 / VAR. SLOPE
PID NO. 103161

SHEET NUMBER						PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	4-6	7-10	LOCATION-1 (CUY-10-0869)	LOCATION-2 (CUY-90-0758)	LOCATION-3 (CUY-480-0647)	CROSS SECTIONS	01/IMS/BR	02/BRO/BR					
												ROADWAY	
	LS						LS	LS	201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN	5
		185					112	73	202	23010	185	SY	PAVEMENT REMOVED, ASPHALT
	493			263			731	25	203	10000	756	CY	EXCAVATION
	100						75	25	203	20000	100	CY	EMBANKMENT
	50						50		209	10001	50	FT	DITCH CLEANOUT, AS PER PLAN
													5
		250					175	75	607	98000	250	FT	FENCE, MISC.: CONSTRUCTION FENCE
		1						1	623	39500	1	EACH	MONUMENT BOX ADJUSTED TO GRADE
	LS						LS	LS	SPECIAL	69098400	LS		SITE ACCESS
													8 6
												EROSION CONTROL	
		45					45		601	32204	45	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC
	LS						LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN
	LS						LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS
	LS						LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE
	35000						25000	10000	832	30000	35000	EACH	EROSION CONTROL
												DRAINAGE	
		16					13	3	611	99654	16	EACH	MANHOLE ADJUSTED TO GRADE
		1					1		638	40800	1	EACH	VALVE BOX ADJUSTED TO GRADE
												PAVEMENT	
		3547					1867	1680	253	01000	3547	SY	PAVEMENT REPAIR
		35467					18667	16800	254	01000	35467	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5" DEPTH
		256					256		255	10160	256	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS
		954					954		255	20000	954	FT	FULL DEPTH PAVEMENT SAWING
		42					29	13	304	20000	42	CY	AGGREGATE BASE
		3192					1680	1512	407	20000	3192	GAL	NON-TRACKING TACK COAT
		4					4		411	10000	4	CY	STABILIZED CRUSHED AGGREGATE
		1495					788	707	441	50000	1495	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
		276					145	131	617	10100	276	CY	COMPACTED AGGREGATE
		4935					2579	2356	617	2000	4935	SY	SHOULDER PREPARATION
												TRAFFIC CONTROL	
		127.5					71.1	56.4	630	03100	127.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST
		3					2	1	630	08600	3	EACH	SIGN POST REFLECTOR
		75.0					42.0	33.0	630	80100	75	SF	SIGN, FLAT SHEET
		5.38					2.99	2.39	642	00100	5.38	MILE	EDGE LINE, 4", TYPE 1
		2.69					1.50	1.19	642	00300	2.69	MILE	CENTER LINE, TYPE 1
		215					215		642	00400	215	FT	CHANNELIZING LINE, 8", TYPE 1
		159					112	47	642	00500	159	FT	STOP LINE, TYPE 1
		1217					776	441	642	00600	1217	FT	CROSSWALK LINE, TYPE 1
		8					8		642	01300	8	EACH	LANE ARROW, TYPE 1
		6					3	3	642	19000	6	EACH	SHARED LANE MARKING, TYPE 1
												STRUCTURE REPAIR (CUY-10-0869 SFN 1801325 - LOCATION 1)	
			872					872	SPECIAL	20270110	872	FT	PIPE CLEANOUT, 24" AND UNDER
						85		85	601	26000	85	CY	DUMPED ROCK FILL, TYPE B
						224		224	601	26001	224	CY	DUMPED ROCK FILL, TYPE B, AS PER PLAN
			2660					2660	607	98000	2660	FT	FENCE, MISC.: CONSTRUCTION FENCE
			14					14	611	99900	14	EACH	DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT
												STRUCTURE REPAIR (CUY-90-0758 SFN 1808567 - LOCATION 2)	
				438			438		SPECIAL	20270110	438	FT	PIPE CLEANOUT, 24" AND UNDER
				431			431		SPECIAL	20270120	431	FT	PIPE CLEANOUT, 27" TO 48"
				145			145		209	10001	145	FT	DITCH CLEANOUT, AS PER PLAN
				5			5		516	10010	5	FT	ARMORLESS PREFORMED JOINT SEAL
	93			1118			1211		601	20011	1211	CY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN
				192			192		601	28000	192	CY	DUMPED ROCK FILL, TYPE D
				1479			1479		601	32000	1479	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
				1629			1629		607	98000	1629	FT	FENCE, MISC.: CONSTRUCTION FENCE
				1			1		611	98231	1	EACH	CATCH BASIN, NO. 4, AS PER PLAN
				8			8		611	99900	8	EACH	DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT
													6 6 6
				654			654		838	20751	654	CY	GABIONS WITH ADDITIONAL COATING, AS PER PLAN
													24

CALCULATED TF
CHECKED PS

GENERAL SUMMARY

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

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SHEET NUMBER							PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	4-6	7-10	LOCATION-1 (CUY-10-0869)	LOCATION-2 (CUY-90-0758)	LOCATION-3 (CUY-480-0647)	CROSS SECTIONS	01/IMS/BR	02/BRO/BR						
													STRUCTURE REPAIR (CUY-480-0647 SFN 1812831 - LOCATION 3)	
					364		364		202	35100	364	FT	PIPE REMOVED, 24" AND UNDER	
					20		20		202	35200	20	FT	PIPE REMOVED, OVER 24"	
					25		25		202	38200	25	FT	GUARDRAIL REMOVED FOR REUSE	
					1		1		202	58000	1	EACH	MANHOLE REMOVED	
					4		4		202	58100	4	EACH	CATCH BASIN REMOVED	
					90		90		SPECIAL	20270000	90	FT	FILL AND PLUG EXISTING CONDUIT	5
					108		108		SPECIAL	20270110	108	FT	PIPE CLEANOUT, 24" AND UNDER	5
					317		317		SPECIAL	20270120	317	FT	PIPE CLEANOUT, 27" TO 48"	5
					125		125		SPECIAL	20270130	125	FT	PIPE CLEANOUT OVER 48"	5
						148	148		203	10000	148	CY	EXCAVATION	
						471	471		203	20000	471	CY	EMBANKMENT	
	300				3595	134	4029		601	20011	4029	CY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN	
					1481		1481		601	32000	1481	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	
						601	601		601	32001	601	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, AS PER PLAN	
					57		57		601	34400	57	CY	ROCK CHANNEL PROTECTION, WITH GROUT, TYPE A	
					0.3		0.3		602	20000	0.3	CY	CONCRETE MASONRY	
					25		25		606	16500	25	FT	GUARDRAIL REBUILT, TYPE 5	
														6
					3297		3297		607	98000	3297	FT	FENCE, MISC.: CONSTRUCTION FENCE	
					520		520		611	06100	520	FT	15" CONDUIT, TYPE C, WITH PREMIUM JOINTS	
					26		26		611	07600	26	FT	18" CONDUIT, TYPE C, WITH PREMIUM JOINTS	
					70		70		611	08200	70	FT	18" CONDUIT, TYPE F	
					20		20		611	16600	20	FT	36" CONDUIT, TYPE C	
					205		205		611	97400	205	FT	CONDUIT, MISC.: 16" CONDUIT, TYPE F, 748.01, CLASS 52, WITH RESTRAINED MECHANICAL JOINTS	
					7		7		611	98300	7	EACH	CATCH BASIN, NO. 5	
					4		4		611	99574	4	EACH	MANHOLE, NO. 3	32
					4		4		611	99575	4	EACH	MANHOLE, NO. 3, AS PER PLAN	
	2						2		659	00100	2	EACH	SOIL ANALYSIS TEST	
	142						142		659	00300	142	CY	TOPSOIL	
	1275						1275		659	10000	1275	SY	SEEDING AND MULCHING	
	64						64		659	14000	64	SY	REPAIR SEEDING AND MULCHING	
	0.17						0.17		659	20000	0.17	TON	COMMERCIAL FERTILIZER	
	0.26						0.26		659	31000	0.26	ACRE	LIME	
	7						7		659	35000	7	MGAL	WATER	
						475	475		670	00500	475	SY	SLOPE EROSION PROTECTION	
						223	223		670	00700	223	SY	DITCH EROSION PROTECTION	
													MAINTENANCE OF TRAFFIC	
		80					60	20	614	11110	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		LS					LS	LS	614	12420	LS		DETOUR SIGNING	9
		LS					LS	LS	614	18002	LS		MAINTAINING TRAFFIC MISC.: CANOE TRAFFIC	9
		LS					LS	LS	614	18002	LS		MAINTAINING TRAFFIC MISC.: CANOE WARNING SIGNS	9
		18					16	2	614	18601	18	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	
		5					4	1	616	10000	5	MGAL	WATER	
													INCIDENTALS	
		LS					LS	LS	103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
		LS					LS	LS	108	10000	LS		CPM PROGRESS SCHEDULE	
		LS					LS	LS	614	11000	LS		MAINTAINING TRAFFIC	5
	9						6	3	619	16011	9	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	
		LS					LS	LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
		LS					LS	LS	624	10000	LS		MOBILIZATION	

CALCULATED TF
CHECKED PS

GENERAL SUMMARY

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

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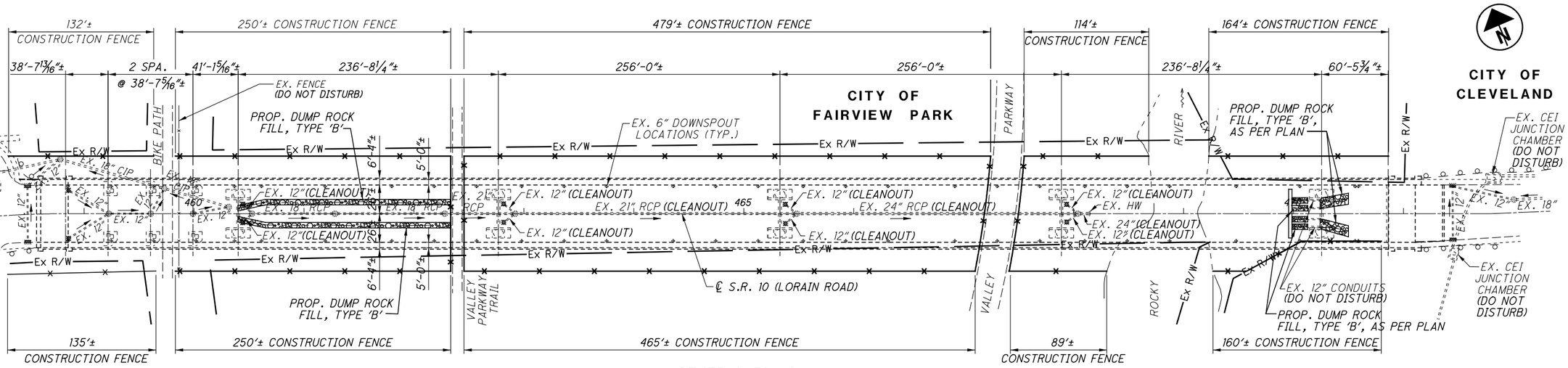
LINE	DESCRIPTION	CALCULATION		QUANTITY
	Δ CUY-480-0647 CALCULATIONS			
	611 - CONDUIT, MISC.: 16" CONDUIT, TYPE F, 748.01, CLASS 52, WITH RESTRAINED MECHANICAL JOINTS			
75	STA. 455+02.95 LT TO STA. 455+15.00 LT		=	12.00 FT
76	STA. 455+15.00 LT TO STA. 455+60.00 LT		=	45.00 FT
77	STA. 455+60.00 LT TO STA. 456+40.00 LT		=	80.00 FT
78	STA. 456+40.00 LT TO STA. 457+07.73 LT		=	68.00 FT
79	SUM LINES 75 TO 78		=	205.00 FT
		TOTAL CARRIED TO THE GENERAL SUMMARY	**=**	**205 FT**
	611 - CATCH BASIN, NO. 5			
80	STA. 442+31.50 RT		=	1 EACH
81	STA. 442+31.46 RT		=	1 EACH
82	STA. 442+67.49 LT		=	1 EACH
83	STA. 442+67.53 LT		=	1 EACH
84	STA. 442+47.84 LT		=	1 EACH
85	STA. 457+07.84 CL		=	1 EACH
86	STA. 457+98.49 LT		=	1 EACH
87	SUM LINES 80 TO 86		=	7 EACH
		TOTAL CARRIED TO THE GENERAL SUMMARY	**=**	**7 EACH**
	611 - MANHOLE, NO. 3			
88	STA. 443+00.62 RT		=	1 EACH
89	STA. 443+00.58 RT		=	1 EACH
90	STA. 443+00.56 LT		=	1 EACH
91	STA. 443+00.51 LT		=	1 EACH
92	SUM LINES 88 TO 91		=	4 EACH
		TOTAL CARRIED TO THE GENERAL SUMMARY	**=**	**4 EACH**
	611 - MANHOLE, NO. 3, AS PER PLAN			
93	STA. 455+15.00 LT		=	1 EACH
94	STA. 455+60.00 LT		=	1 EACH
95	STA. 456+40.00 LT		=	1 EACH
96	STA. 457+07.73 LT		=	1 EACH
97	SUM LINES 93 TO 96		=	4 EACH
		TOTAL CARRIED TO THE GENERAL SUMMARY	**=**	**4 EACH**
	670 - SLOPE EROSION PROTECTION			
98	COMPUTER GENERATED AREA 4270.32 SF / 9		=	474.48 SY
		TOTAL CARRIED TO GENERAL SUMMARY	**=**	**475 SY**
	670 - DITCH EROSION PROTECTION			
99	STA. 458+50.00 RT TO STA. 460+50.00 RT = 200 FT x 10 FT / 9		=	222.22 SY
		TOTAL CARRIED TO GENERAL SUMMARY	**=**	**223 SY**
	EROSION CONTROL			
	659 - SEEDING AND MULCHING			
1	TOTALS FROM CROSS SECTIONS		=	1275.00 SY
		TOTAL CARRIED TO GENERAL NOTES	**=**	**1275 SY**
	659 - TOPSOIL			
2	FROM LINE 1 , 1275 SY X 111 CY / 1000 SY		=	141.53 CY
		TOTAL CARRIED TO GENERAL NOTES	**=**	**142 CY**
	659 - COMMERCIAL FERTILIZER			
3	FROM LINE 1 , 1275 SY X 1 TON / 7410 SY		=	0.17 TON
		TOTAL CARRIED TO GENERAL NOTES	**=**	**0.17 TON**
	659 - LIME			
4	FROM LINE 1 , 1275 SY / 4840 SY/ACRE		=	0.26 ACRE
		TOTAL CARRIED TO GENERAL NOTES	**=**	**0.26 ACRE**
	659 - WATER			
5	FROM LINE 1 , 1275 SY X 0.0027 MGAL / SY X 2 APPLICATIONS		=	6.89 MGAL
		TOTAL CARRIED TO GENERAL NOTES	**=**	**7 MGAL**
	659 - REPAIR SEEDING AND MULCHING			
6	FROM LINE 1 , 1275 SY X 5%		=	63.75 SY
		TOTAL CARRIED TO GENERAL NOTES	**=**	**64 SY**
	659 - SOIL ANALYSIS TEST			
7	FROM LINE 2 , 141.53 CY / 10000 CY		=	0.01 EACH
		TOTAL CARRIED TO GENERAL NOTES	**=**	**2 EACH**
	LEGEND			
	Δ 01/IMS/BR			

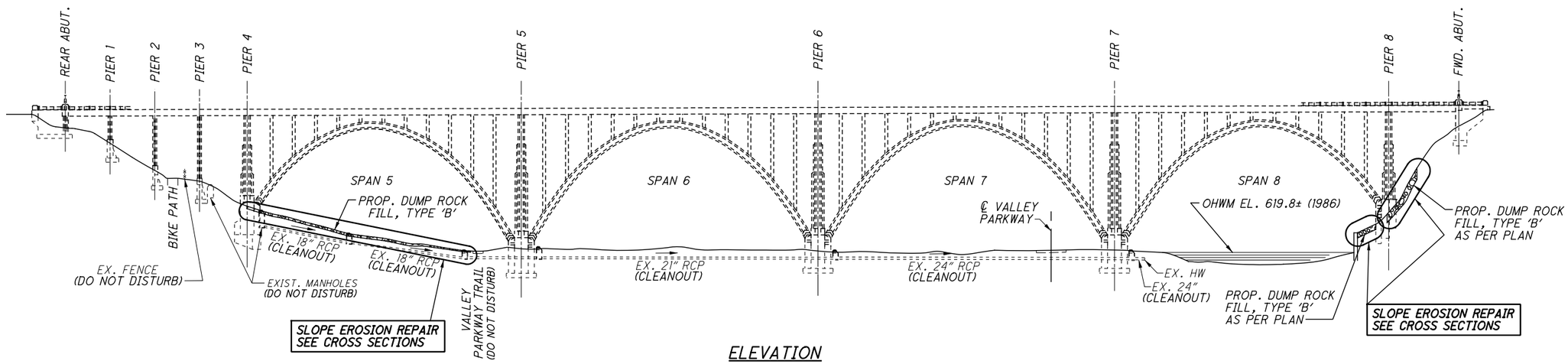
CALCULATED TF
CHECKED PS

CALCULATIONS

CUY-90-07.58/VAR. SLOPE
PID NO. 103161



GENERAL PLAN



ELEVATION

CROSS REFERENCES	
4-6	GENERAL NOTES
7-11	MAINTENANCE OF TRAFFIC
20-22	CROSS SECTIONS

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, BOLD TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
PS	SM		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TF	SM	1801325	

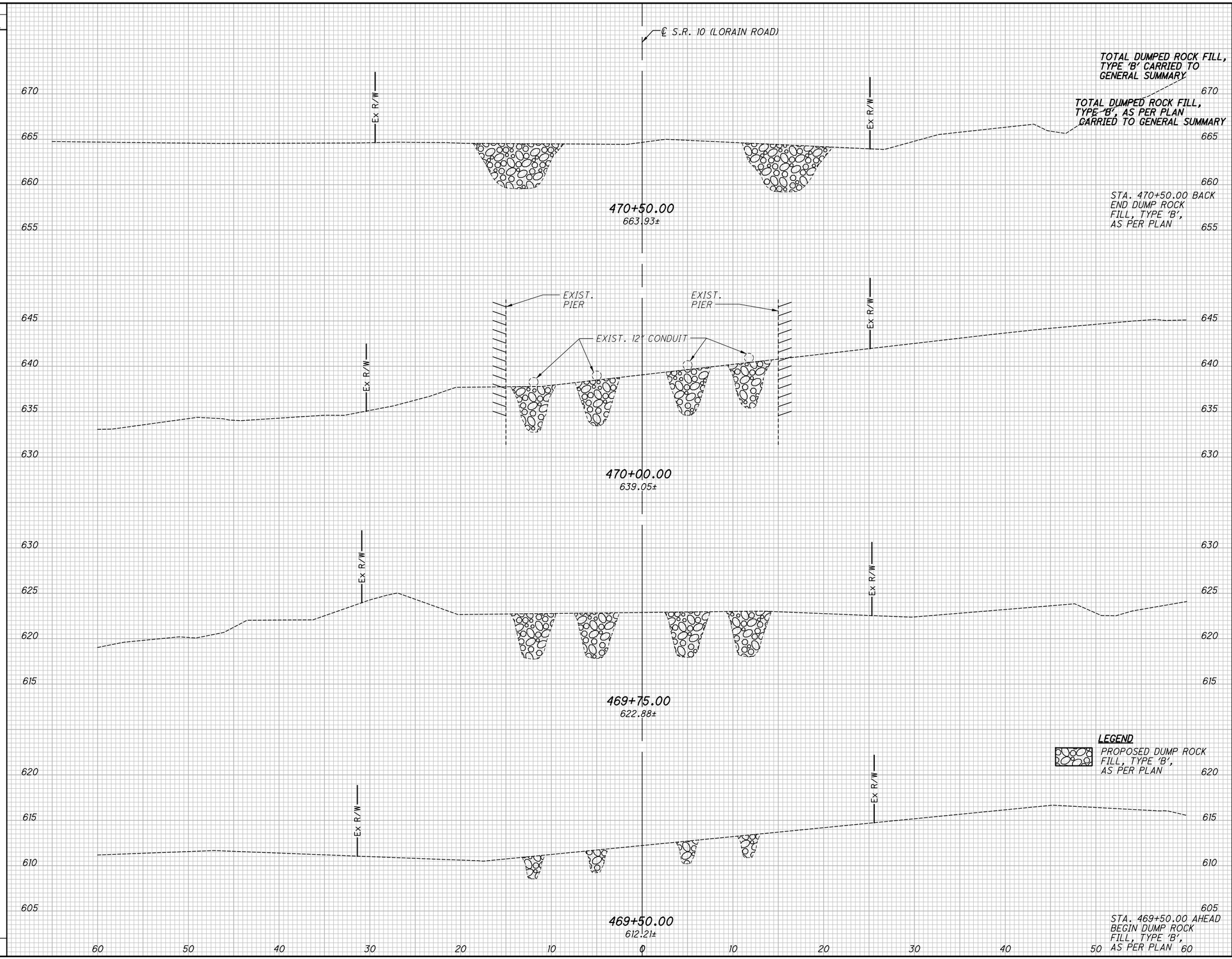
GENERAL PLAN - LOCATION 1
BRIDGE NO. CUY-10-0869
OVER VALLEY PARKWAY AND ROCKY RIVER

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

1 / 4

19
34

SEEDING	
END WIDTH	SQ. YDS.
.	.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	85
		0	224
0	69		
		0	123
0	63		
		0	61
0	68		
		0	40
0	17		
.	.	0	224

CALCULATED TF
CHECKED SAM

CROSS SECTIONS

STA. 469+50.00 TO STA. 470+50.00

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

4 / 4

22
34

ITEM 838 - GABIONS WITH ADDITIONAL COATING, AS PER PLAN

THIS ITEM SHALL BE USED TO REMOVE AND DISPOSE OF THE EXISTING GABIONS, GRADE, PREPARE THE AREA, AND PLACE GABIONS AT STRUCTURE CUY-90-0758 AS DETAILED IN THE PLANS. THE GABIONS SHALL BE GALVANIZED AND PVC COATED DOUBLE TWIST WIRE MESH FITTED WITH DIAPHRAGMS AS PER SUPPLEMENTAL SPECIFICATION 838- GABIONS.

THE GABION BASKETS SHALL BE (LENGTH X WIDTH X HEIGHT) 12' X 6' X 9".

THE GABIONS SHALL BE FILLED WITH AN APPROVED AGGREGATE WITH A MINIMUM SIZE OF 5 INCHES AND A MAXIMUM SIZE OF 8 INCHES, WITH BOTH STONE MEASUREMENTS MADE IN THE GREATEST DIMENSION.

IN ADDITION TO THE SUPPLEMENTAL SPECIFICATION, THE GABIONS SHALL BE ANCHORED AS DETAILED ON THIS SHEET. PAYMENT FOR THE ANCHORING SYSTEM INCLUDING ADDITIONAL ANCHORS REQUIRED ALONG THE PERIMETER SHALL BE INCLUDED IN ITEM 838.

ALL EARTHWORK AND FABRIC FILTER SHALL BE INCIDENTAL TO THIS ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 838 - GABIONS WITH ADDITIONAL COATING, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DUMPED ROCK FILL SHALL BE USED AS A TRANSITION ELEMENT BETWEEN THE EXISTING GRADE AND THE PROPOSED GABION MATTRESSES. ALL VOIDS NOT COVERED BY THE GABION TREATMENT SHALL BE FILLED WITH DUMPED ROCK FILL.

THE FOLLOWING QUANTITY OF ITEM 203 - EXCAVATION AND ITEM 601 - DUMPED ROCK FILL, TYPE D HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE AS APPROVED BY THE ENGINEER.

ITEM 203 - EXCAVATION 263 CY

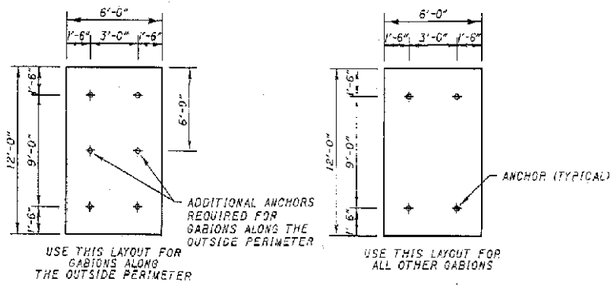
ADDITIONAL	= 50.00 CY
STA. 574+67.77 RT. TO STA. 576+44.28 RT. ((176.51' + 174.25') / 2) x 56.75' x (3" / 12) x 1.12 SLOPE / 27 = 103.21 CY	
STA. 574+65.77 LT. TO STA. 576+39.49 LT. ((173.73' + 171.32') / 2) x 60.97' x (3" / 12) x 1.12 SLOPE / 27 = 109.08 CY	
TOTAL =	262.29 CY
USE	**263.00 CY**

ITEM 601 - DUMPED ROCK FILL, TYPE D 192 CY

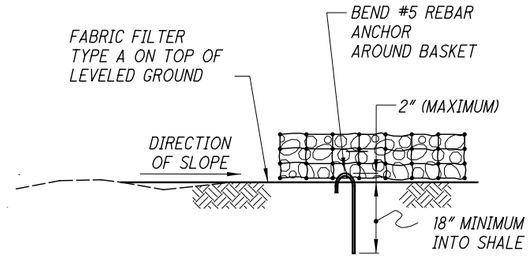
ADDITIONAL	= 50.00 CY
STA. 574+67.77 RT. TO STA. 576+44.28 RT. ((176.51' + 174.25') / 2) x 56.75' x (2" / 12) x 1.12 SLOPE / 27 = 68.81 CY	
STA. 574+65.77 LT. TO STA. 576+39.49 LT. ((173.73' + 171.32') / 2) x 60.97' x (2" / 12) x 1.12 SLOPE / 27 = 72.72 CY	
TOTAL =	191.53 CY
USE	**192.00 CY**

PRIOR TO PLACING THE GABIONS THE SLOPE SHALL BE LEVELED OF ALL SHARP BREAKS, MOUNDS AND GULLEY (EXCAVATE AND USE DUMP ROCK AS NECESSARY), AND THEN COVERED WITH FILTER FABRIC. THE SLOPE MAY VARY FROM 2:1 (NORMAL) TO 1.5:1 (NORMAL). PAYMENT FOR LEVELING THE SURFACE SHALL BE INCLUDED IT ITEM 838 - GABIONS WITH ADDITIONAL COATING, AS PER PLAN.

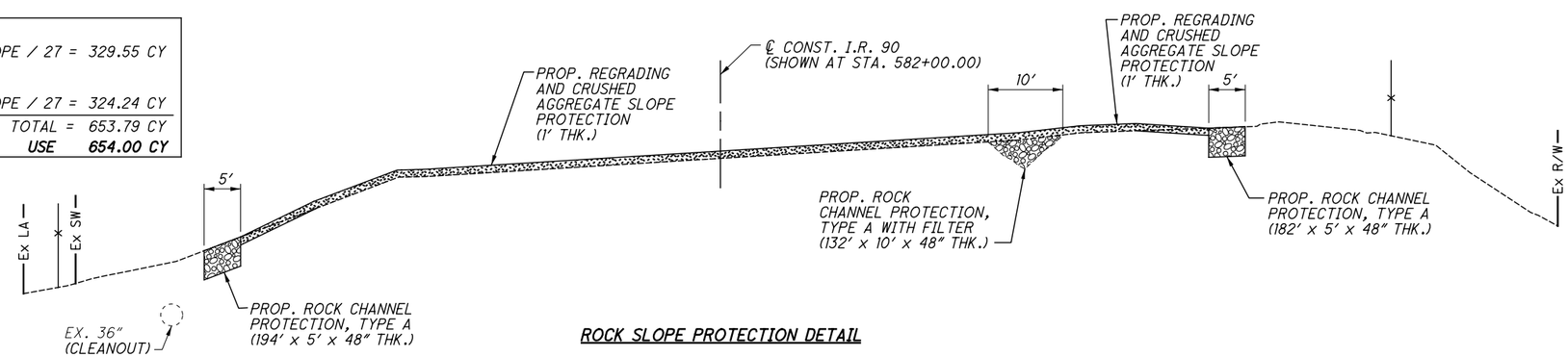
STA. 574+67.77 RT. TO STA. 576+44.28 RT. ((176.51' + 174.12') / 2) x 60.42' x (9" / 12) x 1.12 SLOPE / 27 = 329.55 CY	
STA. 574+65.77 LT. TO STA. 576+39.49 LT. ((173.72' + 171.32') / 2) x 60.41' x (9" / 12) x 1.12 SLOPE / 27 = 324.24 CY	
TOTAL =	653.79 CY
USE	**654.00 CY**



GABION MATTRESS ANCHORING LAYOUT



GABION ANCHORING DETAIL



ROCK SLOPE PROTECTION DETAIL

CALCULATED PS CHECKED TF

DRAINAGE DETAILS

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

2 / 3

24
34

LEGEND

- CATCH BASIN, CB-5
- MANHOLE NO. 3
- VEGETATED BIOFILTER

*LONGITUDE AND LATITUDE TO APPROXIMATE CENTER OF PROJECT.

ϕCALCULATED PER L&D VOL. 2, SEC. 1115.7

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING DRAINAGE; SLOPE PROTECTION REPAIR; AND OTHER SCOUR REPAIRS.

THE EXISTING SITE CAN BE DESCRIBED AS URBAN.

USGS QUADRANT: LAKEWOOD QUADRANGLE
LAKEWOOD, OHIO

*LATITUDE 41°25'25" N
*LONGITUDE 81°51'20" W

CURVE DATA
P.I. Sta. 468+69.38
Δ = 18° 20' 43" (RT)
Dc = 1° 15' 00"
R = 4,583.66'
T = 740.14'
L = 1,467.62'
E = 59.37'
C = 1,461.36'
C.B. = S 75° 51' 03" E

CLEVELAND METROPARKS DISTRICT

CITY OF CLEVELAND

ROCKY RIVER BRIDGE CHANNEL

ROCKY RIVER

℄ DITCH

S 85° 01' 24" E

174'

STA. 460+82.56
℄ CONST. I.R. 480
X = 2146468.594651
Y = 640907.153306

℄ CONST. I.R. 480 (OUTERBELT SOUTH FREEWAY)

EX. 18" PIPE (PLUG AND ABANDON)

EX. 18" PIPE (CLEANOUT)

PC Sta. 461+29.24

0.25 AC C=0.56

0.48 AC C=0.57

0.23 AC C=0.57

BMP TYPE	LATITUDE/LONGITUDE				BMP WIDTH	EDA TREATMENT CREDIT
	BEGIN		END		(FEET)	(ACRES)
VEGETATED BIOFILTER	41.423762	81.851936	41.423697	81.851212	10	0.74
			TREATMENT PROVIDED			0.74
			TREATMENT REQUIRED ϕ			0.73

PROJECT DATA

TOTAL AREA (EXISTING RIGHT-OF-WAY):	9.06 ACRES	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.5-0.9
PROJECT EARTH DISTURBED AREA:	3.65 ACRES	RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE:	0.5-0.9
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.63 ACRES	POST CONSTRUCTION BMP: VEGETATED BIOFILTERS ARE PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS. SEE CROSS SECTION SHEETS FOR LOCATIONS.	
NOTICE OF INTENT EARTH DISTURBED AREA:	4.28 ACRES		
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	6.02 ACRES	IMMEDIATE RECEIVING WATERS:	ROCKY RIVER
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE:	6.02 ACRES	SUBSEQUENT RECEIVING WATER:	LAKE ERIE

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ALP
CHECKED PS

PROJECT SITE PLAN
STA. 451+00.00 TO STA. 465+00

CUY-90-07.58/ VAR. SLOPE
PID NO. 103161

1A / 9

25A / 34

NOTES:

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LEGEND

- (CR) CATCH BASIN REMOVED
- (MR) MANHOLE REMOVED
- (PR) PIPE REMOVED
- ITEM 670 - SLOPE EROSION PROTECTION

CITY OF FAIRVIEW PARK

CLEVELAND METROPARKS DISTRICT

(*) 25' GUARDRAIL REMOVED FOR REUSE (RESTRICT ACCESS TO THIS AREA WHEN NO VEHICLES ARE USING IT DURING WORK HOURS AND DURING NON-WORKING HOURS)

STA. 440+00.00
℄ CONST. I.R. 480
X = 2144393.889191
Y = 641087.810779

263'± CONSTRUCTION FENCE
127'± CONSTRUCTION FENCE
510'± CONSTRUCTION FENCE
105'± CONSTRUCTION FENCE
153'± CONSTRUCTION FENCE
206'± CONSTRUCTION FENCE
161'± CONSTRUCTION FENCE
567'± CONSTRUCTION FENCE

ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (342' x 5' x 48" THK.)
ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (320' x 5' x 48" THK.)

PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN)

℄ CONST. I.R. 480 (OUTERBELT SOUTH FREEWAY)

EX. GRATED SCUPPERS (TYP.)

EX. GROUND MOUNTED SIGN
EX. OVERHEAD SIGN
EX. 18" CMP
EX. 12" PIPE
EX. 24" CMP
EX. 54" PIPE
EX. 36" PIPE (CLEANOUT)
EX. 15" PIPE
EX. CRUSHED AGGREGATE SLOPE PROTECTION
℄ DITCH
EX. 54" PIPE (CLEANOUT)
EX. 6" CONC. RIPRAP
EX. DUMPED RCP
ROCKY RIVER BRIDGE CHANNEL
BRIDLE TRAIL
PARKVIEW LANE
VALLEY PARKWAY
VALLEY PARKWAY TRAIL

S 85° 01' 24" E

MATCHLINE STA. 450+67.81 SEE SHEET 28

PLAN

CROSS REFERENCES	
4-6	GENERAL NOTES
7-11	MAINTENANCE OF TRAFFIC
27-28	CROSS SECTIONS
32	DRAINAGE DETAILS

(1) STA. 442+31.50±, 61.47'± RT.
PROP. CB NO. 5 (DOWNSPOUT OUTLET SHALL BE DIRECTED IN CATCH BASIN)
PROP. TOP OF GRATE EL. 726.50±
℄ 15" (N.) EL. 722.75±

(2) STA. 443+00.62, 83.13' RT.
PROP. MH NO. 3
PROP. TOP OF COVER EL. 693.40±
℄ 18" (N.) EL. 688.50±
℄ 36" (W.) EL. 687.00±
℄ 36" (E.) EL. 687.00±

(3) STA. 442+31.46±, 13.25'± RT.
PROP. CB NO. 5 (DOWNSPOUT OUTLET SHALL BE DIRECTED IN CATCH BASIN)
PROP. TOP OF GRATE EL. 726.50±
℄ 15" (S. & E.) EL. 722.25±

(4) STA. 443+00.58±, 13.28'± RT.
PROP. MH NO. 3
PROP. TOP OF COVER EL. 727.00±
℄ 15" (W.) EL. 721.75±
℄ 18" (N. & S.) EL. 718.80±

(5) STA. 442+67.53±, 12.19'± LT.
PROP. CB NO. 5 (DOWNSPOUT OUTLET SHALL BE DIRECTED IN CATCH BASIN)
PROP. TOP OF GRATE EL. 726.50±
℄ 15" (N. & E.) EL. 723.25±

(6) STA. 443+00.56±, 12.21'± LT.
PROP. MH NO. 3
PROP. TOP OF COVER EL. 727.00±
℄ 15" (W.) EL. 723.05±
℄ 15" (N.) EL. 719.25±
℄ 18" (S.) EL. 719.00±

(7) STA. 442+67.49±, 60.80'± LT.
PROP. CB NO. 5 (DOWNSPOUT OUTLET SHALL BE DIRECTED IN CATCH BASIN)
PROP. TOP OF COVER EL. 726.50±
℄ 15" (S.) EL. 723.75±

(8) STA. 442+47.77±, 125.04'± LT.
PROP. CB NO. 5
PROP. TOP OF COVER EL. 723.90±
℄ 15" (S.E.) EL. 720.65±

(9) STA. 443+00.51±, 92.49'± LT.
PROP. MH NO. 3
PROP. TOP OF COVER EL. 727.00±
℄ 15" (N.W. & S.) EL. 719.75±

PROP. ROCK CHANNEL PROTECTION, TYPE A (TYP.)
PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (TYP.) (ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN)
444+00.00
682.42
PROP. 18" TYPE C, WITH PREMIUM JOINTS
PROP. 15" TYPE C, WITH PREMIUM JOINTS
PROP. 18" TYPE F
443+00.00
709.42

BRIDGE LIMITS = 1571.00'± E.B. LANES
BRIDGE LIMITS = 1535.00'± W.B. LANES
PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN)
CHANNEL PROFILE

MATCHLINE STA. 450+67.81 SEE SHEET 28

ELEVATION

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED PS CHECKED TF

PLAN AND ELEVATION
CUY-480-0647 OVER ROCKY RIVER
CUY-90-07.58 / VAR. SLOPE
PID NO. 103161

1 / 9

26 / 34

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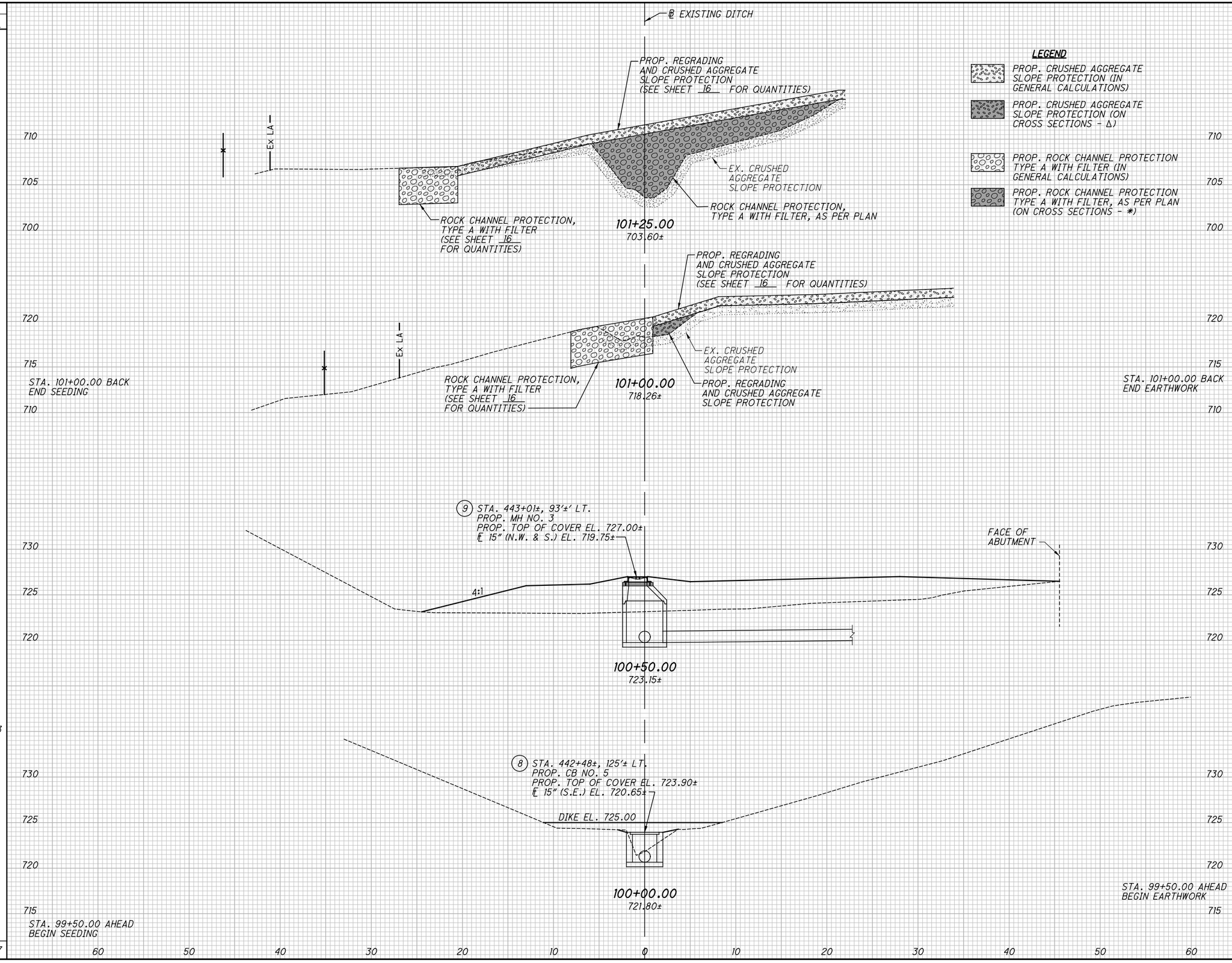
SEEDING END WIDTH	SEEDING SQ. YDS.
0	
	507
71	
20	
0	
	56
253	
198	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	86* 0 Δ		40* 3 Δ
	0* 5 Δ 0		0* 5 Δ 141
	0* 0 Δ 152		0* 0 Δ 154
	0* 0 Δ 14		0* 0 Δ 13
	0* 0 Δ 0		40* 8 Δ 308

CALCULATED PS | CHECKED TF

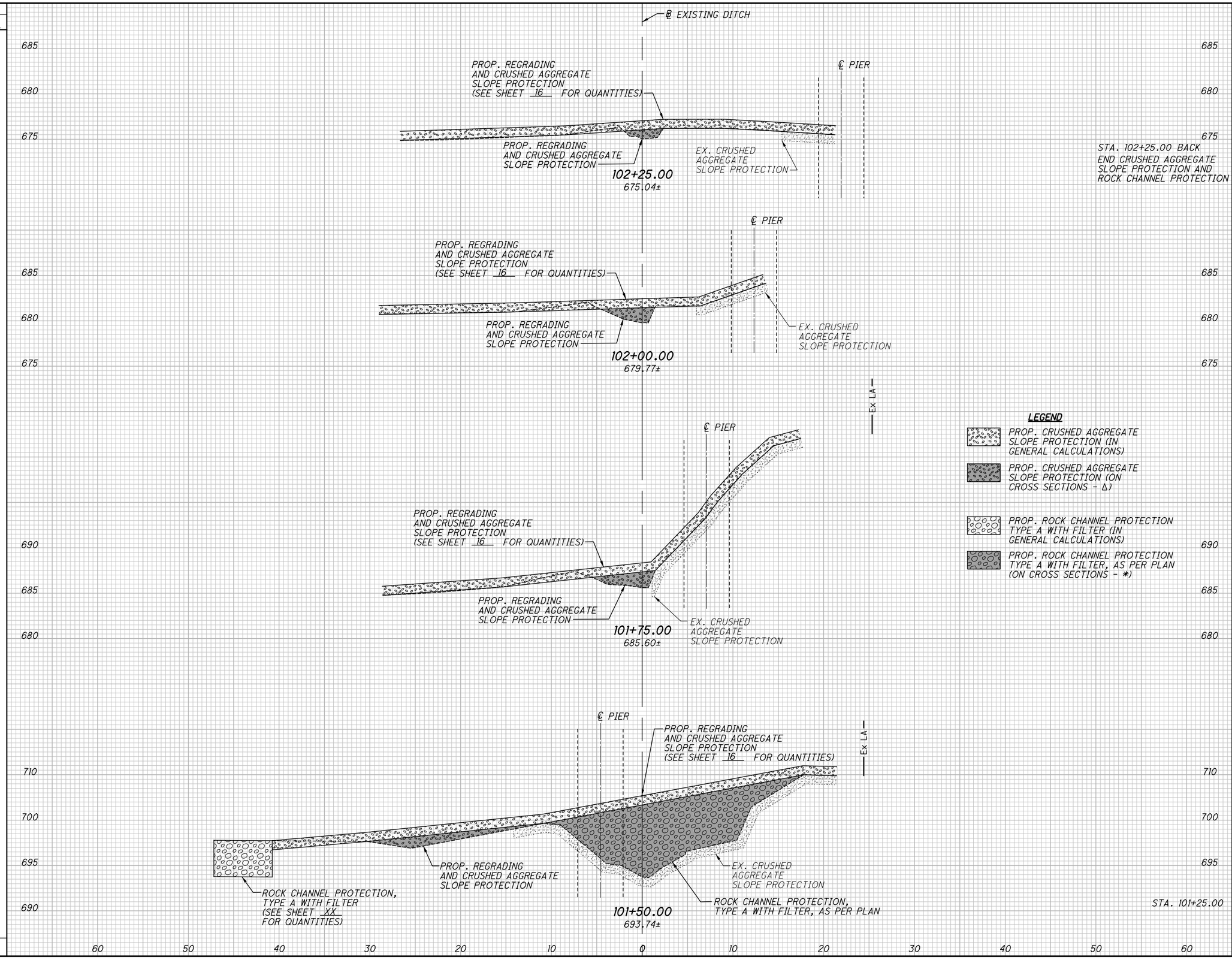
CROSS SECTIONS
STA. 100+00.00 TO STA. 101+25.00

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

2 / 9

27
34

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	0 * 4 Δ		
			0 * 6 Δ
	0 * 7 Δ		
			0 * 7 Δ
	0 * 8 Δ		
	125 * 13 Δ		58 * 10 Δ
	86 * 0 Δ		98 * 7 Δ
			156 * 30 Δ

CALCULATED PS | CHECKED TF

CROSS SECTIONS
STA. 101+50.00 TO STA. 102+25.00

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

3 / 9

28 / 34

CLEVELAND METROPARKS DISTRICT

CITY OF CLEVELAND

510'± CONSTRUCTION FENCE

280'± CONSTRUCTION FENCE

ROCK CHANNEL PROTECTION, TYPE A (273' x 5' x 48" THK.)

PROP. ROCK CHANNEL PROTECTION, TYPE A GROUTED IN PLACE

PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN)

EX. GRATED SCUPPERS (TYP.)

EX. GROUND MOUNTED SIGN

STA. 460+82.56
℄ CONST. I.R. 480
X = 2146468.594651
Y = 640907.153306

MATCHLINE STA. 450+67.81 SEE SHEET 25

℄ DITCH

EX. 18" PIPE (PLUG AND ABANDON)

EX. 18" PIPE (CLEANOUT)

ROCKY RIVER BRIDGE CHANNEL

PROP. ROCK CHANNEL PROTECTION, TYPE A (175' x 10' x 48" THK.)

567'± CONSTRUCTION FENCE

EX. CRUSHED AGGREGATE SLOPE PROTECTION

EX. DUMPED ROCK

EX. BROKEN CORRUGATED DRAINAGE CONDUIT

PROP. ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (260' x 5' x 48" THK.)

PROP. ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (279' x 5' x 48" THK.)

PROP. ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (195' x VARIES x VARIES THK.)

320'± CONSTRUCTION FENCE

℄ CONST. I.R. 480 (OUTERBELT SOUTH FREEWAY)

P.C. STA. 461+22.24

EX. GROUND MOUNTED SIGN

LEGEND

ITEM 670 - DITCH EROSION PROTECTION

PROP. 15" TYPE C

457+00.00
721.32

PROP. 16" TYPE F WITH RESTRAINED MECHANICAL JOINTS

456+00.00
670.99

PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (TYP.) (ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN)

PROP. ROCK CHANNEL PROTECTION, TYPE A (TYP.)

ROCKY RIVER

PLAN

MATCHLINE STA. 450+67.81 SEE SHEET 25

BRIDGE LIMITS = 1571.00'± E.B. LANES
BRIDGE LIMITS = 1535.00'± W.B. LANES

EXISTING CONCRETE PADS TO BE CRUSHED AND REUSED IN ROCK CHANNEL PROTECTION

PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN)

100 YR, HW El. 635.6

OHWM EL. 631.18

CHANNEL PROFILE

6'-11"

PROP. 15" TYPE C

PROP. 16" TYPE F, 748.01, CLASS 52 WITH RESTRAINED MECHANICAL JOINTS

PROP. ROCK CHANNEL PROTECTION, TYPE A (175' x 10' x 48" THK.)

ELEVATION

(10) STA. 457+98.49±, 89.99'± LT.
PROP. CB NO. 5
PROP. TOP OF GRATE EL. 740.50±
℄ 15" (W.) EL. 737.25±

(11) STA. 457+07.84±, 0.81'± RT.
PROP. CB NO. 5
PROP. TOP OF GRATE EL. 721.00±
℄ 15" (N.) EL. 716.75±

(12) STA. 457+07.73±, 85.56'± LT.
PROP. MH NO. 3, AS PER PLAN
PROP. TOP OF COVER EL. 729.00±
℄ 16" (E.) EL. 715.67±
℄ 15" (W. & S.) EL. 715.75±

(13) STA. 456+40.00±, 85.52±' LT.
PROP. MH NO. 3, AS PER PLAN
PROP. TOP OF COVER EL. 707.85±
℄ 16" (W. & E.) EL. 700.92±

(14) STA. 455+60.00±, 85.47±' LT.
PROP. MH NO. 3, AS PER PLAN
PROP. TOP OF COVER EL. 659.60±
℄ 16" (W. & E.) EL. 652.92±

(15) STA. 455+15.00±, 85.45±' LT.
PROP. MH NO. 3, AS PER PLAN
PROP. TOP OF COVER EL. 647.50±
℄ 16" (W. & E.) EL. 640.42±

(16) STA. 455+02.95±, 85.44±' LT.
PROP. HW-2.1
℄ 16" OUTLET EL. 640.27±

CROSS REFERENCES	
4-6	GENERAL NOTES
7-11	MAINTENANCE OF TRAFFIC
30-31	CROSS SECTIONS
32	DRAINAGE DETAILS
33-34	ROADWAY DETAILS

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, BOLD TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

HORIZONTAL SCALE IN FEET

CALCULATED PS CHECKED TF

PLAN

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

CUY-480-0647 OVER ROCKY RIVER

4 / 9

29 / 34

SEEDING END WIDTH	SEEDING SQ. YDS.
29	173
33	389
37	206
37	768

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15	24	27	45
14	24	75	82
26	20	46	36
23	18	148	163

CALCULATED

CHECKED

CROSS SECTIONS STA. 458+00 TO STA. 460+00

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

4A / 9

29A / 34

461+00
764.8

460+50 RT END VEGETATED BIOFILTER

460+00
762.8

For Inspection Road Profile
See Sheet No. 49

459+00
762.2

Rev. 10 14 70

458+00
764.3

458+50 RT BEGIN VEGETATED BIOFILTER

Sta 457+98.5 90° Lt.
108.5 C.S.
TC 741.4

171'-48" Type "S" Class "B" Bedding @ 1.12 %

737.40

Inv 735.47
Concrete Collar

457+98.5 108.5 Rt.
H.W.-4 HEADWALL (Mod. W/out Riprap)
INV 727.00

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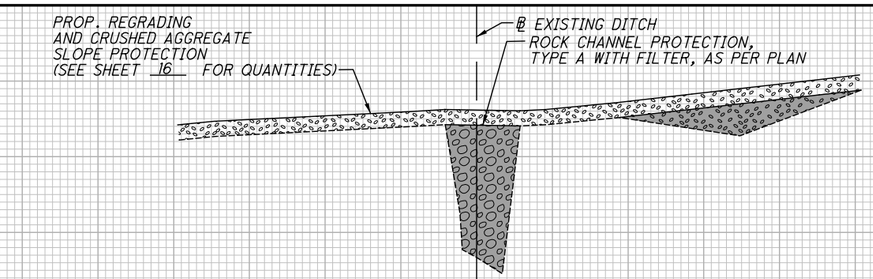
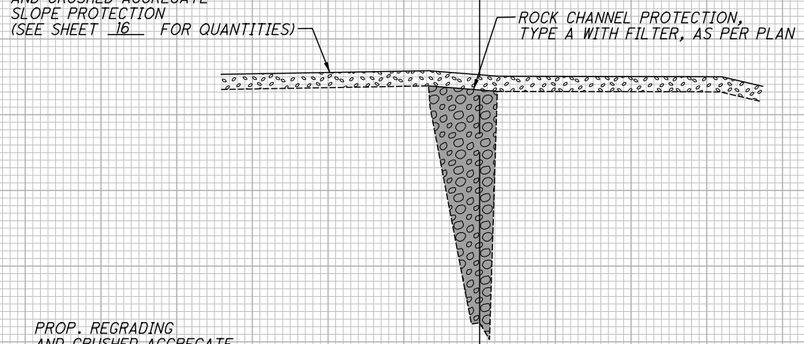
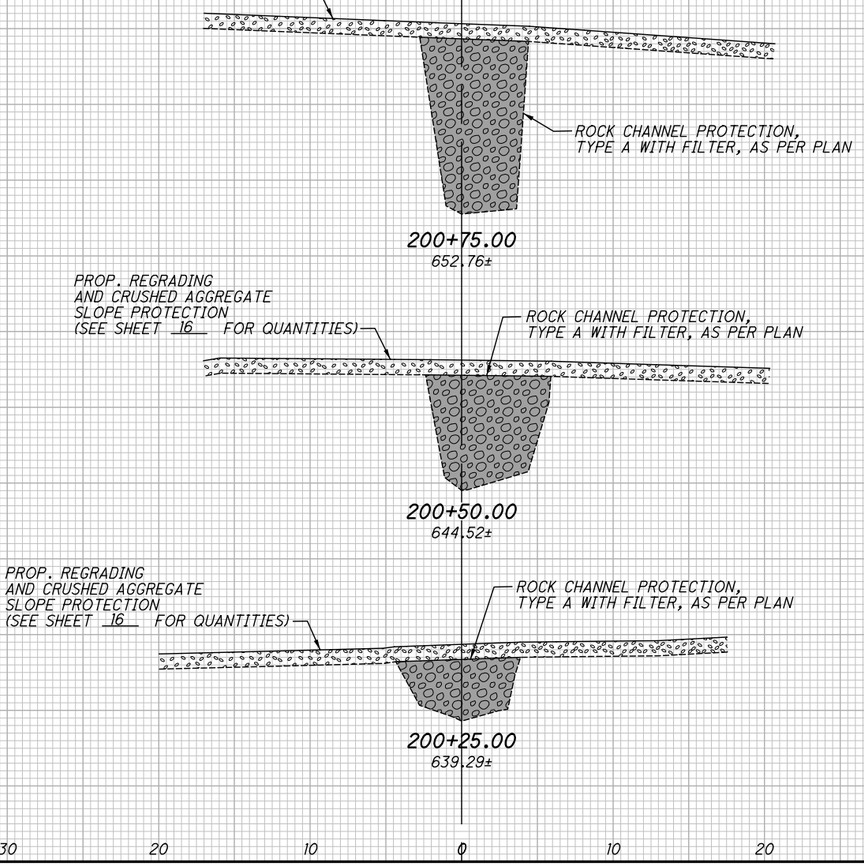
SEEDING	
END WIDTH	SQ. YDS.







LEGEND

- PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (IN GENERAL CALCULATIONS)
- PROP. REGRADING AND CRUSHED AGGREGATE SLOPE PROTECTION (ON CROSS SECTIONS - Δ)
- PROP. ROCK CHANNEL PROTECTION TYPE A WITH FILTER (IN GENERAL CALCULATIONS)
- PROP. ROCK CHANNEL PROTECTION TYPE A WITH FILTER, AS PER PLAN (ON CROSS SECTIONS - *)

STA. 200+00.00 AHEAD
BEGIN CRUSHED AGGREGATE SLOPE PROTECTION AND ROCK CHANNEL PROTECTION

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	34* 17Δ		38* 8Δ
	47* 0Δ		53* 0Δ
	67* 0Δ		54* 0Δ
	49* 0Δ		35* 0Δ
	25* 0Δ		12* 0Δ
	0* 0Δ		192* 8Δ

CALCULATED PS
CHECKED TF

CROSS SECTIONS
STA. 200+25.00 TO STA. 201+25.00

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

5 / 9

30 / 34

SEEDING	
END WIDTH	SQ. YDS.
	507

TOTAL SEEDING AND MULCHING CARRIED TO CALCULATIONS

TOTAL CARRIED TO GENERAL SUMMARY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
			601* 134Δ 308
	0* 0Δ		
			0* 38Δ
	0* 81Δ		
			26* 40Δ
	55* 4Δ		
			69* 2Δ
			94* 0Δ
			73* 0Δ
	62* 0Δ		
			45* 8Δ
	34* 17Δ		
			213* 88Δ

CALCULATED PS

CHECKED TF

CROSS SECTIONS
STA. 201+50.00 TO STA. 202+50.00

CUY-90-07.58/VAR. SLOPE
PID NO. 103161

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31
34