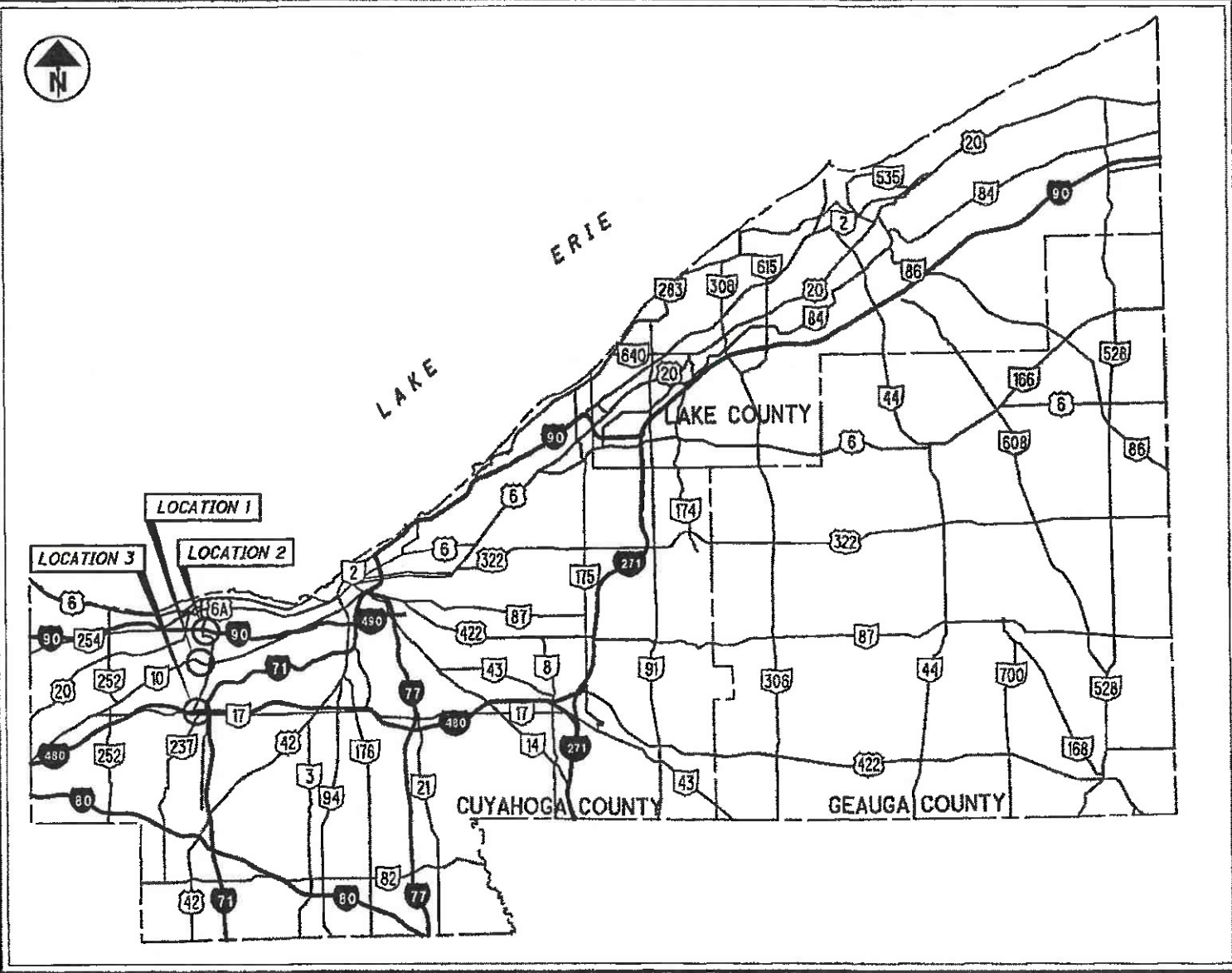


CUY - IR 90-07.58/VAR Slope
 200467 PID - 103161
 Dist 12 10/1/2020

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

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LOCATION MAP

(NOTE: FOR COORDINATES PER LOCATION, SEE SHEET 2)

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
 REGISTERED PROFESSIONAL ENGINEER
 PATRICK SCHWAN
 61571

SIGNED: [Signature]
 DATE: 6-23-2020

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	1-17-20	MT-95.30	7-19-19	800	7-17-20	WATERWAY PERMIT CONDITIONS	
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	2-28-2020	
		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						

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:

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STRUCTURE DATA TABLE	3
GENERAL NOTES	4-6
MAINTENANCE OF TRAFFIC	7-11
GENERAL SUMMARY	12-13
CALCULATIONS	13-18
LOCATION 1 - CUY-10-0869	19-22
LOCATION 2 - CUY-90-0758	23-25
LOCATION 3 - CUY-480-0647	25A, 26-29, 29A, 30-34

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.

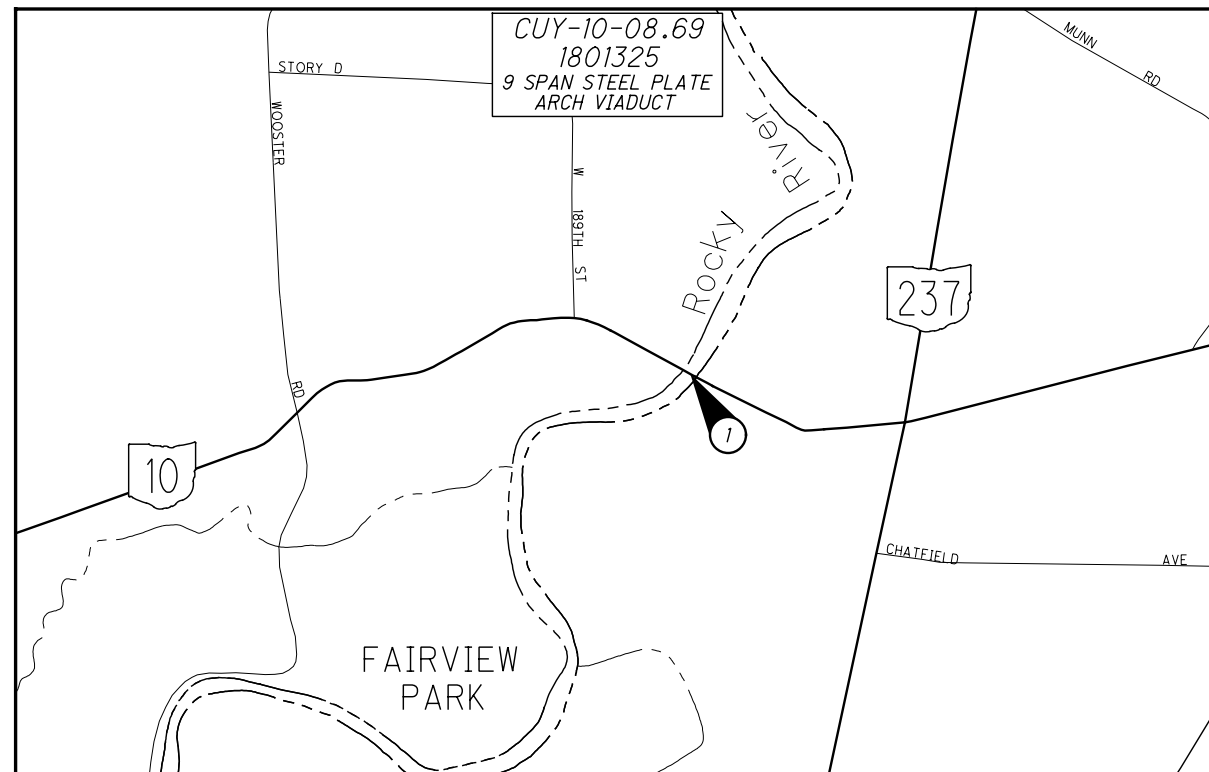
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 10, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED: [Signature]
 DATE 6/25/20 DISTRICT DEPUTY DIRECTOR

APPROVED: [Signature]
 DATE 6/23/20 DIRECTOR, DEPARTMENT OF TRANSPORTATION

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

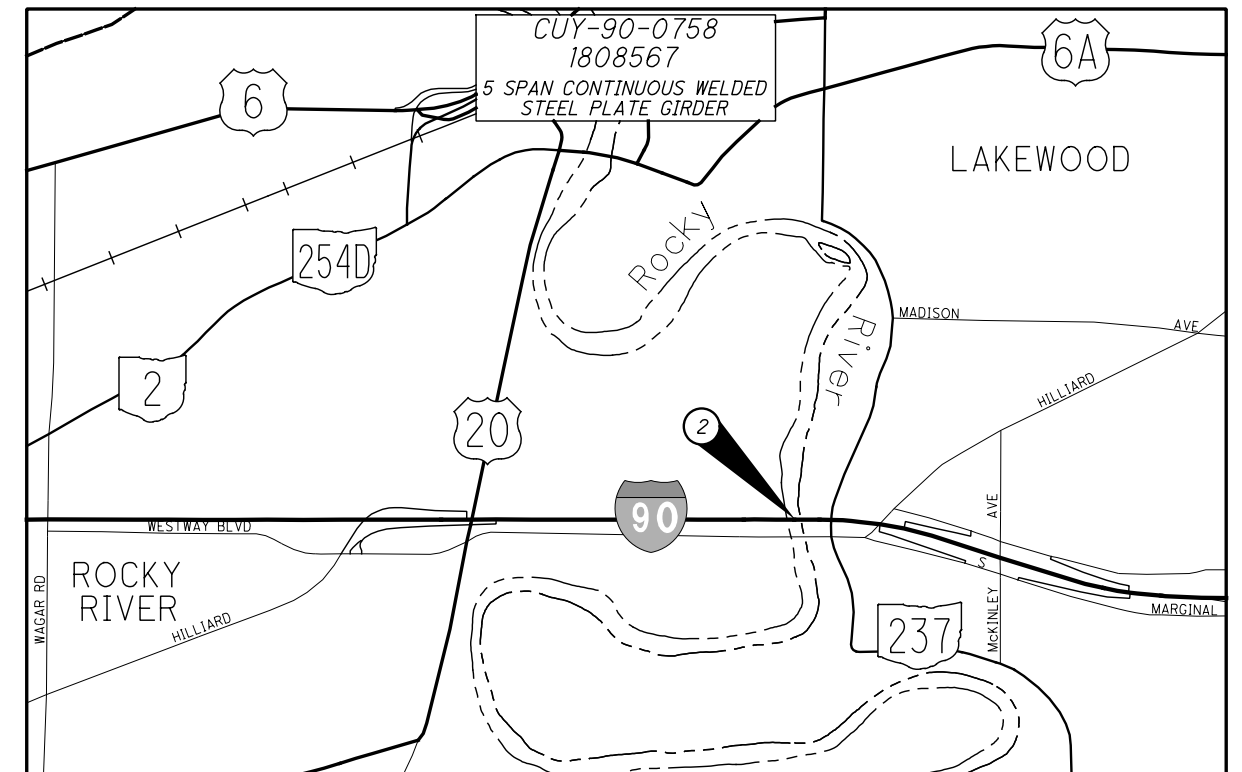
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MAP FOR LOCATION 1

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

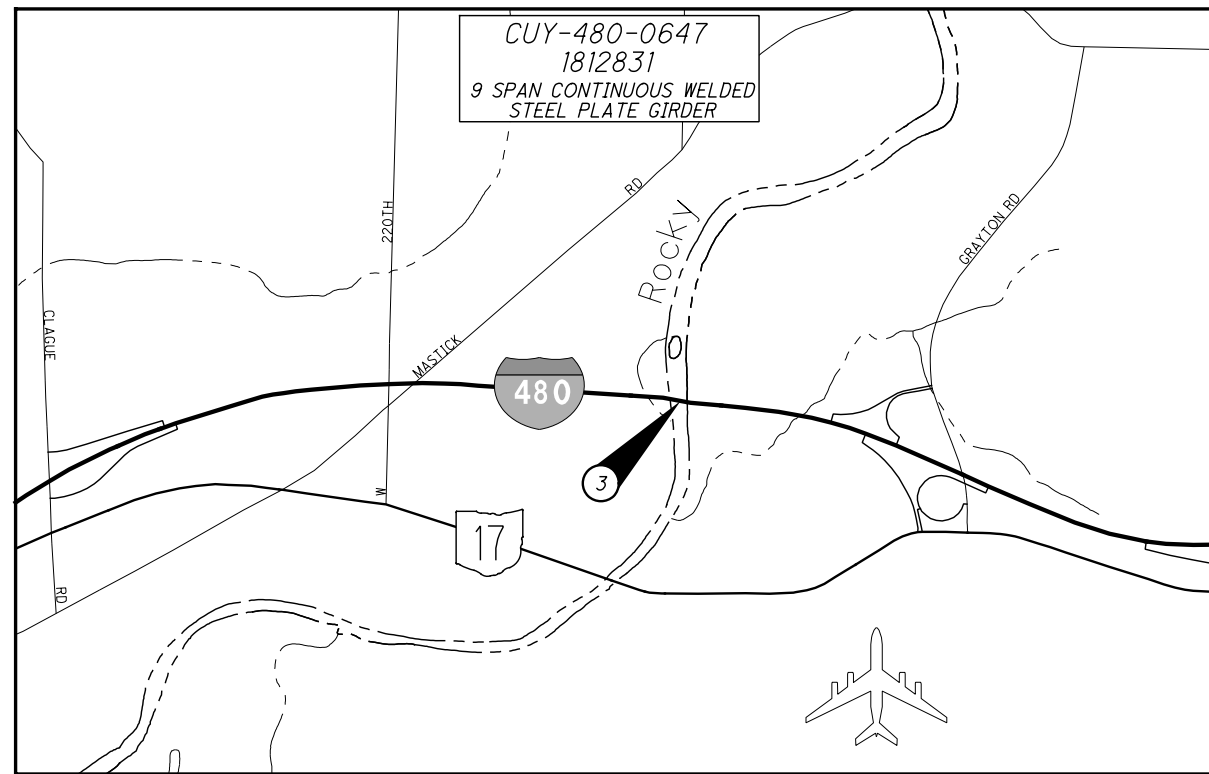
PROPOSED WORK (1)
SLOPE EROSION REPAIR
DRAINAGE CLEANOUT



MAP FOR LOCATION 2

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

PROPOSED WORK (2)
SLOPE EROSION REPAIR
REPAIR PIER COLUMNS SCOUR
DRAINAGE IMPROVEMENTS



MAP FOR LOCATION 3

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

PROPOSED WORK (3)
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.

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LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	STRUCTURE TYPE	STRUCTURE LIMITS	BRIDGE WIDTH (OUT/OUT)	LANES ON	LANES UNDER	SEALER AND PAINT COLOR	PROPOSED WORK (WORK SHOWN IS REPRESENTATIVE AND DOES NOT INCLUDE ALL WORK REQUIRED)
1	CUY-10-0869	1801325	9 SPAN STEEL PLATE ARCH VIADUCT	1229'	64.67'	4	2	N/A	- SLOPE EROSION REPAIR - DRAINAGE CLEANOUT
2	CUY-90-0758	1808567	5 SPAN CONTINUOUS WELDED STEEL PLATE GIRDER	838'	72.17'	4	2	N/A	- SLOPE EROSION REPAIR - CORRECT SCOUR AT PIER - DRAINAGE IMPROVEMENTS
3	CUY-480-0647	1812831	9 SPAN CONTINUOUS WELDED STEEL PLATE GIRDER	1571'	72.17'	4	2	N/A	- SLOPE EROSION REPAIR - CORRECT SCOUR AT PIER - DRAINAGE IMPROVEMENTS

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	CHECKED	DRAWN	REVISED	REVIEWED	DATE

STRUCTURE DATA TABLE

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

1 / 1

3
34

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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 CIRCLE
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

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.

CONSTRUCT 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](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
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GENERAL NOTES - 1

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

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EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE AFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND. PAYMENT FOR THE NEW PAVEMENT MARKINGS IS AS LISTED IN THE PLANS.

EARTHWORK FOR PROJECT TRANSITION

A CONTINGENCY OF ITEM 203 - EMBANKMENT AND ITEM 203 - EXCAVATION IS BEING PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO TRANSITION THE EARTHWORK INTO THE EXISTING AT THE BEGIN/END OF THE PROJECT.

ITEM 203 - EXCAVATION	<u>100</u> CY (75 CY ^Δ) (25 CY*)
ITEM 203 - EMBANKMENT	<u>100</u> CY (75 CY ^Δ) (25 CY*)

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.

COORDINATION WITH CLEVELAND METROPARKS

THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM CLEVELAND METROPARKS FOR WORK WITHIN CLEVELAND METROPARKS PROPERTY PRIOR TO ANY WORK WITHIN THE ROCKY RIVER RESERVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL COMPLIANCE WITH THE CONSTRUCTION PERMIT AS PROVIDED BY THE CLEVELAND METROPARKS. A COPY OF THE CONSTRUCTION PERMIT SHALL BE PROVIDED TO ODOT.

ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THIS ELEMENT OF WORK FOR THE PROJECT SHALL BE INCIDENTAL TO THE PROJECT WORK ITEMS.

THE CONTRACTOR SHALL RESTORE THE PARK PROPERTY TO A CONDITION AT LEAST AS GOOD AS EXISTED PRIOR TO THE PROJECT AT NO ADDITIONAL COST TO THE STATE.

THE CONTRACTOR SHALL PROVIDE CLEVELAND METROPARKS WITH AN OPPORTUNITY TO INSPECT THE PARK PROPERTY PRIOR TO COMPLETION OF CONSTRUCTION.

THE CONTRACTOR SHALL COORDINATE THE PROJECT SCHEDULE WITH CLEVELAND METROPARKS.

CLEVELAND METROPARKS
4101 FULTON PARKWAY
CLEVELAND, OH 44144
ATTN: DAVID FREY
PHONE: 216-635-3258

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE B FIELD OFFICE, AS SPECIFIED IN TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

THE COPIER SUPPLIED MUST MEET THE REQUIREMENTS OF THE COPIER SUPPLIED WITH THE TYPE C FIELD OFFICE.

THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.

THE CONTRACTOR SHALL FURNISH, SET-UP AND MAINTAIN A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11ac FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN	<u>9</u> MNTH
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ENVIRONMENTAL COMMITMENTS

THE CONTRACTOR SHALL ENSURE ACCESS TO ROCKY RIVER RESERVATION TO BE MAINTAINED AT ALL TIMES, EXCEPT FOR THE TIME NEEDED TO TEMPORARILY OCCUPY THE PROPERTY.

THE CONTRACTOR SHALL ENSURE APPROPRIATE SIGNAGE TO BE INSTALLED TO ALERT USERS OF ROCKY RIVER RESERVATION OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS.

THE CONTRACTOR SHALL ENSURE THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT OR MATERIALS TO NOT TAKE PLACE OUTSIDE PROPOSED CONSTRUCTION LIMITS THAT ARE WITHIN THE DEFINED BOUNDARIES OF THE 4(F) PROPERTY.

THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND CLEVELAND METROPARKS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONSTRUCTION TIME FRAME AT EACH BRIDGE LOCATION SHALL BE LESS THAN 6 MONTHS.

THE CONTRACTOR SHALL ENSURE TEMPORARY CONSTRUCTION FENCING TO BE INSTALLED ALONG PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE 4(F) PROPERTY AND THE PUBLIC.

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 APPURTENANCES 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.

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.

ITEM 601 - EROSION CONTROL

ITEM 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ITEM SPECIAL - PIPE CLEANOUT

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

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 18 IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACK-FILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, FOR EACH BRIDGE LOCATION IDENTIFIED TO BE USED AS DIRECTED BY THE ENGINEER. THE TREE CLEARING LIMITS SHALL BE MARKED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

ITEM 209 - DITCH CLEANOUT, AS PER PLAN

THIS WORK SHALL CONSIST OF REESTABLISHING THE CROSS SECTION ON AN EXISTING DITCH. SURPLUS OR UNSUITABLE MATERIAL, AS DETERMINED BY THE ENGINEER, SHALL BE DISPOSED OF. EMBANKMENT REQUIRED FOR ERODED CONDITIONS SHALL MEET THE REQUIREMENTS OF 203.02R EXCEPT THAT THE COMPACTION REQUIREMENTS ARE WAIVED. ALSO INCLUDED IN THIS ITEM SHALL BE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO INSTALL EROSION CONTROL IN COORDINATION WITH THE OTHER EROSION REPAIRS IN THE CLEANED OUT DITCH UNLESS OTHER PERMANENT EROSION CONTROL MEASURES HAVE BEEN PROVIDED IN THE PLANS. THE CONTRACTOR SHALL RESTORE, TO THE SATISFACTION OF THE ENGINEER, ANY DISTURBED AREAS CAUSED BY CONSTRUCTION OF THIS ITEM AT NO ADDITIONAL COST TO THE STATE.

MEASUREMENT OF THE DITCH CLEANOUT SHALL BE THE FEET MEASURED ALONG THE CENTERLINE OF THE DITCH.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 209, DITCH CLEANOUT, AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

209 DITCH CLEANOUT, AS PER PLAN	<u>50</u> FT ^Δ
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ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

LEGEND

- Δ 01/IMS/BR
- * 02/BRO/BR

CALCULATED
PS
CHECKED
TF

GENERAL NOTES - 2

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

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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 90^Δ		
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 480^Δ		
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 90^Δ	
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 480^Δ	
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	

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	SY ^Δ
659, TOPSOIL	142	CY ^Δ
659, COMMERCIAL FERTILIZER	0.17	TON ^Δ
659, LIME	0.26	ACRE ^Δ
659, WATER	7	MGAL ^Δ
659, REPAIR SEEDING AND MULCHING	64	SY ^Δ
659, SOIL ANALYSIS TEST	2	EACH ^Δ

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 PROTECTION, 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 DISTURBED 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 INCLUDE 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	LS ^Δ
ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS	LS ^Δ
ITEM 832 - STORM WATER POLLUTION INSPECTION SOFTWARE	LS ^Δ
CUY-10-0869	
CUY-90-0758	
CUY-480-0647	
ITEM 832 - EROSION CONTROL	35000 EACH (25000 EACH ^Δ) (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
6
34

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ITEM 614 - MAINTAINING TRAFFIC

GENERALLY THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AS TO MAKE THE PROPOSED CONSTRUCTION WITH A MINIMUM HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY. MAINTENANCE OF TRAFFIC INCLUDES ALL LOCATIONS FOR THIS PROJECT. THIS ITEM SHALL CONSIST MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS, RAMPS, RIVERS, CANALS, AND BIKE TRAILS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND THE FOLLOWING:

THE CONTRACTOR SHALL ACCESS VALLEY PARKWAY ON DESIGNATED ROUTES ONLY.

I. NOTIFICATION

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER BY EMAIL AT
D12.PUBLIC.INFROMATION@ODOT.OHIO.GOV

DISTRICT PERMIT SECTION BY EMAIL AT
DISTRICT12.PERMITS@ODOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY EMAIL AT
HAULING.PERMITS@ODOT.OHIO.GOV

CLEVELAND METROPARKS, SEAN MCDERMOTT BY PHONE AT
(216) 635-3258 OR EMAIL AT SEM1@CLEVELANOMETROPARKS.COM

CITY OF CLEVELAND, ANDREW CROSS BY PHONE AT
(216) 664-3197 OR EMAIL AT ACROSS@CITY.CLEVELANO.OH.US

CITY OF FAIRVIEW PARK, SHAWN LEININGER BY PHONE AT
(440) 333-2200 OR EMAIL AT SHAWN.LEININGER@FAIRVIEWPARK.ORG

CITY OF ROCKY RIVER, MICHAEL MACKAY, P.E. BY PHONE AT
(440) 331-0600, EXT. 2581 2200

CITY OF LAKEWOOD, MARK PAPKE BY PHONE AT
(216) 529-6692 OR EMAIL AT ENGINEERING@LAKEWOODOH.NET

FAIRVIEW HOSPITAL BY PHONE AT (216) 476-7000

THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

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

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & > 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGE	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

II. LANE CLOSURE RESTRICTIONS

- LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST WHICH IS LOCATED ON THE ODOT WEB SITE: HTTP://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAY MANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX THE LATEST REVISION AT 14 DAYS PRIOR TO THE BID DATE SHALL BE IN EFFECT FOR THIS PROJECT. ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THIS PROJECT.
- UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.
- MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE ODOT CD.
- PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT ALL TIMES AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.
- ALL DRIVES AND SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES.

LOCATION 1 (CUY-10-0869):

NO TRAFFIC RESTRICTIONS ARE ANTICIPATED ON SR 10 (LORAIN ROAD).

THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH MT-95.30 AND MT-95.45 ON LORAIN ROAD IF NEEDED. THE CONTRACTOR SHALL PERFORM WORK ON ROADWAYS BELOW LORAIN ROAD IN ACCORDANCE WITH MT-97.10 FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY.

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON VALLEY PARKWAY AT ALL TIMES EXCEPT FOR A SHORT TERM 15 MINUTE CLOSURE OR WITH MT-97.10 FLAGGER CLOSING 1 LANE ON A 2 LANE HIGHWAY THAT WILL BE PERMITTED DURING NON-PEAK HOURS FOR EQUIPMENT ACCESS.

LOCATION 2 (CUY-90-0758):

VALLEY PARKWAY MAY NOT BE DETOURED BETWEEN MEMORIAL DAY AND LABOR DAY.

THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH MT-95.30 AND MT-95.45 ON IR 90 IF NEEDED DURING PERMITTED LANE CLOSURE PERIODS. THE CONTRACTOR SHALL PERFORM WORK ON ROADWAYS BELOW IR 90 IN ACCORDANCE WITH MT-97.10 FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY.

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON VALLEY PARKWAY, EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 10.

THE 30 CONSECUTIVE CALENDAR DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (CMS 108) AND FOR EACH CALENDAR DAY BEYOND THE 30 CONSECUTIVE CALENDAR DAYS THE ROADWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER CMS 108.07.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS AND SUBSEQUENTLY REMOVE THE DETOUR SIGNING AS DETAILED ON THIS SHEET.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING BARRICADES AT THE APPROXIMATE WORK LIMITS OF THE PROJECT AND THE ADVANCE WARNING SIGNS AS SHOWN IN STANDARD CONSTRUCTION DRAWING MT-101.60.

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

LOCATION 3 (CUY-480-0647):

NO TRAFFIC RESTRICTIONS ARE ANTICIPATED ON IR-480.

THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH MT-95.30 AND MT-95.45 ON IR 480 IF NEEDED DURING PERMITTED LANE CLOSURE PERIODS. THE CONTRACTOR SHALL PERFORM WORK ON ROADWAYS BELOW IR 480 IN ACCORDANCE WITH MT-97.10 FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY.

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON VALLEY PARKWAY AT ALL TIMES EXCEPT FOR A SHORT TERM 15 MINUTE CLOSURE OR WITH MT-97.10 FLAGGER CLOSING 1 LANE ON A 2 LANE HIGHWAY THAT WILL BE PERMITTED DURING NON-PEAK HOURS FOR EQUIPMENT ACCESS.

ITEM 614 - MAINTAINING TRAFFIC (CONT.)

III. MAINTENANCE OF TRAFFIC MATERIALS

- SIGNS
SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES ARE TO BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.
- SIGN SUPPORT
SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.
- FLASHING ARROW REQUIREMENT
WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO SUPPLEMENTAL SPECIFICATION 821, 921, AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS. PAYMENT FOR THE ABOVE MENTIONED ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.
- DRUMS
DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEQUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.
- CONES
CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.
- BARRIER
PORTABLE CONCRETE BARRIER IF NECESSARY IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.
- FLASHERS
FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWINGS.
- FLOODLIGHTING
FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.
PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.
- WORK VEHICLES
ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

IV. CLEVELAND METROPARKS

ALL TRAIL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR SHORT TERM 15 MINUTE CLOSURES THAT WILL BE PERMITTED DURING NON-PEAK HOURS FOR EQUIPMENT ACCESS. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, SIGNS INDICATING "CONSTRUCTION AHEAD DELAYS POSSIBLE" SHALL BE PLACED AT ALL PARKWAY TRAIL AND BRIDLE TRAIL LOCATIONS THAT INTERSECT THE PROJECT CONSTRUCTION LIMITS. PAYMENT FOR INSTALLATION AND REMOVAL OF SIGNS AND SIGN SUPPORTS SHALL BE PAID UNDER ITEM 614 - MAINTAINING TRAFFIC. ALL TRAILS AND AMENITIES SHALL NOT BE DISTURBED.

A FLAGGER WILL BE STATIONED ON THE TRAILS DURING THE OPERATIONS TO STOP PEDESTRIAN AND BICYCLE TRAFFIC WHEN HEAVY MACHINERY IS WORKING. ONE FLAGGER FOR EACH DIRECTION SHALL BE USED TO STOP TRAFFIC. THE FLAGGERS SHALL BE ABLE TO COMMUNICATE WITH EACH OTHER AND THE FOREMAN AT ALL TIMES. ADEQUATE AREA ILLUMINATION OF EACH FLAGGER STATION SHALL BE PROVIDED AT NIGHT. USE OF PORTABLE FLOODLIGHTING IS ACCEPTABLE. LUMINAIRES SHALL BE LOCATED ADJACENT TO EACH FLAGGER STATION. A (W3-1A-36) "STOP AHEAD" SIGN EQUIPPED WITH ONE TYPE 'A' FLASHING WARNING LIGHT SHALL BE PLACED 250 FEET IN ADVANCE OF THE FLAGGER STATION ON THE RIGHT HAND SIDE OF THE TRAIL FACING ONCOMING TRAIL TRAFFIC.

THE 15 MINUTE CLOSURE PERIOD SHALL BEGIN AT THE TIME THE FIRST TRAIL USER IS STOPPED. AT THE END OF THE 15 MINUTE CLOSURE THE CONTRACTOR SHALL SUSPEND ALL SITE ACCESS ACROSS THE TRAIL. AT THIS TIME THE TRAIL WILL BE REOPENED FOR A MINIMUM OF 15 MINUTES AT THE END OF WHICH THE CONTRACTOR MAY CLOSE THE TRAIL FOR ANOTHER 15 MINUTE PERIOD. THE CONTRACTOR SHALL REPEAT THIS SEQUENCE UNTIL HIS/HER EQUIPMENT ACCESS OVER THE TRAIL IS COMPLETE. THE TRAFFIC PROTECTION PLAN SUBMISSION WILL BE ACCORDING TO CMS 501.05.

TRAIL CLOSURES AT LOCATION 1 (CUY-10-0869):

PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES WITHIN SR 10 (LORAIN ROAD) SPAN 3, THE CONTRACTOR SHALL PLACE TRAIL CLOSED SIGNS AND BARRICADES MEETING OMTCD REQUIREMENTS AT THE STORY ROAD/LORAIN ROAD ENTRANCE AND THE VALLEY PARKWAY TRAIL CONNECTION TO THE BIKE TRAIL FOR THE ACTUAL PERIODS OF CLOSURES.

PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES WITHIN SR 10 (LORAIN ROAD) SPAN 5, THE CONTRACTOR SHALL PLACE TRAIL CLOSED SIGNS AND BARRICADES MEETING OMTCD REQUIREMENTS AT THE INTERSECTION OF VALLEY PARKWAY TRAIL AND VALLEY PARKWAY AND THE VALLEY PARKWAY TRAIL CONNECTION TO THE PARKING LOT.

THE CLOSURE PERIODS SHALL BEGIN PRIOR TO COMMENCING CONSTRUCTION WITHIN SR 10 (LORAIN ROAD) SPAN 3 AND SPAN 5 AS APPROVED BY THE ENGINEER. BOTH TRAILS WILL BE REOPENED AND SIGNS/BARRICADES REMOVED WHEN THE CONTRACTOR HAS SUSPENDED ACTIVITIES WITHIN SR 10 (LORAIN ROAD) SPAN 3 AND SPAN 5. NO OVERNIGHT CLOSURES WILL BE PERMITTED.

THE CONTRACTOR SHALL NOTIFY ODOT DISTRICT 12 AND THE CLEVELAND METROPARKS IN WRITING A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF ANY CONSTRUCTION REQUIRING A CLOSING.

CLEVELAND METROPARKS
PLANNING AND ENGINEERING DEPARTMENT
4101 FULTON PARKWAY
CLEVELAND, OHIO 44144
ATTN: DAVID FREY, P.E., MANAGER OF FACILITIES ENGINEER
PHONE: 216-780-1163 dff@clevelandmetroparks.com

ADVANCE NOTICE OF THE PROJECTS CONSTRUCTION SCHEDULE AND POTENTIAL FOR USERS TO ENCOUNTER FLAGGERS ON THE TRAIL WILL BE PROVIDED NO LESS THAN 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. NOTICES SHALL BE POSTED AS APPROVED BY THE ENGINEER IN AN AREA THAT CAN BE SEEN BY USERS OF THE EXISTING TRAIL AND ON THE CLEVELAND METROPARK'S WEB SITE. THE CONTRACTOR SHALL INSTALL APPROPRIATE CONSTRUCTION WARNING SIGNS IN AREAS THAT WILL BE VISIBLE TO USERS OF THE TRAIL PRIOR TO CONSTRUCTION.

NO STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT SHALL OCCUR WITHIN THE EXISTING BOUNDARIES OF THE PARK PROPERTY WITHOUT WRITTEN PERMISSION FROM THE METROPARKS.

PRIOR TO OPENING THE TRAIL TO TRAFFIC THE TRAIL SHALL BE IN A SAFE PASSABLE CONDITION. DIRT AND DEBRIS SHALL BE REMOVED FROM THE TRAIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING ADEQUATE MAINTENANCE OF TRAFFIC DEVICES SUITABLE FOR THE WORK IN PROGRESS AT EACH SIDE OF THE CONSTRUCTION AREAS.

TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED BY THE CONTRACTOR ALONG THE RIGHT OF WAY AND TRAILS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE PUBLIC. WHEN NO CONSTRUCTION VEHICLES ARE CROSSING THE TRAILS DURING NORMAL WORK HOURS AND DURING NON-WORK HOURS THE TEMPORARY CONSTRUCTION FENCE SHALL BE SECURELY ERECTED, SEPARATING CONSTRUCTION ACCESS FROM TRAILS/PUBLIC AS APPROVED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED TO BE USED AS APPROVED BY THE ENGINEER AT PROJECT LOCATIONS, IN ADDITION TO THE TEMPORARY CONSTRUCTION FENCING QUANTITY CALCULATIONS, AND CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE 250 FT (175 FT^Δ) (75 FT*)

V. PAYMENT

UNLESS STATED OTHERWISE, PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES INCLUDING DETOURS AND INTERSTATE LANE CLOSURES/SHIFTS SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES AND THE DESIGNATED HAUL ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS AND WALKWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUM AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME FOR EACH LOCATION, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE SAFETY ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN ACCEPTED.

IF DURING THE PROJECT THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE CONTRACTOR TO ADJUST THE MAINTENANCE OF TRAFFIC SCHEME TO THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL WORK ZONE TRAFFIC CONTROL SIGNS, EXCEPT W20-1 (ROAD WORK AHEAD) SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SET-UP TIME. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTCD INTENDS THAT FLAGGERS BE USED. IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

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

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

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) MAY BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS DETERMINED AND PRE-APPROVED BY THE ENGINEER. ANY LEO HOURS WHICH ARE NOT PRE-APPROVED FOR THE FOLLOWING PURPOSES SHALL NOT BE COMPENSABLE:

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

IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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

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

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

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

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COST (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS 80 HOURS (60 HOURS^Δ) (20 HOURS*)

LEGEND

- Δ 01/IMS/BR
- * 02/BRO/BR

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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^Δ) (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^Δ) (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 PERFORM 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.

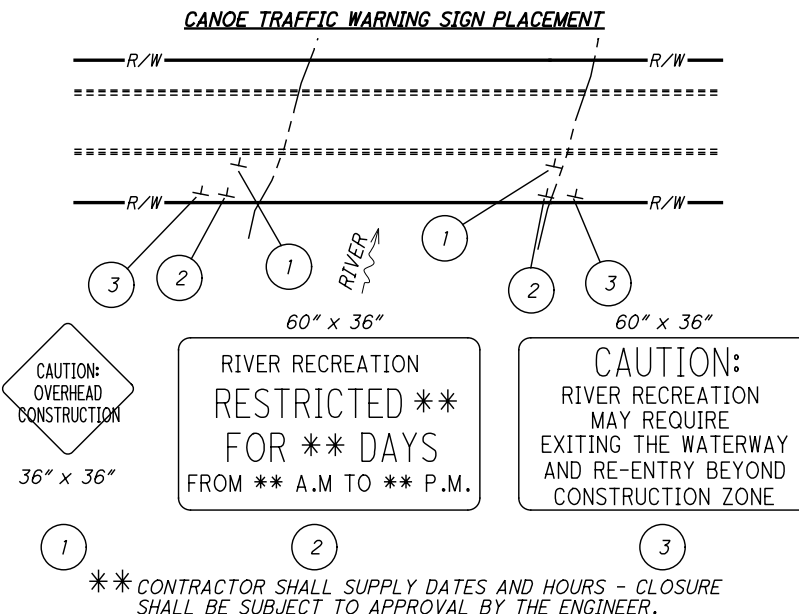
THE ABOVE SIGNING SHALL BE MOUNTED IN SUCH A WAY AS TO BE A MINIMUM OF 4 FEET ABOVE THE WATER LEVEL, UNOBSTRUCTED BY TREE BRANCHES, AND PROPERLY ANGLED FOR MAXIMUM VISIBILITY FROM THE MAIN CLEAR CHANNEL. THE METHOD OF SUPPORTING THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. UPON 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.



LEGEND
^Δ 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 (DVS 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 SUBSEQUENTLY RESTORE THE DESIGNATED HAUL ROUTE AND METRO PARK TRAILS AT THE CONSTRUCTION ACCESS LOCATIONS.

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

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 1/2", ITEM 407 NON-TRACKING TACK COAT PLACED ON MILLED SURFACE AND RESURFACED WITH ITEM 441 - 1/2" 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.

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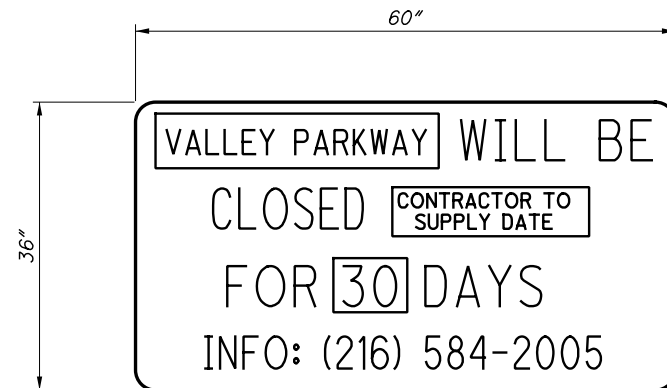


DENOTES DETOUR ROUTE

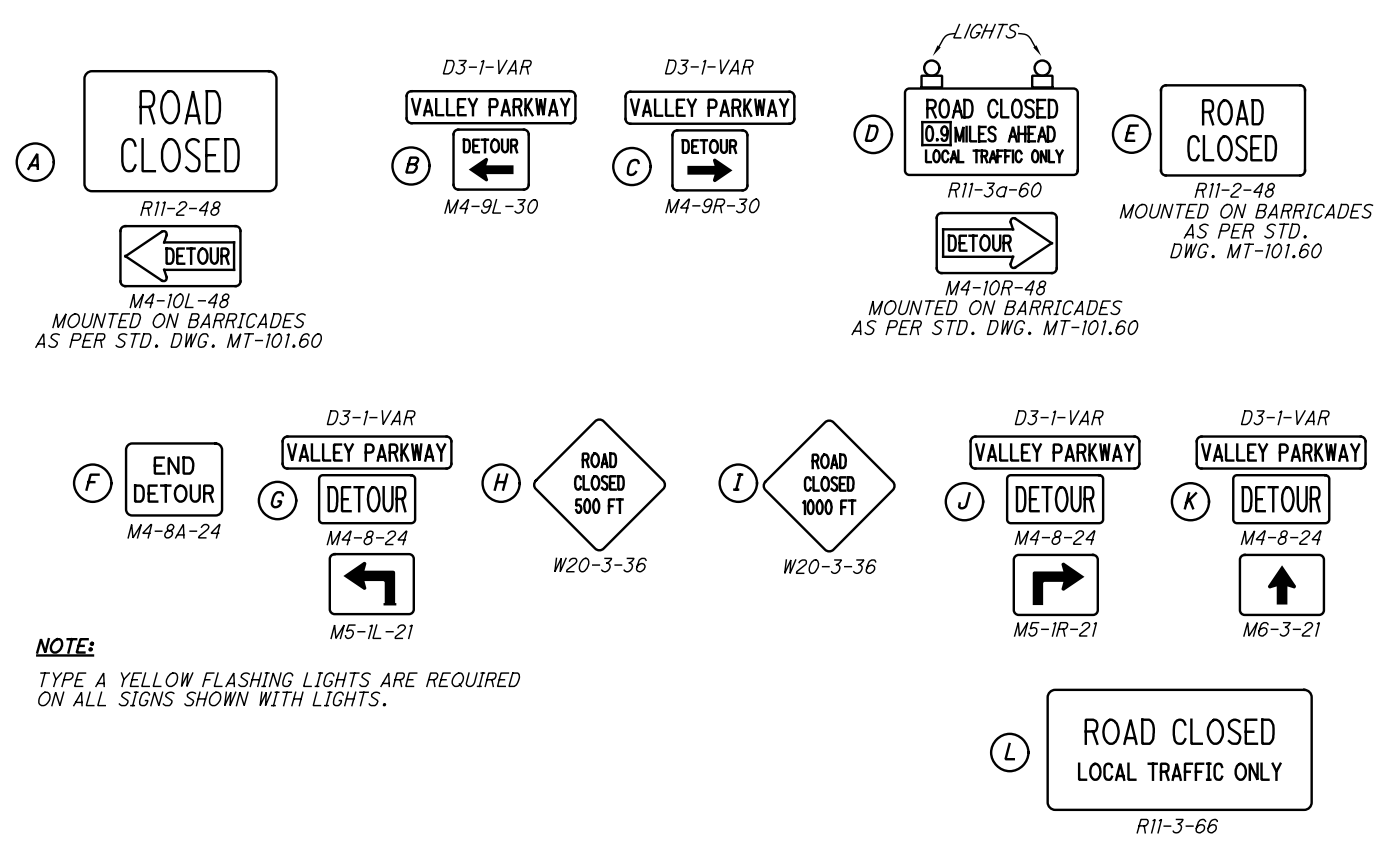
X-X-X DENOTES GATES & BARRICADES AS PER ODOT STD. DWG. MT-101.60

ITEM 614 DETOUR SIGNING

VALLEY PARKWAY	LUMP
TOTAL CARRIED TO GENERAL SUMMARY	LUMP



W20-H13-60



NOTE:
TYPE A YELLOW FLASHING LIGHTS ARE REQUIRED ON ALL SIGNS SHOWN WITH LIGHTS.

NOTICE OF CLOSURE SIGNS

NOTICE OF CLOSURE SIGNS (W20-H13), AS DETAILED BELOW, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST 14 CALENDAR DAYS IN ADVANCE OF THE SCHEDULED ROAD CLOSURE.

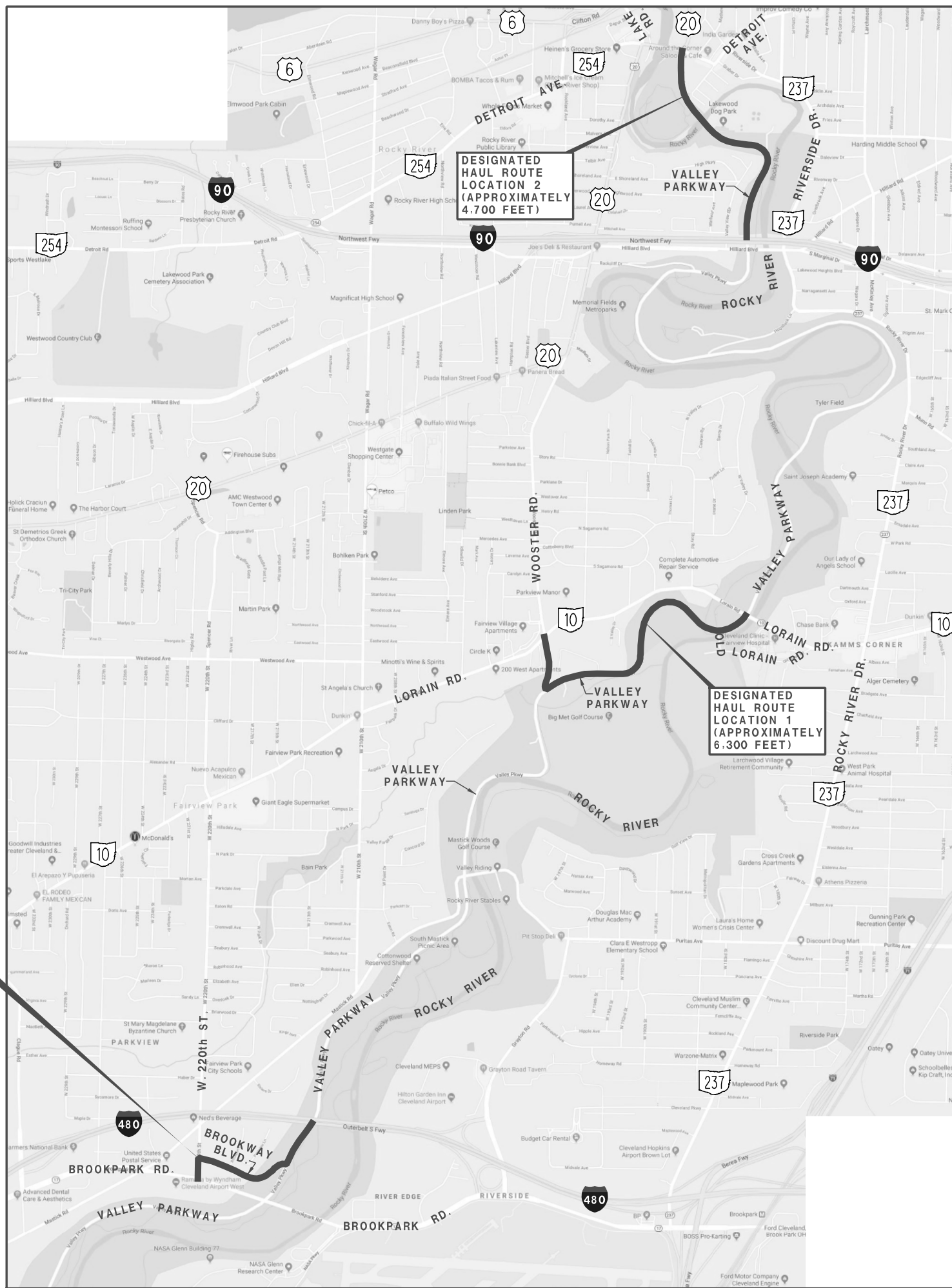
THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION.

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE SIGNS INCLUDING SUPPORTS.

NOTE:
VALLEY PARKWAY MAY NOT BE DETOURED BETWEEN MEMORIAL DAY AND LABOR DAY.

MAINTENANCE OF TRAFFIC
 DETOUR MAP CUY-90
 CUY-90-07.58 / VAR. SLOPE
 PID NO. 103161
 10
 34



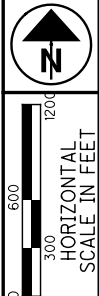
DESIGNATED
HAUL ROUTE
LOCATION 3
(APPROXIMATELY
3.200 FEET)

DESIGNATED
HAUL ROUTE
LOCATION 2
(APPROXIMATELY
4.700 FEET)

DESIGNATED
HAUL ROUTE
LOCATION 1
(APPROXIMATELY
6.300 FEET)

LEGEND

— DESIGNATED
HAUL ROUTE



**MAINTENANCE OF TRAFFIC
DESIGNATED HAUL ROUTES**

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/TMS/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	8	
	1						1	623	39500	1	EACH	MONUMENT BOX ADJUSTED TO GRADE		
LS						LS	LS	SPECIAL	69098400	LS		SITE ACCESS	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	5	
					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	6	
		14					14	611	99900	14	EACH	DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT	6	
												STRUCTURE REPAIR (CUY-90-0758 SFN 1808567 - LOCATION 2)		
			438				438	SPECIAL	20270110	438	FT	PIPE CLEANOUT, 24" AND UNDER	5	
			431				431	SPECIAL	20270120	431	FT	PIPE CLEANOUT, 27" TO 48"	5	
			145				145	209	10001	145	FT	DITCH CLEANOUT, AS PER PLAN	5	
			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	6	
			1				1	611	98231	1	EACH	CATCH BASIN, NO. 4, AS PER PLAN	6	
			8				8	611	99900	8	EACH	DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT	6	
			654				654	838	20751	654	CY	GABIONS WITH ADDITIONAL COATING, AS PER PLAN	24	

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.	CALCULATED TF	CHECKED PS
4-6	7-10	LOCATION-1 (CUY-10-0869)	LOCATION-2 (CUY-90-0758)	LOCATION-3 (CUY-480-0647)	CROSS SECTIONS	01/TMS/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				
				3297		3297		607	98000	3297	FT	FENCE, MISC.: CONSTRUCTION FENCE				6
				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	1110	80	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE				9
				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				

GENERAL SUMMARY

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

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LINE	DESCRIPTION	CALCULATION	QUANTITY
*CUY-10-0869 CALCULATIONS			
202 - PIPE CLEANOUT, 24" AND UNDER			
1	STA. 460+44.40 RT TO STA. 460+52.80 RT	=	12 FT
2	STA. 460+44.40 LT TO STA. 460+52.80 LT	=	12 FT
3	STA. 460+52.80 CL TO STA. 461+28.30 CL	=	76 FT
4	STA. 461+28.30 CL TO STA. 462+28.10 CL	=	100 FT
5	STA. 462+28.10 CL TO STA. 462+92.20 CL	=	65 FT
6	STA. 462+81.70 RT TO STA. 462+92.20 RT	=	14 FT
7	STA. 462+81.42 LT TO STA. 462+92.20 LT	=	14 FT
8	STA. 462+92.20 CL TO STA. 465+48.10 CL	=	256 FT
9	STA. 465+38.00 RT TO STA. 465+48.10 RT	=	14 FT
10	STA. 465+37.70 LT TO STA. 465+48.10 LT	=	14 FT
11	STA. 465+48.10 CL TO STA. 468+03.80 CL	=	256 FT
12	STA. 467+93.75 RT TO STA. 468+03.80 RT	=	13 FT
13	STA. 467+93.50 LT TO STA. 468+03.80 LT	=	14 FT
14	STA. 468+03.80 CL TO STA. 468+15.00 CL	=	12 FT
15	SUM LINES 1 TO 14	=	872 FT
TOTAL CARRIED TO THE GENERAL SUMMARY			= 872 FT
607 - FENCE, MISC.: CONSTRUCTION FENCE			
16	STA. 458+30.00 RT TO STA. 459+65.00 RT	=	135 FT
17	STA. 458+30.00 LT TO STA. 459+63.00 LT	=	132 FT
18	STA. 459+83.10 RT TO STA. 462+33.42 RT	=	250 FT
19	STA. 459+83.10 LT TO STA. 462+33.42 LT	=	250 FT
20	STA. 462+45.60 RT TO STA. 467+10.37 RT	=	465 FT
21	STA. 462+45.60 LT TO STA. 467+24.50 LT	=	479 FT
22	STA. 467+41.40 RT TO STA. 468+30.20 RT	=	89 FT
23	STA. 467+55.05 LT TO STA. 468+68.33 LT	=	114 FT
24	STA. 469+26.80 RT TO STA. 470+86.60 RT	=	160 FT
25	STA. 469+23.00 LT TO STA. 470+86.60 LT	=	164 FT
26	STA. 462+33.42 RT TO STA. 462+33.42 LT	=	105 FT
27	STA. 462+45.60 RT TO STA. 462+45.60 LT	=	105 FT
28	STA. 467+10.37 RT TO STA. 467+24.50 LT	=	106 FT
29	STA. 467+41.40 RT TO STA. 467+55.05 LT	=	106 FT
30	SUM LINES 16 TO 29	=	2660 FT
TOTAL CARRIED TO THE GENERAL SUMMARY			= 2660 FT
611 - DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT			
31	STA. 460+44.40 RT	=	1 EACH
32	STA. 460+44.40 LT	=	1 EACH
33	STA. 460+52.80 CL	=	1 EACH
34	STA. 461+28.30 CL	=	1 EACH
35	STA. 462+28.10 CL	=	1 EACH
36	STA. 462+81.70 RT	=	1 EACH
37	STA. 462+81.42 LT	=	1 EACH
38	STA. 462+92.20 CL	=	1 EACH
39	STA. 465+38.00 RT	=	1 EACH
40	STA. 465+37.70 LT	=	1 EACH
41	STA. 465+48.10 CL	=	1 EACH
42	STA. 467+93.75 RT	=	1 EACH
43	STA. 467+93.50 LT	=	1 EACH
44	STA. 468+03.80 CL	=	1 EACH
45	SUM LINES 31 TO 44	=	14 EACH
TOTAL CARRIED TO THE GENERAL SUMMARY			= 14 EACH
LEGEND			
* 02/BRO/BR			

CALCULATED
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CALCULATIONS

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

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LINE	DESCRIPTION	CALCULATION	QUANTITY
Δ CUY-90-0758 CALCULATIONS			
202 - PIPE CLEANOUT, 24" AND UNDER			
1	STA. 574+91.69 RT TO STA. 576+52.67 RT =	=	162.00 FT
2	STA. 583+83.49 RT TO STA. 583+15.74 RT =	=	121.00 FT
3	STA. 583+15.74 RT TO STA. 583+07.13 LT =	=	155.00 FT
4	SUM LINES 1 TO 3	=	438.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 438 FT
202 - PIPE CLEANOUT, 27" TO 48"			
5	STA. 576+52.67 RT TO STA. 578+76.59 RT =	=	225.00 FT
6	STA. 580+72.99 LT TO STA. 582+78.42 LT =	=	206.00 FT
7	SUM LINES 5 TO 6	=	431.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 431 FT
209 - DITCH CLEANOUT, AS PER PLAN			
8	STA. 576+44.52 RT TO STA. 576+35.03 LT =	=	145.00 FT
9	LINE 8	=	145.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 145 FT
601 - CRUSHED AGGREGATE SLOPE PROTECTION			
10	STA. 580+69.65 RT TO STA. 582+72.41 RT =	$((202.76' + 191.8') / 2) \times 66.45' \times (12" \text{ THK} / 12) \times 1.12 \text{ SLOPE} / 27$	= 543.79 CY
11	STA. 580+57.72 LT TO STA. 582+71.45 LT =	$((213.73' + 202.76') / 2) \times 66.45' \times (12" \text{ THK} / 12) \times 1.12 \text{ SLOPE} / 27$	= 574.02 CY
12	SUM LINES 10 TO 11	=	1117.81 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 1118 CY
601 - ROCK CHANNEL PROTECTION, TYPE A WITH FILTER			
13	STA. 574+67.77 RT TO STA. 576+44.28 RT =	$(176.51' \times 5' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 146.44 CY
14	STA. 574+66.05 RT TO STA. 576+40.17 RT =	$(174.12' \times 5' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 144.46 CY
15	STA. 574+65.77 LT TO STA. 576+39.49 LT =	$(173.72' \times 5' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 144.12 CY
16	STA. 574+64.05 LT TO STA. 576+35.37 LT =	$(171.32' \times 5' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 142.13 CY
17	STA. 579+45.85 RT TO STA. 579+43.93 LT =	$(142.00' \times 19' \times (48" / 12)) - (13.9' \times 13.9') \times 4 \text{ PIER COLUMNS} / 27$	= 371.08 CY
18	STA. 581+48.07 RT TO STA. 582+73.16 RT =	$(132.00' \times 10' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 219.02 CY
19	STA. 580+91.51 RT TO STA. 582+73.39 RT =	$(181.88' \times 5' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 150.89 CY
20	STA. 580+78.33 LT TO STA. 582+71.45 LT =	$(193.12' \times 5' \times (48" / 12)) \times 1.12 \text{ SLOPE} / 27$	= 160.22 CY
21	SUM LINES 13 TO 20	=	1478.36 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 1479 CY
607 - FENCE, MISC.: CONSTRUCTION FENCE			
22	STA. 574+65.00 RT TO STA. 576+56.83 RT	=	192 FT
23	STA. 574+71.77 LT TO STA. 576+30.58 LT	=	159 FT
24	STA. 576+90.71 RT TO STA. 578+09.50 RT	=	119 FT
25	STA. 576+62.71 LT TO STA. 578+26.07 LT	=	164 FT
26	STA. 578+26.80 RT TO STA. 579+47.54 RT	=	121 FT
27	STA. 578+44.45 LT TO STA. 579+38.89 LT	=	94 FT
28	STA. 580+80.15 RT TO STA. 582+73.65 RT	=	194 FT
29	STA. 580+50.76 LT TO STA. 582+60.10 LT	=	210 FT
30	STA. 578+09.50 RT TO STA. 578+26.07 LT	=	188 FT
31	STA. 578+26.80 RT TO STA. 578+44.45 LT	=	188 FT
32	SUM LINES 22 TO 31	=	1629 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 1629 FT
611 - CATCH BASIN, NO. 4, AS PER PLAN			
33	STA. 583+15.74 RT	=	1 EACH
34	LINE 33	=	1 EACH
			TOTAL CARRIED TO THE GENERAL SUMMARY = 1 EACH
611 - DRAINAGE STRUCTURE, MISC.: CATCH BASIN AND MANHOLE CLEANOUT			
35	STA. 574+91.69 RT MH	=	1 EACH
36	STA. 576+52.67 RT MH	=	1 EACH
37	STA. 582+78.42 LT MH	=	1 EACH
38	STA. 583+07.13 LT INLET	=	1 EACH
39	STA. 583+07.87 CL INLET	=	1 EACH
40	STA. 583+09.25 LT CB	=	1 EACH
41	STA. 583+15.74 RT CB	=	1 EACH
42	STA. 583+15.74 RT INLET	=	1 EACH
43	SUM LINES 35 TO 42	=	8 EACH
			TOTAL CARRIED TO THE GENERAL SUMMARY = 8 EACH
838 - GABIONS WITH ADDITIONAL COATING, AS PER PLAN			
44	STA. 574+67.77 RT TO STA. 576+44.28 RT =	$((176.51' + 174.12') / 2) \times 60.42' \times (9" / 12) \times 1.12 \text{ SLOPE} / 27$	= 329.55 CY
45	STA. 574+65.77 LT TO STA. 576+39.49 LT =	$((173.72' + 171.32') / 2) \times 60.41' \times (9" / 12) \times 1.12 \text{ SLOPE} / 27$	= 324.24 CY
46	SUM LINES 44 TO 45	=	653.79 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 654 CY
LEGEND			
Δ 01/IMS/BR			

CALCULATIONS
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CUY-90-07.58 / VAR. SLOPE
PID NO. 103161
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LINE	DESCRIPTION	CALCULATION	QUANTITY
Δ CUY-480-0647 CALCULATIONS			
202 - PIPE REMOVED, 24" AND UNDER			
1	STA. 442+30.79 RT TO STA. 442+66.58 RT	=	77.50 FT
2	STA. 442+31.46 RT TO STA. 442+66.58 RT	=	35.50 FT
3	STA. 442+67.49 LT TO STA. 442+66.58 RT	=	76.00 FT
4	STA. 443+00.51 LT TO STA. 442+66.58 RT	=	113.00 FT
5	STA. 442+47.84 LT TO STA. 443+00.51 LT	=	62.00 FT
6	SUM LINES 1 TO 5	=	364.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 364 FT
202 - PIPE REMOVED, OVER 24"			
7	STA. 442+90.62 RT TO STA. 443+10.62 RT	=	20.00 FT
8	LINE 7	=	20.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 20 FT
202 - GUARDRAIL REMOVED FOR REUSE			
9	STA. 446+11.10 RT TO STA. 446+22.05 RT	=	25.00 FT
10	LINE 9	=	25.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 25 FT
202 - MANHOLE REMOVED			
11	STA. 442+66.58 RT	=	1 EACH
12	LINE 11	=	1 EACH
			TOTAL CARRIED TO THE GENERAL SUMMARY = 1 EACH
202 - CATCH BASIN REMOVED			
13	STA. 442+31.46 RT	=	1 EACH
14	STA. 442+31.50 RT	=	1 EACH
15	STA. 442+67.53 LT	=	1 EACH
16	STA. 442+67.49 LT	=	1 EACH
17	SUM LINES 13 TO 16	=	4 EACH
			TOTAL CARRIED TO THE GENERAL SUMMARY = 4 EACH
202 - FILL AND PLUG EXISTING CONDUIT			
18	STA. 457+98.49 LT TO STA. 457+98.49 CL	=	90.00 FT
19	LINE 18	=	90.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 90 FT
202 - PIPE CLEANOUT, 24" AND UNDER			
20	STA. 457+98.49 CL TO STA. 457+98.49 RT	=	108.00 FT
21	LINE 20	=	108.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 108 FT
202 - PIPE CLEANOUT, 27" TO 48"			
22	STA. 442+30.79 RT TO STA. 443+00.62 RT	=	70.00 FT
23	STA. 443+00.62 RT TO STA. 445+47.59 RT	=	247.00 FT
24	SUM LINES 22 TO 23	=	317.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 317 FT
202 - PIPE CLEANOUT OVER 48"			
25	STA. 445+47.59 RT TO STA. 446+34.23 RT	=	87.00 FT
26	STA. 447+62.89 RT TO STA. 448+00.88 RT	=	38.00 FT
27	SUM LINES 25 TO 26	=	125.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 125 FT
LEGEND			
Δ 01/IMS/BR			

CALCULATED	TF	CHECKED	PS
CALCULATIONS			
CUY - 90-07.58 / VAR. SLOPE PID NO. 103161			
16		34	

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LINE	DESCRIPTION	CALCULATION	QUANTITY
Δ CUY-480-0647 CALCULATIONS			
601 - CRUSHED AGGREGATE SLOPE PROTECTION			
28	STA. 442+28.90 RT TO STA. 445+77.41	RT/LT = ((348.73 ' + 320.22 ') / 2) x 74.74 ' x (12 " THK / 12) x 1.12 SLOPE / 27	= 1036.98 CY
29	STA. 442+64.37 LT TO STA. 446+04.51	LT = ((340.14 ' + 311.62 ') / 2) x 70.25 ' x (12 " THK / 12) x 1.12 SLOPE / 27	= 949.64 CY
30	STA. 454+75.38 RT TO STA. 457+41.16	RT = ((265.78 ' + 259.40 ') / 2) x 74.07 ' x (12 " THK / 12) x 1.12 SLOPE / 27	= 806.82 CY
31	STA. 454+69.27 LT TO STA. 457+41.26	LT = ((271.99 ' + 265.78 ') / 2) x 71.82 ' x (12 " THK / 12) x 1.12 SLOPE / 27	= 801.06 CY
32	SUM LINES 28 TO 31		= 3594.50 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 3595 CY
601 - ROCK CHANNEL PROTECTION, TYPE A WITH FILTER			
33	STA. 442+29.18 RT TO STA. 445+49.39	RT = (320.21 ' x 5 ' x (48 " / 12)) x 1.12 SLOPE / 27	= 265.66 CY
34	STA. 442+64.37 LT TO STA. 446+06.41	LT = (342.04 ' x 5 ' x (48 " / 12)) x 1.12 SLOPE / 27	= 283.77 CY
35	STA. 453+28.46 RT TO STA. 453+28.46	LT = (175.00 ' x 10 ' x (48 " / 12)) / 27	= 259.26 CY
36	STA. 454+68.84 LT TO STA. 457+41.26	LT = (272.42 ' x 5 ' x (48 " / 12)) x 1.12 SLOPE / 27	= 226.01 CY
37	STA. 454+81.66 RT TO STA. 457+41.05	RT = (259.39 ' x 5 ' x (48 " / 12)) x 1.12 SLOPE / 27	= 215.20 CY
38	STA. 454+74.36 RT TO STA. 457+01.47	RT = (278.43 ' x 5 ' x (48 " / 12)) x 1.12 SLOPE / 27	= 230.99 CY
39	SUM LINES 33 TO 38		= 1480.89 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 1481 CY
601 - ROCK CHANNEL PROTECTION, WITH GROUT, TYPE A			
40	STA. 454+68.83 LT TO STA. 455+02.95	LT = (34.12 ' x 10 ' x (48 " / 12)) x 1.12 SLOPE / 27	= 56.61 CY
41	LINE 40		= 56.61 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 57 CY
602 - CONCRETE MASONRY			
42	STA. 455+02.95 LT		= 0.27 CY
43	LINE 42		= 0.27 CY
			TOTAL CARRIED TO THE GENERAL SUMMARY = 0.3 CY
606 - GUARDRAIL REBUILT, TYPE 5			
44	STA. 446+11.10 RT TO STA. 446+22.05	RT	= 25.00 FT
45	LINE 44		= 25.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 25 FT
607 - FENCE, MISC.: CONSTRUCTION FENCE			
46	STA. 441+98.80 RT TO STA. 445+47.51	RT	= 359 FT
47	STA. 443+56.57 LT TO STA. 446+18.70	LT	= 368 FT
48	STA. 446+03.92 RT TO STA. 447+64.88	RT	= 161 FT
49	STA. 446+77.85 LT TO STA. 448+04.38	LT	= 127 FT
50	STA. 447+91.46 RT TO STA. 453+57.51	RT	= 567 FT
51	STA. 448+29.82 LT TO STA. 453+38.93	LT	= 510 FT
52	STA. 454+71.57 RT TO STA. 457+91.10	RT	= 320 FT
53	STA. 454+61.82 LT TO STA. 457+41.26	LT	= 280 FT
54	STA. 446+27.53 RT TO STA. 446+38.90	RT	= 25 FT
55	STA. 446+03.92 RT TO STA. 446+77.85	LT	= 201 FT
56	STA. 447+64.88 RT TO STA. 448+04.38	LT	= 190 FT
57	STA. 447+91.46 RT TO STA. 448+29.82	LT	= 189 FT
58	SUM LINES 46 TO 57		= 3297 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 3297 FT
611 - 15" CONDUIT, TYPE C, WITH PREMIUM JOINTS			
59	STA. 442+47.84 LT TO STA. 443+00.51	LT	= 62.00 FT
60	STA. 443+00.51 LT TO STA. 443+00.56	LT	= 80.00 FT
61	STA. 442+67.49 LT TO STA. 442+67.53	LT	= 49.00 FT
62	STA. 442+67.53 LT TO STA. 443+00.56	LT	= 33.00 FT
63	STA. 442+31.50 RT TO STA. 442+31.46	RT	= 49.00 FT
64	STA. 442+31.46 RT TO STA. 443+00.58	RT	= 69.00 FT
65	STA. 457+07.84 RT TO STA. 457+07.73	LT	= 87.00 FT
66	STA. 457+07.73 LT TO STA. 457+98.49	LT	= 91.00 FT
67	SUM LINES 59 TO 66		= 520.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 520 FT
611 - 18" CONDUIT, TYPE C, WITH PREMIUM JOINTS			
68	STA. 443+00.56 LT TO STA. 443+00.58	RT	= 25.50 FT
69	LINE 68		= 25.50 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 26 FT
611 - 18" CONDUIT, TYPE F			
70	STA. 443+00.58 RT TO STA. 443+00.62	RT	= 70.00 FT
71	LINE 70		= 70.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 70 FT
611 - 36" CONDUIT, TYPE C			
72	STA. 442+90.62 RT TO STA. 443+00.62	RT	= FT
73	STA. 443+00.62 RT TO STA. 443+10.62	RT	= 10.00 FT
74	SUM LINES 72 TO 73		= 20.00 FT
			TOTAL CARRIED TO THE GENERAL SUMMARY = 20 FT
LEGEND			
Δ 01/IMS/BR			

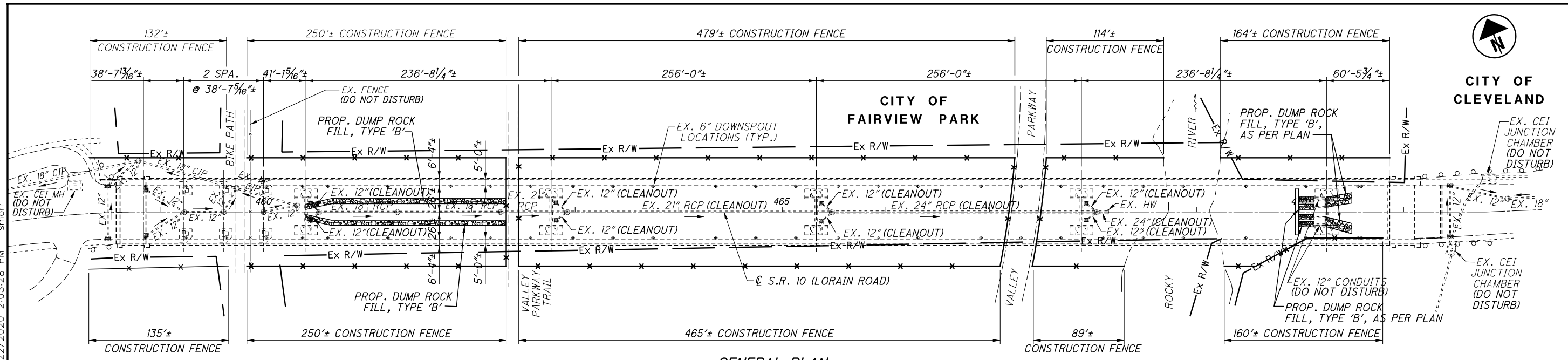
CALCULATED TF CHECKED PS
CALCULATIONS
 CUY-90-07.58 / VAR. SLOPE
 PID NO. 103161
 17
 34

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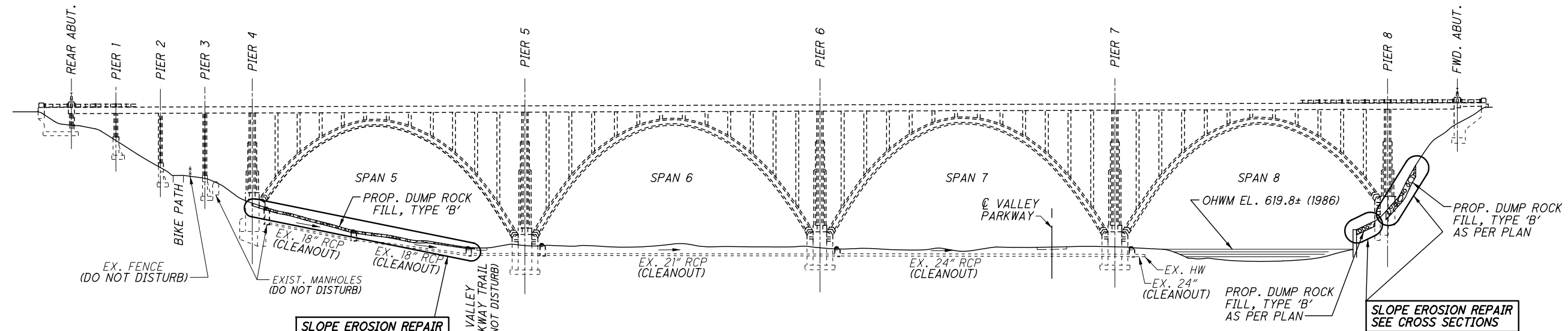
LINE	DESCRIPTION	CALCULATION	QUANTITY
△ CUY-480-0647 CALCULATIONS			
611 - CONDUIT, MISC.: 16" CONDUIT, TYPE F, 748.01, CLASS 52, WITH RESTRAINED MECHANICAL JOINTS			
75	STA. 455+02.95 LT TO STA. 455+15.00 LT	=	12.00 FT
76	STA. 455+15.00 LT TO STA. 455+60.00 LT	=	45.00 FT
77	STA. 455+60.00 LT TO STA. 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			
△ 01/IMS/BR			

CALCULATED TF CHECKED PS	CALCULATIONS	CUY-90-07.58 / VAR. SLOPE PID NO. 103161
18		34

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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	SM	
CHECKED	REVIS	SM	
TF			

STRUCTURE FILE NUMBER: 1801325

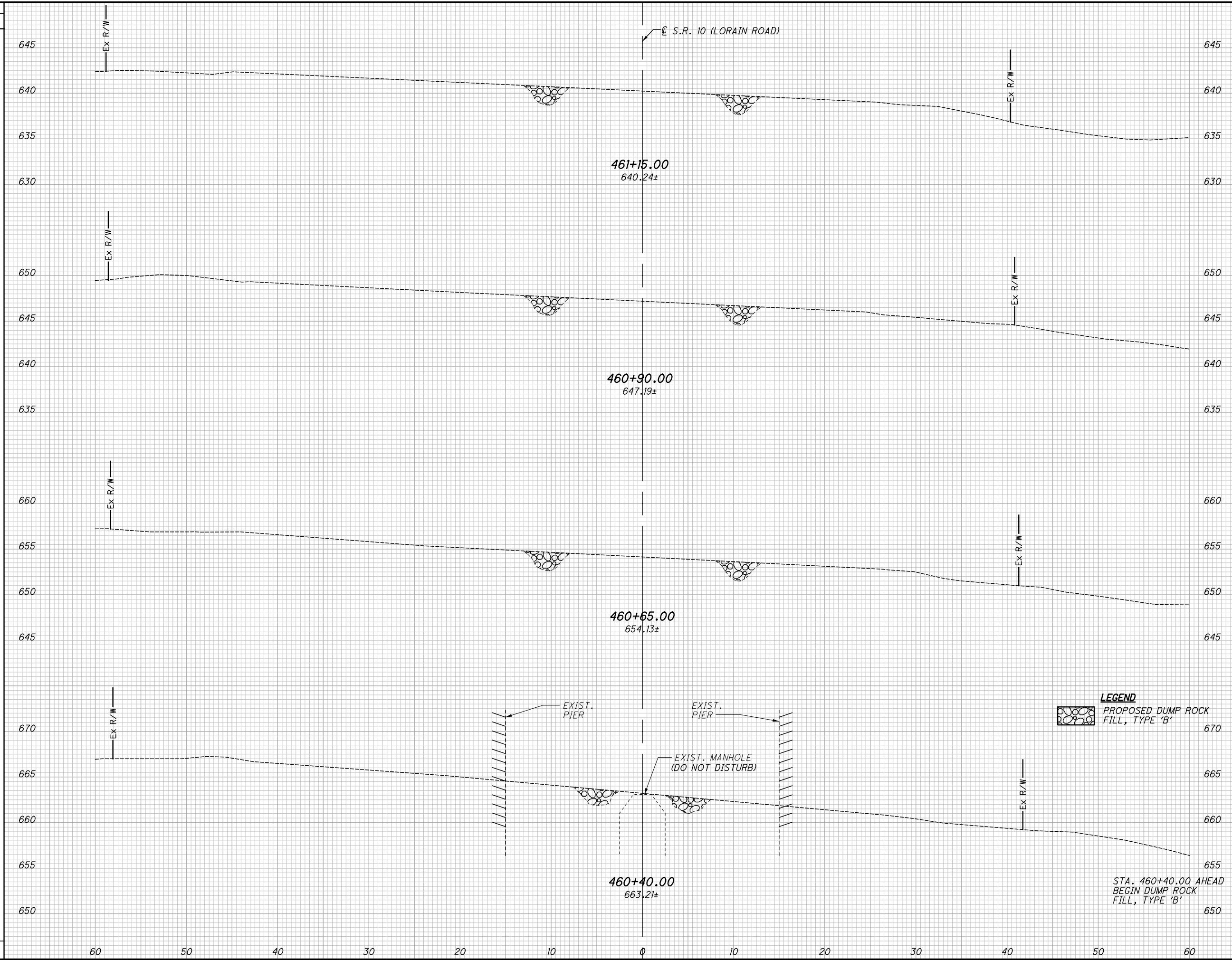
GENERAL PLAN - LOCATION 1
BRIDGE NO. CUY-10-0869
OVER VALLEY PARKWAY AND ROCKY RIVER

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

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SEEDING

END WIDTH	SO. YDS.
60	645
50	640
40	635
30	630
20	625
10	620
0	615
10	610
20	605
30	600
40	595
50	590
60	585



END	AREA		VOLUME	
	CUT	FILL	CUT	FILL
645	0	13	0	13
650	0	13	0	13
655	0	13	0	13
660	0	11	0	12
665	0	0	0	38

CROSS SECTIONS
 STA. 460+40.00 TO STA. 461+15.00

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

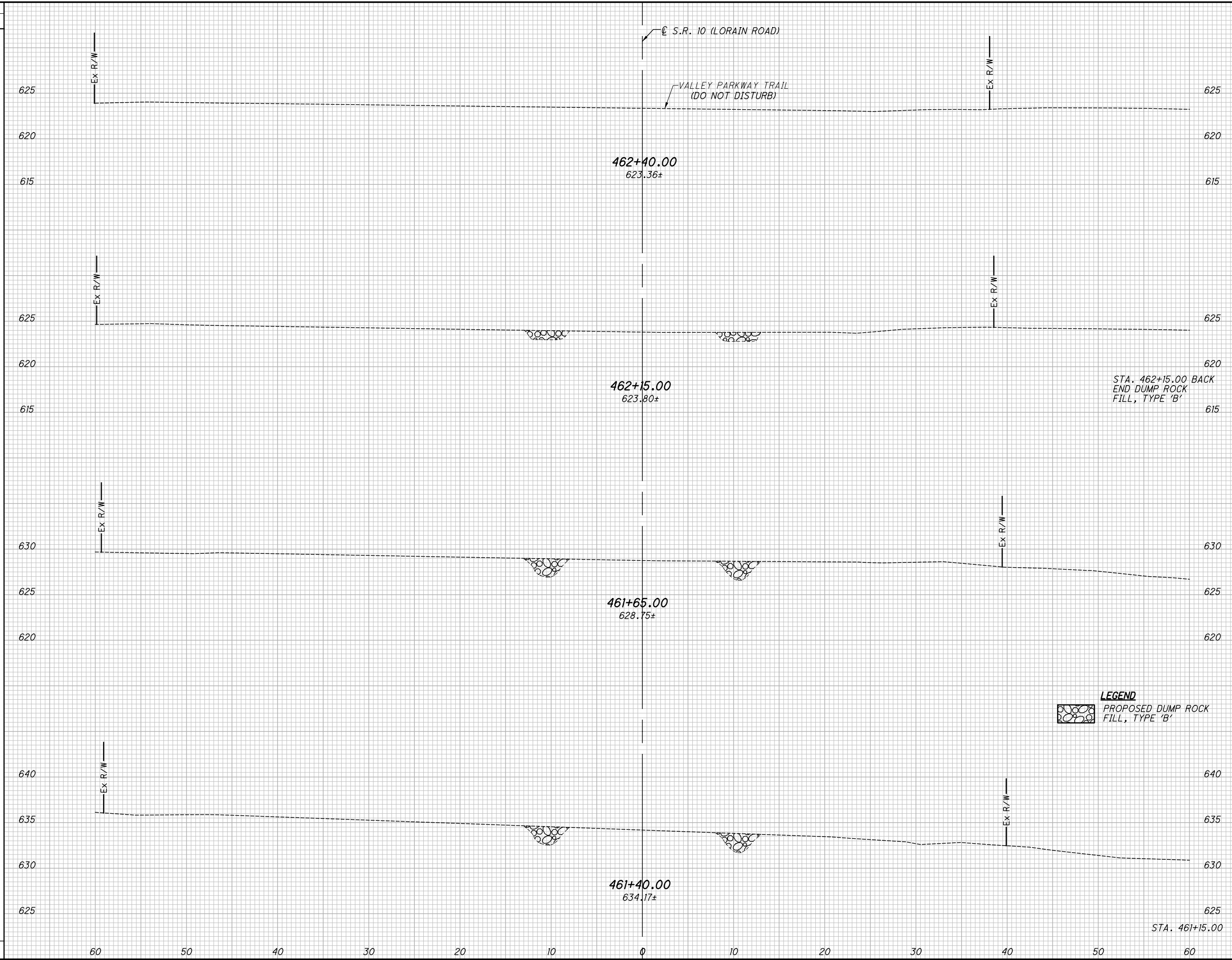
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20 / 34

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SEEDING

END WIDTH	SO. YDS.
60	625
50	620
40	615
30	625
20	620
10	615
0	625
10	620
20	615
30	625
40	620
50	615
60	625

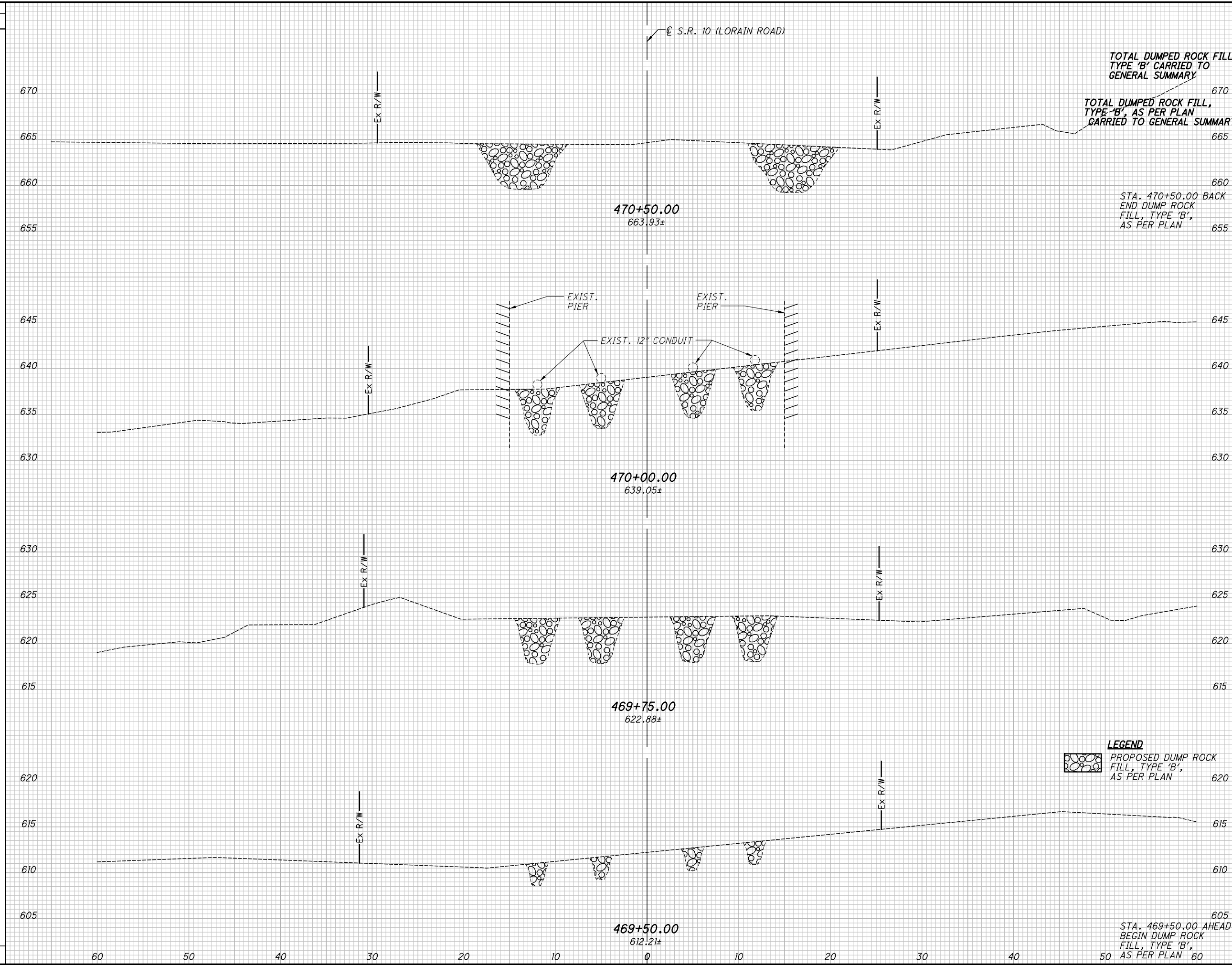


END	AREA		VOLUME	
	CUT	FILL	CUT	FILL
625				
620				
615				
625	0	9	0	21
620				
615				
630	0	13		
625				
620				
640				
635	0	13		
630				
625	0	13	0	13
	0	13	0	47

CROSS SECTIONS
 STA. 461+40.00 TO STA. 462+40.00
 CUY-90-07.58 / VAR. SLOPE
 PID NO. 103161
 3/4
 21/34

F:\2016\116041 D12 Bridge Rehab\12-BH-FY2020 GROUP_3\ProjectData\103161\Design\Structures\CUY010_0869C\98601-XS001.dgn 10/16/2020 4:22:24 PM mstrohm

SEEDING
END SO.
WIDTH YDS.



TOTAL DUMPED ROCK FILL,
TYPE 'B' CARRIED TO
GENERAL SUMMARY

TOTAL DUMPED ROCK FILL,
TYPE 'B', AS PER PLAN
CARRIED TO GENERAL SUMMARY

STA. 470+50.00 BACK
END DUMP ROCK
FILL, TYPE 'B',
AS PER PLAN



LEGEND
 PROPOSED DUMP ROCK
FILL, TYPE 'B',
AS PER PLAN

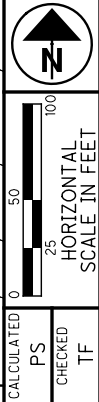
STA. 469+50.00 AHEAD
BEGIN DUMP ROCK
FILL, TYPE 'B',
AS PER PLAN

END STA.	AREA		VOLUME		CALCULATED TF	CHECKED SAM
	CUT	FILL	CUT	FILL		
470+50.00	0	69	0	85		
470+00.00	0	63	0	123		
469+75.00	0	61	0	61		
469+50.00	0	68	0	40		
469+50.00	0	17	0	224		
TOTAL	0	224	0	224		

**CROSS SECTIONS
STA. 469+50.00 TO STA. 470+50.00**

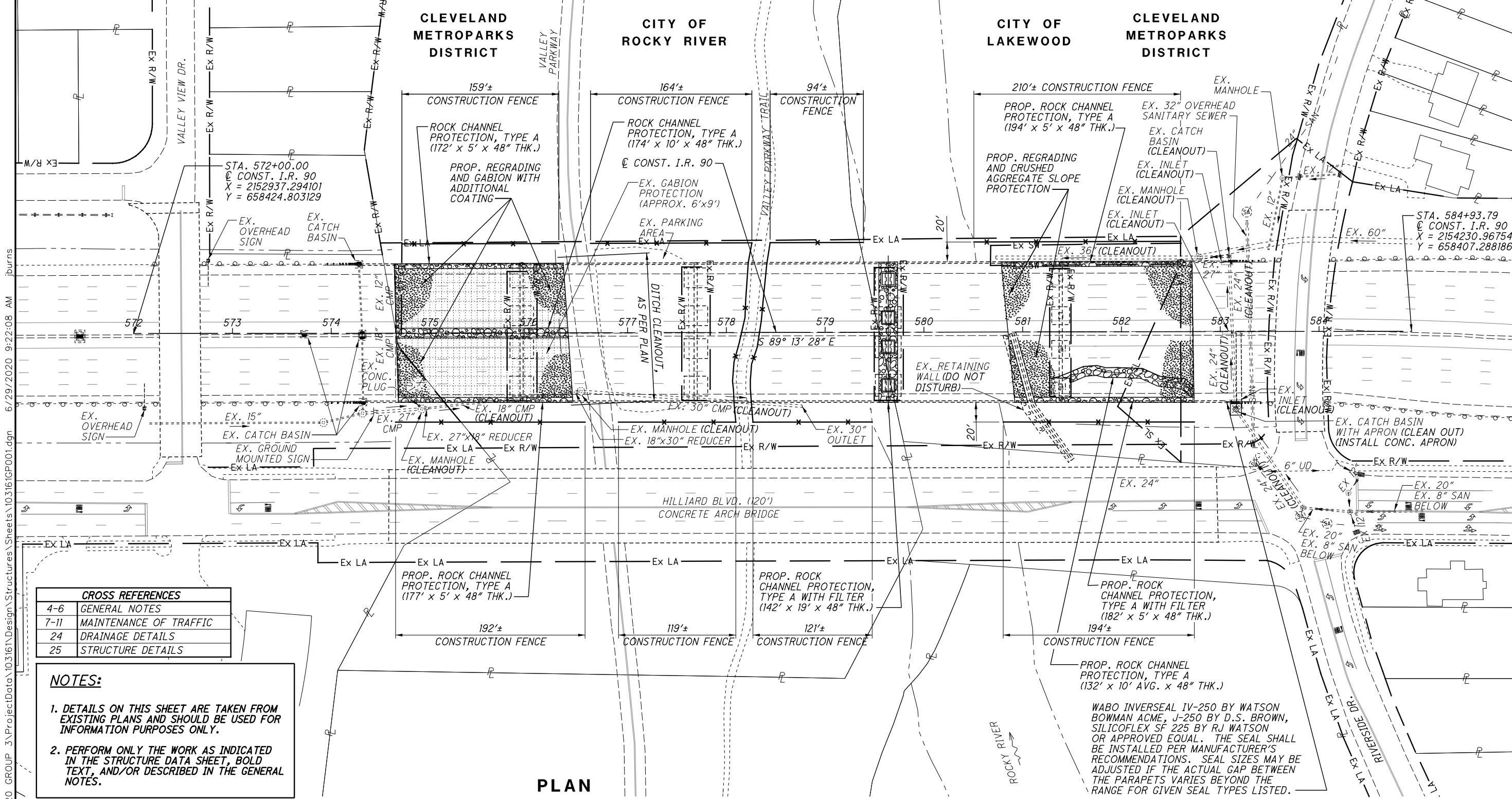
**CUY-90-07.58 / VAR. SLOPE
PID NO. 103161**

4 / 4





PLAN
 CUY-90-0758 OVER ROCKY RIVER

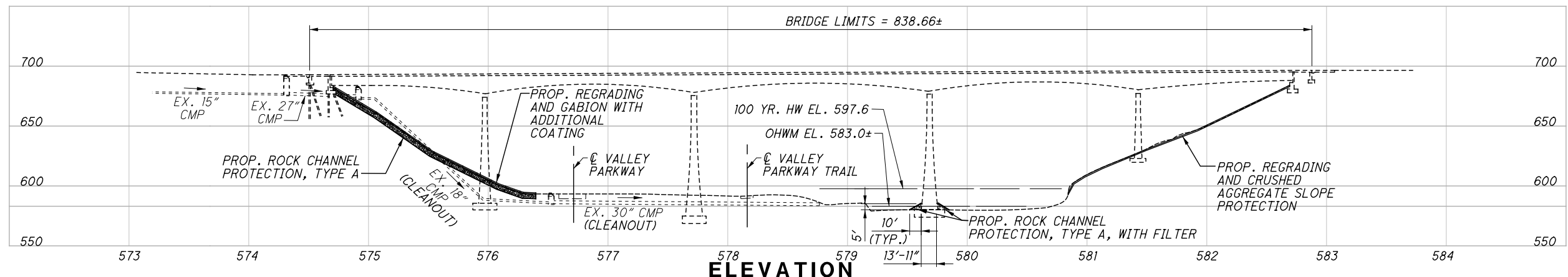
CUY-90-07.58 / VAR. SLOPE
 PID NO. 103161
 1 / 3
 23 / 34



CROSS REFERENCES	
4-6	GENERAL NOTES
7-11	MAINTENANCE OF TRAFFIC
24	DRAINAGE DETAILS
25	STRUCTURE DETAILS

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
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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

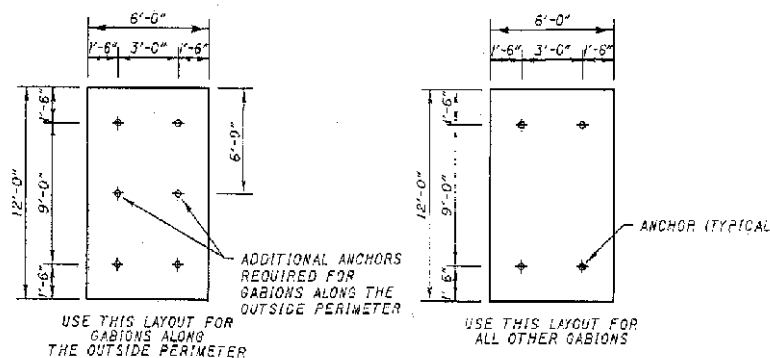
ADDITIONAL	= 50.00 CY
STA. 574+67.77 RT. TO STA. 576+44.28 RT. $((176.51' + 174.25') / 2) \times 56.75' \times (3" / 12) \times 1.12 \text{ SLOPE} / 27 = 103.21 \text{ CY}$	
STA. 574+65.77 LT. TO STA. 576+39.49 LT. $((173.73' + 171.32') / 2) \times 60.97' \times (3" / 12) \times 1.12 \text{ SLOPE} /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

ITEM 601 - DUMPED ROCK FILL, TYPE D 192 CY

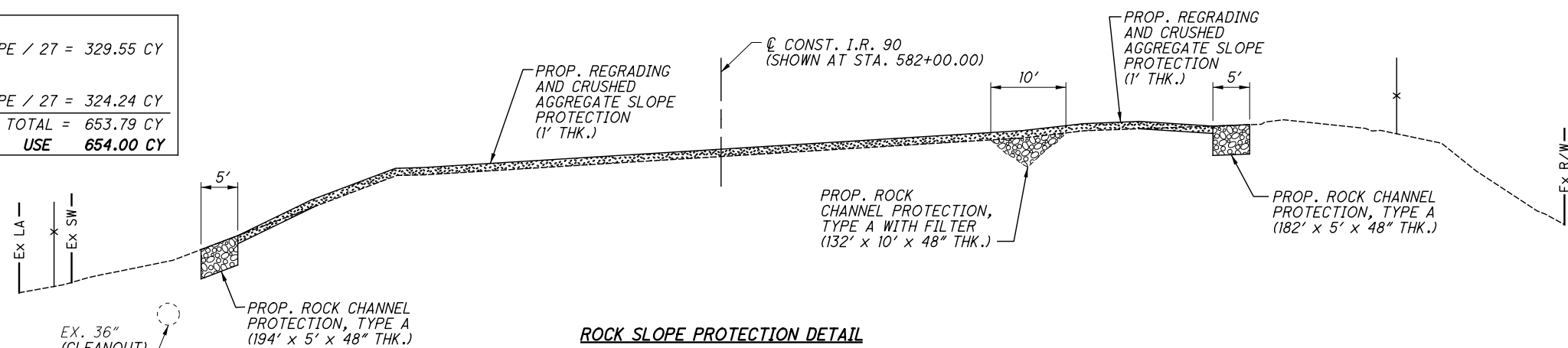
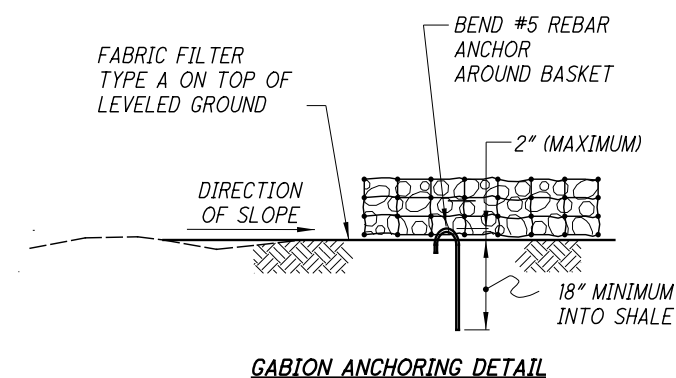
ADDITIONAL	= 50.00 CY
STA. 574+67.77 RT. TO STA. 576+44.28 RT. $((176.51' + 174.25') / 2) \times 56.75' \times (2" / 12) \times 1.12 \text{ SLOPE} / 27 = 68.81 \text{ CY}$	
STA. 574+65.77 LT. TO STA. 576+39.49 LT. $((173.73' + 171.32') / 2) \times 60.97' \times (2" / 12) \times 1.12 \text{ SLOPE} / 27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

PRIOR TO PLACING THE GABIONS THE SLOPE SHALL BE LEVELLED 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 IN ITEM 838 - GABIONS WITH ADDITIONAL COATING, AS PER PLAN.

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



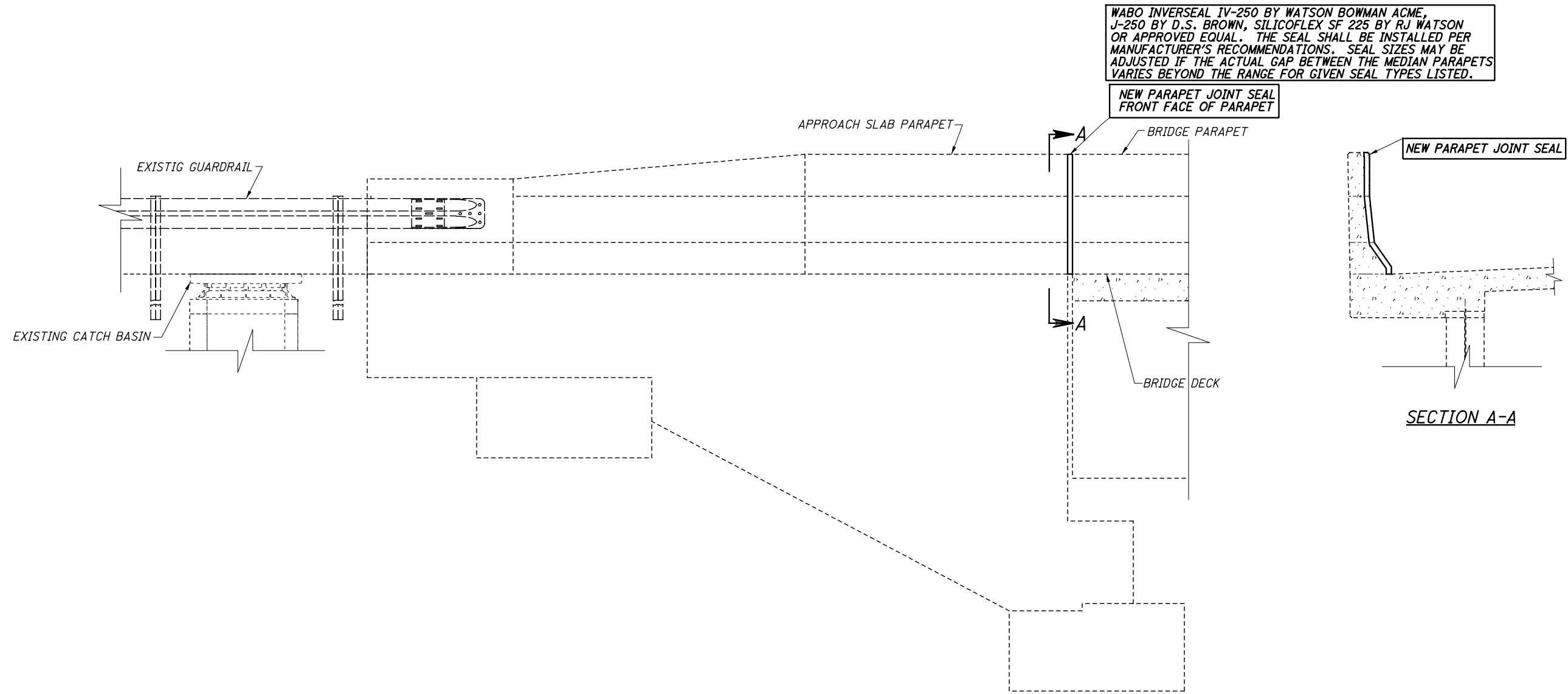
GABION MATTRESS ANCHORING LAYOUT



ROCK SLOPE PROTECTION DETAIL

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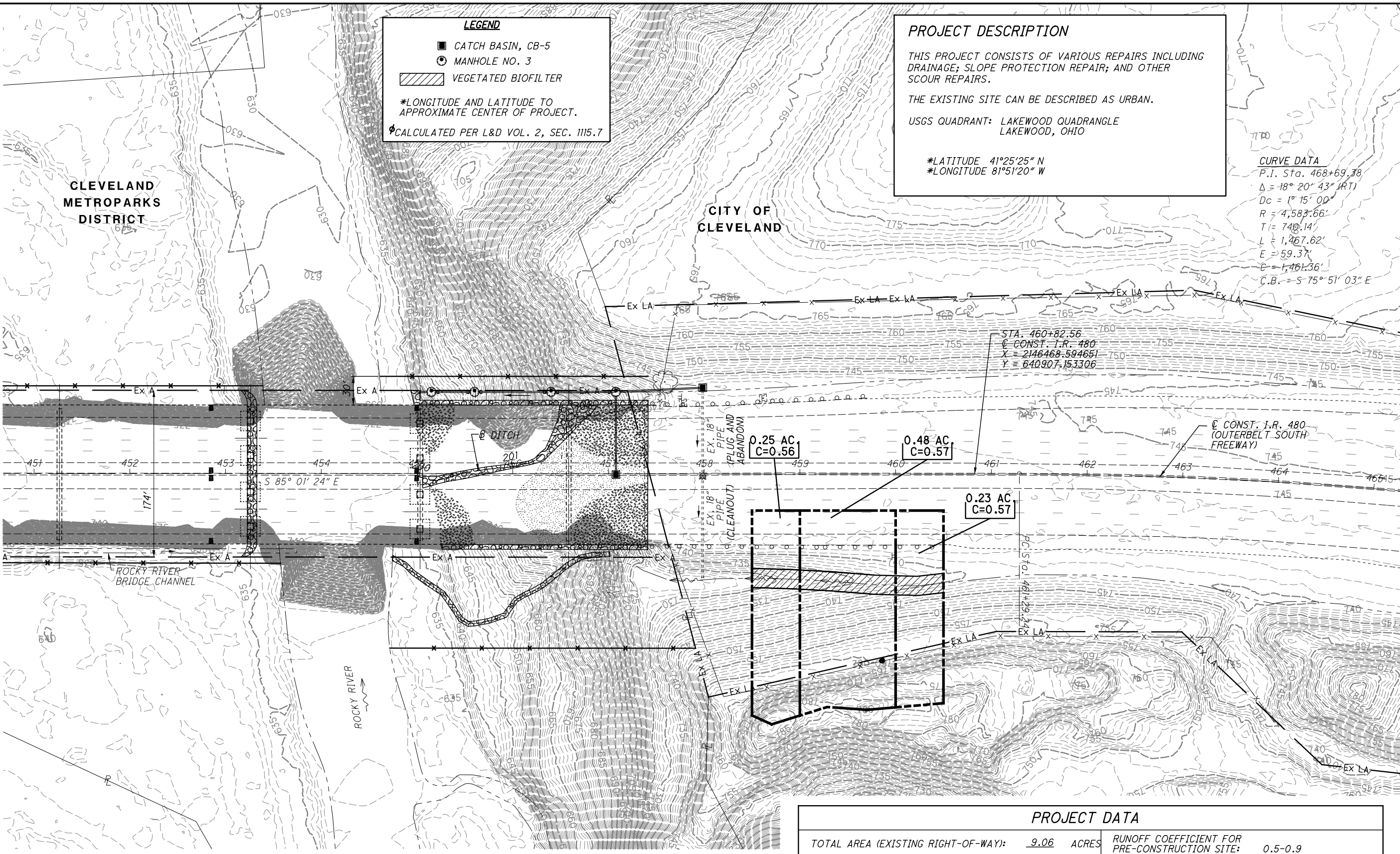


PARAPET SEAL DETAIL (WINGWALL ELEVATION)
(FORWARD ABUTMENT-LOOKING SOUTH)

ESTIMATED QUANTITIES					
<i>ITEM</i>	<i>ITEM EXT.</i>	<i>TOTAL</i>	<i>UNIT</i>	<i>DESCRIPTION</i>	<i>GEN'L</i>
516	10010	5	LF	ARMORLESS PREFORMED JOINT SEAL	5

CALCULATED _____ DATED _____
CHECKED _____ DATED _____

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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

0 50 100
 25
 HORIZONTAL SCALE IN FEET

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

BMP TYPE	LATITUDE/LONGITUDE				BMP WIDTH (FEET)	EDA TREATMENT CREDIT (ACRES)
	BEGIN	END	BEGIN	END		
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

NOTES:

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LEGEND

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

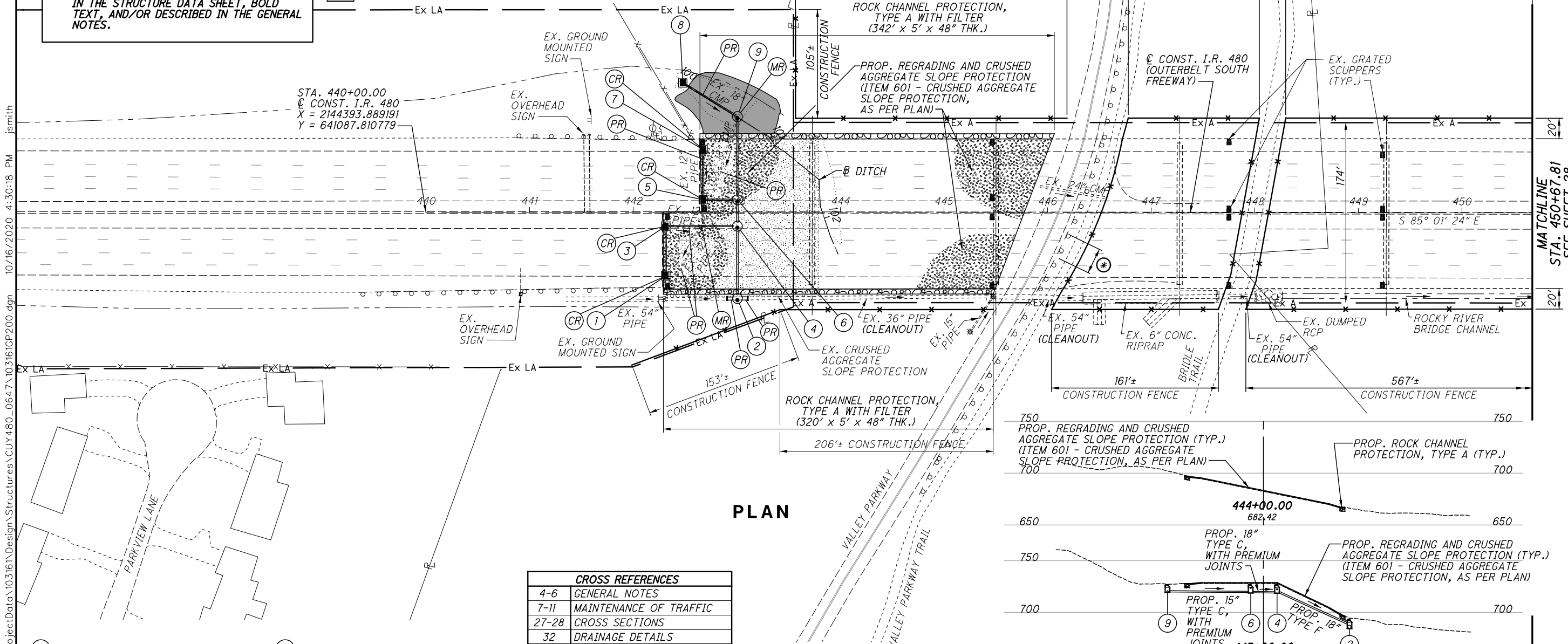
CITY OF FAIRVIEW PARK

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)



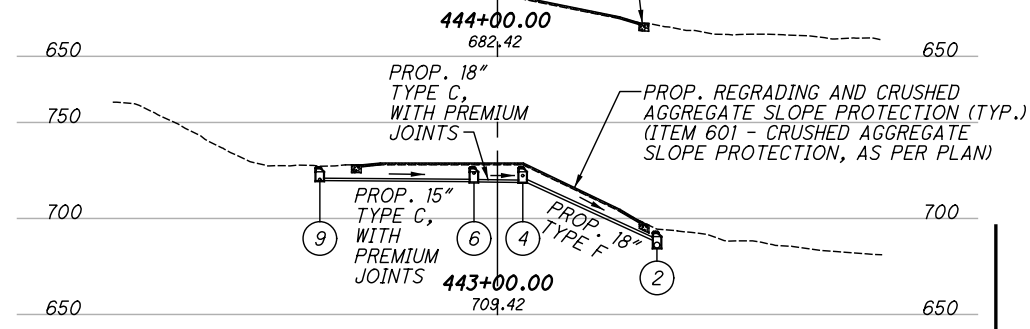
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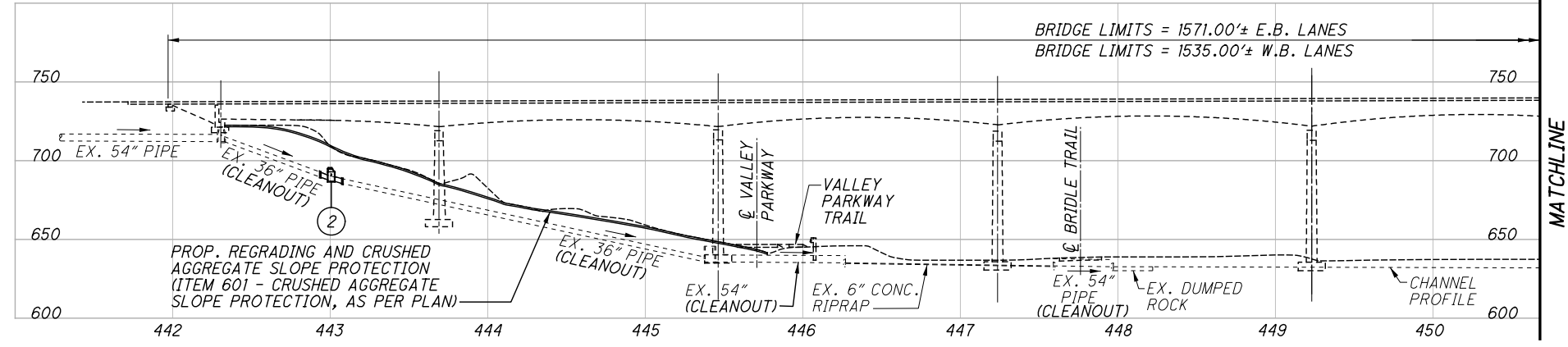
PLAN

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±
ℓ 15" (N.) EL. 722.75±
- ② STA. 443+00.62, 83.13' RT. PROP. MH NO. 3 PROP. TOP OF COVER EL. 693.40±
ℓ 18" (N.) EL. 688.50±
ℓ 36" (W.) EL. 687.00±
ℓ 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±
ℓ 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±
ℓ 15" (W.) EL. 721.75±
ℓ 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±
ℓ 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±
ℓ 15" (W.) EL. 723.05±
ℓ 15" (N.) EL. 719.25±
ℓ 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±
ℓ 15" (S.) EL. 723.75±
- ⑧ STA. 442+47.77±, 125.04± LT. PROP. CB NO. 5 PROP. TOP OF COVER EL. 723.90±
ℓ 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±
ℓ 15" (N.W. & S.) EL. 719.75±



ELEVATION

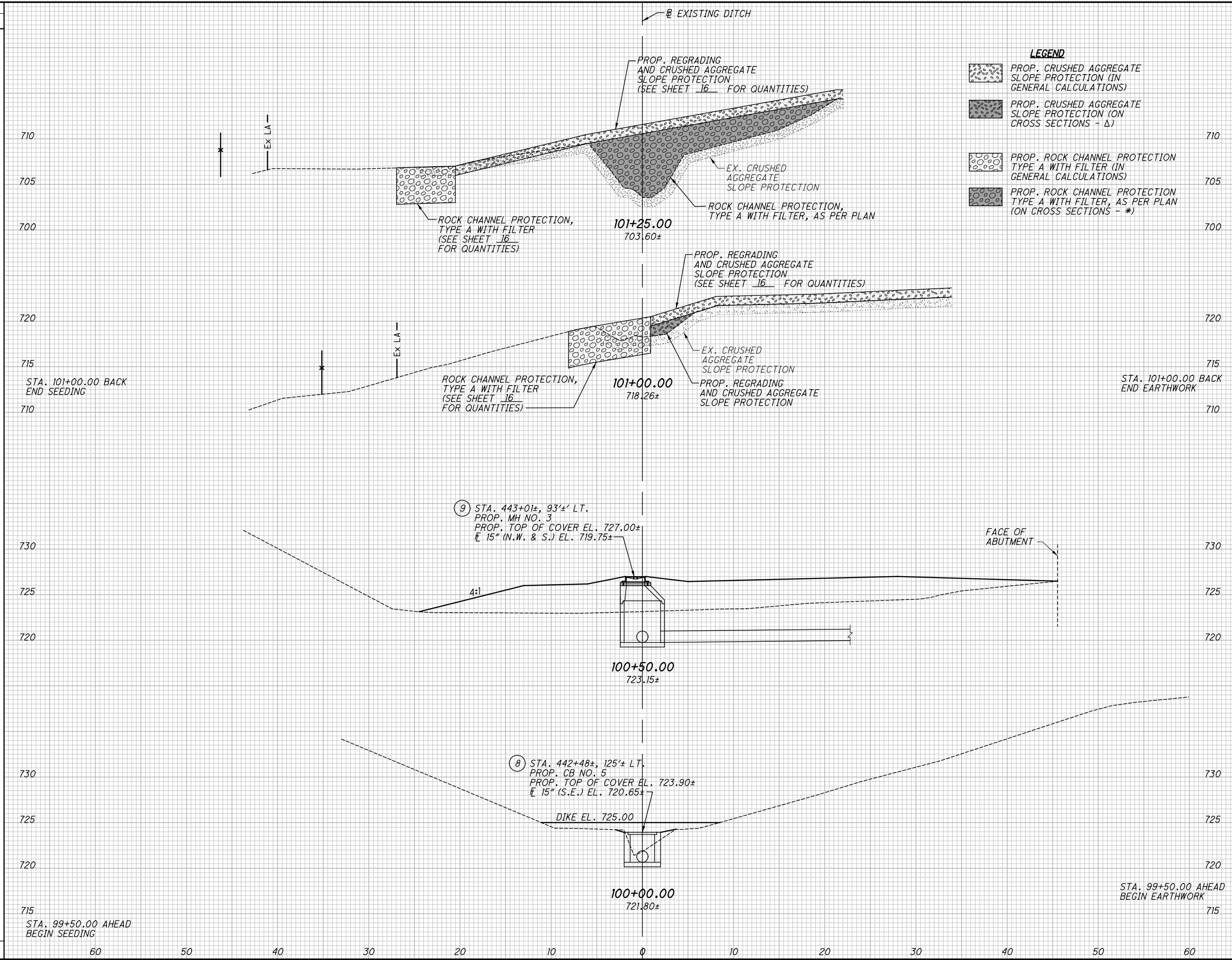


MATCHLINE STA. 450+67.81 SEE SHEET 28

MATCHLINE STA. 450+67.81 SEE SHEET 28

PLAN CUY-480-0647 OVER ROCKY RIVER

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



END AREA	VOLUME	CALCULATED		CHECKED	
		CUT	FILL		PS
86*	0 Δ				
0*	5 Δ				
0*	0 Δ				
0*	0 Δ				
0*	0 Δ				
0*	0 Δ				
0*	0 Δ				
0*	0 Δ				
0*	0 Δ				
40*	8 Δ				
308	308				

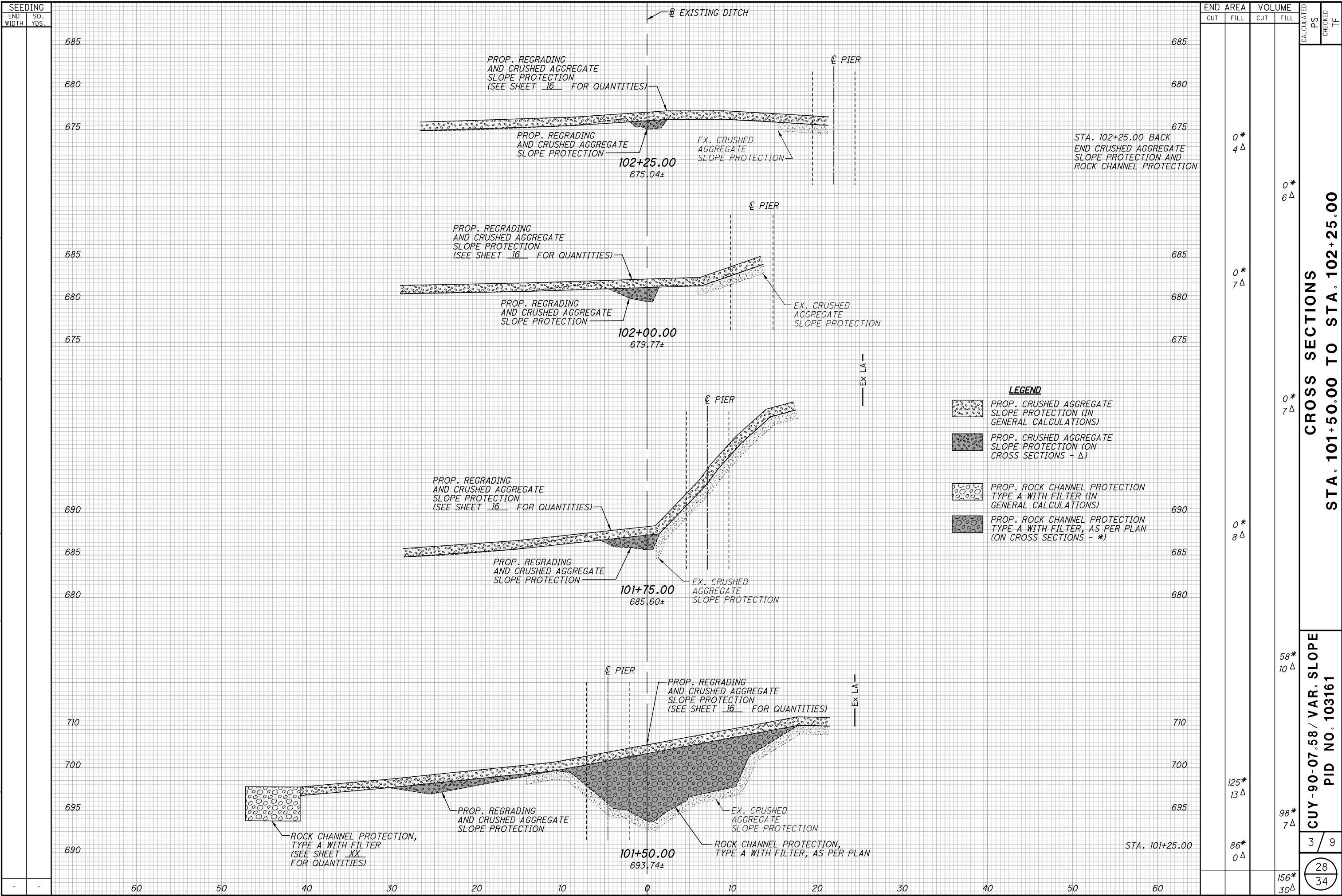
**CROSS SECTIONS
STA. 100+00.00 TO STA. 101+25.00**

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

2 / 9

27 / 34

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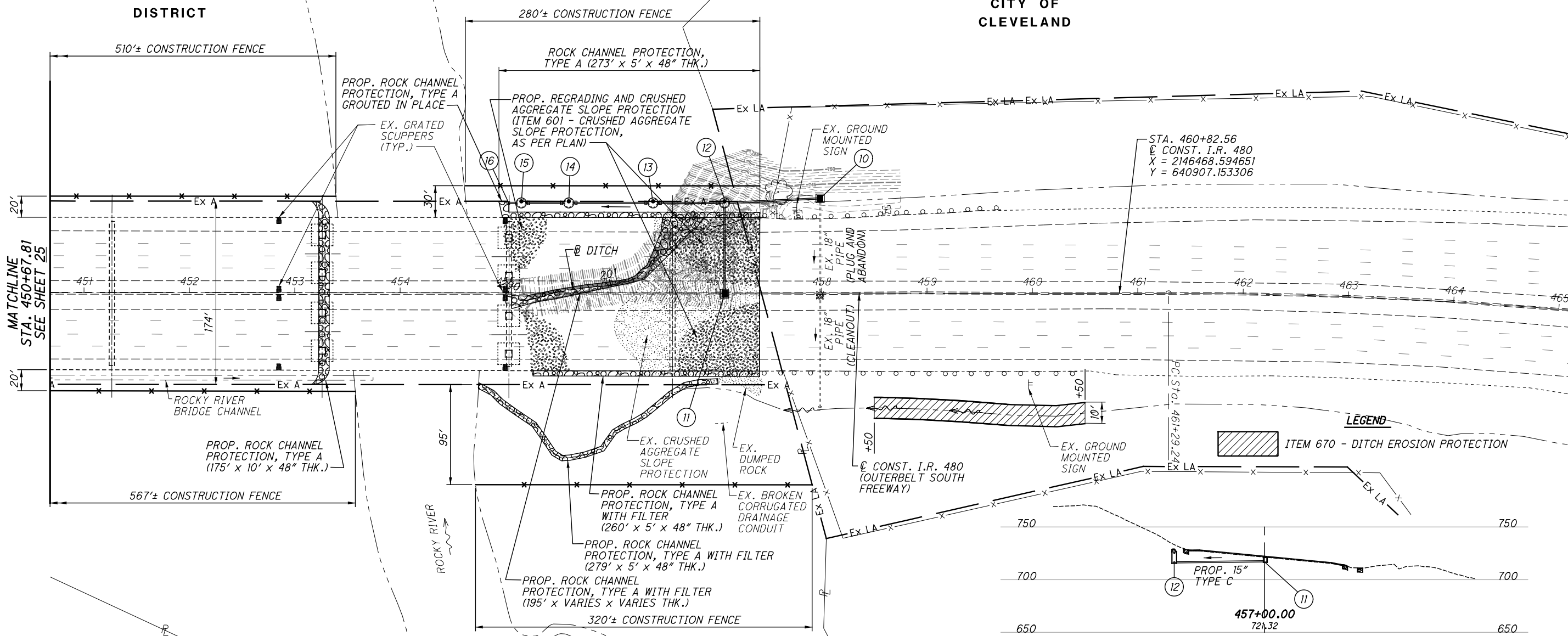
CROSS SECTIONS
STA. 101+50.00 TO STA. 102+25.00

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

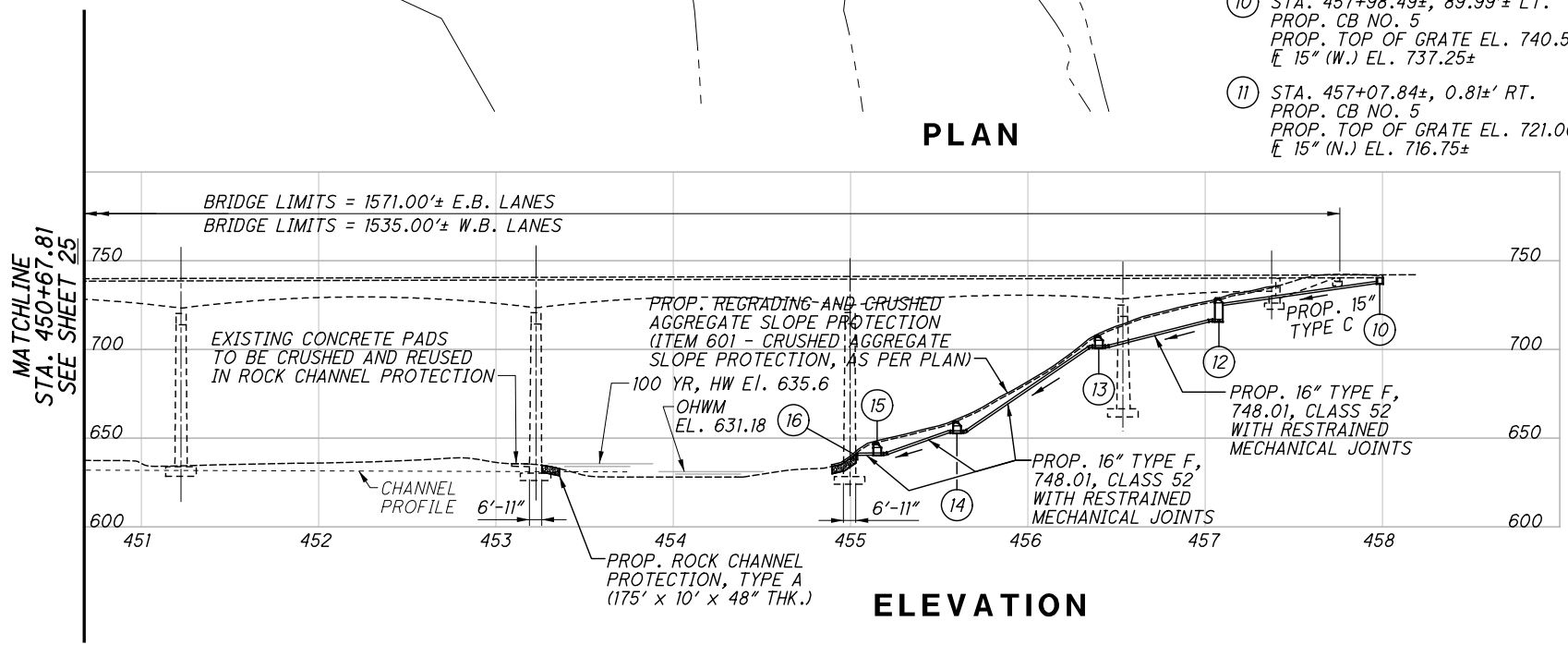
28
34

CLEVELAND METROPARKS DISTRICT

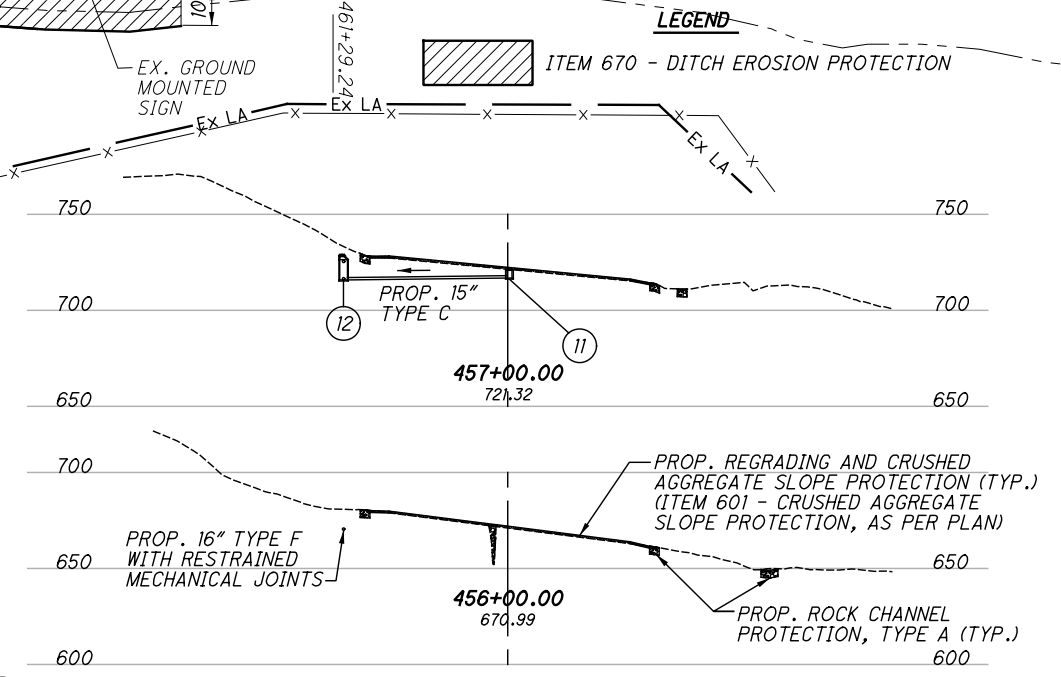
CITY OF CLEVELAND



PLAN



ELEVATION



LEGEND

ITEM 670 - DITCH EROSION PROTECTION

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.
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- 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±

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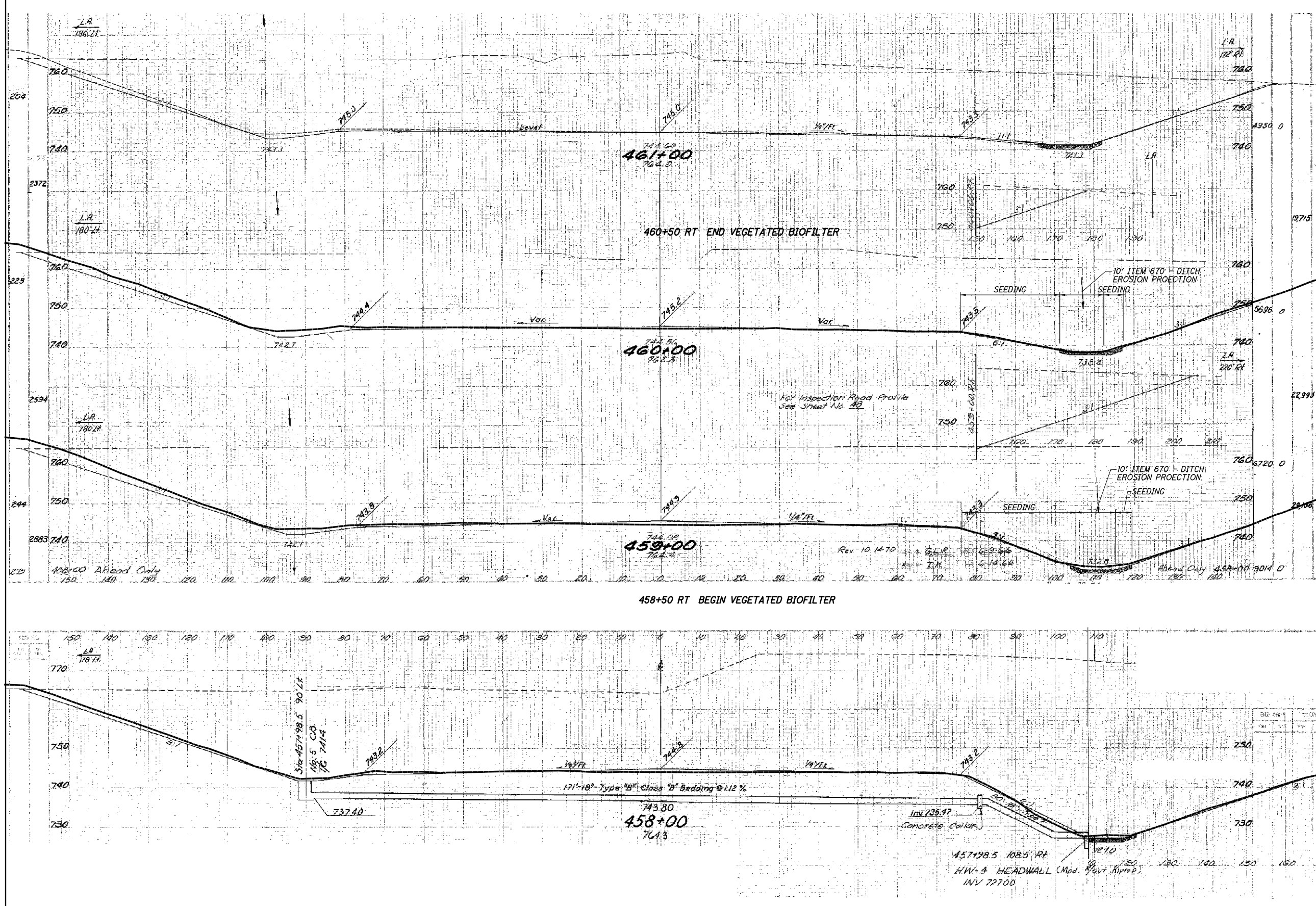
MATCHLINE STA. 450+67.81 SEE SHEET 25

MATCHLINE STA. 450+67.81 SEE SHEET 25

PLAN CUY-480-0647 OVER ROCKY RIVER

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

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



END AREA	VOLUME	CALCULATED	CHECKED
15	24		
14	24		
75	82		
26	20		
46	36		
23	18		
148	163		

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

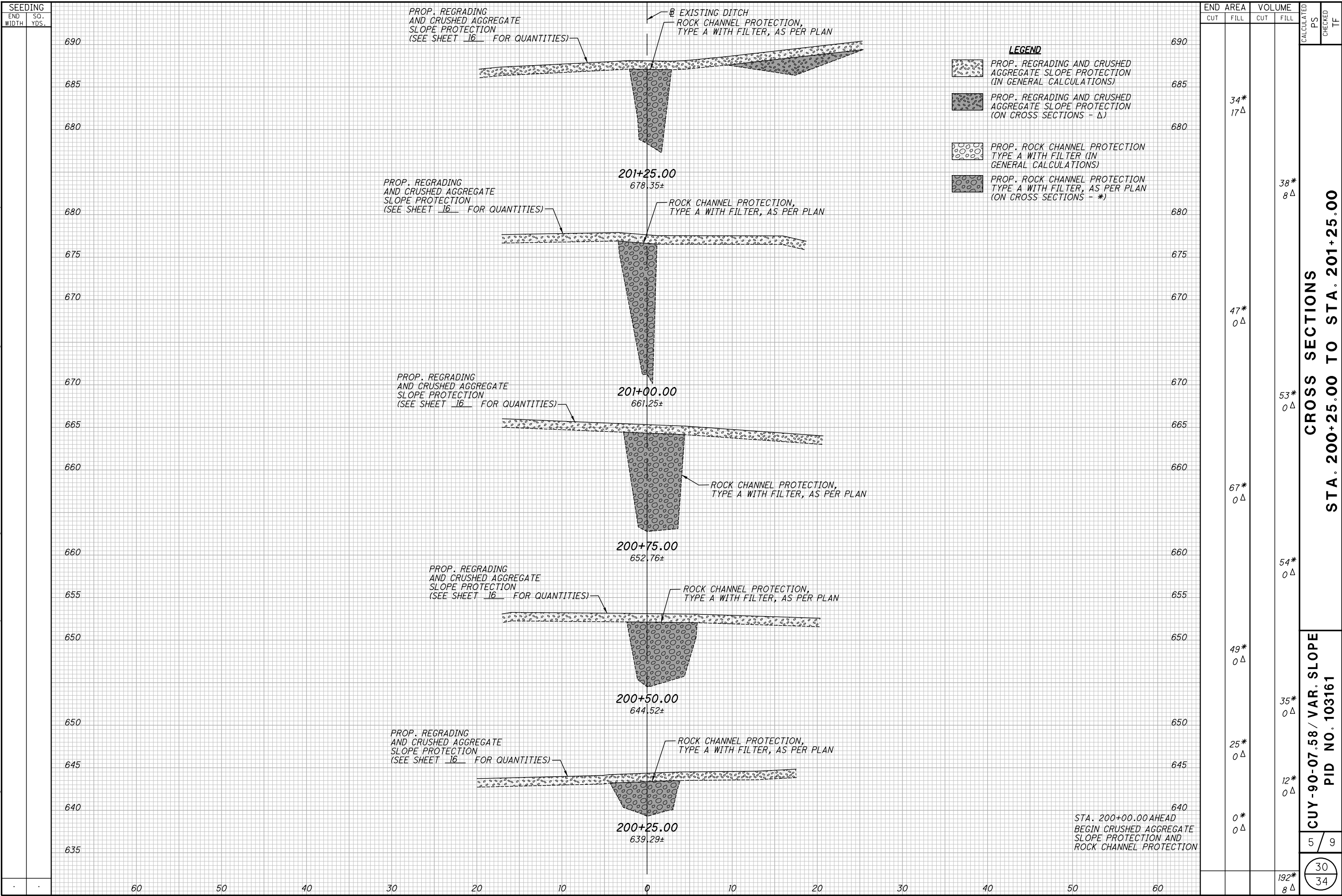
CUY-90-07.58 / VAR. SLOPE
 PID NO. 103161

4A / 9

29A
 34

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END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	PS	TF
690									
685	34*								
680	17Δ								
680								38*	
680								8Δ	
675									
670	47*								
670	0Δ								
670									
665								53*	
665								0Δ	
660									
660	67*								
660	0Δ								
660									
655								54*	
655								0Δ	
650									
650	49*								
650	0Δ								
650									
645								35*	
645								0Δ	
645	25*								
645	0Δ								
640								12*	
640								0Δ	
640									
640	0*								
640	0Δ								
635									
635									
60								192*	
50								8Δ	
40									
30									
20									
10									
0									
10									
20									
30									
40									
50									
60									

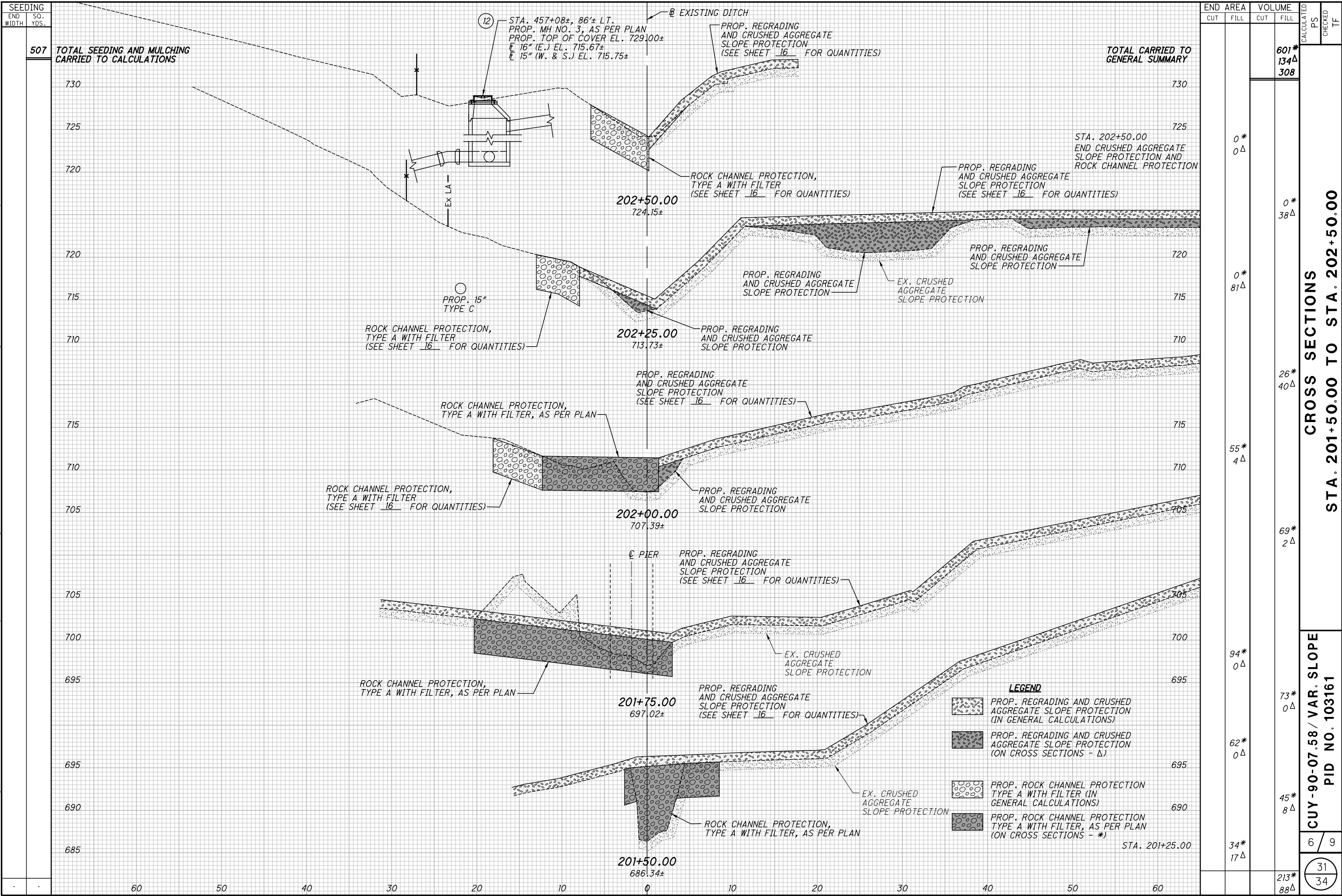
CROSS SECTIONS
STA. 200+25.00 TO STA. 201+25.00

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

5 / 9
30 / 34

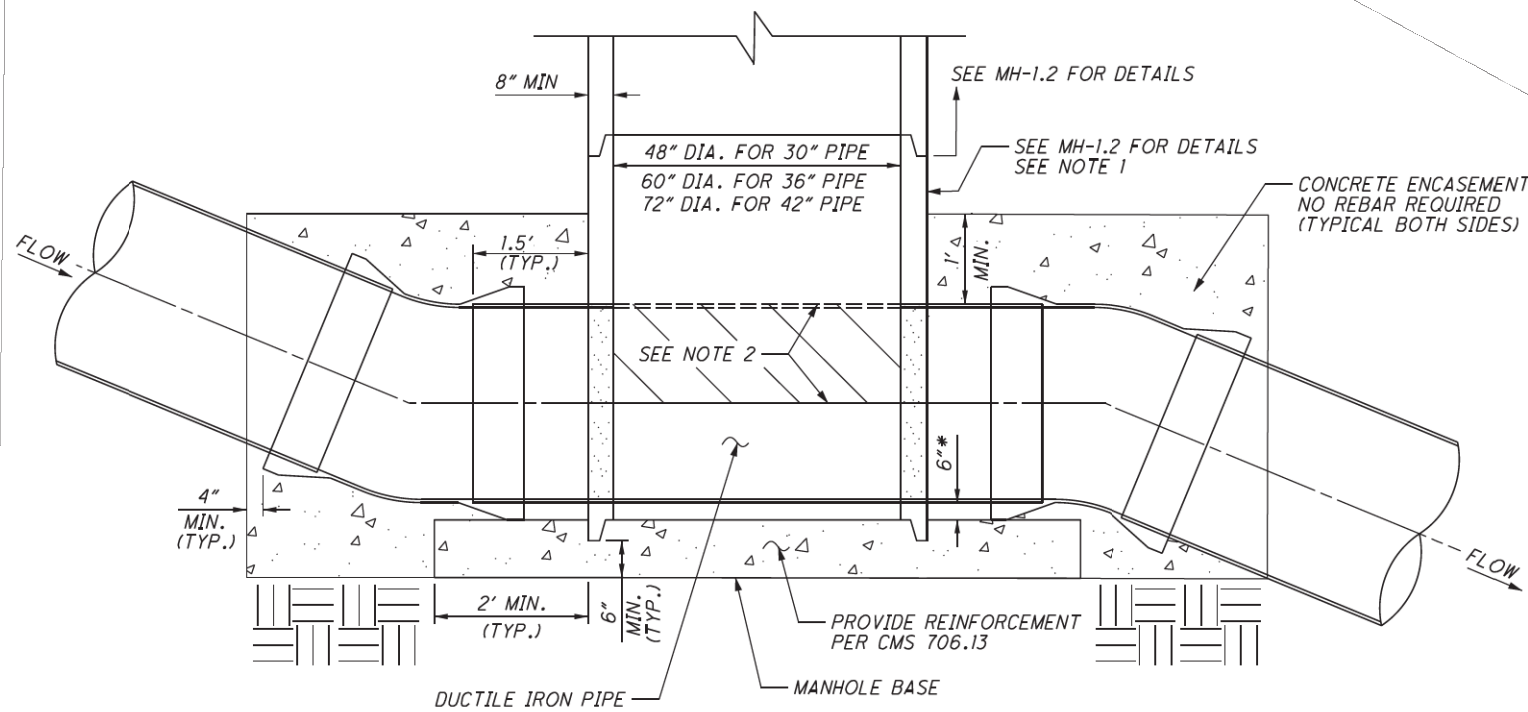
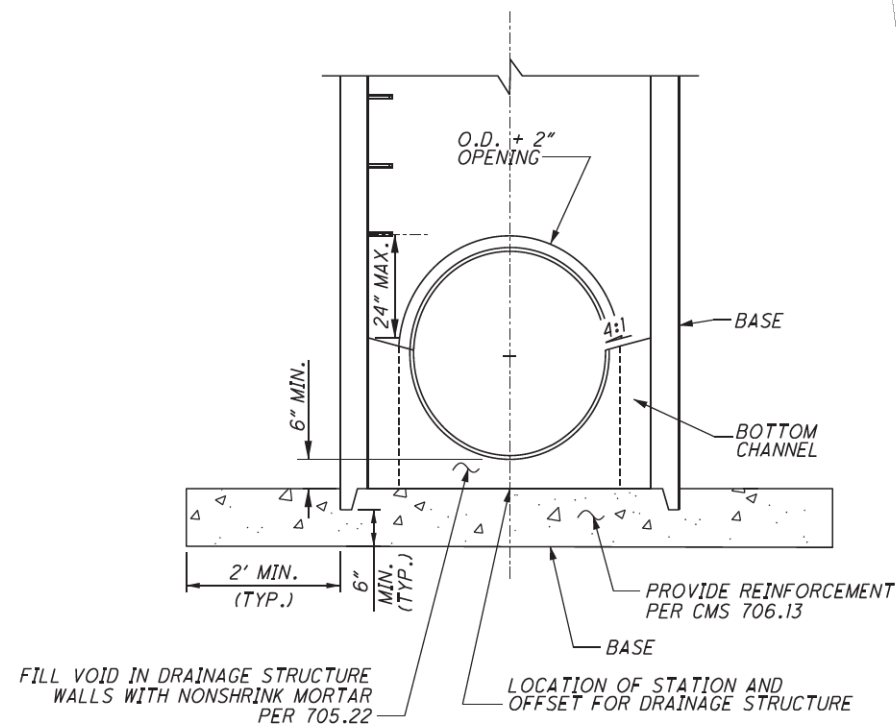
STA. 200+00.00 AHEAD
BEGIN CRUSHED AGGREGATE
SLOPE PROTECTION AND
ROCK CHANNEL PROTECTION

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SEEDING	END AREA		VOLUME		CALCULATED PS	CHECKED TF
	END WIDTH	SO. YDS.	CUT	FILL		
507	TOTAL SEEDING AND MULCHING CARRIED TO CALCULATIONS		TOTAL CARRIED TO GENERAL SUMMARY		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		

CROSS SECTIONS STA. 201+50.00 TO STA. 202+50.00
 CUY-90-07.58 / VAR. SLOPE
 PID NO. 103161
 6 / 9
 31 / 34



MANHOLE NO. 3, AS PER PLAN

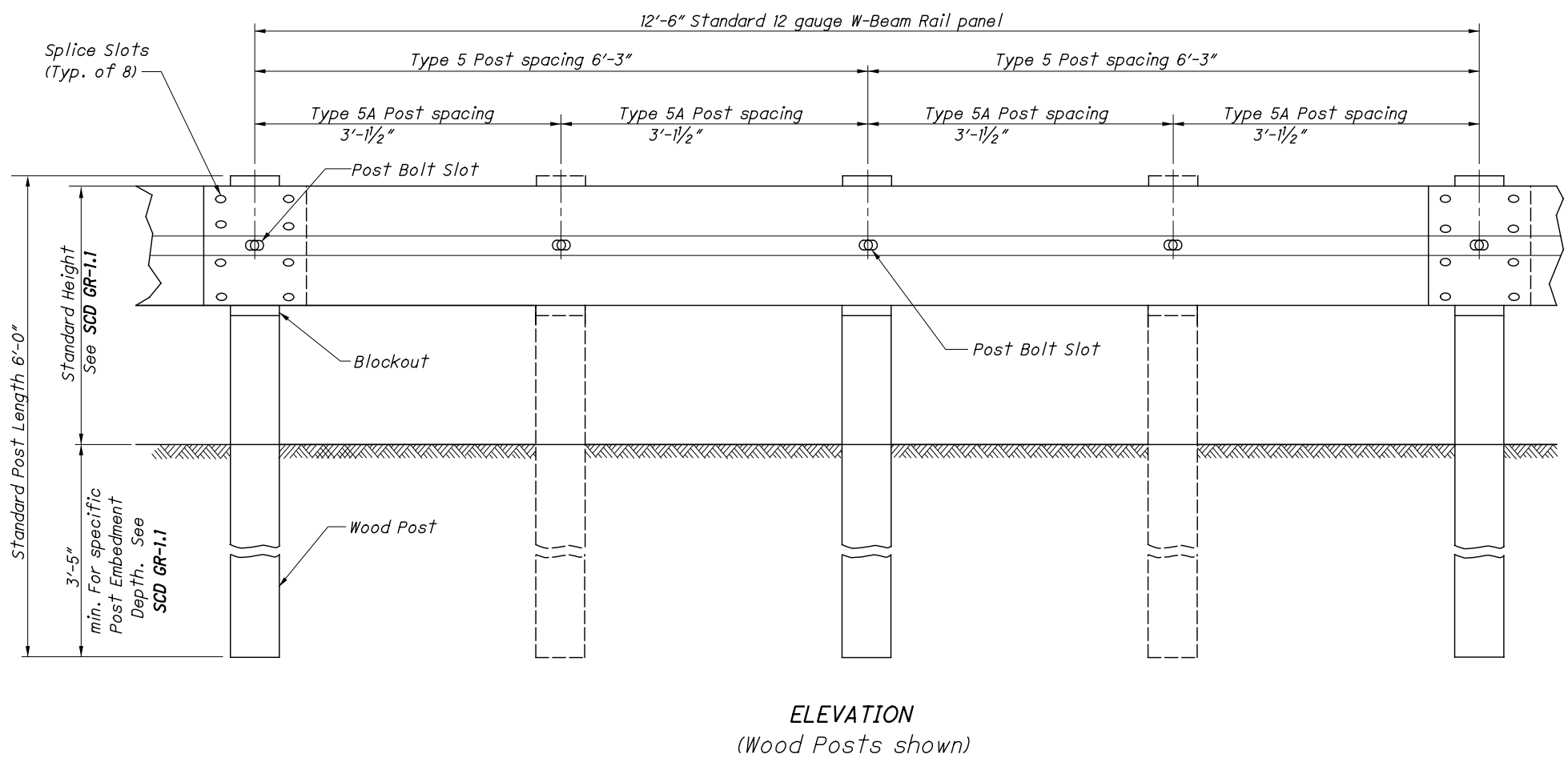
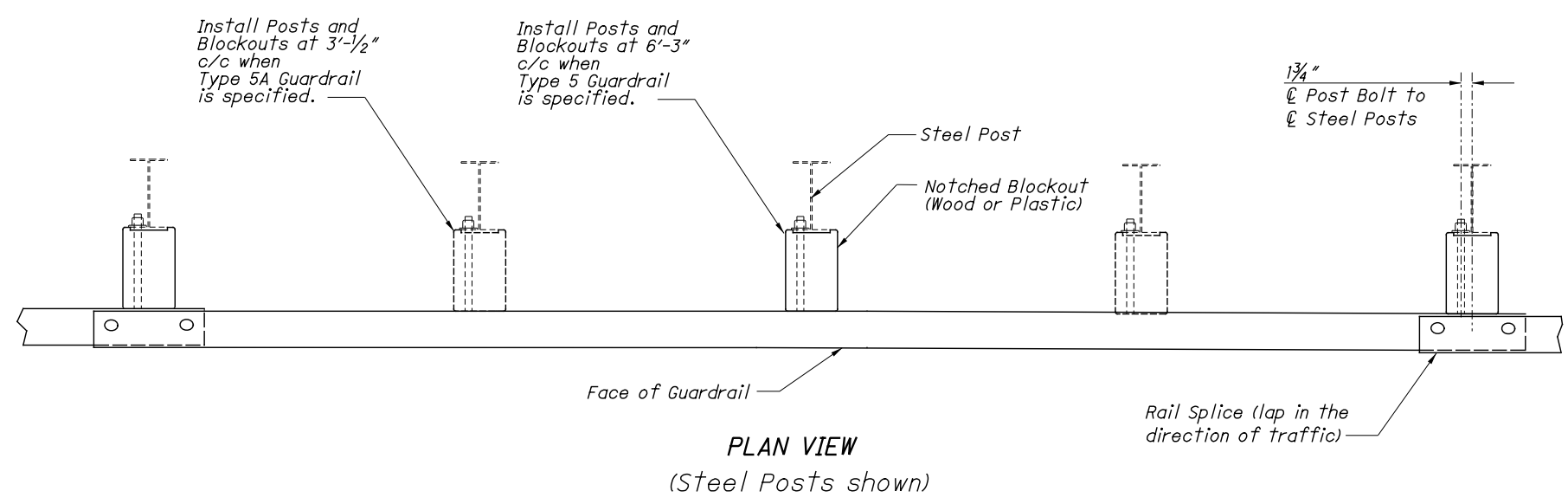
PROVISIONS OF ITEM 611, SHALL APPLY. THE MANHOLE, FLAT TOP SLAB, WALL PIPE(S), FRAME, COVER, STEPS AND INCIDENTAL ITEMS SHALL BE INCLUDED FOR PAYMENT IN ITEM 611 - MANHOLE NO. 3, AS PER PLAN

* - FITTING CLEARANCE

NOTES:

1. USE "DOG HOUSE" STYLE BASE TO DROP OVER PIPE.
2. LAY PIPE THROUGH MANHOLE, POUR CONCRETE BENCH TO SPRING LINE ON EACH SIDE OF PIPE IN MANHOLE, SLOPE BENCH TO DRAIN @ 4:1 SLOPE AND CUT OUT TOP OF PIPE INSIDE MANHOLE FLUSH WITH BENCH.
3. FOR ADDITIONAL DETAILS SEE MH-1.2.
4. STRUCTURES D-46, 44, 43 SHALL BE PROVIDED WITH A NEENAH R-2504 FRAME AND GRATE WITH TYPE C LID OR EQUIVALENT.
5. ALL FITTINGS SHALL BE DUCTILE IRON WITH RESTRAINED MECHANICAL JOINTS.

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NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform Taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering**.

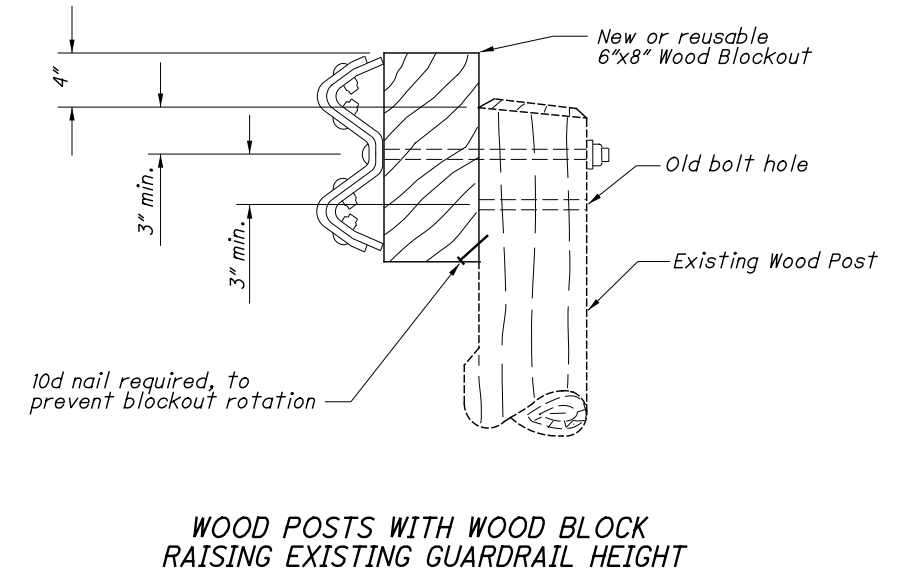
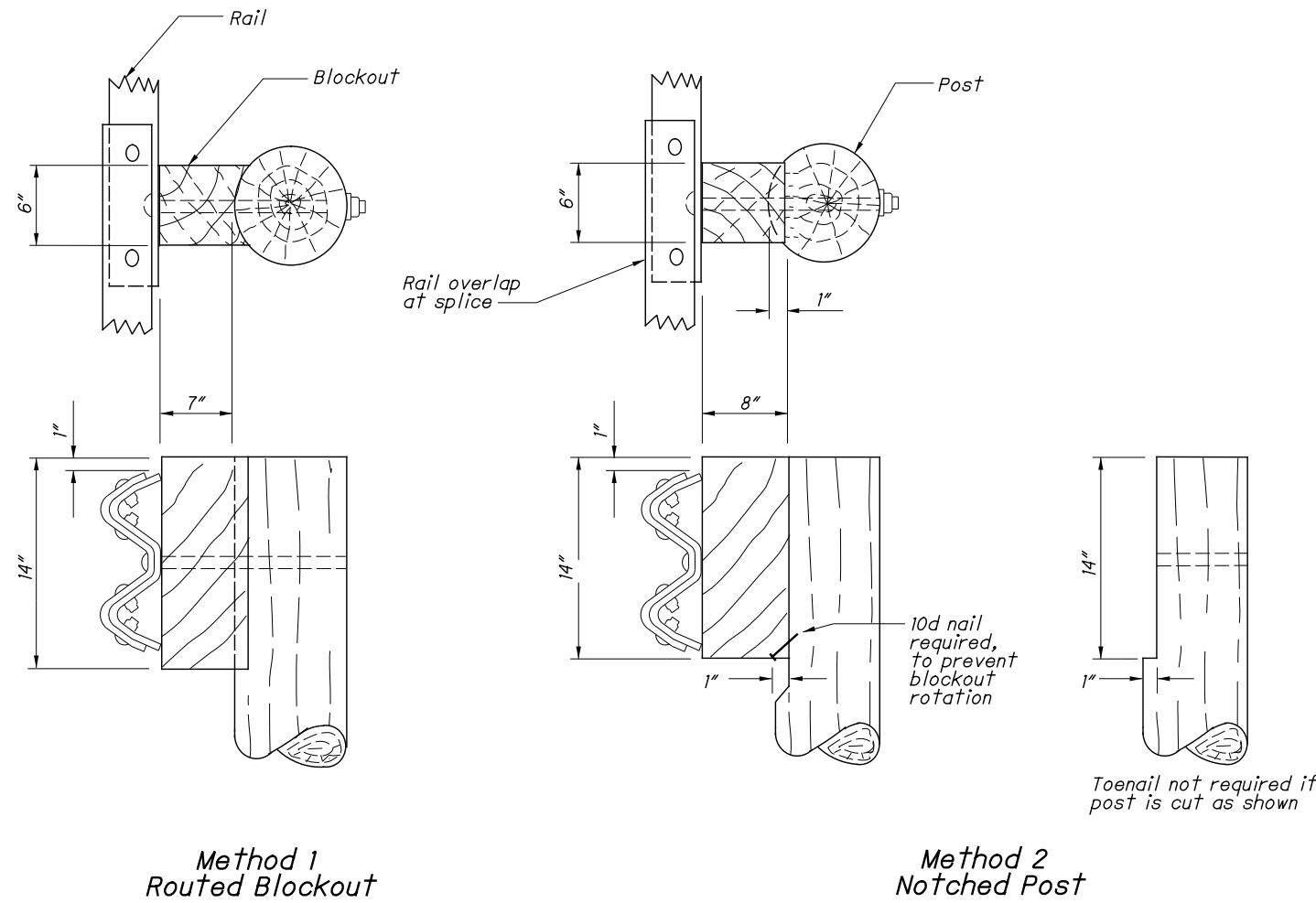
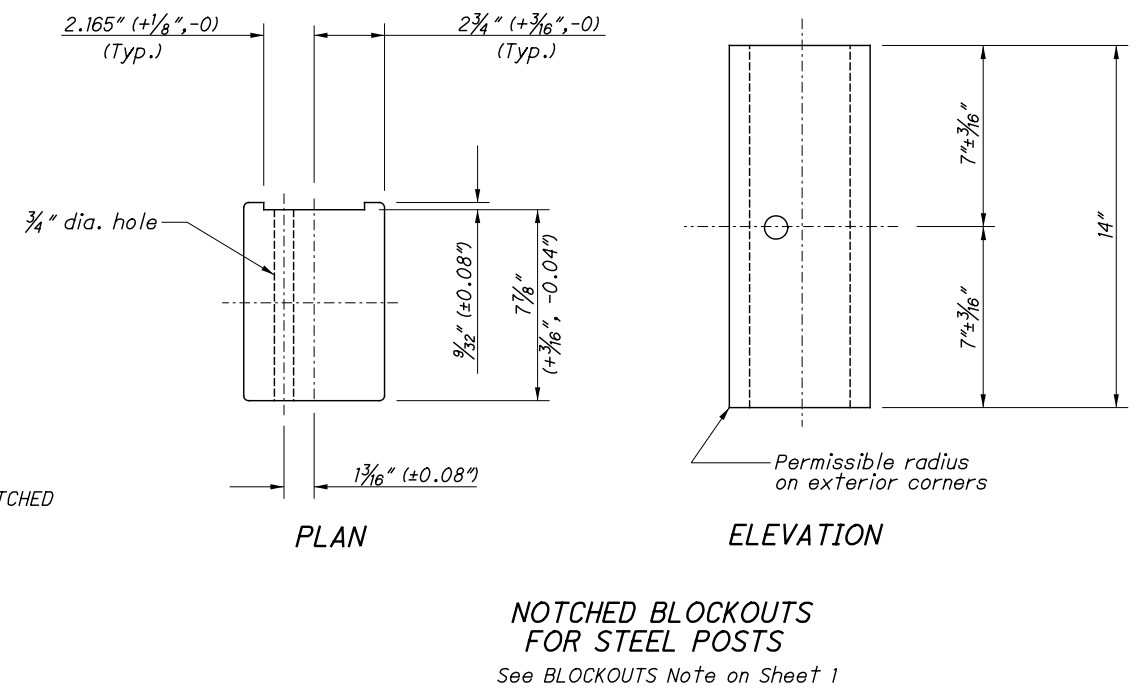
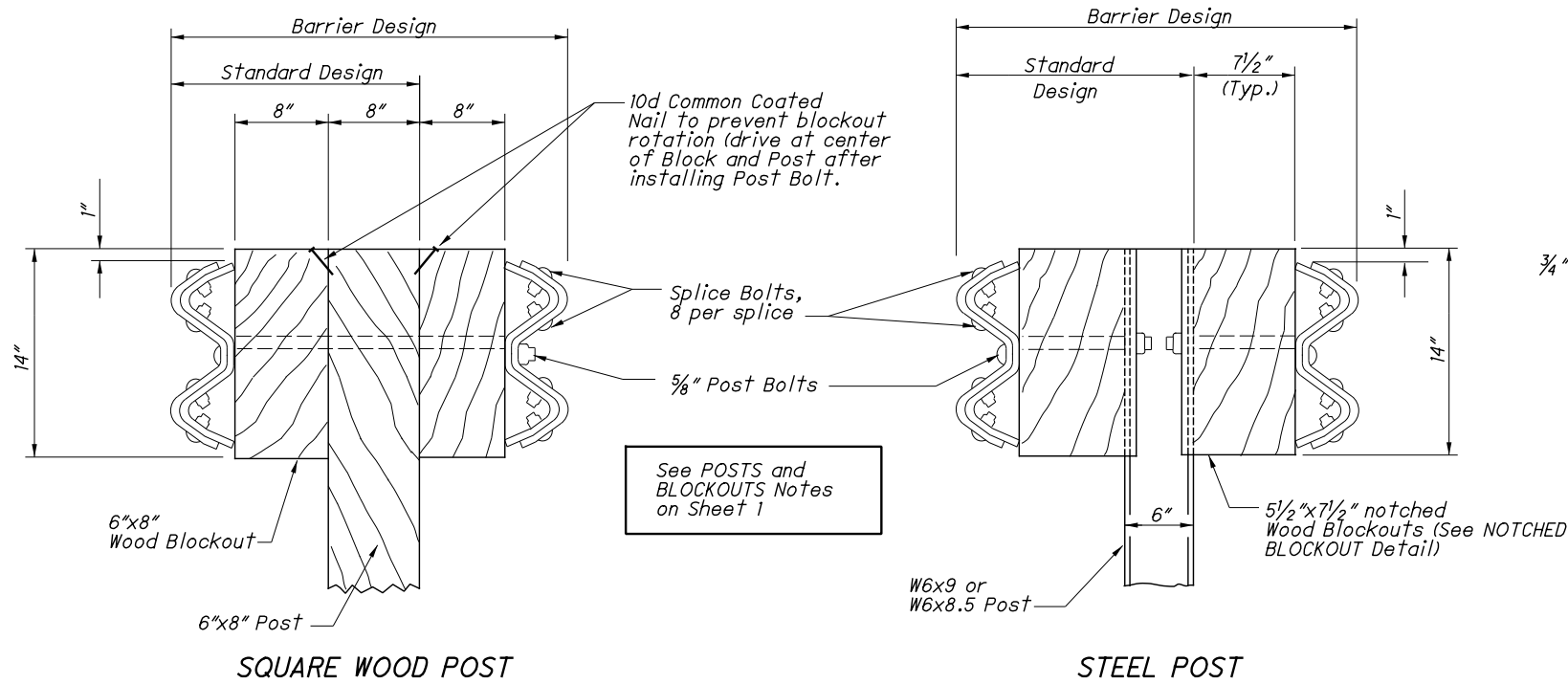
WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see SCD GR-1.1.

STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

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Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS
Single Sided runs only (Standard Design)

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: CUY-90-7.58+VAR Slope

PID: 103161

Date: 02/26/2020

1. Waterway Permits Time Restrictions:

Regional General Permit (RGP) Section B (Maintenance) is authorized for CUY-90-07.58+VAR Slope, PID: 103161. 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: **February 26, 2020**. The permit expires: **October 24, 2024**.

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor’s submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (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) as appropriate.

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 if TAF partially spans the stream* (No in-stream work permitted)	Work restriction dates if TAF fully spans the stream# (No in-stream work permitted)
Rocky River	CUY-10-8.69, STA 468+90.00	April 15 - June 30	September 15 - June 30
Rocky River	CUY-90-7.58, STA 580+0.00	April 15 - June 30	September 15 - June 30
Rocky River	CUY-480-6.47, STA 454+0.00	April 15 - June 30	September 15 - June 30

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

#Restriction dates do not apply if the stream has been dewatered prior to September 15.

In-stream work has been defined as the placement and/or removal of fill materials (temporary or 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 access fills.

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 for temporary or 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:
Per CMS 107.10, if archeological sites, historical 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 Cuyahoga County Sheriff's Office at 216-443-6000.

6. Aquatic Resource Demarcation:
The table below includes detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized for impact by these Special Provisions shall be demarcated in the field as per SS 832 prior to site disturbance. 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.

Resource ID	Resource Location	Impact Location	Temporary Impact Amount	Permanent Impact Amount
Rocky River*	CUY-10-8.69	STA 468+90.00	85 feet (0.30 acre)	32 feet (0.02 acre)
Rocky River [#]	CUY-90-7.58	STA 580+0.00	160 feet (1.35 acre)	155.5 (0.16 acre)
Rocky River*	CUY-480-6.47	STA 454+0.00	165 feet (0.55 acre)	150 feet (0.04 acre)

*The total upstream to downstream impact shall not exceed 85 linear feet.
[#]The total upstream to downstream impact shall not exceed 160 linear feet.
 *The total upstream to downstream impact shall not exceed 165 linear feet.

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 the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

9. 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).

10. Temporary Access Fills:

Definitions:

Hydraulic Opening
The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

Standard Temporary Discharge
Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways These flows are also available in a web application by USGS StreamStats, (<https://water.usgs.gov/osw/streamstats/ohio.html>).

Average Monthly Flow
The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

Requirements
21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all TAFs proposed for use on the project
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.

- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.
- A description of all temporary material to be placed below the OHWM elevation.
- A description of the installation and staging of all temporary fill over the life of the contract.
- Volume of temporary fill below the OHWM elevation.
- A description of the diversion ditches, equipment, conduits or means for maintaining normal flows in the waterway.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the TAFs.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials. The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:

“These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents.”

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design of the Contractor’s TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of waterways and other aquatic resources is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM).***

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The Department makes no guarantee to grant the request. The Contractor’s proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor’s proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the initiation of any in-stream work, establish a monument upstream of the proposed TAF to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 B. of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the TAF will not damage property, flood roadways, or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

- Furnish culverts on the existing stream bottom.
- Avoid a drop in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
- Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
- Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the TAFs will be restored to its pre-construction elevations. The TAFs will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities, are incidental to the work within the boundaries of the aquatic resources.

11. Excavation Activities:

Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into jurisdictional waters of the U.S. is permitted during the excavation process. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).

12. Demolition Debris:

The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into the Rocky River, it must be removed immediately. Notify the Engineer immediately in writing of any inadvertent fill discharged into the Rocky River. Also contact ODOT-OES-WPU at 614-466-7100 if any unintentional discharge occurs.

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