CONTRACTOR IS ADVISED THAT BETWEEN STATIONS 530+00 TO 531+75 (SFF SHFFT 9 -10) THAT THE EXISTING UTILITIES HAVE MINIMAL COVER. CONTRACTOR SHALL TAKE EXTREME CAUTION WHILE WORKING WITHIN THIS AREA. CONTRACTOR SHALL TAKE EVERY PRECAUTION UP TO AND INCLUDING HAND EXCAVATION AND GRADING TO MINIMIZE THE POTENTIAL FOR UTILITY CONFLICTS.

## UTILITIES

SHALLOW UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

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

ELECTRIC: THE ILLUMINATING CO. FIRST ENERGY 6896 MILLER ROAD, SUITE 101 BRECKSVILLE. OH 44141 ATTN: JOHN M. ZASSICK PHONE: (440) 546-8706

GAS: DOMINION ENERGY OHIO 320 SPRINGSIDE DRIVE, SUITE 320 AKRON, OH 44333 ATTN: 2nd FLOOR RELOCATION DESIGN EMAIL: relocation@dominionenergy.com

CABLE: (NORTHEASTERN ITS) SPREAD NETWORKS BY ZAYO GROUP CORTLAND, OH 44410 ATTN: JOHN BRUCE PHONE: (877) 601-7662 EMAIL: john.bruce@zayo.com

CABLE: CHARTER COMMUNICATIONS 7 SEVERANCE CIRCLE CLEVELAND HEIGHTS, OH 44118 ATTN: PAT SANTOIEMMO PHONE: (216) 575-8016X, 12165554202 EMAIL: pat.santoiemmo@charter.com

WATER: CITY OF CLEVELAND DIVISION OF WATER 1201 LAKESIDE AVE. CLEVELAND, OH 44114 ATTN: FRED ROBERTS PHONE: (216) 644-2444 EXT. 5590 EMAIL: fred\_roberts@clevelandwater.com

SANITARY: VILLAGE OF MORELAND HILLS 22999 FORBES RD. SUITE. B CLEVELAND, OH 44146 ATTN: JEFF FILARSKI PHONE: (440) 439-1999 EMAIL: filarski@cvelimited.com

SANITARY/STORM: VILLAGE OF HUNTING VALLEY 38251 FAIRMOUNT BLVD. HUNTING VALLEY, OH 44022 ATTN: DON CUNNINGHAM PHONE: (440) 247-6106 EMAIL: bldg@huntingvalley.net

# PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 12 OF THE PLANS FOR A TABLE CONTAINING PROJECT

CONTROL INFORMATION. USE THE FOLLOWING PROJECT CONTROL, VERTICAL

POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

SURVEYING PARAMETERS

POSITIONING METHOD: GNSS RTN/CONVENTIONAL TRAVERSING MONUMENT TYPE: SET 5/8" REBAR AND CAPS

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88 GEOID: GEOID 12B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011) EPOCH 2010.00 ELLIPSOID: GRS80 MAP PROJECTION: LAMBERT COORDINATE SYSTEM: OHIO STATE PLANE (NORTH ZONE 3401) COMBINED SCALE FACTOR: 0.99992068 ORIGIN OF COORDINATE SYSTEM: NAD83 (2011)

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET. CONVERSION FACTOR: 1 METER = 3.2808333333 U.S. SURVEY FEET.

## CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS. DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 6 PM AND 7 AM, SATURDAYS BEFORE 8 AM, SUNDAYS, OR NEW YEARS DAY, GOOD FRIDAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, CHRISTMAS DAY, YOM KIPPUR AND ROSH HASHANAH. IN ADDITION DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASON-ABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

### 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, THE FOLLOWING PROVISIONS SHALL APPLY:

- 1. ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN THIRTY (30) DAY.
- 2. THE STORAGE OF EQUIPMENT, MATERIALS AND VEHICLES WITHIN THE HIGHWAY RIGHT OF WAY WILL BE PERMITTED. THE NUMBER OF AREAS AND EXACT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
- 3. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE STATE.

PROJECT. A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND

REMOVE ALL STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF STUMPS TO BE

REMOVED.
THE CONTRACTOR IS ADVISED THAT TREE REMOVAL FOR THE PROJECT WILL BE PERFORMED UNDER A SEPARATE CONTRACT. IT IS RECOMMENDED THAT THE CONTRACTOR PERFORM A SITE VISIT PRIOR TO BIDDING TO REVIEW THE EXISTING CONDITIONS FOR CLEARING AND GRUBBING NEEDS FOR THE PROJECT

<u>DIAMETER</u>	<u>NO. TRÉES</u>	<u>NO. STUMPS</u>	TOTAL
18"	0	1	1
20"	0	1	1
24"	0	2	2
28"	0	1	1

### SEEDING AND MULCHING

CLEARING AND GRUBBING

GRUBBING.

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

- 659, SOIL ANALYSIS TEST 1 EACH
- 659, TOPSOIL 198 CU. YD.
- 659, SEEDING AND MULCHING 1,782 SQ. YD.
- 659, REPAIR SEEDING AND MULCHING 89 SQ. YD
- 659, INTER-SEEDING 89 SQ. YD.
- 659. COMMERCIAL FERTILIZER 0.4 TON
- 659, LIME 0.37 ACRES
- 659, WATER 4.8 M. GAL.

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

### PROTECTION OF RIGHT-OF-WAY LANDSCAPING

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

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS.

## ROUNDING

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

#### PROTECTION OF RIGHT-OF-WAY LANDSCAPING (CONTINUED)

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. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. 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.

#### WORK LIMITS

UNITED 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.

#### 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 (ESA). 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.

## ITEM 611 - CONDUIT, MISC.: EXISTING SANITARY SEWER LINE LOCATE

THE CONTRACTOR SHALL PERFORM HORIZONTAL AND VERTICAL LINE LOCATES OF THE EXISTING SANITARY LINES AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL NEED TO VERIFY BOTH HORIZONTAL ALIGNMENT AND VERTICAL PROFILE OF PIPE WITH A MINIMUM OF FOUR (4) LOCATES PERFORMED BY AN ODOT PRE-QUALIFIED SUBSURFACE UTILITY LOCATE COMPANY. THIS WORK SHALL BE PERFORMED PRIOR TO ORDERING ANY MATERIALS NECESSARY TO CONSTRUCT CIP BOX CULVERT. IN ADDITION, THE CONTRACTOR WILL NEED TO PERFORM BOTH BEFORE AND AFTER VIDEO OF THE SANITARY LINE TO VERIFY THAT THE REMOVAL AND REPLACEMENT OF PORTIONS OF EXISTING BOX CULVERT HAS NOT DAMAGED THE EXISTING PIPE.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM 611, CONDUIT, MISC.: EXISTING SANITARY SEWER LINE LOCATE.

### ITEM 614 MAINTAINING TRAFFIC

ROAD CLOSURE OF SR 87 IS PROHIBITED. SHOULDERS ON SR 87 MAY BE CLOSED TO PROTECT TRAFFIC FROM ARRIVING AND DEPARTING CONSTRUCTION TRAFFIC AND CONCRETE PUMP OPERATIONS. TWO WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. SHOULDER ZONES AND DURATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL 14 DAYS BEFORE THEIR INSTALLATION.

	SHE	ET NUM.	_	_	_	_	_	PA	RT.	Ţ┯┍╻⋪	ITEM	GRAND	INITT	DECODIDATION	SEE	CULATEI
OFFICE CALCS										ITEM	EXT	TOTAL	UNIT	DESCRIPTION	SHEET NO.	CALCU
ALOO			+											ROADWAY		
										201	11000	LS		CLEARING AND GRUBBING, AS PER PLAN		
10										202	35100	10		PIPE REMOVED, 24" AND UNDER		
15										202	35200	15		PIPE REMOVED, OVER 24"		
648										203	10000	648	CY	EXCAVATION		4
357										203	20000	357	CY	EMBANKMENT		1
27										254	01000	27	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1 1/2"		
										40=		1.0				_
1.3			_				_			407 441	20000 50000	1.3		NON-TRACKING TACK COAT  ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN		-
-			+				1			441	30000	1	01	ASPITALI CONCILIL SUNI ACL COUNSE, TIPL 1, (440), PG04-22, ASPLIN PLAN		1
27										251	01000	27	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), 3"		
			1											EROSION CONTROL		_
243										601	34100	243	CY	ROCK CHANNEL PROTECTION, TYPE B WITHOUT FILTER		1
1										659	00100	1		SOIL ANALYSIS TEST		1
921										659	10000	1,921	SY	SEEDING AND MULCHING		1,
96										659	14000	96		REPAIR SEEDING AND MULCHING		1 7
96										659	15000	96	SY	INTER-SEEDING		
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213										659	00300	213	CY	TOPSOIL		] '
0.4										659	31000	0.4	ACRE	LIME		] ;
5.2										659	35000	5.2	MGAL	WATER		] :
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5,262										832	30000	15,262	EACH	EROSION CONTROL		┨.
														DRAINAGE		] ;
.74										602	20000	0.74		CONCRETE MASONRY		
10										611	04600	10		12" CONDUIT, TYPE C		
15										611	12100	15		27" CONDUIT, TYPE C		
										611	97300	LS		CONDUIT, MISC.:EXISTING SANITARY SEWER LINE LOCATE		
1										611	99654	1	EACH	MANHOLE ADJUSTED TO GRADE		
8										661	40020	8	EACH	LANDSCAPING DECIDUOUS TREE, 6' HEIGHT, ACER SACCHARUM		-
										000	44000	1.0		STRUCTURE 20 FOOT SPAN AND UNDER (CUY-87-15.12)		1
416							_		-	202	11202	LS	CY	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN		1
416 2,083							1		-	503 509	21100 10000	416 52,083		UNCLASSIFIED EXCAVATION  EPOXY COATED REINFORCING STEEL		+
372										510	10000	372		DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		-
18.7									<del> </del>	511	46010	18.7		CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING		1
			1							<u> </u>	10010					1
40.5										511	46510	40.5	CY	CLASS QC1 CONCRETE, FOOTING		
260										511	47011	260	CY	CLASS QC1 CONCRETE, CULVERT, AS PER PLAN		
39.2										511	50210	39.2		CLASS QC1 CONCRETE, SUBSTRUCTURE		
200										512	10100	200		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
612										512	33001	612	SY	TYPE 2 WATERPROOFING, AS PER PLAN		_
20										516	13600	29	SF	1" PREFORMED EXPANSION JOINT FILLER		-
29										518	21200			POROUS BACKFILL WITH GEOTEXTILE FABRIC		1
17 100										519	11100	17 100		PATCHING CONCRETE STRUCTURE, AS-DIRECTED		
,062										613	41301	1,062		LOW STRENGTH MORTAR BACKFILL (TYPE 2), AS PER PLAN		
,002										SPECIAL	51960000			PATCHING CONCRETE STRUCTURE, AS PER PLAN (SOUNDING SURVEY)		1
										01 2017 (2	0100000			TANGEMENT CONTENTS OF THE CONTENTS CONT		1 9
														INCIDENTALS		1 '
										614	11000	LS		MAINTAINING TRAFFIC		
										623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
							1			624	10000	LS		MOBILIZATION		I
15										623	40520	15		RIGHT-OF-WAY MONUMENT		
11										623	40000	11	EACH	MONUMENT ASSEMBLY REMOVED AND RESET		
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#### DESIGN LOADING

DESIGN LOADING: HL-93

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

#### DESIGN DATA

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CONCRETE CLASS QC1
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

### ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PI AN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. SHIELD, STABILIZE AND PROTECT ANY NEARY UNDERGROUND UTILITY, DRAINAGE OR SEWER LINES, AND MAN-HOLES OR CHAMBERS THAT ARE EXPOSED DURING THE ARCH OR CULVERT DEMOLITION. MAINTAIN THIS PROTECTION DURING CONSTRUCTION AS APPROVED BY THE ENGINEER SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

#### CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL. IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST, THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT. DUST. RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

#### SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

#### FOUNDATION BEARING RESISTANCE

HEADWALL AND WINGWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 1.6 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 2.2 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 6.1 KIPS PER SQUARE FOOT.

### ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL AND REPAIR OF SPALLED AND UNSOUND CONCRETE AND SUBSEQUENT CONCRETE PATCHING, IN ACCORDANCE WITH CMS ITEM 519, WHERE INDICATED IN THE PLANS AND AS DIRECTED BY THE ENGINEER. A UNITARY COST ONE (1) SQ. FT. HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES AND WILL BE PAID FOR AT THAT UNIT COST, FOR A QUANTITY AGREED TO BY THE ENGINEER, UPON REVIEW OF THE CONTRACTOR'S SOUNDING SURVEY (SEE ITEM SPECIAL BELOW).

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

### ITEM SPECIAL - PATCHING CONCRETE STRUCTURES, (SOUNDING SURVEY)

THIS ITEM SHALL INCLUDE A SURVEY BY THE CONTRACTOR TO DETECT AND MARK AREAS OF UNSOUND CONCRETE BY MANUALLY SOUNDING WITH A HAMMER, WHERE INDICATED IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RECORD THE AREAS, BOTH ALREADY SPALLED AND DETECTED BY SOUNDING, BY MARKING THE CONCRETE WITH HEAVY LUMBER CRAYON IN APPROXIMATELY RECTANGLE SHAPES AND SUBSHAPES, AND THEN MEASURING, MARKING THE PERIMETER DIMENSIONS ON THE CONCRETE. THE AREAS SHALL THEN BE RECORDED, TALLIED AND SUBMITTED TO THE ENGINEER FOR REVIEW.

CALC	DLG	2/24/2021
CHECKED:	SNS	5/21/2021

ESTIMATED QUANTITIES								
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION				
202	11202	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
503	21100	416	CY	UNCLASSIFIED EXCAVATION				
509	10000	52083	LB	EPOXY COATED REINFORCING STEEL				
510	10000	372	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT				
511	46010	18.7	CY	CLASS QC1 CONCRETE, RETAINING WALL NOT INCLUDING FOOTING				
511	46510	40.5	CY	CLASS QC1 CONCRETE, FOOTING				
511	47011	260	CY	CLASS QC1 CONCRETE, CULVERT, AS PER PLAN				
511	50210	39.2	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE				
512	10100	200	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)				
512	33001	612	SY	TYPE 2 WATERPROOFING, AS PER PLAN				
516	13600	29	SF	1" PREFORMED EXPANSION JOINT FILLER				
~~8t8~~	~~3t808~~~		CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
519	11100	100	<b>S</b> F	PATCHING CONCRETE STRUCTURE				
Wayer	mesosam	<del>wyw.</del>		SPECIAL PATCHING CONCRETE STRUCTURE, AS PER PLAN (SOUNDING SURVEY)				
613	41301	1062	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 2), AS PER PLAN				

ITEM 613 - LOW STRENGTH MORTAR, AS PER PLAN

PROVIDE TYPE 2 LOW STRENGTH MORTAR ONLY IN ACCORDANCE
WITH ITEM 613.03. OTHER LOW STRENGTH MORTAR TYPES ARE PROHIBITED.

DLG 02/25/21 STAHL SHEAFFER ENGINEERI STRUCTURE FILE NUMBER 1401 SOUTH MAIN STREET S 1807536 NORTH CANTON, OH 44

NED DRAWN REVIEWED DATE

DE DLG 02/25/
KED REVISED STRUCTURE FILE NUMB

SXXX 1807536

PDI PDI CHECK

ND ESTIMATED QUANTITIE UY-87-15.12 D RD.) OVER GRISWALD CREEK

GENERAL NOTES AND ESTIMA

CUY-87-15.12

CUY-087-15.12 PID No. 21806

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