

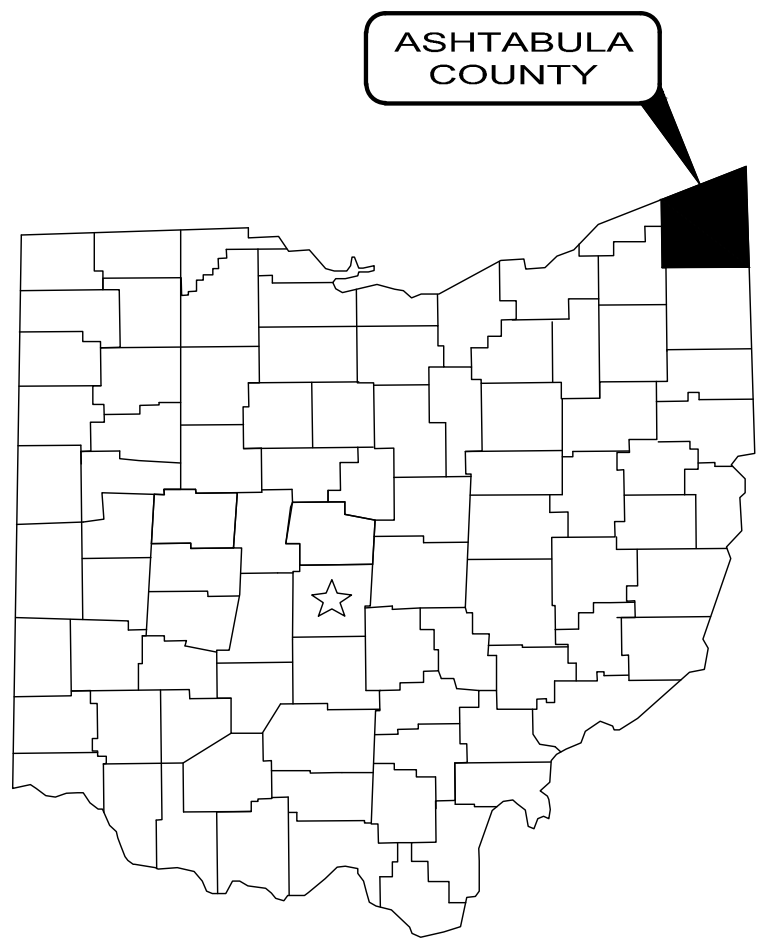
VILLAGE OF JEFFERSON

JEFFERSON WASTEWATER TREATMENT PLANT

CLARIFIER IMPROVEMENTS - PHASE 2

ASHTABULA COUNTY, OHIO

JULY 2026



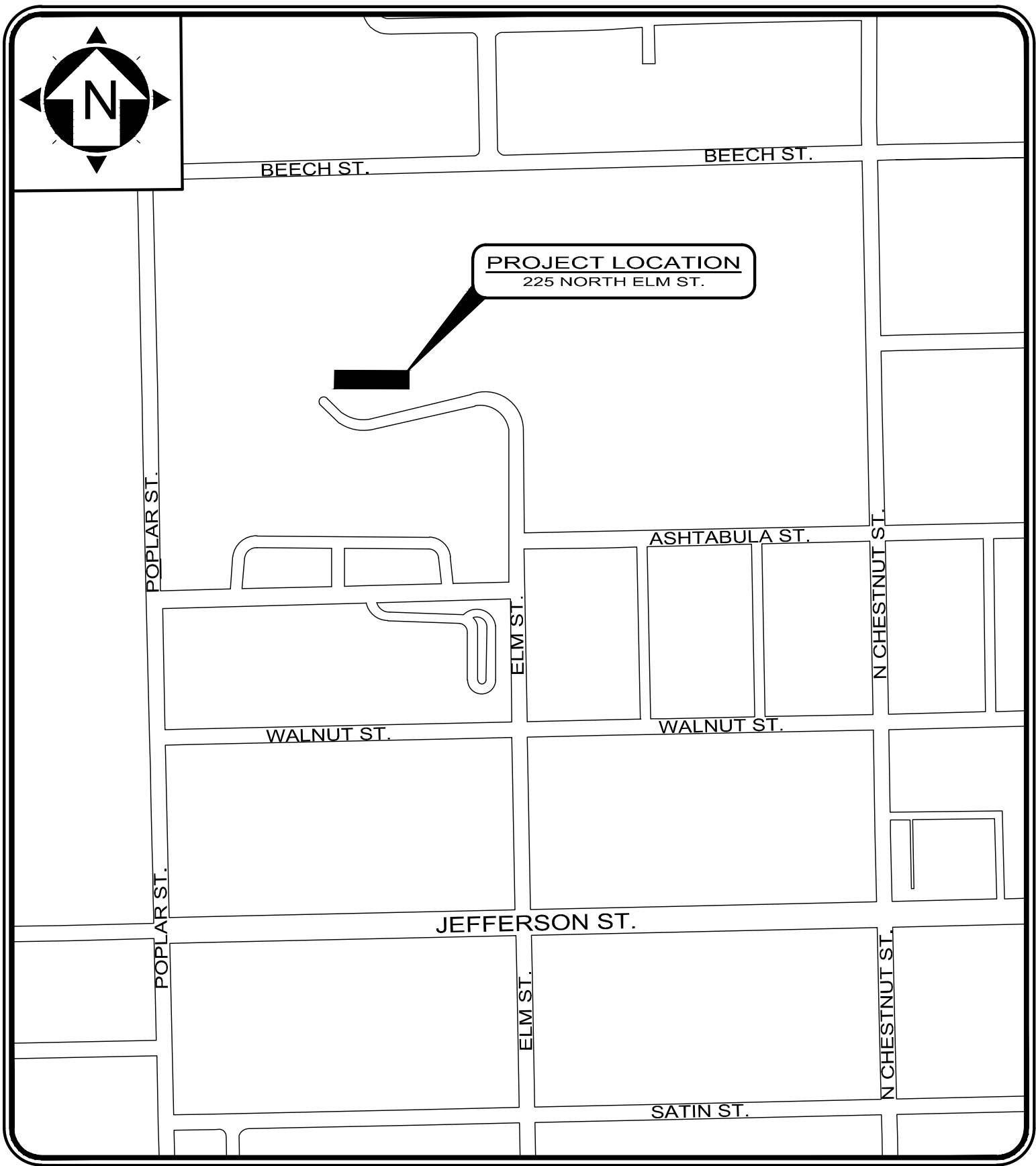


OHIO811
Before You Dig

1-800-362-2764

CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

1. THE SURVEY SHOWN ON THESE PLANS WAS OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR ANY OTHER PURPOSE.
2. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
3. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.



LOCATION MAP
SCALE: 1"=500'

OFFICIALS

MAYOR JIM CHIACCHIERO

VILLAGE ADMINISTRATOR ANDRIA MANOR

CLERK-TREASURER PATRICIA FISHER

RECREATION AND PARKS JAMIE DEAN

CHIEF OF POLICE CHRIS MACKENSEN

FIRE CHIEF CHRIS SNYDER

STREETS DEPARTMENT PAT MARTUCCIO

WASTE WATER DEPARTMENT GARY LICATE

MEMBERS OF COUNCIL

STEVE FEBEL

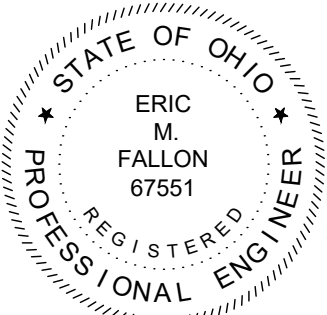
PAT MARTUCCIO

KEVIN ORVOS

KAREN RODERICK

STEVE SEKANINA

KATY WHITE-DREIER



Eric M. Fallon

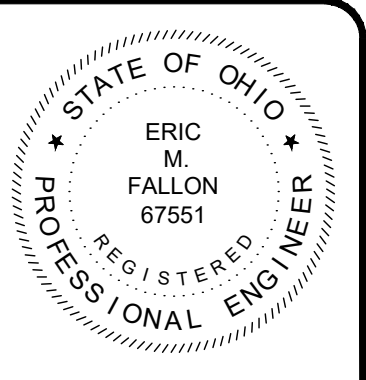
ERIC FALLON

P.E. No. E-85401

7/20/2026

DATE

ENGINEER'S PROJECT No. 241530



NO	REVISION		DATE	

SCALE: AS NOTED	DATE: 2/20/25	DESIGNED BY: RLM	DRAWN BY: RLM	CHECKED BY: GBC
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VILLAGE OF JEFFERSON JEFFERSON WASTEWATER TREATMENT PLANT CLARIFIER IMPROVEMENTS- PHASE 2 ASHTABULA COUNTY, OHIO	TITLE SHEET

PROJECT NO: 241530	
DRAWING NAME 00G-01	
SHEET 1	OF 15

1. THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY.
2. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE NEW IMPROVEMENTS SO AS TO HIGHLIGHT SPECIFIC TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
4. SYMBOLOGY OR DIAGRAMMATICAL LEGENDS MAY BE SHOWN ON INDIVIDUAL SHEETS FOR SCHEDULES, DIAGRAMS, DETAILS, SCHEMATICS OR EQUIPMENT.

1. CT CONTRACTUAL NOTES ARE DEPICTED WITH A HEXAGON, SQUARE, CIRCLE OR TRIANGLE. ALL OTHER EXISTING WRITTEN CALLOUTS SHOWN ON THE REUSED SCANNED PLANS FROM PREVIOUS CONTRACT DRAWINGS, (BACKGROUND IMAGES), SECTIONS & DETAILS ARE FOR EXISTING CONDITIONS AND REFERENCE ONLY, MANY OF THOSE NOTES FROM THE SCANNED DRAWINGS PERTAIN TO PREVIOUS WORK DONE. THESE BACKGROUND IMAGES ARE SHOWN IN GRAY.

CH = CHAIN
EM = ELECTRIC MOTOR
ES = EXTENSION STEM
FB = FLOOR BOX
FS = FLOOR STAND
GE = GEAR
HC = HYDRAULIC CYLINDER
HW = HANDWHEEL
LE = LEVER
LW = "L" WRENCH
ON = OPERATING NUT
PC = PNEUMATIC CYLINDER
PD = PNEUMATIC DIAPHRAGM
TW = "T" WRENCH
VB = VALVE BOX

BE = BELL
CM = COMPRESSION
FL = FLANGED
GR = GROOVED
LU = LUG
MJ = MECHANICAL JOINT
NPT = NATIONAL PIPE THREAD
RJ = RESTRAINED JOINT
PE = PLAIN END
S = SOLDERED
SJ = SLIP JOINT (PUSH ON)
SW = SOLVENT WELDED
TH = THREADED
W = WELDED

BR = BRASS
BS = BLACK STEEL
BZ = BRONZE
CI = GRAY CAST IRON
CU = COPPER
CS = CAST IRON
CT = CARBON STEEL TUBING
DIP = DUCTILE IRON PIPE
DR = DIAMETER RATIO
FRP = FIBERGLASS REINFORCED PLASTIC
GS = GALVANIZED STEEL
HDPE = HIGH-DENSITY POLYETHYLENE PIPE
PVC = POLYVINYL CHLORIDE PIPE
SS = STAINLESS STEEL
STL = STEEL PIPE
SDR = STANDARD DIAMETER RATIO
SCH = SCHEDULE

BG	- BULKHEAD GATE	PRV	= PRESSURE REDUCING VALVE
SG	- SLIDE GATE	PT	= PRESSURE TEMPERATURE RELIEF
SP	- STOP PLATE	RF	= RATE-OF-FLOW CONTROLLER
SL	- STOP LOG	SV	= SOLENOID VALVE
ALUM	- ALUMINUM	SU	= SURGE VALVE
SS	- STAINLESS STEEL	TE	= TELESCOPING VALVE
CI	- CAST IRON	TM	= TEMPERATURE CONTROL VALVE
POLY	- POLYMER		
B/C	- BOTTOM OF CHANNEL		
T/C	- TOP OF CHANNEL		
A	- HEIGHT		
B	- WIDTH		

AC = AIR CHECK VALVE
AN = ANGLE VALVE
AR = AIR RELEASE VALVE
AV = AIR & VACUUM VALVE
BA = BALL VALVE
B'FLY = BUTTERFLY VALVE
BK = BACKPRESSURE VALVE
BP = BACKFLOW PREVENTER
CV = CHECK VALVE
CO = CONE VALVE
GV = GATE VALVE
GL = GLOBE VALVE
KG = KNIFE GATE VALVE
KN = KNUF VALVE
MV = MUD VALVE
PD = PLUG DRAIN VALVE
PF = PRESSURE RELIEF
PG = PRESSURE REGULATOR
PI = PINCH VALVE
PV = PLUG VALVE
PRV = PRESSURE REDUCING VALVE
PT = PRESSURE TEMPERATURE RELIEF
RF = RATE-OF-FLOW CONTROLLER
SV = SOLENOID VALVE
SU = SURGE VALVE
TE = TELESCOPING VALVE
TM = TEMPERATURE CONTROL VALVE

AC = AIR COMPRESSOR
AER = AERATOR
BFP = BELT FILTER PRESS
CLS = CLASSIFIER
C = COMMUNITOR
CMP = COMPACTOR
CFD = CHEMICAL FEEDER
CNV = CONVEYOR
CNT = CENTRIGUE
CC = CALIBRATION CYLINDER
CFD = CHEMICAL FEEDER
CP = CONTROL PANEL
CR = CRANE
D = DECANTER
DR = DRIVE
DFL = DISC FILTER
ELEC = ELECTRICAL
F = FAN
FL = FILTER
FM = FLOW METER
GBT = GRAVITY BELT THICKENER
GR = GRINDER
GEN = GENERATOR
HB = HOSE BIB
MECH= MECHANICAL
M = MOTOR
MX = MIXER
P = PUMP
PS = PUMP STATION
SMP = SAMPLER
SCR = SCREEN

ADDL	= ADDITIONAL
AGG	= AGGREGATE
ALUM.	= ALUMINUM
ARCH	= ARCHITECTURAL
BTWN	= BETWEEN
CWL	= COUNTERLINE
CLR	= CLEAR
CONC	= CONCRETE
CONT	= CONTINUOUS
DWL	= DOWEL(S)
EF	= EACH FACE
EL	= ELEVATION
EMBED	= EMBEDMENT
EW	= EACH WAY
EX	= EXISTING
FG	= FINISH FLOOR
FG	= FINISH GRADE
FND	= FOUNDATION
GALV	= GALVANIZED
HORIZ	= HORIZONTAL
HP	= HIGH POINT
LLV	= LONG LEG VERTICAL
LP	= LOW POINT
MAX	= MAXIMUM
MFR	= MANUFACTURER
MIN	= MINIMUM
REF	= REFERENCE
REINF	= REINFORCING
STRC	= STRUCTURE
T/	= TOP OF
TYP	= TYPICAL
UNO	= UNLESS NOTED OTHERWISE
VERT	= VERTICAL

DESCRIPTION

REVISION DESCRIPTION

FOR PARTIAL SECTIONS

SECTION PATH

SECTION IDENTIFICATION LETTER OR NUMBER

SHEET LOCATION BY NUMBER OR NAME

DETAIL IDENTIFICATION LETTER OR NUMBER

6 **DETAIL** SCALE: 1/4" = 1'-0"

DETAIL SHEET LOCATION

12'-4" (REF.)

REFERENCE DIMENSIONS ARE GIVEN AS
INFORMATION OF EXPECTED DESIGN.
THEY ARE CALCULATED DIMENSIONS
THAT MAY VARY AND ARE INTENDED TO
BE FIELD VERIFIED.

	WELDED PIPING		PIPE THROUGH SECTION
	FLG PIPING		PIPE CONTINUOUS BREAK
	MJ PIPING		PIPE BASE SUPPORT
	CAPPED OR PLUGGED		CONCRETE PIPE SUPPORT
	PIPE COUPLING		EXPANSION JOINT
	FLOW METER		

BUTTERFLY CHECK GATE PLUG PRESSURE REDUCING

F X F X F
 W / BLIND FLANGE

F X F X MJ

MJ X F X MJ
 SEE NOTE

MJ X F X PE
 W / MJ PLUG

MJ X F X PE

F X F X PE
 CENTERED IN WALL, TYP.

PE X F X PE

NOTE:
 WALL CASTINGS REQUIRING BELL ENDS (IN LIEU OF MJ SHALL BE NOTED AS "B". ALL FLANGED (F) AND MECHANICAL JOINT (MJ) FLUSH WITH WALL (SEE DRAWINGS) ARE TO BE DRILLED AND TAPPED FOR STUDS.

Sheet List Table		
SHEET NUMBER	SHEET TITLE	SHEET NAME
GENERAL - 00 SERIES		
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2	LEGENDS ABBREVIATIONS AND SHEET INDEX	00G-02
3	GENERAL NOTES	00G-03
4	GENERAL NOTES	00G-04
FINAL SETTLING TANKS - 10 SERIES: STRUCTURAL		
5	STRUCTURAL NOTES	10S-01
6	STRUCTURAL NOTES (CONTINUED)	10S-02
7	STRUCTURAL NOTES (CONTINUED)	10S-03
8	GENERAL STRUCTURAL REPAIRS	10S-04
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12	PROCESS EQUIPMENT REPLACEMENT	10D-01
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15	ELECTRICAL NOTES, LEGEND & 1-LINE	10E-01

GENERAL

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE PLANS AND TECHNICAL SPECIFICATIONS, VISIT THE PROJECT SITE AND NOTIFY IN WRITING THE PROJECT ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND SUBMIT ANY NECESSARY MODIFICATIONS TO THE ENGINEER FOR APPROVAL.
3. ANY REVISIONS TO THE ACCEPTED CONSTRUCTION PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A CURRENT SET OF "AS BUILT" DRAWINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
6. NO WORK MAY COMMENCE WITHOUT AN EXECUTED NOTICE TO PROCEED.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH OSHA AND ENGINEER SAFETY REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL VISITORS, EMPLOYEES AND WORKERS ON THE CONSTRUCTION SITE.
8. ANY DAMAGE TO UTILITIES DURING THIS WORK BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR SHALL CONSTRUCT THIS PROJECT IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL BUILDING CODES.
10. ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
11. ANY DISTURBED AREAS NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN THIRTY DAYS OF DISTURBANCE SHALL BE TEMPORARILY STABILIZED AND SEEDED.
12. ALL POLLUTANTS OTHER THAN SEDIMENT THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND LEGALLY DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORM OR SURFACE WATERS. POLLUTANTS OF CONCERN INCLUDE, BUT ARE NOT LIMITED TO, FUELS, LUBRICANTS, SOLVENTS, CONCRETE AND CONSTRUCTION MATERIALS.
13. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SECURITY OF ALL STORED MATERIALS ON OWNER'S SITE.
14. THE CONTRACTOR SHALL COORDINATE WITH OWNER THE STORAGE OF STORED MATERIALS AND REMOVED EXISTING EQUIPMENT TO BE RETAINED.
15. ACCESS MUST BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.
16. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN PEDESTRIAN, LOCAL ROADWAY AND DRIVEWAY ACCESS AT ALL TIMES. CLOSING OFF OF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD MAY NOT OCCUR WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER.
17. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE "UNIFORM MANUAL OF TRAFFIC CONTROL".
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNING AND TRAFFIC CONTROL AS DIRECTED BY THE LOCAL MUNICIPALITY. ALL SIGNS AND MATERIAL USED SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
19. ACCESS TO ALL DRIVEWAYS WILL BE MAINTAINED AT ALL TIMES EXCEPT THE TIME WHEN UTILITY INSTALLATION AND PAVEMENT REPLACEMENT WILL NOT PERMIT.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING A SITE FOR DISPOSAL OF ALL EXCAVATED MATERIAL THAT IS UNSUITABLE FOR USE AS BACKFILL AND ALL OTHER EXCESS EXCAVATED MATERIALS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE LOCATION OF THE DISPOSAL SITE AND WRITTEN PERMISSION FOR USE OF THE SITE FROM THE PROPERTY OWNER.
21. THE CONTRACTOR MUST COORDINATE HIS WORK WITH THE WWTP SUPERINTENDENT. THE CONTRACTOR MUST MAINTAIN ADEQUATE ACCESS FOR ALL MAINTENANCE VEHICLES AS WELL AS LOCAL RESIDENTS THAT UTILIZE THE SURROUNDING WALKWAYS. THE SITE AT WHICH THE WORK IS TO BE PERFORMED WILL BE MAINTAINED DURING THE PERFORMANCE OF THIS CONTRACT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF AND AVOID INTERFERENCE TO FACILITY OPERATION.
22. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY FACILITIES AS REQUIRED TO MAINTAIN SANITARY FLOWS DURING THE COURSE OF THE WORK.
23. THE INFORMATION PROVIDED WITHIN THESE PLANS IS SPECIFIC TO THE ANTICIPATED WORK AREAS AND IS NOT INCLUSIVE OF ALL TOPOGRAPHIC AND UTILITY FEATURES OUTSIDE OF THE AREA.
24. CONTRACTOR SHALL CLEAR ALL DEBRIS, DIRT, VEHICLES, AND EQUIPMENT FROM WALKWAY AND TRAFFIC ROUTES AT THE CONCLUSION OF WORK EACH DAY.
25. OSHA PROHIBITS CRANE AND BACKHOE OPERATIONS WITHIN 10 FEET OF ENERGIZED PRIMARY CONDUCTORS. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT OF POLES, RELOCATION OF POLES, AND RUBBER COVERING OF ENERGIZED CONDUCTOS MAY BE REQUIRED. THE COORDINATION AND COST OF THESE SERVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MAY RESTRAIN POLES IF THE METHOD OF SUPPORT HAS BEEN SUBMITTED AND APPROVED BY THE UTILITY COMPANY.
26. ALL EXCESS EXCAVATION SHALL BE DISPOSED OF IN A LOCATION TO BE SELECTED BY THE CONTRACTOR. ALL DUMP SITES FOR THE DISPOSAL OF EXCESS MATERIAL SHALL HAVE WRITTEN PERMISSION FROM THE OWNER AND SHALL BE APPROVED IN ADVANCE BY THE VILLAGE ENGINEER. THE CONTRACTOR(S) SHALL PROVIDE TO THE ENGINEER AND OEPA-DEFA THE LOCATION(S) FOR EXCESS SOIL PLACEMENT PRIOR TO DISPOSAL. THE CONTRACTOR(S) SHALL ENSURE THAT THE SOIL IS NOT PLACED IN ANY WATER BODY, FLOODPLAIN, WETLAND, DRAINAGE COURSE OR ENVIRONMENTALLY SENSITIVE AREA EVEN WITH THE PERMISSION OF THE PROPERTY OWNER. THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE OWNER IF THE MATERIAL IS TO BE DISPOSED OF WITHIN THE VILLAGE LIMITS.
27. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY, WHEN ORDERED BY THE ENGINEER, WATER OR CALCIUM CHLORIDE FOR THE ALLEVATION OR PREVENTION OF DUST NUISANCE ORIGINATING FROM CONSTRUCTION ACTIVITIES. CALCIUM CHLORIDE SHALL NOT BE UTILIZED ON OR BE ALLOWED TO TRACK ONTO PAVED SURFACES. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL. THE COST OF DUST CONTROL SHALL BE INCLUDED IN THE BID PRICES FOR ALL ITEMS OF THE PROPOSAL.

PROTECTION AGAINST VANDALISM:

1. THE REMOVAL AND DISPOSAL OF ALL CONSTRUCTION DEBRIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ULTIMATE DISPOSAL. THE DISPOSAL OF ALL CONSTRUCTION DEBRIS SHALL BE AT AN APPROVED LANDFILL. THE DISPOSAL OF ALL "CLEAN" WASTE MATERIAL SHALL BE AT AN APPROVED LANDFILL. THE DISPOSAL OF ALL "CLEAN" WASTE MATERIAL SHALL BE AT APPROVED LANDFILLS AND/OR SITES APPROVED BY THE OWNER AND ENGINEER. THE DISPOSAL OF SEDIMENTS AND WASTEWATER SLUDGE SHALL BE AT AN APPROVED LANDFILL. THE CONTRACTOR SHALL OBTAIN ALL APPROVALS, PERMITS, LICENSES, ETC. FROM LOCAL, STATE, AND FEDERAL AGENCIES AND/OR PRIVATE LANDOWNERS. THE CONTRACTOR SHALL FURNISH THE ENGINEER A COPY OF ALL APPROVALS OR WRITTEN PERMISSION PRIOR TO DISPOSING OF ANY WASTE AT SAID SITE.

NOISE CONTROL PRACTICES:

1. CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS AS REQUIRED BY SAFETY STANDARDS AND LOCAL NOISE ORDINANCE.
2. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO DAYTIME HOURS UNLESS OTHERWISE DIRECTED BY THE OWNER.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS:

1. THE CONTRACTOR WILL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, AND STAKES AND IN CASE OF DISTURBANCE, HE SHALL ENGAGE A REGISTERED SURVEYOR TO REPLACE THEM AT HIS EXPENSE AND SHALL BE RESPONSIBLE FOR ANY MISTAKES THAT MAY BE CAUSED BY THEIR LOSS OR DISTURBANCE.

STATIONING AND LOCATIONS:

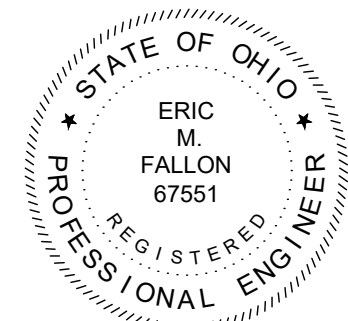
1. ALL LOCATIONS AND ITEMS CALLED OUT BY STATION ARE SUBJECT TO ADJUSTMENT IN THE FIELD AS APPROVED BY THE ENGINEER.

PROTECTION AGAINST VANDALISM:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SUFFICIENT SITE SECURITY MEASURES AND / OR PERSONNEL TO PROTECT ALL NEW CONCRETE WORK FROM VANDALISM UNTIL THE CONCRETE IS SUFFICIENTLY CURED AT NO ADDITIONAL COST.
2. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS/HER OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER. RESTORATION SHALL INCLUDE SEEDING AND MULCHING DISTURBED AREAS, RESTORATION OF EXISTING DRIVES, AND FINAL CLEAN UP.
3. ALL EXISTING STORM AND SANITARY SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM AS DIRECTED BY THE ENGINEER AT NO COST TO THE OWNER.

EXISTING UTILITIES:

1. EXISTING UTILITIES SHOWN ARE FROM BEST AVAILABLE RECORDS AND FIELD INVESTIGATIONS AND ARE NOT NECESSARILY COMPLETE OR EXACT. THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE BY PRE-EXCAVATING ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED AND EXISTING UTILITIES. THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH THE UTILITY OWNER.
2. WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE. THE COST FOR ANY REQUIRED PROTECTION OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THAT OF THE VILLAGE.
3. THE CONTRACTOR SHALL BE REQUIRED, AT HIS EXPENSE, TO DO EVERYTHING NECESSARY TO PROTECT, SUPPORT AND SUSTAIN ALL SANITARY SEWERS, STORM DRAINS, WATER, PROCESS OR GAS PIPES, SERVICE PIPES, ELECTRIC LIGHTS, POWER AND TELEPHONE POLES, CONDUIT AND OTHER FIXTURES LAID ACROSS OR ALONG THE SITE OF THE WORK. THE ENGINEER AS WELL AS THE COMPANY OR CORPORATION OWNING SAID PIPES, POLES OR CONDUITS MUST BE NOTIFIED OF THE SAME BY THE CONTRACTOR, BEFORE ANY SUCH FIXTURES ARE REMOVED OR DISTURBED. IN CASE ANY OF THE SAID SEWER, DRAIN, GAS, PROCESS OR WATER PIPES, SERVICE PIPES, ELECTRIC LIGHT, POWER AND TELEPHONE POLES, CONDUITS OR OTHER FIXTURES ARE DAMAGED THEY SHALL BE REPAIRED BY THE AUTHORITIES HAVING CONTROL OF THE SAME AND THE EXPENSE OF SAID REPAIRS SHALL BE DEDUCTED FROM THE MONIES WHICH ARE DUE OR TO BECOME DUE THE CONTRACTOR UNDER THIS CONTRACT.
4. EXISTING UTILITY (GAS, ELECTRICAL, CABLE TELEVISION, TELEPHONE, WATER LINE, STORM OR SANITARY SEWER, WATER LINE OR STORM OR SANITARY SEWER APPURTENANCE, ETC.) IN OR OUTSIDE THE CONSTRUCTION LIMITS DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. INDIVIDUAL SANITARY, STORM, GAS, WATER, ELECTRIC AND TELEPHONE AND CABLE SERVICE CONNECTIONS ARE NOT SHOWN. THE CONTRACTOR SHALL LOCATE AND PROTECT SERVICE CONNECTIONS THROUGHOUT THE COURSE OF THE WORK. IN THE EVENT SERVICE CONNECTIONS ARE BROKEN OR DISTURBED, THE CONTRACTOR SHALL REPAIR OR REPLACE THE SERVICE CONNECTION TO THE SATISFACTION OF THE OWNER AT NO ADDITION COST TO THE OWNER
5. SHOULD IT BECOME NECESSARY TO CHANGE THE POSITION OR TEMPORARILY REMOVE ANY STORM DRAIN, SANITARY SEWER, ELECTRIC CONDUITS, WATER PIPES, GAS PIPES, PROCESS OR OTHER PIPES OR WIRES IN ORDER TO PERMIT THE CONTRACTOR TO USE A PARTICULAR METHOD OF CONSTRUCTION OR IN ORDER TO CLEAR THE STRUCTURES BEING BUILT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE LOCATION AND CIRCUMSTANCES IMMEDIATELY
6. NO SURFACE, GROUND OR TRENCH WATER SHALL BE ALLOWED TO FLOW INTO EXISTING SANITARY SEWERS.



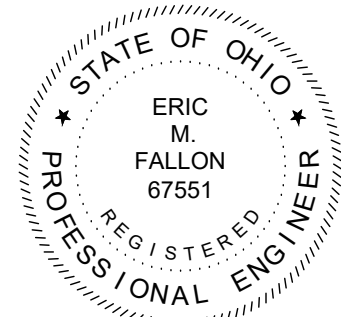
SCALE:	N/A	NO	REVISION	DATE
DATE:	4/20/2026			
DESIGNED BY:	MLB			
DRAWN BY:	MLB			
CHECKED BY:	EMF			

JEFFERSON WASTEWATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS- PHASE 2
VILLAGE OF JEFFERSON
ASHTABULA COUNTY, OHIO

GENERAL - 00 SERIES

GENERAL NOTES

PROJECT NO:	
241530	
DRAWING NAME	
00G-03	
SHEET	OF
3	15



SCALE:	N/A	NO	REVISION	DATE
DATE:	4/20/2026			
DESIGNED BY:	MLB			
DRAWN BY:	MLB			
CHECKED BY:	EMF			

VILLAGE OF JEFFERSON

JEFFERSON WASTEWATER TREATMENT PLANT CLARIFIER IMPROVEMENTS- PHASE 2

ASHTABULA COUNTY, OHIO

GENERAL - 00 SERIES

GENERAL NOTES

PROJECT NO:	
241530	
DRAWING NAME	
00G-04	
SHEET	OF
4	15

1. PROHIBITED CONSTRUCTION ACTIVITIES

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS, FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER;
2. LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS;
3. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS;
4. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE;
5. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO;
6. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM;
7. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA;
8. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS;
9. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT;
10. DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION;
11. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES;
12. RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER;
13. OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OR 8:00 AM AND 5:00 P.M. OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS; AND
14. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS:
 - BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
 - BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR
 - BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.
15. SOIL AND FILL SHALL NOT BE STOCKPILED IN THE FLOODPLAIN.

2. MITIGATIVE MEASURES

EROSION/SEDIMENT CONTROL

- SITE CLEARING AND GRUBBING SHALL NOT COMMENCE UNTIL SUCH TIME THAT THE CONTRACTOR IS PREPARED TO START CONSTRUCTION. REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION OF ACTUAL FACILITIES; PROTECT THE REST TO PRESERVE THEIR AESTHETIC, HABITAT, AND EROSION CONTROL VALUES.
 2. IMMEDIATELY FOLLOWING SITE AND ACCESS CLEARING, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED. THEY WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION UNTIL FINAL SEEDING AND SITE RESTORATION OCCURS.
 3. AT THE WWTP CONSTRUCTION SITE, INSTALL SEDIMENT BASINS AND DIVERSION DIKES BEFORE DISTURBING THE LAND THAT DRAINS INTO THEM.
 4. DIVERSION CHANNELS WILL BE CONSTRUCTED AROUND THE WWTP CONSTRUCTION SITE TO COLLECT RUNOFF AND PREVENT SILT AND OTHER ERODIBLE MATERIALS FROM ENTERING LOCAL DRAINAGE COURSES. DIVERSION CHANNELS WILL FLOW TO TEMPORARY SEDIMENT BASINS, AND ARE TO BE STABILIZED THROUGH SEEDING, RIP-RAPPING, OR LINING THEM WITH PLASTIC.
 5. EXISTING TOPSOIL WILL BE STOCKPILED AND REPLACED UPON FINAL GRADING OF THE WWTP CONSTRUCTION SITE.
 6. EXTENSIVE AREAS OF STOCKPILED TOPSOIL AT THE WWTP CONSTRUCTION SITE ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING OR COVERING SUCH AS WITH ANCHORED STRAW MULCH. SILT BARRIERS WILL BE INSTALLED DOWN GRADIENT OF THESE AREAS ON CONTOUR AND WITH THEIR ENDS UP SLOPE OF THE CONTOUR TO PREVENT SILT LADEN RUNOFF FROM ENTERING WATERWAYS OR STORM SEWERS. WITHIN 15 DAYS OF COMPLETION OF CONSTRUCTION, ANY REMAINING SOIL MUST EITHER BE REMOVED OR PERMANENTLY STABILIZED.
 7. SILT FENCES SHOULD BE TRENCHED SIX TO TWELVE INCHES DEEP, THE FABRIC LAID IN THE TRENCH, AND THE SOIL PROPERLY BACKFILLED INTO THE TRENCH TO PREVENT UNDERCUTTING.
 8. WHERE TRENCH EXCAVATION OCCURS PARALLEL TO ANY WATERWAY, A VEGETATED BARRIER SHOULD BE MAINTAINED BETWEEN THE STREAM AND THE CONSTRUCTION SITE. ALL TRENCH SPOILS WILL BE STOCKPILED ON THE SIDE OF THE TRENCH AWAY FROM THE WATERWAY, AND A LINE OF SILT BARRIERS WILL BE ESTABLISHED ALONG THE EDGE OF CONSTRUCTION ON THE CONTOUR BETWEEN THE TRENCH AND THE WATERWAY.
 9. NO MORE THAN 200 FEET OF TRENCH SHALL BE OPEN AT ANY GIVEN TIME. TRENCH OPENING AND LAYING OF PIPE SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA. ALL TRENCHES ARE TO BE BACKFILLED AND COMPACTED IMMEDIATELY AFTER PIPE INSTALLATION. IMMEDIATELY FOLLOWING THE BACKFILLING OF THE TRENCH, THE GROUND SURFACE WILL BE ROUGH GRADED TO THE EXISTING CONTOURS TO ALLOW FOR PROPER DRAINAGE, AND WILL BE SEEDED AND/OR MULCHED IN STAGES TO PREVENT EROSION.
 10. ANY DISTURBED AREA THAT WILL NOT BE ACTIVELY UNDER CONSTRUCTION FOR A PERIOD OF 15 DAYS OR MORE WILL BE TEMPORARILY STABILIZED IMMEDIATELY BY SEEDING AND MULCHING OR BY ANCHORED STRAW MULCH.
 11. AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA IN STAGES WITH PERENNIAL VEGETATION INSTALLED ACCORDING TO OHIO EPA (OR EQUIVALENT) STANDARDS AND SPECIFICATIONS. AFTER FINAL SOIL SETTLING OVER THE SANITARY SEWER, OUTFALL SEWER, AND FORCE MAIN ALIGNMENTS, THE CONTRACTOR SHALL BRING THE TRENCH BACK TO GRADE IF NECESSARY, PLACE TOPSOIL, AND FINE GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF THAT SECTION OF PIPE. FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY FOR DRAINAGE AND AESTHETIC REASONS.
 12. BORING PITS (FOR JACK AND BORE LOCATIONS) SHALL BE SURROUNDED WITH SILT BARRIERS TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL. STORM SEWER INLETS WILL BE SURROUNDED WITH SILT BARRIERS TO PREVENT SILTATION.
 13. SLOPES EXCEEDING 15 PERCENT OR THAT TEND TO BE UNSTABLE REQUIRE SPECIAL TREATMENT SUCH AS WATER DIVERSION BERMS, SODDING, OR THE USE OF JUTE OR EXCELSIOR BLANKETS.
 14. WHEN BORROW MATERIAL IS OBTAINED FROM OTHER THAN COMMERCIALY OPERATED SOURCES, EROSION OF THE BORROW SITE WILL BE SO CONTROLLED BOTH DURING AND AFTER COMPLETION OF THE WORK THAT EROSION WILL BE MINIMIZED AND SEDIMENT WILL NOT ENTER STREAMS OR OTHER BODIES OF WATER. WASTE OR DISPOSAL AREAS AND CONSTRUCTION ROADS SHALL BE LOCATED AND CONSTRUCTED IN A MANNER THAT WILL KEEP SEDIMENT FROM ENTERING STREAMS. TEMPORARY EROSION CONTROL BARRIERS AND LIMITED SITE CLEARING WILL BE USED AS NEEDED.
 15. IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROLS IN GOOD OPERATING CONDITION DURING THE SUSPENSION OF THE WORK. ALSO, WHEN SEASONAL CONDITIONS PERMIT AND THE SUSPENSION OF WORK IS EXPECTED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR SHALL SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN THE WORK IS STOPPED.
 16. INSTALL THE ABOVE EROSION AND SEDIMENT CONTROL MEASURES, AS APPROPRIATE, REFERRING TO OHIO EPA, STORM WATER TECHNICAL ASSISTANCE, RAINWATER AND LAND DEVELOPMENT MANUAL STANDARDS AND SPECIFICATIONS (FORMERLY ODNR) OR EQUIVALENT FOR PARTICULAR TECHNIQUES. THESE MEASURES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- LINK:
<http://epa.ohio.gov/portals/35/storm/technicalassistance/RLD11-6-14a>

2. MITIGATIVE MEASURES - CONTINUED

TRAFFIC CONTROL

17. AT LEAST ONE LANE OF TRAFFIC MUST BE MAINTAINED ALONG THE TRAVEL ROUTE TO THE CONSTRUCTION SITE.
 18. ACCESS MUST BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.
 19. NO TRENCH WILL BE LEFT OPEN AT THE END OF A WORK DAY, WHERE PRACTICAL, ANY OPEN TRENCH WILL BE PROPERLY IDENTIFIED AND BARRICADED FOR SAFETY PURPOSES.
 20. ANY CONSTRUCTION EQUIPMENT OR EXCAVATIONS NEAR ROADS MUST BE MARKED WITH LIGHTS, REFLECTORS, OIL LANTERNS, OR SMUDGE POTS.
 21. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, WARNING SIGNS, DANGER SIGNALS, FLAG PERSON(S), WATCHERS, AND ALL OTHER APPROPRIATE PRECAUTIONS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR SAFETY.
 22. PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE, OR BOULEVARD, THE CONTRACTOR MUST HAVE CONSENT FROM LOCAL OFFICIALS AND THE ENGINEER.
- AIR POLLUTION / NOISE CONTROL
23. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO DAYTIME HOURS.
 24. CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.
 25. ALL CONSTRUCTION VEHICLES SHOULD BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.
 26. PERIODICALLY CHECK EQUIPMENT AND MACHINERY FOR PROPER TUNING TO MINIMIZE EXHAUST EMISSIONS AND NOISE.
 27. UNPAVED AREAS WILL BE WET DOWN (AS NECESSARY) DURING CONSTRUCTION TO MINIMIZE DUST GENERATION.

BE WET DOWN (AS NECESSARY)
RATION

DEWATERING

28. ALL Dewatering flows are to be settled in siltation basins or directed through filtering devices before discharge to stabilized sites, such as streams or storm sewers; not onto exposed soils, stream banks, or any other site where the flow could cause erosion.
29. Silt from construction operations shall not be permitted to enter the storm sewer system. When construction occurs near storm sewer inlets, erosion control measures such as inlet filters and hay bales shall be used to prevent silt from entering the storm sewers.
30. Convey water from the construction site in a closed conduit. Do not use trench excavations as temporary drainage ditches.

ARCHAEOLOGICAL / HISTORICAL RESOURCES

31. CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE SECTION 149.53 TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORIC SITE PRESERVATION BOARD OF ARCHAEOLOGICAL DISCOVERIES LOCATED IN THE PROJECT AREA, AND TO COOPERATE WITH THOSE ENTITIES IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

CONTACT: STATE HISTORIC PRESERVATION OFFICE
PHONE: 1-614-298-2000

TREE REMOVAL

TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHENEVER POSSIBLE. IF THE PROJECT REQUIRES TREES MUST BE CUT, THIS MUST OCCUR BEFORE OCTOBER 1, AND MARCH 31. INDIANA BATTS ARE HIGHLY-DEPENDENT UPON TREES INCLUDING DEAD AND DYING TREES OF SPECIES WITH EXFOLIATING BARK, CREVICES, OR CAVITIES IN UPLAND AREAS OR RIPARIAN CORRIDORS AND LIVING TREES WITH EXFOLIATING BARK, CAVITIES, OR HOLLOW AREAS FORMED FROM BROKEN BRANCHES OR TOPS. IF SUITABLE TREES MUST BE CUT DURING THE PROHIBITED TIME PERIOD, A NET SURVEY MUST BE CONDUCTED TO DETERMINE THE PRESENCE OR ABSENCE OF INDIANA BATTS PRIOR TO CUTTING.

JEFFERSON WASTEWATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS-PHASE 2
VILLAGE OF JEFFERSON
ASHTABULA COUNTY, OHIO

FINAL SETTLING TANKS - 10 SERIES

STRUCTURAL NOTES

COMMENTARY

1. THE WASTEWATER TREATMENT SYSTEM INCLUDES THREE CLARIFIERS (FINAL SETTLING TANKS), AN INFLUENT DISTRIBUTION CHAMBER (SLUDGE WELL), AND AN UNDERGROUND PUMP ROOM. EACH CLARIFIER HAS AN EFFLUENT DROP BOX THAT IS ATTACHED TO CONCRETE CHANNELS. THE CHANNELS RUN TO THE DISTRIBUTION CHAMBER. THE INFLUENT DISTRIBUTION CHAMBER IS CENTRALLY LOCATED BETWEEN CLARIFIER #1 AND #3. THE UNDERGROUND PUMP ROOM IS LOCATED BETWEEN CLARIFIERS #2 AND #3. THE PUMP ROOM SHARES THE COMMON WALLS OF THE CLARIFIERS AND THE DISTRIBUTION CHAMBER. ACCESS TO THE PUMP ROOM IS FROM A SET OF STAIRS WITHIN THE CLARIFIER (FINAL SETTLING TANK) CONTROL BUILDING. THE CONTROL BUILDING BEARS ON THE PUMP ROOM ROOF/TOP SLAB.

2. THE FOLLOWING DIMENSIONS AND ELEVATIONS ARE BASED ON THE CONSTRUCTION DOCUMENTS DATED OCTOBER 1970. FIELD VERIFY ALL DIMENSIONS AND GRADES IN THE CONSTRUCTION DOCUMENTS. ADJUST EXISTING GRADES TO THE CURRENT DATUM.

3. THE CLARIFIER INSIDE DIAMETER IS 35'-0" WITH 11'-4" TALL WALLS BY 12" WIDE. THE EFFLUENT DROP BOX WALLS ARE 4'-0" TALL BY 8" WIDE. THE TOP OF THE CLARIFIER WALLS AND DROP BOX WALLS ARE AT ELEVATION 881.00". THE STRUCTURAL SLAB THAT FORMS THE ROOF OF THE PUMP ROOM IS 8" THICK AND SLOPES FROM ELEVATION 879.67". THERE IS A STRUCTURAL SLAB OVER THE INFLUENT DISTRIBUTION CHAMBER THAT PARTIALLY COVERS THE EFFLUENT CHANNELS. THE SLAB OVER THE CHAMBER IS 8" THICK AND THE SLAB OVER CHANNELS IS 6" THICK AND IS AT ELEVATION 881.00". THE SLAB OVER CHANNELS IS PARTIALLY CANTILEVERED. THE SLABS-ON-GRADE ARE NOT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. THE SLOPES AND THICKNESS ARE NOT DOCUMENTED. A FEW OF THE STORM INLET RIM ELEVATIONS ARE DOCUMENTED.

4. THE STRUCTURAL CONSTRUCTION LIMITS OF THE PROJECT INCLUDE THE FOLLOWING:

A. SELECTIVE DEMOLITION AND REPLACEMENT OF CONCRETE WALLS OF THE CLARIFIERS AND THE EFFLUENT DROP BOXES. THE DEMOLITION IS LIMITED TO THE TOP FOUR FEET OF THE WALLS UNLESS ADDITIONAL ISSUES ARE IDENTIFIED DURING THE REHABILITATION.

B. THE REMOVAL, CLEANING, STORAGE AND RE-INSTALLATION OF THE CLARIFIERS ALUMINUM GUARDRAIL SYSTEM. THE GUARDRAIL SYSTEM SHALL BE INSPECTED PRIOR TO REMOVAL. DAMAGED PARTS AND/OR PIECES SHALL BE IDENTIFIED AND REPLACED. SUBMIT A LIST OF DAMAGED PARTS AND/OR PIECES TO THE OWNER IMMEDIATELY AFTER REMOVAL. THE PUMP ROOM AND EXPANSION JOINTS SHALL BE IN THE ORIGINAL LOCATION. AT THE LOCATION OF THE EXPANSION JOINTS, VERIFY THAT THERE IS A SLIP JOINT AT EACH HORIZONTAL MEMBER, PROVIDE JOINTS AS NEEDED.

C. SELECTIVE DEMOLITION AND OVERLAY OF THE PUMP ROOM TOP SLAB (STRUCTURAL SLAB), BEAMS, AND THE INFLUENT DISTRIBUTION CHAMBER STRUCTURAL SLAB. THE WORK REQUIRES LIMITED CONCRETE SAW CUTS AS SOME LOCATIONS.

D. DEMOLITION AND REPLACEMENT OF FOUR SLABS (SLAB-IN-GRADE) WITH STORM WATER INLETS. THE STORM DRAIN ASSEMBLY SHALL BE RE-USED. THE WORK REQUIRES LIMITED CONCRETE SAW CUTS AT SOME LOCATIONS.

E. DESIGN, INSTALLATION AND REMOVAL OF CONSTRUCTION SHORING.

5. THE WASTEWATER TREATMENT PLANT SHALL CONTINUE OPERATING DURING CONSTRUCTION. THE CONSTRUCTION OPERATION SHALL NOT PROHIBIT THE WASTEWATER TREATMENT OPERATIONS. ONE CLARIFIER SHALL BE REHABILITATED AT A TIME WHILE THE OTHER TWO CLARIFIERS ARE OPERATING. UPGRADES TO THE CLARIFIER PROCESS EQUIPMENT, ELECTRICAL SYSTEMS AND PERSONNEL ACCESS SHOULD OCCUR DURING THE INDIVIDUAL CLARIFIER REHABILITATION.

6. THE INFLUENT DISTRIBUTION CHAMBER AND THE EFFLUENT CHANNELS OF THE OPERATING CLARIFIERS SHALL BE FUNCTIONING THROUGHOUT THE CONSTRUCTION. ISOLATION OF THE EFFLUENT CHANNELS, IF NEEDED, CAN UTILIZE TEMPORARY BULKHEADS, ONLY WITH PRIOR APPROVAL FROM THE OWNER.

7. THE CONTRACTOR SHALL PRODUCE AND SUBMIT A STAGED CONSTRUCTION SCHEDULE TO THE OWNER AND THE ENGINEER FOR APPROVAL. THE SCHEDULE SHALL IDENTIFY, BUT NOT BE LIMITED TO, THE STAGING, THE STARTING AND END DATE, THE STRUCTURE, THE WORK TASKS TO BE COMPLETED ALONG WITH THE TIME FRAME FOR EACH TASK. THE OWNER PREFERS THAT THE ORDER OF REPAIR FOR THE CLARIFIERS IS #3 FIRST AND #1 LAST.

II. GENERAL

1. WORK SHALL BE IN ACCORDANCE WITH CONSTRUCTION DOCUMENT (PROJECT DRAWING AND SPECIFICATIONS) AND THE LATEST EDITION OF THE APPLICABLE LOCAL AND STATE BUILDING CODES.

A. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW THE EXISTING CONSTRUCTION DOCUMENTS FOR THE STRUCTURES NOTED ABOVE. AT A MINIMUM, REVIEW THE FOLLOWING DOCUMENTS:

i. VILLAGE OF JEFFERSON, WASTEWATER TREATMENT PLANT IMPROVEMENTS AND ADDITIONS, CONTRACT A, B, C AND D. DATED OCTOBER 1970

ii. VILLAGE OF JEFFERSON, WASTEWATER TREATMENT PLANT, EXPANSION CONTRACT 84-1 DATED DECEMBER 1989

B. IF CONFLICT IS FOUND BETWEEN THE SPECIFICATIONS AND THESE NOTES, THE REQUIREMENTS OF THE SPECIFICATIONS SHALL GOVERN.

C. ALL WORK SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE OHIO BUILDING CODE (LATEST EDITION) OR THE CONSTRUCTION DOCUMENTS, WHICHEVER IS MORE STRINGENT.

2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VISIT THE SITE AND SPECIFIC LOCATIONS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING CONDITIONS. THE CONTRACTOR SHALL COORDINATE THE VISIT WITH THE OWNER AND THE ENGINEER.

A. THE CONTRACTOR SHALL FIELD VERIFY ANY DIMENSIONS AND ELEVATIONS AS NOTED ON THE DRAWINGS OR AS MAY BE REQUIRED, PRIOR TO CONSTRUCTION, TO MINIMIZE FIELD CHANGES.

B. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY INCONSISTENCIES BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS THAT COULD AFFECT THE CONSTRUCTION.

C. DIMENSIONS AND ELEVATIONS MARKED "REF" ARE FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO USING THEM FOR ANY CONSTRUCTION.

3. DETAILED SHOP DRAWINGS OF ALL STRUCTURAL COMPONENTS SHALL BE SUBMITTED TO THE ENGINEER "FOR REVIEW" PRIOR TO FABRICATION.

4. DETAILED SUBMITTALS OF ALL CONCRETE AND CONCRETE RESTORATION PRODUCTS SHALL BE SUBMITTED TO THE ENGINEER "FOR REVIEW" PRIOR TO PROCUREMENT/USE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

6. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER TO AVOID SYSTEM/OPERATION INTERRUPTIONS.

7. MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHALL BE STORED AT OWNER'S DESIGNATED LOCATIONS.

8. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE WORK AREA AND SURROUNDING PREMISES FREE OF WASTE, SURPLUS MATERIALS, RUBBISH, AND DEBRIS RESULTING FROM THE WORK.

9. ALL CONTRACTORS SHALL CONFORM TO THE SAFETY REQUIREMENTS OF THE OWNER, AIA DOCUMENTS A201, OSHA SAFETY AND HEALTH STANDARDS, OWNERS SAFETY REGULATIONS, AND ANY OTHER LOCAL AUTHORITY IN CONNECTION WITH THE PROJECT. ALL EXCAVATIONS SHALL BE PROPERLY SHORED IN ACCORDANCE WITH OSHA STANDARDS AND REQUIREMENTS. ENGINEER DOES NOT ASSUME ANY RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY.

10. ALL MATERIALS AND EQUIPMENT FURNISHED WILL BE NEW AND OF GOOD QUALITY, FREE

FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT BEING SUBSTITUTED. ALL SPECIFIED MATERIALS SHALL BE USED/INSTALLED IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS, INCLUDING ANY PREPARATION WORK SPECIFIED THEREIN REQUIRED FOR AN ACCEPTABLE INSTALLATION.

DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS ONLY. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS AT ALL TIMES. ANY DISCREPANCIES SHOULD BE IDENTIFIED PRIOR TO COMMENCEMENT OF WORK.

THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL WORK WITH THE WORK OF OTHER TRADES, MATERIAL SUPPLIERS, AND MANUFACTURERS.

ALL PROJECT TESTING REQUIREMENTS ARE IN FORCE AND SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION AND DESIGN DRAWING REQUIREMENTS. TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

A. ALL REQUIRED MATERIAL TESTING SHALL BE PERFORMED AT THE EXPENSE OF THE CONTRACTOR AND PERFORMED BY AN APPROVED TESTING AGENCY OR LABORATORY. TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

B. THE OWNER SHALL EMPLOY A TESTING AGENCY TO PERFORM SPECIAL INSPECTIONS. CONTRACTOR SHALL ADHERE TO THE STRUCTURAL QUALITY ASSURANCE PLAN AS PER SECTION 17 OF THE IBC 2018. THE CONTRACTOR SHALL COORDINATE WITH THE SPECIAL INSPECTOR.

C. ANY SUPPORT SERVICES PERFORMED BY THE ENGINEER DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ENGINEER ARE SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. THEY DO NOT GUARANTEE OR CONTRACTOR PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

THE CONTRACTOR SHALL PERFORM CONSTRUCTION ACTIVITIES IN A SEQUENCE THAT IS BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE, WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED. CONSTRUCTION MEANS AND METHODS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY DIRECTION FROM THE OWNER AND/OR THE ENGINEER THAT CAN BE CONSTRUED AS A MEANS AND METHODS ITEM SHALL BE TREATED AS SUGGESTION.

THE CONTRACTOR SHALL REVIEW/EVALUATE DESIGN DOCUMENTS PRIOR TO COMMENCEMENT OF WORK. IF ANY DISCREPANCY OR CONFLICT IS DEEMED TO EXIST, OBTAIN CLARIFICATION FROM THE ENGINEER THROUGH THE REQUEST FOR INFORMATION (RFI) PROCESS BEFORE PROCEEDING. ONCE WORK BEGINS, THE CONTRACTOR ACCEPTS ALL RESPONSIBILITIES FOR THE COORDINATION AND COMPLETENESS OF THE CONSTRUCTION DOCUMENTS.

STRUCTURAL COMPONENTS ARE DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER REHABILITATION OF EACH STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE, SEQUENCE, ENSURE THE SAFETY OF THE CONSTRUCTION PERSONNEL, THE STRUCTURE AND ITS COMPONENT PARTS, AND ADJACENT STRUCTURES DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF SHORING AND/OR BRACING THAT MAY BE NECESSARY.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO EMPLOY THE SERVICES OF PROFESSIONAL CONSULTANTS AS NECESSARY TO DETERMINE CONSTRUCTION LOADS, SHORING METHODS AND TYPE, INSTALLATION METHODS, SHORING DESIGN, DETAILING, AND FABRICATION OF SUPPORTS REGARDING CONCRETE FORMING AND RE-SHORING, ETC. SUBMIT SHORING LOCATIONS AND SEALED CALCULATIONS PRIOR TO THE START OF EACH CONSTRUCTION PHASE. CONSTRUCTION SHORING REQUIREMENTS:

A. PUMP ROOM STRUCTURAL SLAB AND BEAMS SHALL BE SHORED PRIOR TO THE SELECTIVE DEMOLITION OF CLARIFIER #2 AND #3 WALLS AND THE PUMP ROOM SLAB MODIFICATIONS. SHORING OF THE SLAB AND BEAMS SHALL REMAIN IN-PLACE THROUGHOUT THE REHABILITATION OF THE CLARIFIER AND THE PUMP ROOM SLAB. THE SHORING SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER. AT A MINIMUM, THE SHORING SHALL REMAIN IN-PLACE UNTIL THE PROPOSED CLARIFIER CONCRETE AND THE PUMP ROOM OVERLAY CONCRETE HAS REACHED ITS 28-DAY DESIGN STRENGTH.

B. CONCRETE TROUGH SUPPORT BRACKETS SHALL BE UNLOADED PRIOR TO THE SELECTIVE DEMOLITION OF THE CLARIFIER. EFFLUENT TROUGHS, PROCESS EQUIPMENT, AND ANY ITEM ATTACHED TO THE CONCRETE TROUGH SUPPORT BRACKETS SHALL BE REMOVED PRIOR TO THE SELECTIVE DEMOLITION. EFFLUENT TROUGHS, PROCESS EQUIPMENT, AND ANY ITEM ATTACHED TO THE CONCRETE TROUGH SUPPORT BRACKETS SHALL NOT BE INSTALLED UNTIL THE PROPOSED CLARIFIER CONCRETE HAS REACHED ITS 7-DAY DESIGN STRENGTH.

C. THE END OF THE CLARIFIER EFFLUENT DROP BOX SLAB SHALL BE SHORED PRIOR TO THE DEMOLITION OF THE EFFLUENT DROP BOX WALLS OR THE SELECTIVE DEMOLITION OF CLARIFIER. THE SHORING SHALL REMAIN IN-PLACE UNTIL THE PROPOSED CLARIFIER CONCRETE AND THE EFFLUENT DROP BOX WALLS HAVE REACHED ITS 28-DAY DESIGN STRENGTH.

D. THE CANTILEVER EDGE OF THE INFLUENT DISTRIBUTION CHAMBER STRUCTURAL SLAB SHALL BE SHORED PRIOR TO THE SLAB SCARIFYING AND CONCRETE OVERLAY. THE SHORING SHALL REMAIN IN-PLACE UNTIL THE CONCRETE OVERLAY HAS REACHED ITS 14-DAY DESIGN STRENGTH.

IF UNDOCUMENTED UTILITIES OR STRUCTURAL COMPONENTS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CEASE WORK IMMEDIATELY AND NOTIFY THE ENGINEER FOR FURTHER DIRECTION.

THE CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS OR DEMOLISHED MATERIALS ON STRUCTURAL SLABS OR STRUCTURAL MEMBERS.

AT COMPLETION OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE TEMPORARY CONSTRUCTION BARRIERS, CONSTRUCTION EQUIPMENT/MATERIALS, RESTORE AREA CLEANLINESS, AS WELL AS CLEAN CONSTRUCTION DUST/DIRT/DEBRIS RESIDUE FROM AFFECTED BLDG COMPONENTS AND OWNER EQUIPMENT TO RETURN SITE TO PRE-EXISTING CONSTRUCTION CONDITIONS.

A. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE PRE-CONSTRUCTION AND POST-CONSTRUCTION VIDEOS OF THE AFFECTED AREAS OF THE PREMISES FOR DOCUMENTATION PURPOSES.

NO SUBSTITUTIONS OF MATERIAL WILL BE ALLOWED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

DESIGN CRITERIA:

A. COVERING CODES, REQUIREMENTS, DESIGN STANDARDS AND SPECIFICATIONS: BUILDING CODE(S): 2024 OHIO BUILDING CODE BASED ON THE 2018 INTERNATIONAL BUILDING CODE

B. REFERENCE DESIGN STANDARDS:

- ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE
- ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT
- ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
- ACI 350 CODE REQUIREMENTS FOR ENVIRONMENTAL CONCRETE STRUCTURES AND COMMENTARY
- CRSI REINFORCING BAR DETAILING (MANUAL OF STANDARD PRACTICE)
- ALUMINUM DESIGN MANUAL
- PROJECT DESIGN SPECIFICATIONS
- ALL REFERENCE STANDARDS HEREIN ARE TO BE THE MOST RECENT ISSUE IN EFFECT AS OF THE DATE OF THESE DOCUMENTS, UNLESS NOTED OTHERWISE ON THE PLANS

SHOP DRAWINGS AND SUBMITTALS

A. REPRODUCTION OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED.

B. ELECTRONIC DRAWING FILES WILL NOT BE PROVIDED TO THE CONTRACTOR.

C. REVIEW OF SHOP DRAWINGS WILL BE FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS, IF APPLICABLE, AND CONSTRUCTION DOCUMENT DETAILS. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THE FULL RESPONSIBILITY TO COMPLY WITH THE CONSTRUCTION DOCUMENTS.

D. THE STRUCTURAL QUALITY ASSURANCE PLAN AND SPECIFICATIONS IDENTIFY THE REQUIRED SUBMITTALS. PRIOR TO (OR WITH) THE FIRST SUBMITTAL, THE CONTRACTOR SHALL SUBMIT A LIST OF ALL REQUIRED SUBMITTALS FOR ENGINEER'S REVIEW.

E. DEFERRED SUBMITTALS

i. DEFERRED SUBMITTALS INCLUDE THOSE PORTIONS OF THE PROJECT THAT ARE FURNISHED BY THE CONTRACTOR AND DESIGNED BY SOMEONE OTHER THAN THE ENGINEER OF RECORD AND ARE SUBMITTED AT THE TIME OF THE APPLICATION. DEFERRED SUBMITTALS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL PRIOR TO FABRICATION AND INSTALLATION.

ii. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTALS:

- SHALL BE INCLUDED IN THE CONTRACTOR'S SCOPE OF SERVICES AND SHALL BE SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE. DESIGN OF DEFERRED SUBMITTALS SHALL BE IN ACCORDANCE WITH THE GOVERNING BUILDING CODE INDICATED ABOVE.
- SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

iii. SUBMITTAL DOCUMENTS MAY ALSO INCLUDE SUBSTANTIATING CALCULATIONS, WHEN REQUIRED.

F. THE FOLLOWING SHALL BE CONSIDERED DEFERRED SUBMITTALS: TEMPORARY SHORING.

TEMPORARY EXCAVATION

1. EXISTING GROUND AND ANY ACCOMPANYING PAVEMENT ALONG THE PERIMETER OF AND ADJACENT TO CLARIFIER (SETTLING TANK) REPAIR ZONES SHALL BE REMOVED AS REQUIRED TO TEMPORARILY LOWER THE GRADE ELEVATION 6"± BELOW THE HORIZONTAL SAWCUT LINE WITHIN THE DESIGNATED REPAIR AREAS:

A. EXCAVATED SOIL SHALL BE STORED ON SITE FOR REINSTALLATION FOLLOWING COMPLETION OF CONSTRUCTION. STORAGE LOCATION SHALL BE PER OWNER DIRECTION.

2. ENCOUNTERED FILL SHOULD BE CONSIDERED AS UNSTABLE TYPE "C" SOIL. IN-SITU SOIL SHALL BE DEWATERED AS NECESSARY TO MAINTAIN GROUND WATER ELEVATION AT LEAST 3 FEET BELOW THE HORIZONTAL SAWCUT ELEVATION FOR THE DURATION OF THE PROJECT.

3. THE CONTRACTOR SHALL MAINTAIN SAFE SIDE SLOPES FOR ALL EXCAVATIONS OR SHORE/BOX AS REQUIRED BY OSHA AND/OR OTHER PERTINENT BUILDING CODES.

4. EXCAVATION SAFETY IS THE CONTRACTOR'S RESPONSIBILITY. SHEETING AND BRACING MAY BE REQUIRED TO MAINTAIN SAFE EXCAVATIONS AND MINIMIZE DISTURBANCE TO EXISTING UTILITIES AND STRUCTURES.

SELECTIVE DEMOLITION

1. INDICATED STRUCTURAL SLABS, NEIGHBORING SOG AREAS AND TANK WALL EXTENTS SHALL BE DEMOLISHED TO THE LIMITS SHOWN ON THE DESIGN DRAWINGS, ONLY. CONTRACTOR SHALL EXERCISE CARE NOT TO CUT INTO CONCRETE THAT IS TO REMAIN OR DAMAGE SLAB/BEAM REINFORCING AND IMPLEMENT NECESSARY MEANS TO PROTECT THE FOLLOWING FROM DAMAGE APART FROM THE DESIGNATED DEMOLITION:

A. INTEGRAL/UNDERGROUND CONCRETE PUMP ROOM STRUCTURE INCLUDING SLAB, BEAMS AND WALLS.

B. ADJACENT CONSTRUCTION TO REMAIN.

C. DISTRIBUTION CHAMBER.

2. PRIOR TO INITIATION OF SAW-CUTTING AND DEMOLITION WORK, CONTRACTOR SHALL PROVIDE/INSTALL/MAINTAIN SHORING, BRACING, AND TEMPORARY STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE STABILITY AND PREVENT UNEXPECTED OR UNCONTROLLED MOVEMENT, SETTLEMENT, OR COLLAPSE OF CONSTRUCTION BEING DEMOLISHED AND CONSTRUCTION AND FINISHES TO REMAIN. STRENGTHEN OR ADD NEW SUPPORTS WHEN REQUIRED DURING PROGRESS OF REMOVAL WORK. DESIGN AND INSTALLATION OF SHORING/BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SHORING/BRACING SHALL REMAIN INSTALLED UNTIL THE STRENGTH LEVEL OF THE NEWLY PLACED CONCRETE HAS REACHED ITS SPECIFIED DESIGN STRENGTH.

3. ALL SAW-CUTS SHALL BE TRUE, LEVEL AND PLUMB TO MAINTAIN PROPER ALIGNMENT/RECONSTRUCTION.

A. SAW-CUTTING SHALL BE DONE IN A MANNER TO AVOID CROSS CUTTING CORNERS AND OVER CUTTING INTO AREAS OF EXISTING CONCRETE TO REMAIN. DRILL HOLES AND OR CORE HOLES TO NEATLY CREATE THE CORNERS AND GRIND OR HAND CHIP AS NECESSARY. COMPLY WITH OSHA 1926.1153.

4. PRIOR TO SAW-CUTTING, CONTRACTOR SHALL LAYOUT ALIGNMENT AND PATTERN IDENTIFYING DEMOLITION AREAS AND MARK ACCORDINGLY TO AVOID SAW-CUTTING CONCRETE TO REMAIN ADVERSELY AFFECTING STRUCTURAL INTEGRITY OF ADJOINING STRUCTURES AND/OR OWNER'S ABILITY TO MAINTAIN PLANT OPERATION.

5. REMOVE CONCRETE TO THE DEPTH OR LOCATION AS IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. IF CONCRETE IS DEGRADED AT DETERMINED LOCATION, IMMEDIATELY CONTACT THE ENGINEER.

A. REMOVE MORTAR USING ABRASIVE BLASTING, WATER BLASTING, SHOTBLASTING, WIRE BRUSHING, AND/OR LIGHT WEIGHT PNEUMATIC CHIPPING HAMMER TO REACH A SOUND, SOLID SUBSTRATE. REMOVE MORTAR FROM EXPOSED REINFORCING.

B. DO NOT USE CHIPPING HAMMERS LARGER THAN 20 LBS. FOR THIS WORK. DO NOT USE METHODS THAT WILL CAUSE CRACKING TO THE REMAINING CONCRETE SURFACE.

C. REMOVE LOOSE CONCRETE AND DEGRADED CONCRETE.

D. SOUND ALL CONCRETE SURFACES.

E. ROUGHENED CONCRETE SURFACE/INTERFACE TO 3/8-INCH AMPLITUDE. PRIOR TO PLACEMENT OF CONCRETE, THE SURFACE SHALL BE THOROUGHLY CLEAN AND APPLY BONDING AGENT.

F. PROTECT REINFORCING FROM CORROSION. PRIOR TO INSTALLING LENTON REBAR COUPLER, CLEAN REINFORCING TO CLEAN WHITE METAL.

6. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION JOBSITE MEETING WITH EMPLOYEES AND SUBCONTRACTORS ALIKE TO CONVEY IMPORTANCE OF MAINTAINING PLANT OPERATIONS VIA PHASED CONSTRUCTION/DEMOLITION WITH INSTRUCTION TO EXERCISE CARE AND PERFORM DUE DILIGENCE TO AVOID DAMAGE TO AREAS OF EXISTING STRUCTURES THAT MUST REMAIN INTACT AND UNDAMAGED.

7. DEMOLITION AND/OR CONSTRUCTION DEBRIS SHALL NOT BE PERMITTED TO FREEFALL AND IMPACT THE EXISTING STRUCTURE, EQUIPMENT, AND UTILITIES. EFFLUENT SHALL NOT BE EXPOSED TO DEMOLITION AND/OR CONSTRUCTION DEBRIS. DEMOLITION AND/OR CONSTRUCTION DEBRIS WOULD BE DETRIMENTAL TO PROCESS EQUIPMENT. THE CONTRACTOR SHALL IMPLEMENT NECESSARY MEANS TO PROTECT THE EXISTING STRUCTURE, EQUIPMENT AND UTILITIES FROM DAMAGE.

8. THE CONTRACTOR SHALL TAKE APPROPRIATE STEP TO CONTROL DUST FROM CONCRETE REMOVAL.

MATERIAL REMOVED AS PART OF THE DEMOLITION WORK SHALL BE REMOVED AND DISPOSED OF LEGALLY OFF-SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.

10. DISTRIBUTION CHAMBER GRATING PANELS SHALL BE REMOVED/SCRAPPED AND SUBSEQUENTLY REPLACED IN ACCORDANCE WITH SECTION XII.

11. CLARIFIER (SETTLING TANK) AND DISTRIBUTION CHAMBER GUARDRAIL SHALL BE REMOVED/SALVAGED FOR REINSTALLATION IN ACCORDANCE WITH SECTION XII, IF APPROVED IN ADVANCE BY THE OWNER.

12. REFER TO SECTION VII FOR SCARIFICATION REQUIREMENTS REGARDING SURFACE OF THE UNDERGROUND PUMP ROOM SLAB.

CAST-IN-PLACE CONCRETE.

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).

2. CONCRETE WORK SHALL CONFORM WITH THE LATEST EDITION OF THE FOLLOWING ACI CODES:

- ACI 117 --- STANDARD SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS
- ACI 301 --- SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
- ACI 305R --- HOT WEATHER CONCRETING
- ACI 308 --- COLD WEATHER CONCRETING
- ACI 308R --- GUIDE FOR CONSOLIDATION OF CONCRETE
- ACI 318 --- BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- ACI 350 --- CODE REQUIREMENTS FOR ENVIRONMENTAL CONCRETE STRUCTURES

3. CONCRETE MIX DESIGNS SHALL BE PROPORTIONED IN ACCORDANCE WITH SPECIFICATION SECTION 030000 "CONCRETE WORK", IN CONJUNCTION WITH THE FOLLOWING:

A. FINAL CLARIFIERS (SETTLING TANKS) & DISTRIBUTION WELL.

- i. CONCRETE SHALL BE CLASS "D" NORMAL WEIGHT AIR ENTRAINED CONCRETE WITH A MAXIMUM WATER/CEMENT RATIO OF 0.40 AND DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500PSI. CONTAIN A HIGH RANGE WATER-REDUCING ADMIXTURE AND INCLUDE FLY ASH OR GGBFS POZZOLAN ADMIXTURE IN ACCORDANCE WITH SPECIFICATION CONSTRAINTS.
- ii. ADDITIONALLY, CONCRETE MIX SHALL CONTAIN XYPEX ADMIX C500 CEMENTITIOUS CRYSTALLINE CONCRETE WATERPROOFING ADMIXTURE AS MANUFACTURED BY THE XYPEX CHEMICAL CORPORATION (SUBSTITUTIONS NOT PERMITTED). XYPEX ADMIX SHALL BE ADDED TO THE CONCRETE MIX AT THE TIME OF BATCHING AT A RATE OF 2%-3% BY WEIGHT OF TOTAL CEMENTITIOUS CONTENT AND BE MIXED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND REQUIREMENTS.
- iii. MAX. SLUMP SHALL BE 3" PRIOR TO ADDITION OF THE PLASTICIZER AND 8" FOLLOWING ADDITION OF THE PLASTICIZER.

B. MISC. CONCRETE PAVEMENT, SIDEWALKS, STAIRS, ETC.

- i. CONCRETE SHALL BE CLASS "C" NORMAL WEIGHT AIR ENTRAINED CONCRETE WITH A MAXIMUM WATER/CEMENT RATIO OF 0.50, DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000PSI AND CONTAIN A HIGH RANGE WATER-REDUCING ADMIXTURE.
- ii. ADDITIONALLY, CONCRETE MIX SHALL CONTAIN NYLON MONOFILAMENT SYNTHETIC FIBER SECONDARY REINFORCING. FIBERS SHALL BE ADDED TO THE CONCRETE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AT A MINIMUM DOSAGE RATE OF 1.5 LBS/CUBIC YARD IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.
- iii. MAX SLUMP SHALL BE 4" PRIOR TO ADDITION OF THE PLASTICIZER AND 8" FOLLOWING ADDITION OF THE PLASTICIZER.

C. PUMP ROOM STRUCTURAL SLAB

- i. REFER TO SECTION VII "CONCRETE OVERLAY" NOTE FOR MICRO-SILICA MODIFIED (MSM) CONCRETE MIX SPECIFICATION.

D. CALCIUM CHLORIDE THYOCYANATES OR ADMIXTURES CONTAINING MORE THAN 0.1 PERCENT CHLORIDE IONS ARE NOT PERMITTED.

E. PRODUCT REPRESENTATIVE FOR THE XYPEX PRODUCT LINE IS AS FOLLOWS:

XYPEX CHEMICAL CORPORATION
6164 VENICE DR., COMMERCE, MI 48382
CELL: 248-320-8157
MAT.BURZLAFF@XYPEX.COM

4. READY-MIX CONCRETE SHALL COMPLY WITH SPECIFICATION REQUIREMENTS AND ASTM C94 FOR HOT AND COLD WEATHER PLACEMENT OF CONCRETE.

A. USE BLANKETS AS REQUIRED FOR COLD WEATHER CONCRETING; DO NOT USE ACCELERATING ADMIXTURES.

5. MIX DESIGN(S) SHALL BE SUBMITTED TO THE ENGINEER "FOR REVIEW" AT LEAST 15 DAYS PRIOR TO START OF WORK; DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED BY ENGINEER.

A. WHEN ACCEPTABLE RECORD OF TEST RESULTS ARE NOT AVAILABLE FROM THE CONCRETE PRODUCTION FACILITY, CONCRETE PROPORTIONS SHALL BE ESTABLISHED BASED UPON TRIAL MIXTURES. AT LEAST THREE (3) DIFFERENT WATER-CEMENT RATIOS ENCOMPASSING THE REQUIRED AVERAGE STRENGTH OF 5,700PSI SHALL BE MADE. AT LEAST THREE (3) TEST CYLINDERS FOR EACH TEST AGE SHALL BE MADE.

6. THE SURFACES OF NEW CONCRETE SHALL BE FINISHED IN ACCORDANCE WITH THE "CONCRETE SURFACE SCHEDULE" ON DRAWING 105-03.

7. ADMIXTURES SHALL CONTAIN NO MORE THAN 0.05% CHLORIDE IONS BY WEIGHT OF CEMENT WHEN TESTED IN ACCORDANCE WITH AASHTO T260.

8. CONCRETE SHALL BE PROPORTIONED, BATCHED, MIXED, PLACED, CONSOLIDATED, AND CURED IN ACCORDANCE WITH ACI 301,304,308,309 AND 318. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN ACCORDANCE WITH ACI 304 AND ACI 309.

9. THE CONTRACTOR SHALL KEEP A COPY OF "FIELD REFERENCE MANUAL: STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI 301 WITH SELECTED ACI REFERENCES", (ACI PUBLICATION SP-15) AT THE PROJECT FIELD OFFICE.

10. ALL REINFORCING DETAILS SHALL CONFORM TO THE ACI DETAILING MANUAL, SP-66, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.

11. THE CONTRACTOR SHALL EMPLOY A TESTING LABORATORY APPROVED BY THE ENGINEER/ARCHITECT TO PERFORM THE TESTING SPECIFIED PER PARAGRAPH 1.6.4 OF ACI 301. THE TESTING LABORATORY SHALL MEET THE REQUIREMENTS OF ASTM E329. TESTING SHALL BE MADE BY AN ACI CONCRETE FIELD-TESTING TECHNICIAN GRADE 1 OR APPROVED EQUIVALENT. A TECHNICIAN GRADE 1 SHALL BE PRESENT DURING ALL CONCRETE PLACEMENT.

12. THE CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF CONSTRUCTION JOINTS NOT INDICATED ON THE DRAWINGS FOR REVIEW BY THE ENGINEER/ARCHITECT.

13. ALUMINUM OR DISSIMILAR METALS IN CONTACT WITH CONCRETE SHALL BE COATED WITH GRAY EPOXY PRIMER, EPOXY PRIMER SHALL BE PRE-APPROVED BY THE ENGINEER.

14. FORMWORK, FOR ALL CONCRETE THAT WILL BE EXPOSED IN THE COMPLETED STRUCTURE, SHALL BE CONSTRUCTED FROM A METAL OR SUITABLE SURFACE PLYWOOD THAT WILL PRODUCE AN ACCEPTABLY SMOOTH SURFACE. SEE SPECIFICATIONS.

15. PITCH CONCRETE SLABS TO FLOOR DRAINS SHOWN ON MECHANICAL OR ARCHITECTURAL DRAWINGS.

16. CHAMFER ALL EXPOSED CORNERS AND EDGES 3/4" UNLESS OTHERWISE INDICATED ON THE DESIGN DRAWINGS. MINIMUM CLEARANCES FOR REINFORCING STEEL SHALL BE

MAINTAINED. CHAMFERS SHALL EXTEND 2'-0", MINIMUM, BELOW GRADE.

17. CONCRETE SHALL BE MOIST CURED FOR, AT LEAST, SEVEN (7) DAYS AND PERMITTED TO AIR DRY FOR A MINIMUM OF THREE (3) DAYS BEFORE PLACING AN ADJACENT ELEMENT.

18. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY CONSOLIDATE PLACED CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING, OR TAMPING TO MITIGATE FORMATION OF VOIDS/HONEYCOMBING WITHIN THE CONCRETE. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH ACI 309.

19. FORM TIES SHALL BE FACTORY-FABRICATED SNAP-OFF GLASS-FIBER-REINFORCED PLASTIC OR METAL FORM TIES DESIGNED TO RESIST LATERAL PRESSURE DURING CONCRETE PLACEMENT. FORM TIES SHALL HAVE PLASTIC CONE AND, WHEN USED IN AN ENVIRONMENTAL STRUCTURE, HAVE A WATERSTOP LOCATED AT THE CENTER. FORM TIE UNITS, AFTER BREAKBACK, SHALL BE AT LEAST 1 INCH FROM THE FACE OF THE CONCRETE SURFACE.

20. AT CONSTRUCTION JOINTS AND COLD JOINTS, THE EXISTING CONCRETE SUBSTRATE SHALL SHALL BE ROUGHENED TO A MINIMUM 1/4" AMPLITUDE, PRESSURE WASHED WITH CLEAN WATER TO REMOVE ALL DUST, LOOSE/DELETERIOUS/BOND INHIBITING MATERIALS AND COATED WITH AN EPOXY BONDING AGENT PRIOR TO PLACEMENT OF CONCRETE.

21. AT CONSTRUCTION JOINTS AND COLD JOINTS OF ENVIRONMENTAL STRUCTURE (CLARIFIER AND CLARIFIER DROP BOX) SHALL RECEIVE A PREFORMED PLASTIC WATERSTOP. PLACE WATERSTOP AT THE CENTER OF THE CONCRETE SURFACE, AT A MINIMUM 3 1/2" CLEAR OF THE CONCRETE SURFACE. WATERSTOPS SHALL BE CONTINUOUS AT ALL JOINTS AND THRU INTERSECTIONS AND CORNERS. TERMINATE 4" FROM THE TOP OF WALLS. WATERSTOP SHALL BE SYNKO-FLEX SF302 1"x1" SQUARE WATERSTOP STRIP WITH SYNKO-FLEX SOLVENT PRIMER SF311 AS MANUFACTURED BY THE HENRY COMPANY OR APPROVED EQUAL.

22. CONTRACTOR SHALL PREDETERMINE LOCATION AND AVOID CUTTING/CORING/DRILLING EXISTING REBAR FOR POST INSTALLED REBAR AND/OR ANCHOR INSTALLATIONS.

23. GROUT WHERE REQUIRED SHALL BE MIXED, APPLIED, INSTALLED AND CURED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND CONFORM WITH THE FOLLOWING:

A. GROUT SHALL BE AN APPROVED NON-SHRINK CEMENTITIOUS MULTIPLE FLUIDITY GROUT CONTAINING NATURAL AGGREGATES DELIVERED TO THE JOB SITE IN FACTORY PREPACKAGED CONTAINERS REQUIRING ONLY THE ADDITION OF WATER; SUCH AS SIKAGROUT 212 OR APPROVED EQUAL. GROUT SHALL BE CAPABLE OF DEVELOPING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5800 PSI.

B. THE FAYING SURFACE WHERE GROUT IS PLACED ON TOP OF OR AGAINST EXISTING CONCRETE SHALL BE ROUGHENED TO A MINIMUM 1/4" AMPLITUDE, PRESSURE WASHED WITH CLEAN WATER TO REMOVE ALL DUST, LOOSE/DELETERIOUS/BOND INHIBITING MATERIALS AND COATED WITH AN EPOXY BONDING AGENT SUCH AS SIKADUR-32 HI-MOD LPL EPOXY BONDING/GROUTING ADHESIVE (OR APPROVED EQUAL) PRIOR TO PLACEMENT OF CONCRETE.

24. SPECIALIZED STRUCTURAL REPAIR CONCRETE SHALL BE IN ACCORDANCE WITH "CONCRETE SURFACE REPAIR NOTES AND SPECIFICATIONS" ON DRAWING 10S-04.

25. PRODUCT REPRESENTATIVE FOR SIKA PRODUCT LINE IS AS FOLLOWS:

MIKE CHILDRESS
CHILCO DIVERSIFIED, INC.
PH: 330-714-6900
EMAIL: MIKE@CHILCOREPS.COM

VII. MINIMUM CONCRETE COVER FOR REINFORCEMENT

1. UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER FOR REINFORCED CONCRETE EXPOSED TO EARTH, LIQUID, AND/OR WEATHER SHALL COMPLY WITH THE FOLLOWING:
- A. STRUCTURAL SLABS:
- | | |
|--------------|----|
| TOP & BOTTOM | 2" |
|--------------|----|
- B. SLAB ON GRADE:
- | | |
|-----|--------|
| TOP | 1 1/2" |
|-----|--------|
- C. FOUNDATION WALLS:
- | | |
|---------|----|
| EA FACE | 2" |
|---------|----|
- D. OTHER/MISC:
- | | |
|--------|--------|
| STAIRS | 1 1/2" |
|--------|--------|
- E. MECHANICAL COUPLERS:
- | | |
|-------|---------|
| WALLS | 1 3/16" |
|-------|---------|
- NOTE: COUPLER AND CONNECTED REINFORCING WITHIN 18" SHALL BE COATED WITH A CORROSION INHIBITOR SUCH AS SIKA ARMATEC 110 EPOCEM OR APPROVED EQUAL.

VII. CONCRETE OVERLAY

1. PREPARE EXISTING CONCRETE SURFACE VIA MECHANICAL MEANS AND INSTALL MICRO-SILICA MODIFIED (MSM) CONCRETE OVERLAY WHERE INDICATED ON THE DESIGN DRAWINGS, AS NOTED HEREIN.
2. WHEN SLAB EXTEND BEYOND THE SCARIFIED AREA, SAWCUT THE SLAB AT THE SCARIFIED LIMIT. SAWCUT SHALL BE 3/4" DEEP.
3. USE WALK BEHIND GRINDER AND/OR SCARIFIER TO REMOVE 3/4" TO 1" THICKNESS OF EXISTING CONCRETE SURFACE WITHIN THE BOUNDARIES OF THE INDICATED OVERLAY AREA; DO NOT USE SCABBLER FOR CONCRETE REMOVAL.
- A. ROUGHEN SURFACE OF CONCRETE TO PRODUCE A SURFACE PROFILE WITHIN THE RANGE OF CSP 7 TO CSP 10 IN ACCORDANCE WITH ICRI 310.2R-2013.
4. ANY REMOVAL OF ADDITIONAL DETERIORATED/UN SOUND CONCRETE BELOW THE NOMINAL 1" DEPTH SHALL BE LOCALLY PERFORMED USING ABRASIVE BLASTING, WATER BLASTING, SHOTBLASTING, WIRE BRUSHING, AND/OR LIGHT WEIGHT PNEUMATIC 20 POUND, MAXIMUM, CHIPPING HAMMER. DO NOT USE ANY METHODS THAT WILL CAUSE MICROCRACKING TO THE CONCRETE BASE.
5. SAW CUTTING, IF USED, SHALL BE DONE VIA THE WET METHOD. MAX SAWCUT DEPTH SHALL BE 3/4" BELOW THE EXISTING SURFACE OF THE CONCRETE TO REMAIN WITHIN THE CONFINES OF THE EXISTING CONCRETE COVER, NOTING THAT NO EXISTING SLAB REINFORCING STEEL SHALL BE CUT/DAMAGED.
6. HAMMER SOUND THE SCARIFIED SURFACE FOLLOWING REMOVAL OF THE NOMINAL 1" DEPTH. SPRAY PAINT PERIMETER OF REMAINING UNSOUND AREAS, THEN USE USING ABRASIVE BLASTING, WIRE BRUSHING, AND/OR LIGHT WEIGHT PNEUMATIC 20 POUND, MAXIMUM, CHIPPING HAMMER TO REACH SOUND MATERIAL.
7. FINAL CONCRETE PROFILE SHALL BE A ROUGHEN SURFACE TO PRODUCE A SURFACE PROFILE WITHIN THE RANGE OF CSP 7 TO CSP 10 IN ACCORDANCE WITH ICRI 310.2R-2013 OR A 1/4" AMPLITUDE.
8. REMOVE RUST/CORROSION ON ALL EXPOSED REBAR USING HAND TOOL CLEANING TO LEAVE SOLID METAL.
9. VACUUM ALL DUST AND LOOSE MATERIAL FROM ROUGHENED CONCRETE SUBSTRATE.
10. SPRAY CLEANED SURFACE WITH WATER TO MAINTAIN A SATURATED SURFACE DRY SUBSTRATE CONDITION WITH NO STANDING WATER.
11. APPLY BONDING AGENT WITH CORROSION INHIBITOR ON THE PREPARED/CLEANED SURFACE, SUCH AS SIKA ARMATEC 110 EPOCEM OR APPROVED EQUAL. BONDING AGENT SHALL BE INSTALLED AND ALLOWED TO SLAKE PER MANUFACTURER RECOMMENDATIONS

AND REQUIREMENTS.

12. INSTALL/PLACE MONOLITHIC OVERLAY APPLICATION (NO JOINTS) OF MSM CONCRETE ATOP OF THE INSTALLED BONDING AGENT.
- A. MSM CONCRETE MIX SHALL CONFORM TO THE REQUIREMENTS OF ODOT (2019), ITEMS 847.04 (MATERIALS), 847.07(MIXERS) & 847.11(PROPORTIONING) CONCURRENT WITH SPECIFICATION SECTION 030130 - CONCRETE REHABILITATION.
- B. MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER "FOR REVIEW" AT LEAST 15 DAYS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIX HAS BEEN REVIEWED BY ENGINEER.
- C. THE USE OF MICRO-SILICA ADMIXTURE IN DISSOLVABLE BAGS SHALL NOT BE ALLOWED.
- D. MSM CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OF BATCHING.
13. PLACE/FINISH/SCREED MSM CONCRETE OVERLAY TO MATCH THE PRE-CONSTRUCTION LEVEL AND SLOPE OF THE EXISTING CONCRETE SURFACE. APPLY A STEEL TROWEL FINISH.
14. COMMENCE CURING IMMEDIATELY FOLLOWING FINISHING IN ACCORDANCE WITH THE FOLLOWING:
- A. COVER THE CONCRETE SURFACE WITH A LAYER OF WET BURLAP PER ODOT ITEM 705.05, KEEPING IT WET VIA SOAKER HOSE FOR 72 HOURS (MIN).
- B. CURING COMPOUND IS NOT PERMITTED BECAUSE A SUBSEQUENT COATING IS TO BE APPLIED TO THE OVERLAY SURFACE.

VIII. CONCRETE REPAIR

1. DEFICIENT CONCRETE/REBAR AREAS SHALL BE REMEDIATED IN ACCORDANCE WITH THE "CONCRETE SURFACE REPAIR NOTES AND SPECIFICATIONS" PROVIDED WITHIN THE STANDARD DETAILS DRAWING IN CONJUNCTION WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
2. DEFICIENT CONCRETE WITHIN LOCALLY SPALLED AND DELAMINATED AREAS SHALL BE EXCAVATED/PREPARED FOR SUBSEQUENT SURFACE REPAIR IN ACCORDANCE WITH NOTE #1 ABOVE, AS FOLLOWS:
- A. VISIBLY SPALLED CONCRETE SHALL BE REMOVED TO SOUND CONCRETE BY HAND CHIPPING OR LIGHTWEIGHT AIR HAMMER (? 10 LBS.) FITTED WITH A SPADE SHAPED BIT (CHISEL BIT NOT PERMITTED). SAW CUT EDGES OF AREA SLIGHTLY UNDERCUT TO A DEPTH OF 1/2'-1" (FEATHERED EDGES ARE NOT PERMITTED), TAKING NECESSARY PRECAUTIONS TO LOCATE AND AVOID CUTTING THE REINFORCING STEEL.
- B. SUSPECTED DELAMINATED CONCRETE AREAS SHALL BE SOUNDED WITH A MASON'S HAMMER TO LOCATE EXTENTS OF LOOSE/DEFICIENT CONCRETE. USE AEROSOL SPRAY PAINT TO OUTLINE AREAS REQUIRING REMOVAL. RESOUND, RE-OUTLINE AND REMOVE UNSOUND AREAS PER ITEM 2A ABOVE UNTIL ONLY SOUND CONCRETE REMAINS.
3. CONCRETE CRACK REPAIR SHALL CONFORM WITH THE FOLLOWING:
- A. NON-LEAKING DORMANT SURFACE CRACKS:
- a. ROUTE AND SEAL DORMANT CONCRETE CRACKS IN ACCORDANCE WITH THE FOLLOWING:
- REMOVE ANY EXISTING CRACK FILLER/SEALANT PREVIOUSLY INSTALLED WITHIN THE CRACK AND/OR EXISTING COATINGS WITHIN 3/4" OF THE CRACK.
 - ROUTE CRACK VIA MECHANICAL MEANS TO ENLARGE WIDTH ALONG ITS ENTIRE LENGTH TO FORM A 1/2" TO 3/4" WIDE INVERTED "V" SHAPE GROOVE PROVIDING A SLIGHT UNDERCUT WITH A DEPTH OF 1/4" TO 1"
 - CLEAN GROOVE BY OIL FREE COMPRESSED AIR OR WATER BLASTING TO REMOVE LOOSE/DELETERIOUS MATERIALS AND ALLOW TO DRY.
 - FILL THE DRY GROOVE WITH AN ELASTOMERIC SEALANT, SUCH AS SIKAFLEX-2C NS EZ MIX, MAINTAINING A 2:1 WIDTH TO DEPTH RATIO IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS. ROUTED DEPTHS EXCEEDING THE 2:1 WIDTH TO DEPTH LIMIT SHALL BE FITTED WITH POLYETHYLENE TAPE OR CLOSED CELL FOAM BACKER ROD AS APPLICABLE TO MAINTAIN PROPER SEALANT DEPTH & PROFILE.
- B. NON-LEAKING STRUCTURAL CRACKS:
- i. PRESSURE INJECT NON-LEAKING CRACKS IN STRUCTURAL CONCRETE WITH AN EPOXY ADHESIVE IN ACCORDANCE WITH THE FOLLOWING:
- CLEAN CRACK BY OIL-FREE COMPRESSED AIR OR WATER BLASTING TO REMOVE LOOSE/DELETERIOUS MATERIALS AND ALLOW TO DRY.
 - PREPLACE/INSTALL INJECTION PORTS TO INTERSECT THE CRACKS AT A 45 DEG ANGLE, THE FULL LENGTH OF THE VISIBLE CRACK. SPACING SHALL BE PER MANUFACTURER REQUIREMENTS/RECOMMENDATIONS.
 - SEAL INJECTION PORTS AND CRACK SURFACE WITH SIKADUR 31 HI-MOD GEL OR SIKADUR 33 PRIOR TO EPOXY INJECTION AND ALLOW TO CURE.
 - PRESSURE INJECT CRACKS WITH A 100% SOLIDS, MOISTURE TOLERANT, LOW-VISCOSITY, HIGH-STRENGTH EPOXY RESIN ADHESIVE SUCH AS SIKADUR 35, HI-MOD LV OR APPROVED EQUAL. INJECTION PRESSURE SHALL CONFORM WITH MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS.
 - INSTALLATION SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS, GUIDELINES AND PRINTED LITERATURE.
 - THIS WORK SHALL BE PERFORMED BY A CONTRACTOR SPECIALIZING IN CONCRETE CRACK INJECTION WITH AT LEAST FIVE (5) YEARS OF EXPERIENCE.
- C. ACTIVE/LEAKING STRUCTURAL CRACKS:
- i. PRESSURE INJECT ACTIVE/LEAKING CRACKS IN STRUCTURAL CONCRETE WITH A POLYURETHANE CHEMICAL GROUT IN ACCORDANCE WITH THE FOLLOWING:
- CLEAN CRACK BY OIL-FREE COMPRESSED AIR OR WATER BLASTING TO REMOVE LOOSE/DELETERIOUS MATERIALS AND ALLOW TO DRY.
 - PREPLACE/INSTALL INJECTION PORTS TO INTERSECT THE CRACKS AT A 45 DEG ANGLE, THE FULL LENGTH OF THE VISIBLE CRACK. SPACING SHALL BE PER MANUFACTURER REQUIREMENTS/RECOMMENDATIONS.
 - SEAL INJECTION PORTS AND CRACK SURFACE WITH SIKADUR 31 HI-MOD GEL PRIOR TO EPOXY INJECTION.
 - PRESSURE INJECT CRACKS WITH AN EXPANDING, POLYURETHANE CHEMICAL GROUT SUCH AS SIKAFIX HH+ HYDROPHOBIC OR APPROVED EQUAL.
 - INSTALLATION SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS, GUIDELINES AND PRINTED LITERATURE.
 - THIS WORK SHALL BE PERFORMED BY A CONTRACTOR SPECIALIZING IN CONCRETE CRACK INJECTION WITH AT LEAST FIVE (5) YEARS OF EXPERIENCE.

4. SLUDGE WELL
- A. INTERIOR: NIC
- B. EXTERIOR:
- i. EXPOSED WALLS: NIC
- ii. TOP SURFACE:
- NORTHERN/OPEN HALF AT TOP OF WALLS: NIC
 - SOUTHERN SLAB AREA ATOP OF CHANNELS: SCOPE RESTRICTED TO SCARIFY & OVERLAY PER THE REQUIREMENTS OF SECTION VII - CONCRETE OVERLAY.
5. MISCELLANEOUS: DETERIORATED, MISSING, AND/OR IMPROPERLY INSTALLED EXPANSION JOINTS SHALL BE REPAIRED/REPLACED WITH A HIGH-PERFORMANCE JOINT SEALING SYSTEM SUCH AS SIKADUR COMBIFLEX SG SYSTEM, CONSISTING OF A HYPALON SEALING STRIP AND EPOXY ADHESIVE APPLIED ON A PREPARED SURFACE OVER THE EXISTING DETERIORATED EXPANSION JOINT. SUBSTRATE PREPARATION AND INSTALLATION SHALL BE DONE IN STRICT ADHERENCE WITH THE MANUFACTURERS PRINTED LITERATURE.

IX. REINFORCING STEEL

1. REINFORCING BARS WITHIN STANDARD CONCRETE SHALL CONFORM TO ASTM A615 GR 60 (FY=60KSI) DEFORMED BILLET STEEL, UNFINISHED BARS, IN ACCORDANCE WITH SPECIFICATION SECTION 030000 REQUIREMENTS.
- A. BAR SIZE AND SPACING SHALL BE IN ACCORDANCE WITH THE DESIGN DRAWINGS.
2. REINFORCING WITHIN SPECIALIZED STRUCTURAL REPAIR CONCRETE, WHERE REQUIRED:
- A. BARS SHALL BE ASTM A706 GR 60 (FY=60KSI) UNFINISHED, WELDABLE GRADE DEFORMED BILLET STEEL BARS.
3. WELDED WIRE REINFORCING SHALL CONFORM TO ASTM A185, A1064 PROVIDED IN FLAT

SHEETS.

4. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI-315, LATEST EDITION) AND MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (CRSI, LATEST EDITION). REINFORCING STEEL SHALL NOT BE HEATED OR WELDED AND MUST BE DRY AND FREE OF CONTAMINANTS SUCH AS RUST, DIRT, GREASE, AND PROTECTIVE COATINGS.
5. DETAILED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER "FOR REVIEW" PRIOR TO FABRICATION. AT A MINIMUM, THESE DRAWINGS SHALL SHOW THE GENERAL PLACEMENT OF REINFORCING, CONSTRUCTION JOINTS, CONTROL JOINTS, EXPANSION JOINTS, CONCRETE MEMBER DIMENSIONS, DOWELS, BAR LENGTHS, SPLICE LENGTH, AND REINFORCING BEND TABLES.
6. REINFORCING BARS SHALL NOT BE BENT IN THE FIELD BY HEATING.
7. TACK WELDING OR WELDING OF REBAR SHALL NOT BE PERMITTED UNLESS OTHERWISE CALLED FOR OR APPROVED BY THE ENGINEER. IF APPROVED, REINFORCING MAY BE WELDED IN ACCORDANCE WITH AWS SPECIFICATION D1.4. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706.
8. HOOKS, BENDS, SUPPORTS AND SPACERS SHALL BE IN ACCORDANCE WITH THE ACI DETAILING MANUAL. PROVIDE ACI STANDARD HOOKS WHERE HOOKS ARE SHOWN. HOOKS SHALL BE ACI STANDARD HOOKS UNLESS DIMENSIONED OTHERWISE. BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, SECT. 25.3. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS REQUIRED TO PROVIDE SPECIFIED DEVELOPMENT LENGTH DUE TO AN ADJACENT STRUCTURE, EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOKS.
9. ALL REINFORCING STEEL SHALL HAVE MINIMUM EXTENSION INTO THE SUPPORTS IN ACCORDANCE WITH ACI BUILDING CODE (ACI 318).
- A. WHERE NOT SPECIFICALLY SHOWN/NOTED, MINIMUM REBAR ANCHORAGE REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE "MINIMUM LAP SPLICE & ANCHORAGE DIMENSIONS FOR CAST IN PLACE CONCRETE REINFORCING" PER ACI 318, BUT SHALL NOT BE LESS THAN 12", UNLESS OTHERWISE NOTED.
10. VERTICAL AND HORIZONTAL DOWEL BARS SHALL MATCH THE SIZE AND SPACING OF THE MAIN REINFORCING STEEL, UNLESS NOTED OTHERWISE.
11. REBAR ANCHORAGE TO THE EXISTING STRUCTURE IS DESIGNED WITH DRILL/EPOXY LAP SPLICES, NOTING THAT MECHANICAL COUPLERS MAY BE USED IN LIEU OF THE DRILL/EPOXY LAP SPLICES SHOWN WITHIN THE DESIGN DRAWINGS. REBAR CONNECTIONS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
- A. EMBEDMENT REQUIREMENTS FOR DRILL/EPOXY LAP TYPE CONNECTIONS SHALL CONFORM WITH THE LAP SPLICE DIMENSIONS INDICATED IN THE "MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE FOR CAST IN PLACE CONCRETE REINFORCING" PER ITEM #9 BELOW, BUT SHALL NOT BE LESS THAN 12", UNLESS OTHERWISE NOTED.
- B. FULL MECHANICAL CONNECTIONS WHERE USED SHALL DEVELOP AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCING STEEL. MECHANICAL COUPLERS SHALL BE "NVENT LENTAL CONNECT S2 SERIES SHEAR BOLT COUPLER (PLAIN)" OR APPROVED EQUAL. DETAILED SPECIFICATION/CUT SHEET OF MECHANICAL CONNECTOR(S) SHALL BE SUBMITTED TO THE ENGINEER "FOR REVIEW" PRIOR TO PROCUREMENT.
12. ALL DEVELOPMENT AND SPLICE LENGTHS SHALL BE PER ACI 318 WITH CLEAR SPACING GREATER OR EQUAL TO 3 BAR DIAMETER. PROVIDE CLASS "B" TENSION LAP SPLICE OR FULL MECHANICAL SPLICE (ACI 318, SECT. 25.4.2) FOR STEEL IN WALLS, COLUMNS, AND SLABS. MIN REINFORCING STEEL LAP LENGTH AND ANCHORAGE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING REINFORCING "MINIMUM LAP SPLICE & ANCHORAGE" TABLE, UNO:
13. BARS SHALL BE CLEANED, TAGGED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318/350, LATEST EDITIONS.
14. REBAR SHALL BE CHAIRED AND SECURED TO MAINTAIN PROPER POSITION, SPACING AND ADEQUATE CONCRETE COVER. PROVIDE ADEQUATE BOLSTERS, HI-CHAIRS, SUPPORT BARS, ETC., TO MAINTAIN SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. SUPPORTS THAT BEAR DIRECTLY ON EXPOSED SURFACES SHALL BE A CRSI CLASS 3. PRECAST CONCRETE BLOCKS SHALL NOT BE USED FOR SPACERS.
15. A TOP BAR IS A HORIZONTAL BAR WHERE MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST DIRECTLY BELOW THE BAR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS. FOR EPOXY-COATED REINFORCEMENT, MULTIPLY THE TABULATED VALUES BY 1.5 FOR 'REGULAR BARS' AND 1.3 FOR 'TOP BARS'.
16. CONCRETE CONSTRUCTION SHALL BE REINFORCED CONCRETE EXCEPT WHERE PLAIN CONCRETE IS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE NOTED, MINIMUM REINFORCING STEEL SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SCHEDULES:
- | SLAB THICKNESS | SIZE | SPACING E.W. | LOCATION |
|----------------|------|--------------|----------|
| 4" | #3 | 12" | CENTERED |
| 6" | #4 | 12" | CENTERED |
| 8" | #4 | 12" | T & B |
- | WALL THICKNESS | SIZE | SPACING E.W. | LOCATION |
|----------------|------|--------------|----------|
| 6" | #4 | 12" | CENTERED |
| 8" | #5 | 12" | CENTERED |
| 10" | #4 | 12" | E F |
| 12" | #5 | 12" | E F |
17. IN ADDITION TO NORMAL ACCESSORIES USED TO HOLD REINFORCING STEEL FIRMLY IN POSITION, EXTRA ACCESSORY BARS SHALL BE USED AS FOLLOWS:
- A. IN SLABS, #5 RAISER BARS AT 36" ON CENTER MAXIMUM TO SUPPORT TOP REINFORCING STEEL.
- B. IN WALLS WITH TWO CURTAINS, #3 U OR Z-SHAPE SPACERS AT 6'-0" ON CENTER EACH WAY.
18. LAP SPLICE WELDED WIRE FABRIC ONE SPACE PLUS 2 INCHES AT EDGES AND ENDS AND PROVIDE ADDITIONAL REINFORCING WHERE NOTED OR SHOWN ON DRAWINGS. PLACE MESH 2 INCHES FROM TOP OF SLAB FOR SLABS ON GROUND AND 1 INCH FROM TOP OF SUPPORTED SLABS UNLESS NOTED OTHERWISE.
- X. REBAR DOWEL INSTALLATION
1. POST INSTALLED REBAR SHALL BE INSTALLED WITH HILTI INJECTABLE HIT-HY 200 OR HIT-RE 500 V3 EPOXY ADHESIVE AS APPLICABLE FOR TEMPERATURE AND HOLE CONDITIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS. ADHESIVE SHALL BE DISPENSED THROUGH A STATIC MIXING NOZZLE SUPPLIED BY HILTI TO ENSURE THAT ADHESIVE COMPONENTS ARE THOROUGHLY BLENDED. POST INSTALLED REBAR SHALL ONLY BE INSTALLED IN CURED CONCRETE THAT HAS ATTAINED ITS DESIGN STRENGTH.
2. INSTALLATION OF ADHESIVE ANCHORAGE SHALL BE PERFORMED BY PERSONNEL CERTIFIED IN THE ACI/CRSI ADHESIVE ANCHOR INSTALLATION PROGRAM. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL PRIOR TO COMMENCEMENT OF THE INSTALLATION.
3. HOLES SHALL BE DRILLED AND CLEANED IN STRICT ADHERENCE WITH THE MANUFACTURERS PUBLISHED INSTALLATION INSTRUCTIONS (MPII). MANUFACTURER'S FIELD

REPRESENTATIVE SHALL PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO COMMENCEMENT OF WORK.

4. ADHESIVE ANCHOR SYSTEMS MUST COMPLY WITH THE LATEST REVISIONS OF ICC-ES ACCEPTANCE CRITERIA AC308 AND HAVE A VALID ICC-ES REPORT IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
5. DRILLING SHALL BE PERFORMED WITH A ROTARY HAMMER DRILL AND CARBIDE TIPPED DRILL BIT IN ACCORDANCE WITH INSTRUCTIONS ACCOMPANYING ADHESIVE CARTRIDGES AND APPLICABLE ICC-ESR.
6. NO REINFORCING STEEL SHALL BE CUT FOR INSTALLATION OF THE POST INSTALLED ANCHORS.
7. BOREHOLE CLEANING PROCEDURES MUST COMPLY WITH INSTRUCTIONS ACCOMPANYING THE ADHESIVE CARTRIDGE AND APPLICABLE ICC-ESR IN ORDER TO PRODUCE A DRY, DUST-FREE HOLE.
8. INJECTION OF ADHESIVE SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS ACCOMPANYING PRODUCT AND APPLICABLE ICC-ESR TO PRODUCE AN AIR-VOID FREE INJECTION.
9. ALTERNATE DRILLING METHODS, SUCH AS DIAMOND CORING, MUST BE APPROVED IN ADVANCE BY THE ENGINEER AND COMPLY WITH THE APPLICABLE ICC-ES REPORT.
10. ANCHOR ROD FASTENING ELEMENTS MUST BE CLEAN, DRY AND FREE OF ANY OIL OR CONTAMINANTS.

XI. CONCRETE PROTECTION

1. FOLLOWING COMPLETION OF ASSOCIATED CONCRETE REPAIR WORK, PEDESTRIAN WALKWAYS INCLUDING SIDEWALKS, STAIRS/STEPS, ENTRANCE/EXIT STOOPS AND OTHER NOTED AREAS SHALL BE COATED WITH A NON-SLIP, CRACK-BRIDGING, ELASTOMERIC POLYURETHANE WATERPROOFING MEMBRANE SUCH AS SIKALASTIC 720/745 AL TRAFFIC SYSTEM OR APPROVED EQUAL. COATING SHALL MEET THE REQUIREMENTS OF 'HEAVY PEDESTRIAN/LIGHT VEHICULAR' SYSTEM STRUCTURE AND CONTAIN OVEN DRIED QUARTZ SAND AGGREGATE BROADCAST INTO THE WEAR COURSE. TOTAL DRY THICKNESS EXCLUDING PRIMER, DETAIL COAT AND SAND/AGGREGATE SHALL BE 41 MILS. COATING SYSTEM SHALL BE APPLIED TO PREPARED/PRIMED SURFACES IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS.
- A. APPLY A DETAIL COAT OF SIKALASTIC 720/745 AL TRAFFIC SYSTEM AT 23 WET MILS. 4" WIDE, CENTERED OVER NON-STRUCTURAL CRACKS UP TO 1/16". ALLOW TO BECOME TACK FREE BEFORE OVER COATING.
- B. ROUT AND SEAL CRACKS AND JOINTS OVER 1/16" UP TO 1 INCH WITH SIKAFLEX SEALANT CONCURRENT WITH NOTE III-5 ABOVE AND ALLOW TO CURE. SUBSEQUENTLY, APPLY A DETAIL COAT OF SIKALASTIC 720/745 AL TRAFFIC SYSTEM AT 23 WET MILS. 4" WIDE, CENTERED OVER THE CRACK. ALLOW TO BECOME TACK FREE BEFORE OVER COATING.
2. FOLLOWING COMPLETION OF ASSOCIATED CONCRETE REPAIRWORK, THE INTERIOR SURFACES OF ALL TANKS, CLARIFIERS, CHANNELS AND OTHER NOTED STRUCTURES SHALL BE COATED WITH A LIQUID APPLIED, ASPHALT EXTENDED POLYURETHANE (BITUMEN MODIFIED) WATERPROOFING MEMBRANE/COATING SYSTEM, SUCH AS SIKAGARD-7600 HG, OR APPROVED EQUAL. PRIOR TO COATING, AFFECTED CONCRETE SURFACES SHALL BE PRIMED WITH AN 8-MIL THICKNESS OF SIKALASTIC PF LO-VOC PRIMER, SIKALASTIC FTP LO-VOC PRIMER OR SIKALASTIC EP PRIMER/SEALER IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS, UNLESS NOTED OTHERWISE. TWO COATS OF SIKAGARD-7600 HG SHALL BE APPLIED FOR A TOTAL DFT OF 45 MILS EXCLUDING PRIMER AND DETAIL THICKNESS.
- A. CRACKS OR JOINTS UNDER 1/16" NEED NO SPECIAL DETAILING PRIOR TO INSTALLATION OF SIKAGARD-7600 HG.
- B. APPLY A DETAIL COAT OF SIKAGARD-7600 HG AT 30 MILS, 6" WIDE, CENTERED OVER CRACKS AND JOINTS BETWEEN 1/16" - 1/8". ALLOW TO BECOME TACK FREE BEFORE OVER COATING.
- C. ROUT AND SEAL CRACKS AND JOINTS OVER 1/8 INCH WITH SIKAFLEX SEALANT PER NOTE III-5 AND ALLOW TO CURE. SUBSEQUENTLY, APPLY A DETAIL COAT OF SIKAGARD-7600 HG AT 30 MILS, 6" WIDE, CENTERED OVER CRACK. ALLOW TO BECOME TACK FREE BEFORE OVER COATING.
3. PRIOR TO COATING, NEW, EXISTING AND RESTORED CONCRETE SURFACES SHALL BE CLEANED AND PREPARED TO ACHIEVE A LAITANCE AND CONTAMINANT FREE, OPEN TEXTURED SURFACE VIA BLAST CLEANING (SHOT, WATER OR ABRASIVE) OR EQUIVALENT MECHANICAL MEANS. CONFORMING TO CONCRETE SURFACE PROFILE (CSP 3-4) PER INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI) GUIDELINES. SURFACE MUST BE CLEAN, DRY AND SOUND WITH AN OPEN TEXTURE. REMOVE BOND INHIBITING IMPREGNATIONS INCLUDING DUST, LAITANCE, GREASE, CURING COMPOUNDS, PEELING, FLAKING AND LOOSE COATINGS, MOLD/MILDEW, EFFLORESCENCE AND ANY OTHER CONTAMINANTS. ALL PROJECTIONS, ROUGH SPOTS, ETC. SHOULD BE DRESSED OFF TO ACHIEVE A LEVEL SURFACE PRIOR TO THE APPLICATION.
4. REFER TO SECTION V FOR LOCAL PRODUCT REPRESENTATIVE REGARDING SIKA CONCRETE REPAIR AND PROTECTION PRODUCT LINES, MANUFACTURES PREPERATION AND APPLICATION REQUIREMENTS.

XII. ALUMINUM GUARDRAIL

1. REMOVE ALL EXISTING GUARDRAIL WITHIN AFFECTED CONCRETE REMEDIATION AREAS. SALVAGE/STORE ALL UNDAMAGED, NON-DETERIORATED SECTIONS FOR SUBSEQUENT REUSE FOLLOWING COMPLETION OF CONCRETE REPAIR-WORK. REMEDIATE PROJECTING ANCHORED THREADED RODS AS FOLLOWS:
- A. UNAFFECTED OR CONCRETE AREAS REQUIRING REPAIR/PATCHING ONLY:
- i. EXPANSION ANCHORS SHALL BE CUT FLUSH WITH THE SURFACE OF THE CONCRETE, DRIVEN INTO THE HOLE AT LEAST 1" BELOW THE FINISHED SURFACE OF THE CONCRETE, COATED WITH BONDING AGENT CONTAINING CORROSION INHIBITOR SUCH AS SIKA ARMATEC 110 EPOCEM AND FILLED WITH SIKATOP-111 PLUS PATCHING MORTAR, OR APPROVED EQUAL, FLUSH WITH THE EXISTING SURFACE.
- ii. ADHESIVE ANCHORS SHALL BE CUT FLUSH WITH THE SURFACE OF THE CONCRETE. THE EXPOSED ENDS OF THE SAW-CUT ANCHOR SHALL BE GROUND AT LEAST 1" BELOW THE FINISHED SURFACE OF THE CONCRETE, COATED WITH BONDING AGENT CONTAINING CORROSION INHIBITOR SUCH AS SIKA ARMATEC 110 EPOCEM AND FILLED WITH SIKATOP-111 PLUS PATCHING MORTAR, OR APPROVED EQUAL, FLUSH WITH THE EXISTING SURFACE.
- B. CONCRETE AREAS TO BE REMOVED/REPLACED DO NOT REQUIRE ANCHOR REMEDIATION, SINCE EXISTING BOLTS WILL BE REMOVED WITH THE AFFECTED CONCRETE.
2. IF APPROVED BY THE OWNER, SALVAGED GUARDRAIL DEEMED TO BE IN GOOD CONDITION MAY BE REUSED/REINSTALLED FOLLOWING COMPLETION OF CONCRETE REPAIR WORK, IN CONJUNCTION WITH THE FOLLOWING:
- A. FAYING SURFACE OF GUARDRAIL BASE IN CONTACT WITH CONCRETE/GROUT SHALL BE COATED IN ACCORDANCE WITH SECTION IX.
- B. NEW ADHESIVE ANCHORED THREADED RODS SHALL BE INSTALLED FOR ANCHORAGE OF THE REINSTALLED GUARDRAIL. SIZE, QUANTITY AND LOCATION SHALL BE AS SPECIFIED ON THE DESIGN DRAWINGS.
3. NEW GUARDRAIL, WHERE REQUIRED, SHALL BE FABRICATED/CONSTRUCTED IN ACCORDANCE WITH THE STANDARD DETAIL DRAWINGS AND SPECIFICATION REQUIREMENTS IN CONJUNCTION WITH THE PROVISIONS NOTED HEREIN.
- A. DETAILED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW, PRIOR TO FABRICATION.
- B. SUBMITTAL OF CONTRACTOR ALTERNATE DESIGN AND/OR PLAN MODIFICATION OF SPECIFIED GUARDRAIL SHALL REQUIRE A PE STAMP OF DESIGN ENGINEER LICENSED WITHIN THE STATE OF OHIO.



verdantas

NO	REVISION	DATE
SCALE:	N/A	
DATE:	10/16/24	
DESIGNED BY:	CMM	
DRAWN BY:	RLM	
CHECKED BY:	CMM	

JEFFERSON WASTEWATER TREATMENT PLANT CLARIFIER IMPROVEMENTS- PHASE 2 ASHTABULA COUNTY, OHIO	
FINAL SETTLING TANKS - 10 SERIES STRUCTURAL NOTES (CONTINUED)	
PROJECT NO: 241530	
DRAWING NAME 10S-02	
SHEET 6	OF 15

4. GUARDRAIL SHALL BE CONSTRUCTED OF 1 1/2" NOMINAL DIAMETER 6061-T6 EXTRUDED ALUMINUM PIPE (SCH 80 FOR VERT MEMBERS, SCH 40 FOR HORIZ MEMBERS). STANDARD NON-SLOPING SECTIONS TO BE INSTALLED WITH 1/4" X 4" TOE PLATE. FOR GUARDRAIL INFORMATION, SEE "TYPICAL GUARDRAIL DETAIL" ON STANDARD DETAIL DRAWING.
5. FAYING SURFACE OF GUARDRAIL BASE IN CONTACT WITH CONCRETE/GROUT SHALL BE COATED IN ACCORDANCE WITH SECTION IX.
6. GUARDRAIL BASE LEVELING GROUT, WHERE REQUIRED, SHALL BE MIXED, APPLIED, INSTALLED AND CURED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND CONFORM WITH THE FOLLOWING:
 - A. GROUT, IF REQUIRED, SHALL COMPLY WITH THE REQUIREMENTS OF THESE SECTIONS.

XIII. ALUMINUM GRATING

1. EXISTING ALUMINUM GRATING PANELS AT THE TOP OF THE DISTRIBUTION WELL SHALL BE REMOVED/SCRAPPED AND SUBSEQUENTLY REPLACED WITH NEW PANEL ASSEMBLIES CONCURRENT WITH DESIGN DRAWINGS AND SPECIFICATION REQUIREMENTS, AS NOTED HEREIN. THE NEW GRATING SHALL BE FLUSH WITH THE TOP OF CONCRETE.
2. ALUMINUM GRATING SHALL MATCH EXISTING GRATING DEPTH, THICKNESS, SPACING, ETC. ALUMINUM GRATING SHALL BE SERRATED SWAGED GRATING. AT A MINIMUM, THE GRATING SHALL BE A 19AS4. ALUMINUM GRATING SHALL BE 1/4"x1/8" FOR SPANS UP TO 3'-6", 1/2"x1/8" FOR SPANS UP TO 4'-0", AND 3/4"x3/16" FOR SPANS UP TO 4'-6". SERRATED GRATING IS A STRIATED ANTI-SLIP SURFACE.
3. ALUMINUM GRATING SHALL CONFORM WITH THE LATEST EDITION OF NAAMM MBG 531 AND ASTM B-221. THE ALUMINUM MATERIAL SHALL CONFORM WITH TO ASTM 6063-T6 OR ASTM 6061-T6
4. THE GRATING PANEL PERIMETER SHALL BE BANDED. OPENINGS SHALL BE BANDED. BANDING SHALL BE IN ACCORDANCE WITH SPECIFICATION AND MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS.
5. DETAILED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW, PRIOR TO FABRICATION.
 - A. DETAILING SHALL BE DONE BY A QUALIFIED DETAILER WHO IS EXPERIENCED IN DETAILING GRATING AND CHECKERED PLATE COMPONENTS.
 - B. SUBMITTALS OF CONTRACTOR DESIGN AND/OR PLAN MODIFICATION OF SPECIFIED GRATING SHALL REQUIRE A PE STAMP OF DESIGN ENGINEER LICENSED WITHIN THE STATE OF OHIO.
6. GRATING PANELS SHALL BE REMOVABLE, SECURED TO SUPPORT COMPONENTS VIA REMOVABLE SS 316 GRATING FASTENERS WITH SS 316 SELF-DRILLING SELF-TAPPING SCREWS. MINIMUM OF FOUR (4) GRATING FASTENERS ARE REQUIRED IN EACH PANEL, ONE (1) EACH CORNER. THE MAXIMUM WEIGHT OF A SINGLE PANEL SHALL NOT EXCEED 60 LBS.

XIV. POST-INSTALLED ANCHORS

1. EXCEPT WHERE NOTED OTHERWISE ON THE DESIGN DRAWINGS, POST-INSTALLED ANCHORED THREADED RODS WHERE REQUIRED, SHALL BE HILTI (OR APPROVED EQUAL) ADHESIVE ANCHORS FOR INSTALLATION IN SOLID CONCRETE INSTALLED WITH HIT-HY 200 OR HIT-RE 500 V3 EPOXY ADHESIVE AS APPLICABLE FOR TEMPERATURE AND HOLE CONDITIONS AND CONFORM WITH THE FOLLOWING:
 - A. THREADED RODS SHALL BE HAS-R 316 STAINLESS STEEL ANCHOR ROD. SIZE, SPACING AND EMBEDMENT SHALL BE AS SPECIFIED ON THE DESIGN DRAWINGS.
 - B. NUTS SHALL BE SS 316 HEAVY HEX CONFORMING TO ASTM F594 GROUP 2, SECURED WITH LOTCITE THREADLOCKER RED Z71 NUT AND BOLT LOCKER. A SS 316 FLAT CIRCULAR WASHER SHALL BE USED UNDER THE NUT OF EACH ANCHOR.
 - C. ADHESIVE ANCHOR SYSTEMS MUST COMPLY WITH THE LATEST REVISIONS OF ICC-ES ACCEPTANCE CRITERIA AC308 AND HAVE A VALID ICC-ES REPORT IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
 - D. DRILLING SHALL BE PERFORMED WITH A ROTARY HAMMER DRILL AND CARBIDE TIPPED DRILL BIT IN ACCORDANCE WITH INSTRUCTIONS ACCOMPANYING ADHESIVE CARTRIDGES AND APPLICABLE ICC-ESR.
 - E. NO EXISTING REINFORCING STEEL SHALL BE CUT FOR INSTALLATION OF THE POST-INSTALLED ANCHORS.
 - F. BORE HOLE CLEANING PROCEDURES MUST COMPLY WITH INSTRUCTIONS ACCOMPANYING THE ADHESIVE CARTRIDGE AND APPLICABLE ICC-ESR IN ORDER TO PRODUCE A DRY, DUST-FREE HOLE.
 - G. INJECTION OF ADHESIVE SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS ACCOMPANYING PRODUCT AND APPLICABLE ICC-ESR TO PRODUCE AN AIR-VOID FREE INJECTION.
 - H. ALTERNATE DRILLING METHODS, SUCH AS DIAMOND CORING, MUST BE APPROVED IN ADVANCE BY THE ENGINEER AND COMPLY WITH THE APPLICABLE ICC-ES REPORT.
 - I. ANCHOR ROD FASTENING ELEMENTS MUST BE CLEAN, DRY AND FREE OF ANY OIL OR CONTAMINANTS.
- PROJECT REPRESENTATIVE FOR HILTI PRODUCT LINE IS AS FOLLOWS:

PRODUCT REPRESENTATIVE FOR HILTI PRODUCT LINE IS AS FOLLOWS

CRAIG WARNER
HILTI, INC.
PH: 330-603-1219
CRAIG.WARNER@HILTI.COM

XV.STRUCTURAL BACKFILL AND FILL

1. EXCAVATED/STOCKPILED SOIL NOTED IN SECTION II MAY BE REUSED AS BACKFILL MATERIAL AROUND THE OUTSIDE PERIMETER OF THE REHABILITATED CLARIFIERS (SETTLING TANKS), CONCURRENT WITH SOILS ENGINEER APPROVAL. REUSED SOIL SHALL BE FREE OF ORGANIC CONTAMINATION AND OTHER MATERIALS DEEMED OBJECTIONABLE BY THE SOILS ENGINEER (SUCH AS SHALE, SLAG, CONCRETE CHUNKS, ROCKS, DEBRIS, ETC.).
 - A. OTHERWISE, ACCEPTED POROUS STRUCTURAL FILL/BACKFILL SHALL BE LIMESTONE #467, 57, 67 OR 78 SIZE. SLAG, CRUSHED/RECYCLED CONCRETE AGGREGATE AND SHALE EXCAVATIONS ARE NOT ACCEPTABLE AND SHALL NOT BE USED AS FILL/BACKFILL MATERIAL.
 - B. COMPACT MAX. 8" LOOSE LAYERS UNIFORMLY TO NOT LESS THAN 95% STANDARD PROCTOR EXCEPT OTHERWISE SPECIFIED. REFER TO SPECIFICATION SECTION 31000 FOR COMPLETE BACKFILLING REQUIREMENTS.
2. BACKFILL SHALL BE PLACED TO RESTORE THE ORIGINAL PRECONSTRUCTION GRADE/CONDITION AROUND PERIMETER OF THE STRUCTURE AND GRADED TO SLOPE AWAY FROM THE REHABILITATED AND/OR EXISTING STRUCTURES.
3. BACKFILL SHALL NOT BE PLACED AGAINST THE STRUCTURE UNTIL AFTER THE STRENGTH LEVEL OF THE NEWLY PLACED CONCRETE HAS REACHED ITS SPECIFIED DESIGN STRENGTH.
4. THE CONTRACTOR MAY TEST IN-PLACE CONCRETE USING THE NON-DESTRUCTIVE PROCEDURES OF ASTM C803, PENETRATION RESISTANCE.
5. USE ONLY WALK-BEHIND TYPE COMPACTOR WITHIN 10 FEET OF THE STRUCTURE.
6. BACKFILL AND FILL SHALL BE INSPECTED AND APPROVED (IN WRITING) BY A SOILS ENGINEER BEFORE, DURING AND IMMEDIATELY AFTER PLACEMENT.

XVI. SPECIAL REQUIREMENTS

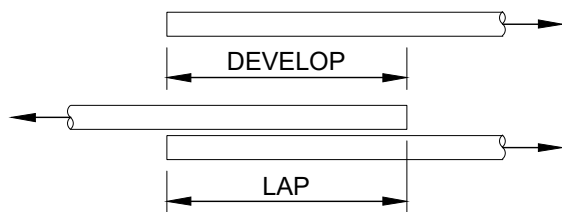
1. LEADING EDGE OF ALL EXISTING AND NEW STAIR STEPS SHALL BE FITTED WITH ALUMINUM ADA-COMPLIANT, SLIP-RESISTANT TREAD NOSING'S (EXTERIOR RATED), MANUFACTURED WITH NON-SLIP EPOXY ABRASIVE MATERIAL BONDED/LOCKED TO THE EXTRUDED ALUMINUM TREAD BASE.
 - A. NOSING'S SHALL BE MIN 3" WIDE WITH LEADING EDGE TURNDOWN AND TERMINATE NOT MORE THAN 1" FROM ENDS OF STEPS FOR EXISTING OR NEWLY POURED CONCRETE STAIRS.
 - B. NOSING ASSEMBLY FOR NEW STEPS SHALL CONTAIN INTEGRAL ANCHORAGE FOR EMBEDMENT WITH FRESH CONCRETE.
 - C. NOSING'S FOR RETROFIT INSTALLATION, WHERE REQUIRED, SHALL BE FLAT BOTTOM ASSEMBLY (NO ANCHORAGE PROJECTIONS) WITH PRE-DRILLED/COUNTERSUNK HOLES FOR ADHESIVE INSTALLATION WITH BACKUP CONCRETE FASTENERS.
2. BACKSIDE OF ALUMINUM STAIR NOSING ASSEMBLIES SHALL BE COATED WITH EPOXY SUCH AS SIKADUR HILMOD 32 TO INSULATE ALUMINUM CONTACT FROM THE CONCRETE. INSULATION COAT SHALL BE EVENLY APPLIED TO THE ENTIRE BACKSIDE OF THE NOSING ASSEMBLY INCLUDING ANY ANCHORAGE PROJECTIONS AND CURED FOR SUBSEQUENT INSTALLATION.
 - A. RETROFIT NOSING APPLICATIONS SHALL RECEIVE A FOLLOW-UP BEDDING COAT OF EPOXY AT TIME OF INSTALLATION TO PROVIDE FLAT ADHESION TO THE EXISTING CONCRETE. INITIAL SETTING SHALL BE SECURED WITH CONCRETE SCREWS TO MAINTAIN LOCATION, POSITION AND ADHESION.
 - B. NEW NOSING ASSEMBLIES WITH INTEGRAL ANCHORAGE SHALL BE EMBEDDED IN FRESH CONCRETE PROVIDING FLAT BEARING WITH THE CONCRETE AND EPOXY INSULATION COATING (BEDDING EPOXY NOT REQUIRED).
 - C. COATED NOSING ASSEMBLIES SHALL BE TEMPORARILY STORED PRIOR TO INSTALLATION IN A MANNER TO PROTECT THE EPOXY INSULATION COATING FROM DAMAGE.
3. FAYING SURFACES OF ALL OTHER ALUMINUM IN CONTACT WITH CONCRETE OR GROUT SHALL BE COATED WITH A (MIN 1/8" THICK) BITUMINOUS COATING OR EPOXY OVERLAY SUCH AS SIKADUR HILMOD 32, TO INSULATE ALUMINUM CONTACT FROM THE CONCRETE. INSULATION COAT SHALL BE EVENLY APPLIED TO ALL SURFACES IN CONTACT WITH CONCRETE/GROUT, INCLUDING ANY ANCHORAGE PROJECTIONS AND ADEQUATELY CURED FOR SUBSEQUENT INSTALLATION.
4. EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE OR GROUT, SHALL BE ROUGHENED MIN 1/4" AMPLITUDE, PRESSURE WASHED WITH CLEAN WATER TO REMOVE ALL DUST, LOOSE/DEBRIS/BOND INHIBITING MATERIALS AND SUBSEQUENTLY SOUNDED WITH A MASON'S HAMMER TO VERIFY ALL LOOSE/DELAMINATED CONCRETE HAS BEEN REMOVED. CLEANED AREAS SHALL BE COATED WITH AN EPOXY BONDING AGENT SUCH AS SIKA AERMATEC-110 EPOCEM (OR APPROVED EQUIV) PRIOR TO PLACEMENT OF CONCRETE, APPLIED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS.

XVII. TESTING AND INSPECTION:

1. MATERIALS AND PROCEDURES TESTING: A TESTING LABORATORY SHALL BE ENGAGED BY THE CONTRACTOR FOR MATERIAL/PROCEDURE TESTING AS REQUIRED BY OBC CHAPTER 17
2. SPECIAL INSPECTION: A SPECIAL INSPECTOR SHALL BE ENGAGED BY THE OWNER TO INSPECT THOSE ELEMENTS AS DEFINED/STIPULATED HEREIN IN COMPLIANCE WITH OBC CHAPTER 17 REQUIREMENTS. THE OWNER WILL PAY FOR ALL SPECIAL INSPECTIONS REQUIRED; THE CONTRACTOR SHALL NOT INCLUDE ANY COST FOR THE SPECIAL INSPECTIONS WITHIN THE BID.
- A. SPECIAL INSPECTIONS ARE TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING DEPARTMENT AND SHALL NOT BE CONSIDERED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND REQUIRED INSPECTIONS REQUIRED BY THE BUILDING CODE.

XVIII. SPECIAL INSPECTIONS

1. SPECIAL INSPECTOR SHALL MEET THE QUALIFICATIONS AND PERFORMANCE RESPONSIBILITIES AS OUTLINED WITHIN THE BUILDING CODE. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR INCLUDE THE FOLLOWING:
 - A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK DESIGNATED TO ASSURE IT IS CONSTRUCTED IN CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
 - B. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS AND TESTS TO THE BUILDING OFFICIAL AND A REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.
 - C. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
 - D. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS, SHALL BE SUBMITTED WITHIN THE AGREED UPON TIME TO THE BUILDING OFFICIAL PRIOR TO THE START ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
 - E. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A STATEMENT OF RESPONSIBILITY ACKNOWLEDGING THE AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.
2. IN ADDITION TO REGULAR INSPECTIONS, THE FOLLOWING SPECIAL INSPECTIONS ARE REQUIRED IN COMPLIANCE WITH IBC/IBC, SECTION 1705:
 - A. CONCRETE:
 - i. INSPECT REINFORCEMENT AND VERIFY PLACEMENT. (PERIODIC)
 - ii. REINFORCING BAR WELDING (IF/WHERE REQUIRED):
 - i. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 (PERIODIC)
 - ii. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16" (PERIODIC)
 - iii. INSPECT ALL OTHER WELDS (CONTINUOUS)
 - iii. INSPECT ANCHORS/DOWELS POST-INSTALLED IN HARDENED CONCRETE:
 - iv. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. (CONTINUOUS)
 - v. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE. (PERIODIC)
 - vi. VERIFY USE OF REQUIRED MIX DESIGN. (PERIODIC)
 - vii. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. (CONTINUOUS)
 - viii. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. (CONTINUOUS)
 - ix. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES. (PERIODIC)
 - x. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. (PERIODIC)
 - xi. NOTE THAT NO INSPECTION IS REQUIRED FOR SLABS-ON-GRADE.
 - B. SOILS:
 - i. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. (PERIODIC)
 - ii. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS. (PERIODIC)
 - iii. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. (CONTINUOUS)
 - iv. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PROPERLY PREPARED. (PERIODIC)



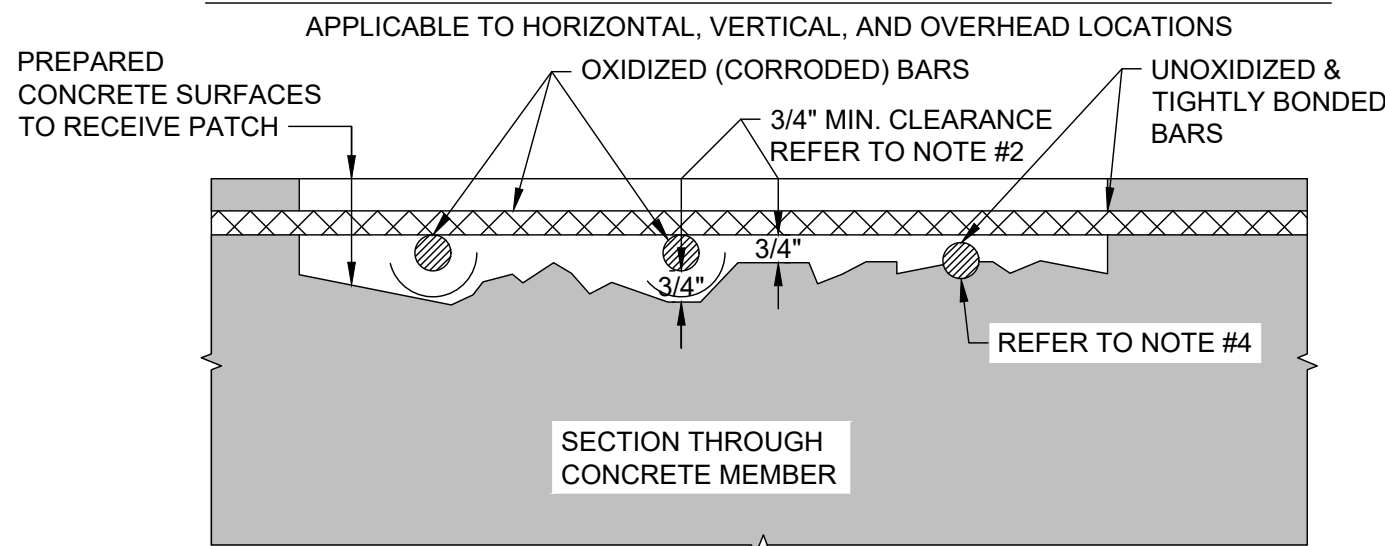
MINIMUM LAP SPlice AND ANCHORAGE TABLE (F'C = 4.5KSI)					
BAR SIZE	LAP CLASS	UNCOATED BARS			
		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2
#3	A	18	27	14	51
	B	23	35	18	27
#4	A	24	35	18	27
	B	31	46	24	35
#5	A	30	44	23	34
	B	38	57	30	44
#6	A	35	53	27	41
	B	46	69	35	53
#7	A	51	77	40	59
	B	67	100	51	77
#8	A	59	88	45	68
	B	76	114	59	88
#9	A	66	99	51	76
	B	86	128	66	99

NOTES:

1. TABULATED VALUES ARE BASED ON A MINIMUM YIELD STRENGTH OF 60,000 PSI. LENGTHS ARE IN INCHES.
2. CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL MEMBER, CONCRETE COVER, AND OC SPACING OF THE BARS ARE DEFINED AS:
BEAMS AND COLUMNS
 - CASE 1: CONCRETE COVER AT LEAST $1.0d_b$ AND OC SPACING AT LEAST $2.0d_b$
 - CASE 2: CONCRETE COVER LESS THAN $1.0d_b$ OR OC SPACING LESS THAN $2.0d_b$OTHER BARS
 - CASE 1: CONCRETE COVER AT LEAST $1.0d_b$ AND OC SPACING AT LEAST $3.0d_b$
 - CASE 2: CONCRETE COVER LESS THAN $1.0d_b$ OR OC SPACING LESS THAN $3.0d_b$
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

CONCRETE SURFACE SCHEDULE		ROUGH FORM FINISH	SMOOTH FORM FINISH	SMOOTH RUBBED FINISH	RELATED UNFORMED FINISH	NON-SLIP BROOM FINISH	TROWEL FINISH
REFER TO CONCRETE SPEC. FOR DESCRIPTION OF FINISHES							
ALL NEW WORK							
LOCATION							
ALL INTERIOR WALLS (N/A)							
BOTTOM SLAB (N/A)							
EXTERIOR WALLS		●					
TOP OF WALLS					●		
UNDERSIDE OF EXPOSED FLOOR SLABS							●
TOP OF EXPOSED (EXTERIOR) SLABS						●	

EXPOSING & UNDERCUTTING REINFORCING STEEL

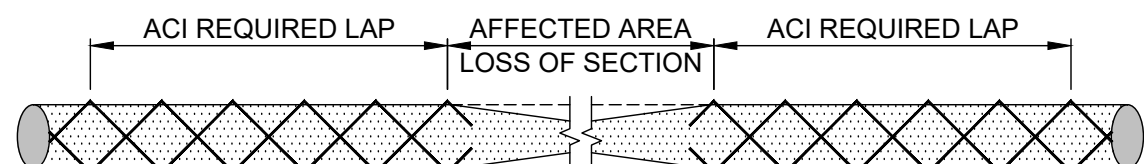


APPLICABLE TO HYDRODEMOLITION, HYDRODRILLING, AND PNEUMATIC, HYDRAULIC, AND ELECTRIC BREAKERS

CAUTION: BEFORE STARTING REMOVALS, REVIEW EFFECT OF REMOVALS ON STRUCTURAL INTEGRITY. PROVIDE SHORING OF MEMBER AS NECESSARY. PARTICULAR CARE SHALL BE EXERCISED AT SLABBEAM CONNECTIONS TO COLUMNS.

1. REMOVE LOOSE OR DELAMINATED CONCRETE ABOVE OXIDIZED REINFORCING STEEL. ONCE INITIAL REMOVALS ARE MADE, PROCEED WITH THE UNDERCUTTING OF ALL EXPOSED OXIDIZED (CORRODED) BARS. UNDERCUTTING WILL PROVIDE CLEARANCE FOR UNDER BAR CLEANING. FULL BAR CIRCUMFERENCE BONDING TO SURROUNDING CONCRETE, AND WILL SECURE THE PATCH STRUCTURALLY
2. PROVIDE MINIMUM 3/4" CLEARANCE BETWEEN EXPOSED REBARS AND SURROUNDING CONCRETE OR 1/4" LARGER THAN LARGEST AGGREGATE IN REPAIR MORTAR, WHICH EVER IS GREATER.
3. CONCRETE REMOVALS SHALL EXTEND ALONG THE BARS TO LOCATIONS ALONG THE BAR FREE OF BOND INHIBITING CORROSION, AND WHERE THE BAR IS WELL BONDED TO SURROUNDING CONCRETE.
4. IF UNOXIDIZED REINFORCING STEEL IS EXPOSED DURING THE UNDERCUTTING PROCESS, CARE SHALL BE TAKEN NOT TO DAMAGE THE BAR'S BOND TO SURROUNDING CONCRETE. IF BOND BETWEEN BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR SHALL BE REQUIRED.
5. ANY REINFORCEMENT WHICH IS LOOSE SHALL BE SECURED IN PLACE BY TYING TO OTHER SECURED BARS OR BY OTHER APPROVED METHODS.

REPAIR OF REINFORCING STEEL DUE TO LOSS TO SECTION

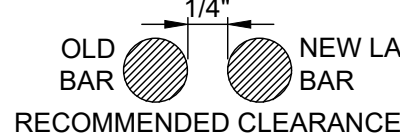


IF REBAR HAS LOST MORE THAN 25% OF ITS CROSS SECTION (20% IF 2 OR MORE CONSECUTIVE PARALLEL BARS ARE AFFECTED), A STRUCTURAL ENGINEER SHOULD BE CONSULTED.

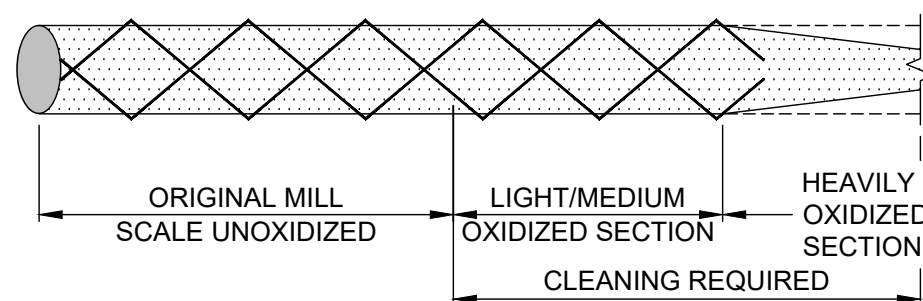
IF REPAIRS ARE REQUIRED TO THE REINFORCING STEEL ONE OF THE FOLLOWING REPAIR METHODS SHOULD BE USED:

1. COMPLETE BAR REPLACEMENT, OR
2. ADDITION OF SUPPLEMENTAL BAR OVER AFFECTED SECTION. NEW BAR MAY BE MECHANICALLY SPLICED TO OLD BAR OR PLACED PARALLEL TO AND APPROXIMATELY 3/4" FROM EXISTING BAR.

LAP LENGTH SHALL BE DETERMINED IN ACCORDANCE WITH ACI318, ALSO REFER TO CRSI AND AASHTO MANUAL

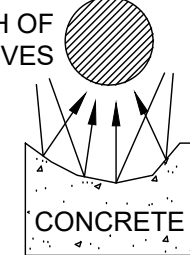


CLEANING OF REINFORCING STEEL

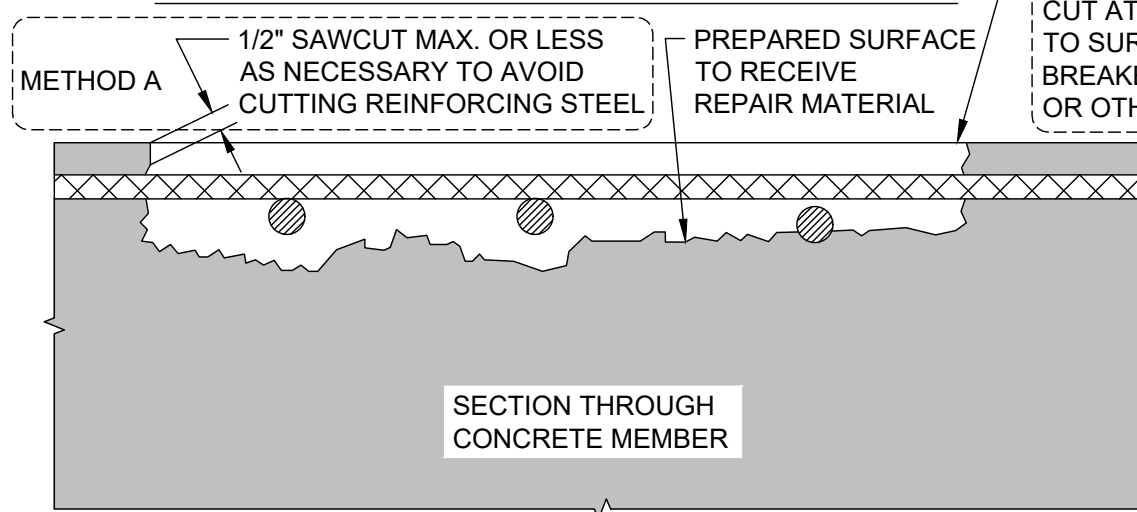


ALL HEAVY OXIDES AND SCALE SHOULD BE REMOVED FROM THE BAR AS NECESSARY TO PROMOTE MAXIMUM BOND OF REPLACEMENT MATERIAL. OIL FREE ABRASIVE BLAST IS THE PREFERRED METHOD A TIGHTLY BONDED LIGHT OXIDE BUILD-UP ON THE SURFACE MAY RESULT FROM HIGH-PRESSURE WATERBLASTING, WITH OR WITHOUT ABRASIVE. THIS IS USUALLY NOT DETRIMENTAL TO BOND, UNLESS A PROTECTIVE COATING IS BEING APPLIED TO THE BAR SURFACE. IN WHICH CASE THE COATING MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION SHOULD BE FOLLOWED.

CLEANING UNDERSIDE OF BAR



EDGE AND SURFACE CONDITIONING



APPLICABLE TO HYDRODEMOLITION, HYDRODRILLING, AND PNEUMATIC, HYDRAULIC, AND ELECTRIC BREAKERS
APPLICABLE TO HORIZONTAL, VERTICAL, AND OVERHEAD LOCATIONS

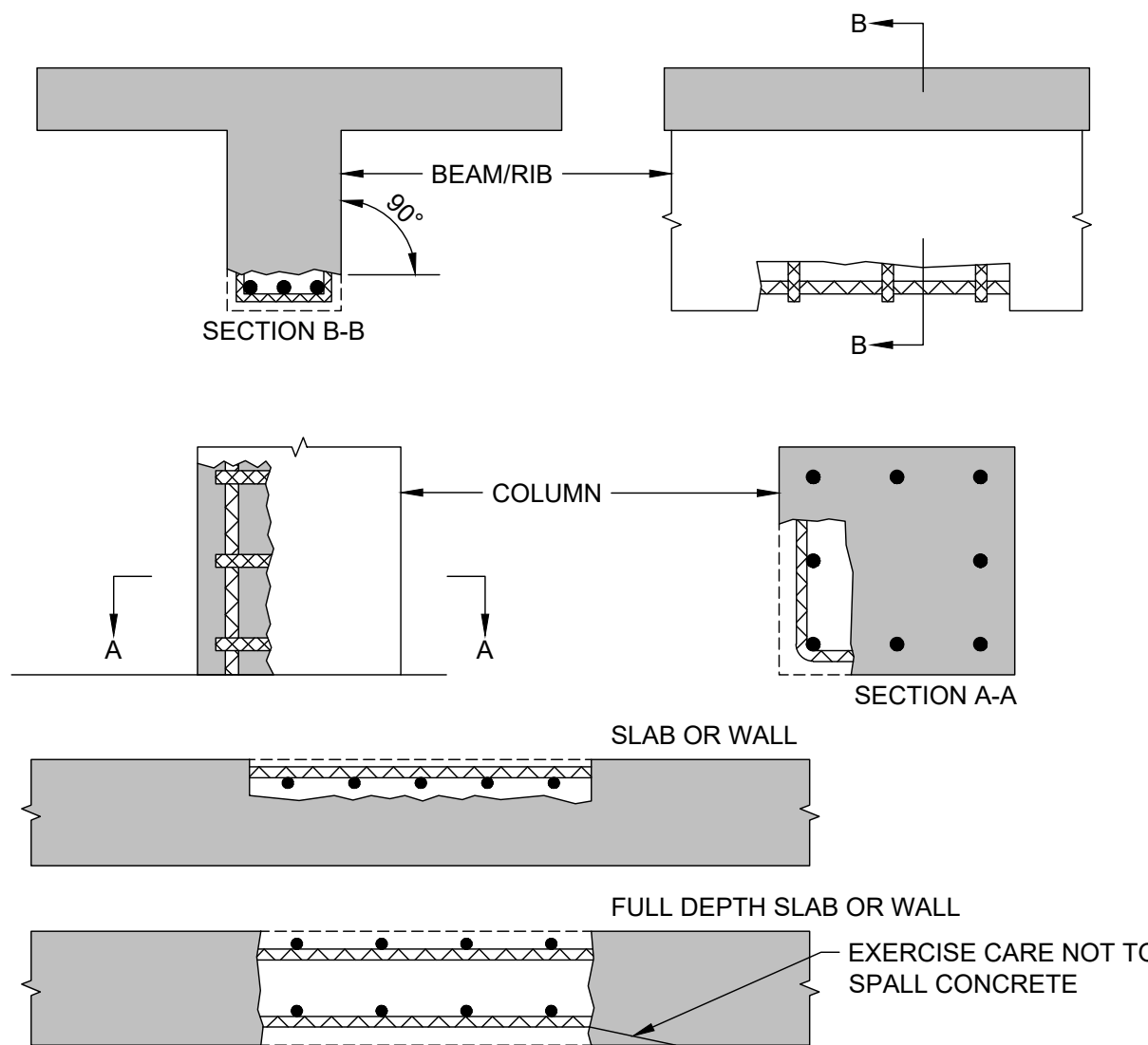
CAUTION: BEFORE STARTING REMOVALS, REVIEW EFFECT OF REMOVALS ON STRUCTURAL INTEGRITY. PROVIDE SHORING OF MEMBER AS NECESSARY. PARTICULAR CARE SHALL BE EXERCISED AT SLABBEAM CONNECTIONS TO COLUMNS.

1. REMOVE DELAMINATED CONCRETE, UNDERCUT REINFORCING STEEL (REFER TO REINFORCING STEEL UNDERCUTTING GUIDELINE J, REMOVE ADDITIONAL CONCRETE AS REQUIRED TO PROVIDE MINIMUM REQUIRED THICKNESS OF REPAIR MATERIAL.
2. AT EDGE LOCATIONS PROVIDE EITHER METHOD A OR METHOD B RIGHT ANGLE CUTS, AVOID FEATHER EDGES, FOR SHOTCRETE REPAIRS REFER TO ACI 506 EDGE PREPARATION GUIDELINES PATCH CONFIGURATIONS SHOULD BE KEPT AS SIMPLE S POSSIBLE. FOR EXAMPLE:



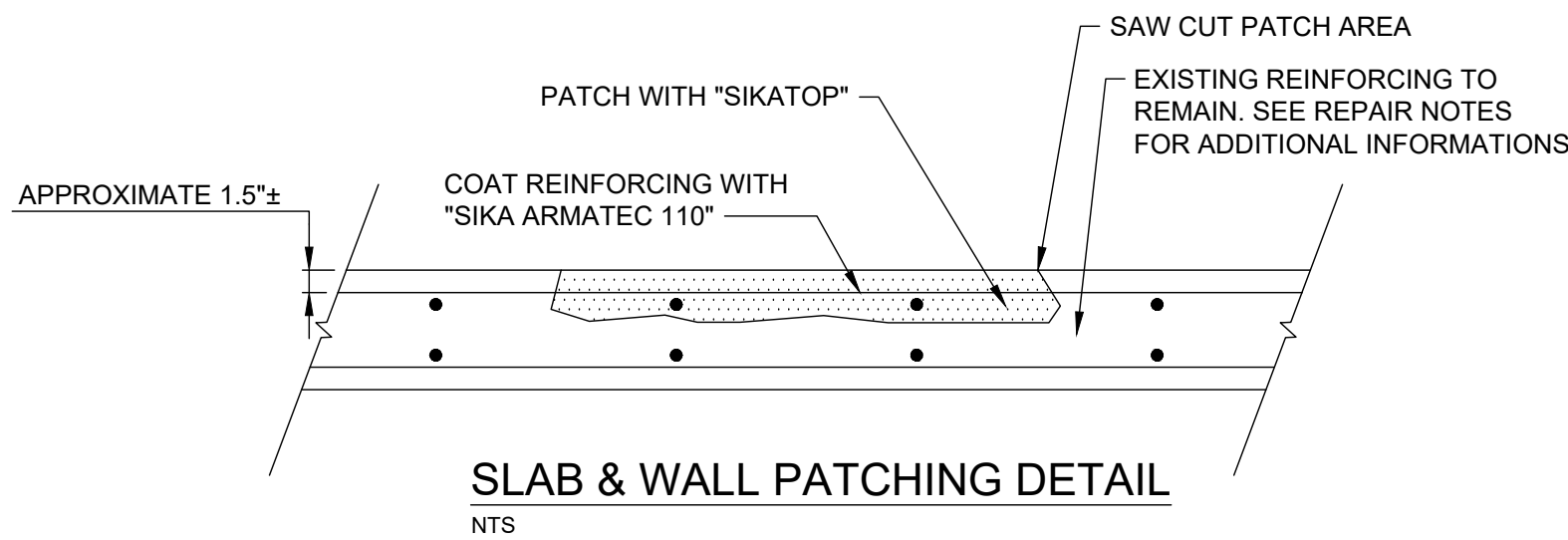
3. AFTER REMOVALS AND EDGE CONDITIONING ARE COMPLETE, REMOVE BOND INHIBITING MATERIALS (DIRT, CONCRETE SLURRY, LOOSELY BONDED AGGREGATES) BY ABRASIVE BLASTING OR HIGH PRESSURE WATERBLASTING WITH OR WITHOUT ABRASIVE. CHECK THE SURFACES AFTER CLEANING TO INSURE THAT SURFACE IS FREE FROM ADDITIONAL LOOSE AGGREGATE, OR THAT ADDITIONAL DELAMINATIONS ARE NOT PRESENT.
4. IF HYDRODEMOLITION IS USED, CEMENT AND PARTICULATE SLURRY MUST BE REMOVED FROM THE PREPARED SURFACES BEFORE SLURRY HARDENS.

REMOVAL GEOMETRY



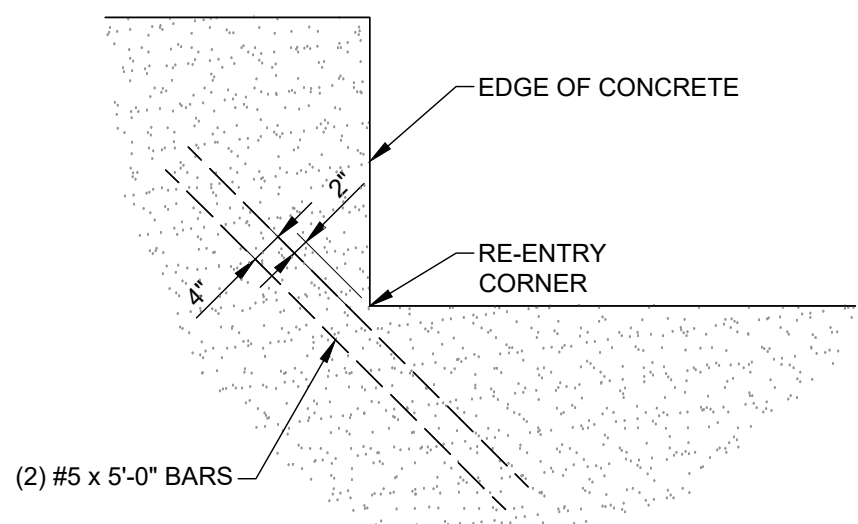
CAUTION: BEFORE STARTING REMOVALS, REVIEW EFFECT OF REMOVALS ON STRUCTURAL INTEGRITY. PROVIDE SHORING OF MEMBER AS NECESSARY. PARTICULAR CARE SHALL BE EXERCISED AT SLABBEAM CONNECTIONS TO COLUMNS.

CONCRETE SURFACE REPAIR NOTES AND SPECIFICATIONS



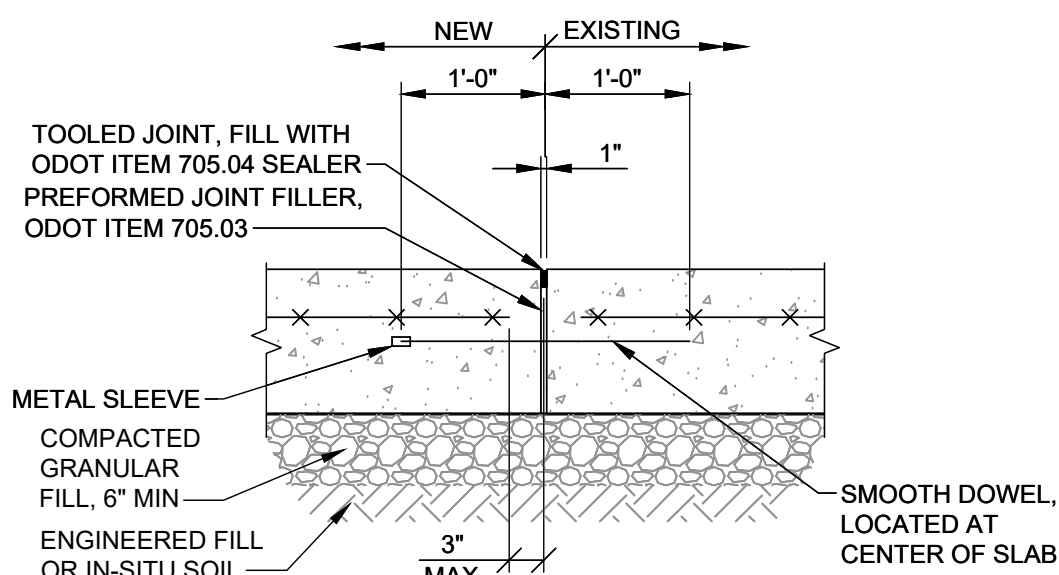
THE CONTRACTOR SHALL REPAIR DELAMINATED CONCRETE AS DESCRIBED IN THE REPAIR NOTES BELOW. THE WORK CONSISTS OF THE REMOVAL OF ALL LOOSE OR DELAMINATED CONCRETE FROM THE SURFACES THAT MAY BE ENCOUNTERED DURING SURFACE CARBONATION REMOVAL (SEE STRUCTURAL GENERAL NOTES), THE PREPARATION OF THE SURFACE, THE FURNISHING AND PLACING OF REINFORCING STEEL AS REQUIRED AND THE PLACING OF CONCRETE PATCHES, INCLUDING CURING OF SAME. THE CONTRACTOR SHALL USE SIKATOP 111 PLUS, 122 PLUS OR 123 PLUS BY SIKA CORP. OF LYNDHURST, NEW JERSEY, OR AN APPROVED EQUAL FOR THESE REPAIRS. HE SHALL HAVE IN HIS POSSESSION AT THE JOB SITE THE MANUFACTURERS PRINTED LITERATURE FOR ALL MATERIALS TO BE UTILIZED.

1. REMOVE ALL LOOSE AND DELAMINATED CONCRETE TO SOUND CONCRETE BY HAND CHIPPING OR WITH A LIGHT WEIGHT AIR HAMMER (35 LBS.) FITTED WITH A SPADE-SHAPED BIT. A CHISEL-TIPPED BIT WILL NOT BE PERMITTED. SAW CUT EDGES OF PATCH SQUARE OR PREFERABLY SLIGHTLY UNDERCUT, HAVING A MINIMUM DEPTH OF 1/2 IN. NO FEATHER EDGES WILL BE PERMITTED. DO NOT SAW CUT THE REINFORCING.
2. ALL LOOSE CONCRETE AND FINES SHALL BE FLUSHED FROM THE SURFACE AND THE ENTIRE AREA SHALL BE SOUNDED WITH A MASON'S HAMMER TO VERIFY THAT ALL LOOSE AND DELAMINATED CONCRETE HAS BEEN REMOVED. USE AEROSOL SPRAY PAINT TO OUTLINE ANY AREAS REQUIRING FURTHER REMOVAL. RESOUND AND REOUTLINE ANY UNSOUND AREAS UNTIL ONLY SOUND CONCRETE REMAINS.
3. REMOVE CONCRETE TO A DEPTH OF AT LEAST 1/2 INCH IN AREA TO BE REPAIRED AND 3/4 INCH BELOW ANY REINFORCING BARS AND CONDUITS ENCOUNTERED. DEEPER REMOVAL MAY BE REQUIRED TO EXPOSE SOUND CONCRETE.
4. CARE SHALL BE USED IN WORKING AROUND REINFORCING STEEL SO AS NOT TO DAMAGE THE STEEL OR TO SHATTER THE CONCRETE AROUND IT, BEYOND THE AREA TO BE PATCHED.
5. FOR REPAIR DEPTHS GREATER THAN 1", ADD SMALL(-" OR y"), CLEAN, COARSE AGGREGATE FOLLOWING THE MANUFACTURER'S MIXING PROCEDURES. DO NOT USE LIMESTONE AS AN AGGREGATE WITH THE SIKA PRODUCT.
6. AFTER CHIPPING AREA TO SOUND CONCRETE, WATER BLAST THE SURFACE TO REMOVE ALL CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND. WIRE BRUSH ALL EXPOSED REINFORCING AND CONDUITS TO REMOVE LOOSE RUST AND OTHER BOND-INHIBITING MATTER.
7. CHECK THE REINFORCING WITH A MICROMETER TO LOCATE BARS HAVING LESS THAN 75 TO 85% OF THEIR ORIGINAL CROSS SECTION REMAINING. ALL BARS FALLING INTO THIS CATEGORY SHALL EITHER BE SPLICED OR REPLACED WITH NEW BARS OF THE SAME SIZE AND SPACING. THE SPLICE LENGTH SHALL BE 15 INCHES. WIRE TIE NEW BARS IN PLACE.
8. COAT ALL PREPARED REINFORCING WITH SIKA ARMATEC 110 BY SIKA CORP. FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND APPLY A MINIMUM THICKNESS OF 20 MILS.
9. APPLY SCRUB COAT OF SIKATOP 122 PLUS TO ALL CONCRETE SURFACES TO ACHIEVE MAXIMUM BOND FOR THE SIKA 122 PATCHING MATERIAL. SUBSTRATE SHOULD BE CLEAN AND SATURATED SURFACE DRY WITH NO STANDING WATER. SPRAY WITH CLEAN WATER TO OBTAIN THIS SURFACE CONDITION.
10. LEAVE THE FINISHED REPAIRS IN A NEAT CLEAN CONDITION WITH NO SPILLOVERS ONTO ADJACENT AREAS.
11. CURE ALL PATCHES AS RECOMMENDED BY THE MANUFACTURER.



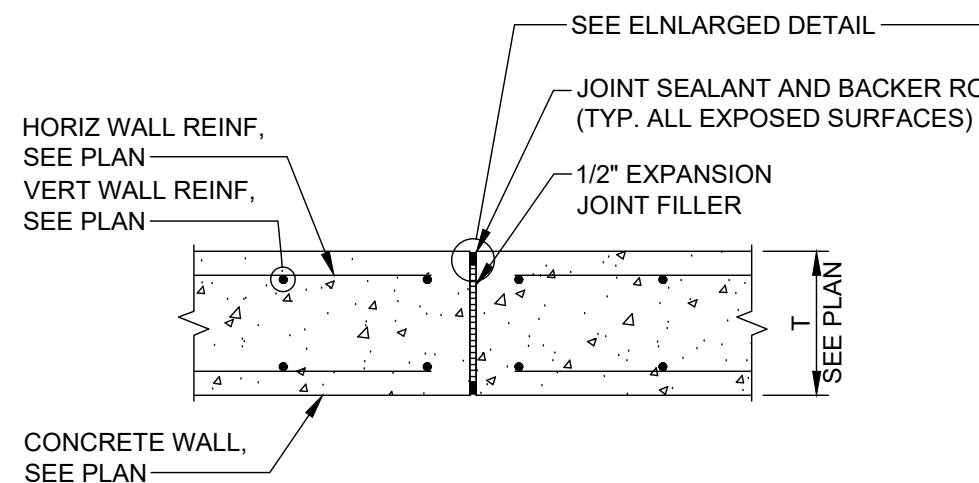
NOTE: PROVIDE RE-ENTRY REINFORCING AT ALL RE-ENTRY CONCRETE CORNERS. IF REINFORCING EXTENDS TO THE END OF THE CONCRETE, TERMINATE END WITH STD HOOK.

1 RE-ENTRANT CORNERS DETAIL
10S-04 SCALE: NTS

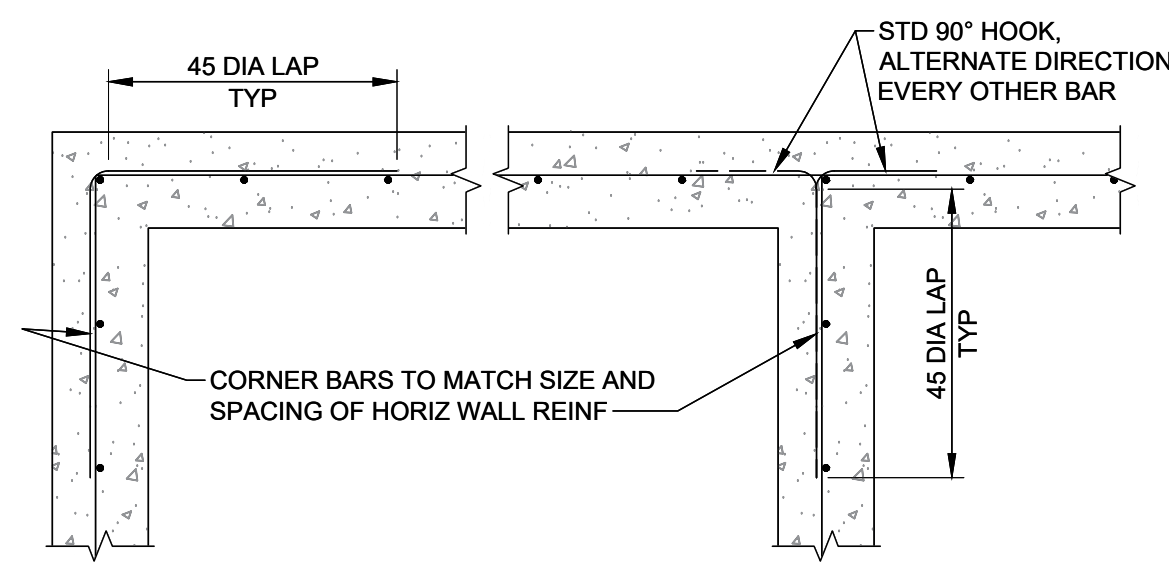


NOTE: REFER TO ODOT STANDARD DRAWING BP-5

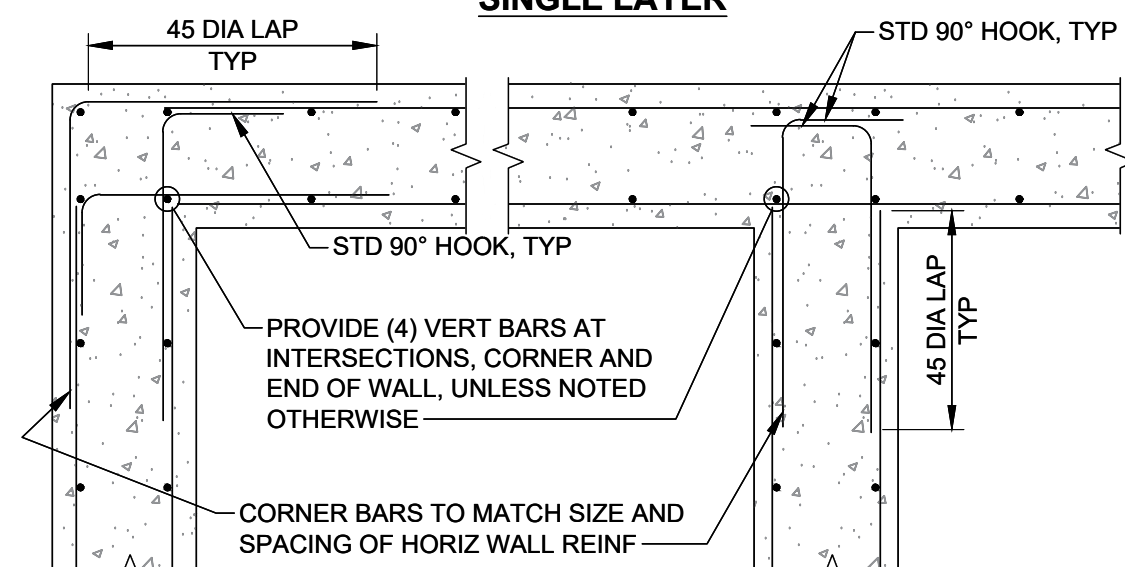
2 EXPANSION JOINT WITH DOWEL
10S-04 SCALE: NTS



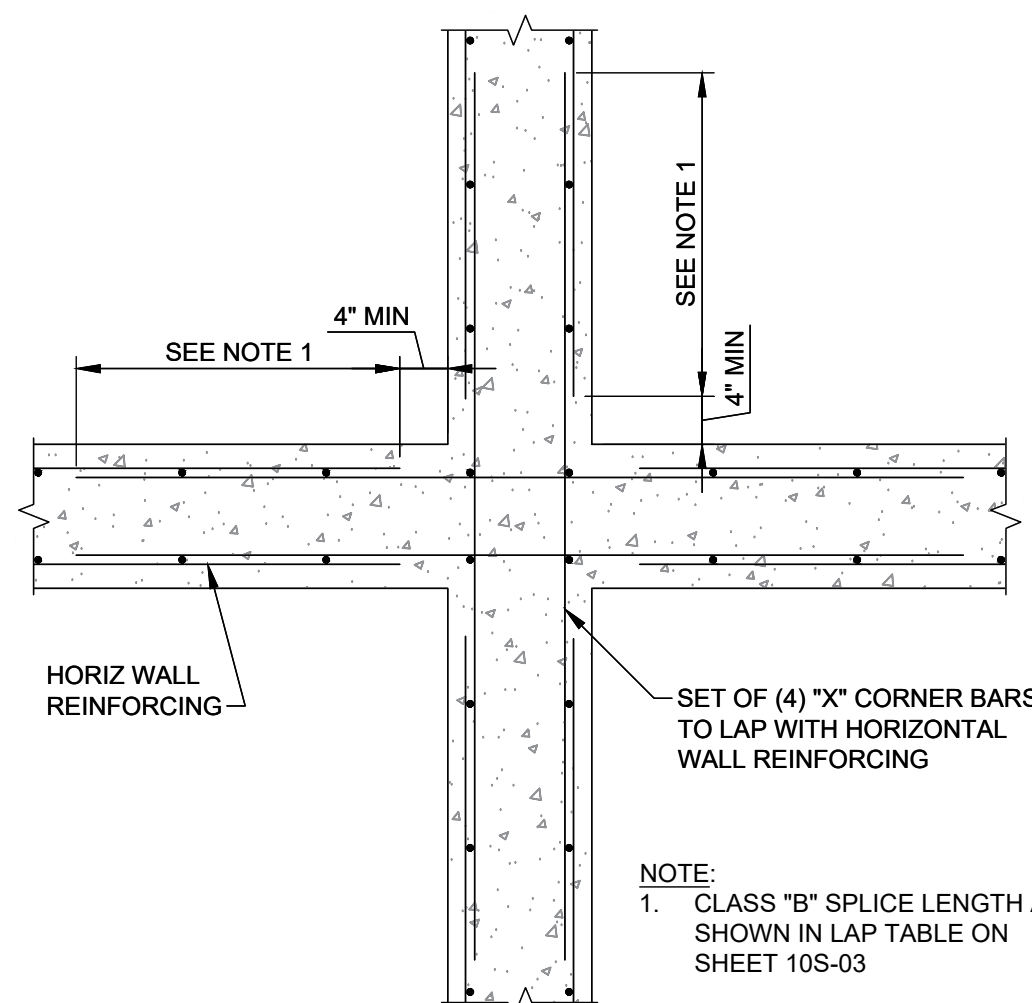
5 TYPICAL WALL EXPANSION JOINT DETAIL
10S-04 SCALE: NTS



SINGLE LAYER

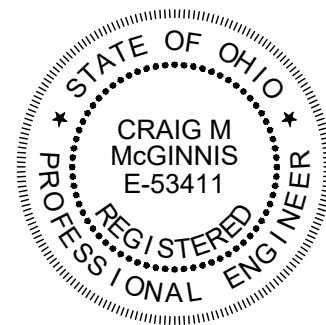


DOUBLE LAYER



"CROSS" CORNER REINFORCING, EACH FACE
(UNLESS NOTED OTHERWISE)

3 CONCRETE WALL CORNER DETAILS
10S-04 SCALE: NTS



verdantas

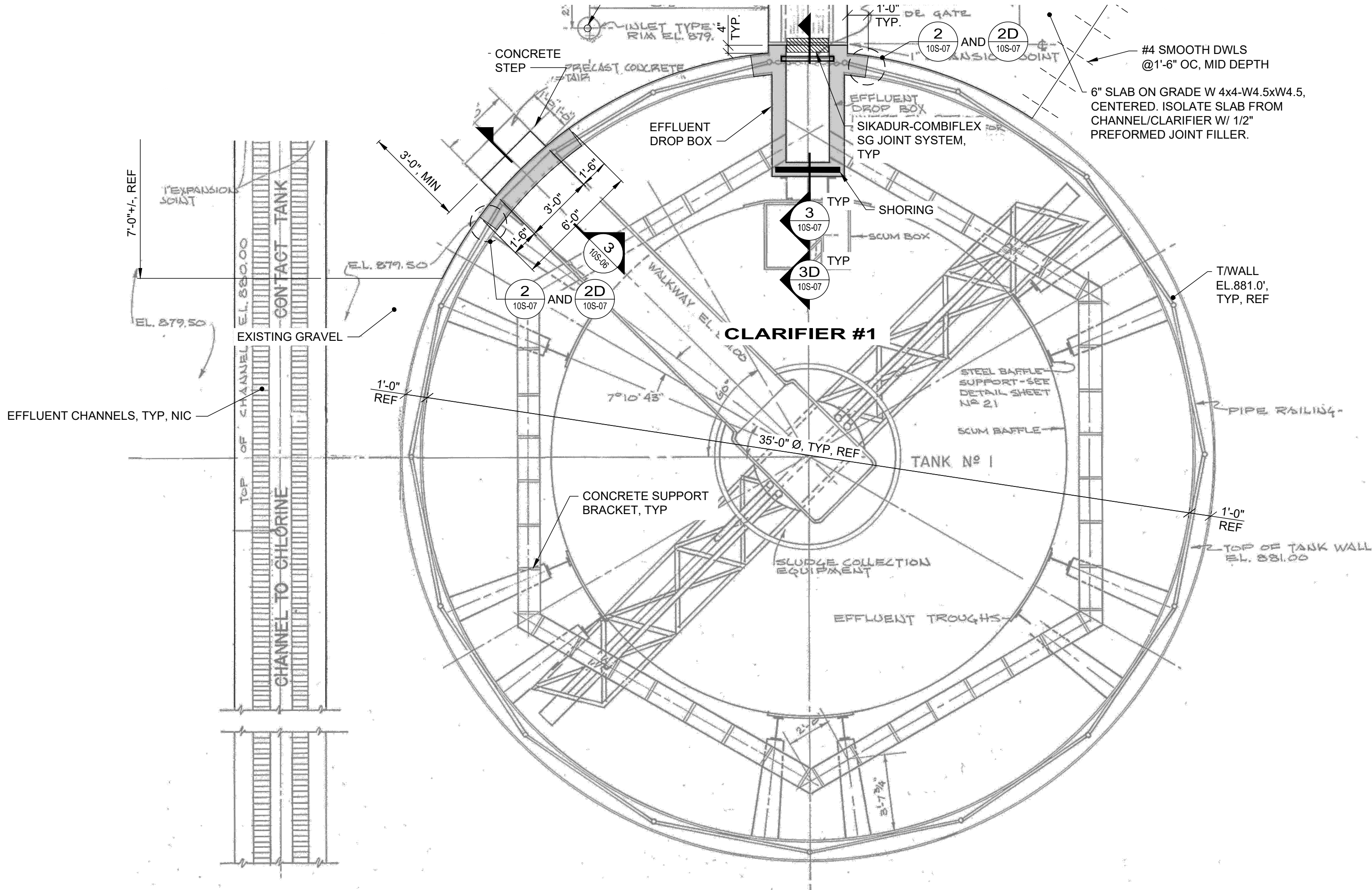
DATE	REVISION	NO

SCALE: AS NOTED	DATE: 1/9/25	DESIGNED BY: CMM	DRAWN BY: RLM	CHECKED BY: CMM
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VILLAGE OF JEFFERSON
JEFFERSON WASTEWATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS- PHASE 2
ASHTABULA COUNTY, OHIO

FINAL SETTLING TANKS - 10 SERIES
GENERAL STRUCTURAL REPAIRS

PROJECT NO: 241530	
DRAWING NAME 10S-04	
SHEET 8	OF 15



PLAN NOTES

- SEE SHEETS 10S-01, THRU 10S-03 FOR GENERAL STRUCTURAL NOTES.
- SEE SHEET 10S-04 FOR TYPICAL DETAILS.
- FIELD VERIFY DIMENSIONS AND ELEVATIONS. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VISIT THE SITE AND SPECIFIC LOCATIONS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING CONDITIONS. THE CONTRACTOR SHALL COORDINATE THE VISIT WITH THE OWNER AND THE ENGINEER.
 - THE CONTRACTOR SHALL FIELD VERIFY ANY DIMENSIONS AND ELEVATIONS AS NOTED ON THE DRAWINGS OR AS MAY BE REQUIRED, PRIOR TO CONSTRUCTION, TO MINIMIZE FIELD CHANGES.
 - THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY INCONSISTENCIES BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS THAT COULD AFFECT THE CONSTRUCTION.
 - DIMENSIONS AND ELEVATIONS MARKED "REF" ARE FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO USING THEM FOR ANY CONSTRUCTION.
- THE CONSTRUCTION SHORING SHOWN IS A SUGGESTED LAYOUT AND LOCATION. SUBMIT SHORING LOCATIONS AND SEALED CALCULATIONS PRIOR TO THE START OF EACH CONSTRUCTION PHASE. CONSTRUCTION SHORING SHALL REMAIN IN PLACE UNTIL CONCRETE HAS REACHED AN ADEQUATE STRENGTH.
- THE WASTEWATER TREATMENT PLANT SHALL CONTINUE OPERATING DURING CONSTRUCTION. THE CONSTRUCTION OPERATION SHALL NOT PROHIBIT THE WASTEWATER TREATMENT OPERATIONS. ONLY ONE CLARIFIER SHALL BE TAKEN OFFLINE AT A TIME.
- THE CONTRACTOR SHALL SUBMIT DEMOLITION AND CONSTRUCTION STAGING SCHEDULE TO THE OWNER AND THE ENGINEER FOR APPROVAL. CLARIFIER REHABILITATION SHALL START WITH CLARIFIER #3. CLARIFIER #1 SHALL BE THE LAST CLARIFIER REHABILITATED UNLESS OTHERWISE DIRECTED BY THE OWNER.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW THE EXISTING CONSTRUCTION DOCUMENTS FOR THE STRUCTURES NOTED ABOVE. AT A MINIMUM, REVIEW THE FOLLOWING DOCUMENTS:
 - VILLAGE OF JEFFERSON, WASTEWATER TREATMENT PLANT IMPROVEMENTS AND ADDITIONS, CONTRACT A, B, C AND D. DATED OCTOBER 1970.
 - VILLAGE OF JEFFERSON, WASTEWATER TREATMENT PLANT, EXPANSION CONTRACT 94-1 DATED DECEMBER 1994.
- THE CLARIFIER INSIDE DIAMETER IS 35'-0", THE WALLS ARE 11'-4" TALL BY 12" WIDE. THE EFFLUENT DROP BOX WALLS ARE 4'-0" TALL BY 8" WIDE. THE TOP OF CLARIFIER WALL AND EFFLUENT DROP BOX WALL ELEVATION IS 881.00'. THE STRUCTURAL SLAB THAT FORMS THE ROOF THE THE PUMP ROOM IS 8" THICK AND SLOPES FROM ELEVATION 879.67'. THERE IS A STRUCTURAL SLAB OVER THE INFLUENT DISTRIBUTION CHAMBER THAT PARTIALLY COVERS THE EFFLUENT CHANNELS. THE SLAB IS 8" THICK AT IS AT ELEVATION 881.00'.
- THE CLARIFIERS ALUMINUM GUARDRAIL SYSTEM SHALL BE INSPECTED PRIOR TO REMOVAL. DAMAGED PARTS AND/OR PIECES SHALL BE IDENTIFIED AND REPLACED. IDENTIFY DAMAGED ITEM WITH OWNER AND REPLACE PRIOR TO REINSTALLATION. REINSTALL POSTS AND EXPANSION JOINTS SHALL BE IN THE ORIGINAL LOCATION. AT THE LOCATION OF THE EXPANSION JOINT, VERIFY THAT THERE IS A SLIP JOINT AT EACH HORIZONTAL MEMBER, PROVIDE JOINTS AS NEEDED.
- GATES AT DROP BOX CHANNEL TO EFFLUENT CHANNEL SHALL BE REUSED. REMOVE EMBEDDED FRAMES, CLEAN, AND RE-INSTALL.
- MAINTAIN EXISTING STORM DRAINAGE PATTERNS. PRIOR TO MODIFICATION OF CONCRETE SLABS, FIELD VERIFY TOP OF CONCRETE AND DRAINAGE PATTERNS. NEW CONCRETE AND/OR OVERLY CONCRETE SHALL MATCH EXISTING GRADES AND DRAINAGE PATTERNS. DO NOT DAMAGE EXISTING STORMWATER INLETS.
- THE CONCRETE INTERFACE SHALL BE ROUGHENED TO 1/4", MINIMUM, AMPLITUDE. PRIOR TO CASTING CONCRETE, APPLY BONDING AGENT ON ROUGHENED SURFACE.
- TYPICAL REPLACEMENT SLAB-ON-GRADE, UNLESS NOTED OTHERWISE, SHALL BE A 4" MINIMUM SLAB W/4x4-W3xW3, CENTERED. ISOLATE SLAB W/1/2" PREFORMED JOINT FILLER AT PERIMETER OF THE SLAB.
- NEW STEPS SHALL HAVE A MAXIMUM RISE OF 7" AND MINIMUM TREAD OF 11". AT CLARIFIER #3, DO NOT PLACE CONCRETE ON COVER PLATE OR COVER PLATE EMBEDD ANGLE. ADJUST RISE AND TREAD TO FIT AREA. MATCH EXISTING STAIR RISE AND TREAD WIDTH AS NEEDED.
- INSTALL SIKADUR-COMBIFLEX SG JOINT SYSTEM AT JOINT BETWEEN CHANNEL AND DROP BOX, TYPICAL. COMBIFLEX JOINT SYSTEM SHALL BE CONTINUOUS FROM THE TOP OF WALL TO THE BOTTOM OF THE WALLS AND ACROSS THE BOTTOM OF THE CHANNEL/ BOX. USE 2 MILLIMETER BY 8" WIDE POLYOLEFIN TAPE MEMBRANE. STRICTLY ADHERE TO THE MANUFACTURES SURFACE PREPARATIONS AND INSTALLATION INSTRUCTIONS.

LEGEND

- REMOVE AND REPLACE TOP 4' OF WALL, SEE SECTIONS 3/10S-06 AND 3/10S-07 AND 3D/10S-07 AND DETAILS 2/10S-07 AND 2D/10S-07.



verdantas

DATE	REVISION	NO

SCALE:	AS NOTED
DATE:	19/25
DESIGNED BY:	CMM
DRAWN BY:	RLM
CHECKED BY:	GBC

VILLAGE OF JEFFERSON	JEFFERSON WASTEWATER TREATMENT PLANT
ASHTABULA COUNTY, OHIO	CLARIFIER IMPROVEMENTS- PHASE 2
FINAL SETTLING TANKS - 10 SERIES	
PLAN VIEW - STRUCTURAL REPAIRS	

PROJECT NO:	241530
DRAWING NAME	10S-05
SHEET	OF
9	15

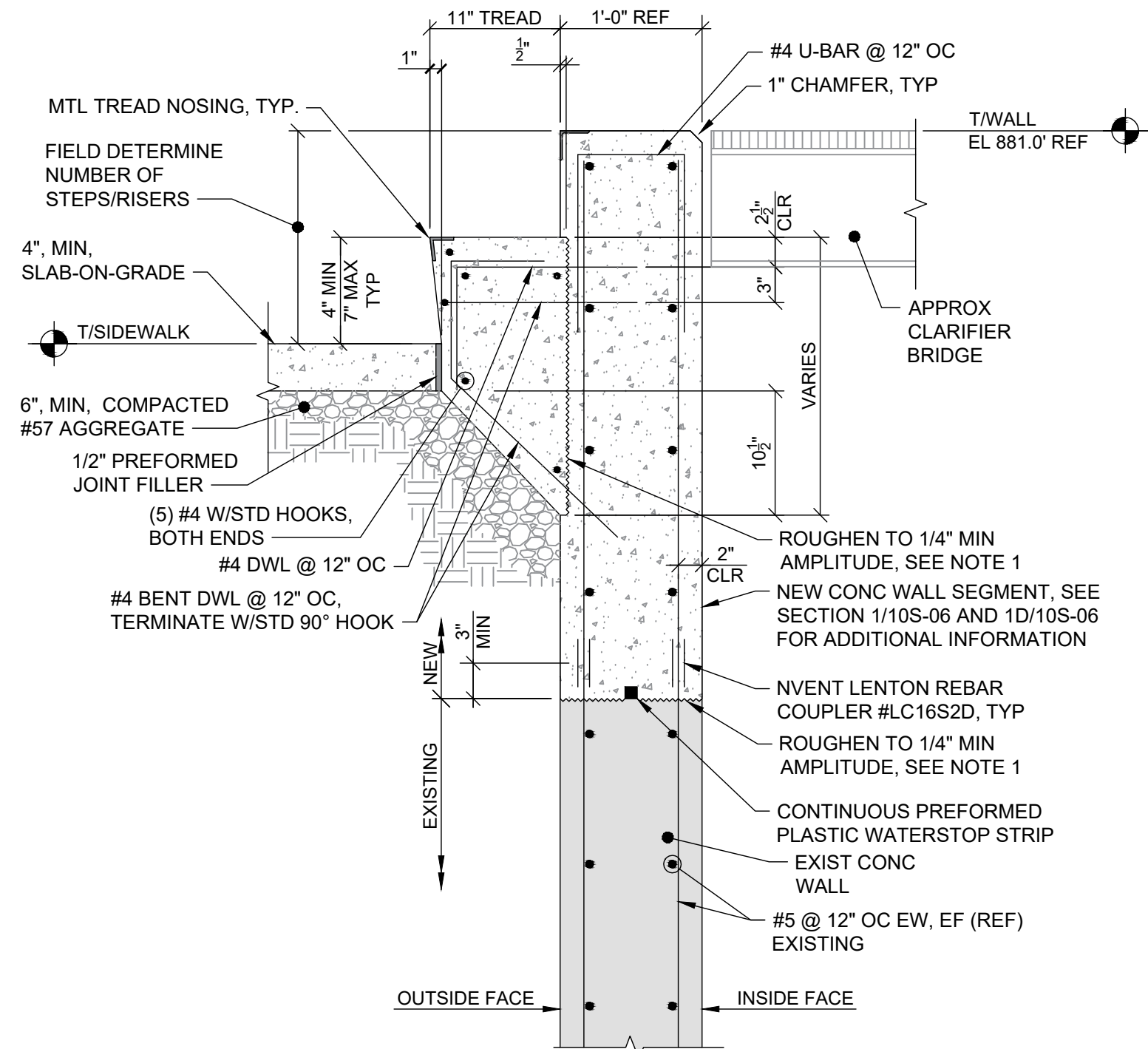


NO	REVISION	DATE

SCALE: AS NOTED	DATE: 10/16/24	DESIGNED BY: CMM	DRAWN BY: RLM	CHECKED BY: CMM
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VILLAGE OF JEFFERSON JEFFERSON WASTEWATER TREATMENT PLANT CLARIFIER IMPROVEMENTS- PHASE 2 ASHTABULA COUNTY, OHIO	FINAL SETTLING TANKS - 10 SERIES STRUCTURAL DETAILS
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PROJECT NO: 241530	DRAWING NAME 10S-06
SHEET 10	OF 15



- NOTES:
1. APPLY EPOXY BONDING AGENT TO ROUGHENED SURFACE
 2. CONNECT HORIZONTAL WALL REINFORCEMENT TO EXIST W/ NVENT LENTON REBAR COUPLER #LC16S2D, TYP. SEE DETAIL 2/10S-07
 3. STAIR DOWELS SHALL HAVE 6" MIN EMBEDMENT INTO WALL
 4. FIELD VERIFY DISTANCE FROM SLAB TO TOP OF WALL. PROVIDE NUMBER OF RISERS AS REQUIRED. MAX RISER SHALL NOT EXCEED 7". ALL RISERS SHALL BE EQUAL
 5. REFERENCE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION ON GRANULAR BASE MATERIAL

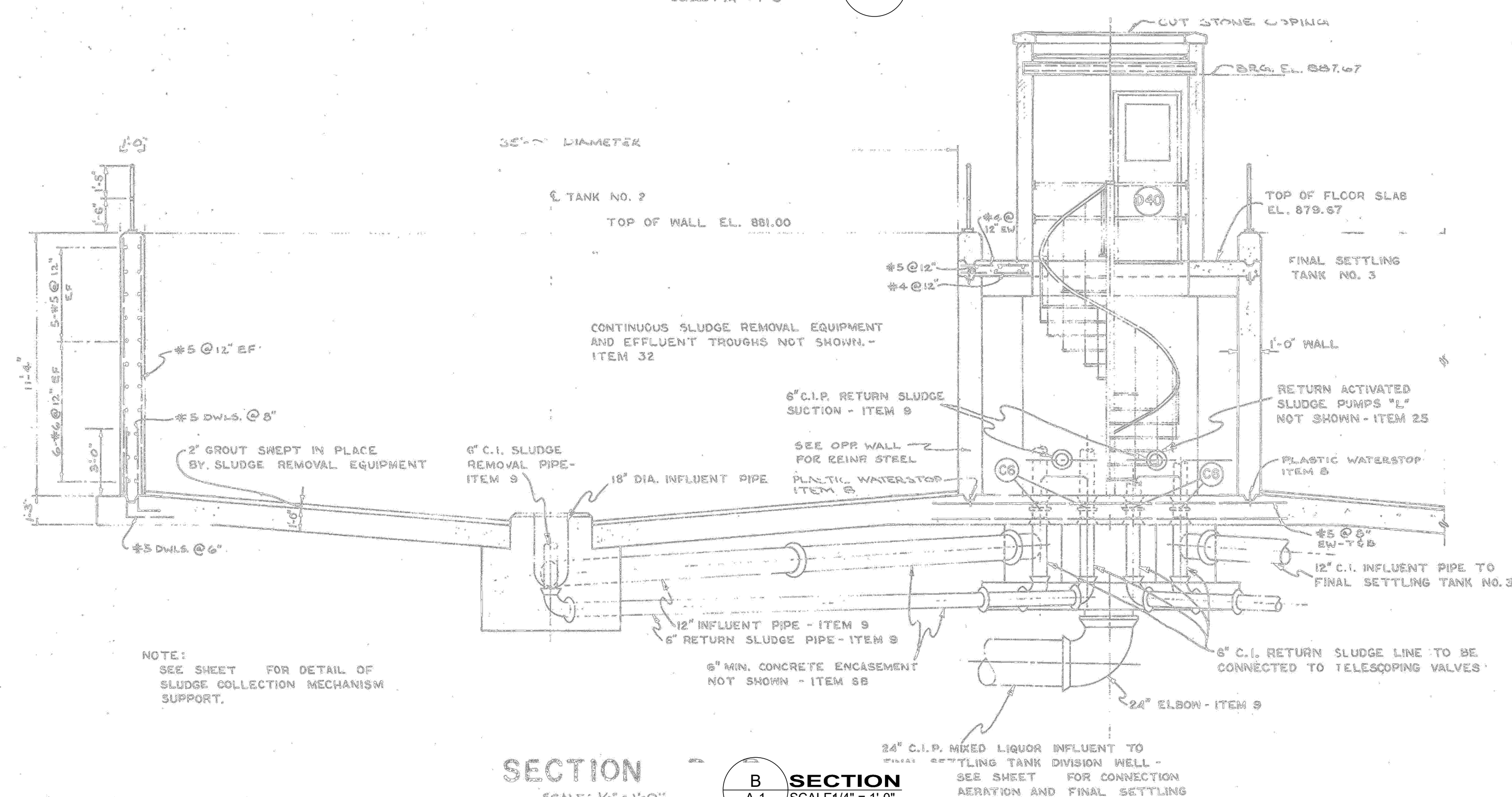
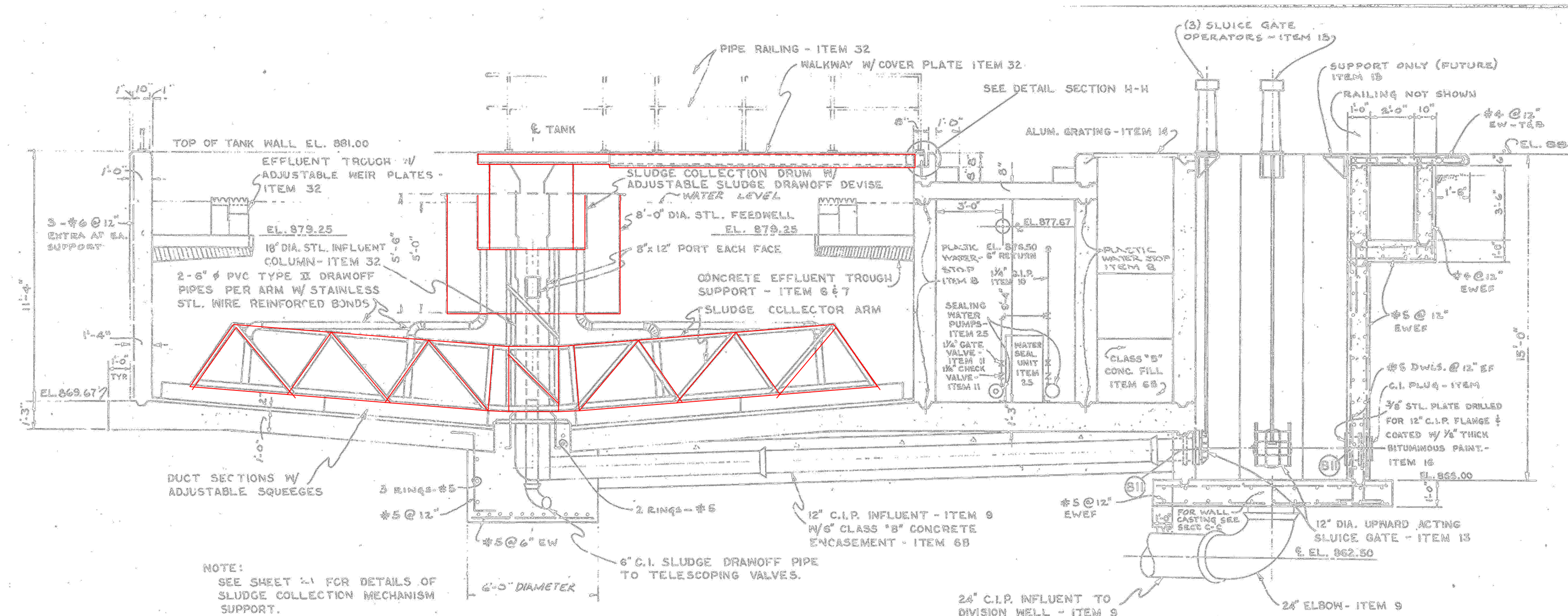
3 SECTION - NEW CONSTRUCTION
10S-06 SCALE: NTS



- | SCALE: AS NOTED | | NO | REVISION | DATE |
|-----------------|--|----|----------|----------|
| DATE: | | | | 10/16/24 |
| DESIGNED BY: | | | | CMMI |
| DRAWN BY: | | | | TLM |
| CHECKED BY: | | | | GBC |

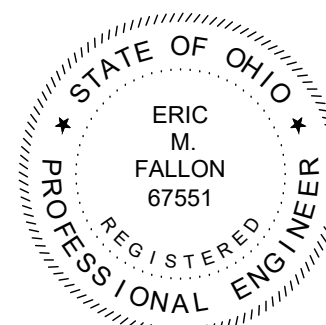
**JEFFERSON WASTEWATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS-PHASE 2
VILLAGE OF JEFFERSON
ASHTABULA COUNTY, OHIO**

PROJECT NO:	
241530	
DRAWING NAME	
10S-07	
SHEET	OF
11	15



GENERAL NOTES:

1. SUPPLEMENTARY DRAWINGS FOR MECHANISM DETAILS AND REPLACEMENT. SEE NOTES ON PREVIOUS SHEET FOR ITEMS INCLUDED IN REPLACEMENT AND REHABILITATION.



SCALE:	1/4" = 1'-0"	NO	REVISION	DATE
DATE:	4/20/2026			
DESIGNED BY:	MLB			
DRAWN BY:	MLB			

JEFFERSON WASTEWATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS-PHASE 2
VILLAGE OF JEFFERSON
ASHTABULA COUNTY, OHIO

FINAL SETTLING TANKS - 10 SERIES

CLARIFIER SECTION VIEW

PROJECT NO:

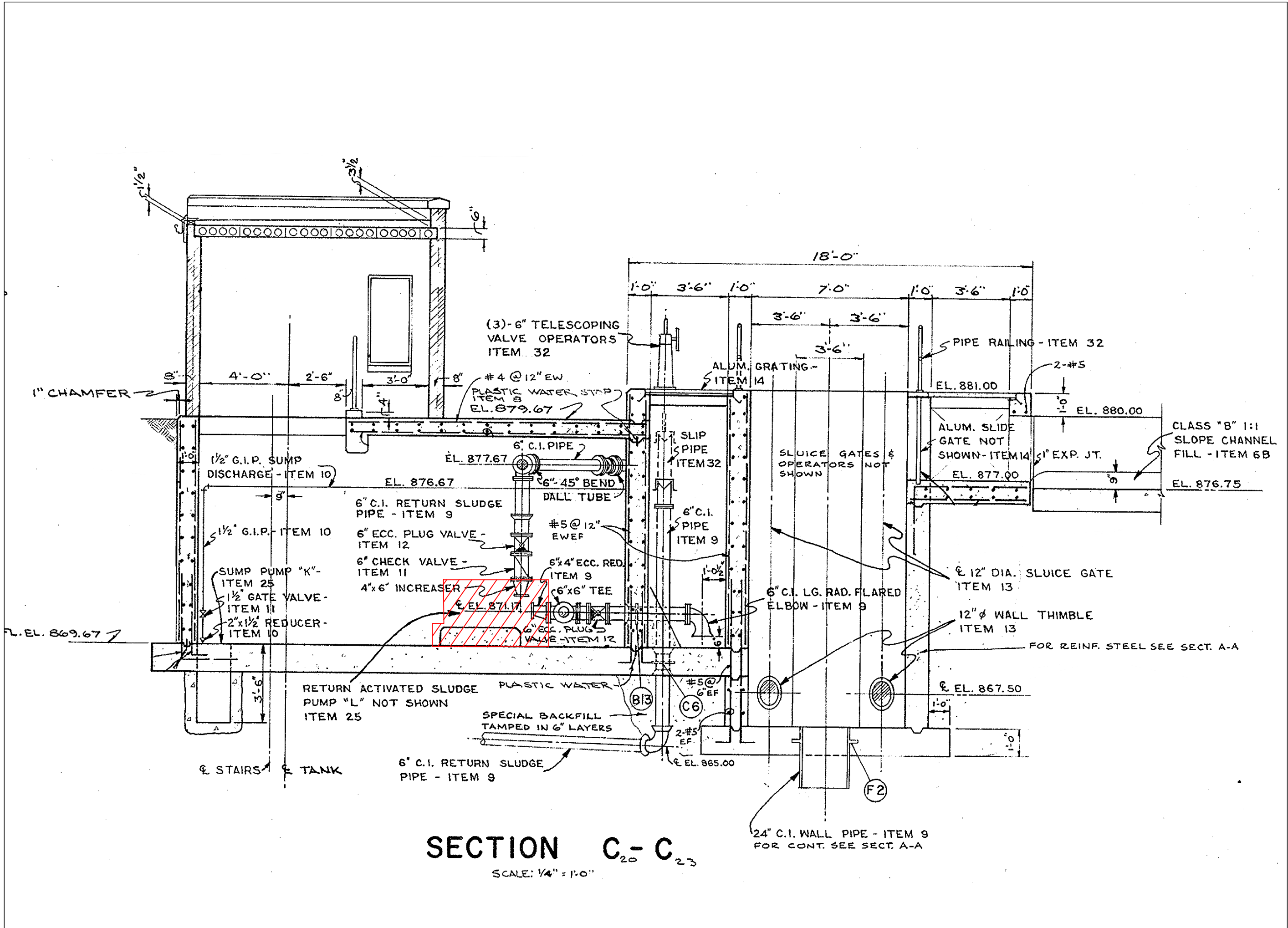
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DRAWING NAME

10D-02

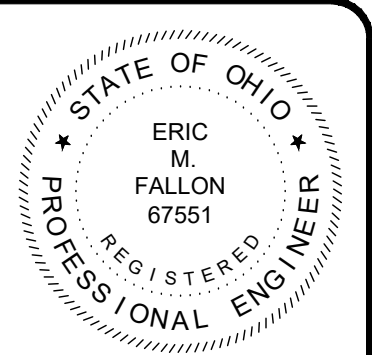
SHEET	OF
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13	15
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PUMP SCHEDULE						
DESCRIPTION	TYPE	DESIGN CAPACITY, GPM	TDH, FT	MOTOR HORSEPOWER	DISCHARGE SZIE, IN	SUCTION SIZE, IN
RETURN ACTIVATED SLUDGE	SCREW CENTRIFUGAL	400/600/900	2/6/35	15	5	6

- DEMO NOTES:**
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL RAS PUMP COMPONENTS.
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING EQUIPMENT PADS
- GENERAL NOTES:**
- CONTRACTOR SHALL INSTALL NEW EQUIPMENT PAD.
 - CONTRACTOR SHALL REPLACE THE RETURN ACTIVATED SLUDGE PUMPS AND CONTROL PANELS, SEE SPECIFICATIONS SECTION 432359.
 - CONTRACTOR SHALL MAKE ALL NECESSARY PIPING MODIFICATIONS FOR FITTING THE NEW PUMPS.



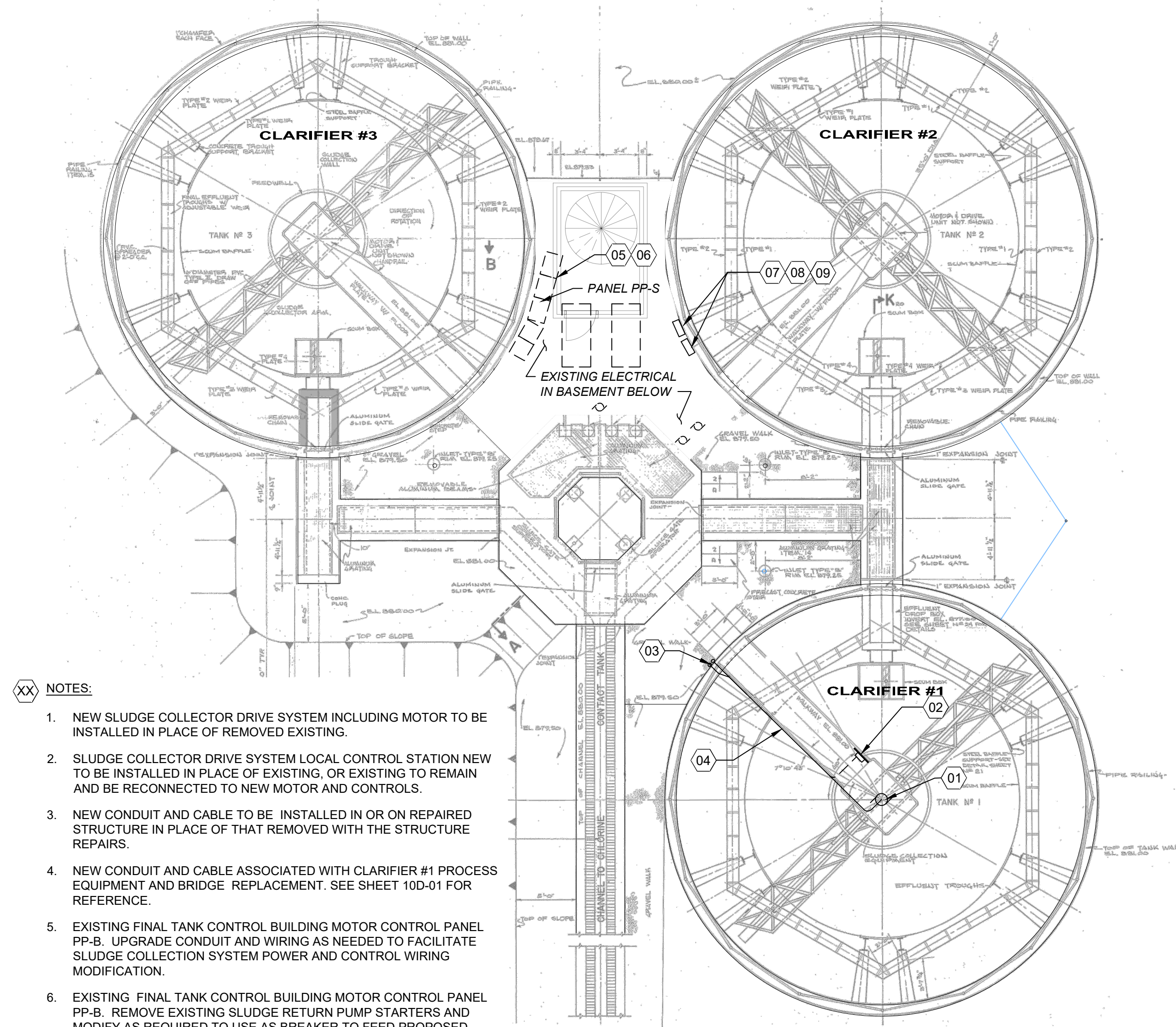
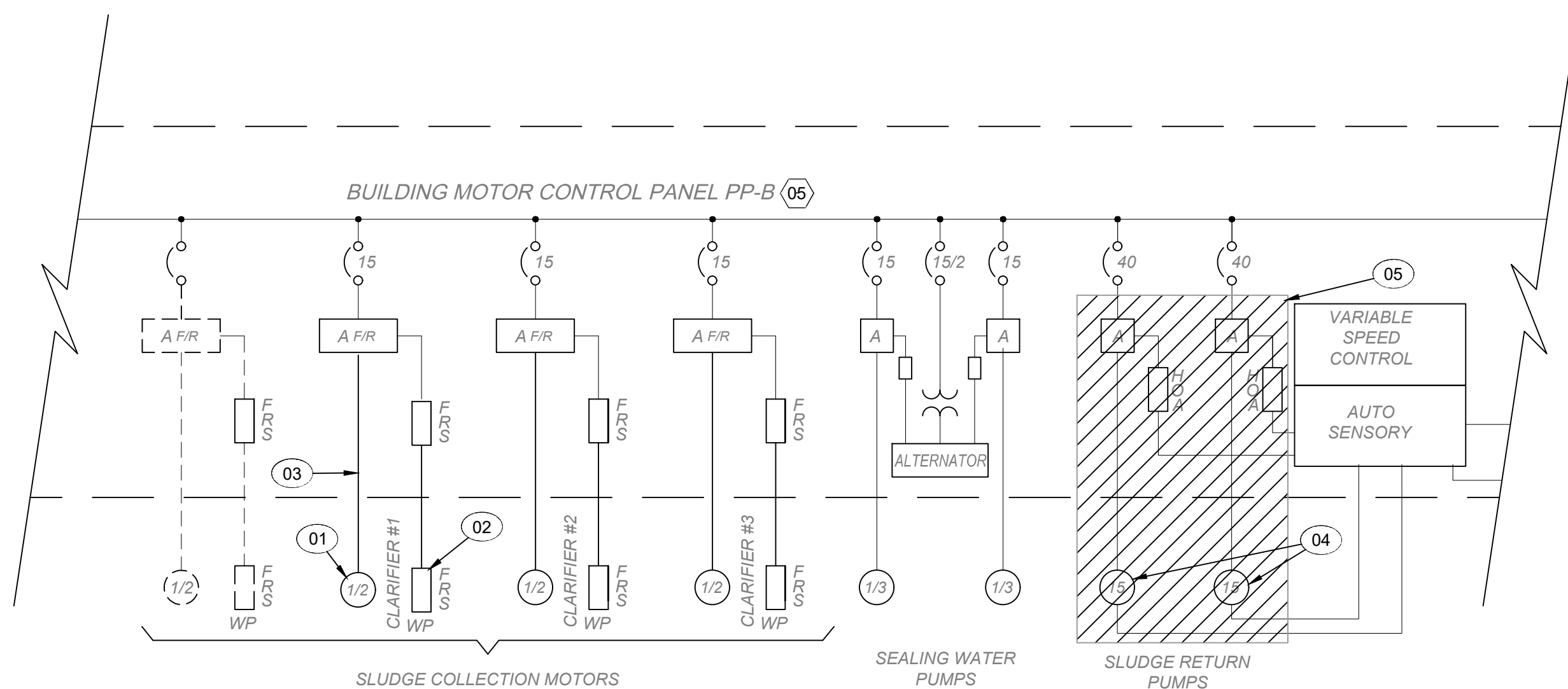
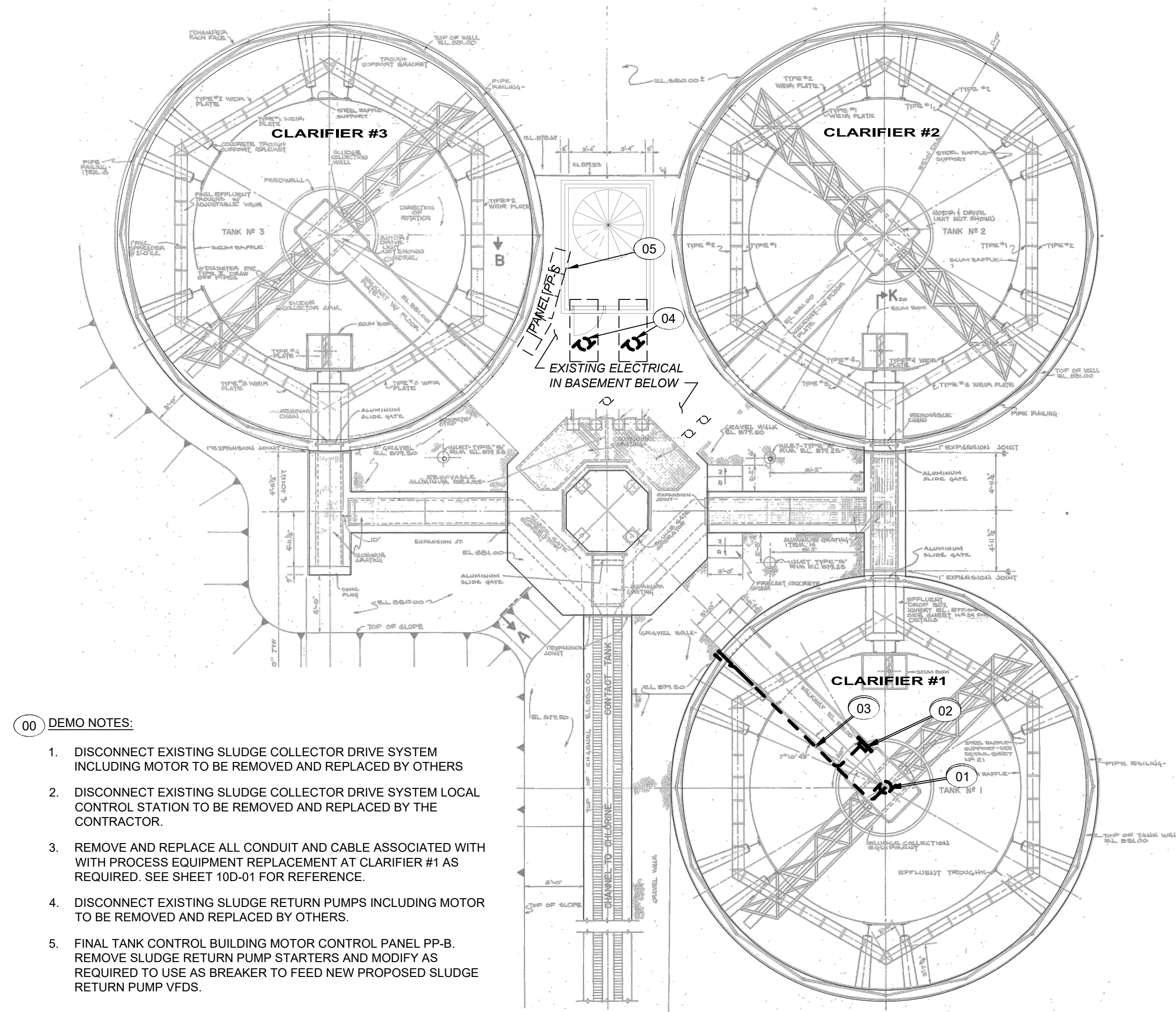
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NO	REVISION	DATE	SCALE: 1/4" = 1'-0"	DATE: 4/20/2026	DESIGNED BY: MLB	DRAWN BY: MLB	CHECKED BY: EMF

VILLAGE OF JEFFERSON
JEFFERSON WASTEWATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS- PHASE 2
ASHTABULA COUNTY, OHIO

FINAL SETTLING TANKS - 10 SERIES
RAS PUMP REPLACEMENT

PROJECT NO: 241530	
DRAWING NAME 10D-02	
SHEET 14	OF 15



- XX** NOTES:
1. NEW SLUDGE COLLECTOR DRIVE SYSTEM INCLUDING MOTOR TO BE INSTALLED IN PLACE OF REMOVED EXISTING.
 2. SLUDGE COLLECTOR DRIVE SYSTEM LOCAL CONTROL STATION NEW TO BE INSTALLED IN PLACE OF EXISTING, OR EXISTING TO REMAIN AND BE RECONNECTED TO NEW MOTOR AND CONTROLS.
 3. NEW CONDUIT AND CABLE TO BE INSTALLED IN OR ON REPAIRED STRUCTURE IN PLACE OF THAT REMOVED WITH THE STRUCTURE REPAIRS.
 4. NEW CONDUIT AND CABLE ASSOCIATED WITH CLARIFIER #1 PROCESS EQUIPMENT AND BRIDGE REPLACEMENT. SEE SHEET 100-01 FOR REFERENCE.
 5. EXISTING FINAL TANK CONTROL BUILDING MOTOR CONTROL PANEL PP-B. UPGRADE CONDUIT AND WIRING AS NEEDED TO FACILITATE SLUDGE COLLECTION SYSTEM POWER AND CONTROL WIRING MODIFICATION.
 6. EXISTING FINAL TANK CONTROL BUILDING MOTOR CONTROL PANEL PP-B. REMOVE EXISTING SLUDGE RETURN PUMP STARTERS AND MODIFY AS REQUIRED TO USE AS BREAKER TO FEED PROPOSED SLUDGE RETURN PUMP VFDs.
 7. INSTALL NEW SLUDGE RETURN PUMP VFDs (FURNISHED BY OTHERS) IN THE ELECTRICAL PANEL AREA. EXACT LOCATION TO BE DETERMINED IN THE FIELD. COORDINATE FINAL LOCATION, CLEARANCES, AND ENCLOSURE TYPE WITH OWNER AND SYSTEM INTEGRATOR.
 8. NEWEST NEW SLUDGE RETURN PUMP VFDs TO PROPOSED PUMPS. (INSTALLED BY OTHERS). REUSE AND RE-TERMINATE EXISTING PUMP CONTROL DEVICES AS APPLICABLE AND CONNECT ALL CONTROL, INTERLOCK, AND SIGNAL WIRING TO THE NEW VFDs IN ACCORDANCE WITH VFD AND PUMP MANUFACTURER REQUIREMENTS AND APPROVED INTEGRATOR SHOP DRAWINGS.
 9. PROVIDE ALL VFD CONTROL INTERFACING, INCLUDING START/STOP, SPEED REFERENCE, STATUS, AND FAULT SIGNALS, AS REQUIRED FOR INTEGRATION WITH PLANT SCADA SYSTEM.

- ## ELECTRICAL SPECIFICATIONS

1. THE ELECTRICAL CONTRACTOR SHALL APPLY FOR AND SECURE ALL COSTS AND CHARGES FOR PERMITS, CONSTRUCTION, AND MISCELLANEOUS WORK ASSOCIATED WITH AND REQUIRED FOR THE COMPLETION OF THE PROJECT ELECTRICAL WORK.
 2. THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS OF ELECTRICAL WORK BY ALL INSPECTION AUTHORITIES HAVING JURISDICTION. COPIES OF INSPECTION REPORTS SHALL BE MADE AVAILABLE TO THE OWNER UPON REQUEST. COPIES OF THE APPROVED FINAL INSPECTION REPORT SHALL ACCOMPANY THE REQUEST FOR FINAL PAYMENT.
 3. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, OHIO BUILDING CODE, LOCAL CODES, AND ORDINANCES WHERE APPLICABLE, AND REQUIREMENTS OF OSHA.
 4. ALL MATERIALS AND EQUIPMENT FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE NEW, U.L. LISTED OR LABELED, AND CONFORM TO NEMA AND ANSI STANDARDS WHERE APPLICABLE.
 5. THE CONTRACTOR SHALL VISIT THE SITE AND FULLY FAMILIARIZE THEMSELVES WITH ALL CONDITIONS WHICH AFFECT THEIR WORK PRIOR TO BID. COORDINATE AND SCHEDULE WORK WITH OTHER TRADES TO ENSURE SATISFACTORY PERFORMANCE, AVOID DELAYS AND DUPLICATIONS AND MEET THE OWNER'S COMPLETION SCHEDULE FOR THE USE OF THE BUILDING.
 6. ALL WORK SHALL BE INSTALLED BY WORKMEN FULLY SKILLED IN THE WORK THEY PERFORMED. REPAIR OR REPLACE EXISTING EQUIPMENT OR PROPERTY OF THE OWNER DAMAGED BY ELECTRICAL TRADES WORKMEN.
 7. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE MATERIALS AND WORKMANSHIP PROVIDED BY THEM FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE. REPAIR OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER WITHIN THE GUARANTEE PERIOD.
 8. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE EMT, INTERMEDIATE, OR RIGID GALVANIZED IN ACCORDANCE WITH AND AS PERMITTED BY THE NATIONAL ELECTRICAL CODE OR LOCAL/STATE CODES AS APPLICABLE. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, 1" MINIMUM.
 9. ALL ELECTRICAL WIRES SHALL BE MINIMUM #12 AWG, COPPER, 600 V RATED. #14 AWG COPPER SHALL BE PERMISSIBLE FOR CONTROL CIRCUITRY. AMPACITY RATINGS SHALL BE BASED UPON 75 DEGREES C RATINGS.
 - 10.1. #14, #12, AND #10 AWG CONDUCTORS SHALL BE "THHN/THWN".
 - 10.2. #8 AND LARGER SHALL BE STRANDED "THHN/THWN".
 11. FLEXIBLE METAL CONDUIT INCLUDING LIQUID-TIGHT SHALL BE PERMITTED WHERE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND LOCAL CODE PROVISIONS. FLEXIBLE METAL CONDUIT SHALL CONTAIN A SEPARATE GROUNDING CONDUCTOR AND BE TERMINATED WITH APPROPRIATE FITTINGS.
 12. THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO DESCRIBE THE WORK REQUIRED. THE ELECTRICAL CONTRACTOR SHALL ACCURATELY FIELD MEASURE AND LAY OUT HIS WORK TO EFFECTIVELY ACHIEVE A STRUCTURALLY COORDINATED INSTALLATION WITH THE BUILDING LAYOUT AND OTHER TRADES.
 13. COORDINATE ALL SERVICE ENTRANCE REQUIREMENTS WITH THE LOCAL ELECTRICAL UTILITY COMPANY TO ENSURE COMPLIANCE TO UTILITY COMPANY REQUIREMENTS.
 14. DISCONNECTION, RECONNECTION, AND RELOCATION OF EQUIPMENT SHALL BE COORDINATED SO AS TO CAUSE MINIMAL DISRUPTION OF SERVICE.
 15. IDENTIFY PANEL BOARDS AND USAGE OF PANELBOARD CIRCUIT BREAKERS WITH PLASTIC LAMICOID NAMEPLATES. NAMEPLATES SHALL INDICATE PANEL DESIGNATION, VOLTAGE, AND USE.