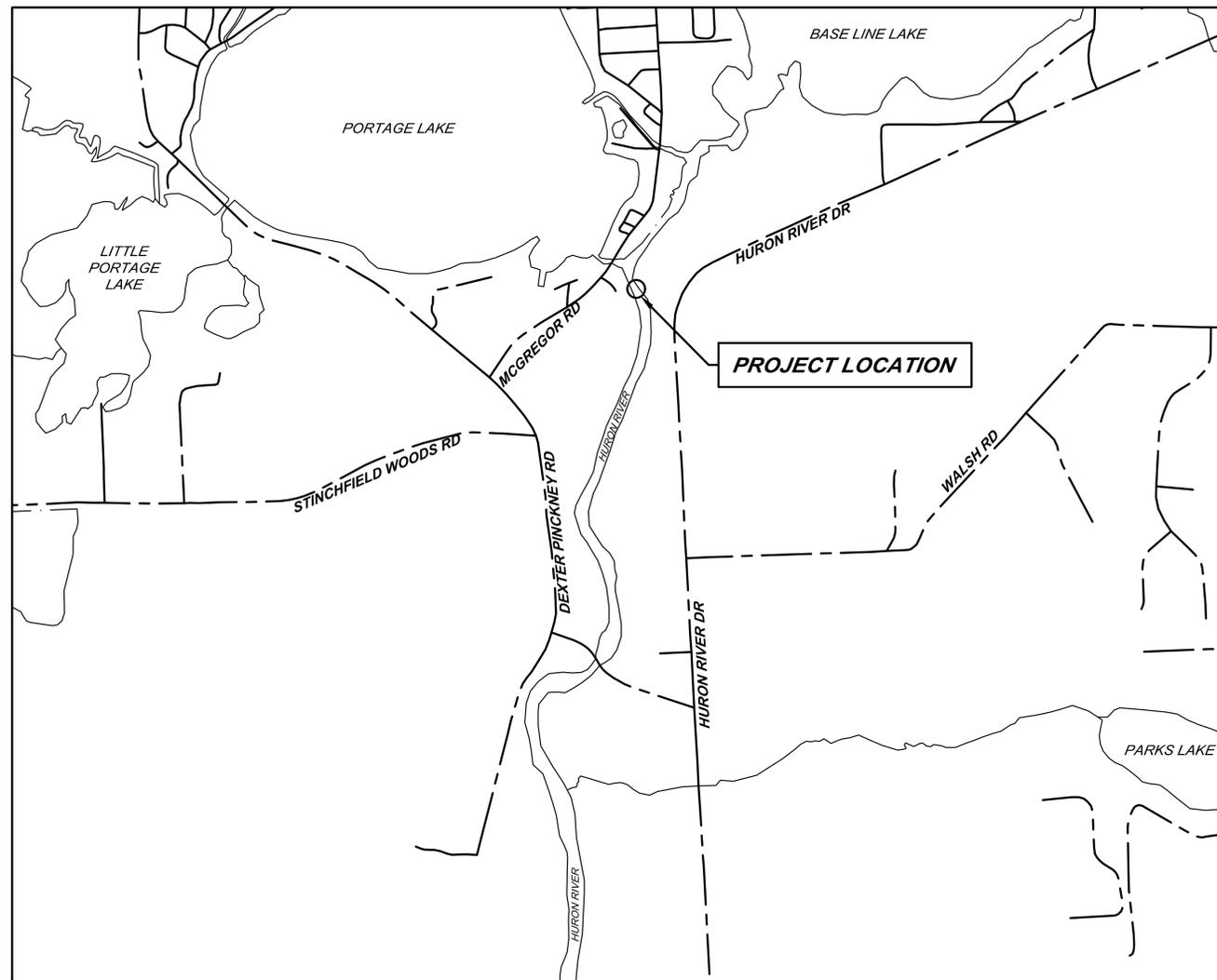


FLOOK DAM #8 - REHABILITATION

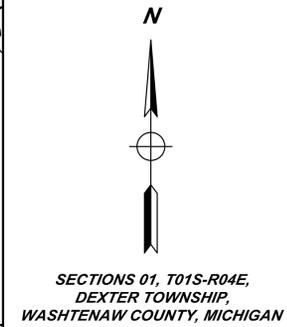
WASHTENAW COUNTY WATER RESOURCES COMMISSIONER



AREA MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE



PLAN INDEX	
SHEET NO.	DESCRIPTION
01	COVER SHEET
02	NOTE SHEET
03	SOIL EROSION AND SEDIMENTATION CONTROL NOTES
04	SOIL EROSION AND SEDIMENTATION CONTROL PLAN
05	DEMOLITION SHEET
06	PROPOSED SITE PLAN
07	ORIGINAL CONSTRUCTION DRAWINGS
08	ORIGINAL CONSTRUCTION DRAWINGS
09	ORIGINAL CONSTRUCTION DRAWINGS
10	DAM DETAILS
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12	TAINTER GATE DETAILS
13	ELECTRICAL SITE PLAN
14	ELECTRICAL POWER DISTRIBUTION
15	CONTROL SYSTEM WIRING DIAGRAM
16	CONTROL SYSTEM WIRING DETAILS
17	ELECTRICAL INSTALLATION DETAILS

BY	MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>			
FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN			
COVER SHEET			
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</small>	
DE. BY:	MTS/DPZ	CH. BY:	RVG
DR. BY:	MTS	APP. BY:	NDC
		PROJECT NO. 1349885G2023	
STDS.	SHEET 01 OF 17		DF 01
DATE	OCTOBER, 2024		
SCALE	NOT TO SCALE		FILE NO. DF-1153-01

P:\Projects\2023\1349885G2023 - Flook Dam Rehabilitation\CAD\CSDWG\Cover_Sheet.dwg, 10/28/2024, 2:18:30 PM, michael.courney

GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS, UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION, CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR SHALL MAINTAIN ACCESS FOR MAIL DELIVERY AND GARBAGE PICKUP AT ALL PARCELS. IF THESE SERVICES CANNOT BE PERFORMED, CONTRACTOR IS RESPONSIBLE FOR TAKING THE NECESSARY MEASURES TO CARRY THEM OUT.

COORDINATE DRIVE CLOSURES AND MAIL BOX RELOCATION WITH LANDOWNERS A MINIMUM OF ONE DAY IN ADVANCE.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY OWNER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD, SEED/MULCH, OR SEED/MULCH BLANKET AS DIRECTED BY OWNER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAPS/BASINS SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

ADJUSTING MONUMENT BOXES ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.

TRAFFIC THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES. SIGNAGE MUST BE IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE COORDINATED WITH THE ENGINEER AND GOVERNING ROAD AGENCY. PERMITS MAY BE REQUIRED.

PERMITS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE AGENCIES.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE AGENCIES.

CONTACTS

DEPUTY WASHTENAW COUNTY WATER RESOURCES COMMISSIONER OWNER
ATT: SCOTT MILLER, P.E.
705 N. ZEEB ROAD
ANN ARBOR, MI 48107
PHONE: (734) 222-8818

SPICER GROUP PROJECT MANAGER
ATT: RICHARD GRAHAM
125 HELLE BLVD
SUITE 1
DUNDEE, MI 48131
PHONE: (734) 823-3308

A7&T COMMUNICATIONS
ATT: ANIKA ESTES
444 MICHIGAN AVENUE
DETROIT, MI 48226
PHONE: (248) 454-2998

CONSUMERS ENERGY GAS
ATT: STEVEN SORIA
1 ENERGY PLAZA
JACKSON, MI 49201
PHONE: (248) 653-2411

DTE ELECTRIC
SARA KIPP
1 ENERGY PLAZA
DETROIT, MI 48226
PHONE: (800) 477-4747

CHARTER INTERNET
ATT: MARK KINGSWORTHY
105 KENT ST
IRON MOUNTAIN, MI 49801
PHONE: (800) 338-9299

GENERAL NOTES CONT.

ALL WORK SHALL BE CONFINED TO THE RIGHT-OF-WAY OR CONSTRUCTION LIMITS SHOWN ON THE PLANS. ANY WORK OUTSIDE OF THESE LIMITS SHALL BE AGREED TO BY THE CONTRACTOR AND THE LANDOWNER IN WRITING.

RESTORE ALL LAWN AREAS PER SPECIFICATIONS AND PLANS.

CONTRACTOR TO RESTORE INCIDENTAL DAMAGES ON THE PROJECT AS DIRECTED BY OWNER AND ENGINEER AT THE CONTRACTOR'S EXPENSE.

ALL DRAIN SIDE SLOPES SHALL BE 2H:1V OR FLATTER, UNLESS SPECIFIED OTHERWISE.

THE WORDS "RIGHT SIDE" OR "LEFT SIDE" IMPLY A REFERENCE TO THE DRAIN FACING UPSTREAM.

REMOVE EXISTING FENCES, LANDSCAPING, AND OTHER STRUCTURES IN RIGHT-OF-WAY OR CONSTRUCTION LIMITS AS-NEEDED FOR CONSTRUCTION. COST TO BE INCLUDED IN SITE CLEARING.

REINSTALLATION OF FENCES MUST BE COORDINATED WITH THE LANDOWNER AT THE LANDOWNER'S EXPENSE, UNLESS STATED OTHERWISE IN THE PLANS.

ALL SPRINKLER SYSTEMS DAMAGED SHALL BE REPAIRED BY CONTRACTOR. COST OF THE PAY ITEM BEING INSTALLED, UNLESS OTHERWISE NOTED.

CONTRACTOR TO CLEAR TREES WITHIN THE RIGHT-OF-WAY OR CONSTRUCTION LIMITS AS NECESSARY TO CONSTRUCT PROJECT AND LEVEL SPOILS AS SHOWN IN DETAILS. COORDINATE REMOVALS WITH THE ENGINEER/LANDOWNER.

ROADS, DRIVEWAYS AND SIDEWALKS ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAW-CUT WITH BUTT-JOINTS.

FOR OPEN CUT PAVEMENT REMOVAL, CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT FULL DEPTH PRIOR TO REMOVAL.

ALL DRIVING SURFACES ARE TO BE RESTORED TO IN-KIND DEPTH AND MATERIAL, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROTECT ALL ROADS NOT SPECIFIED TO BE REMOVED DURING CONSTRUCTION. REPAIR ANY UNAUTHORIZED DAMAGE AT CONTRACTOR'S EXPENSE.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE AND SHALL BE DISPOSED OF BY THE CONTRACTOR OFF-SITE. COST SHALL BE INCLUDED IN THE OTHER PAY ITEMS OF THE PROJECT.

MATCH EXISTING TYPE FOR CONCRETE CURB AND GUTTER RESTORATION.

CONTRACTOR SHALL REMOVE AND REPLACE ALL STREET AND TRAFFIC SIGNAGE AS NECESSARY FOR CONSTRUCTION. ALL COST SHALL BE INCLUDED IN THE BID PRICE FOR SITE CLEARING.

CONTRACTOR SHALL COORDINATE LOCATION OF ANY ACCESS ROADS WITH THE LANDOWNER AND THE ENGINEER. ANY ACCESS ROAD SHALL BE REPAIRED TO THE OWNER'S SATISFACTION.

ALL WORK WITHIN THE ROAD RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS OF THE AGENCY WITH JURISDICTION OVER THE ROAD.

MAIL BOXES CONTRACTOR SHALL REMOVE AND TEMPORARILY RELOCATE ALL EXISTING MAIL BOXES AS NEEDED FOR CONSTRUCTION. COSTS TO BE INCLUDED IN THE UNIT PRICE BID FOR SITE CLEARING.

ALL TEMPORARILY RELOCATED MAIL BOXES, STREET AND TRAFFIC SIGNS TO BE REINSTALLED TO ORIGINAL LOCATIONS AS CONSTRUCTION ALLOWS. COSTS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLEANUP AND RESTORATION.

UTILITIES UTILITIES LOCATED IN THE ROAD AND DRAIN RIGHTS-OF-WAY WILL BE RELOCATED BY OTHERS, UNLESS OTHERWISE NOTED ON THE PLANS.

THE DRAIN COMMISSIONER'S MINIMUM CLEARANCE STANDARDS SHALL BE MET WHENEVER RELOCATING EXISTING UTILITIES WITHIN THE DRAIN RIGHT-OF-WAY.

ALL WATER VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADE. COST SHALL BE INCLUDED IN THE PAY ITEM BEING INSTALLED.

ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ALL MANHOLE RIMS IN ROADWAYS AND DRIVES SHALL BE ADJUSTED PRIOR TO FINAL PAVING TO BE FLUSH WITH FINISHED GRADE.

GRADING AROUND MANHOLES/CATCHBASINS, FLARED END SECTIONS, AND OTHER INLETS SHALL BE SMOOTH AND SHAPED TO PROVIDE POSITIVE DRAINAGE INTO THE INLETS.

DEMOLISH EXISTING STRUCTURE(S) AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. COST TO BE INCLUDED WITH THE ITEM BEING INSTALLED AS DIRECTED BY OWNER/ENGINEER.

CONTRACTOR SHALL CONNECT ANY AND ALL FIELD TILE OUTLETS AND OTHER STORM LEADS TO PROPOSED STORM SEWER WITH PREMANUFACTURED TEES, WYES, GASKETS, SEALS, COUPLERS, BOOTS, ETC. PER SPECIFICATIONS.

SOIL EROSION SEDIMENT CONTROL ALL RIPRAP MATERIAL SHALL BE APPROVED BY THE ENGINEER. OWNER AND ENGINEER RESERVES THE RIGHT TO REJECT ANY AND ALL RIPRAP.

CONTRACTOR SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS AS DESCRIBED IN THE SPECIFICATIONS.

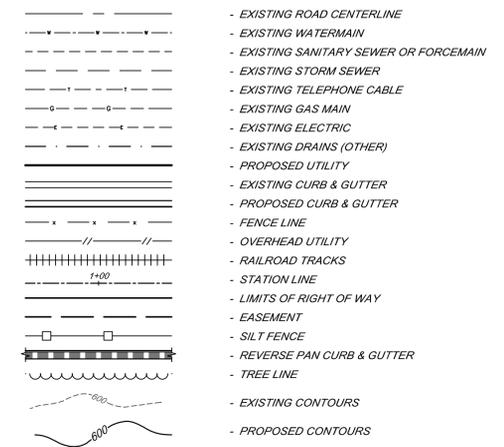
PROJECT NOTES

THE WORK COVERED IN THESE PLANS INCLUDE TAINTER (RADIAL) GATE REPLACEMENTS, REFURBISHING OF GATE HOISTS, REPLACEMENT OF GATE ACTUATORS, CONCRETE SEALING, RETAINING WALL REPAIRS, AND MISCELLANEOUS STRUCTURAL WORK

ABBREVIATIONS

- BC = BACK OF CURB
- BM = BENCH MARK
- CB = CATCH BASIN
- CC = CENTER TO CENTER
- CJ = CONSTRUCTION JOINT
- CL = CENTERLINE
- CMP = CORRUGATED METAL PIPE
- CONC = CONCRETE
- COBR = CORRUGATED
- CSP = CORRUGATED STEEL PIPE
- DI = DUCTILE IRON PIPE
- EF = EACH FACE
- ELEC = ELECTRIC
- EL OR ELEV = ELEVATION
- EOM = EDGE OF METAL
- EOP = EDGE OF PAVEMENT
- EQ/SP = EQUALLY SPACED
- ESMT = EASEMENT
- EW = EACH WAY
- EX OR EXIST = EXISTING
- FES = FLARED END SECTION
- FF = FINISH FLOOR
- FG = FINISH GROUND
- FL = FLOW LINE
- FS = FINISH SURFACE
- FT = FEET
- GALV = GALVANIZED
- G = GUTTER
- GA = GAUGE
- HDG = HOT DIP GALVANIZED
- HDPE = HIGH DENSITY POLYETHYLENE
- HMA = HOT MIX ASPHALT
- HOR = HORIZONTAL
- HP = HIGH POINT
- HYD = HYDRANT
- INV = INVERT
- LP = LOW POINT
- OC = ON CENTER
- OH = OVERHEAD
- MH = MANHOLE
- MIN = MINIMUM
- MON = MONUMENT
- NFL = NOT FIELD LOCATED
- NTS = NOT TO SCALE
- PROP = PROPOSED
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- ROW = RIGHT OF WAY
- SAN = SANITARY
- SB = SOIL BORING
- SS = STAINLESS STEEL
- STA = STATION
- STM = STORM
- SWR = SEWER
- TB = TOP AND BOTTOM
- TC = TOP OF CURB
- TOB = TOP OF BANK
- TOS = TOE OF SLOPE
- TELE = TELEPHONE
- TRW = TOP OF RETAINING WALL
- TW = TOP OF WALK
- UG = UNDERGROUND
- UNO = UNLESS NOTED OTHERWISE
- VERT = VERTICAL
- WM = WATERMAIN
- WSEL = WATER SURFACE ELEVATION

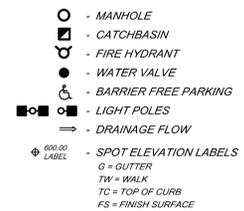
LINE TYPE LEGEND



SYMBOL LEGEND EXISTING SYMBOLS



PROPOSED SYMBOLS



BY	MARK	REVISIONS	DATE

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FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN

NOTE SHEET

SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607
Tel: 989-754-4717
Fax: 989-754-4440
www.SpicerGroup.com

DE. BY: MTS/DPZ	CH. BY: RYG	PROJECT NO.
DR. BY: MTS	APP. BY: NDC	134988SG2023

STDS.	SHEET 02 OF 17	DF
DATE: OCTOBER, 2024	FILE NO.	02
SCALE: NOT TO SCALE	DF-1153-02	

DISTURBANCE/MEASURE																				
INSTALL TEMPORARY CONTROL MEASURES																				
EARTH-DISTURBING ACTIVITIES																				
FINAL GRADING																				
INSTALL AND ESTABLISH PERMANENT CONTROL MEASURES																				
REMOVE TEMPORARY CONTROL MEASURES																				
TOTAL DISTURBED AREA: 0.05 ACRES																				



SOILS MAP

MAINTENANCE PROGRAM FOR SESC MEASURES

GENERAL MAINTENANCE

- TEMPORARY SESC MEASURES SHALL BE INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
- TEMPORARY MEASURES MUST BE MAINTAINED AND IN PLACE UNTIL AREAS ARE PERMANENTLY STABILIZED.
- PERMANENT MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL COMPLETION.
- DAILY MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY.
- TEMPORARY SESC MEASURES SHALL BE REMOVED AT THE END OF THE PROJECT ONCE PERMANENT MEASURES ARE ESTABLISHED.
- TEMPORARY SESC MEASURES SHALL BE INSTALLED PRIOR TO OR AT THE TIME OF EARTH DISTURBANCE.
- CONTRACTOR SHALL PROVIDE DAILY DUST CONTROL ON ALL DISTURBED AREAS, UNTIL TEMPORARY AND PERMANENT STABILIZATION METHODS ARE IN PLACE AND EFFECTIVE.

SEEDING AND MULCHING

- SEEDING PRACTICES INCLUDE TOPSOIL (AS DIRECTED BY ENGINEER), SEED, POLYMER SILT STOP, AND MULCH OR MULCH MATTING (AS DIRECTED BY ENGINEER OR WHERE SHOWN ON PLANS).
- WHERE NECESSARY, APPROPRIATE MULCH MATTING MUST BE APPLIED BASED ON SLOPE AND GROWING CONDITIONS AS APPROVED BY THE PROJECT ENGINEER.
- ALL SLOPES AND HIGHLY ERODIBLE AREAS WILL BE SEEDING AND MULCHED WHEN CONSTRUCTION ACTIVITY IS NOT TAKING PLACE.
- SEED AND MULCH IS TO BE INSPECTED FOLLOWING EACH RAIN EVENT TO DETERMINE IF CONCENTRATED FLOWS ARE PRESENT.
- IN THE EVENT THAT SEED AND MULCH ARE REMOVED BY ERODIBLE RUNOFF, REPAIRS ARE TO BE MADE IMMEDIATELY. COST TO BE INCLUDED IN THE BID PRICE FOR SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.
- ALL AREAS DURING CONSTRUCTION WILL BE PERMANENTLY STABILIZED WITHIN 24 HOURS OF FINAL GRADE (GRADE LISTED ON PLAN).

SILT FENCE

- SILT FENCE IS TO BE TRENCHED IN NO LESS THAN 6 INCHES BELOW THE GROUND SURFACE.
- INSPECT SILT FENCE DAILY AND IMMEDIATELY FOLLOWING EACH RAINFALL.
- REPAIR WHEN SILT FENCE IS SAGGING OR HAS BEEN REMOVED/TORN DOWN.
- WHEN SILT COLLECTS TO HALF THE HEIGHT OF THE FENCE ALL SILT IS TO BE REMOVED AND FENCE REPAIRED.
- REMOVE SILT FENCE WHEN PERMANENT SESC MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED.

COMPLIANCE WITH PART 91 OF PA 451

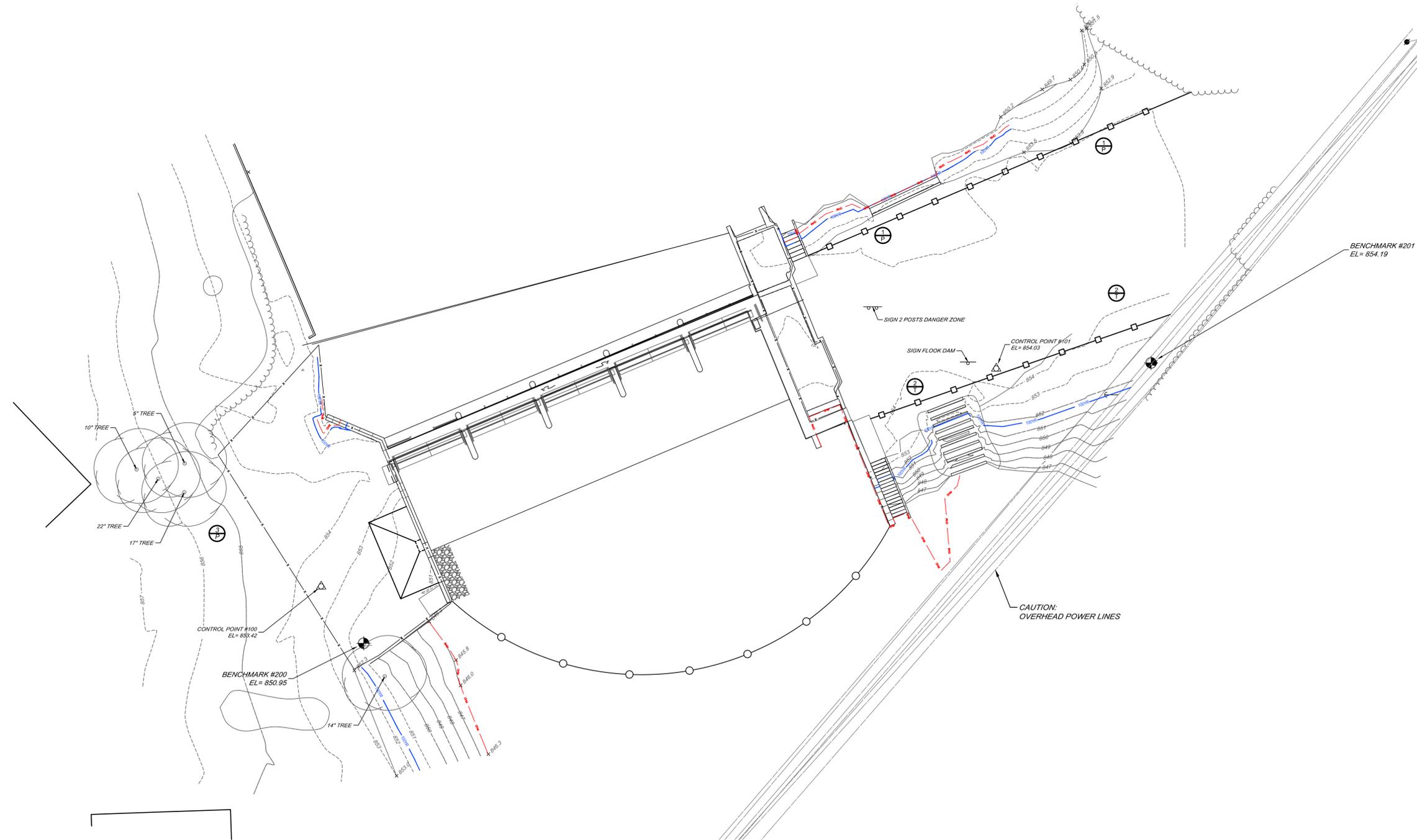
- RESPOND IMMEDIATELY TO STORMWATER OPERATOR AND/OR SOIL EROSION AND SEDIMENTATION CONTROL INSPECTOR CONCERNS. MAKE CORRECTIVE MEASURES AS REQUIRED IMMEDIATELY AS DETAILED BY THE APPROVED APA MANUAL(S) THAT APPLY.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- TEMPORARY SEEDING SHALL BE CONDUCTED ON ALL DISTURBED AREAS THAT WILL BE FINISH GRADED AT A LATER DATE.
- FINAL SEEDING SHALL BE COMPLETED WITHIN 24 HOURS OF FINAL GRADING. WEEKLY INSPECTIONS OF SEEDED AREAS SHALL BE COMPLETED TO VERIFY GRASS GROWTH. ANY AREAS NOT ESTABLISHED SHALL BE FERTILIZED, SOILS AMENDED AND RE-SEEDED AS NECESSARY. ALL COST FOR ESTABLISHMENT OF SEEDED AREAS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE SPECIFIC SEEDING BEING INSTALLED.
- CONTRACTOR TO INSTALL AND MAINTAIN ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE APPROVED PLANS PRIOR TO COMMENCEMENT OF CONSTRUCTION OR MASS GRADING.
- ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADWAYS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR NO LESS THAN ON A DAILY BASIS BY SCRAPING AND SWEEPING.
- ALL PERMANENT SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE WITHIN 24 HOURS OF FINAL GRADE (GRADE LISTED ON PLANS). THIS INCLUDES ALL VEGETATIVE STABILIZATION. VEGETATIVE STABILIZATION WILL BE ONGOING. DAILY PERMANENT SEEDING IS REQUIRED UNLESS AUTHORIZED BY THE ENGINEER. SEED, POLYMER SILT STOP, MULCH MATTING AND/OR RIPRAP MUST BE IN PLACE BEFORE PROCEEDING TO THE NEXT WORK AREA. REMOVAL OF TEMPORARY MEASURES, FOLLOWING ACCEPTANCE OF THE PROJECT, IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE INSPECTED DAILY BY THE CONTRACTOR, AND INSPECTED AFTER EACH RAIN EVENT TO ENSURE PROPER MAINTENANCE OF THE SOIL EROSION CONTROL MEASURES. ANY DEFICIENCIES OR REPAIRS TO SOIL EROSION CONTROL MEASURES ARE TO BE CORRECTED IMMEDIATELY.
- INSTALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES BEFORE OR UPON COMMENCEMENT OF THE EARTH CHANGE ACTIVITY AND MAINTAIN MEASURES ON A DAILY BASIS. REMOVE TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED ("STABILIZED" MEANS THE ESTABLISHMENT OF VEGETATION OR THE PROPER PLACEMENT, GRADING, OR COVERING OF SOIL TO ENSURE ITS RESISTANCE TO SOIL EROSION, SLIDING, OR OTHER EARTH MOVEMENT).
- CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEASURES ARE INSTALLED IN COMPLIANCE WITH THE APA MANUAL AND THAT THE SESC MEASURES ARE MONITORED AND MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED AND TEMPORARY MEASURES ARE REMOVED. CONTRACTOR ACKNOWLEDGES THAT SESC MEASURES MAY NEED TO BE ADAPTED, ADJUSTED, OR ADDED BASED ON SITE CONDITIONS IN ORDER TO REMAIN IN COMPLIANCE WITH PART 91 REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR CLEANUP & RESTORATION INCLUDING PROGRESS CLEANING. PROGRESS CLEANING INCLUDES BUT NOT LIMIT TO REMOVAL OF WASTE MATERIALS, DEBRIS, RUBBISH, AND EXCESS SPOILS. COMPLETE LEVELING AND RESTORE DAMAGE NOT MORE THAN 1000 FEET BEHIND CONSTRUCTION. ALSO INCLUDES DAILY CLEANING OF ALL ROAD SURFACES.

MUSYM	COMPOSITION NAME	DRAINAGE	HYDROLOGIC GROUP	HYDRIC
Cc	Cohoctah fine sandy loam, frequently rounded	Poorly drained	A/D	Yes
Fd	Fill land	N/A	N/A	N/A
FoC	Fox sandy loam, Huron Lobe, 6 to 12 percent slopes	Well drained	B	No
FoB	Fox sandy loam, till plain, 2 to 6 percent slopes	Well drained	B	No
HgtahA	Houghton muck, 0 to 1 percent slopes	Very poorly drained	A/D	Yes
OsB	Oakhtemo loamy sand, 0 to 6 percent slopes	Well drained	A	No
WaA	Wasipi sandy loam, 0 to 4 percent slopes	Somewhat poorly drained	A/D	No

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</p>			
<p>SOIL EROSION AND SEDIMENTATION CONTROL NOTES</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</p>	
DE. BY:	MITS/DPZ	CH. BY:	RVG
DR. BY:	KMO	APP. BY:	NDC
			PROJECT NO. 134988SG2023
STDS.	SHEET 03 OF 17		DF
DATE	OCTOBER, 2024		FILE NO. DF-1153-01
SCALE	NOT TO SCALE		03



SESC PLAN

**2018 MICHIGAN ASSOCIATION OF COUNTY DRAIN
COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL
AUTHORIZED PUBLIC AGENCY PROCEDURES**

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	Seeding		When bare soil is exposed, temporarily or permanently, to erosive forces from wind and/or water on flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles.
2	Mulch		On flat areas, slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosive forces from wind or water.
3	Sodding		When a temporary or permanent vegetative cover is necessary or desired to prevent soil erosion and filter sediment in residential commercial or high traffic areas; or on steep slopes, auxiliary spillways, and grassed swales.
5	Perimeter Sediment Control Measures (Silt Fence, Straw Wattles, etc.)		As a temporary measure used to capture sediment from sheet flow. May also divert small volumes of sheet flow to protected outlets.

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL

SYMBOLY FOR INSERTION INTO CONSTRUCTION DRAWINGS:

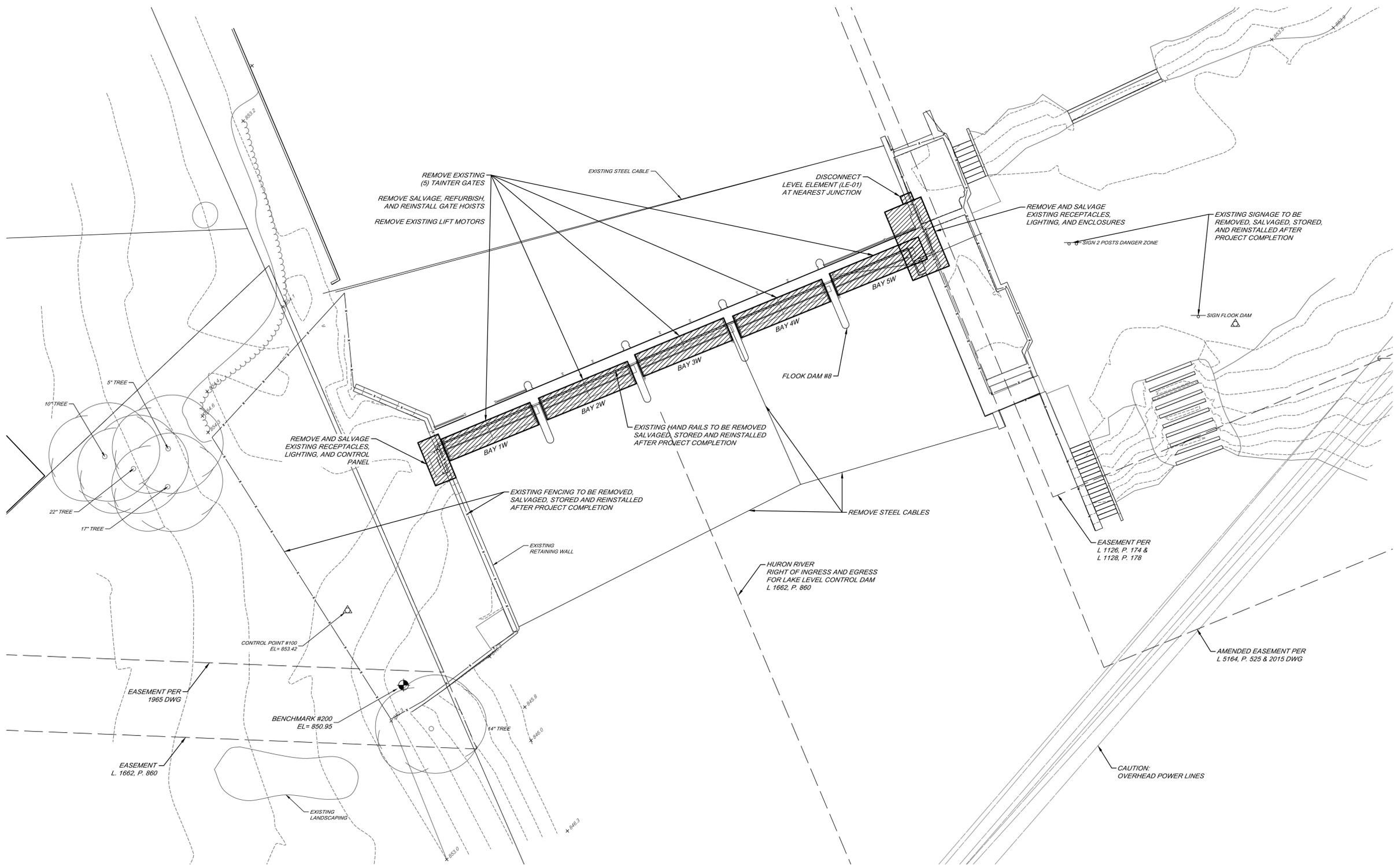
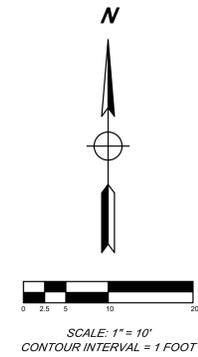
- PERMANENT MEASURE
- TEMPORARY MEASURE

SESC COMMENTS

ADDITIONAL SILT FENCE MAY BE REQUIRED BASED ON CONTRACTORS' USE OF THE SITE. ADDITIONAL COMPENSATION WILL NOT BE PROVIDED FOR SUCH SILT FENCE.

SITE ACCESS TO WEST BANK SHALL BE RESTORED TO ITS ORIGINAL CONDITION WITH GRADING AND SOD AS NECESSARY.

BY	MARK	REVISIONS	DATE
<p><small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small></p>			
<p>FLOOD DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</p>			
<p>SOIL EROSION AND SEDIMENTATION CONTROL PLAN</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
DE. BY:	MTS/DPZ	CH. BY:	RVG
DR. BY:	KMO	APP. BY:	NDC
		PROJECT NO. 134988SG2023	
STDS.	SHEET 04 OF 17		DF
DATE	OCTOBER, 2024		FILE NO. DF-1153-01
SCALE	NOT TO SCALE		04



LEGEND

REMOVAL

NOTE:
 1. ALL REMOVED AND SALVAGED ELECTRICAL EQUIPMENT SHALL BE RETURNED TO OWNER, UNLESS OTHERWISE INDICATED.

DEMOLITION PLAN
 SCALE: 1" = 10'

BY	MARK	REVISIONS	DATE

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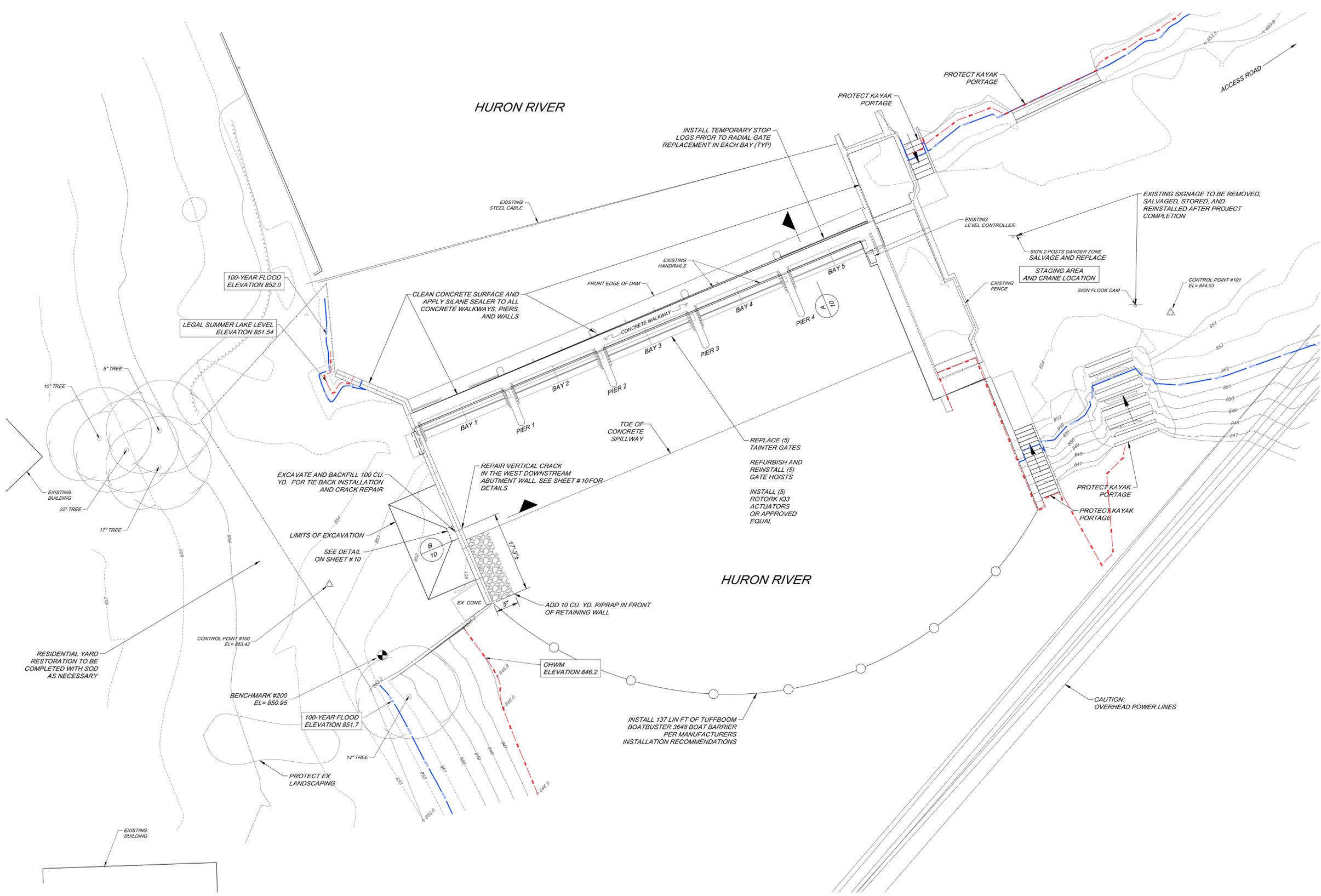
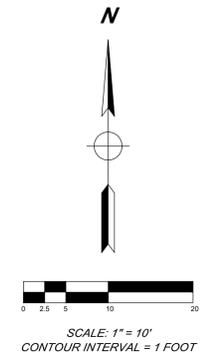
**FLOOD DAM (DAM ID: #8) REHABILITATION
 WASHTENAW COUNTY, MICHIGAN**

DEMOLITION SHEET

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 230 S. Washington Ave.
 Saginaw, MI 48607
 Tel. 989-754-4717
 Fax. 989-754-4440
 www.SpicerGroup.com

DE. BY: MTS/DPZ	CH. BY: RVG	PROJECT NO.
DR. BY: MTS	APP. BY: NDC	134988SG2023
STDS.	SHEET 05 OF 17	DF
DATE: OCTOBER, 2024	FILE NO.	05
SCALE: AS SHOWN	DF-1153-05	

P:\proj\2023\134988SG2023 - Flood Dam Rehabilitation\CAD\DWG\DMO SHEET.dwg, 10/26/2024 11:35:27 AM, mitchell.cornley



NOTE:
CONTRACTOR TO RESET EXISTING BUOYS. COORDINATE LOCATIONS WITH OWNER/ENGINEER.

EXISTING SITE PLAN
SCALE: 1" = 10'

BY	MARK	REVISIONS	DATE

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**FLOOK DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

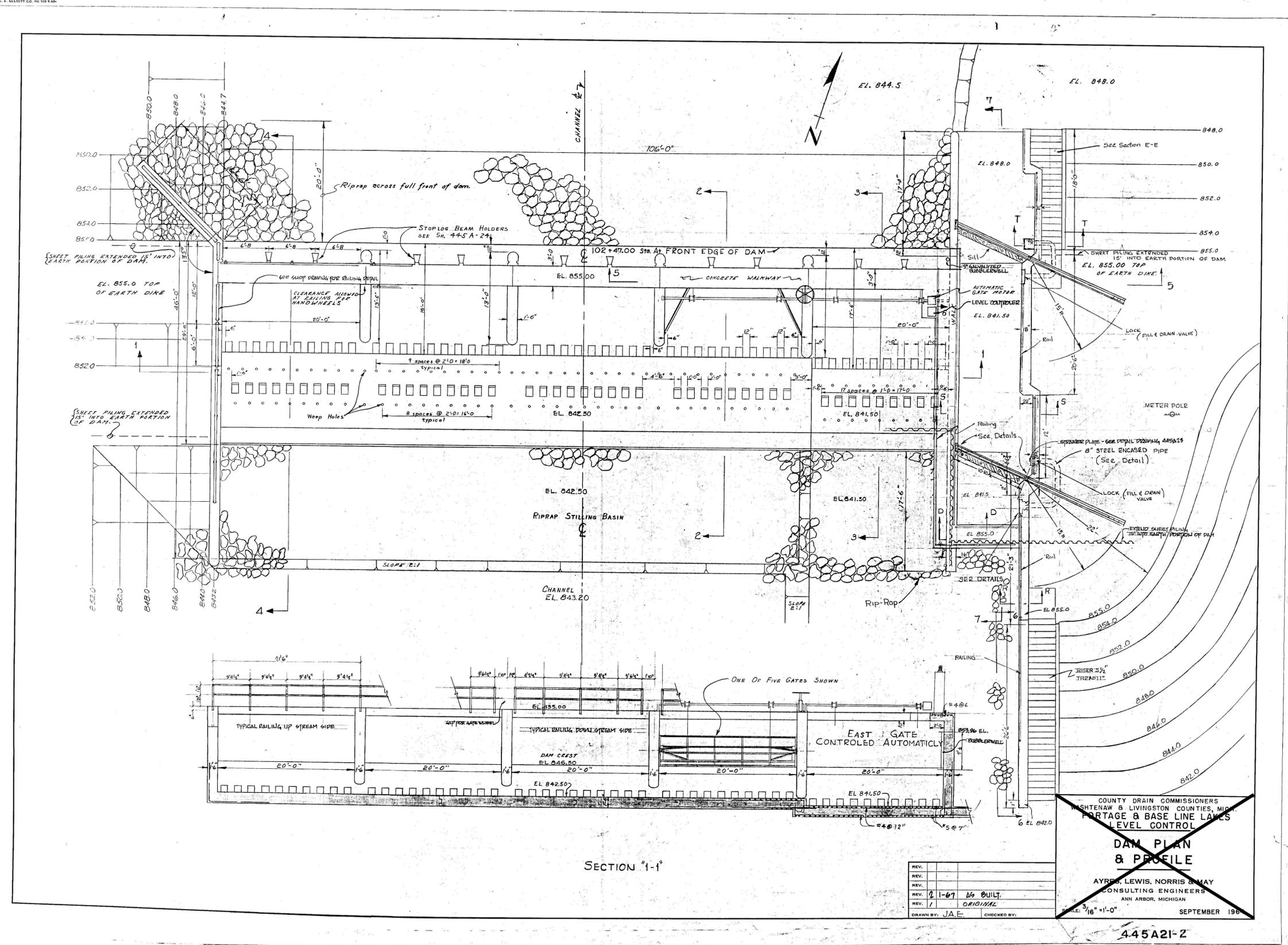
PROPOSED SITE PLAN

Spicer group
SAGINAW OFFICE
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Saginaw, MI 48607
Tel. 989-754-4717
Fax. 989-754-4440
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DE. BY: MTS/DPZ	CH. BY: RVG	PROJECT NO.
DR. BY: MTS	APP. BY: NDC	134988SG2023
STDS.	SHEET 06 OF 17	DF
DATE: OCTOBER, 2024	FILE NO.	06
SCALE: AS SHOWN	DF-1153-06	

P:\proj\2023\134988SG2023 - Flook Dam Rehabilitation\CAD\GDWG\GENERAL PLAN OF SITE.dwg, 10/20/2024 12:42:22 PM, michael.courney

FOR INFORMATION ONLY
DO NOT WORK FROM THIS SHEET.
THE INFORMATION SHOWN HERE IS
FOR REFERENCE ONLY.



SECTION '1-1'

REV.		
REV.		
REV.	1-07	AS BUILT
REV.	1	ORIGINAL

COUNTY DRAIN COMMISSIONERS
WASHTENAW & LIVINGSTON COUNTIES, MICH.
PORTAGE & BASE LINE LINES
LEVEL CONTROL

**DAM PLAN
& PROFILE**

AYRBA, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: 3/16" = 1'-0"
SEPTEMBER 1986

4.45A21-2

BY	MARK	REVISIONS	DATE

THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.

**FLOOD DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

**ORIGINAL CONSTRUCTION
DRAWINGS**

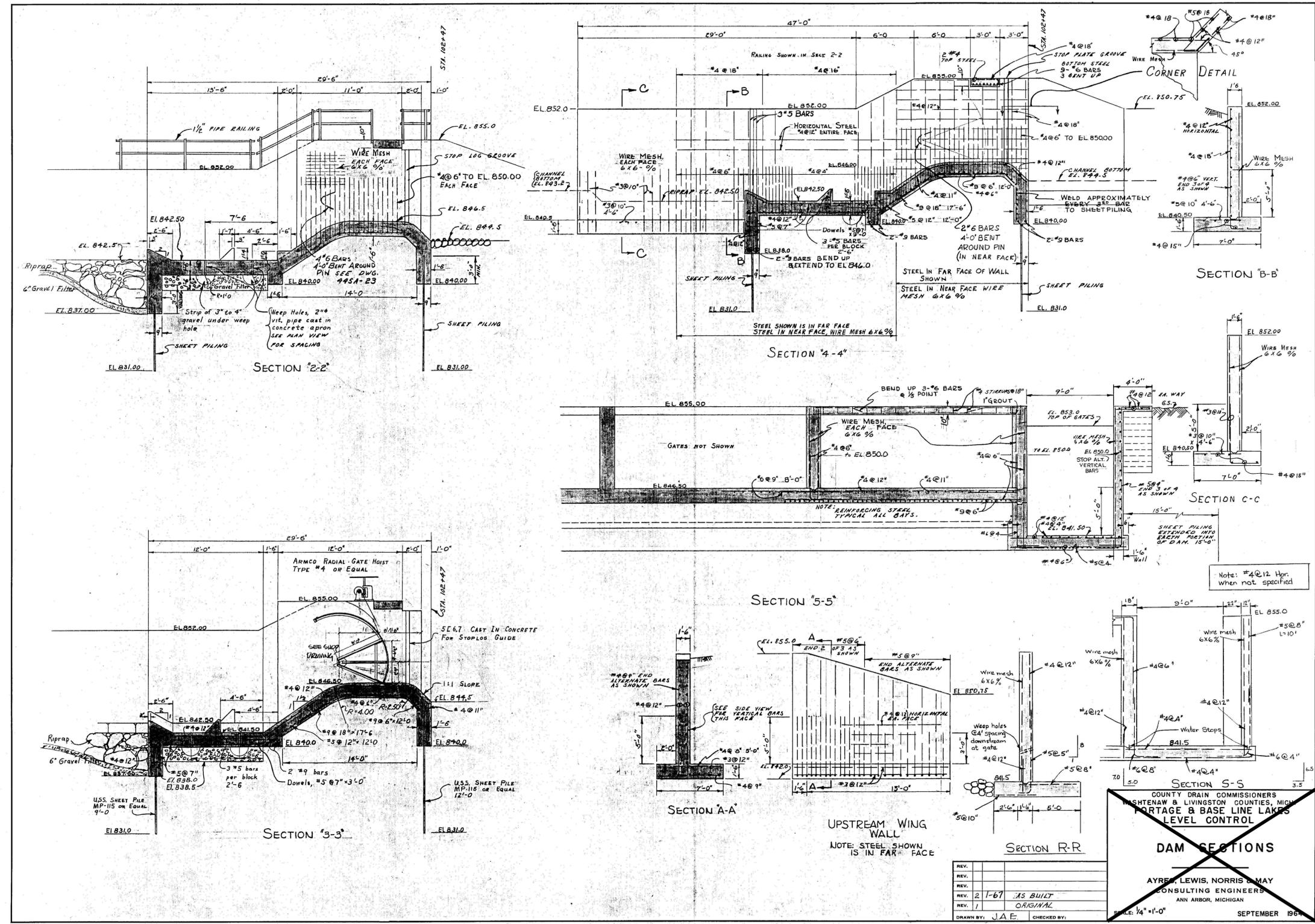
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DE. BY: MTS/DPZ	CH. BY: DPZ	PROJECT NO. 134988SG2023
DR. BY: MTS	APP. BY: DPZ	

STDS.	SHEET 07 OF 17	DF
DATE OCTOBER, 2024	FILE NO. DF-1153-07	07
SCALE NOT TO SCALE		

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DAM SECTIONS
COUNTY DRAIN COMMISSIONERS
WASHTENAW & LIVINGSTON COUNTIES, MICHIGAN
PORTAGE & BASE LINE LAKES
LEVEL CONTROL

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: 1/4" = 1'-0"
SEPTEMBER 1964

REV.	DATE	BY	DESCRIPTION
1		JAE	ORIGINAL
2	1-67	JAE	AS BUILT

REV.	MARK	REVISIONS	DATE

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**FLOOD DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

**ORIGINAL CONSTRUCTION
DRAWINGS**

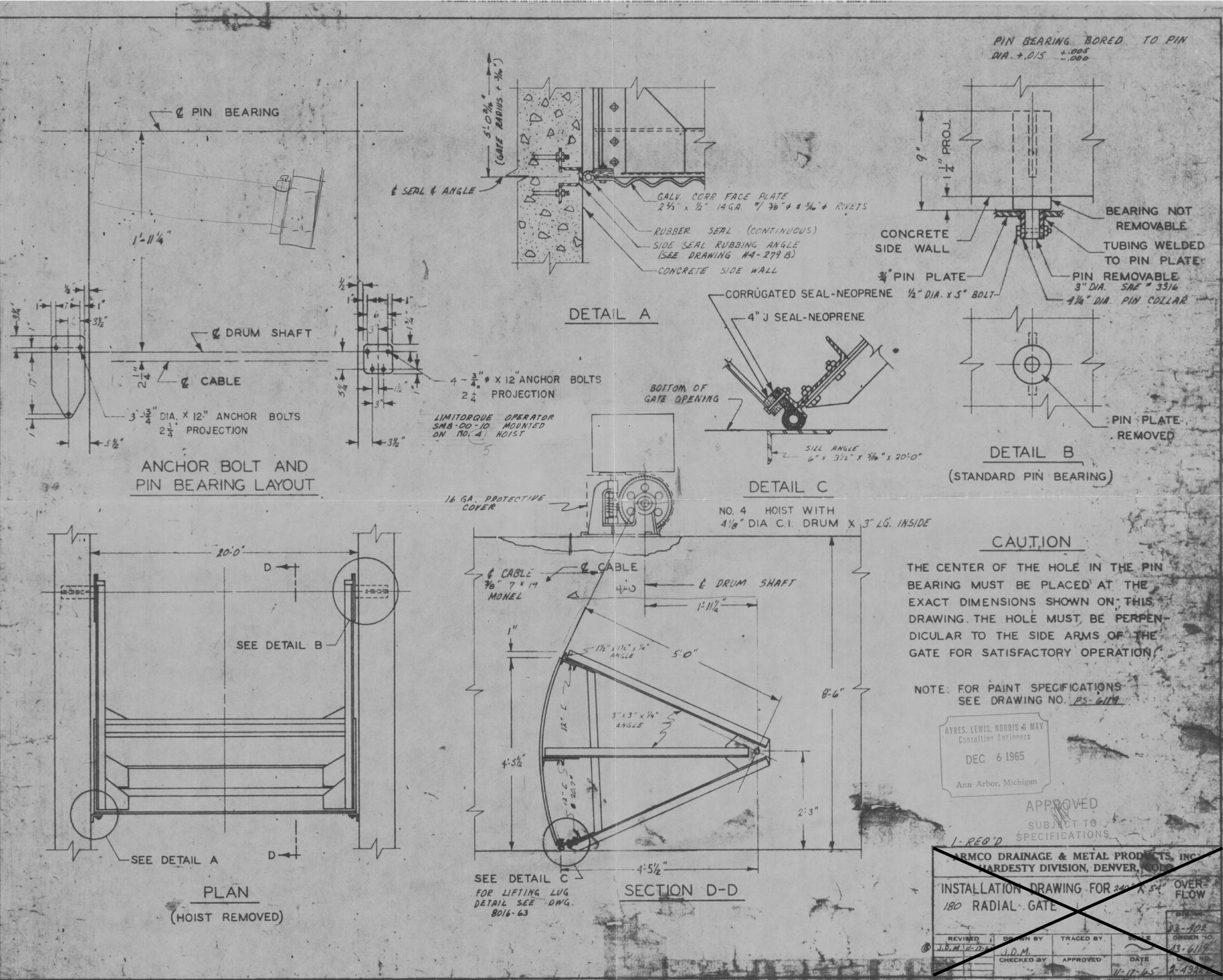
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Fax. 989-754-4440
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DE. BY: MTS/DPZ	CH. BY: DPZ	PROJECT NO. 134988SG2023
DR. BY: MTS	APP. BY: DPZ	

STDS.	SHEET 08 OF 17	DF
DATE: OCTOBER, 2024	FILE NO. DF-1153-08	08
SCALE: NOT TO SCALE		

445 A22-2

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BY	MARK	REVISIONS	DATE

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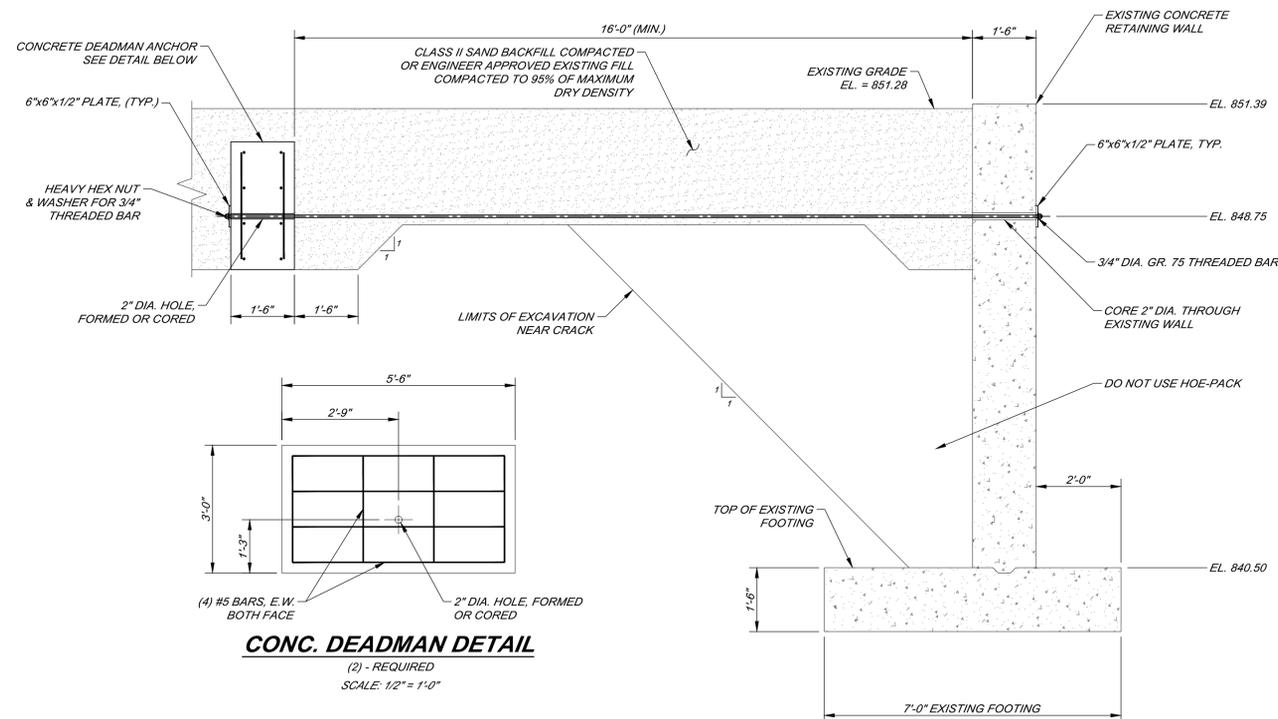
FLOOK DAM (DAM ID: #8) REHABILITATION
 WASHTENAW COUNTY, MICHIGAN

ORIGINAL CONSTRUCTION DRAWINGS

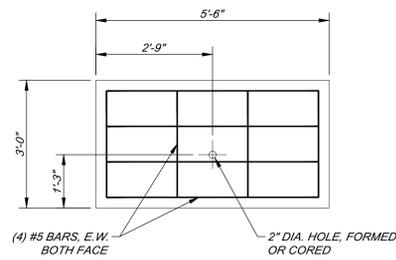
SAGINAW OFFICE
 230 S. Washington Ave.
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DE. BY: MTS/DPZ	CH. BY: DPZ	PROJECT NO.
DR. BY: MTS	APP. BY: DPZ	134988SG2023

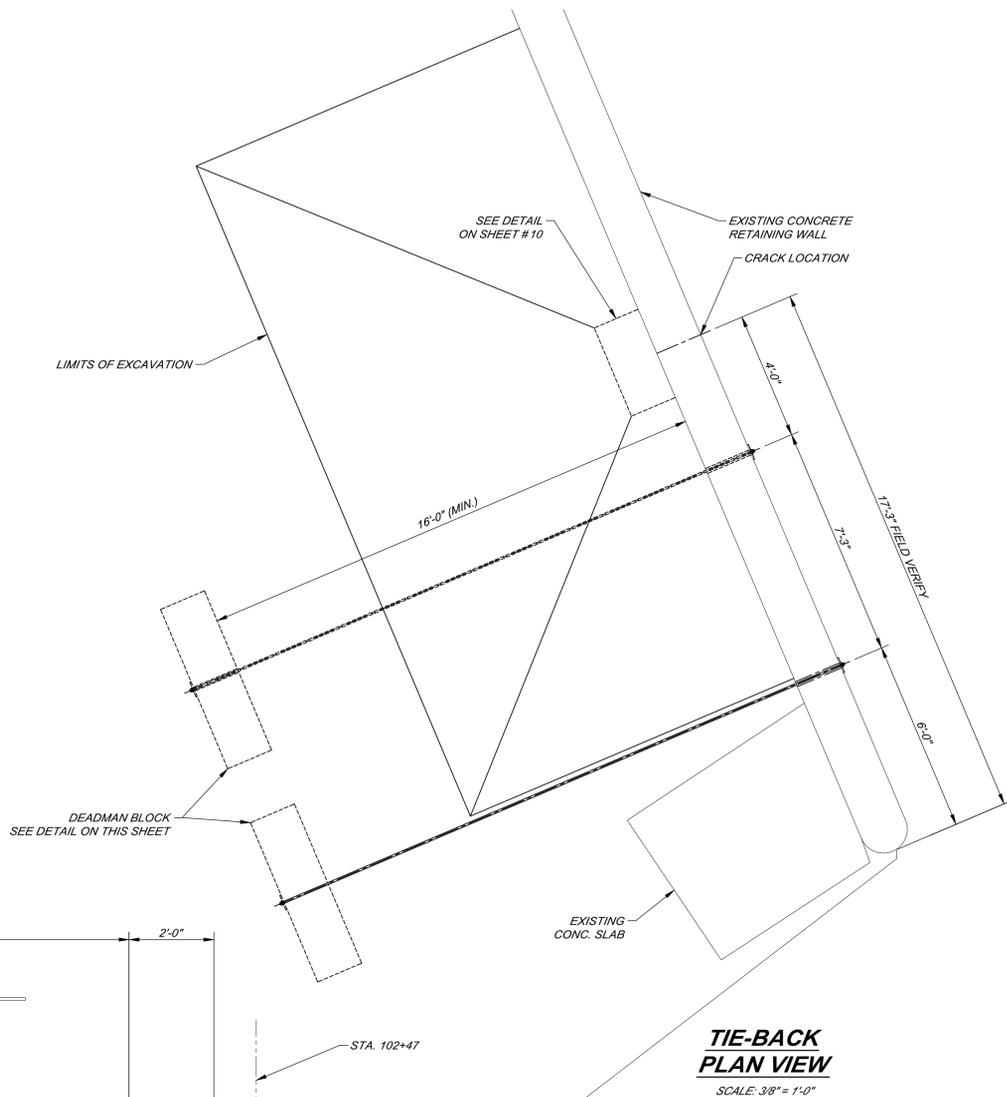
STDS.	SHEET 09 OF 17	DF
DATE OCTOBER, 2024	FILE NO. DF-1153-09	09
SCALE NOT TO SCALE		



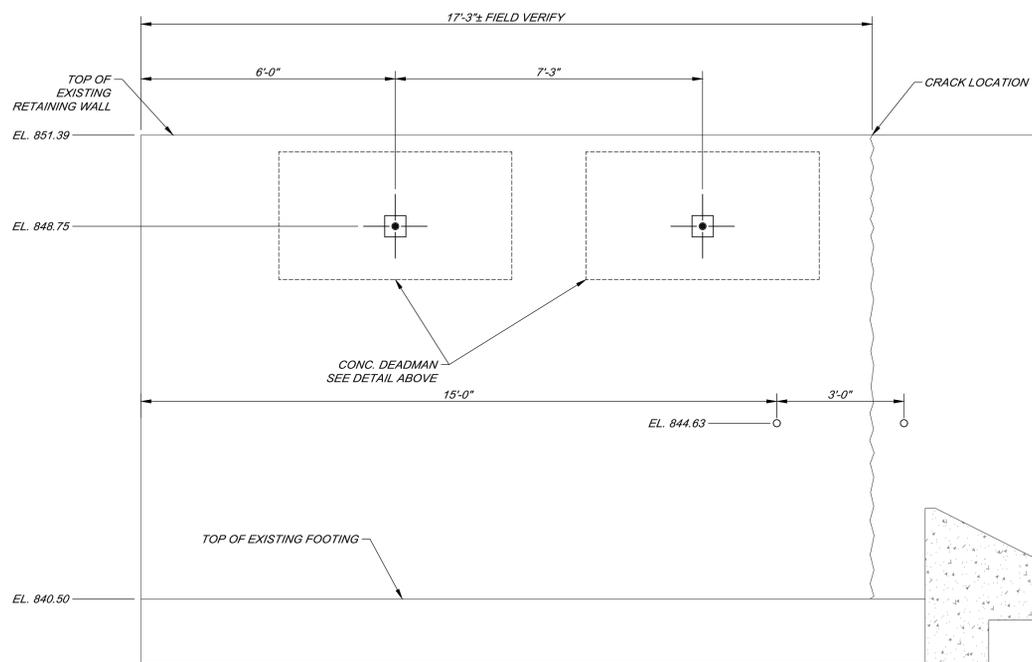
**TIE-BACK SECTION
EXISTING RETAINING WALL**
SCALE: 1/2" = 1'-0"



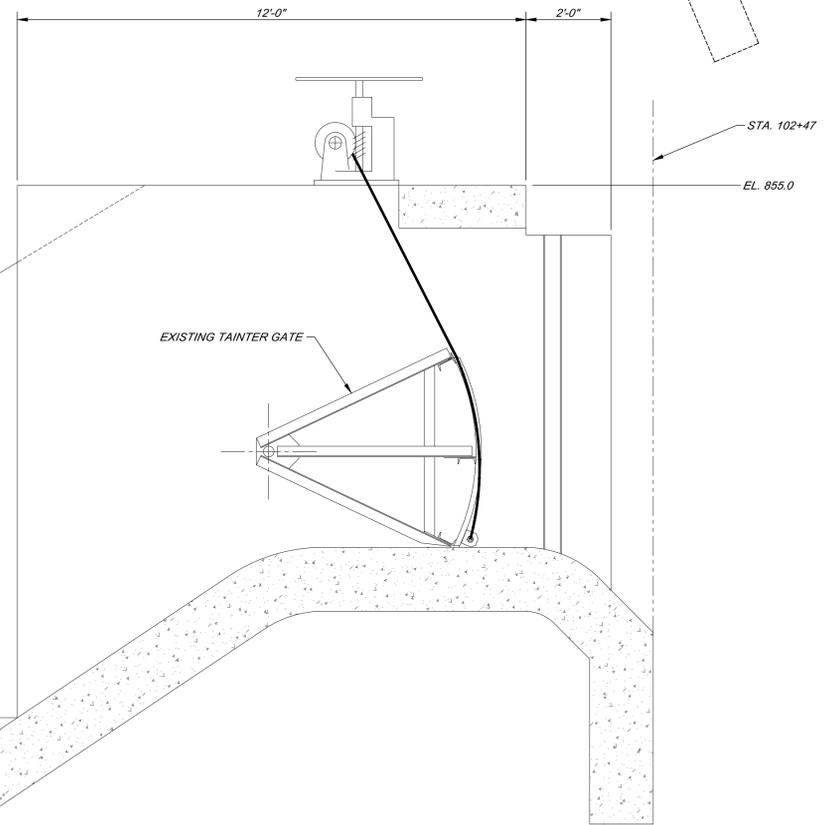
CONC. DEADMAN DETAIL
(2) - REQUIRED
SCALE: 1/2" = 1'-0"



**TIE-BACK
PLAN VIEW**
SCALE: 3/8" = 1'-0"



TIE-BACK ELEVATION
SCALE: 1/2" = 1'-0"



BY	MARK	REVISIONS	DATE

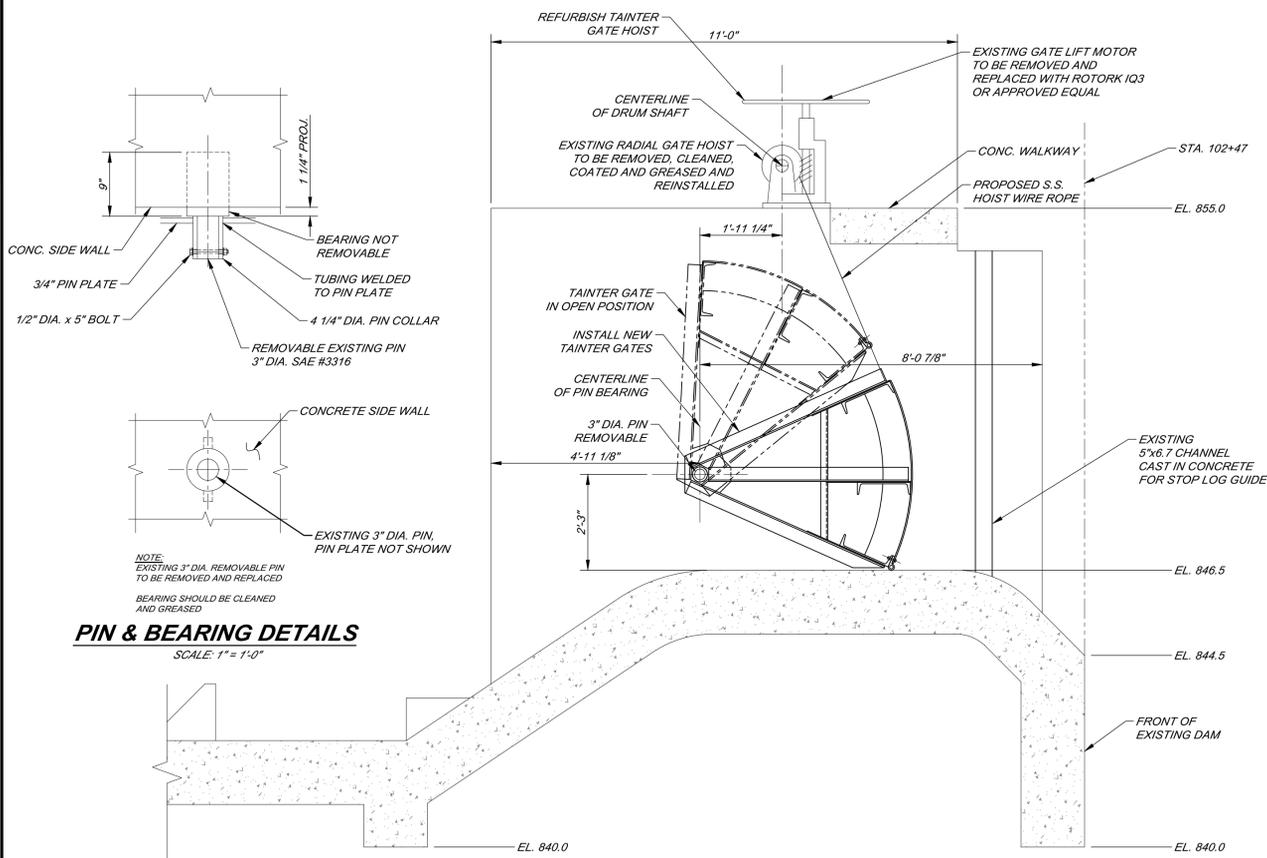
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.

**FLOOD DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

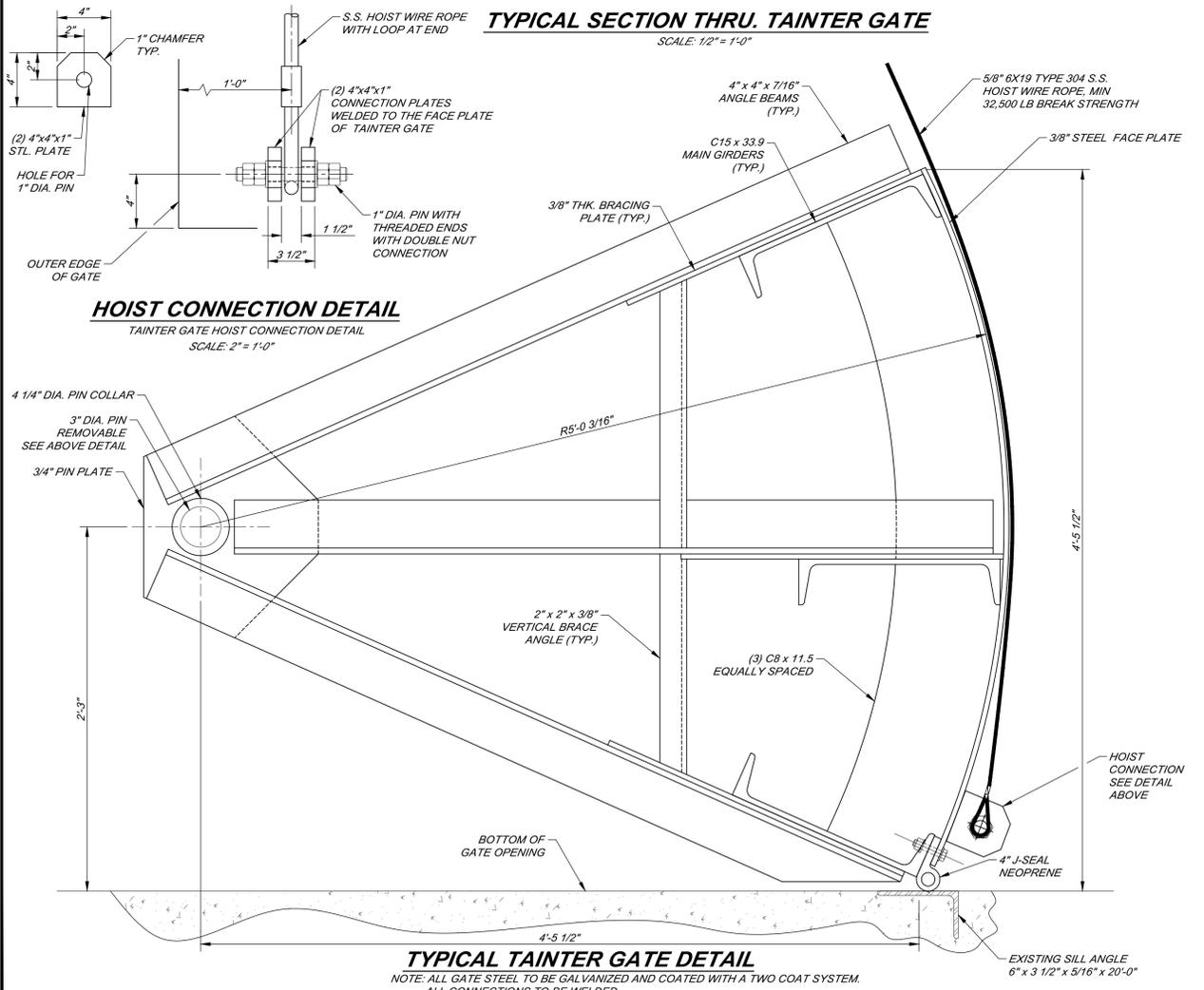
TIE-BACK DETAILS

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Fax. 989-754-4440
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DE. BY: MTS/DPZ	CH. BY: DPZ	PROJECT NO. 134988SG2023
DR. BY: MTS	APP. BY: DPZ	
STDS.	SHEET 11 OF 17	DF
DATE: OCTOBER, 2024	FILE NO. DF-1153-11	11
SCALE: AS SHOWN		

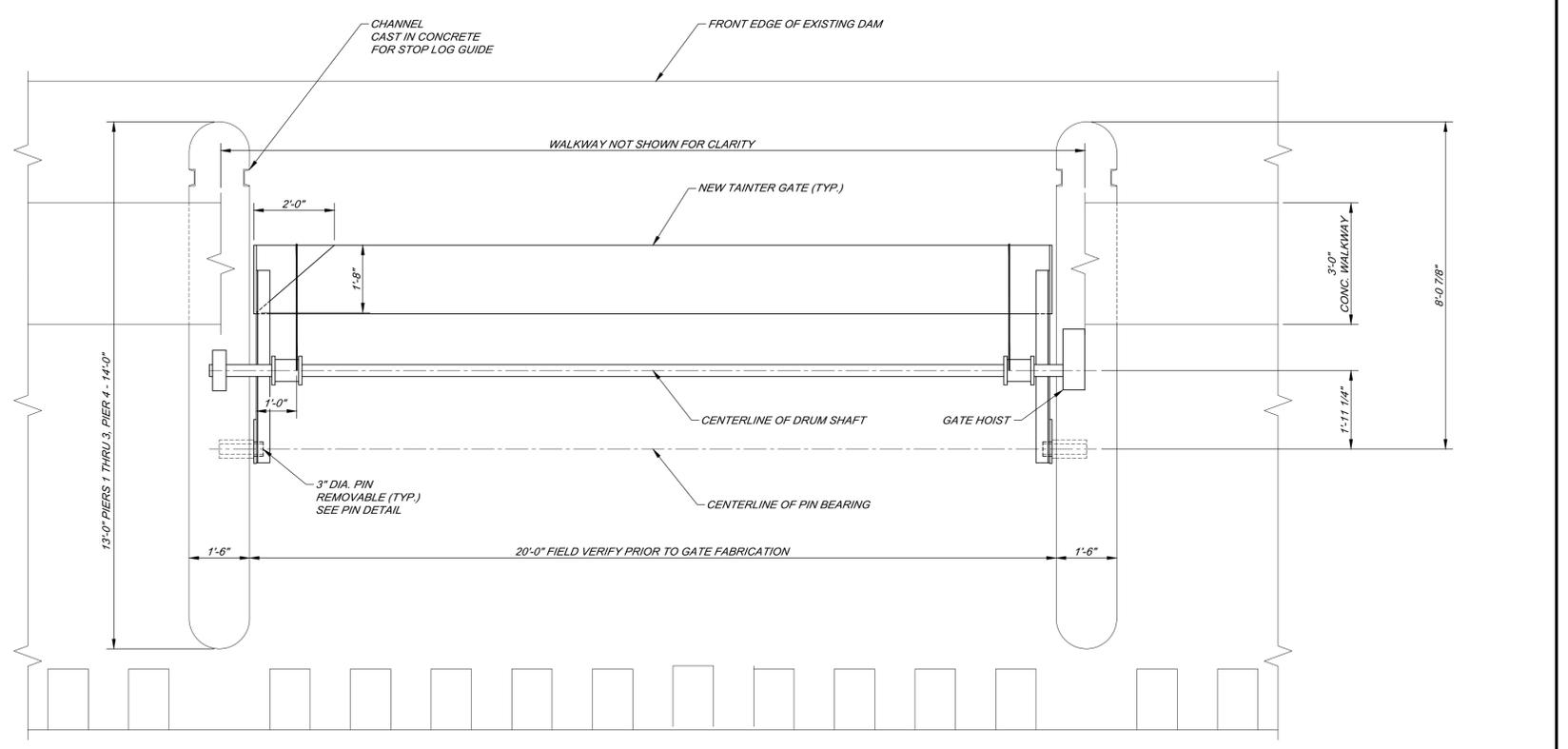


PIN & BEARING DETAILS
SCALE: 1" = 1'-0"

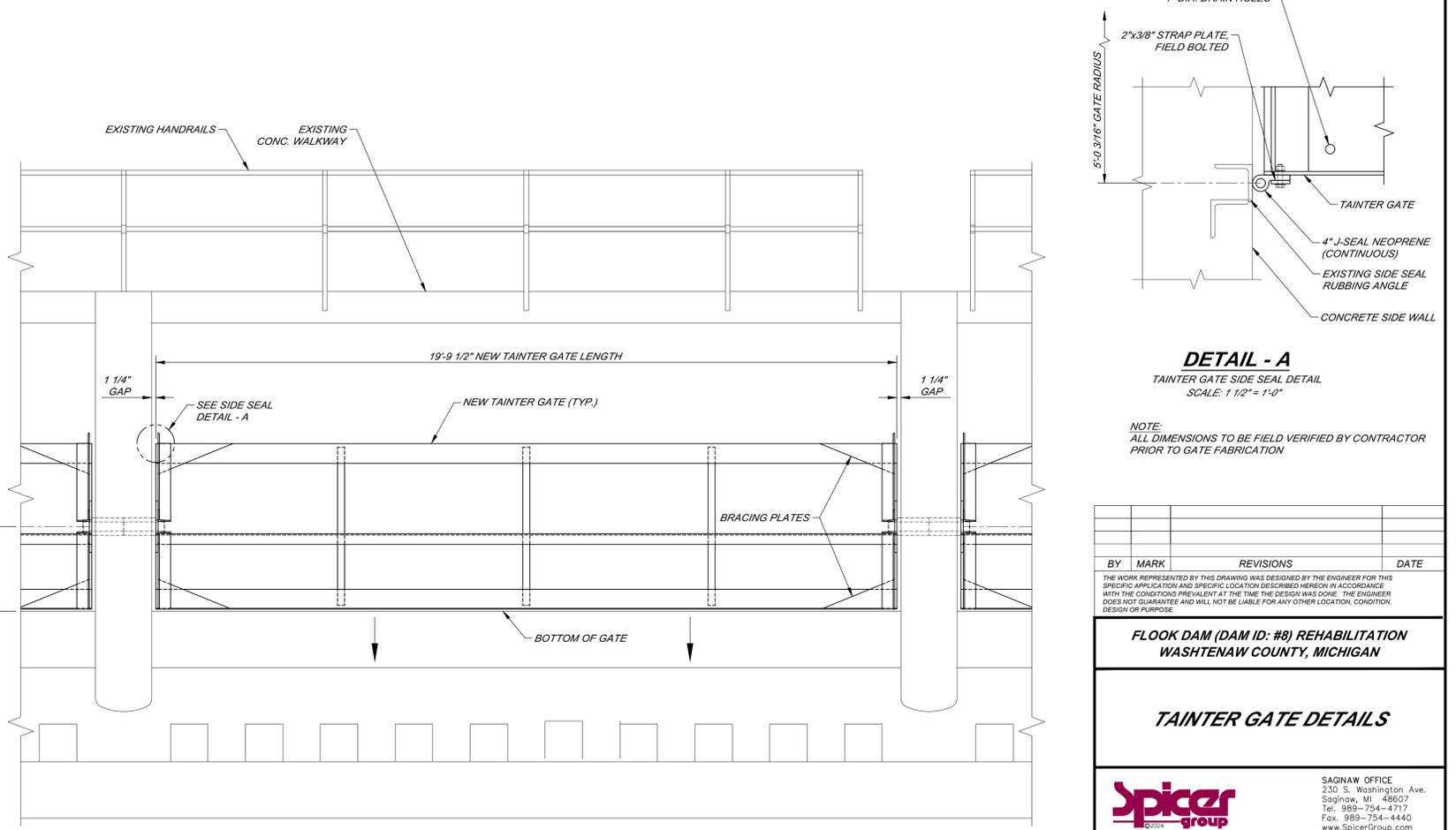


TYPICAL SECTION THRU. TAINTER GATE
SCALE: 1/2" = 1'-0"

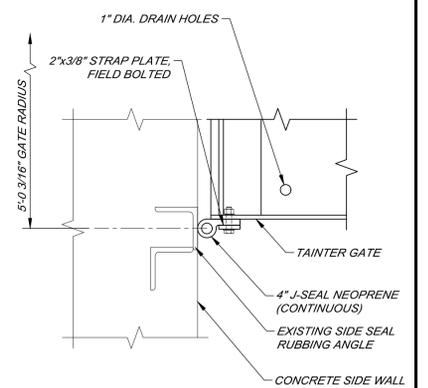
HOIST CONNECTION DETAIL
TAINTER GATE HOIST CONNECTION DETAIL
SCALE: 2" = 1'-0"



TYPICAL PLAN VIEW OF GATE
SCALE: 1/2" = 1'-0"



TYPICAL ELEVATION VIEW OF GATE
SCALE: 1/2" = 1'-0"



DETAIL - A
TAINTER GATE SIDE SEAL DETAIL
SCALE: 1 1/2" = 1'-0"

NOTE:
ALL DIMENSIONS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO GATE FABRICATION

BY	MARK	REVISIONS	DATE

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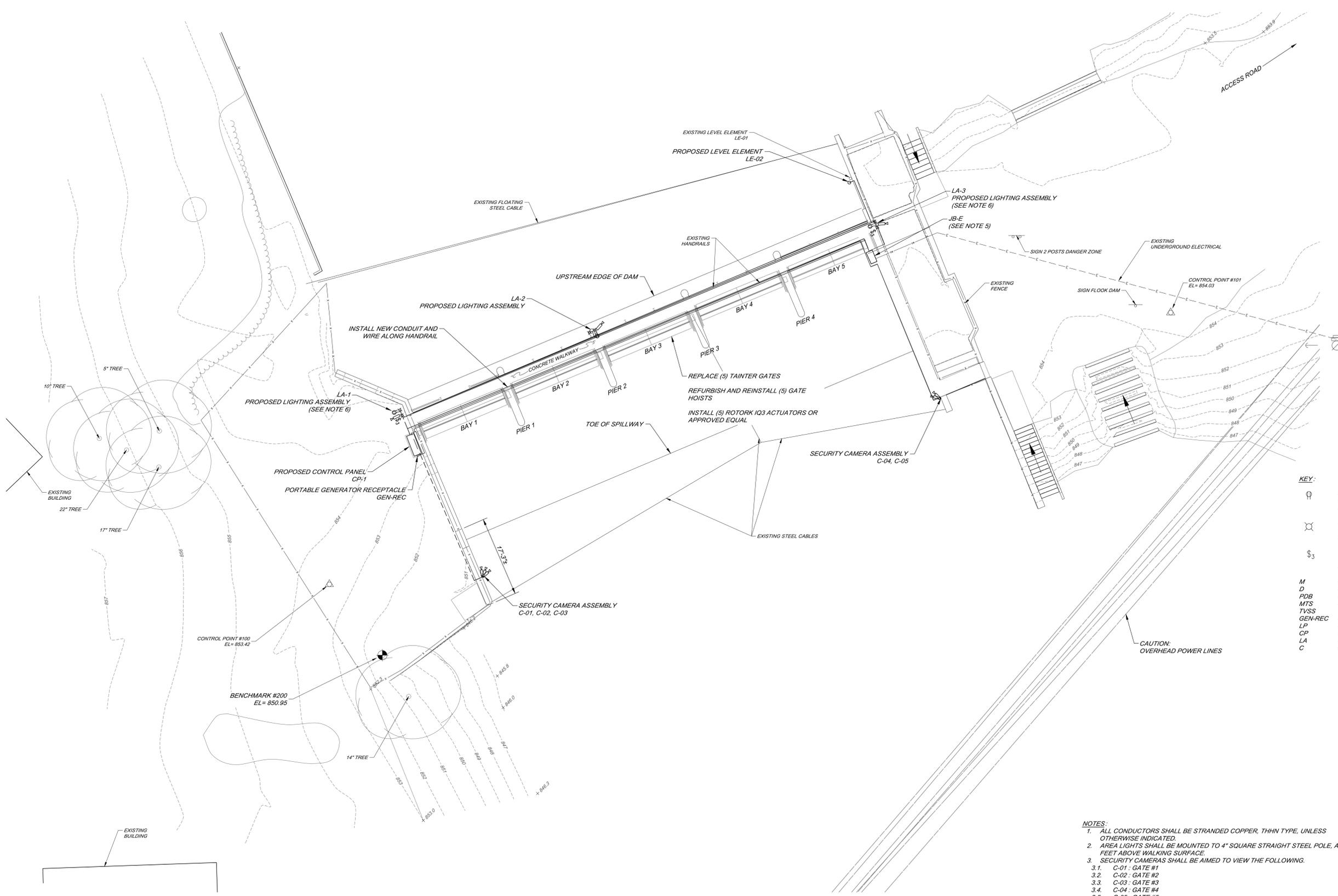
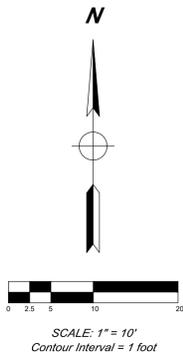
**FLOOK DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

TAINTER GATE DETAILS

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Fax. 989-754-4440
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DE. BY: MTS/DPZ	CH. BY: DPZ	PROJECT NO. 134988SG2023
DR. BY: MTS	APP. BY: DPZ	
STDS.	SHEET 12 OF 17	DF
DATE: OCTOBER, 2024	FILE NO. DF-1153-12	12
SCALE: AS SHOWN		

P:\proj\2023\134988SG2023 - Flook Dam Rehabilitation\CAD\GEN\GENERAL PLAN OF SITE.dwg, 10/26/2024 3:38:32 PM, mchadl.com



KEY:

	RECEPTACLE 120V, 20A, GFCI TYPE METALLIC, LOCKABLE, WEATHERPROOF WHILE-IN-USE ENCLOSURE
	LIGHT FIXTURE 120V, 100W (MAX), LED AREA LIGHT, TYPE 4 DISTRIBUTION ADJUSTABLE SLIPFITTER MOUNT
	TOGGLE SWITCH, 3-WAY 120V, 20A METALLIC, LOCKABLE, WEATHERPROOF ENCLOSURE
	UTILITY METER
	DISCONNECT SWITCH
	POWER DISTRIBUTION BLOCK
	MANUAL TRANSFER SWITCH
	MTS
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	PORTABLE GENERATOR RECEPTACLE
	LIGHTING PANEL
	CONTROL PANEL
	LIGHTING ASSEMBLY
	CAMERA

- NOTES:**
- ALL CONDUCTORS SHALL BE STRANDED COPPER, THHN TYPE, UNLESS OTHERWISE INDICATED.
 - AREA LIGHTS SHALL BE MOUNTED TO 4" SQUARE STRAIGHT STEEL POLE, AT 10 FEET ABOVE WALKING SURFACE.
 - SECURITY CAMERAS SHALL BE AIMED TO VIEW THE FOLLOWING:
 - C-01 - GATE #1
 - C-02 - GATE #2
 - C-03 - GATE #3
 - C-04 - GATE #4
 - C-05 - GATE #5
 - C-06 - LEVEL INSTRUMENTS AND STAFF GAUGE
 - C-07 - WEST SITE (PTZ STYLE)
 - C-08 - EAST SITE (PTZ STYLE)
 - SEE SHEET 15 FOR INSTALLATION DETAILS.
 - CONTRACTOR TO RESTORE AND REUSE EXISTING JB-E ENCLOSURE.
 - PLUG ALL UNUSED OPENINGS.
 - REMOVE ALL RUST.
 - REPAINT EXTERIOR AND MATCH EXISTING COLOR.
 - REPAINT INTERIOR WITH STANDARD WHITE ENAMEL.
 - REUSE EXISTING WOODEN POSTS AND DUAL-HEAD LIGHT FIXTURE TENONS.
 - PROVIDE AND INSTALL NEW CONDUIT, CONDUCTORS, SWITCHES, RECEPTACLES, FIXTURES, AND ACCESSORIES AS REQUIRED FOR SITE PLAN AND INSTALLATION DETAILS.

ELECTRICAL SITE PLAN
SCALE: 1" = 10'

BY	MARK	REVISIONS	DATE

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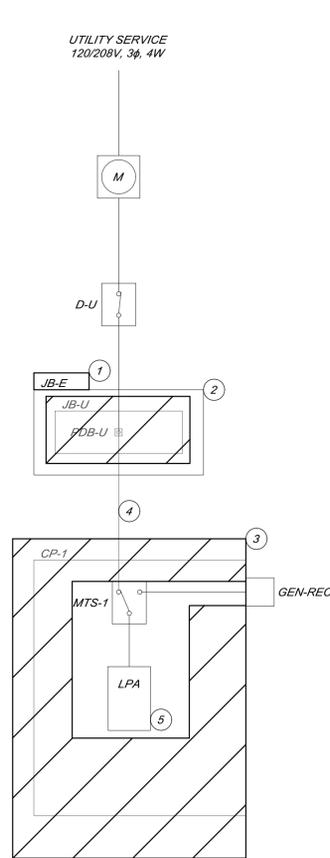
**FLOCK DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

**ELECTRICAL
SITE PLAN**

Spicer group SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607
Tel. 989-754-4717
Fax. 989-754-4440
www.SpicerGroup.com

DE. BY: LAM	CH. BY: RVG	PROJECT NO.
DR. BY: LAM	APP. BY: NDC	134988SG2023
STDS.	SHEET 13 OF 17	E
DATE: OCTOBER, 2024	FILE NO.	01
SCALE: AS SHOWN	DE-1198-01	

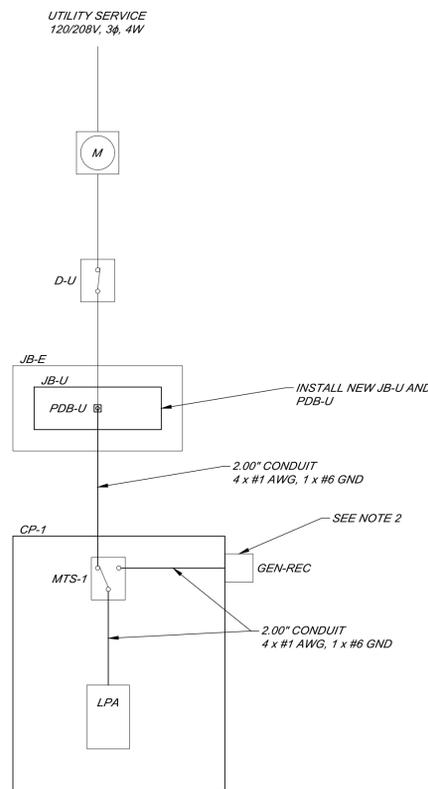
P:\proj\2023\134988SG2023 - Flock Dam Rehabilitation\CAD\CSD\dwg\01-1198 ELEC.dwg 10/26/2024 1:04:23 PM mchallacomby



- KEY:**
- M EXISTING, UTILITY METER
 - D-U EXISTING, UTILITY SERVICE DISCONNECT SWITCH SERVICE RATED, 100A, 240V, 3φ, 3-POLE NEMA 3R
 - PDB-U EXISTING, POWER DISTRIBUTION BLOCK 240V, 100A (MIN.)
 - MTS-1 EXISTING, MANUAL TRANSFER SWITCH SERVICE RATED, 100A, 240V, 3φ, 3-POLE NEMA 1
 - TVSS-1 EXISTING, TRANSIENT VOLTAGE SURGE SUPPRESSOR SQUARE-D, MODEL SDSA3650
 - GEN-REC EXISTING, PORTABLE GENERATOR RECEPTACLE 100A, 600V, 3φ, 4-POLE, STYLE 2 APPLETON, POWERITE, MODEL ADR1034RS REVERSE SERVICE TYPE
 - LPA EXISTING, LIGHTING PANEL A 120/240V, 3φ, 125A MAIN, 125A MCB, 30 SPACE NEMA 1
 - CP-1 EXISTING, CONTROL PANEL

- DEMOLITION NOTES:**
1. SALVAGE AND REUSE EXISTING EAST JUNCTION BOX (JB-E).
 - 1.1. PLUG ALL UNUSED OPENINGS.
 - 1.2. REMOVE ALL RUST.
 - 1.3. REPAINT EXTERIOR AND MATCH EXISTING COLOR.
 - 1.4. REPAINT INTERIOR WITH STANDARD WHITE ENAMEL.
 2. DISCONNECT AND SALVAGE JUNCTION BOX (JB-U) AND POWER DISTRIBUTION BLOCKS (PDB-U).
 3. REMOVE AND SALVAGE CONTROL PANEL (CP-1), INCLUDING ALL CONTENTS, AND DELIVER TO OWNER.
 4. DEMOLISH ALL CONDUITS AND WIRE ALONG SPILLWAY.
 5. REMOVE LIGHTING PANEL (LPA), RECONFIGURE, AND REINSTALL AS SHOWN IN PROPOSED PANEL SCHEDULE.

EXISTING ONE-LINE DIAGRAM
SCALE: N/A



- KEY:**
- M EXISTING, UTILITY METER
 - D-U EXISTING, UTILITY SERVICE DISCONNECT SWITCH SERVICE RATED, 100A, 240V, 3φ, 3-POLE NEMA 3R
 - PDB-U PROPOSED, POWER DISTRIBUTION BLOCK 240V, 100A (MIN.)
 - MTS-1 EXISTING, MANUAL TRANSFER SWITCH SERVICE RATED, 100A, 240V, 3φ, 3-POLE NEMA 1
 - TVSS-1 EXISTING, TRANSIENT VOLTAGE SURGE SUPPRESSOR SQUARE-D, MODEL SDSA3650
 - GEN-REC EXISTING, PORTABLE GENERATOR RECEPTACLE 100A, 600V, 3φ, 4-POLE, STYLE 2 APPLETON, POWERITE, MODEL ADR1034RS REVERSE SERVICE TYPE
 - LPA EXISTING, LIGHTING PANEL A 120/240V, 3φ, 125A MAIN, 125A MCB, 30 SPACE NEMA 1
 - CP-1 PROPOSED, CONTROL PANEL 72\"/>

- NOTES:**
1. ALL CONDUCTORS SHALL BE STRANDED COPPER, THHN TYPE, UNLESS OTHERWISE INDICATED.
 2. CONDUIT AND CONDUCTOR SIZES LISTED ARE MINIMUM ACCEPTABLE SIZES. ANY CHANGES FROM DESIGN MUST BE APPROVED BY ENGINEER, IN WRITING, PRIOR TO SUBSTITUTION.
 3. ANGLED MOUNTING BOX SHALL BE ADDED TO GENERATOR RECEPTACLE.
 4. ALL BRANCH CIRCUIT BREAKERS SHALL BE SUPPLIED AND INSTALLED, EVEN WHERE DEVICES AND/OR EQUIPMENT IS NOT PRESENT.
 5. ALL WIRINGS SHALL BE CLEARLY LABELED BY BRANCH CIRCUIT NUMBER. THIS INCLUDES "NEUTRAL" CONDUCTORS.
 - 5.1. EXAMPLE: LPA-02 & LPA-02N
 6. TANDEM BREAKERS SHALL NOT BE ALLOWED ANYWHERE ON PROJECT.
 7. ALL BRANCH CIRCUIT BREAKER AMPERE RATINGS SHALL BE FIELD VERIFIED AND SHALL BE CONSISTENT WITH WIRE SIZING PER CODE.

PROPOSED ONE-LINE DIAGRAM
SCALE: N/A

PANEL BOARD SCHEDULE										PANEL: LPA: LIGHTING PANEL	
										LOCATION: CONTROL PANEL	
										FED FROM: MTS-1	
										VOLTAGE: 120/208V, 3-PH, 4-WIRE	
										RATINGS: 125A MAIN, 125A MAIN CB	
										SPACES: 30	
LOAD DESCRIPTION	LOAD (W)	CB (A)	CKT #	125A MAIN CB			CKT #	CB (A)	LOAD (W)	LOAD DESCRIPTION	
				A	B	C					
CP-1: CONTROL PANEL	1,200	20	1				2	20	0	OUTDOOR RECEPTACLES	
SPARE	0	20	3				4	20	360	OUTDOOR SECURITY LIGHTING	
SPARE	0	20	5				6	20	0	SPARE	
G-1: GATE MOTOR 1 1 HP	480	20	7				8	20	480	G-4: GATE MOTOR 4 1 HP	
	480	20	9				10	20	630		
	480	20	11				12	20	840		
G-2: GATE MOTOR 2 1 HP	480	20	13				14	20	480	G-5: GATE MOTOR 5 1 HP	
	480	20	15				16	20	480		
	480	20	17				18	20	480		
G-3: GATE MOTOR 3 1 HP	480	20	19				20	20	0	SPARE	
	480	20	21				22	20	0	SPARE	
	480	20	23				24	20	0	SPARE	
SPARE	0	20	25				26	20	0	SPARE	
SPARE	0	30	27				28	20	0	SPARE	
	0		29				30	20	0	SPARE	
TOTALS	5,520			3,600	2,830	2,760			3,670		

CONNECTED AMPS PER PHASE: 30.00 23.58 23.00

CONNECTED LOAD: 9,190 WATTS, 25.51 AMPS

TOTAL SERVICE DEMAND (CONNECTED LOAD * 125%): 11,488 WATTS, 31.89 AMPS

EXISTING PANEL SCHEDULE
SCALE: N/A

PANEL BOARD SCHEDULE										PANEL: LPA: LIGHTING PANEL	
										LOCATION: CONTROL PANEL	
										FED FROM: MTS-1	
										VOLTAGE: 120/208V, 3-PH, 4-WIRE	
										RATINGS: 125A MAIN, 125A MAIN CB	
										SPACES: 30 (MIN.)	
LOAD DESCRIPTION	LOAD (W)	CB (A)	CKT #	125A MAIN CB			CKT #	CB (A)	LOAD (W)	LOAD DESCRIPTION	
				A	B	C					
G-1: GATE 1 OPERATOR 1 HP	480	20	1				2	20	1,200	CP-1: CONTROL PANEL	
	480	20	3				4	20	280	LIGHTS & RECS: CONTROL PANEL	
	480	20	5				6	20	0	SPARE	
G-2: GATE 2 OPERATOR 1 HP	480	20	7				8	20	0	SPARE	
	480	20	9				10	20	150	LIGHTS: SITE	
	480	20	11				12	20	360	RECEPTACLES: SITE	
G-3: GATE 3 OPERATOR 1 HP	480	20	13				14	20	0	SPARE	
	480	20	15				16	20	0	SPARE	
	480	20	17				18	20	0	SPARE	
G-4: GATE 4 OPERATOR 1 HP	480	20	19				20	20	0	SPARE	
	480	20	21				22	20	0	SPARE	
	480	20	23				24	20	0	SPARE	
G-5: GATE 5 OPERATOR 1 HP	480	20	25				26	20	0	SPARE	
	480	20	27				28	20	0	SPARE	
	480	20	29				30	20	0	SPARE	
TOTALS	7,200			3,600	2,830	2,760			1,990		

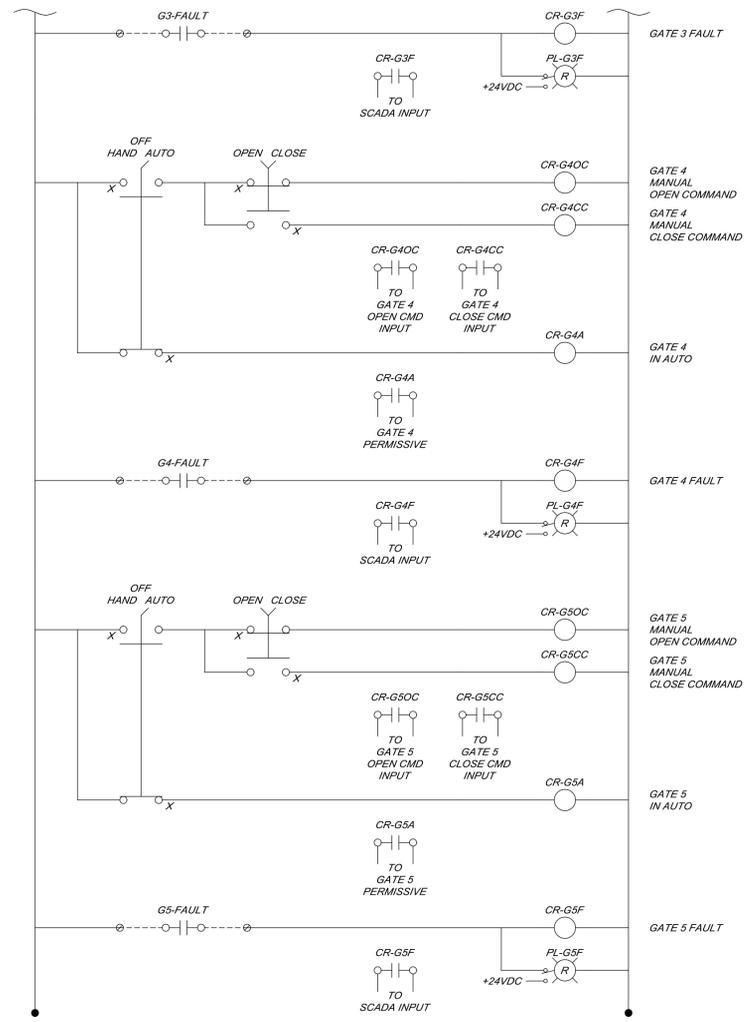
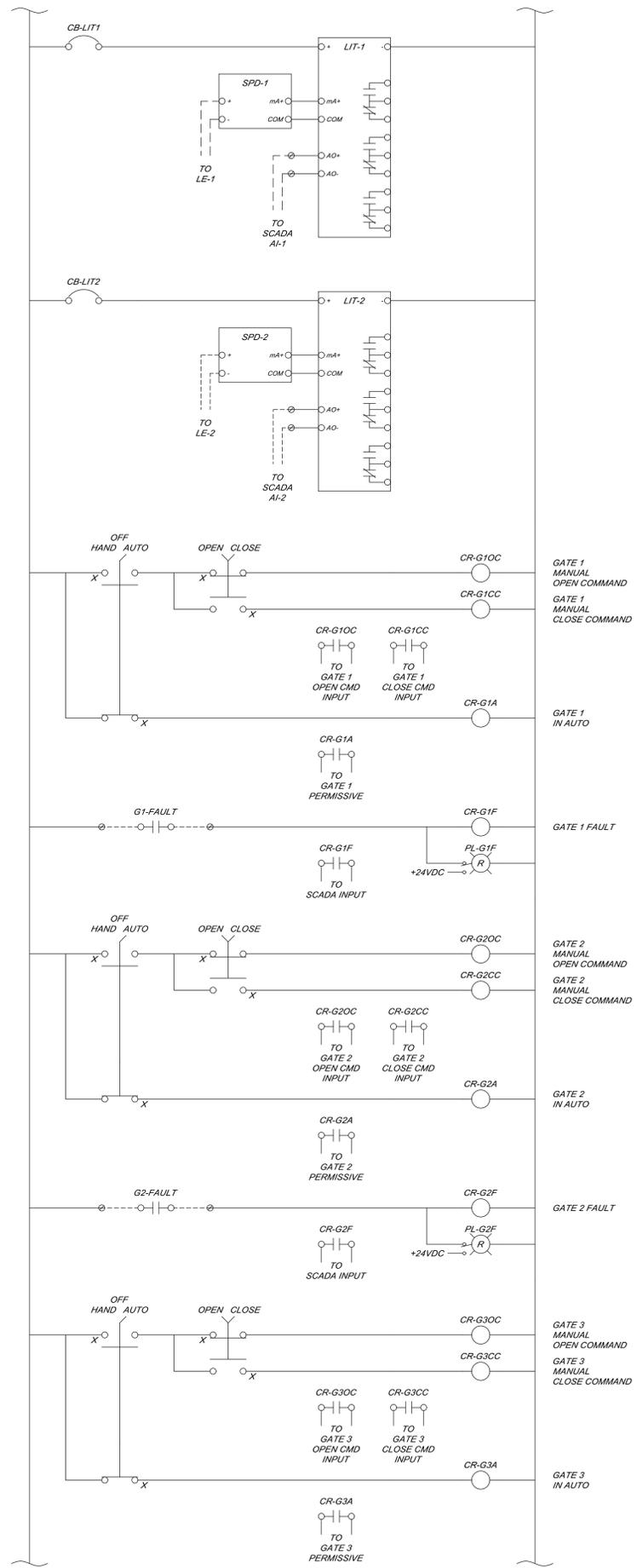
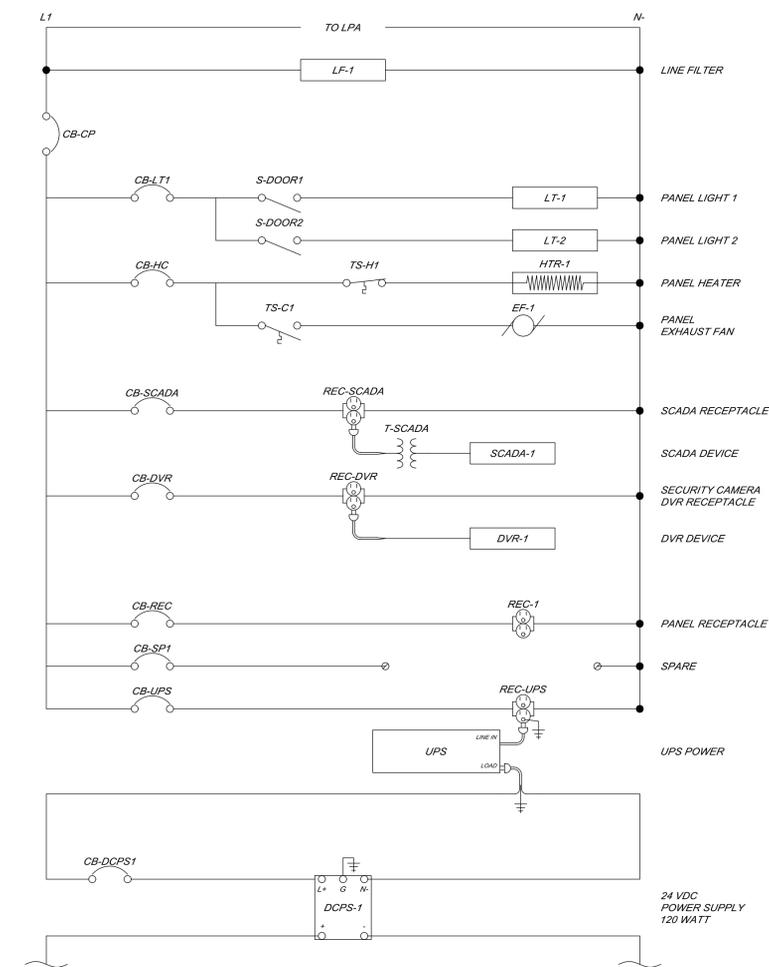
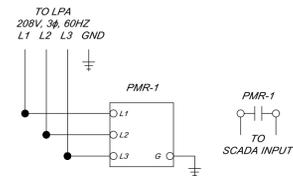
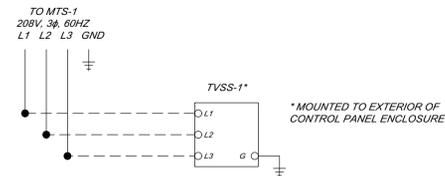
CONNECTED AMPS PER PHASE: 30.00 23.58 23.00

CONNECTED LOAD: 9,190 WATTS, 25.51 AMPS

TOTAL SERVICE DEMAND (CONNECTED LOAD * 125%): 11,488 WATTS, 31.89 AMPS

PROPOSED PANEL SCHEDULE
SCALE: N/A

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</p>			
<p>ELECTRICAL POWER DISTRIBUTION</p>			
<p>Spicer group</p>			<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>
DE. BY:	LAM	CH. BY:	RVG
DR. BY:	LAM	APP. BY:	NDC
			PROJECT NO. 134988SG2023
STDS.	SHEET 14 OF 17		E
DATE	OCTOBER, 2024	FILE NO.	DE-1198-02
SCALE	AS SHOWN		02



- KEY:**
- MTS MANUAL TRANSFER SWITCH
 - TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
 - LPA LIGHTING PANEL A
 - PMR PHASE MONITORING RELAY
 - LF LINE FILTER
 - CB CIRCUIT BREAKER
 - CP CONTROL PANEL
 - LT LIGHT SWITCH
 - S SWITCH
 - TS TEMPERATURE SWITCH
 - H HEATING
 - C COOLING
 - REC RECEPTACLE
 - SCADA SUPERVISORY CONTROL ALARMING & DATA ACQUISITION
 - DVR DIGITAL VIDEO RECORDER
 - T TRANSFORMER
 - UPS UNINTERRUPTIBLE POWER SUPPLY
 - DCPS DC POWER SUPPLY
 - LIT LEVEL INDICATING TRANSMITTER
 - LE LEVEL ELEMENT
 - SPD SURGE PROTECTION DEVICE
 - CR CONTROL RELAY
 - G GATE
 - PL PILOT LIGHT
 - AUX AUXILIARY CONTACT
 - AI ANALOG INPUT
 - AO ANALOG OUTPUT

BY	MARK	REVISIONS	DATE

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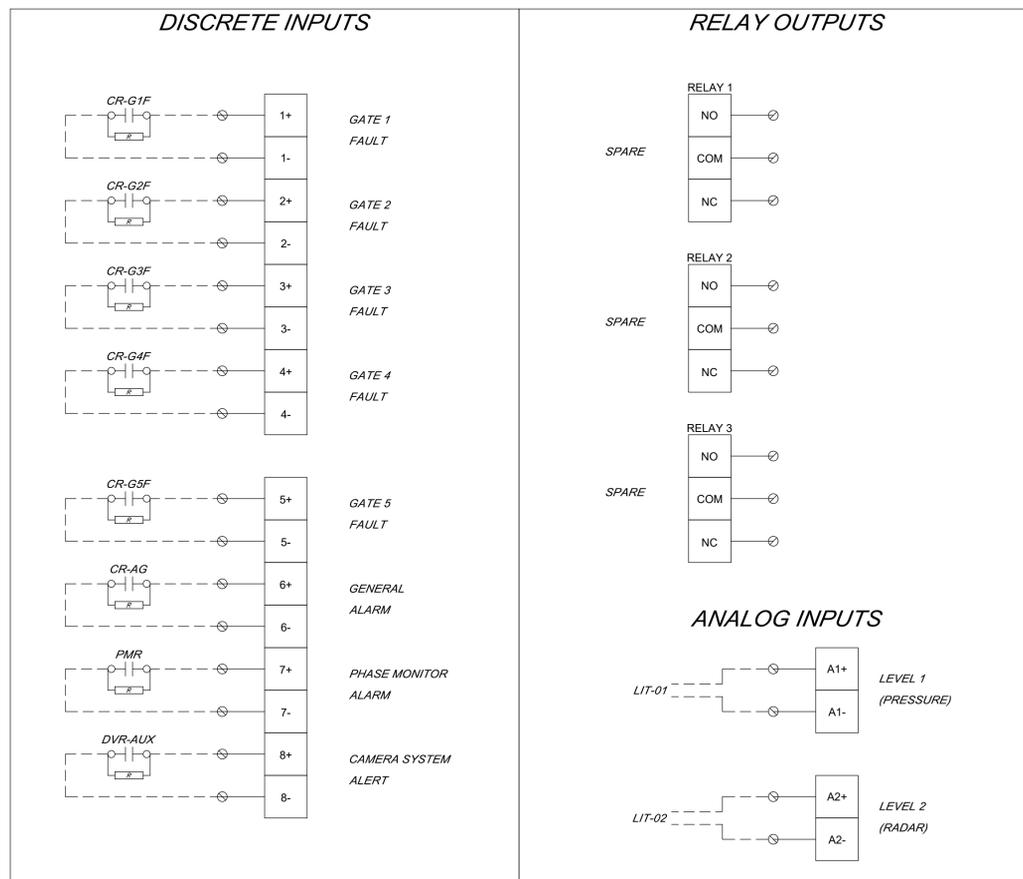
**FLOOK DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

**CONTROL SYSTEM
WIRING DIAGRAM**

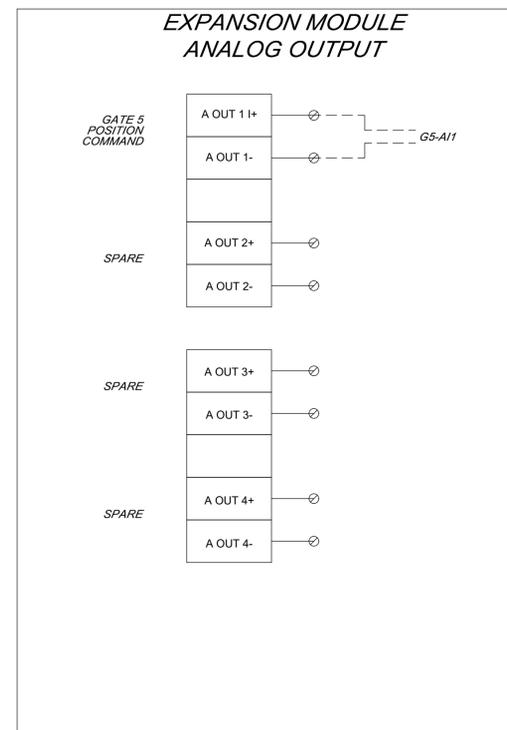
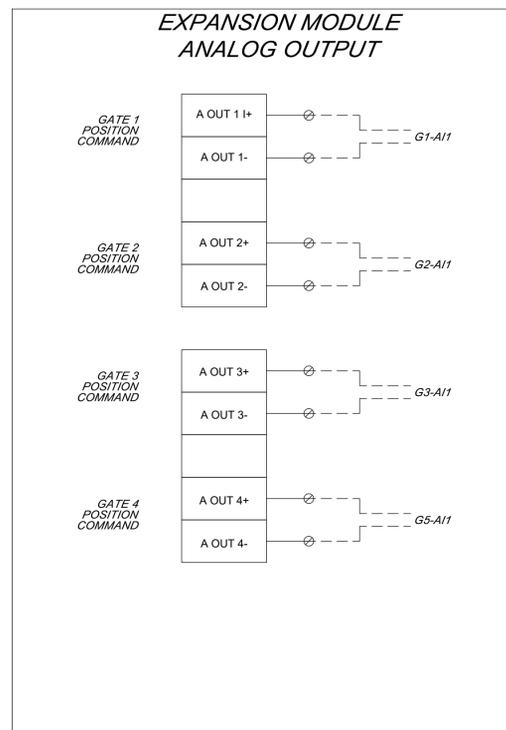
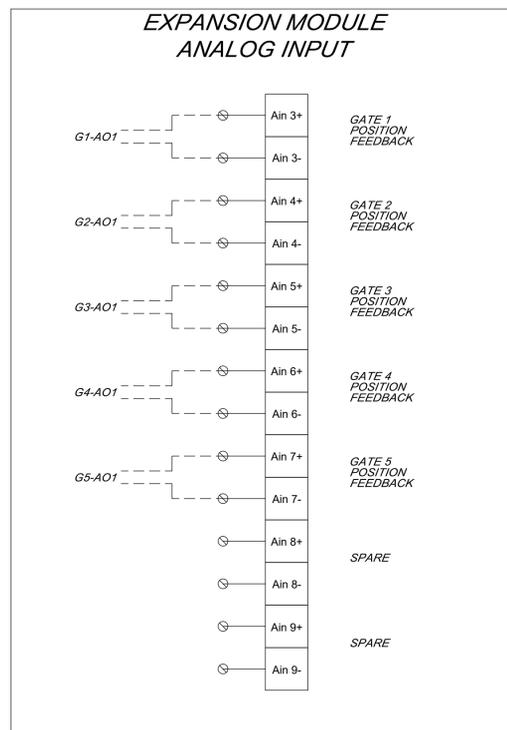
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230 S. Washington Ave.
Saginaw, MI 48607
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Fax. 989-754-4440
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DE. BY: LAM	CH. BY: RVG	PROJECT NO. 134988SG2023
DR. BY: LAM	APP. BY: NDC	
STDS.	SHEET 15 OF 17	E
DATE OCTOBER, 2024	FILE NO. DE-1198-03	03
SCALE AS SHOWN		

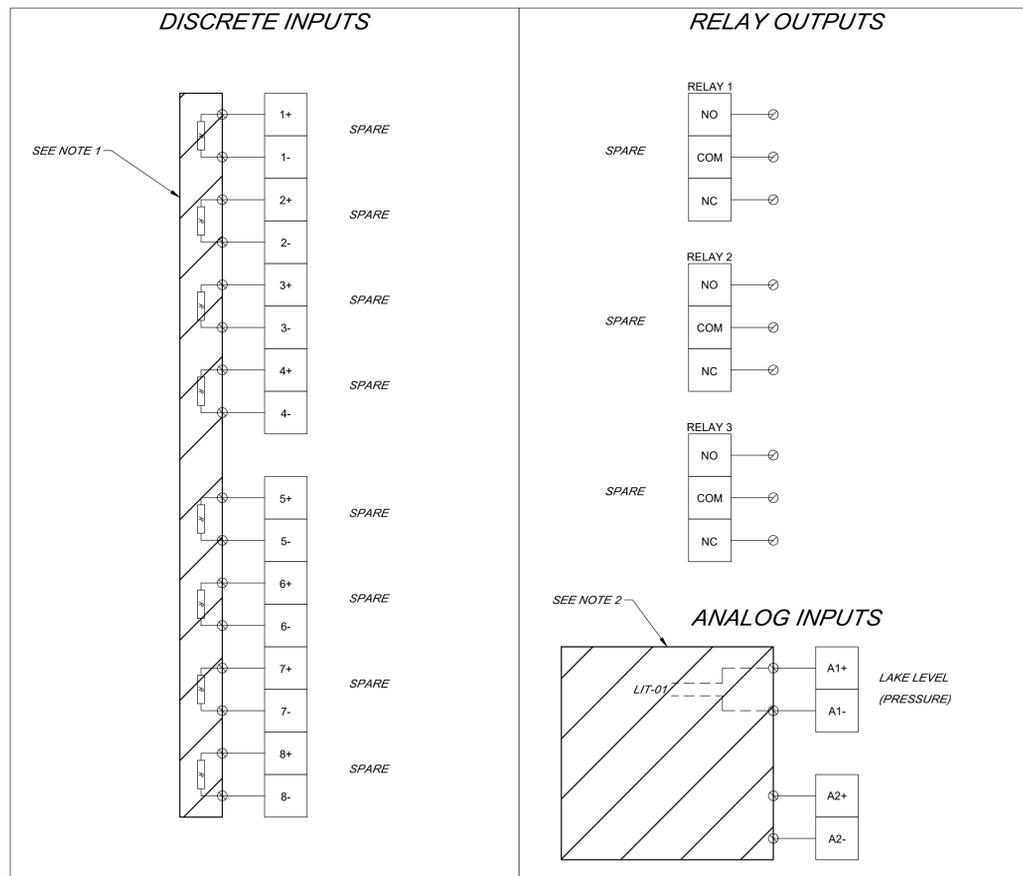
P:\proj\2023\134988SG2023 - Flook Dam Rehabilitation\CAD\GSD\Wiring\1198 ELEC.dwg 10/26/2024 1:06:00 PM mchallan



PROPOSED SCADA DEVICE (MYDRO 850)
SCALE: N/A



PROPOSED SCADA DEVICE EXPANSION MODULES (MYDRO 850)
SCALE: N/A



EXISTING SCADA DEVICE (MISSION M110)
SCALE: N/A

KEY:

- CR: CONTROL RELAY
- G: GATE
- PMR: PHASE MONITORING RELAY
- DVR: DIGITAL VIDEO RECORDER
- AUX: AUXILIARY CONTACT
- LIT: LEVEL INDICATING TRANSMITTER
- AI: ANALOG INPUT
- AO: ANALOG OUTPUT

- NOTES:**
- REMOVE AND SALVAGE ALL 1000 OHM END-OF-LINE RESISTORS.
 - RESISTORS TO BE REINSTALLED AS SHOWN IN PROPOSED WIRING DETAILS.
 - DISCONNECT EXISTING LEVEL ELEMENT AND DELIVER TO OWNER.
 - ALL CONDUCTORS SHALL BE STRANDED COPPER, THHN TYPE, UNLESS OTHERWISE INDICATED.

BY	MARK	REVISIONS	DATE

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**FLOOK DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN**

**CONTROL SYSTEM
WIRING DETAILS**

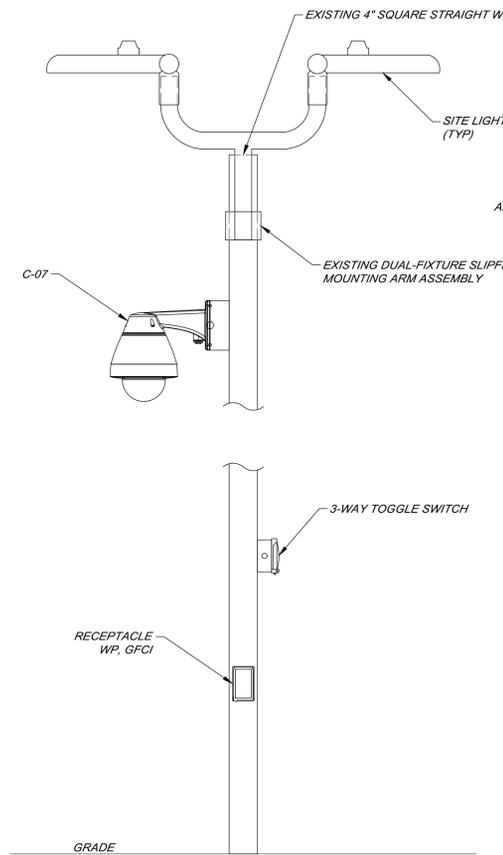


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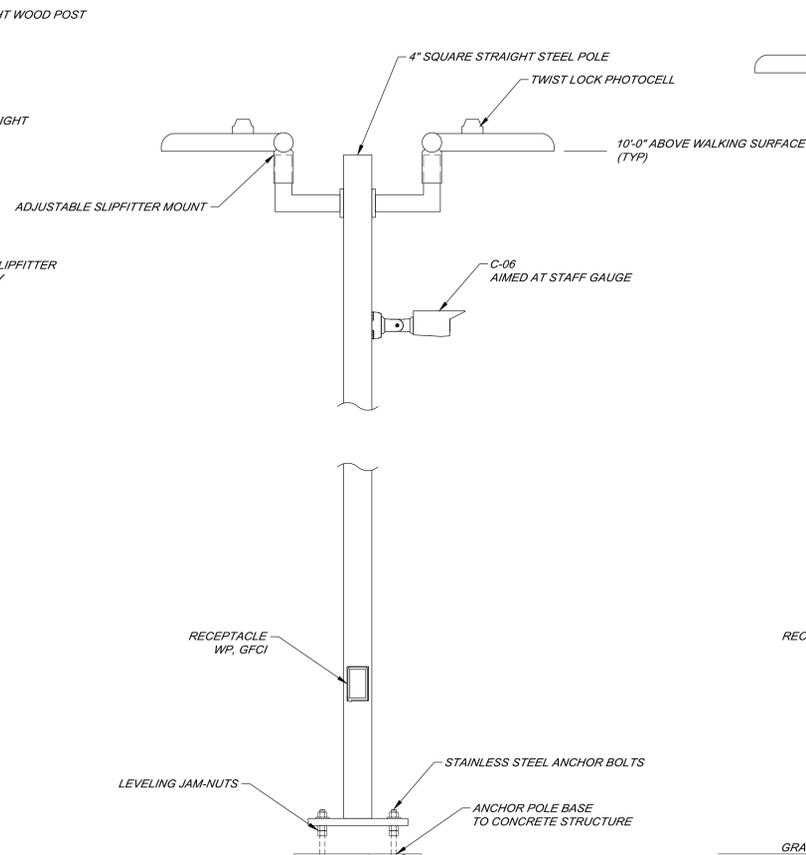
DE. BY: LAM LAM CH. BY: RVG NDC PROJECT NO. 134988SG2023

STDS. SHEET 16 OF 17 DATE OCTOBER, 2024 AS SHOWN FILE NO. DE-1198-04

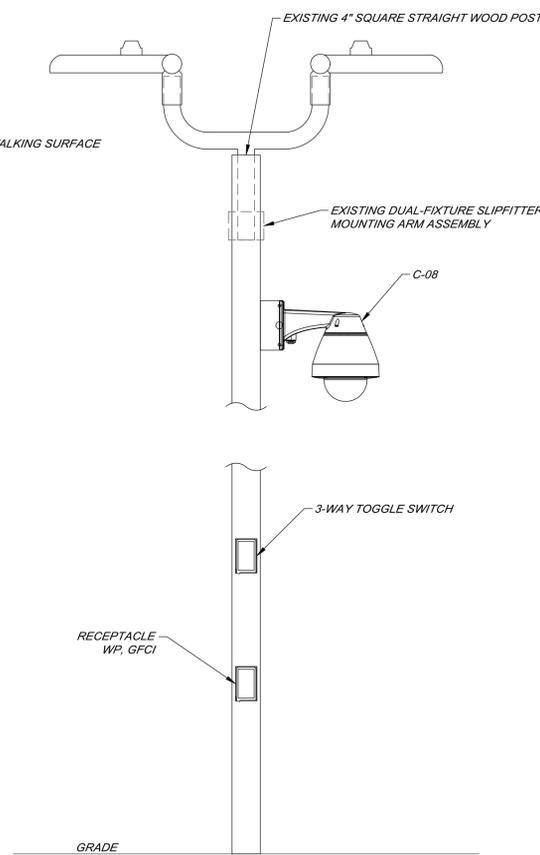
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04**



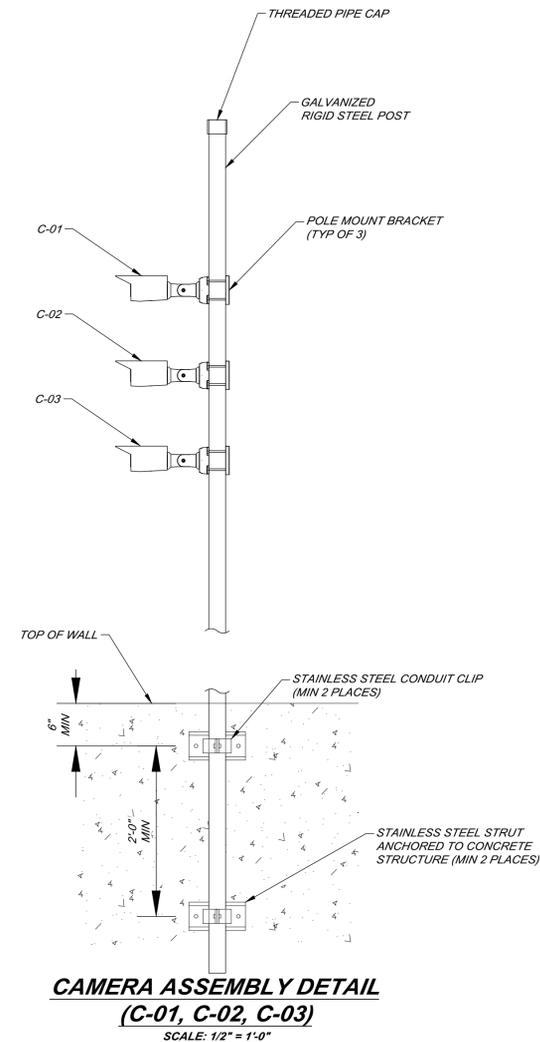
LIGHTING ASSEMBLY "LA-1"
DETAIL
 SCALE: 1/2" = 1'-0"



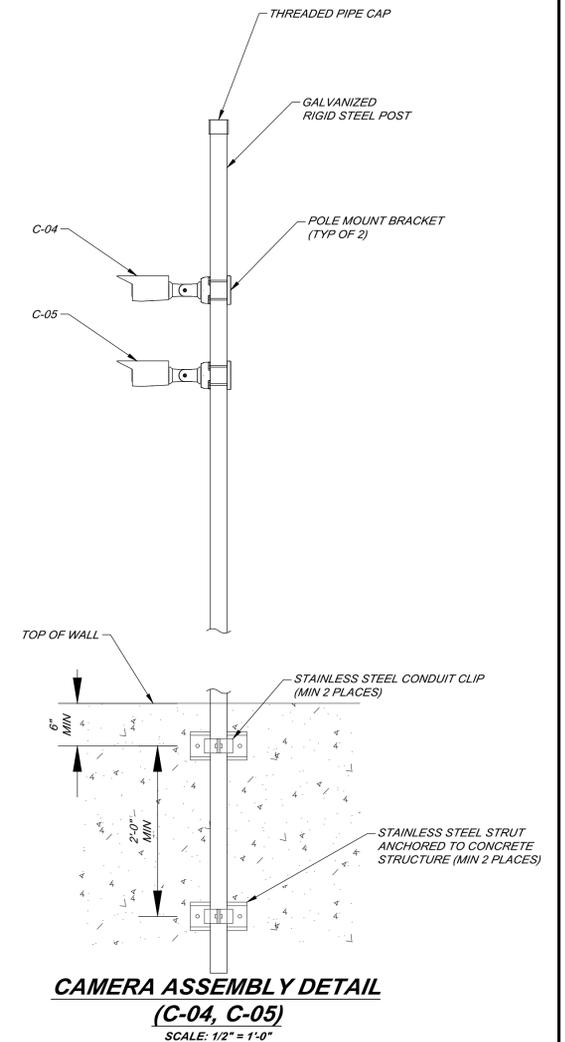
LIGHTING ASSEMBLY "LA-2"
DETAIL
 SCALE: 1/2" = 1'-0"



LIGHTING ASSEMBLY "LA-3"
DETAIL
 SCALE: 1/2" = 1'-0"



CAMERA ASSEMBLY DETAIL
(C-01, C-02, C-03)
 SCALE: 1/2" = 1'-0"



CAMERA ASSEMBLY DETAIL
(C-04, C-05)
 SCALE: 1/2" = 1'-0"

NOTES:

1. CAMERA MOUNTING HEIGHTS TO BE FIELD ADJUSTED, AS DIRECTED BY OWNER, FOR DESIRED VIEW.
2. AREA LIGHTS SHALL BE FIELD ADJUSTED, AS DIRECTED BY OWNER, FOR DESIRED ILLUMINATION.
3. STAINLESS STEEL HARDWARE TO BE USED ON ALL STRUCTURAL CONNECTIONS.
- 3.1. INSULATED FITTING SHALL BE USED TO PREVENT CORROSION DUE TO DISSIMILAR METALS.
4. SECURITY CAMERAS SHALL BE AIMED TO VIEW THE FOLLOWING.
 - 4.1. C-01 : GATE #1
 - 4.2. C-02 : GATE #2
 - 4.3. C-03 : GATE #3
 - 4.4. C-04 : GATE #4
 - 4.5. C-05 : GATE #5
 - 4.6. C-06 : LEVEL INSTRUMENTS AND STAFF GAUGE
 - 4.7. C-07 : WEST SITE (PTZ STYLE)
 - 4.8. C-08 : EAST SITE (PTZ STYLE)
5. SEE SHEET 11 FOR SITE PLANS.

BY	MARK	REVISIONS	DATE

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FLOOK DAM (DAM ID: #8) REHABILITATION
WASHTENAW COUNTY, MICHIGAN

ELECTRICAL
INSTALLATION DETAILS



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DE. BY: LAM	CH. BY: RVG	PROJECT NO.
DR. BY: LAM	APP. BY: NDC	134988SG2023
STDS.	SHEET 17 OF 17	E
DATE OCTOBER, 2024	FILE NO.	05
SCALE AS SHOWN	DE-1198-05	