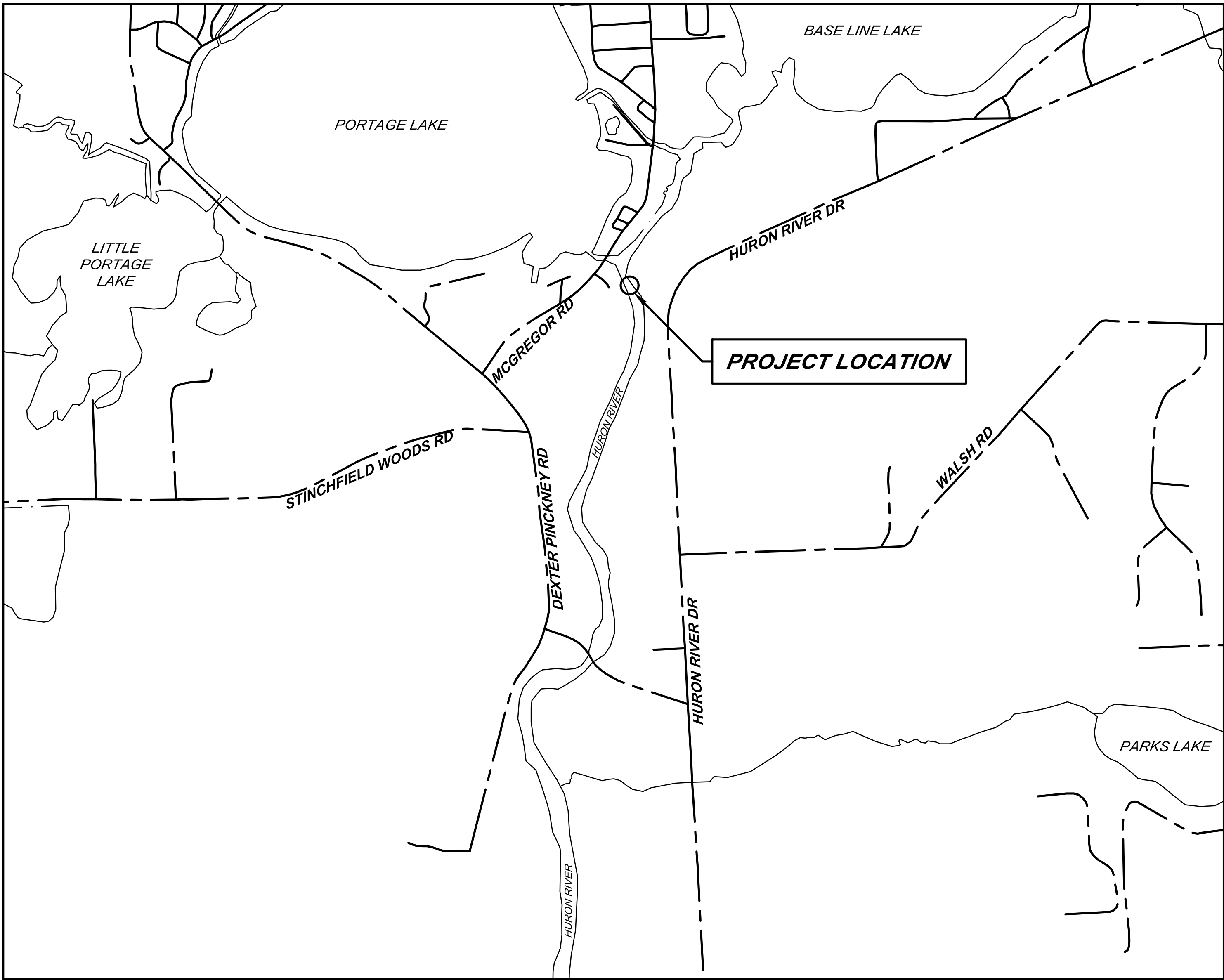


# FLOOK DAM #8 - REHABILITATION

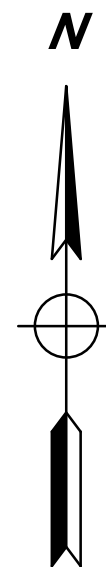
WASHTENAW COUNTY WATER RESOURCES COMMISSIONER



AREA MAP  
NOT TO SCALE




LOCATION MAP  
NOT TO SCALE



SECTIONS 01, T01S-R04E,  
DEXTER TOWNSHIP,  
WASHTENAW COUNTY, MICHIGAN

PLAN INDEX	
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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.			
FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN			
COVER 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
DR. BY:	MTS	APP. BY:	NDC
		PROJECT NO. 134988SG2023	
STDs.		SHEET 01 OF 17	DF 01
DATE OCTOBER, 2024 SCALE NOT TO SCALE		FILE NO. DF-1153-01	

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 THUS 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 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.

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.

ABBREVIATIONS

BC = BACK OF CURB  
BM = BENCH MARK  
CB = CATCH BASIN  
C/C = CENTER TO CENTER  
CJ = CONSTRUCTION JOINT  
CL = CENTERLINE  
CMP = CORRUGATED METAL PIPE  
CONC = CONCRETE  
CORR = 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  
T/B = 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

--- --- - EXISTING ROAD CENTERLINE  
- - - - - EXISTING WATERMAIN  
- - - - - EXISTING SANITARY SEWER OR FORCEMAIN  
- - - - - EXISTING STORM SEWER  
- - - - - EXISTING TELEPHONE CABLE  
- - - - - EXISTING GAS MAIN  
- - - - - EXISTING ELECTRIC  
- - - - - EXISTING DRAINS (OTHER)  
===== PROPOSED UTILITY  
===== EXISTING CURB & GUTTER  
===== PROPOSED CURB & GUTTER  
- - - - - FENCE LINE  
===== OVERHEAD UTILITY  
===== RAILROAD TRACKS  
- - - - - STATION LINE  
- - - - - LIMITS OF RIGHT OF WAY  
- - - - - EASEMENT  
- - - - - SILT FENCE  
===== REVERSE PAN CURB & GUTTER  
- - - - - TREE LINE  
- - - - - EXISTING CONTOURS  
- - - - - PROPOSED CONTOURS

SYMBOL LEGEND

EXISTING SYMBOLS

○ - MANHOLE  
⊗ - CATCH BASIN  
⊗ - CURB CATCH BASIN  
⊗ - FIRE HYDRANT  
⊗ - GAS VALVE  
⊗ - WATER VALVE  
□ - TELEPHONE PEDESTAL  
● - POWER POLE  
○ - TELEPHONE POLE  
⊗ - POWER AND TELEPHONE POLE  
⊗ - LIGHT POLE  
⊗ - GUY ANCHOR AND POLE  
□ - MAIL BOX  
○ - WATER METER  
⊗ - TELEPHONE MANHOLE  
⊗ - ELECTRIC MANHOLE  
⊗ - MONITORING WELL  
+ - HAND HOLE  
⊗ - TRANSFORMER  
■ - ELECTRICAL PEDESTAL  
⊗ - BARRIER FREE PARKING  
⊗ - SPRINKLER  
⊗ - RAILROAD SIGNAL  
⊗ - ANTENNA  
⊗ - SATELLITE DISH  
⊗ - AIR CONDITIONING UNIT  
⊗ - SOIL BORING  
⊗ - CONTROL POINT  
⊗ - BENCH MARK  
⊗ - FOUND SURVEY CORNER  
○ - SET 1/2" IRON ROD  
● - 1/4 SECTION CORNER  
⊗ - BREAK IN LINE  
⊗ - EXISTING SIGN-1 POST  
⊗ - EXISTING SIGN-2 POST  
⊗ - STUMP  
⊗ - WETLANDS  
⊗ - PINE  
⊗ - BUSH  
⊗ - TREE

PROPOSED SYMBOLS

○ - MANHOLE  
⊗ - CATCHBASIN  
⊗ - FIRE HYDRANT  
● - WATER VALVE  
⊗ - BARRIER FREE PARKING  
■ - LIGHT POLES  
== DRAINAGE FLOW  
600.00 LABEL  
G = GUTTER  
TW = WALK  
TC = TOP OF CURB  
FS = FINISH SURFACE

CONTACTS

DEPUTY WASHTENAW COUNTY WATER RESOURCES COMMISSIONER OWNER  
ATT: SCOTT MILLER, P.E.  
705 N. ZEEB ROAD  
ANN ARBOR, MI 48107  
PHONE: (734) 222-6818

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

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

BY	MARK	REVISIONS	DATE
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NOTE SHEET			
SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com		PROJECT NO. 134988SG2023	
DE. BY: MTS/DPZ	CH. BY: RYG	PROJECT NO. 134988SG2023	
DR. BY: MTS	APP. BY: NDC		
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														

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 EROSION AREAS WILL BE SEEDED 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 EROSION 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.



SOILS MAP

MUSYM	COMPOSITION NAME	DRAINAGE	HYDROLOGIC GROUP	HYDRIC
Cc	Cohoctah fine sandy loam, frequently flooded	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	Oshkema loamy sand, 0 to 6 percent slopes	Well drained	A	No
WaA	Wasopi sandy loam, 0 to 4 percent slopes	Somewhat poorly drained	A/D	No

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SOIL EROSION AND SEDIMENTATION CONTROL NOTES			
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SCALE	NOT TO SCALE		03

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

SYMBOLGY FOR INSERTION INTO CONSTRUCTION DRAWINGS:

= PERMANENT MEASURE  
 = TEMPORARY MEASURE

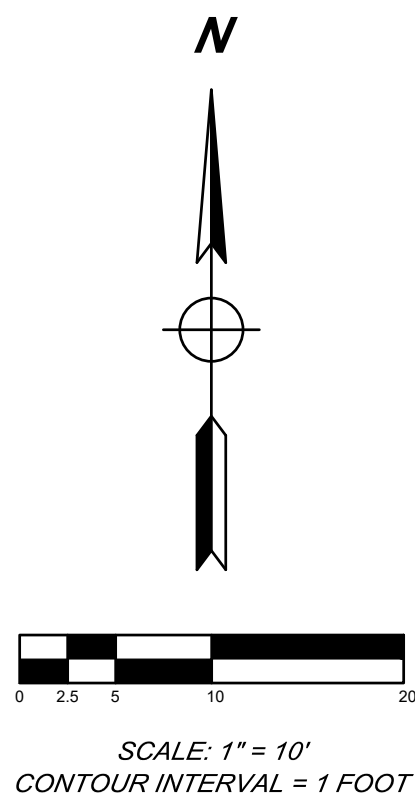
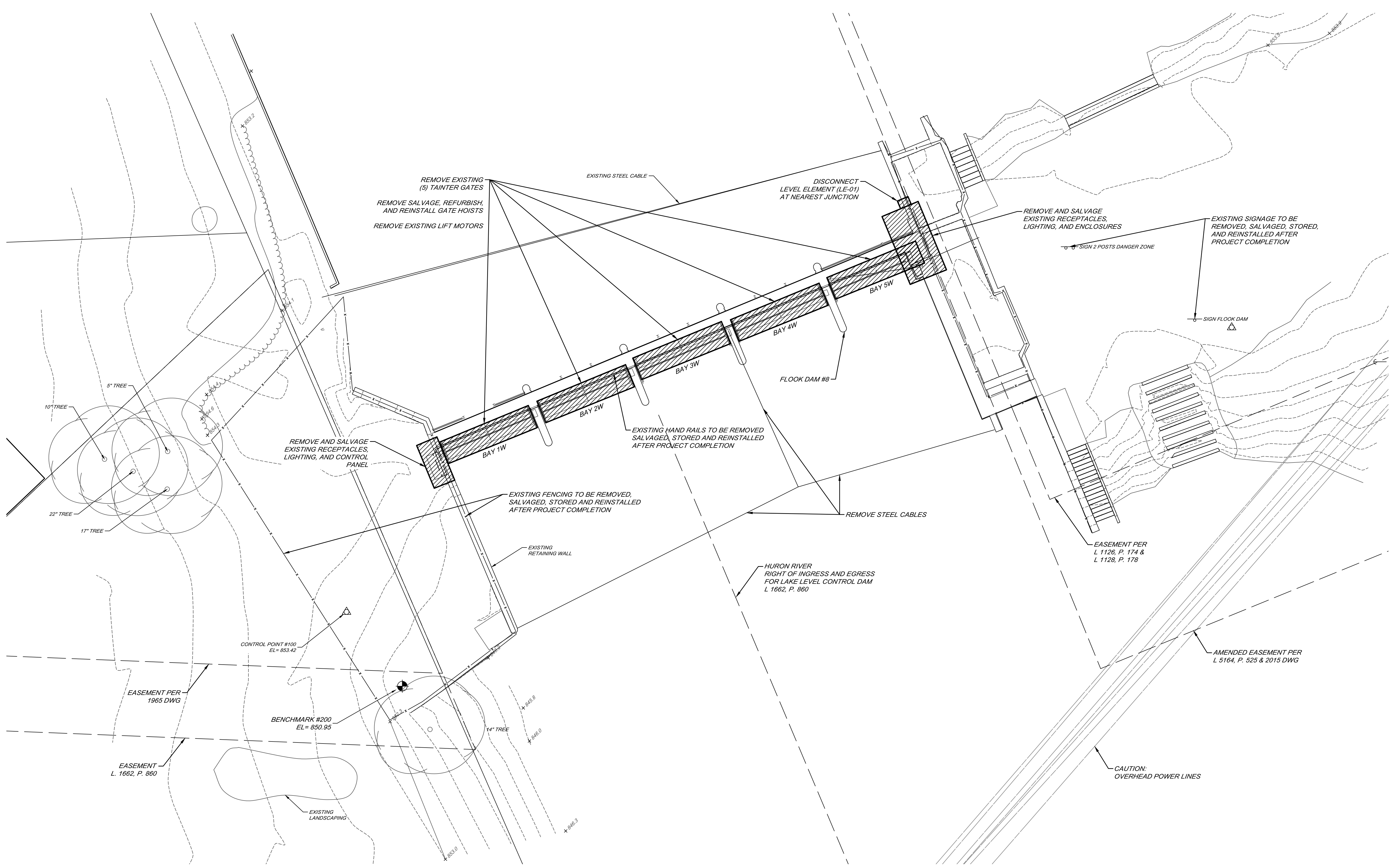
SESC COMMENTS

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

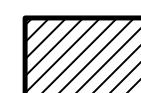
SITE ACCESS TO WEST BANK SHALL BE RESTORED TO ITS ORIGINAL CONDITION WITH GRADING AND SOD AS NECESSARY.

SESC PLAN

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.			
FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN			
SOIL EROSION AND SEDIMENTATION CONTROL PLAN			
		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: RVG	PROJECT NO. 134988SG2023	
DR. BY: KMO	APP. BY: NDC		
STDS.	SHEET 04 OF 17	DF	
DATE: OCTOBER, 2024	FILE NO.	04	
SCALE: NOT TO SCALE	DF-1153-01		



**LEGEND**

 **REMOVAL**

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.

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

DEMOLITION SHEET



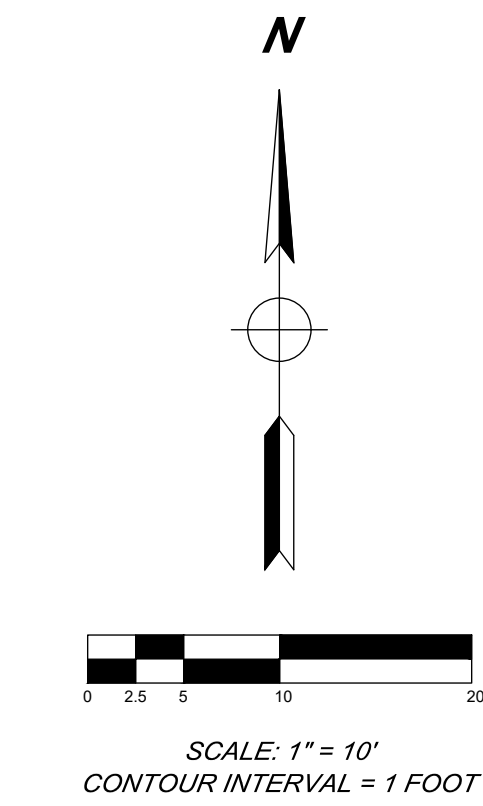
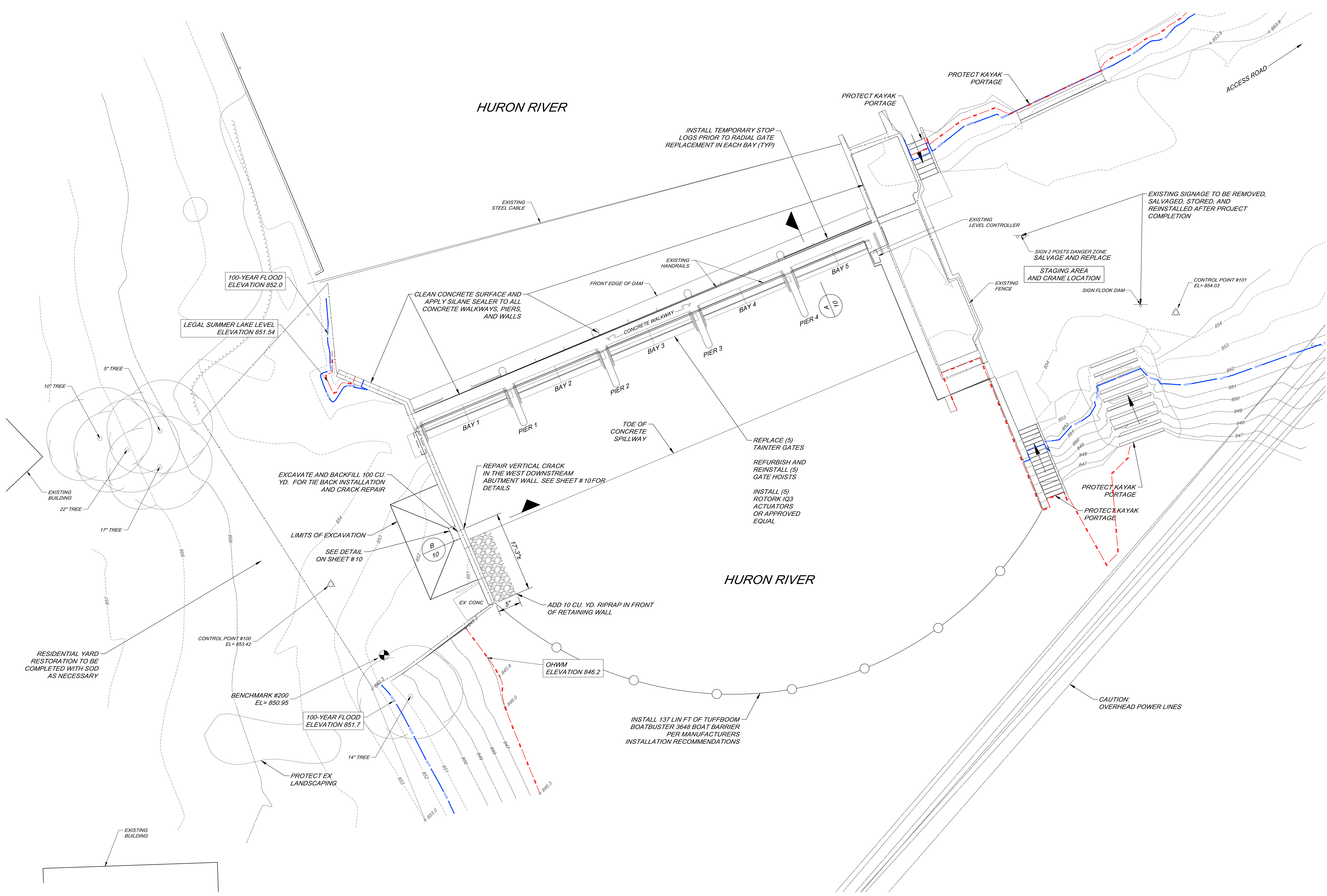
**SAGINAW OFFICE**  
230 S. Washington Ave.  
Saginaw, MI 48607  
Tel. 989-754-4717  
Fax. 989-754-4440  
[www.SpicerGroup.com](http://www.SpicerGroup.com)

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	

DEMOLITION PLAN  
SCALE: 1" = 10'

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

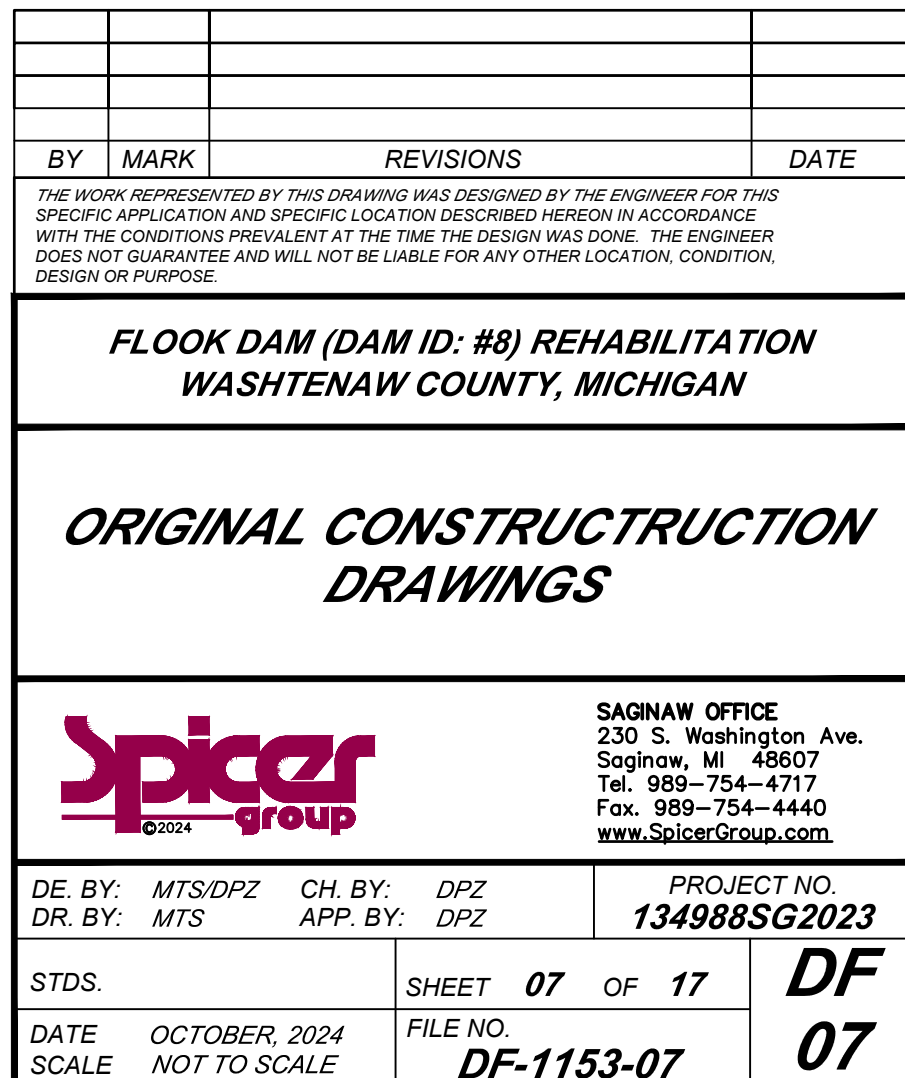
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**NOTE:**  
CONTRACTOR TO RESET EXISTING BUOYS. COORDINATE LOCATIONS WITH OWNER/ENGINEER.

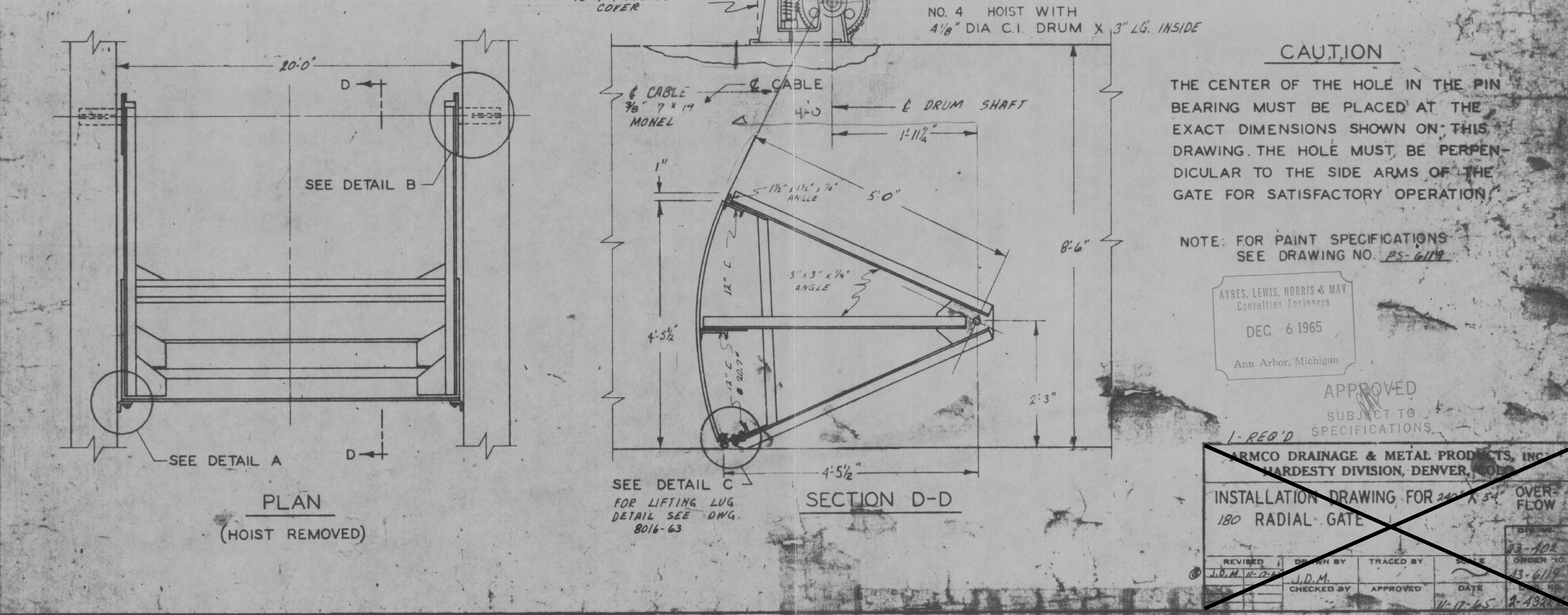
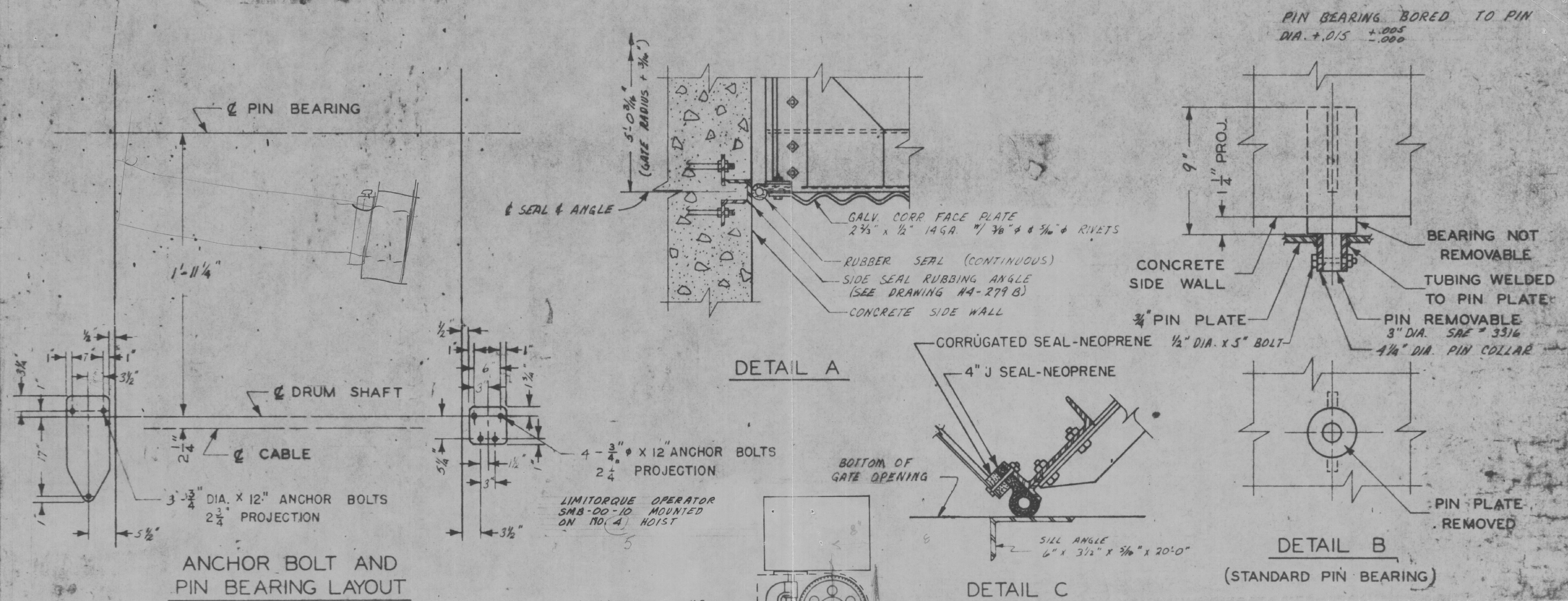
**EXISTING SITE PLAN**  
SCALE: 1" = 10'

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.							
FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN							
PROPOSED SITE PLAN							
				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:	RVG	PROJECT NO.		134988SG2023	
DR. BY:	MTS	APP. BY:	NDC	SHEET 06 OF 17		DF	
STDS.	DATE		OCTOBER, 2024	FILE NO.		DF-1153-06	
SCALE	AS SHOWN				06		





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



CAUTION

THE CENTER OF THE HOLE IN THE PIN BEARING MUST BE PLACED AT THE EXACT DIMENSIONS SHOWN ON THIS DRAWING. THE HOLE MUST BE PERPENDICULAR TO THE SIDE ARMS OF THE GATE FOR SATISFACTORY OPERATION.

NOTE: FOR PAINT SPECIFICATIONS  
SEE DRAWING NO. PS-6119

AYRES, LEWIS, NORRIS & MAY  
Consulting Engineers  
DEC. 6 1965  
Ann Arbor, Michigan

APPROVED  
SUBJECT TO  
SPECIFICATIONS

ARMCO DRAINAGE & METAL PRODUCTS, INC.  
HARDESTY DIVISION, DENVER, COLORADO

INSTALLATION DRAWING FOR 342" X 54" OVER-  
FLOW  
180 RADIAL GATE

REVISED	DRAWN BY	TRACED BY	SCALE	DATE
J.D.M. 11-12-65	J.D.M.			11-17-65
	CHECKED BY	APPROVED		

83-402  
ORDER NO. 43-6119  
D. H. H. 2-1348

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

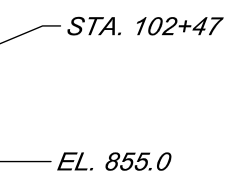
**ORIGINAL CONSTRUCTION  
DRAWINGS**


**Spicer**  
group  
©2024

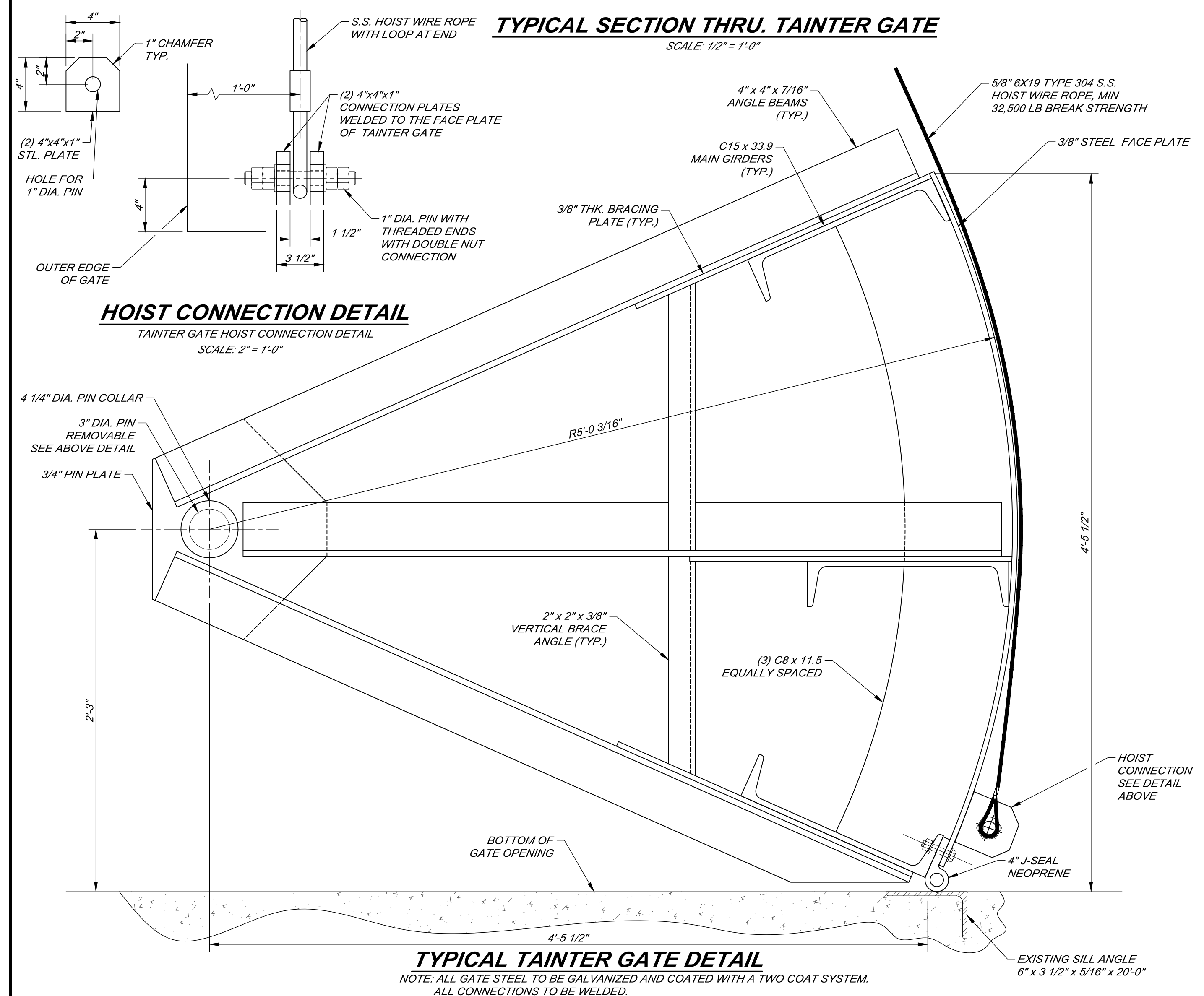
**SAGINAW OFFICE**  
230 S. Washington Ave.  
Saginaw, MI 48607  
Tel. 989-754-4717  
Fax. 989-754-4440  
[www.SpicerGroup.com](http://www.SpicerGroup.com)


DR. BY: <i>MTS/DPZ</i> DE. BY: <i>MTS</i>		CH. BY: <i>DPZ</i> APP. BY: <i>DPZ</i>		PROJECT NO. <b><i>134988SG2023</i></b>	
STDS.		SHEET <b><i>09</i></b> OF <b><i>17</i></b>		<b><i>DF</i></b>  <b><i>09</i></b>	
DATE <i>OCTOBER, 2024</i> SCALE <i>NOT TO SCALE</i>		FILE NO. <b><i>DF-1153-09</i></b>			

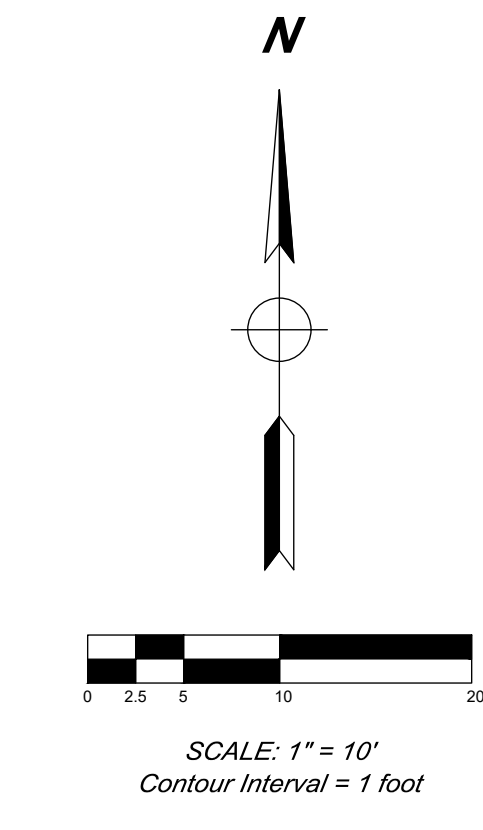
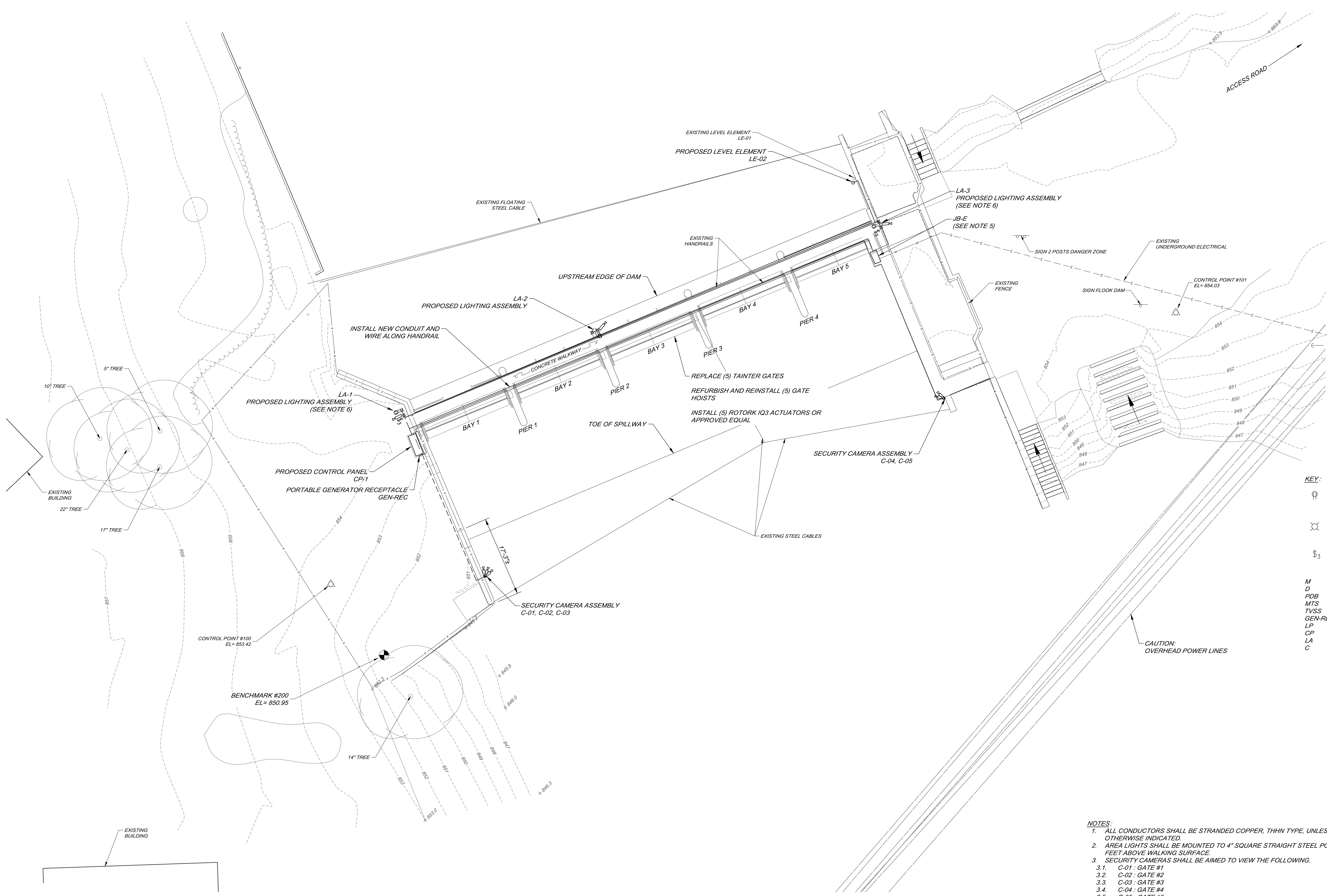




BY	MARK		REVISIONS					DATE	
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.									
<b>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</b>									
<b>TIE-BACK DETAILS</b>									
						SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 <a href="http://www.SpicerGroup.com">www.SpicerGroup.com</a>			
DE. BY:		MTS/DPZ		CH. BY:		DPZ		PROJECT NO. <b>134988SG2023</b>	
DR. BY:		MDS		APP. BY:		DPZ			
STD.S.				SHEET		11 OF 17		<b>DF</b>	
DATE SCALE		OCTOBER 2024 AS SHOWN		FILE NO.		<b>DF-1153-11</b>		<b>11</b>	



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.					
<b>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</b>					
<b>TAINTER GATE DETAILS</b>					
			SAGINAW OFFICE 230 N. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 <a href="http://www.SpicerEngineering.com">www.SpicerEngineering.com</a>		
DE. BY:	MTS/DPZ	CH. BY:	DPZ	PROJECT NO.	
DR. BY:	MTS	APP. BY:	DPZ	<b>13AH09SG2023</b>	
S.T.D.S.			SHEET	12 OF 17	<b>DF</b>
DATE SCALE	OCTOBER, 2024 AS SHOWN	FILE NO.	<b>DF-1153-12</b>		<b>12</b>



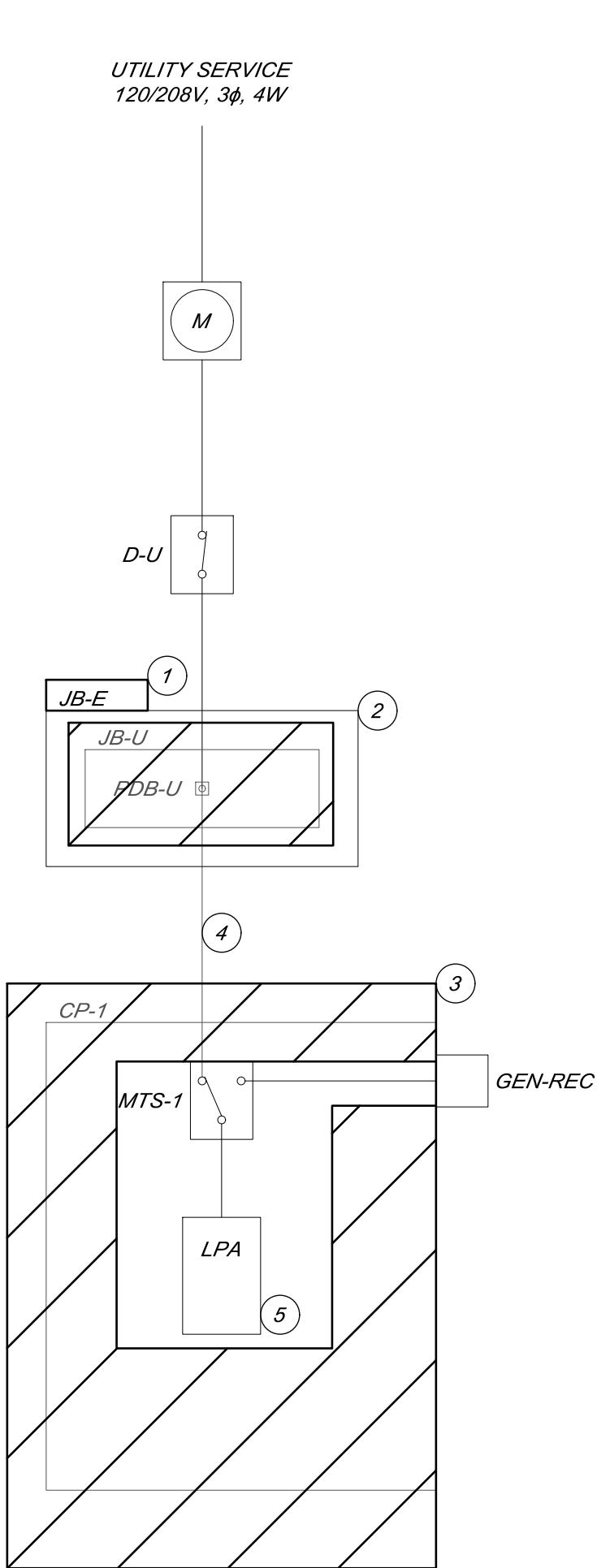
- KEY:**
- RECEPTACLE  
120V, 20A, GFCI TYPE  
METALLIC, LOCKABLE, WEATHERPROOF WHILE-IN-USE ENCLOSURE
  - LIGHT FIXTURE  
120V, 100W (MAX), LED AREA LIGHT, TYPE 4 DISTRIBUTION  
ADJUSTABLE SLIPFITTER MOUNT
  - TOGGLE SWITCH, 3-WAY  
120V, 20A  
METALLIC, LOCKABLE, WEATHERPROOF ENCLOSURE
  - UTILITY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

- NOTES:**
1. ALL CONDUCTORS SHALL BE STRANDED COPPER, THHN TYPE, UNLESS OTHERWISE INDICATED.
  2. AREA LIGHTS SHALL BE MOUNTED TO 4" SQUARE STRAIGHT STEEL POLE, AT 10 FEET ABOVE WALKING SURFACE.
  3. SECURITY CAMERAS SHALL BE AIMED TO VIEW THE FOLLOWING:
    - 3.1. C-01 - GATE #1
    - 3.2. C-02 - GATE #2
    - 3.3. C-03 - GATE #3
    - 3.4. C-04 - GATE #4
    - 3.5. C-05 - GATE #5
    - 3.6. C-06 - LEVEL INSTRUMENTS AND STAFF GAUGE
    - 3.7. C-07 - WEST SITE (PTZ STYLE)
    - 3.8. C-08 - EAST SITE (PTZ STYLE)
  4. SEE SHEET 15 FOR INSTALLATION DETAILS.
  5. CONTRACTOR TO RESTORE AND REUSE EXISTING JB-E ENCLOSURE.
  - 5.1. PLUG ALL UNUSED OPENINGS.
  - 5.2. REMOVE ALL RUST.
  - 5.3. REPAINT EXTERIOR AND MATCH EXISTING COLOR.
  - 5.4. REPAINT INTERIOR WITH STANDARD WHITE ENAMEL.
  6. REUSE EXISTING WOODEN POSTS AND DUAL-HEAD LIGHT FIXTURE TENONS.
  - 6.1. 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'

<b>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</b>			
<b>ELECTRICAL SITE PLAN</b>			
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. 134988SG2023	
DR. BY: LAM	APP. BY: NDC		
STDS.		SHEET 13 OF 17	E
DATE OCTOBER, 2024		FILE NO.	01
SCALE AS SHOWN		DE-1198-01	

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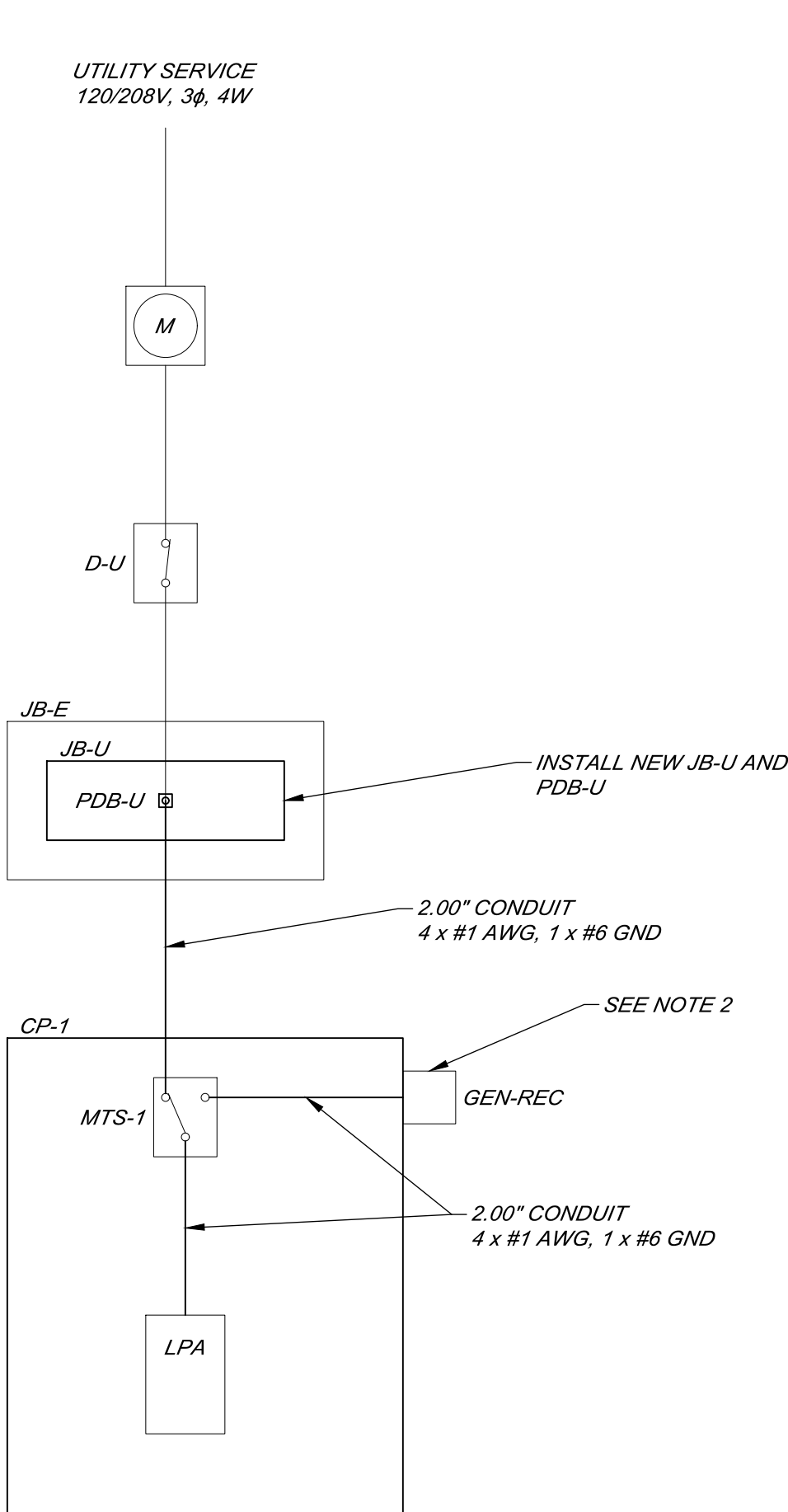


- KEY:**
- M** EXISTING, UTILITY METER
  - D-U** EXISTING, UTILITY SERVICE DISCONNECT SWITCH  
SERVICE RATED, 100A, 240V, 3φ, 3-POLE  
NEMA 3R
  - PDB-U** EXISTING, POWER DISTRIBUTION BLOCK
  - MTS-1** EXISTING, MANUAL TRANSFER SWITCH  
SERVICE RATED, 100A, 240V, 3φ, 3-POLE  
NEMA 1
  - TVSS-1** EXISTING, TRANSIENT VOLTAGE SURGE SUPPRESSOR  
SQUARE-D, MODEL SDSA3650
  - GEN-REC** EXISTING, PORTABLE GENERATOR RECEPTACLE  
100A, 600V, 3φ, 4-POLE, STYLE 2  
APPLETON, POWERITTE, 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, POWERITTE, 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"H x 72"W x 24"D STAINLESS STEEL, NEMA 4X ENCLOSURE

- 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 WIRING 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	480		7				8		480	G-4: GATE MOTOR 4
1 HP	480	20	9				10	20	630	1 HP
	480		11				12		840	
G-2: GATE MOTOR 2	480		14				14		480	G-5: GATE MOTOR 5
1 HP	480	20	15				15	20	480	1 HP
	480		17				18		480	
G-3: GATE MOTOR 3	480		19				20	20	0	SPARE
1 HP	480	20	21				22	20	0	SPARE
	480		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 11,488 WATTS 31.89 AMPS (CONNECTED LOAD \* 125%)

**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	480		1				2	20	1,200	CP-1: CONTROL PANEL
1 HP	480	20	3				4	20	280	LIGHTS & RECS: CONTROL PANEL
	480		5				6	20	0	SPARE
G-2: GATE 2 OPERATOR	480		7				8	20	0	SPARE
1 HP	480	20	9				10	20	150	LIGHTS: SITE
	480		11				12	20	360	RECEPTACLES: SITE
G-3: GATE 3 OPERATOR	480		13				14	20	0	SPARE
1 HP	480	20	15				16	20	0	SPARE
	480		17				18	20	0	SPARE
G-4: GATE 4 OPERATOR	480		19				20	20	0	SPARE
1 HP	480	20	21				22	20	0	SPARE
	480		23				24	20	0	SPARE
G-5: GATE 5 OPERATOR	480		25				26	20	0	SPARE
1 HP	480	20	27				28	20	0	SPARE
	480		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

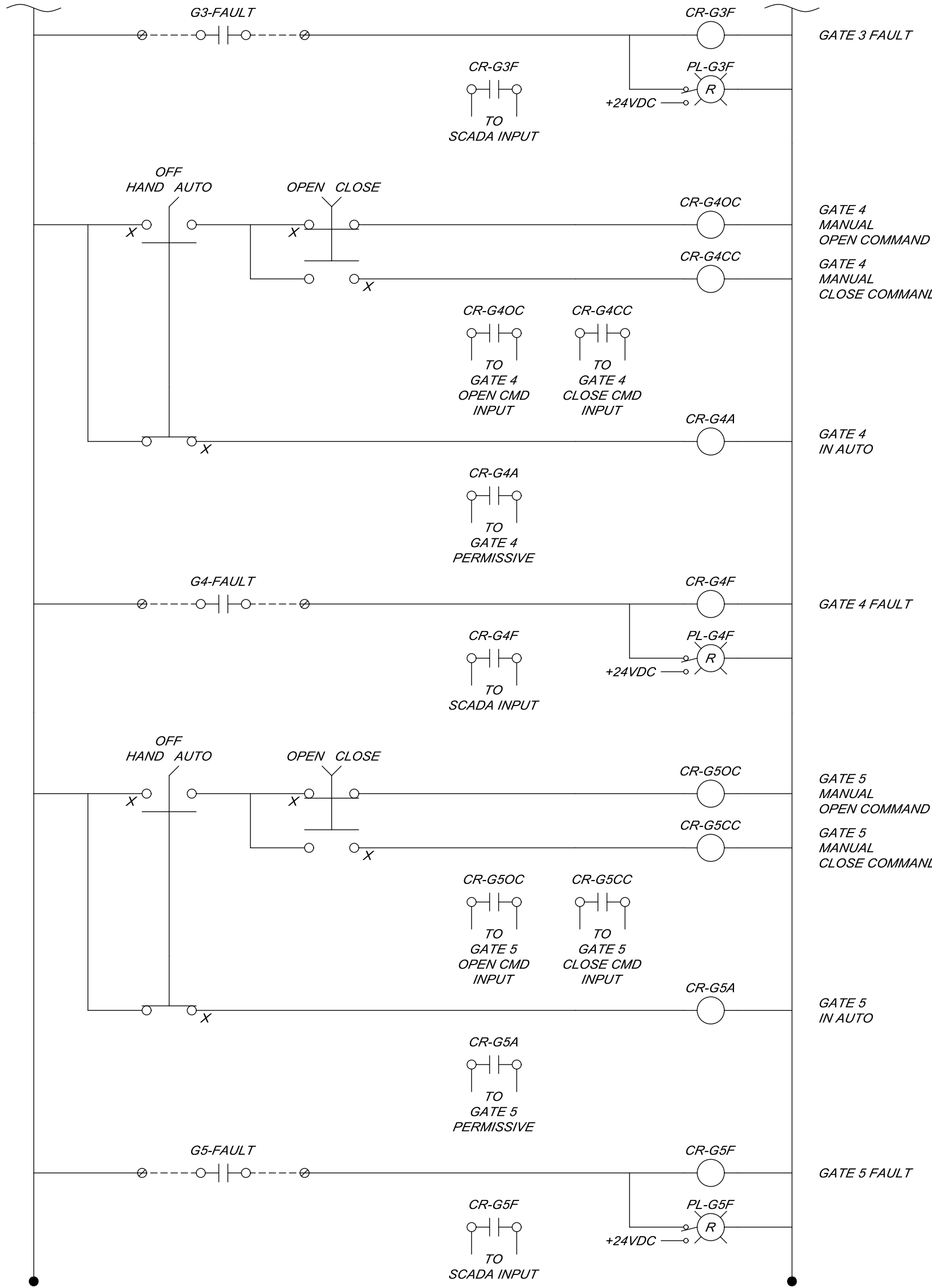
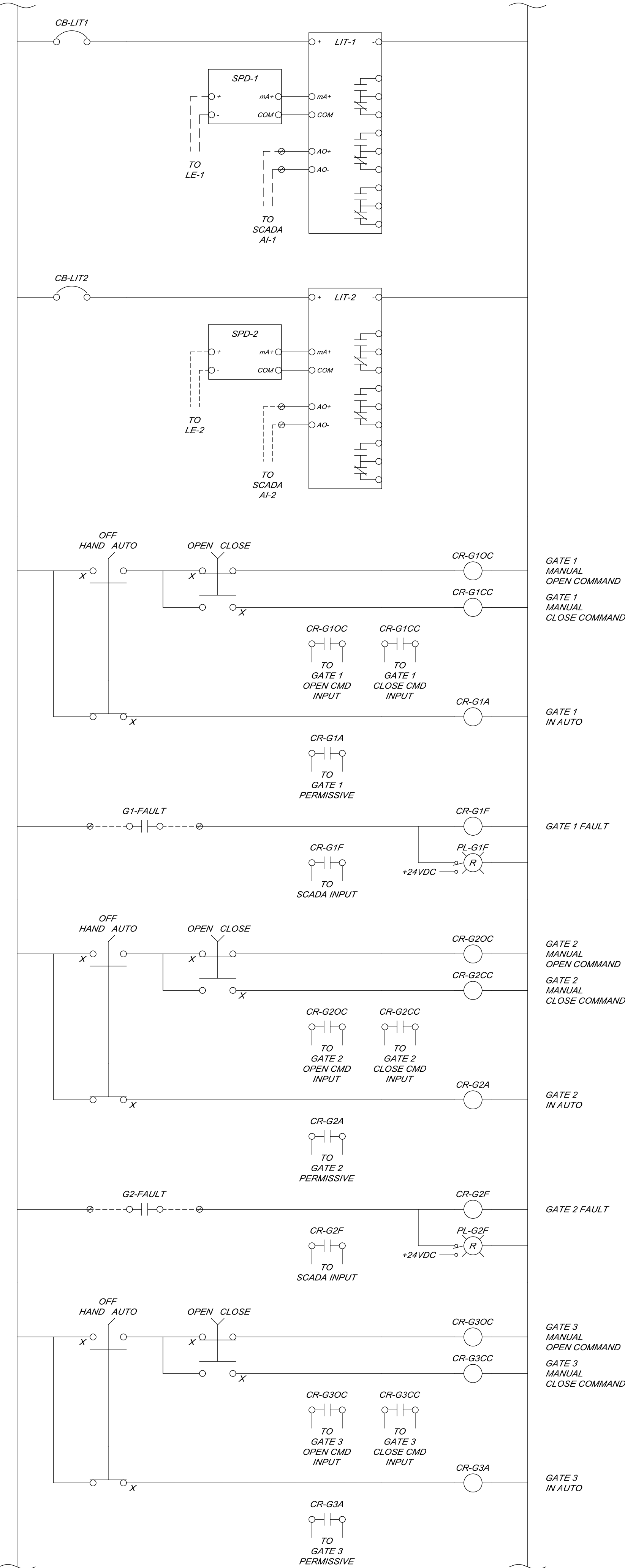
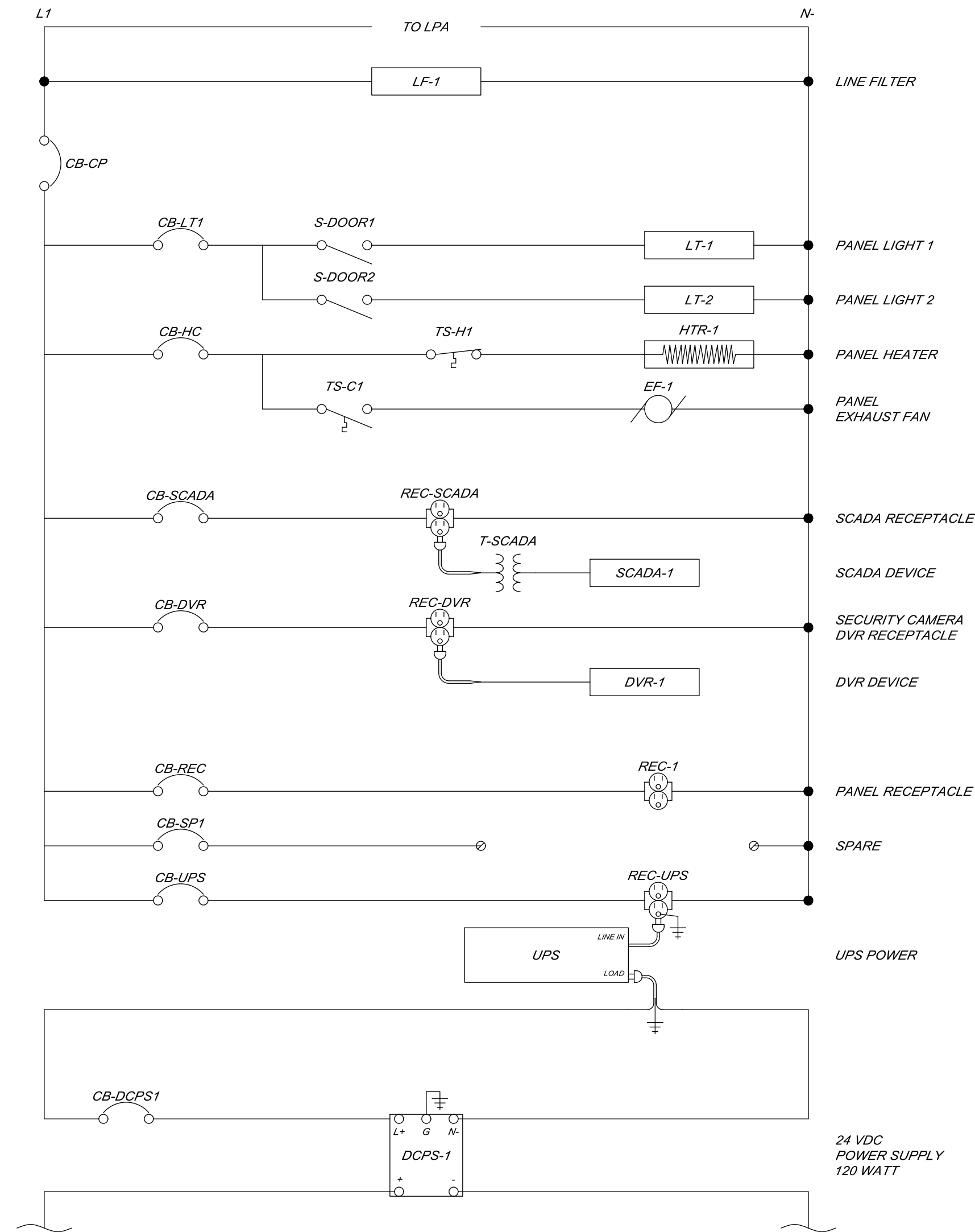
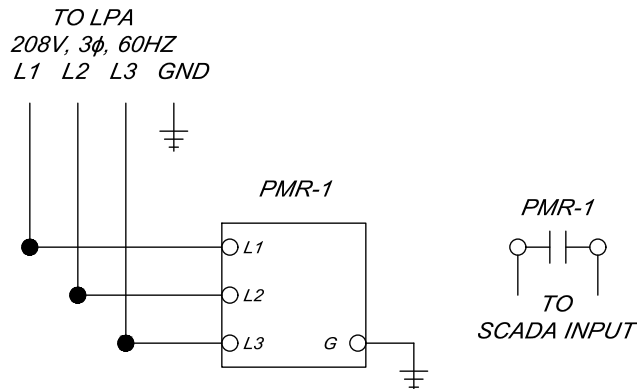
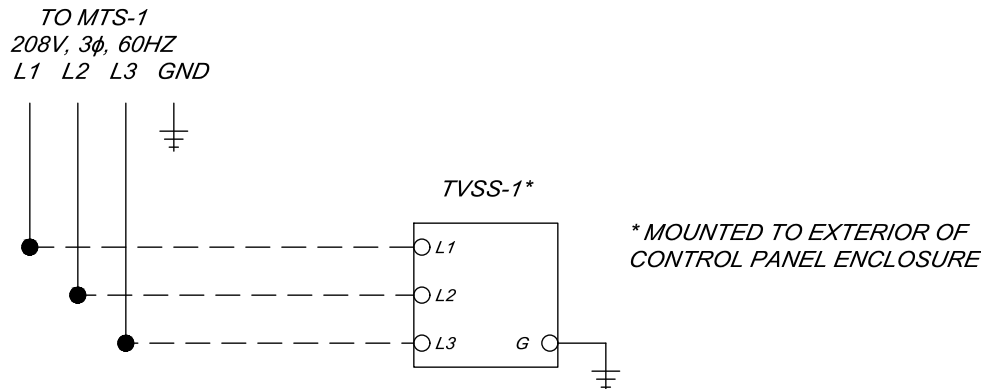
CONNECTED LOAD 9,190 WATTS 25.51 AMPS

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

**PROPOSED PANEL SCHEDULE**

SCALE: N/A

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.			
<b>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</b>			
<b>ELECTRICAL POWER DISTRIBUTION</b>			
		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. 134988SG2023	
DR. BY: LAM	APP. BY: NDC		
STDS.	SHEET 14 OF 17	E	
DATE OCTOBER, 2024	FILE NO. DE-1198-02	02	
SCALE AS SHOWN			



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

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	

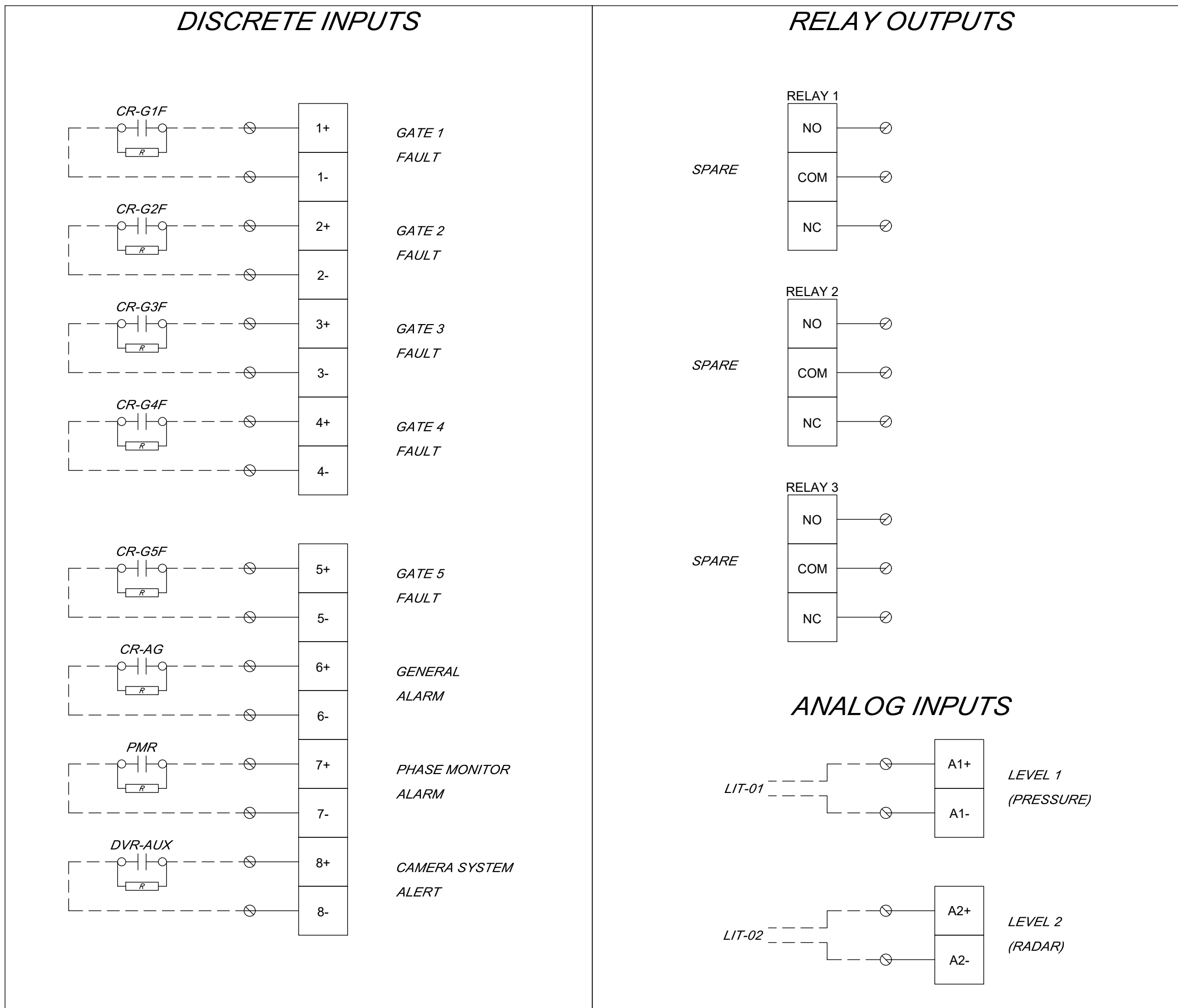
FLOOK DAM (DAM ID: #8) REHABILITATION  
WASHTENAW COUNTY, MICHIGAN

CONTROL SYSTEM  
WIRING DIAGRAM

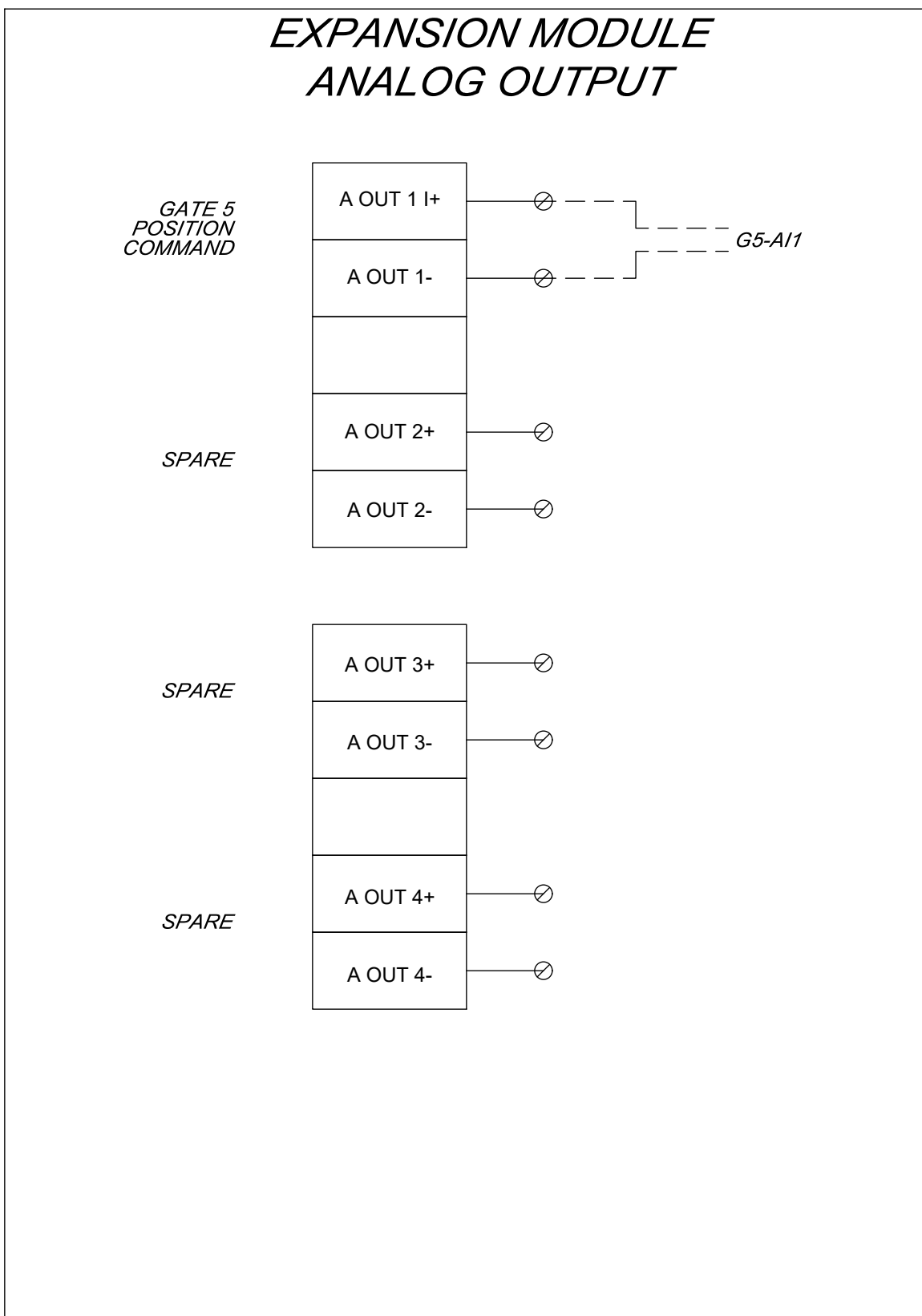
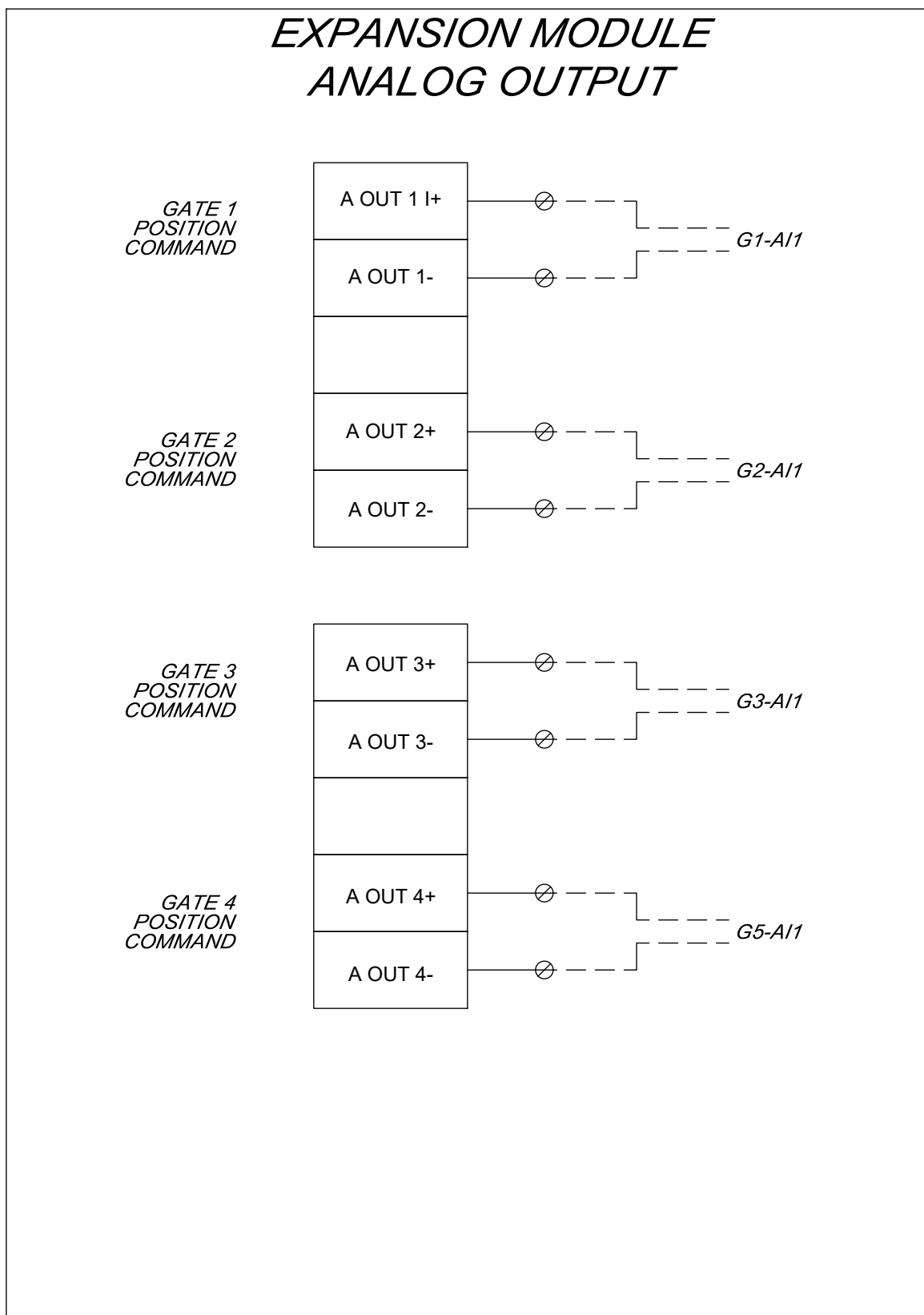
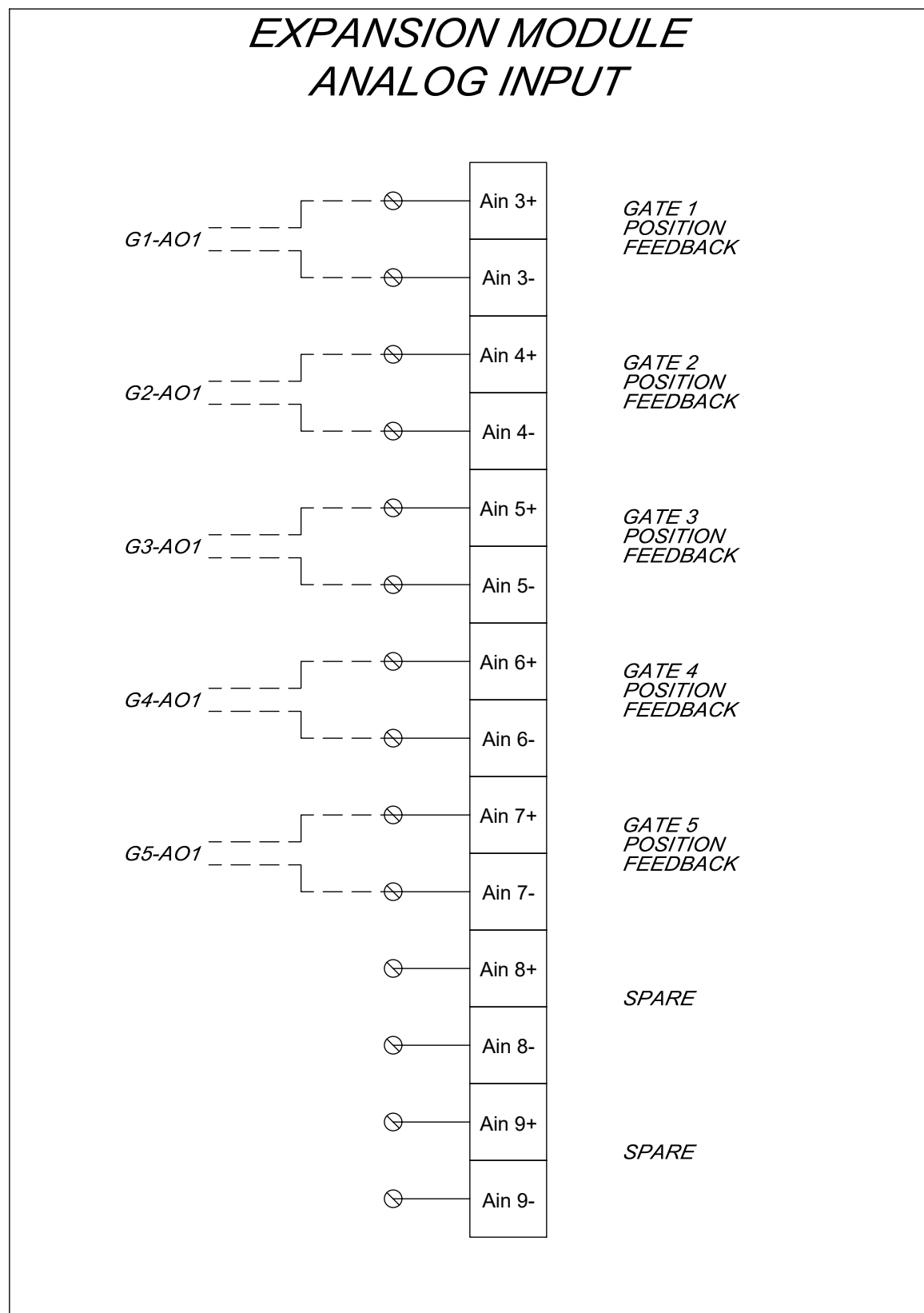
**Spicer** group

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

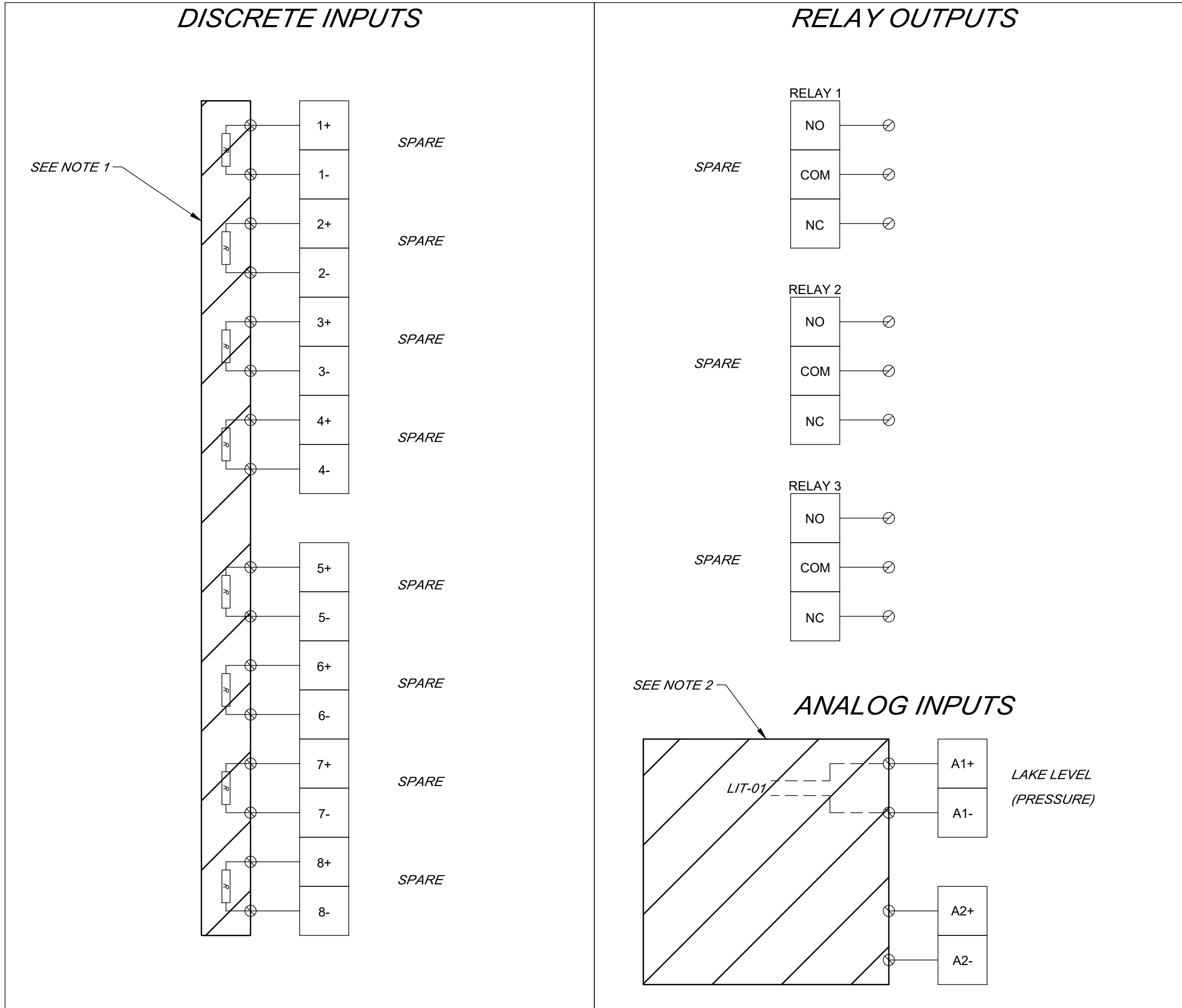
DE. BY: LAM	CH. BY: RVG	PROJECT NO. 134988SG2023
DR. BY: LAM	APP. BY: NDC	
STDS.	SHEET 15 OF 17	E
DATE OCTOBER, 2024	FILE NO. DE-1198-03	03
SCALE AS SHOWN		



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



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



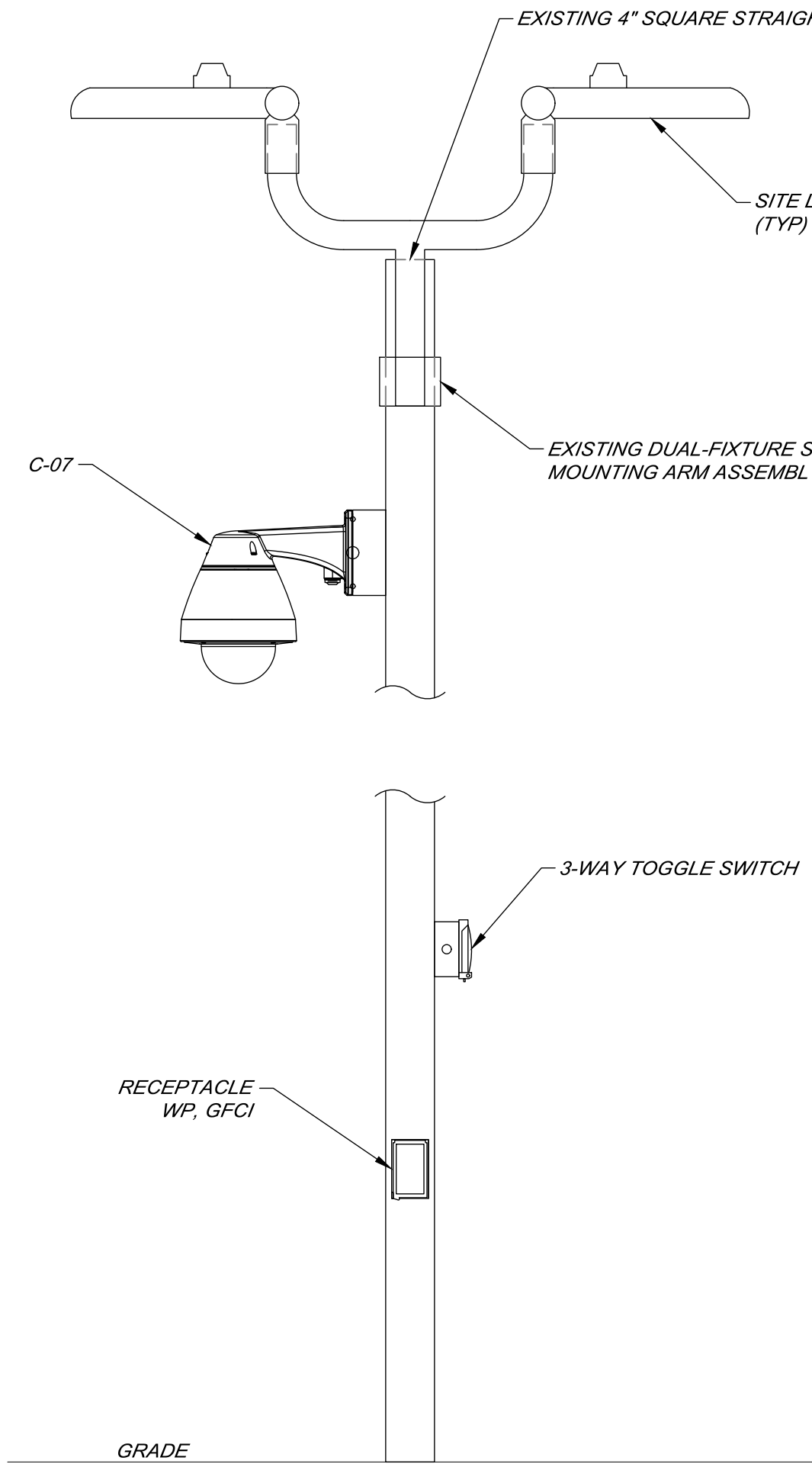
**EXISTING SCADA DEVICE (MISSION M110)**  
SCALE: N/A

**KEY:**

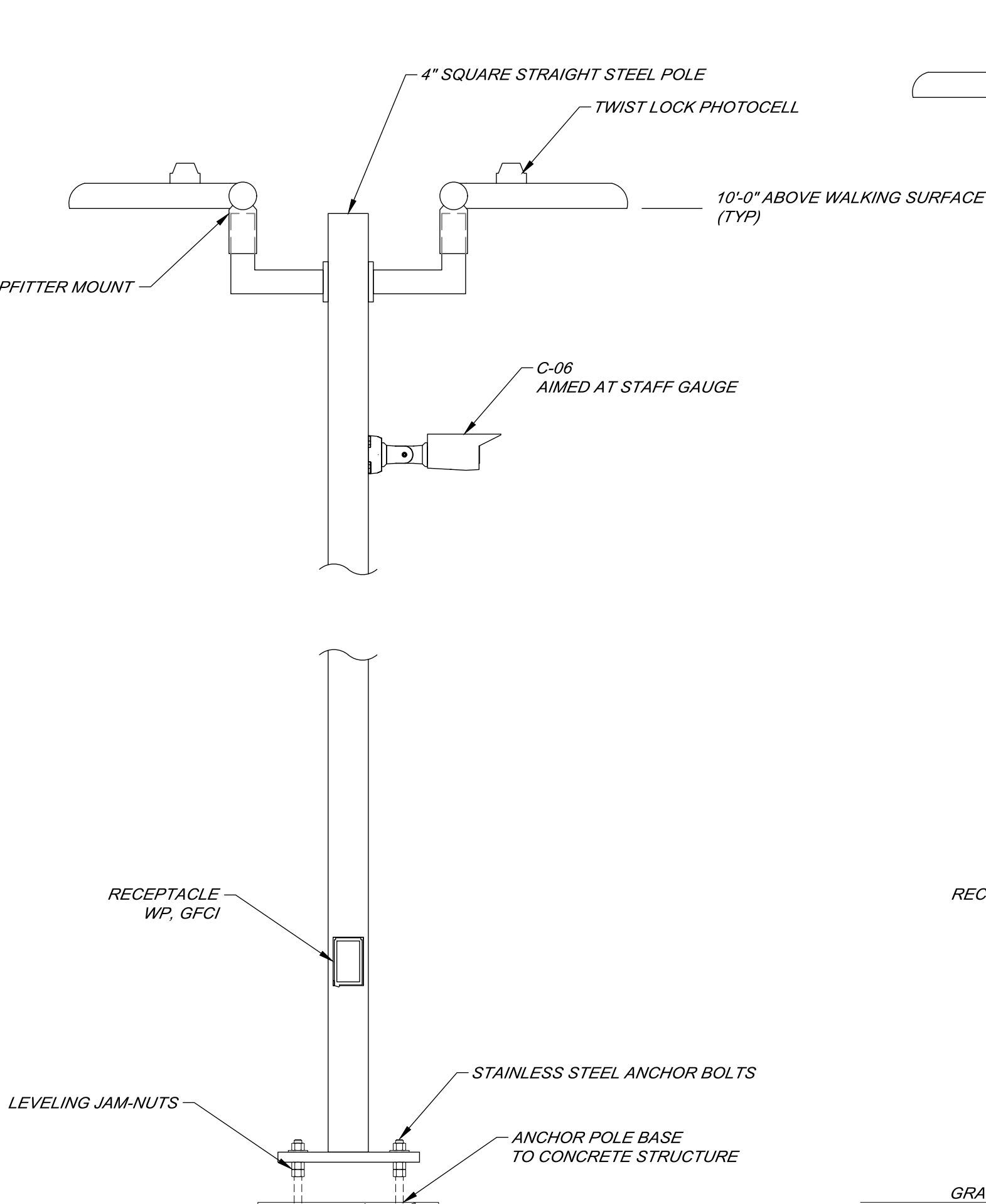
CR CONTROL RELAY  
G GATE  
PMR PHASE MONITORING RELAY  
DVR DIGITAL VIDEO RECORDER  
AUX AUXILIARY CONTACT  
LIT LEVEL INDICATING TRANSMITTER  
AI ANALOG INPUT  
AO ANALOG OUTPUT

- 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.

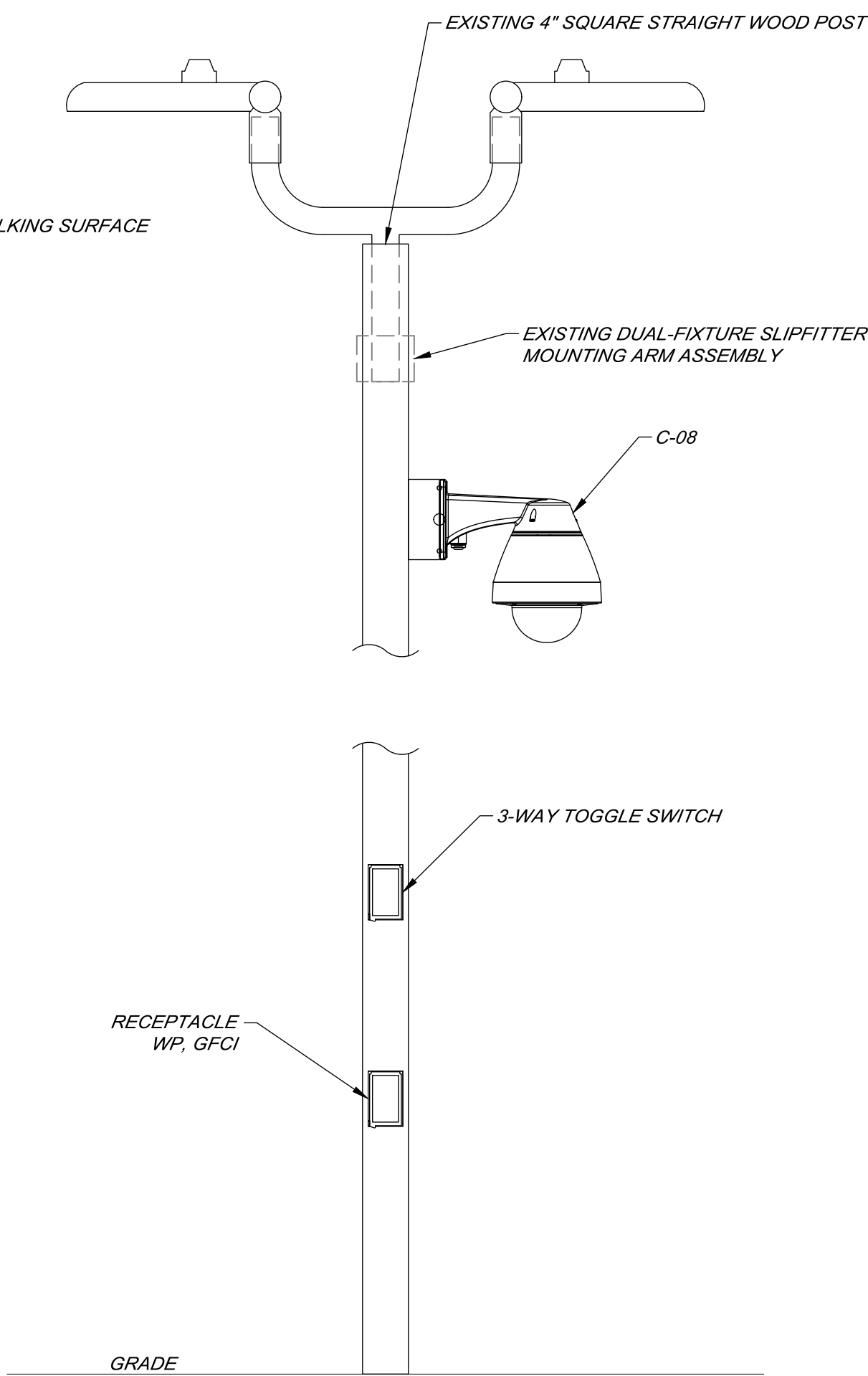
BY	MARK	REVISIONS	DATE	
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.				
FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN				
CONTROL SYSTEM WIRING DETAILS				
SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com		PROJECT NO. 134988SG2023		
DE. BY: LAM	CH. BY: RVG	PROJECT NO. 134988SG2023		
DR. BY: LAM	APP. BY: NDC	PROJECT NO. 134988SG2023		
STDS.		SHEET 16 OF 17	E	
DATE	OCTOBER, 2024	FILE NO.	DE-1198-04	
SCALE	AS SHOWN		04	



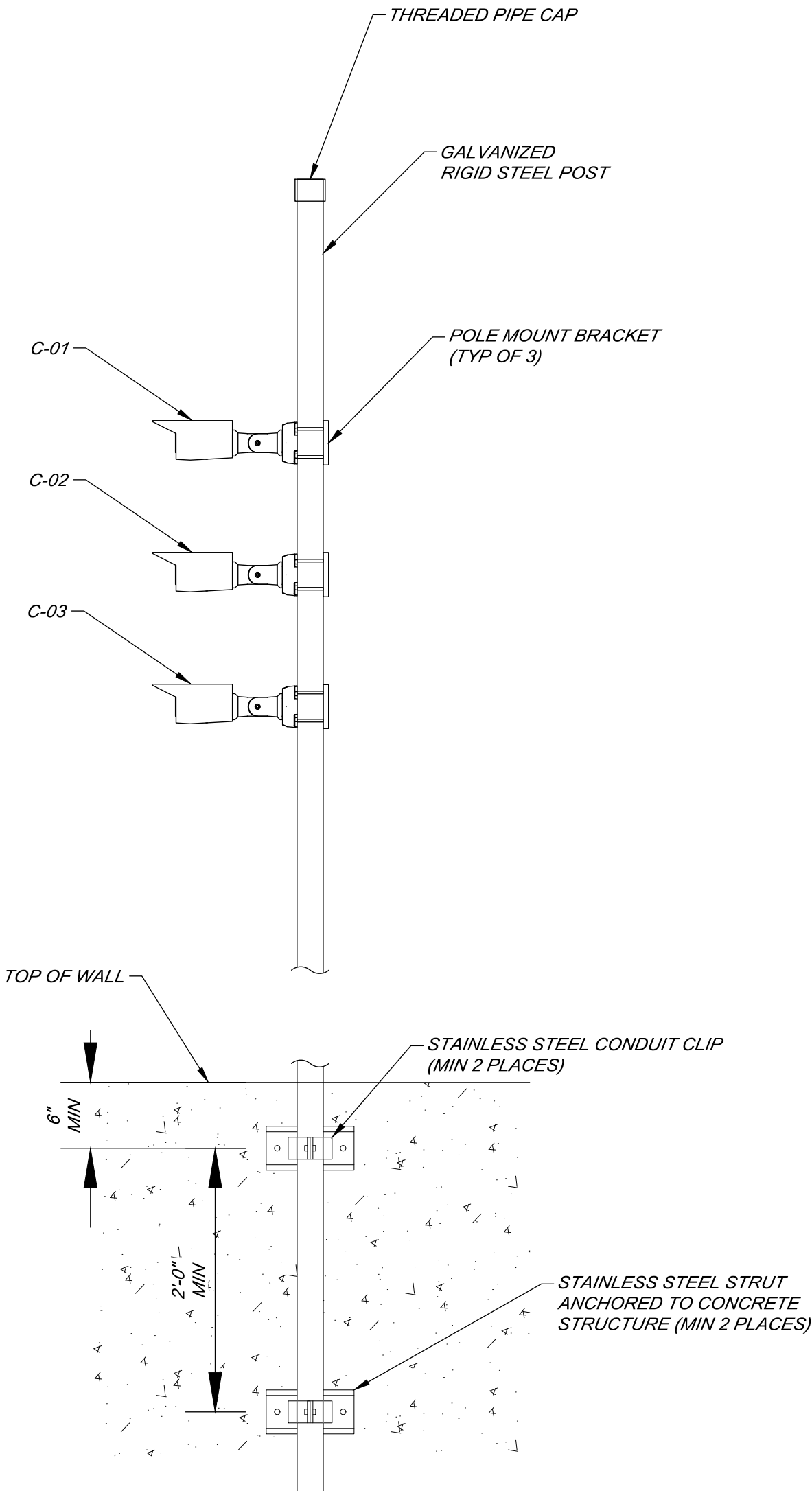
**LIGHTING ASSEMBLY "LA-1"**  
**DETAIL**  
SCALE: 1/2" = 1'-0"



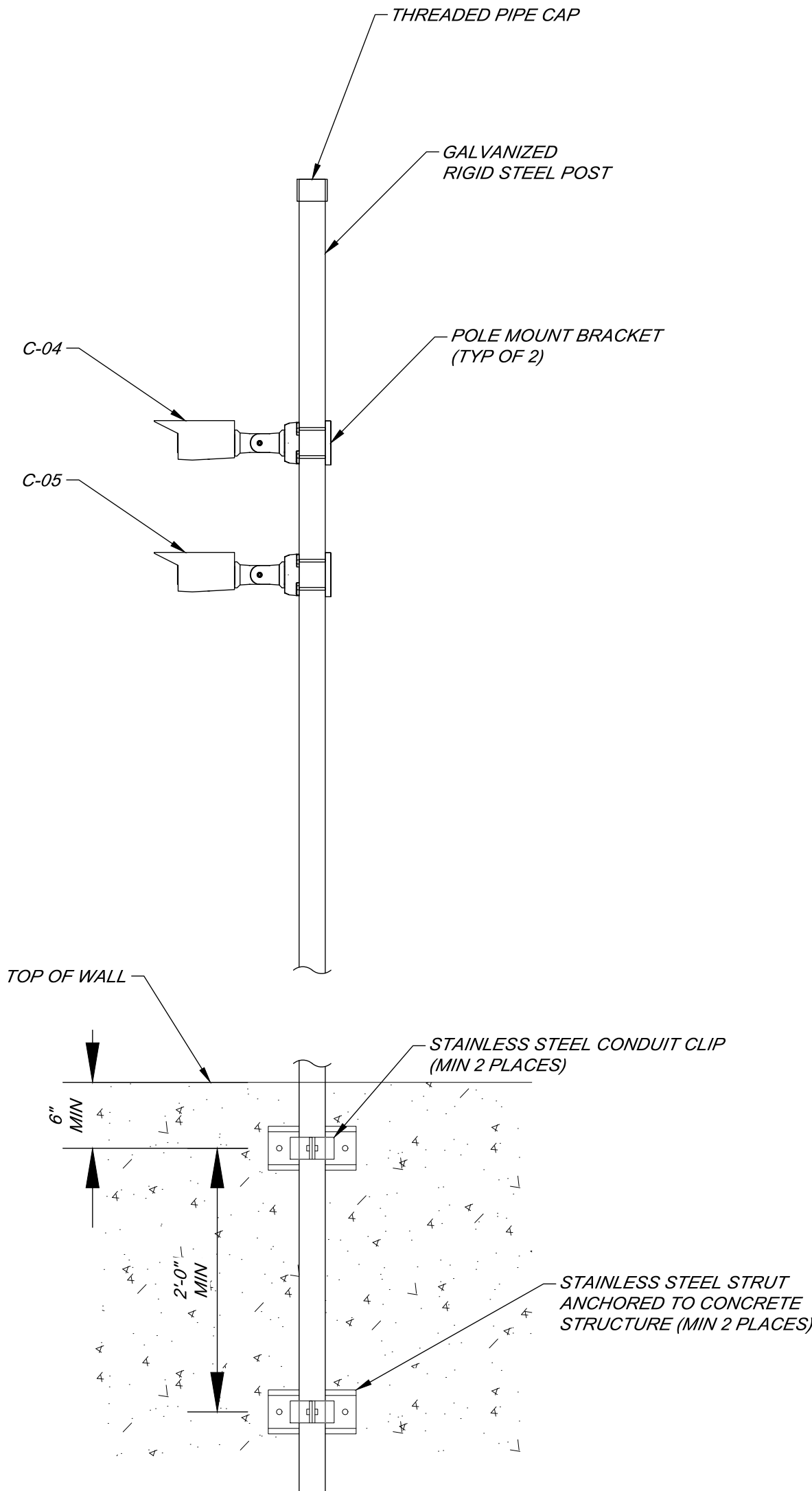
**LIGHTING ASSEMBLY "LA-2"**  
**DETAIL**  
SCALE: 1/2" = 1'-0"



**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:**
- CAMERA MOUNTING HEIGHTS TO BE FIELD ADJUSTED, AS DIRECTED BY OWNER, FOR DESIRED VIEW.
  - AREA LIGHTS SHALL BE FIELD ADJUSTED, AS DIRECTED BY OWNER, FOR DESIRED ILLUMINATION.
  - STAINLESS STEEL HARDWARE TO BE USED ON ALL STRUCTURAL CONNECTIONS.
  - INSULATED FITTING SHALL BE USED TO PREVENT CORROSION DUE TO DISSIMILAR METALS.
  - 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 11 FOR SITE PLANS.

BY	MARK	REVISIONS	DATE
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<b>FLOOK DAM (DAM ID: #8) REHABILITATION WASHTENAW COUNTY, MICHIGAN</b>			
<b>ELECTRICAL INSTALLATION DETAILS</b>			
		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
DR. BY:	LAM	APP. BY:	NDC
PROJECT NO. <b>134988SG2023</b>			
STDs.		SHEET <b>17</b> OF <b>17</b>	<b>E</b>
DATE	OCTOBER, 2024	FILE NO.	<b>DE-1198-05</b>
SCALE	AS SHOWN		<b>05</b>