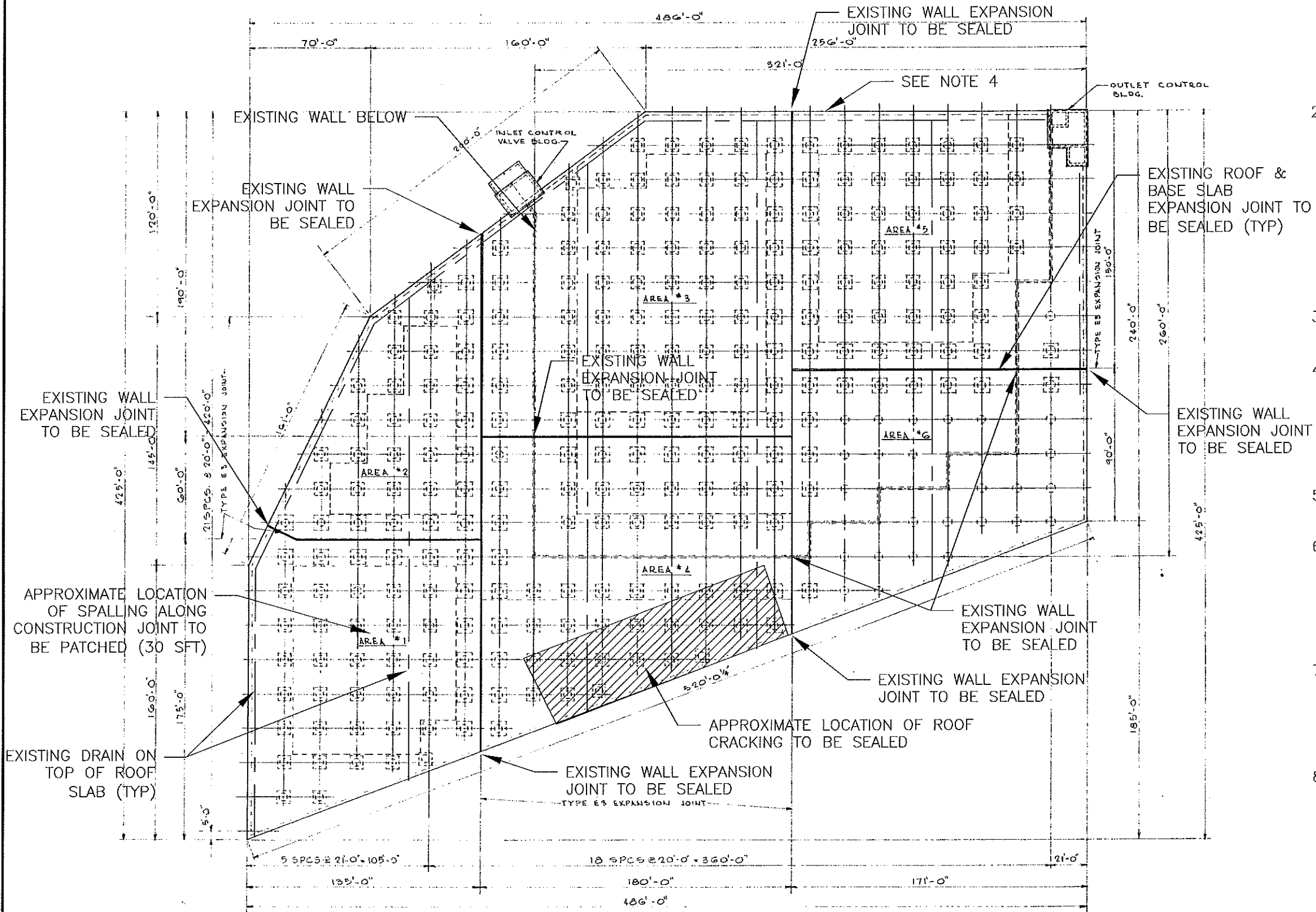


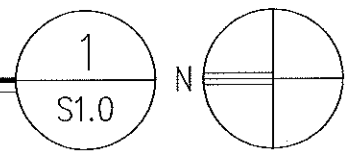
File: M:\PROJ\1949\0188 Flint DORT & Cedar Pumping Station\Drawings\sheet files\S1.0.dwg



- GENERAL NOTES:
1. WHERE SPECIFIC PRODUCTS ARE LISTED THEY SHALL BE CONSIDERED BASIS OF DESIGN. ALTERNATE PRODUCTS MAY BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD.
  2. WHERE QUANTITIES ARE GIVEN THEY SHALL BE ASSUMED TO BE APPROXIMATE AND UNDISTRIBUTED AND SHALL BE THE BASIS FOR THE CONTRACTORS BID. CONTRACTOR SHALL BE PAID FOR ACTUAL WORK PERFORMED BASED ON UNIT PRICES SUBMITTED AT TIME OF BIDDING. UNIT PRICE SHALL INCLUDE ALL MATERIAL, LABOR AND INCIDENTALS REQUIRED FOR INSTALLATION.
  3. COAT ENTIRE BOTTOM SURFACE OF ROOF SLAB WITH SIKA FEROGUARD 903 (137,800 SFT).
  4. CONTRACTOR SHALL SOUND THE EAST WALL OF AREA 5 IN THE VICINITY OF VISIBLE DETERIORATION. ALL DELAMINATED CONCRETE SHALL BE REMOVED AND PATCHED (60 SFT) AND SEALED WITH SIKA FEROGUARD 903 (100 SFT).
  5. ROOF HATCHES ARE NOT SHOWN. CRACKS IN THE ROOF SLAB AT ALL HATCHES SHALL BE REPAIRED.
  6. ALL COLUMNS SHALL BE SOUNDED BY THE CONTRACTOR AND DELAMINATED CONCRETE SHALL BE REMOVED AND PATCHED (500 SFT) AND COATED WITH SIKA FEROGUARD 903 (5830 SFT) FULL HEIGHT OF COLUMN.
  7. CMU Baffle Walls ARE NOT SHOWN. CONTROL JOINTS SHALL BE CLEANED AND SEALED WITH NEW BACKER ROD AND SIKA 2C NS EZ ON EACH SIDE OF THE WALL. (660 LFT).
  8. THREE 6" DIA X 12" CONCRETE CORES SHALL BE TAKEN FROM 3 DIFFERENT COLUMNS AND TESTED FOR ASR DETERIORATION BY PETROGRAPHIC TESTING IN ACCORDANCE WITH ASTM C856 AND FHWA HRT-04-150

GENERAL OVERVIEW

SCALE: NTS



CHK'D.	
DESIGNED:	APPR'D:
DATE: JUNE 14, 2019	
SCALE: NTS	
PROJECT NUMBER	1949-0188-00

MICHIGAN

DORT RESERVOIR  
STRUCTURAL REHABILITATION

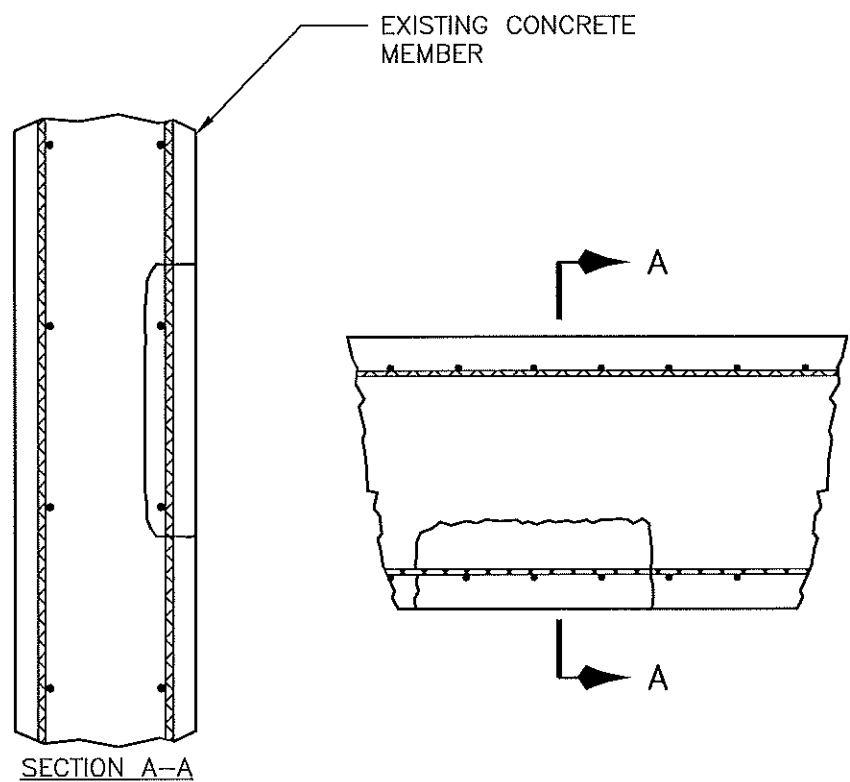
OVERALL PLAN

FLINT

DRAWING NUMBER

S1.0

Date: Jun 17, 2019, 5:12pm User ID: cvanluchene  
 File: M:\PROJ\1949\0188 Flint Dort & Cedar Pumping Station\Drawings\sheet files\S1.1.dwg



CONCRETE REPAIR PROCEDURE

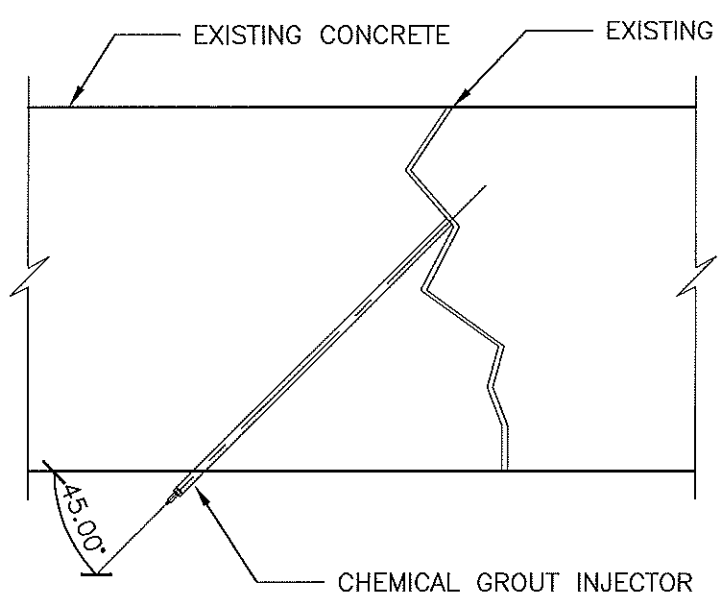
NOTES:

1. THE EXTENT OF THE AREA TO BE REPAIRED SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER BY TAPPING THE CONCRETE WITH A HAMMER TO FIND THE PERIMETER EDGES WHERE UNSOUND MATERIAL MEETS SOUND MATERIAL.
2. PERIMETER OF REPAIR AREA SHALL BE SAW CUT PERPENDICULAR TO THE SURFACE TO A MINIMUM DEPTH OF 1/2". PERIMETER OF PATCH AREA SHALL HAVE STRAIGHT EDGES 90 DEGREE CORNERS AND NO RE-ENTRANT CORNERS. PATCH AREAS SHALL BE EITHER SQUARE OR RECTANGULAR.
3. REMOVE ALL UNSOUND CONCRETE DOWN TO SOUND CONCRETE USING LIGHTWEIGHT PNEUMATIC HAMMERS. ANY REINFORCEMENT THAT IS EXPOSED DURING THIS PROCESS SHALL BE COMPLETELY EXPOSED BY REMOVING CONCRETE TO 3/4" BEYOND THE BAR LEAVING THE ENTIRE CIRCUMFERENCE EXPOSED. FINAL PATCH DEPTH SHALL BE UNIFORM (+/- 1/4") AND SHALL NOT BE LESS THAN 1". IF MORE THAN 30% OF THE BAR CROSS SECTION AREA IS LOST, REPLACE WITH SAME SIZE NEW BAR.
4. ENTIRE CONCRETE SURFACE OF REPAIR AREA SHALL BE MECHANICALLY ABRADED.
5. ALL EXPOSED REBAR SHALL BE CLEANED OF CORROSION BY EITHER SANDBLASTING OR GRINDER. REMOVE ALL LOOSE SCALE AND CORROSION DEPOSITS. STEEL SHALL BE CLEANED TO A BRIGHT CONDITION PAYING PARTICULAR ATTENTION TO THE BACK OF THE EXPOSED BARS. DO NOT USE WIRE BRUSH FOR CLEANING REINFORCEMENT.
6. COAT ENTIRE CIRCUMFERENCE OF ALL EXPOSED REINFORCING STEEL WITH EPOXY BONDING.
7. CONCRETE SURFACE TO BE REPAIRED SHALL BE PREPARED IN ACCORDANCE WITH PATCHING SYSTEM MANUFACTURER'S REQUIREMENTS.
8. REPAIR AREA BY INSTALLING THE PATCHING MORTAR AND CURING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

CONCRETE PATCHING

SCALE: NTS

1  
S1.1



NOTE:

1. PREPARE CRACK AND INJECT CHEMICAL GROUT PER MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR TO ASSUME A TOTAL UNDISTRIBUTED QUANTITY OF XX LFT OF CRACK REPAIR

TYPICAL CONCRETE CRACK REPAIR

SCALE: NTS

2  
S1.1

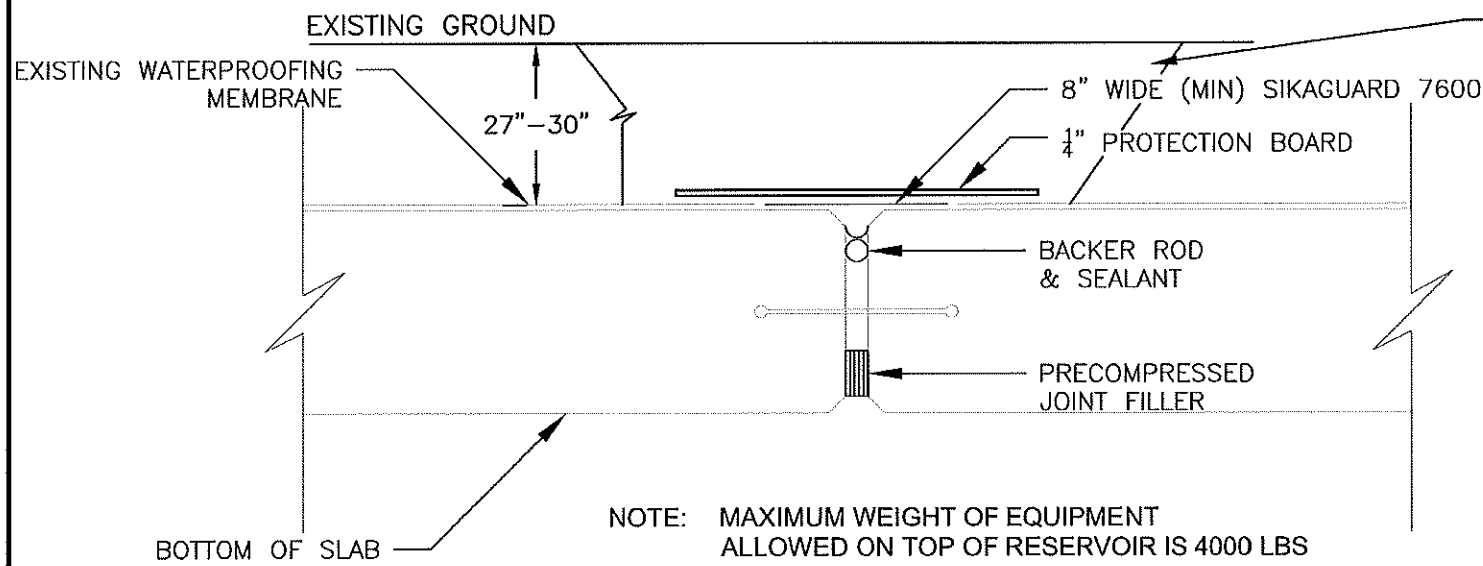


DRAWN:	CHK'D:
DESIGNED:	APPR'D:
DATE: JUNE 14, 2019	
SCALE: NTS	
PROJECT NUMBER <b>1949-0188-00</b>	

FLINT	MICHIGAN
<b>DORT RESERVOIR STRUCTURAL REHABILITATION</b>	
<b>REHABILITATION DETAILS</b>	

DRAWING NUMBER  
**S1.1**

Date: Jun 17, 2019, 5:13pm User ID: cvanluchene  
 File: M:\PROJ\1949\0188 Flint Dort & Cedar Pumping Station\Drawings\sheet files\S1.2.dwg



EXCAVATE TRENCH TO ACCESS JOINT.  
 BACKFILL AND PLACE 4" TOPSOIL SEED AND MULCH.

NOTES:

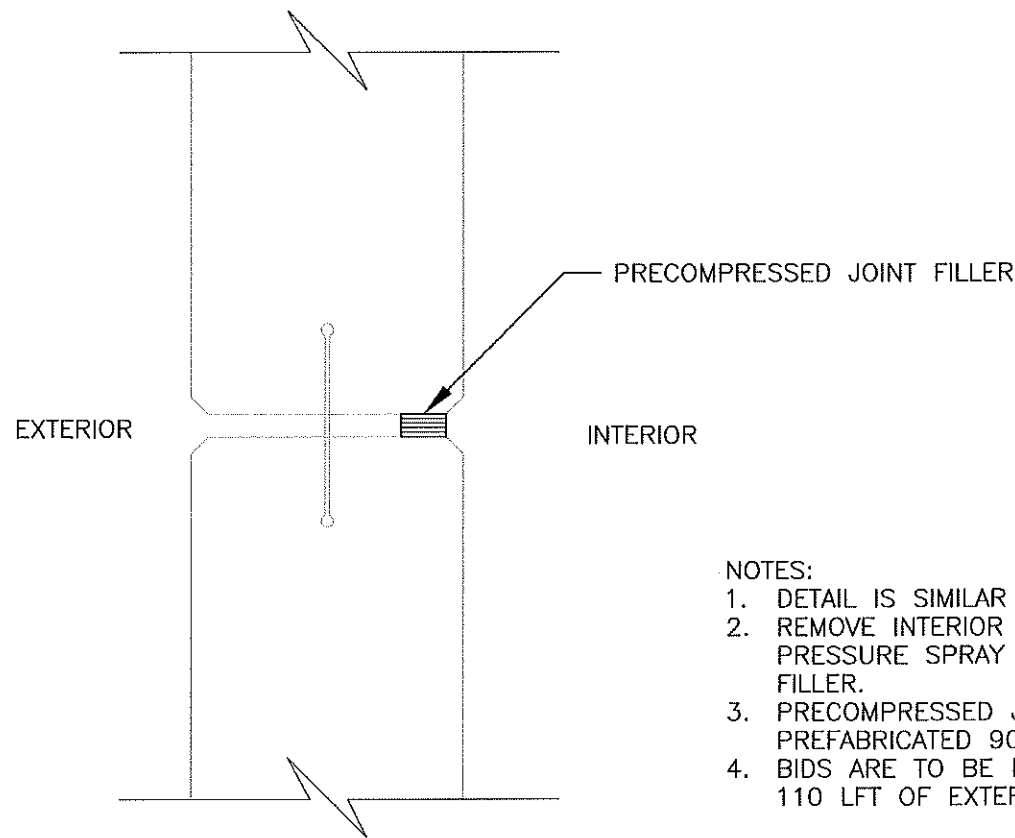
1. CUT BACK/REMOVE EXISTING WATERPROOFING MEMBRANE, REMOVE EXISTING JOINT FILLER, POWERWASH, AND MECHANICALLY ABRADE TOP OF EXISTING SLAB PRIOR TO INSTALLATION OF TOP SLAB MATERIALS. TURN UP/DOWN A MINIMUM OF 1'-0" AT EXTERIOR EDGE OF TANK.
2. PRIME EXISTING CONCRETE AND REINFORCE SIKAGUARD 7600.
3. APPROXIMATELY 2'-3" OF FILL EXISTS ABOVE CONCRETE SLAB. FILL SHALL BE REMOVED AND REINSTALLED PER ORIGINAL DRAINAGE DETAILS.
4. SEALANT TO BE SIKA 2C NS EZ.
5. PRECOMPRESSED JOINT FILLER TO BE EMSEAL SUBMERSEAL WITH PREFABRICATED 90 DEGREE CORNERS.
6. BIDS ARE TO BE BASED ON 1100 LFT OF ROOF EXPANSION JOINT REPAIR.

NOTE: MAXIMUM WEIGHT OF EQUIPMENT  
 ALLOWED ON TOP OF RESERVOIR IS 4000 LBS

### TOP SLAB EXPANSION JOINT REPAIR

SCALE: NTS

3  
 S1.2



NOTES:

1. DETAIL IS SIMILAR AT BASE SLAB.
2. REMOVE INTERIOR JOINT FILLER AND POWER WASH WITH HIGH PRESSURE SPRAY PRIOR TO INSTALLATION OF PRECOMPRESSED JOINT FILLER.
3. PRECOMPRESSED JOINT FILLER TO BE EMSEAL SUBMERSEAL WITH PREFABRICATED 90 DEGREE CORNERS.
4. BIDS ARE TO BE BASED ON 1100 LFT OF BASE SLAB REPAIR AND 110 LFT OF EXTERIOR WALL REPAIR.

### EXTERIOR WALL AND BASE SLAB EXPANSION JOINT REPAIR

SCALE: NTS

4  
 S1.2



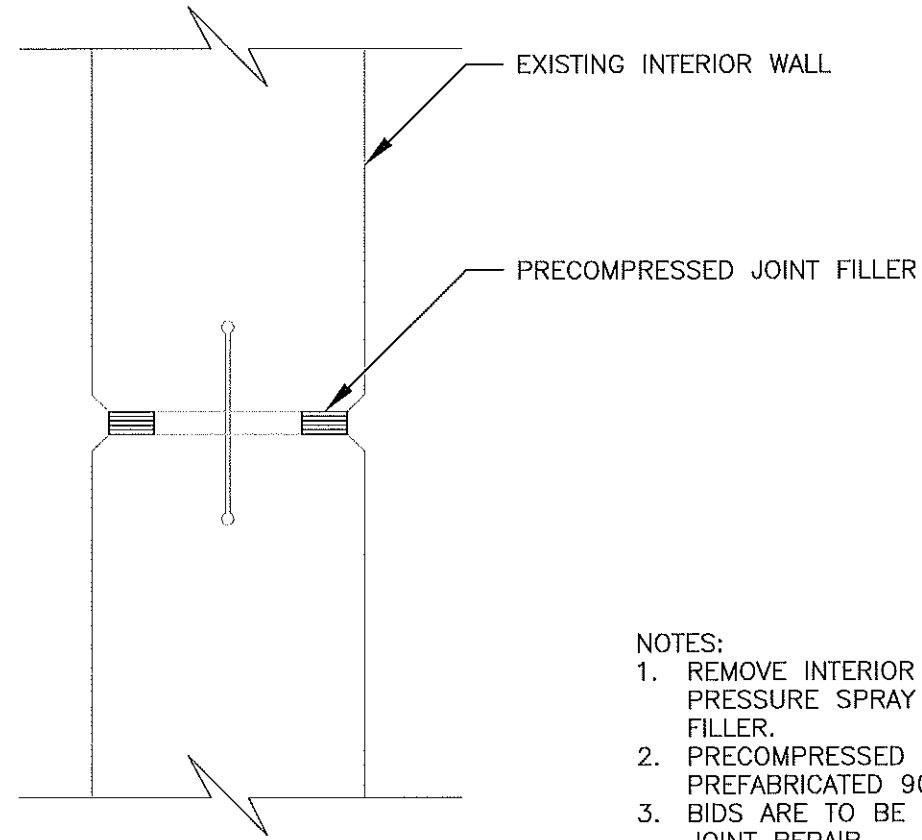
CHK'D:	APPR'D:
DESIGNED:	DATE: JUNE 14, 2019
SCALE: NTS	PROJECT NUMBER
	1949-0188-00

MICHIGAN  
 DORT RESERVOIR  
 STRUCTURAL REHABILITATION  
 REHABILITATION DETAILS

FLINT

DRAWING NUMBER

S1.2



NOTES:

1. REMOVE INTERIOR JOINT FILLER AND POWER WASH WITH HIGH PRESSURE SPRAY PRIOR TO INSTALLATION OF PRECOMPRESSED JOINT FILLER.
2. PRECOMPRESSED JOINT FILLER TO BE EMSEAL SUBMERSEAL WITH PREFABRICATED 90 DEGREE CORNERS.
3. BIDS ARE TO BE BASED ON 70 LFT OF INTERIOR WALL EXPANSION JOINT REPAIR

INTERIOR WALL EXPANSION JOINT REPAIR

SCALE: NTS

5  
S1.3



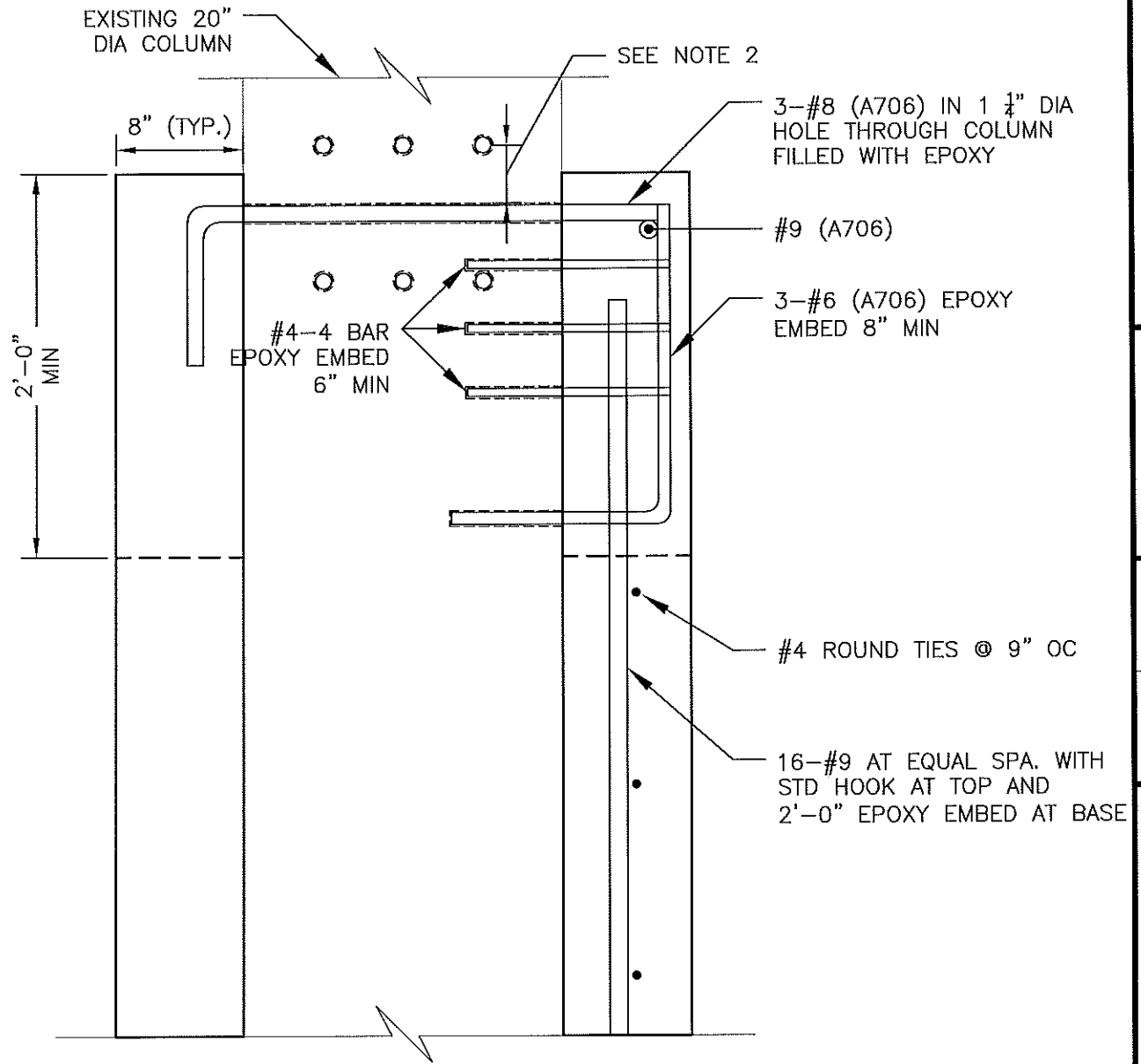
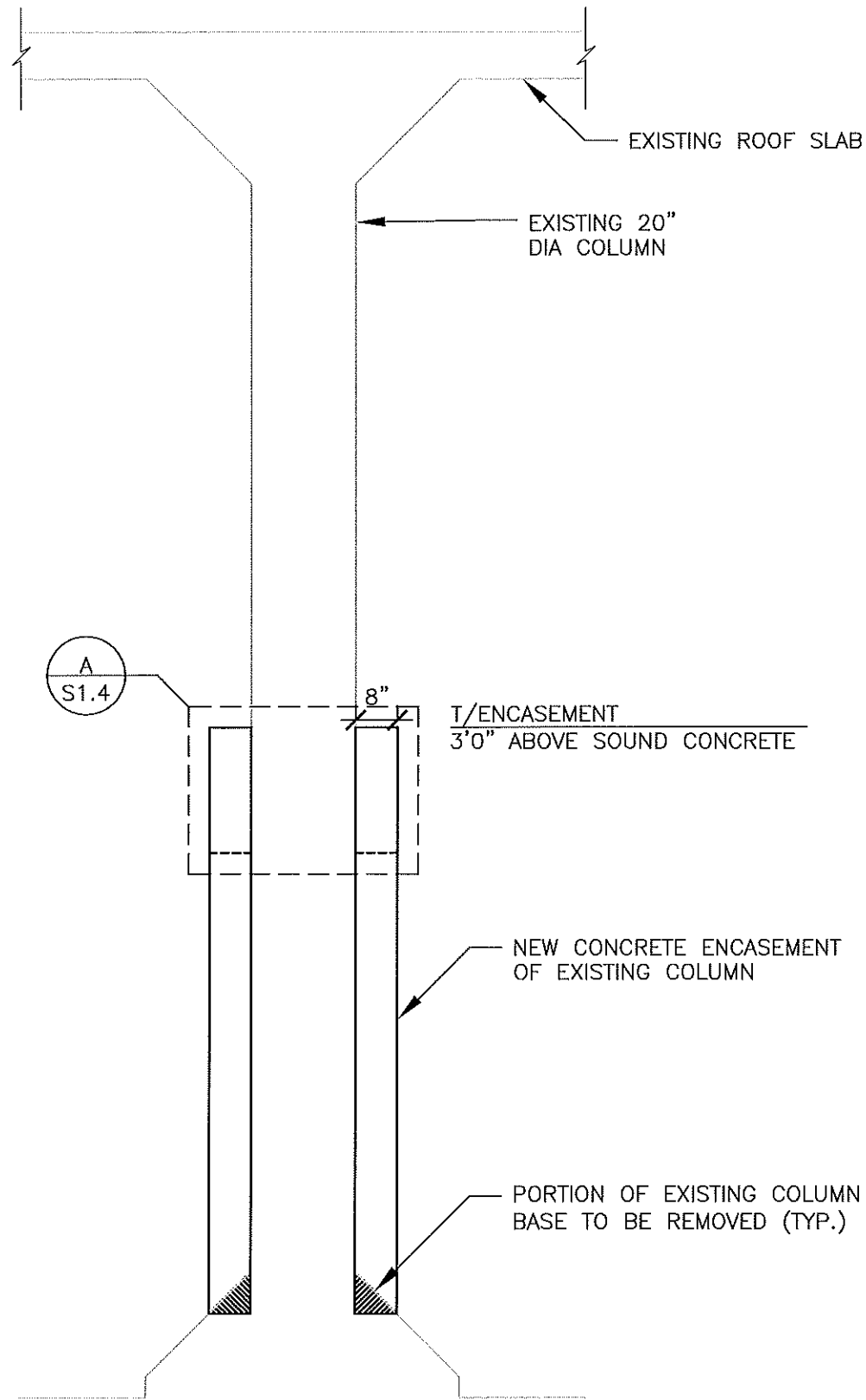
DRAWN:	CHK'D:
DESIGNED:	APPRV'D:
DATE: JUNE 14, 2019	
SCALE: NTS	
PROJECT NUMBER	
1949-0188-00	

FLINT MICHIGAN  
 DORT RESERVOIR  
 STRUCTURAL REHABILITATION

REHABILITATION DETAILS

DRAWING NUMBER  
 S1.3

Date: Jun 17, 2019, 5:17pm User ID: cvanluchene  
 File: M:\PROJ\1949\0188 Flint Dort & Cedar Pumping Station\Drawings\sheet files\S1.4.dwg



### COLUMN REPAIR - REINFORCEMENT

SCALE: NTS

NOTES:

1. REINFORCEMENT IS SHOWN AT ONE LOCATION ONLY. PROVIDE REINFORCEMENT INDICATED ON FOUR SIDES OF COLUMN.
2. TOP #8 BARS ARE TO BE OFFSET VERTICALLY 3" FROM #8 BARS ON ADJACENT SIDES.

A  
S1.4

### COLUMN REPAIR

SCALE: NTS

6  
S1.4



DRAWN:	CHK'D:
DESIGNED:	APPR'D:
DATE: JUNE 14, 2019	
SCALE: NTS	
PROJECT NUMBER	
1949-0188-00	

MICHIGAN  
 DORT RESERVOIR  
 STRUCTURAL REHABILITATION

REHABILITATION DETAILS

FLINT

DRAWING NUMBER

S1.4