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Legend

Deviation		 	Appd.	MM.DD.
Revision				
Issued		By	Appd.	MM.DD.
File Name:	FDA	PJM Chkd.	PJM Dsgn.	05.21.1 MM.DD

Client/Project

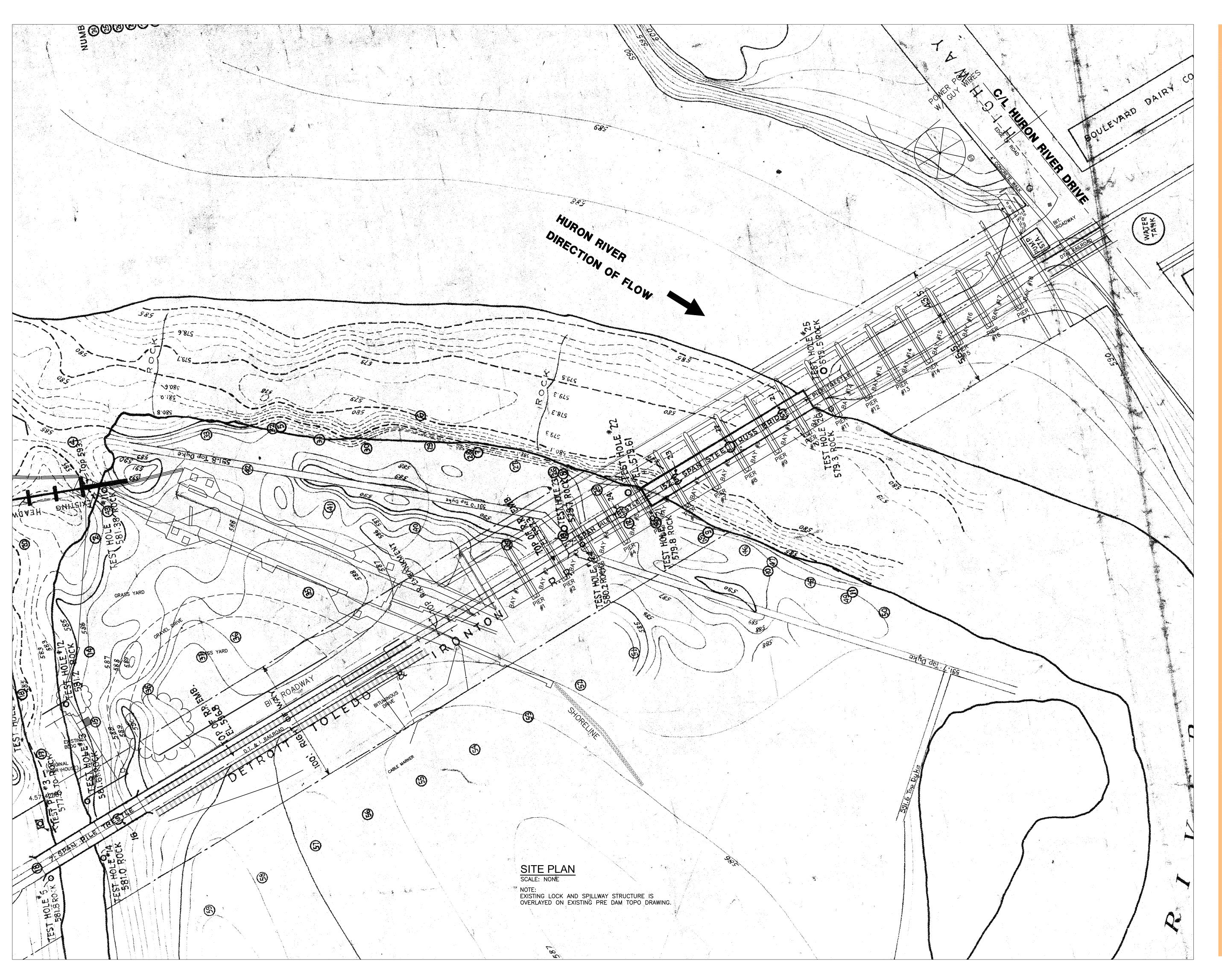
Permit-Seal

FLATROCK DAM OVERLAY ON 1921 TOPO FLATROCK, MICHIGAN

Title

BORINGS TO ROCK (REFERENCE DRAWING)

(1751 51751	NOL DIVAVVINO)	
Project No.	Scale	
2075092501	NONE	
Drawing No.	Sheet	Revision
C-100	1 of 2	





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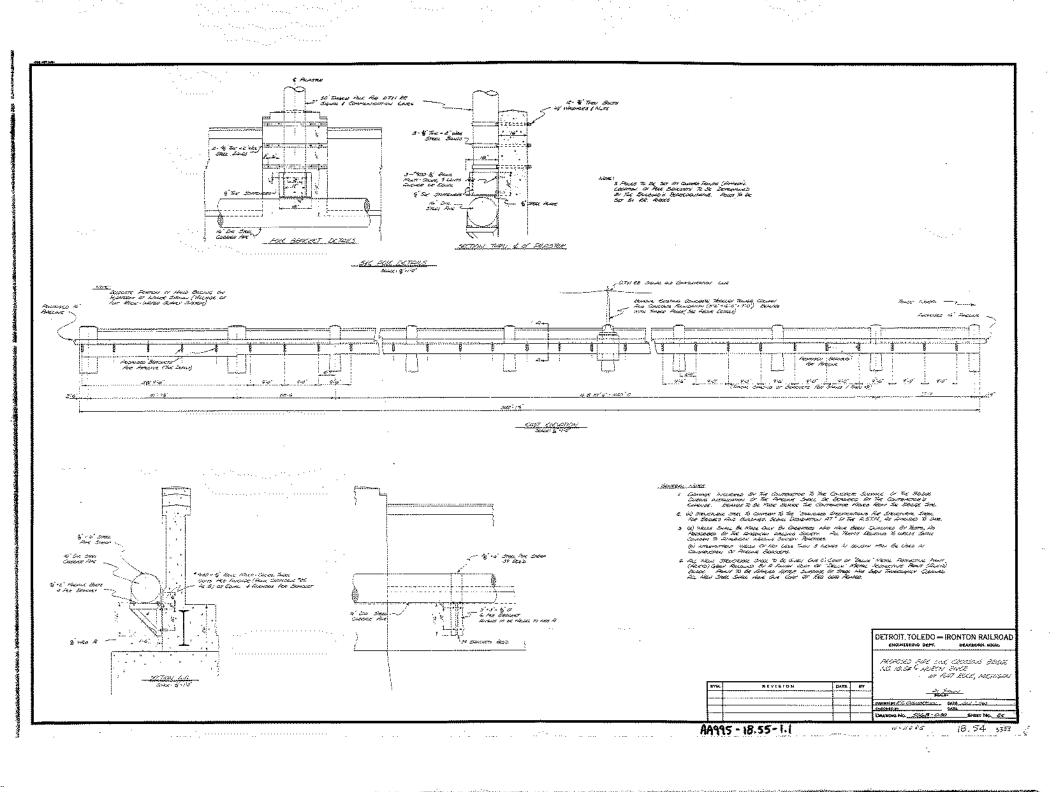
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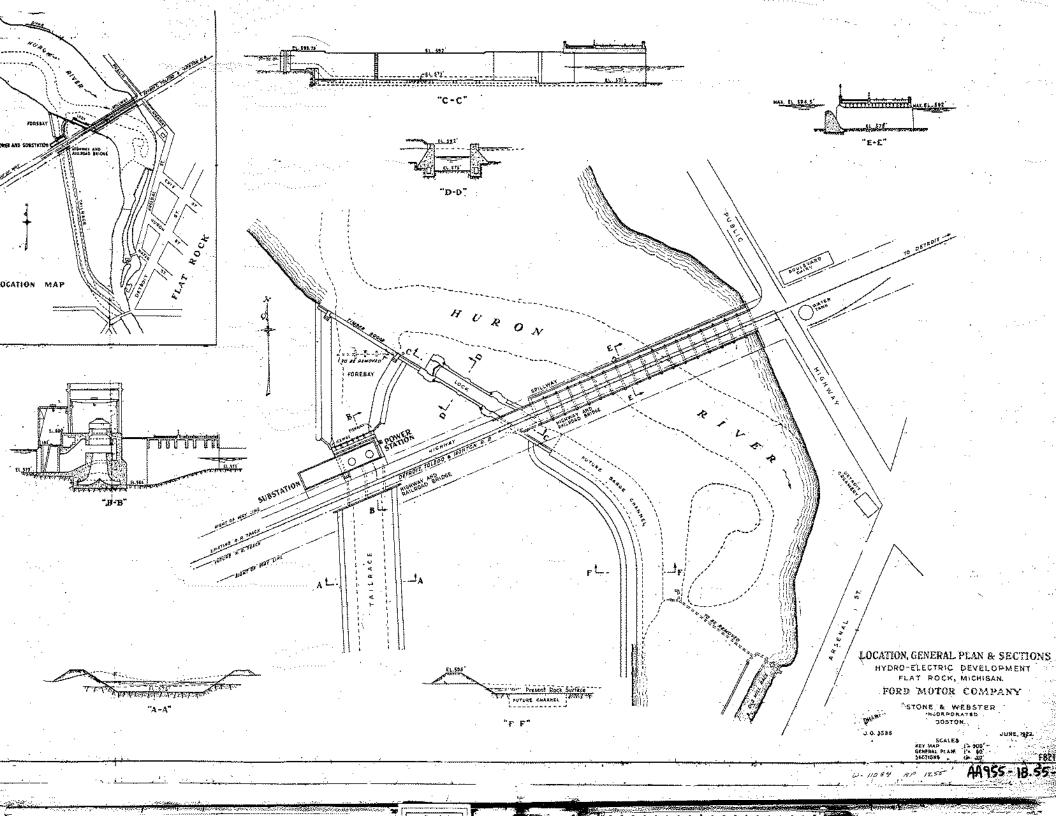
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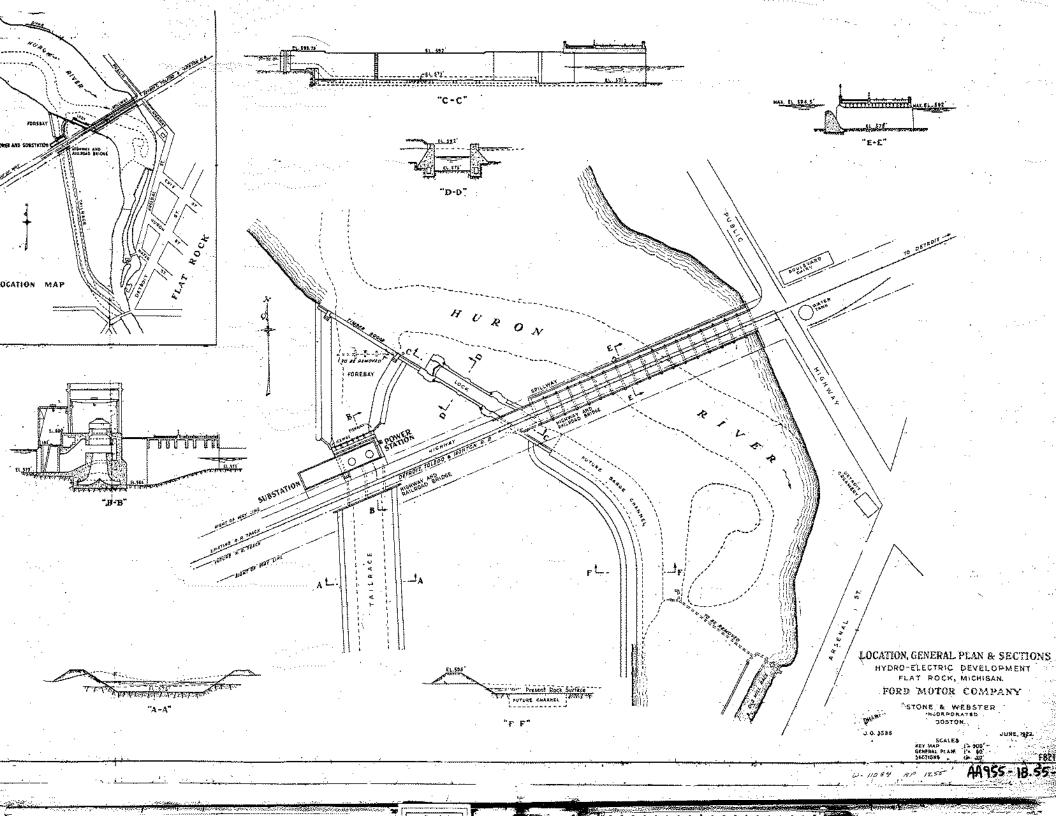
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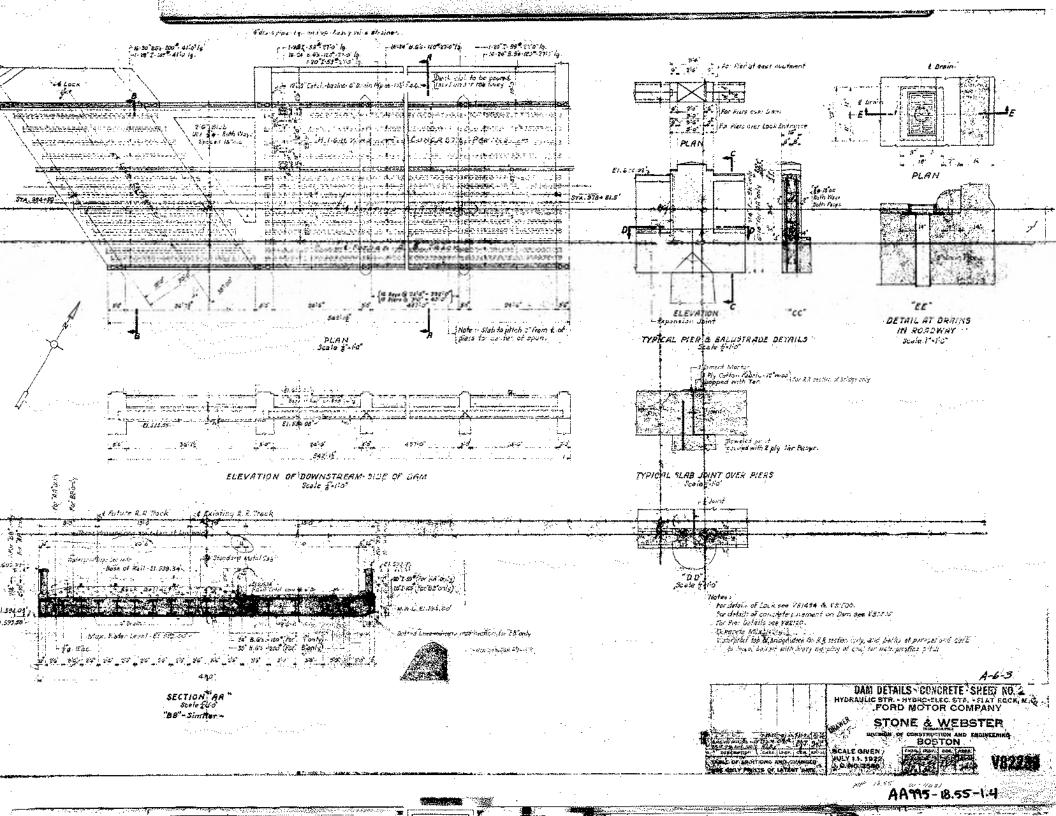
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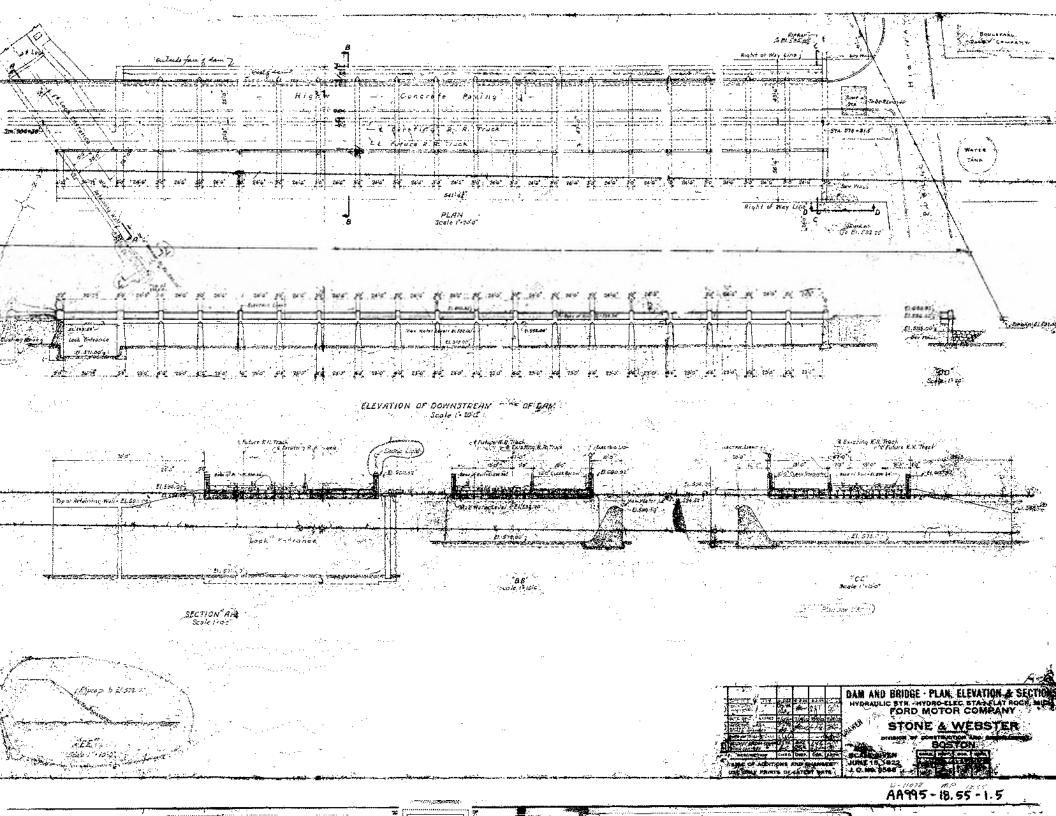
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Project No. 2075092501	Scale NONE	
Drawing No.	Sheet	Revision
C-101	2 of 2	

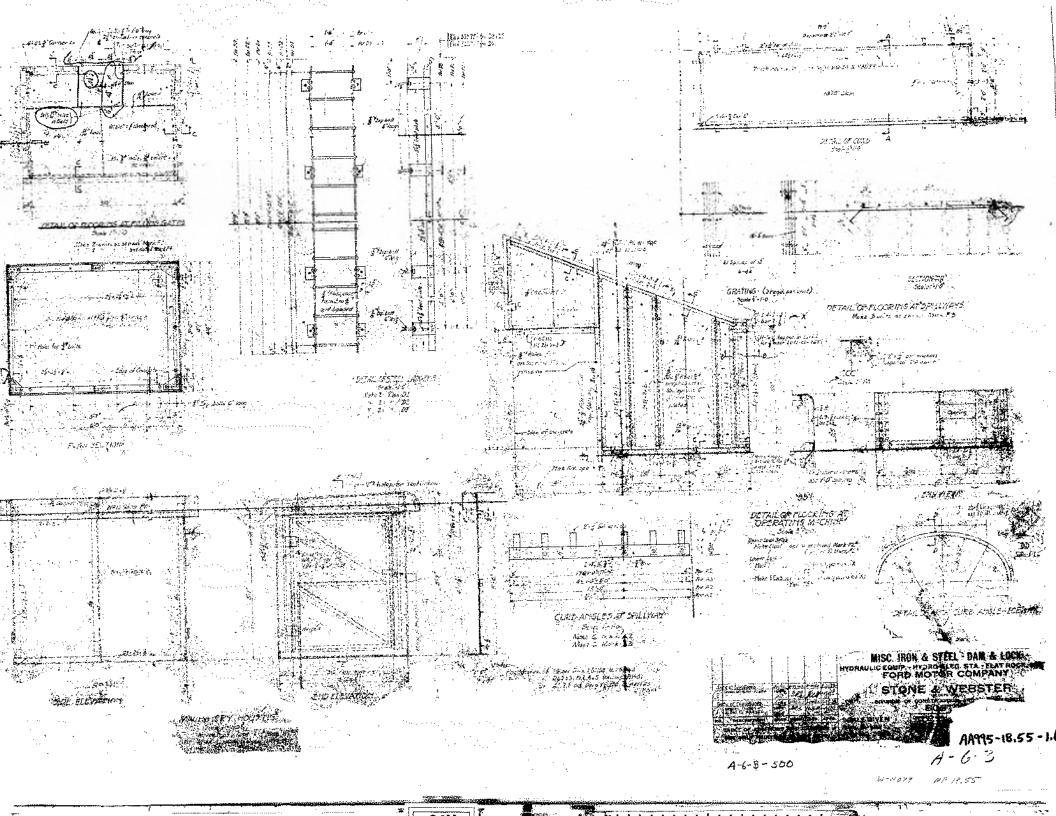


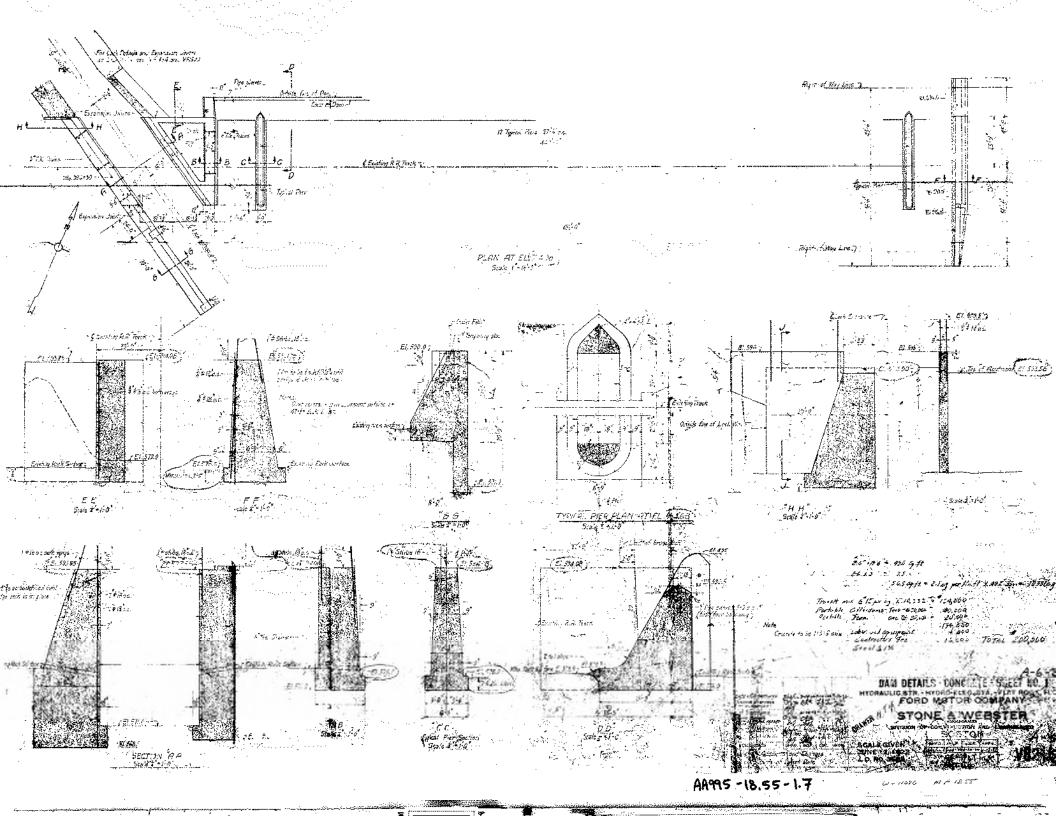


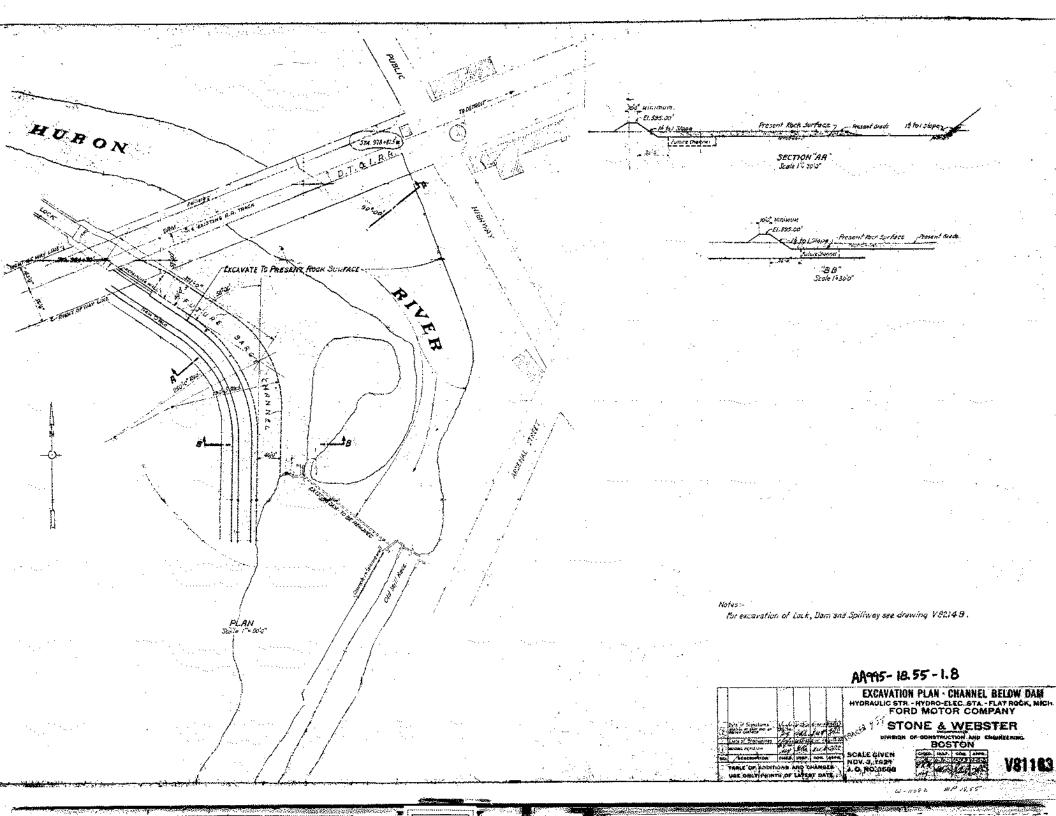


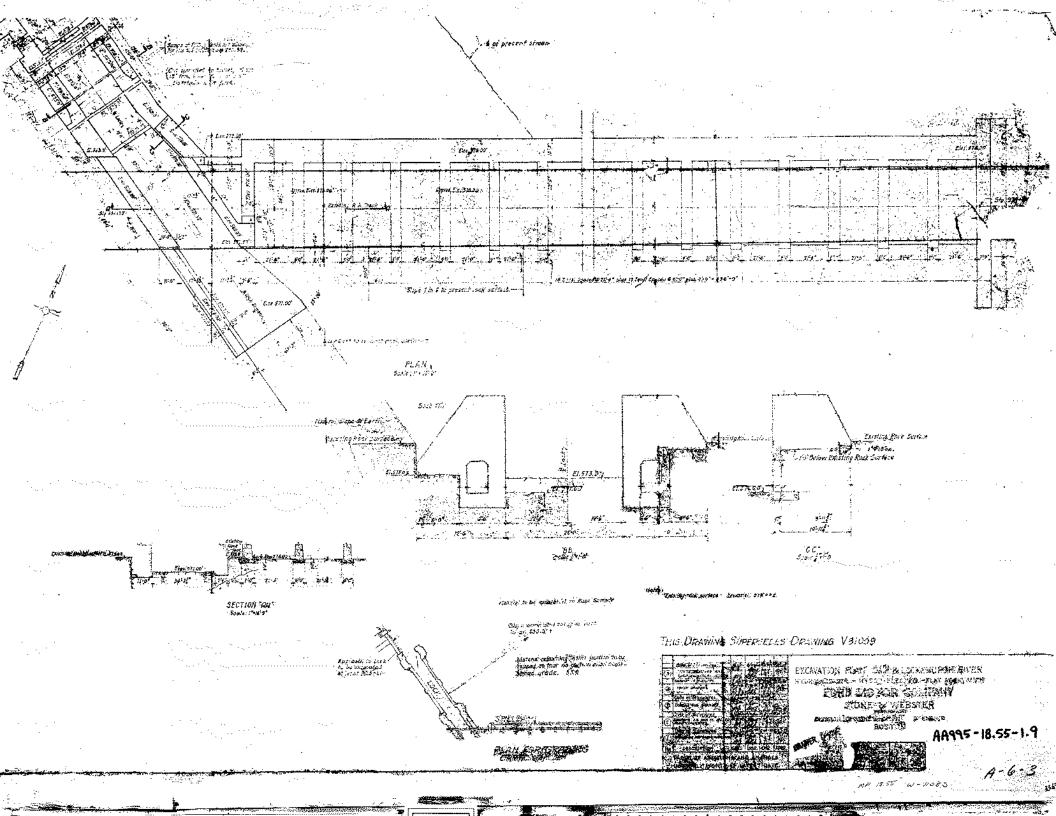








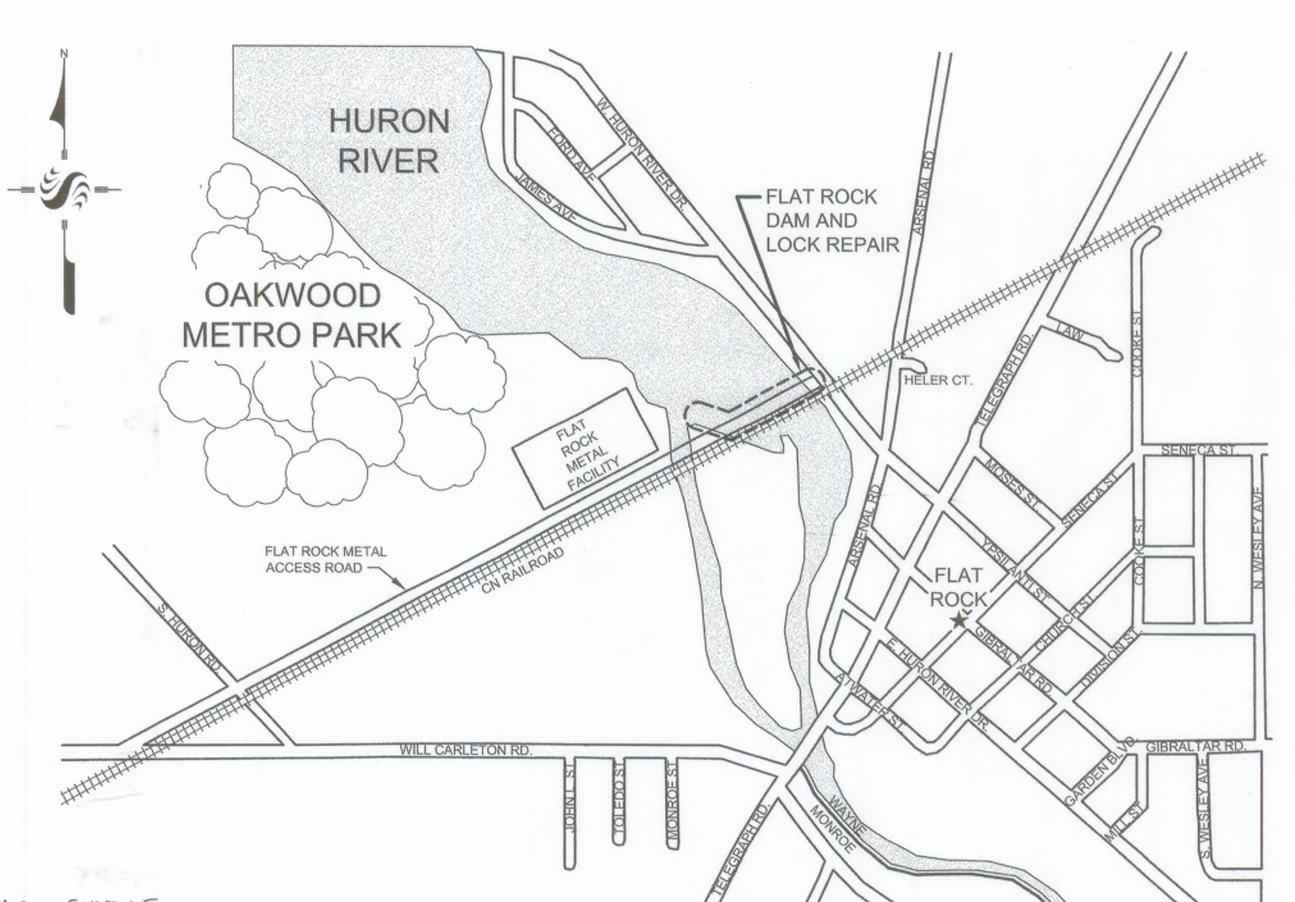




HURON CLINTON METROPOLITAN AUTHORITY

PLANS FOR

FLAT ROCK DAM 2008 REPAIRS



MAY 2008

A.B.C-001 - OVERALL SITE PLAN

DRAWING INDEX:

A.B. C-002 — SOIL EROSION CONTROL AND MISC. DETAILS

A.B. C-101 — RIGHT SIDE, LOCK DEMOLITION PLAN

AB. C-102 - RIGHT SIDE, LOCK DEMOLITION DETAILS

A.B. C-103 — RIGHT SIDE RECONSTRUCTION PLAN

A.B. C-201 — LEFT SIDE, DEMOLITION PLAN

A.B. C-202 - LEFT SIDE, RECONSTRUCTION PLAN

A.B. C-301 — RECONSTRUCTION DETAILS AND SECTIONS I

A.B. C-302 — RECONSTRUCTION DETAILS AND SECTIONS II

REFERENCE DRAWINGS (1922 STONE AND WEBSTER)

C-491 - LOCATION, GENERAL PLAN AND SECTIONS

C-402 - EXCAVATION PLAN

C-403 - PLAN, ELEVATION AND SECTIONS

C-404 - DETAILS

C-405 - DETAILS

C-406 - BORINGS TO ROCK

MDOT STANDARD DETAILS NOT INCLUDED IN THESE PRINTS (R-60-F, R-66-E AND R-67-E)

SCHEDULE ESTIMATED SCHEDULE:

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY MDNR FISHERIES DIVISION (SEE CONTACT INFO, THIS SHEET) OF PROPOSED SCHEDULE. NO IN-WATER CONSTRUCTION ACTIVITIES WILL BE PERMITTED FROM OCTOBER 30 THROUGH JUNE 30, INCLUSIVE.

2. COFFERDAM INSTALLATION AND REMOVAL SHALL BE AS PER IN-WATER GENERAL SEQUENCE OF CONSTRUCTION (SHEET C.001).

START: JULY 1, 2008 AUGUST ZOOB

JULY, 2008

DELIVER EQUIPMENT TO SITE

INSTALL SILT FENCE, FISH LADDER COVER, MUD TRACKING DEVICE AND

- TEMPORARY RIP RAP, ALL LOCATIONS. SETUP TEMPORARY FENCE, ALL LOCATIONS.
- DEMOLISH OLD FENCE.
- INSTALL LOCK COFFERDAM AND DEWATER.
- EXCAVATE ALONG LOCK WALL
- DEMOLISH OLD CONCRETE AND LOCK STRUCTURE EQUIPMENT. RECONSTRUCT CONCRETE AND FILL VOIDS IN LOCK WALLS.
- REMOVE LOCK COFFERDAMS.
- BACKFILL ALONG LOCK WALL.

AUGUST, 2008 -

(REPAIR STEPS SHALL INCLUDE TURBIDITY CURTAINS, COFFERDAMS AND DEWATERING AS REQUIRED PER NOTES ON C.001)

- MAKE REPAIRS TO STRUCTURES. PLACE TREMIE CONCRETE IN BAYS #1, #2-AND #3, # 4 A.B.
- MAKE REPAIRS TO STRUCTURES AND REPLACE TREMIE
- -CONCRETE, BAYS #4, #5 AND #6. PLACE TREMIE CONCRETE BAYS #7, #8 AND #9.

OPENED FISH LADDER BY ILOS, OF AS DIRECTED BY DNR (ONR WANTED, COFFERDAM TO REMAIN IN PLACE UNTIL THEY DID

SOME REPAIRS.

CONTRACTOR STOPPED WORK IN DECEMBER, DUE TO TEMP. RESTRICTIONS ON MAT LS. RIGHT SIDE REPARS DONE + TREMINE IN BAYS # 1-#4,

START UP AFTER WINTER, JULY 2009.

AREA MAP NO SCALE

- MAKE REPAIRS AND PLACE TREMIE CONCRETE BAYS #10, #16 AND #17
- INSTALL TEMPORARY GUARDRAIL AT LEFT SIDE AND REMOVE OLD GUARDRAIL AT GAS LINE.
- INSTALL COFFERDAM ON LEFT BANK.
- REMOVE OLD REVETMENT BLOCKS.
- EXCAVATE ALONG LEFT UPSTREAM WALL
- DEMOLISH OLD CONCRETE AND MAKE REPAIRS.
- BACKFILL ALONG LEFT WALL
- CONSTRUCT NEW REVETMENT WALL. REMOVE LEFT COFFERDAM.
- INSTALL NEW PERMANENT GUARDRAIL AT GAS LINE AND REMOVE TEMPORARY GUARDRAIL.

TREMIE CONC. IN BAYS #5-#8.

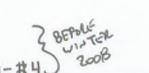
OCTOBER, 2008

· REMOVE MAJOR EQUIPMENT FROM SITE.

- REMOVE TEMPORARY FENCING AND MUD TRACKING DEVICE.
- DO FINE-GRADING TO SITE. INSTALL PERMANENT FENCING.
- TRAP AND RELOCATE WOODCHUCKS. (DONE BEFORE BRETAK)
- ESTABLISH PERMANENT GROUND COVER.
- REMOVE SILT FENCING AND FISH LADDER COVER.

FINISH: OCTOBER 15, 2008-DECEMBER, 2009

PLAUED LEFT COFFEEDAM & REMOVED LEFT SIDE REVETMENT. +





Project Contacts

Utilities and Holders of Rights of Way

- Ameritech
- AT & T Peter Wlotkowski
- 800-437-3497 734-721-8835
- Comcast
- · DTE Gas: Jim Barnette
- Doug Miller
- Cell 419-764-3132 Office 734-856-2161
- 419-421-2211
- Don Karn
- 330-233-0496
- Matt Vale 313-292-8850

- 800-482-7161
- 734-523-6888 .
- Buckeye Pipeline
- 734-788-3631
- Electric: 734-397-4321 313-389-7304.
- Kindermorgan (Dome Pipeline Corp)
- Marathon Ashlund Pipeline Company Regulatory/Agency
- Qwest 800-482-7161
- Sunoco

City of Flat Rock

Bruce Hammond Director of Public Works 734-782-2470

 CN Railroad (Flat Rock Subdivision. Mile post 18.55 to 18.65 bridge over Huron River.) Waldemar Wolosiewicz.

Local Industry:

 Flat Rock Metal Greg Zang 734-782-4454

248-452-4989

 Huron Clinton Metropolitan Authority 810-227-2757 Ext 5154

 Huron River Fishermen's Association Ed McCarter

 MDEQ Dam Safety Paul Wessel 517-241-9862

734-262-0120

- MDNR Fisheries Division Jeffrey Braunscheidel 248-359-9048
- US Fish and Wildlife Service (East Lansing Field Office) Barb Hofler 517-351-2555
- Wayne County Watershed Management 734-326-3936
- Wayne County DPS Yolanda Clemens 734-595-6504

PERMITS

MDEQ-INLAND LAKES AND STREAMS DAM SAFETY WAYNE COUNTY SOIL EROSION WAYNE COUNTY WORK WITHIN R.O.W. (HURON RIVER DRIVE) PERMIT/FILE NO. 07-82-0168-P 07-219 R 08-030

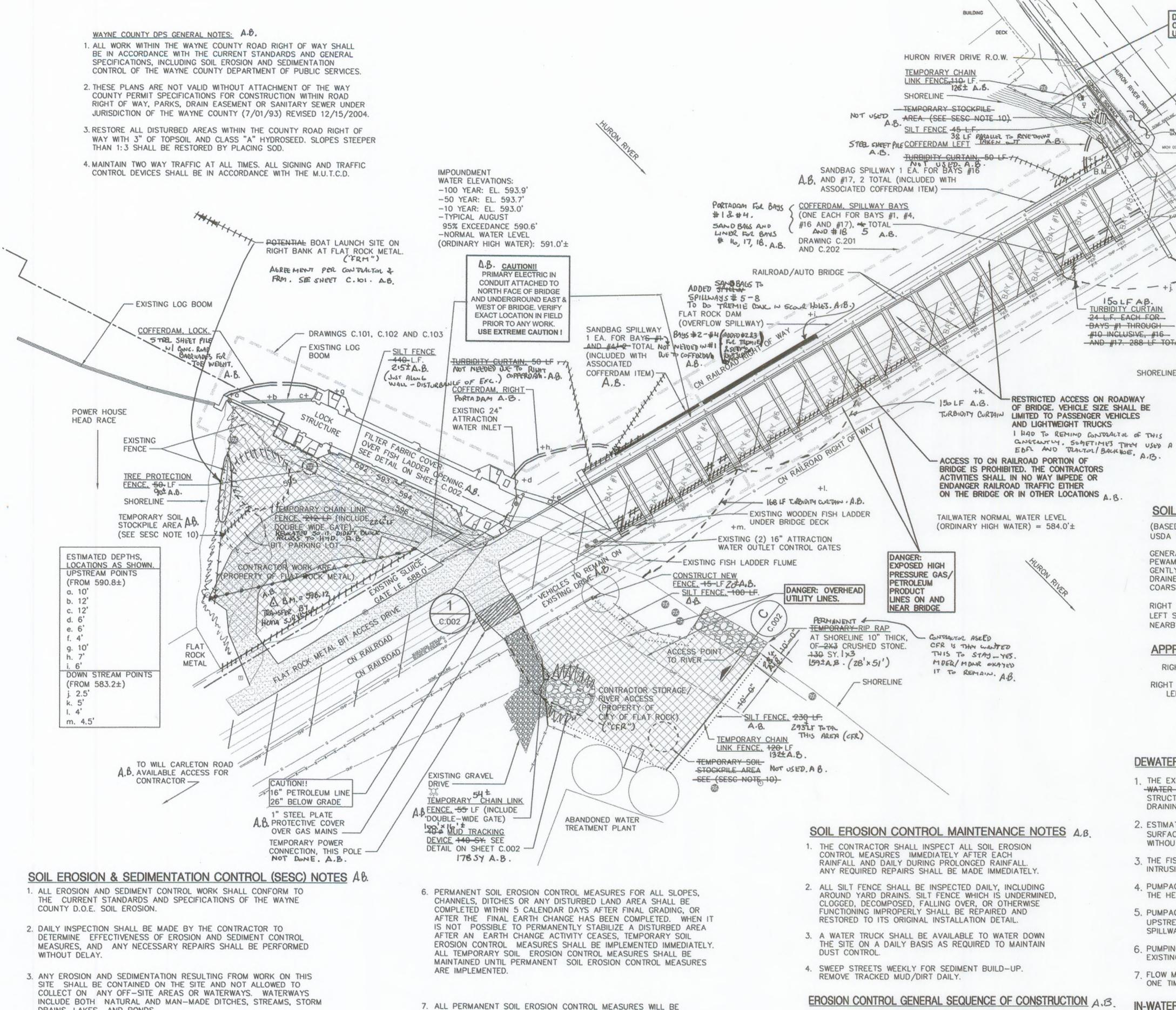


STANTEC #2075092501 PREPARED BY:

STANTEC

3959 RESEARCH PARK DRIVE ANN ARBOR, MI 48108 (734) 761-1010

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- DRAINS, LAKES AND PONDS.
- 4. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES SHALL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SILT OFF THE SITE.
- 5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL AS REQUIRED AND AS DIRECTED IN THESE PLANS. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED.
- IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
- 8. ALL MUD/DIRT TRACKED ONTO EXISTING CITY/COUNTY/STATE ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER, ALL MUD/DIRT TRACKED OR SPILLED ONTO PAVED ROADS OR PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER.
- 9. DISTURBED AREAS WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE RESTORED WITH 4" TOPSOIL, SEEDED AND MULCHED.
- 10. IF A TEMPORARY SOIL STOCKPILE IS NEEDED, AREA MUST BE SURROUNDED BY 2 ROWS OF CONTINUOUS HAY BALES. LOCATION OF OFFSITE DISPOSAL AREA TO BE DETERMINED. I ROW OF SILT FONCE PER COUNTY SESS OFFICER. A.B.

- 1. INSTALL TEMPORARY FENCING AS SHOWN ON PLANS.
- 2. INSTALL TEMPORARY EROSION CONTROL MEASURES INCLUDING SILT FENCE INLET FILTERS, TREE PROTECTION FENCING AND MUD TRACKING PAD.
- 3. EXCAVATE AND REMOVE FENCING, CONCRETE STRUCTURES AND OTHER ITEMS TO BE DEMOLISHED.
- 4. COMPLETE CONCRETE REPAIRS AND BACKFILL WHEN APPROVED BY ENGINEER.
- INSTALL PERMANENT LANDSCAPING.
- REMOVE TEMPORARY SOIL EROSION CONTROL MEASURES AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED.
- 7. RESTORE ALL LANDSCAPE AREAS, PAVEMENT AND CURBING DISTURBED DURING THE PROJECT TO ORIGINAL CONDITIONS.



JRBIDITY CURTAIN

BAYS #1 THROUGH --

#10 INCLUSIVE, #16

AND #17. 288 LF TOTAL

SHORELINE ----

SOIL TYPE

GENERAL:

ROAD ROW

(BASED ON 1977 SURVEY REPORT BY

PEWAMO-SELFRIDGE-CORUNNA ASSOCIATION: NEARLY LEVEL TO

GENTLY SLOPING, VERY POORLY DRAINED TO SOMEWHAT POORLY

RIGHT UPSTREAM: 0.46AC (THIS AREA INCLUDES AN EXISTING BIT PARKING LOT

1 THE EXISTING 4'0 FISH LADDER SLUICE GATE AND 24" ATTRACTION MALLES TO

THAT MAY ONLY BE USED AS A STOCKPILE AREA)

H.R. FISHERMAN'S ASSOC. COULDN'T GET

WORK. A.B.

DRAINED SOILS THAT HAVE A MODERATELY FINE TEXTURED TO

-WATER LINE-ARE AVAILABLE TO AID IN DEWATERING THE LOCK

2. ESTIMATED DEWATERING ELEVATION FOR LOCK=587.0' LOCK WATER

3. THE FISH LADDER MUST BE PROTECTED AT ALL TIMES FROM THE

4. PUMPAGE FROM THE RIGHT COFFERDAM SHALL BE DISCHARGED AT

UPSTREAM OF DAM AT A LOCATION 10' MINIMUM FROM ANY ACTIVE

6. PUMPING DISCHARGE SHALL NOT BE ALLOWED TO ERODE OR SCOUR

7 FLOW MAY BE CUT OFF FROM A MAXIMUM OF 3 SPILLWAY BAYS AT

OF TEMP. COFFERDAMS. A.B.

IN-WATER GENERAL SEQUENCE OF CONSTRUCTION A.B.

(FOR EACH SEPARATE CONSTRUCTION AREA, THE TYPICAL SEQUENCE

1 INSTALL ALL UPSTREAM AND DOWNSTREAM TURBIDITY CURTAINS AS

STRUCTURES, REVETMENTS, RIP RAP, AND/OR TREMIE CONCRETE.

5. PRIOR TO REMOVAL OF TURBIDITY CURTAINS, ALLOW ALL SUSPENDED

MATERIAL TO SETTLE. REMOVE SILTS THAT HAVE COLLECTED ON THE

2. IF APPLICABLE TO LOCATION, INSTALL COFFERDAM AND DEWATER.

4. AS APPLICABLE, TURN OFF DEWATERING AND EQUALIZE WATER

3. DEMOLISH OLD CONCRETE AND CONSTRUCT NEW CONCRETE

BOTTOM OR IN THE FABRIC AND DISPOSE OF OFF SITE.

ONE TIME. STANTER OKAY WITH MORE THAN 3 - CONTRACTORS RISK

5. PUMPAGE FROM SPILLWAY BAYS SHALL DISCHARGE IN TO RIVER

INTRUSION OF SILTS, DEBRIS OR OTHER DAMAGE.

STRUCTURE; HOWEVER, PUMPING MAY BE REQUIRED IN ADDITION TO

SURFACE ELEVATION SHALL NOT BE DRAWN DOWN BELOW 586.0' A.B.

WITHOUT PERMISSION OF ENGINEER. (DESIGN PEX CONTRACTORS) A.B.

USDA SOIL CONSERVATION SERVICE)

COARSE TEXTURED SUBSOIL.

RIGHT SIDE: (BbB) BLOUT LOAM

RIGHT DOWNSTREAM: 0.34AC

DEWATERING NOTES A.B.

THE HEAD OF THE LOCK.

EXISTING EARTH.

LEFT UPSTREAM: 0.06AC

DRAINING THROUGH GRAVITY OUTLETS.

OF CONSTRUCTION SHALL BE AS FOLLOWS)

CURE AND FINISH CONCRETE AS REQUIRED.

SHOWN ON DRAWINGS. A.G.

LEVELS. REMOVE COFFERDAM.

TOTAL: 0.86AC

LEFT SIDE: (MhB) METEA LOAMY SAND

APPROXIMATE DISTURBED ACREAGE

NEARBY: (ShB) SHOALS SILT LOAM

24 L.F. EACH FOR



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Legend	
= =	== = COFFERDAM
	TURBIDITY CURTAIN
	SILT FENCE
	TREE PROTECTION FENCE
	TEMPORARY CHAINLINK FENCE
	RIGHT OF WAY
∠°\ E	OCAL DATUM BENCHMARK: AST SIDE OF SPILLWAY AT LEFT PSTREAM RETAINING WALL = 590.5' BASED ON ORIGINAL STONE & WEBSTER DRA
8	GATE VALVE
0	STORM SEWER MANHOLE
Ø	POWER POLE
(S)	SANITARY SEWER MANHOLE
0	WATER MANHOLE
D.	FIRE HYDRANT
<u></u>	BENCH MARK
G	GAS LINE
ST	STORM SEWER

OHP OVERHEAD POWER

	-			
AS-BUILT ("A.B.") DRAWING N	OT15-3	JRR		01.10
Revision		Ву	Appd.	MM.DD.YY
BID SET				05.08
(WCDPS) RESUBMITTAL				03.08
OWNER REVIEW				03.08
QA/QC (95%)		-		02.08
ROAD COMMISSION SUBMITTAL (WCDPS)	*************	Name and Address of	en a companyon	01.08
REVISIONS PER MDEQ				12.13.07
PERMITS (90% SET)				10.31.07
60% REVIEW				07.10.07
Issued		Ву	Appd.	MM.DD.YY
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UNDERLINED NOTES ARE PAY ITEMS.

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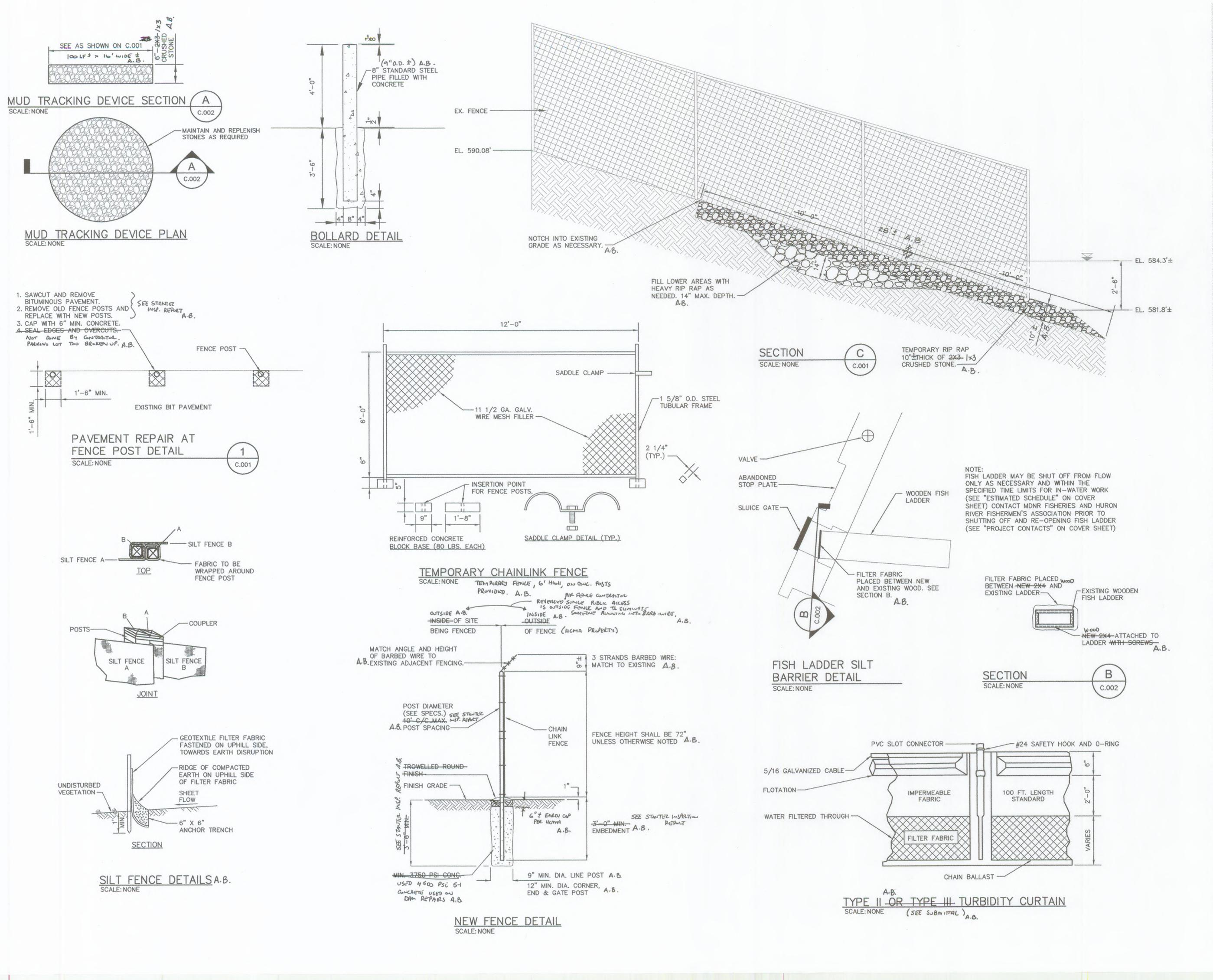
HURON-CLINTON METROPOLITAN AUTHORITY FLATROCK DAM 2008 REPAIRS

FLATROCK, MICHIGAN

OVERALL SITE PLAN

Project No.	Scale	
2075092501	1" = 40'	
Drawing No.	Sheet	Revisior

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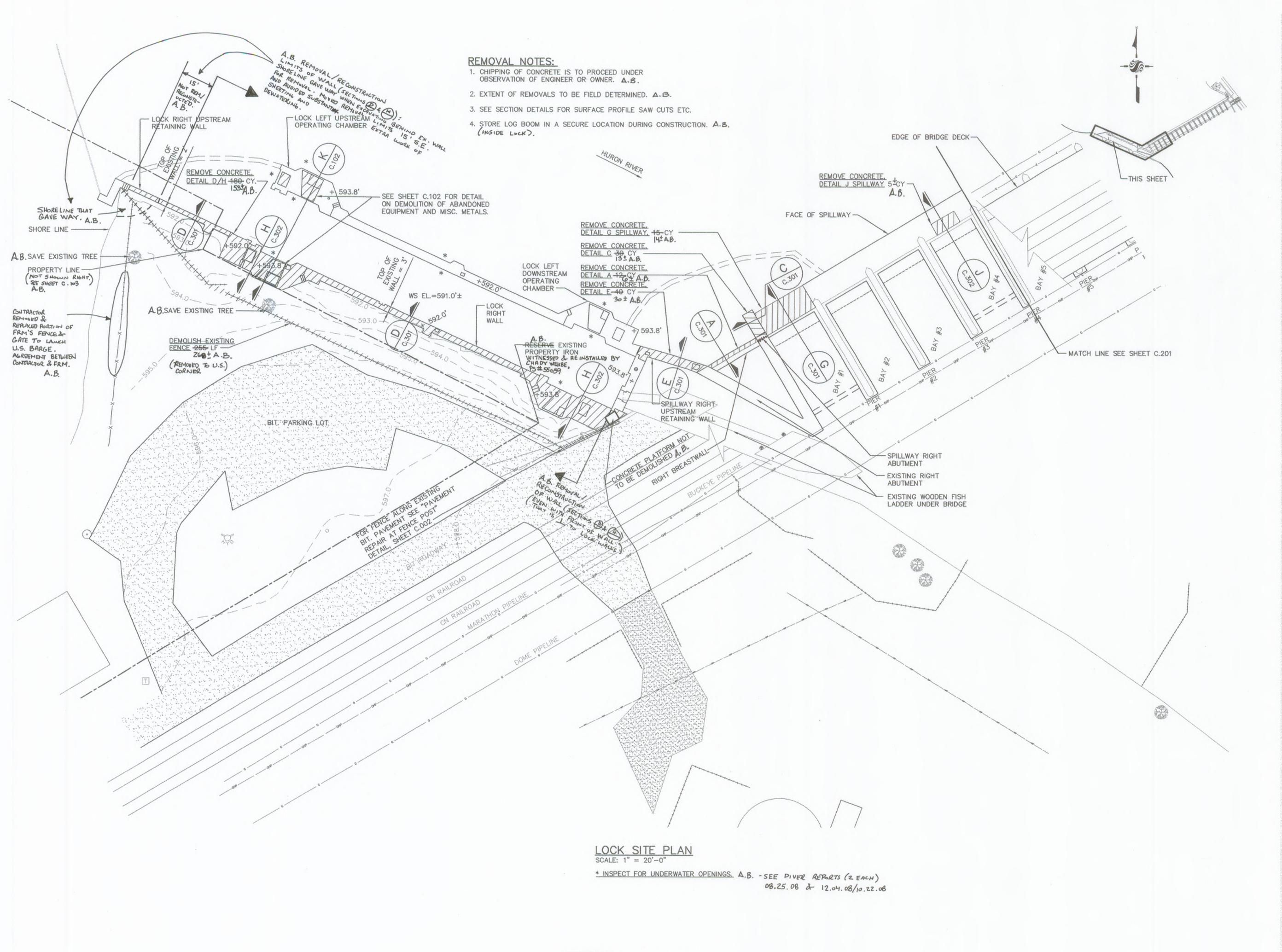
HURON-CLINTON METROPOLITAN AUTHORITY FLATROCK DAM 2008 REPAIRS

FLATROCK, MICHIGAN

Title

SOIL EROSION CONTROL AND MISC. DETAILS

Project No. 2075092501	Scale 1" = 40'	
Drawing No.	Sheet	Revision
C 002	of.	



SHOWS EQUIPMENT AND CONCRETE TO BE REMOVED.



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Legend

⊗ GATE VALVE

ONIE VALV

STORM SEWER MANHOLE

Ø POWER POLE

SANITARY SEWER MANHOLE

WATER MANHOLE

FIRE HYDRANT

BENCH MARK

G GAS LINE

ST STORM SEWER

OHP OVERHEAD POWER

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HURON-CLINTON METROPOLITAN AUTHORITY FLATROCK DAM 2008 REPAIRS

FLATROCK, MICHIGAN

RIGHT SIDE, LOCK DEMOLITION PLAN

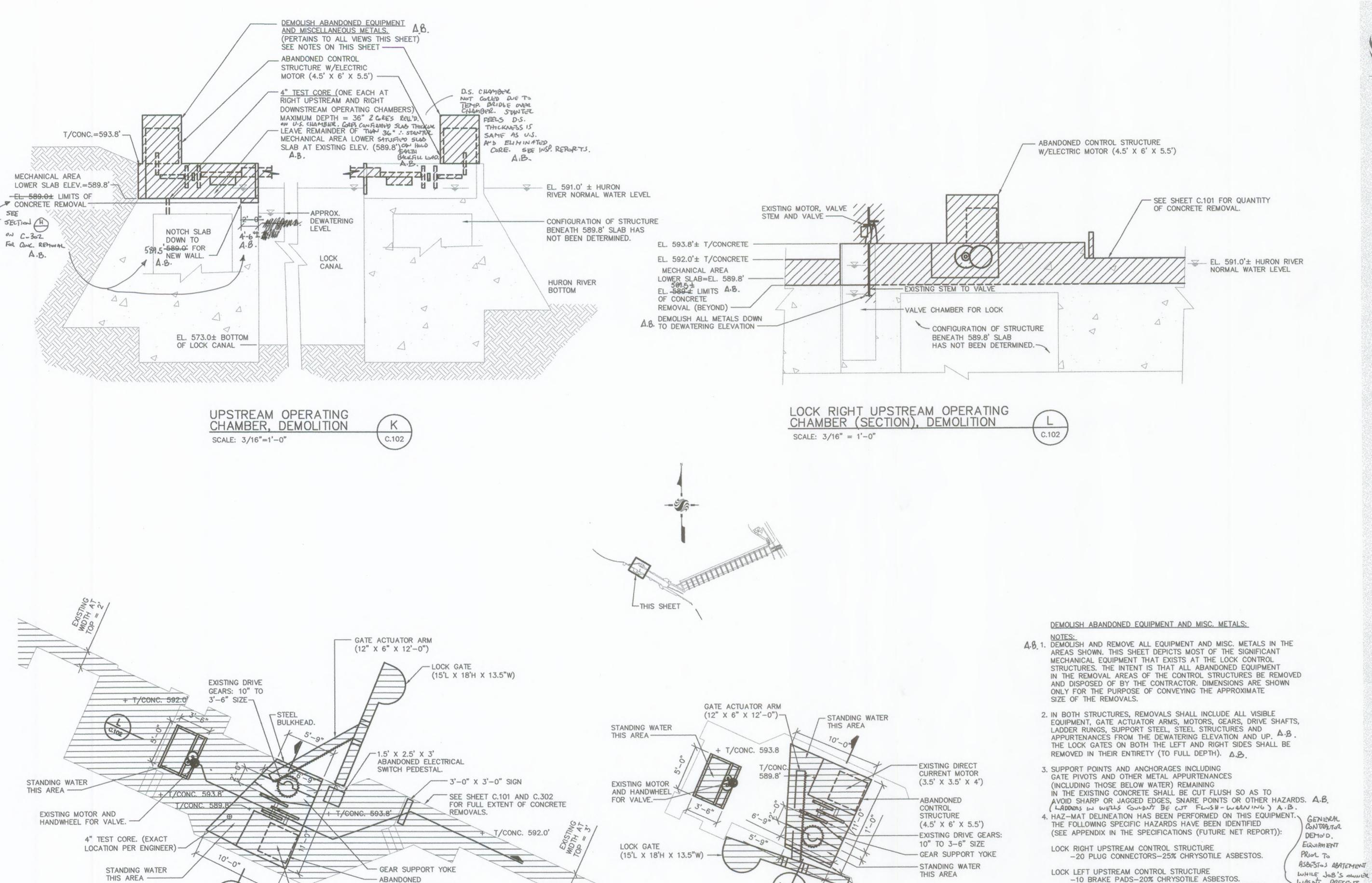
 Project No.
 Scale

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 AS-NOTED

 Drawing No.
 Sheet
 Revision

C.101

of



LOCK LEFT UPSTREAM OPERATING CHAMBER DEMOLITION

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

CONTROL STRUCTURE

(4.5' X 6' X 5.5')

EXISTING DIRECT

CURRENT MOTOR

(3.5' X 3.5' X 4')

OPERATING CHAMBER, DEMOLITION

LOCK RIGHT UPSTREAM

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



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File Name:	SMJ	DMD	PJM	
	Dwn.	Chkd.	Dsgn.	MM.DD.YY
Permit-Seal				

Client/Project

WASN'T PRESENT.

B.C. BROUGHT IN

FOR CLEAN-UP.

- NEVER RECEIVED

FROM G.C. DESATE

MANY ATTEMPTS.

ABATIMENT CONTRACTOR

AFTER BEING CAUGHT

(AS SPECID.).

-10 CABLE CONNECTORS-25% CHRYSOTILE ASBESTOS.

ALL PAINTED SURFACES SHOULD BE PRESUMED TO CONTAIN LEAD.

ALL PLUG CONNECTORS, CABLE CONNECTORS AND BRAKE PADS

CONCRETE AND EQUIPMENT REMOVAL A.B.

-1000 SF.-22% BY WT. LEAD BASED PAINT.

SHOULD BE PRESUMED TO CONTAIN ASBESTOS.

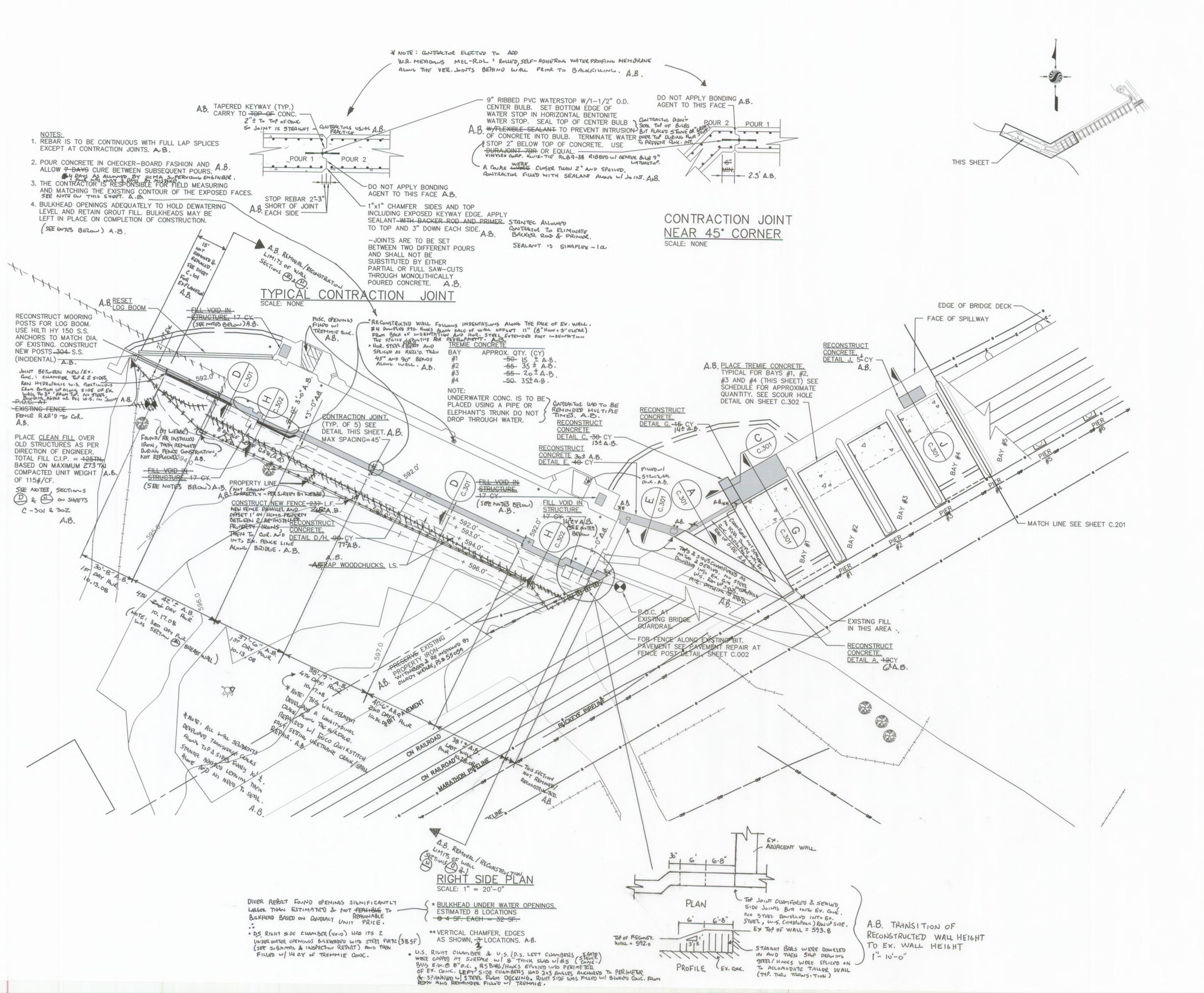
-STEEL BULKHEAD.

HURON-CLINTON METROPOLITAN AUTHORITY FLATROCK DAM 2008 REPAIRS

FLATROCK, MICHIGAN

ABATEMENT REPORTS Title RIGHT SIDE, LOCK **DEMOLITION DETAILS**

Project No.	Scale	
2075092501	AS-NOTED	
Drawing No.	Sheet	Revision
C.102	of	





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Consultants

Legend

- ⊗ GATE VALVE
- STORM SEWER MANHOLE
- Y POWER POLE
- SANITARY SEWER MANHOLE
- WATER MANHOLE
- FIRE HYDRANT
- BENCH MARK
- G GAS LINE
- ST STORM SEWER
- OHP OVERHEAD POWER

UNDERLINED NOTES ARE PAY ITEMS.

AS-BUILT ("A.B.") DRAWING NO	ES JRR		01.10
Revision	Ву	Appd.	MM.DD.YY
BID SET			05.08
OWNER REVIEW			03.08
QA/QC (95%)			02.08
ROAD COMMISION SUBMITTAL (WCDPS)			01.08
PERMITS (90% SET)			10.31.07
60% REVIEW			07.07.10
Issued	Ву	Appd.	MM.DD.YY

Dwn. Chkd. Dsgn. MM.DD.YY

Permit-Seal

Client/Project

HURON-CLINTON METROPOLITAN AUTHORITY FLATROCK DAM 2008 REPAIRS

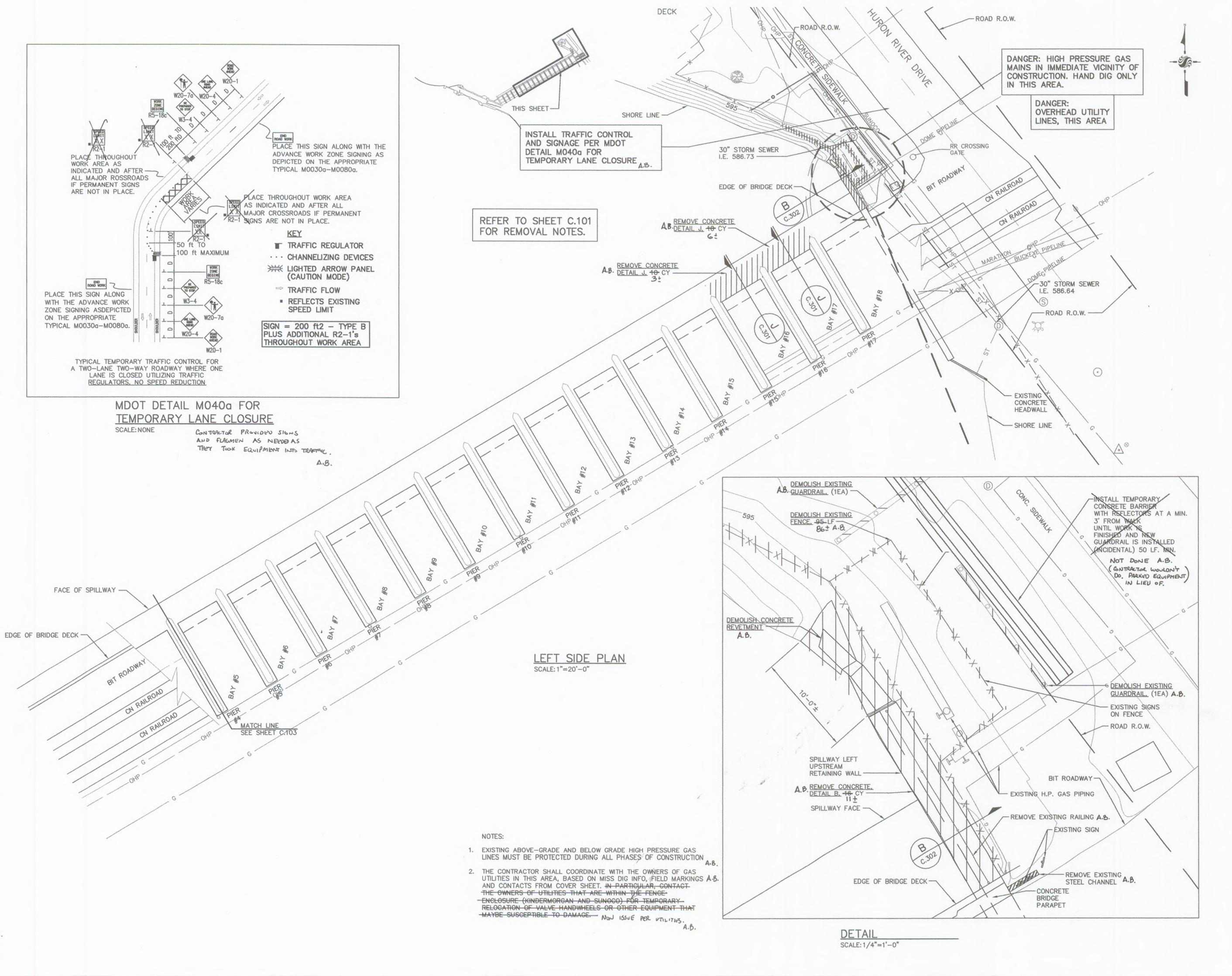
FLATROCK, MICHIGAN

RIGHT SIDE RECONSTRUCTION PLAN

Project No. 2075092501	Scale AS-NOTED	
Drawing No.	Sheet	Revision
C 102		

C.103

of





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- Ø POWER POLE
- (S) SANITARY SEWER MANHOLE
- WATER MANHOLE
- FIRE HYDRANT
- BENCH MARK
- G GAS LINE
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- OHP OVERHEAD POWER

UNDERLINED NOTES ARE PAY ITEMS.

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Revision	Ву	Appd.	MM.DD.YY
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ROAD COMMISION SUBMITTAL (WCDPS)		-	01.08
PERMITS (90% SET)			10.31.07
60% REVIEW			07.07.10
Issued	Ву	Appd.	MM.DD.YY
File Name: SMJ	DMD	PJM	
Dwn.	Chkd.	Dsgn.	MM.DD.Y

Client/Project

Permit-Seal

HURON-CLINTON METROPOLITAN AUTHORITY FLATROCK DAM 2008 REPAIRS

FLATROCK, MICHIGAN

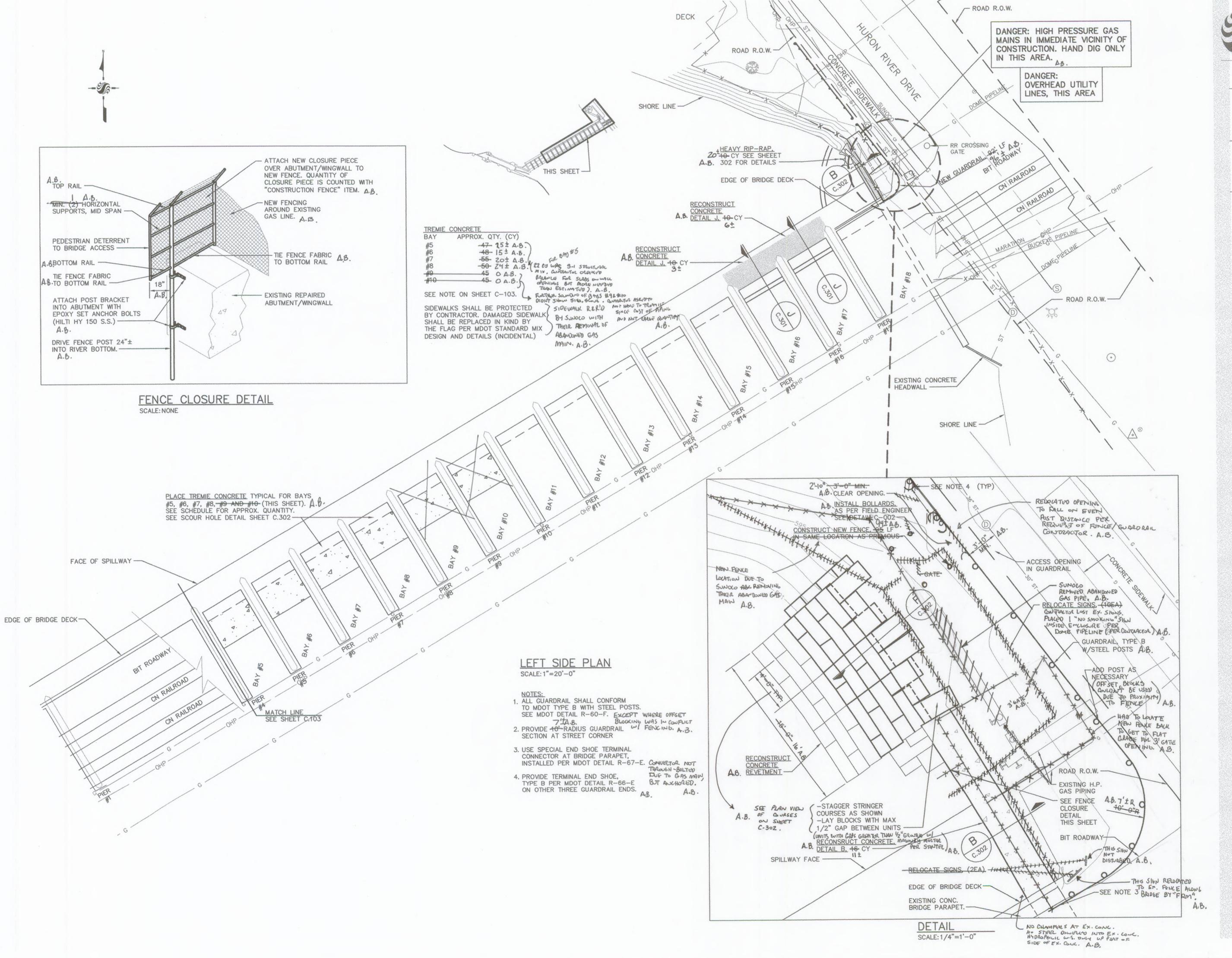
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LEFT SIDE DEMOLITION PLAN

Project No.	Scale	
2075092501	AS NOTED	
Drawing No.	Sheet	Revision

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Legend

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Dwn. Chkd. Dsgn. MM.DD.YY

Client/Project

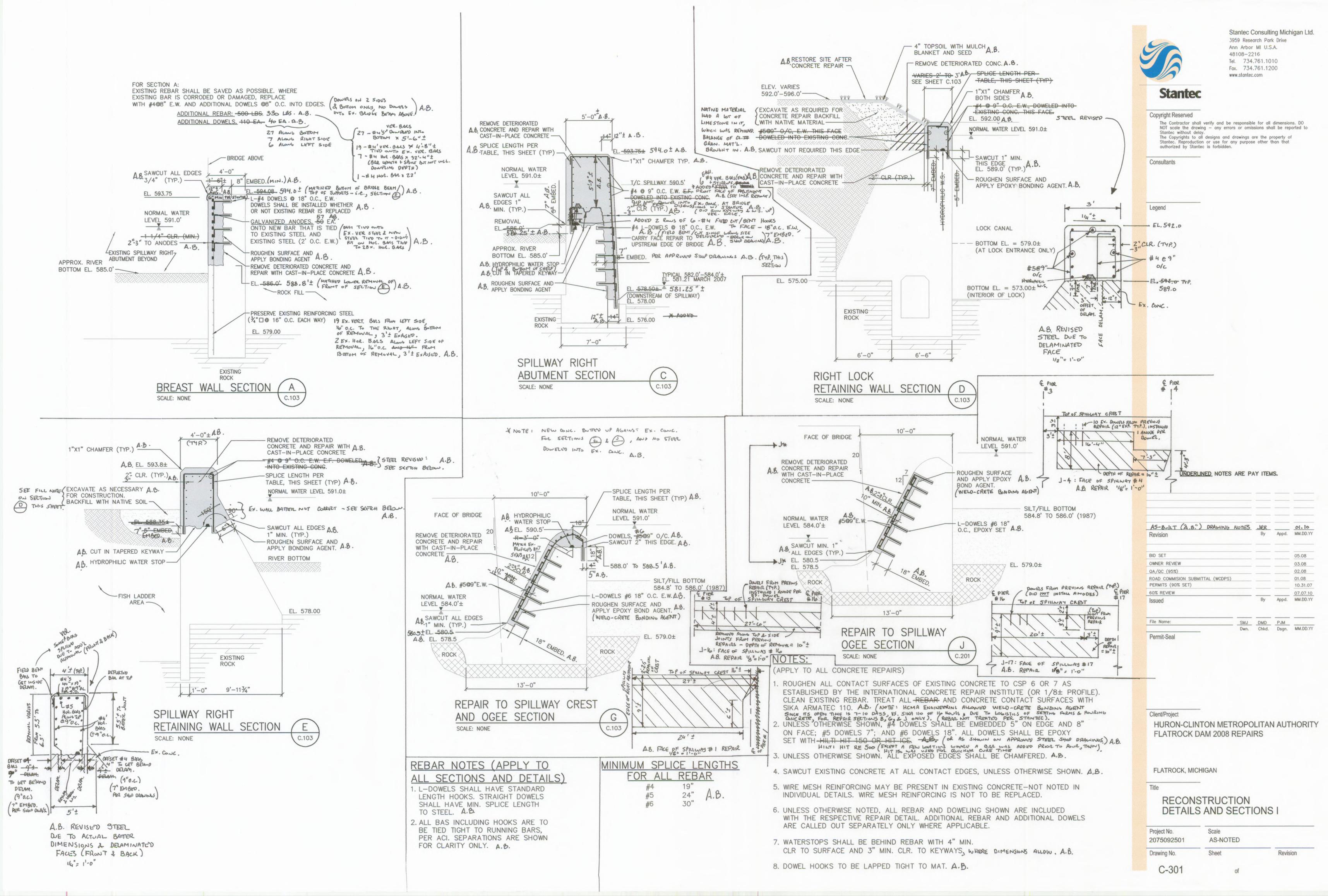
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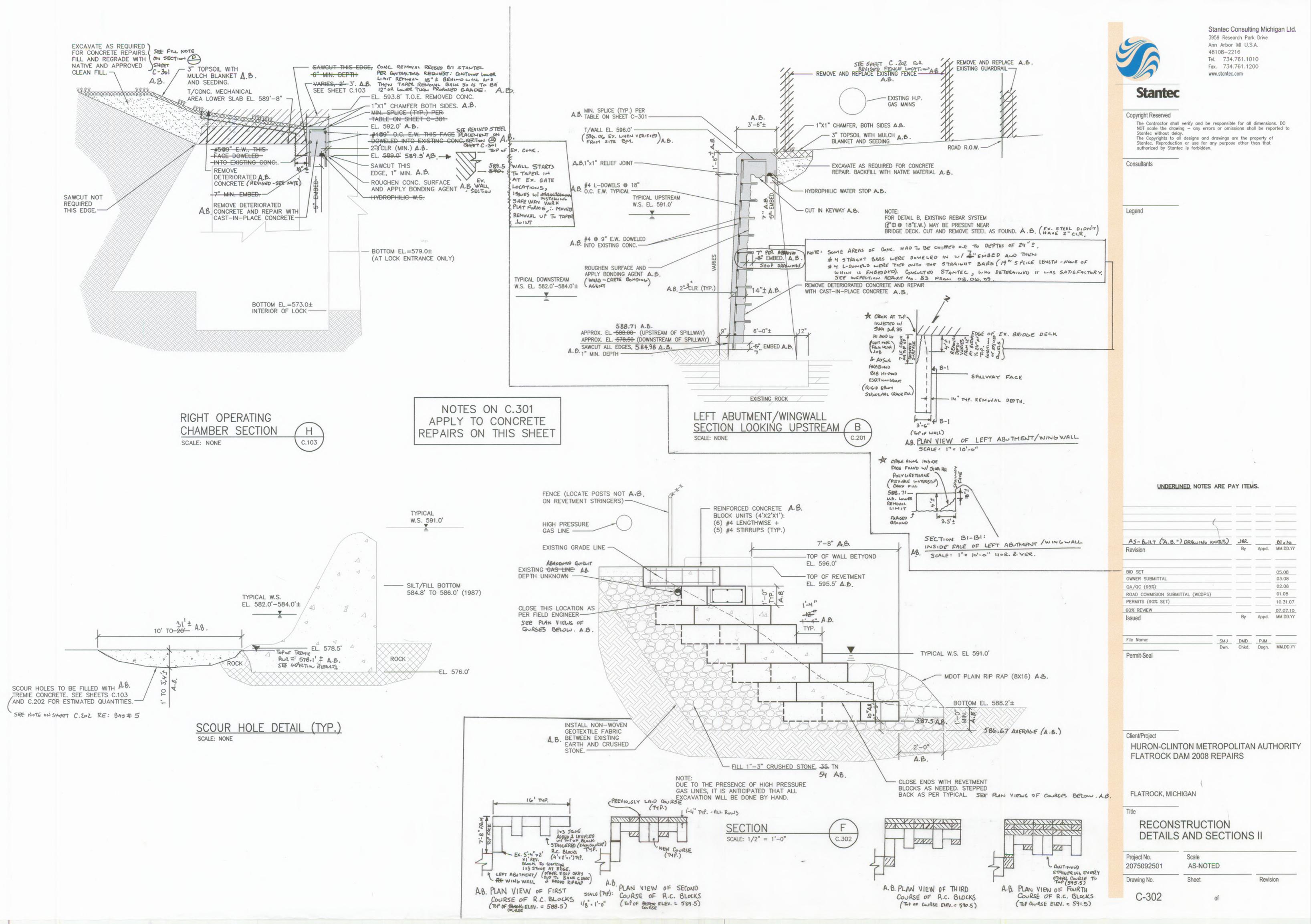
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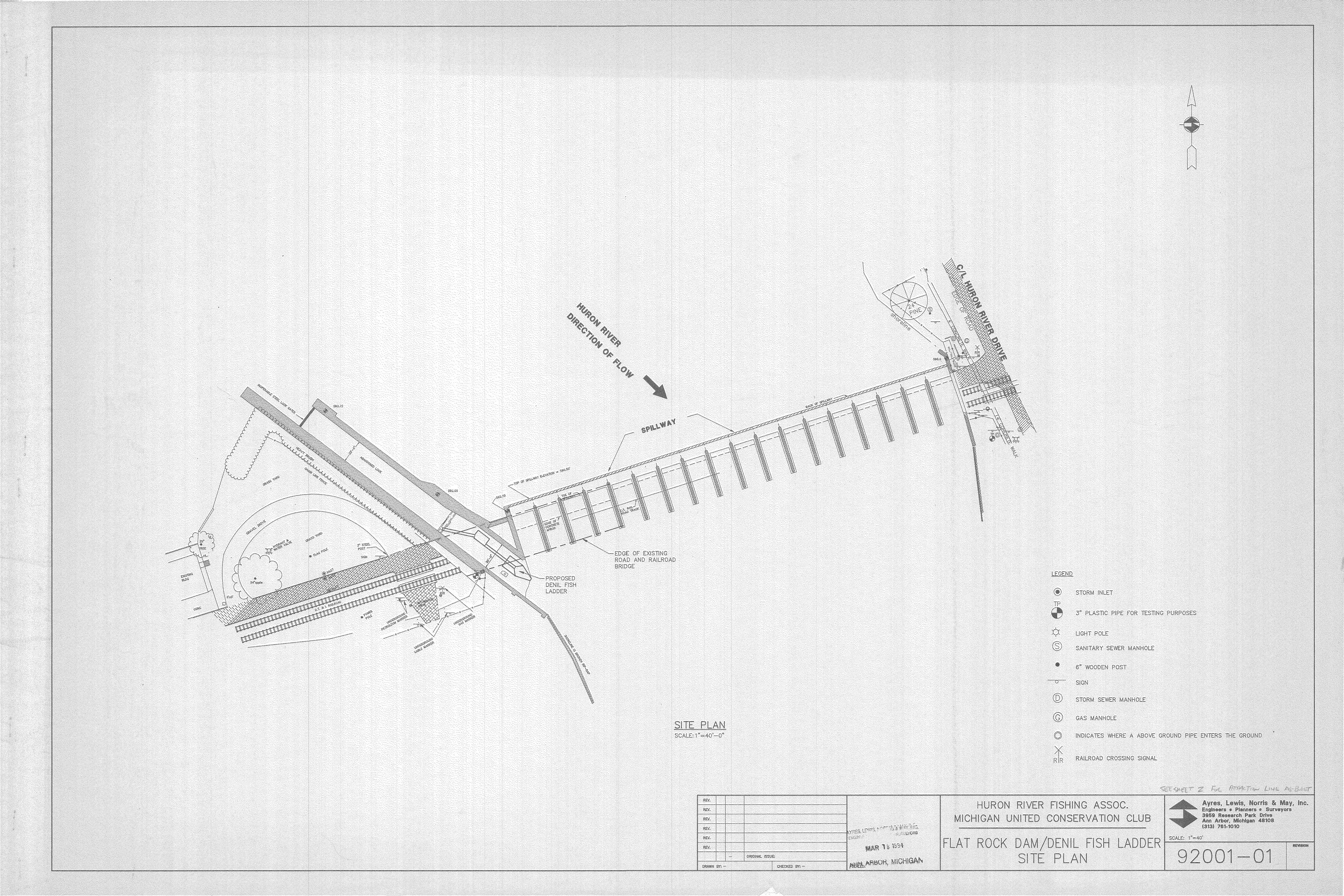
FLATROCK, MICHIGAN

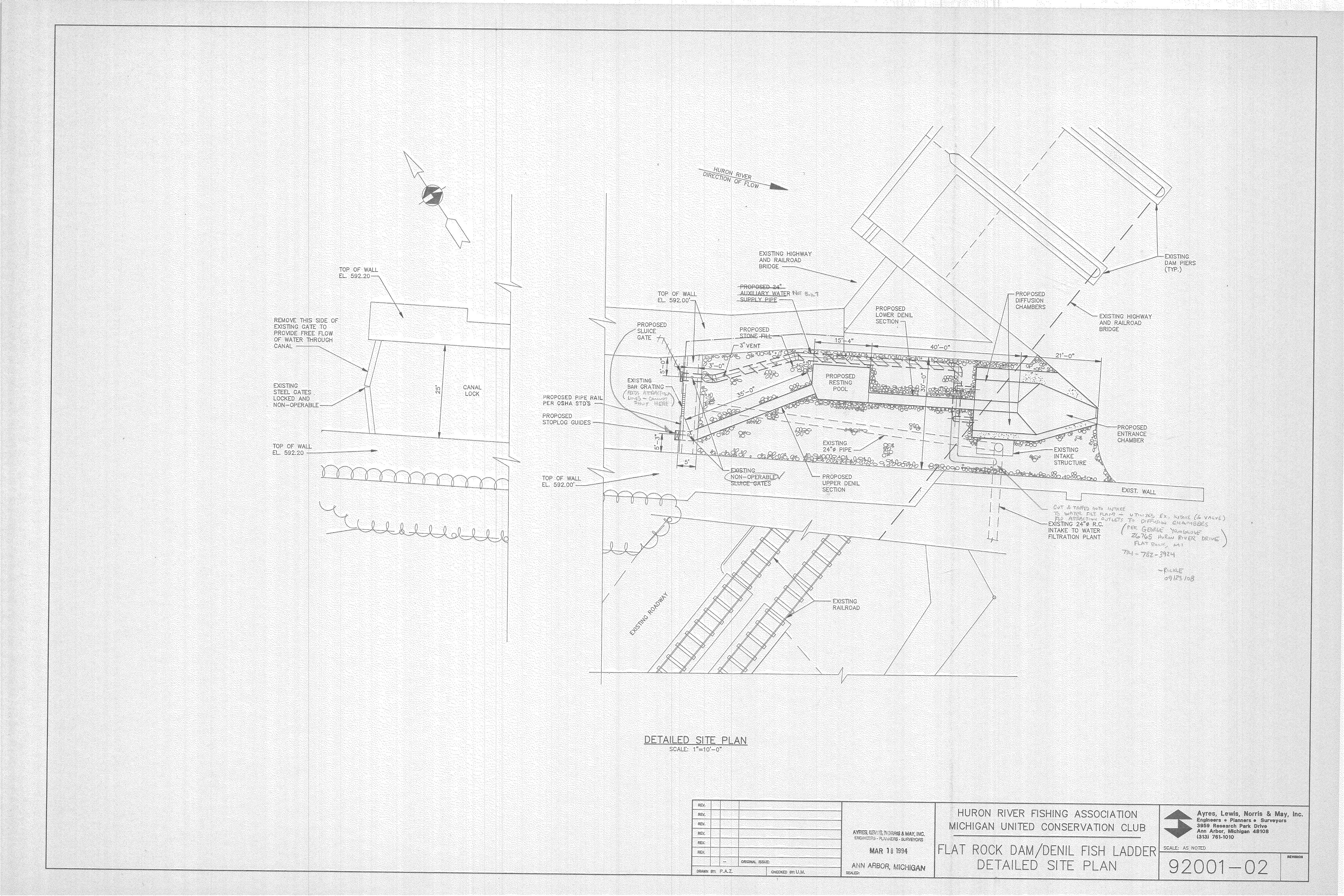
LEFT SIDE RECONSTRUCTION PLAN

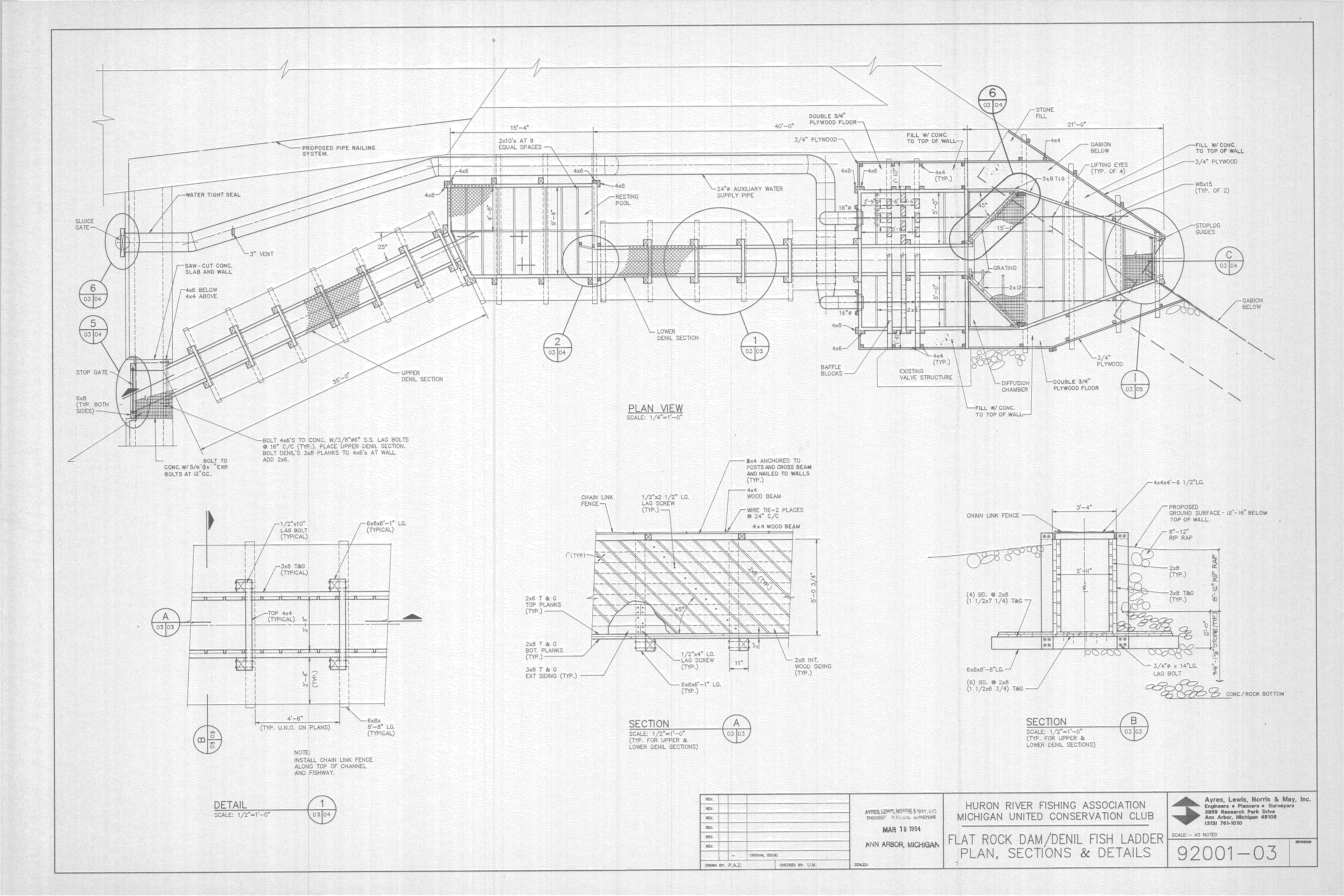
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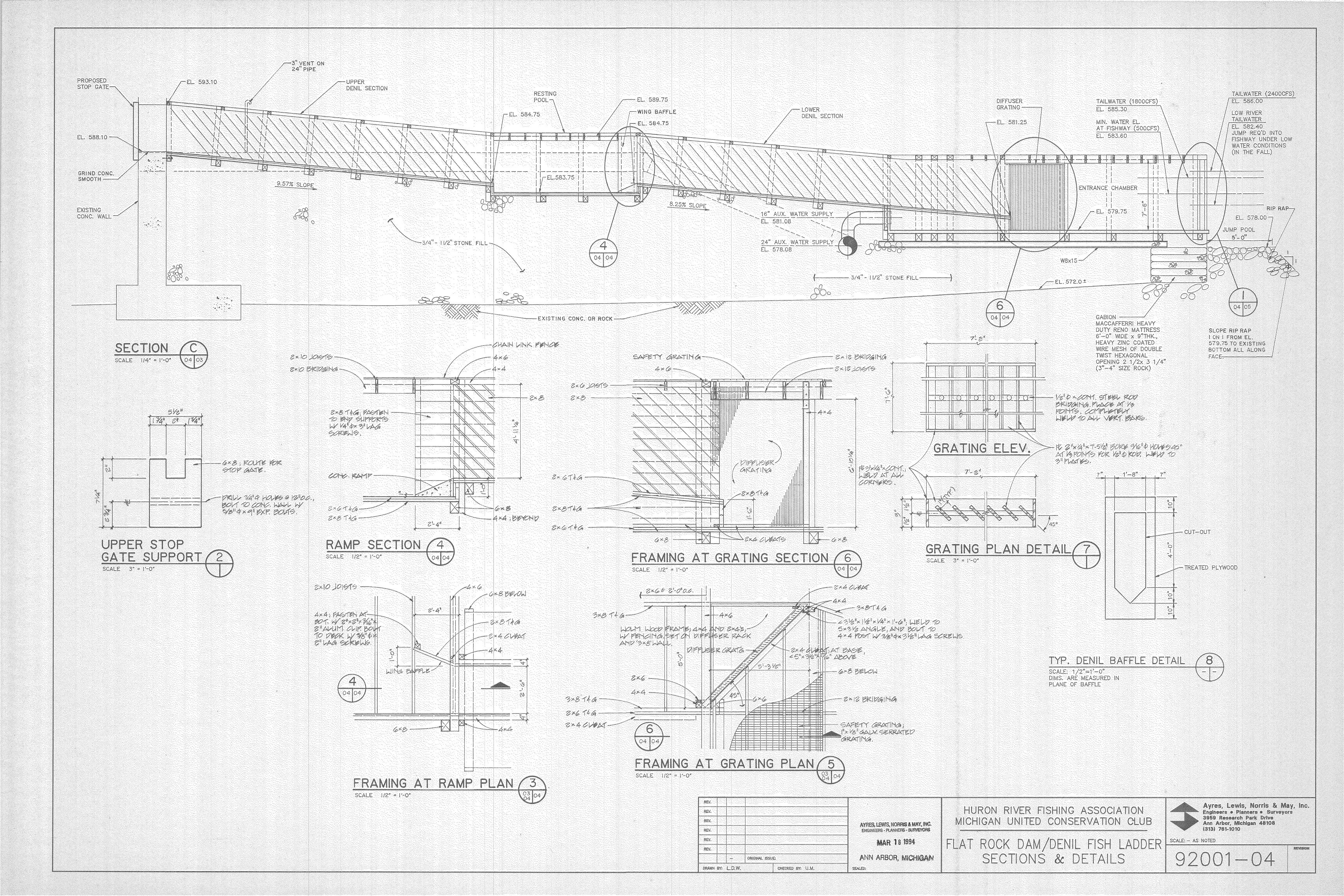


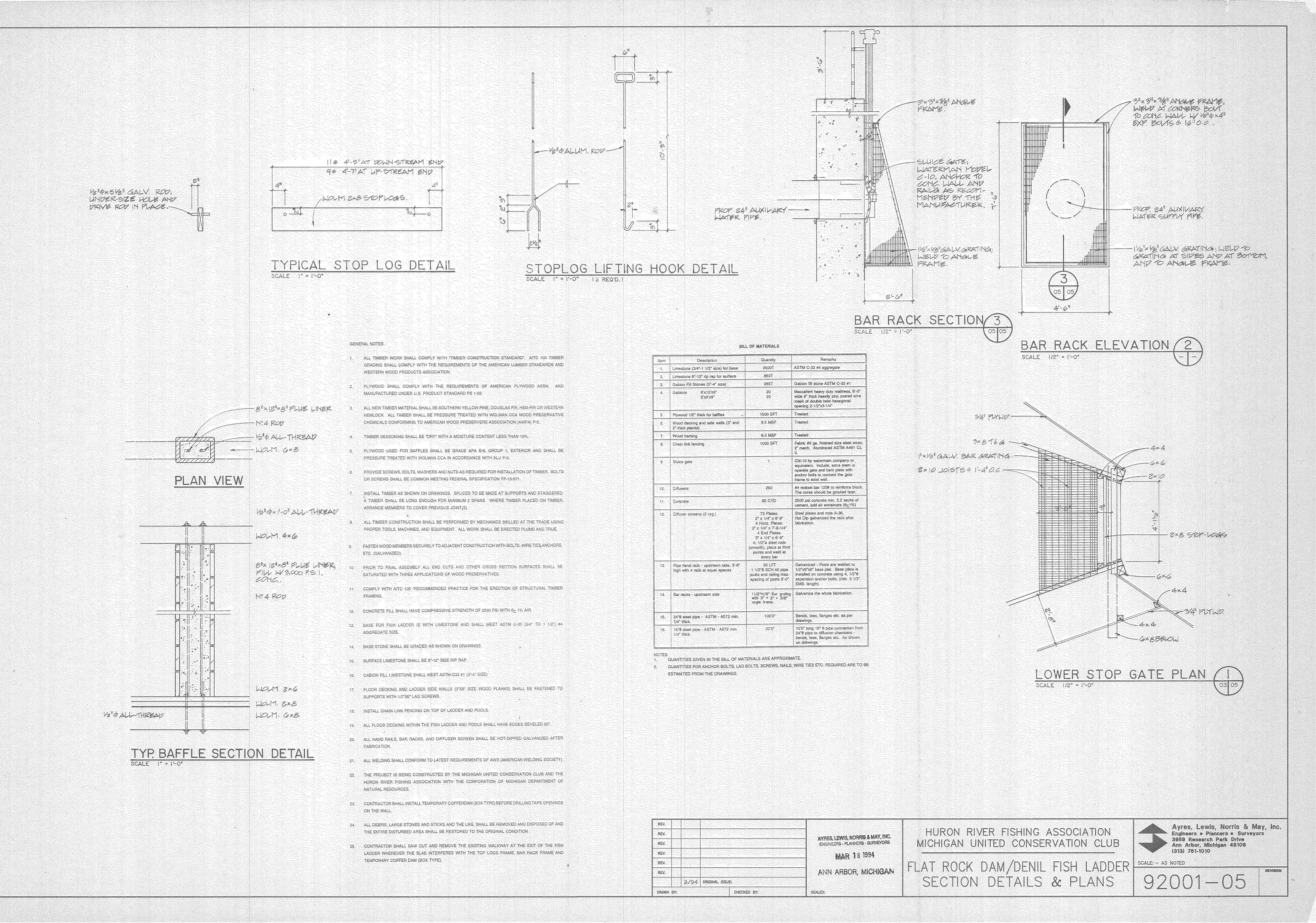




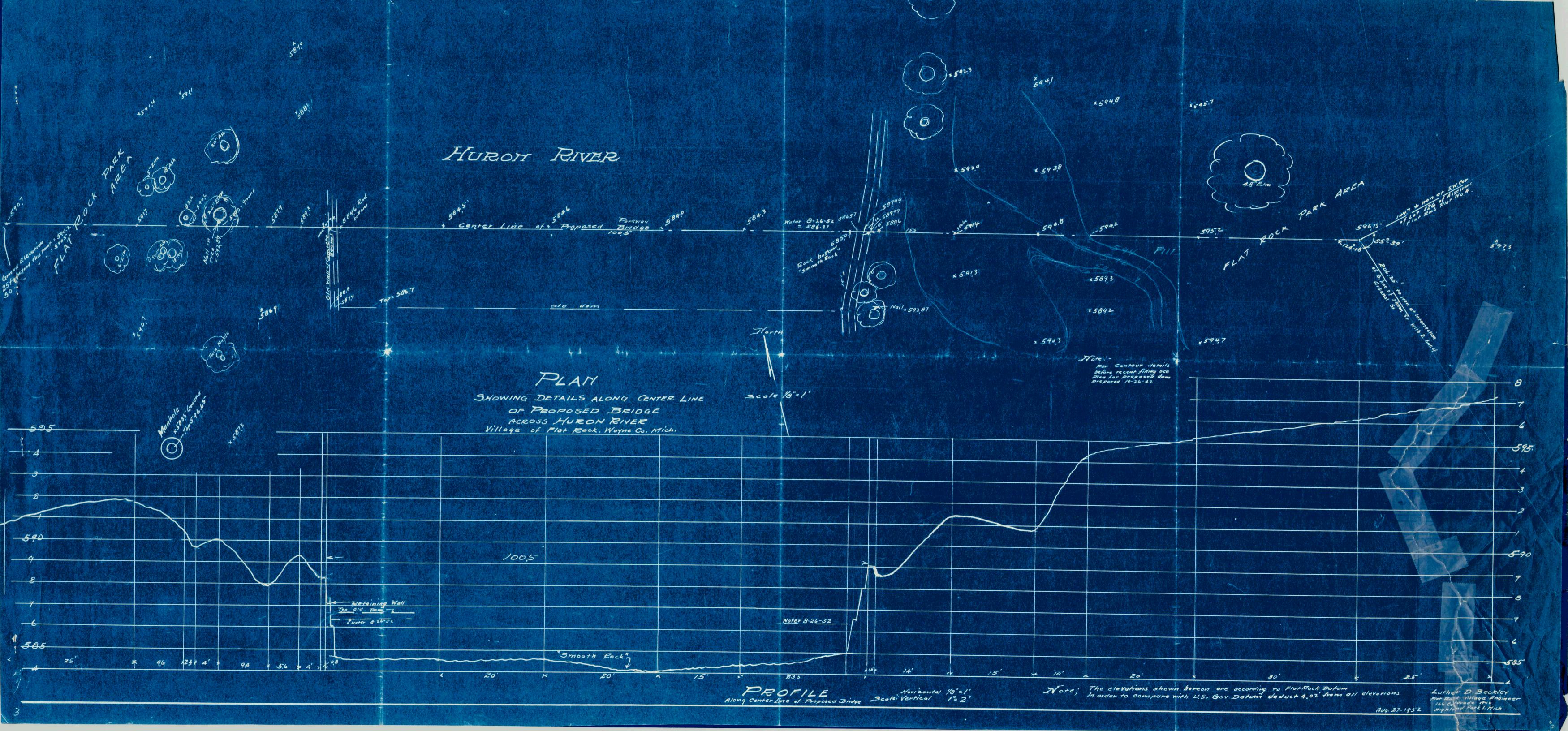


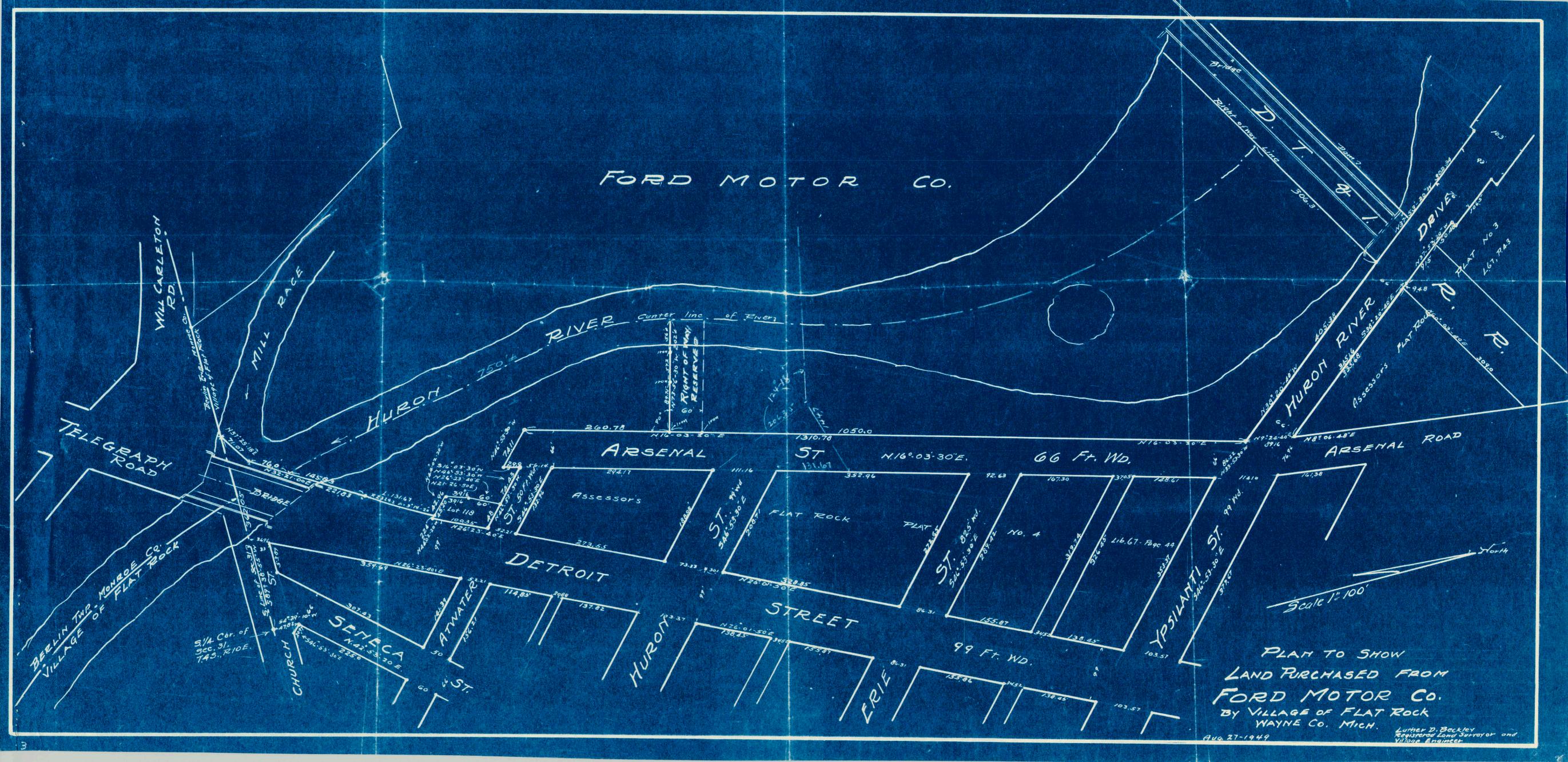


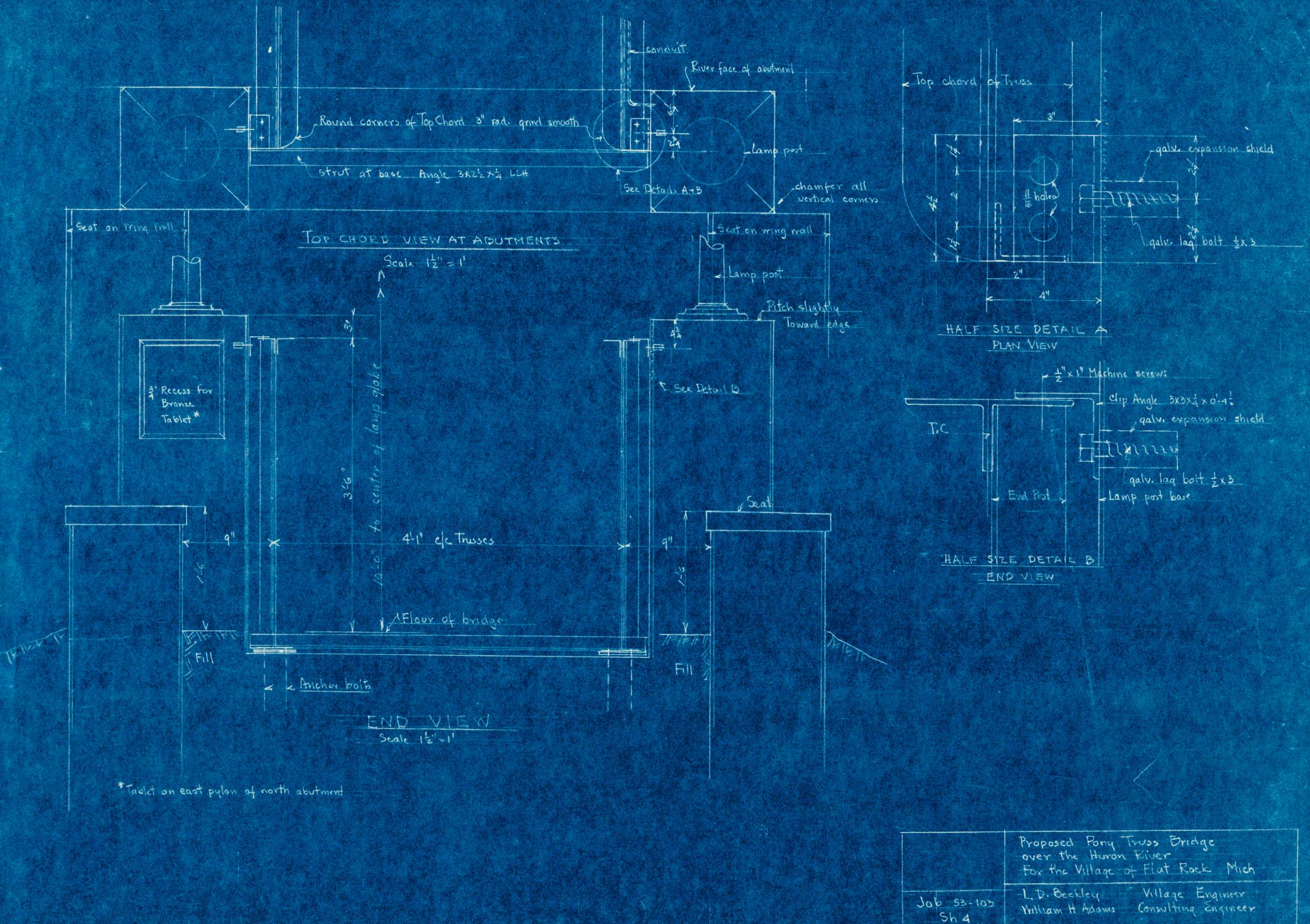


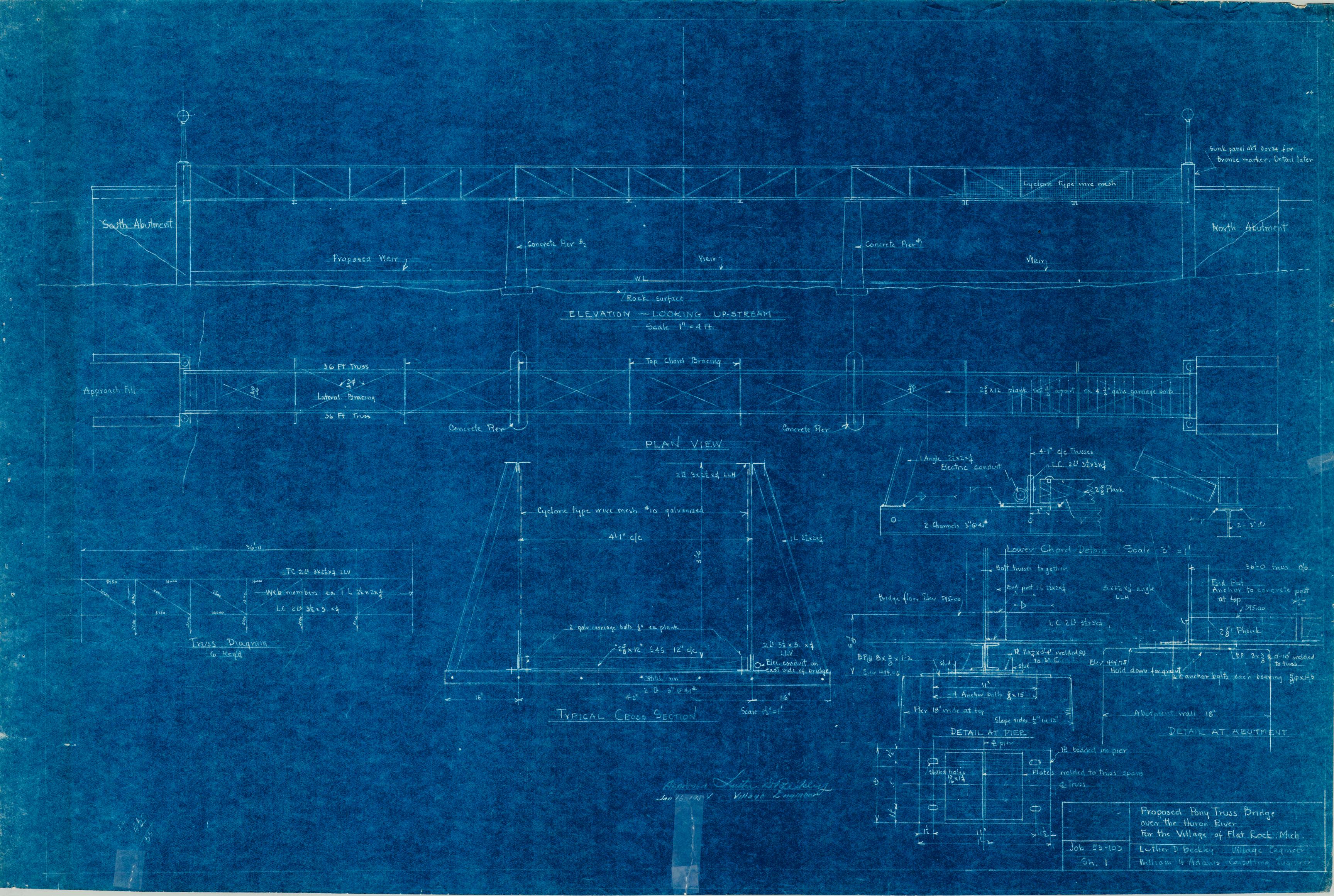


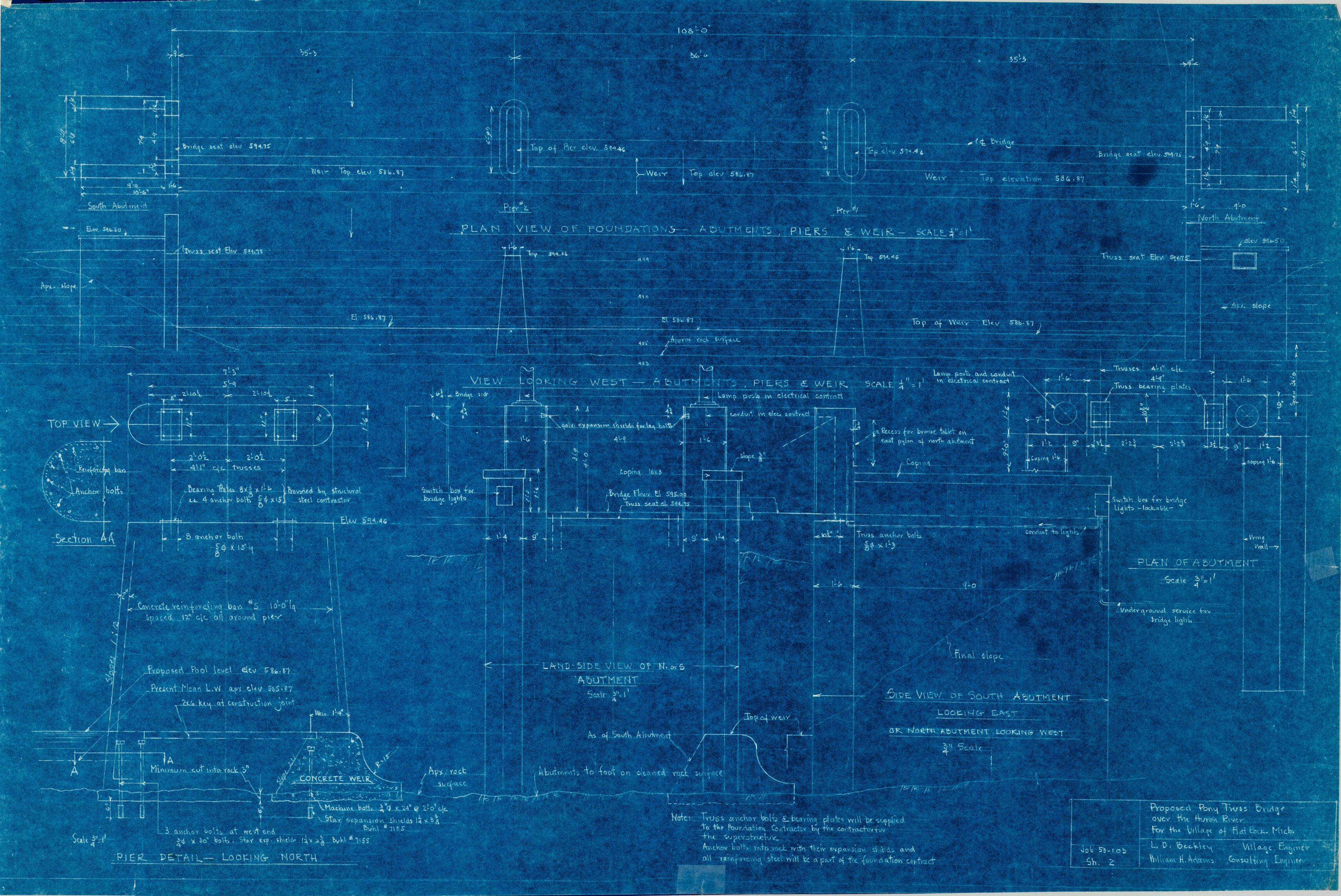


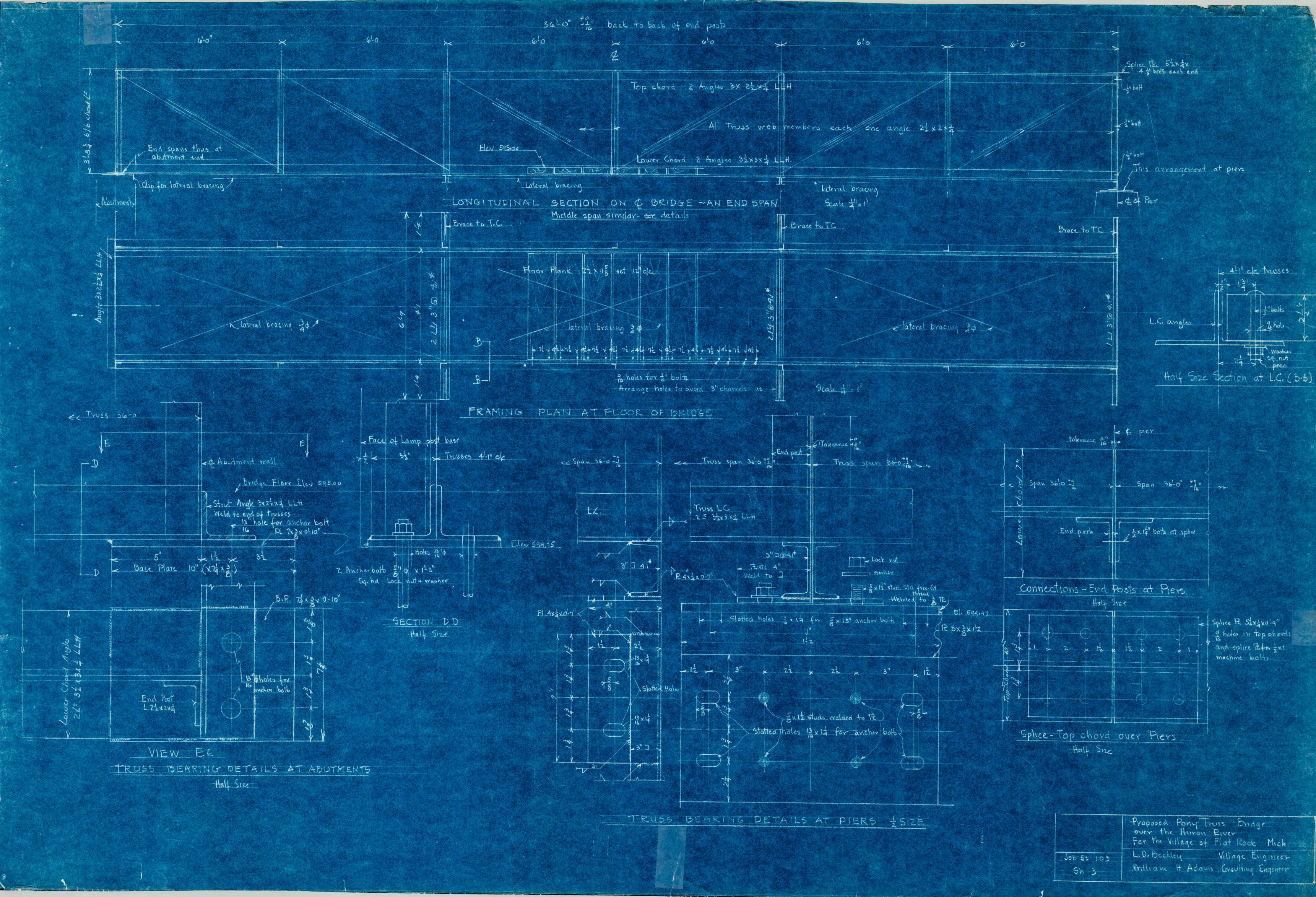


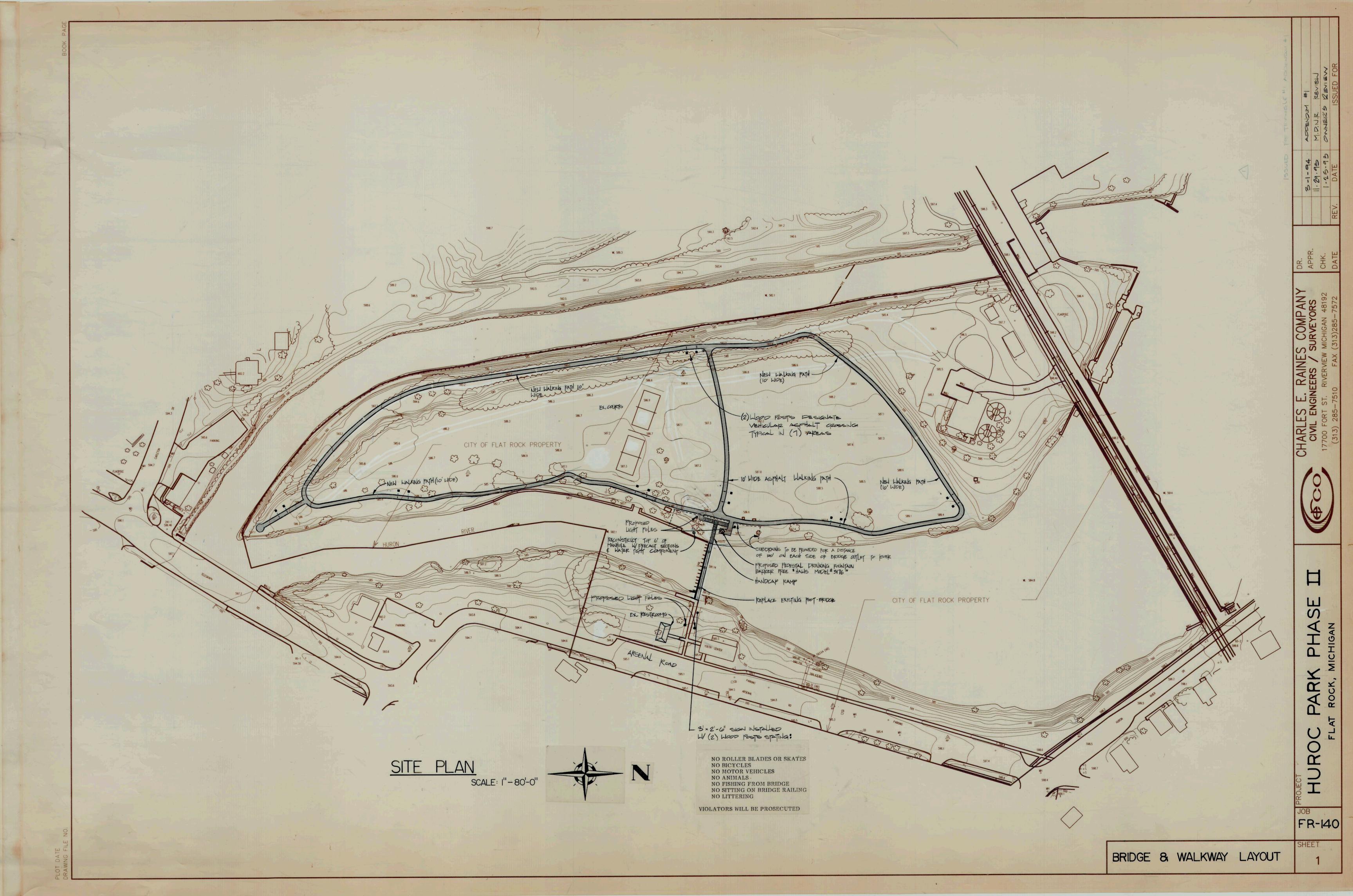


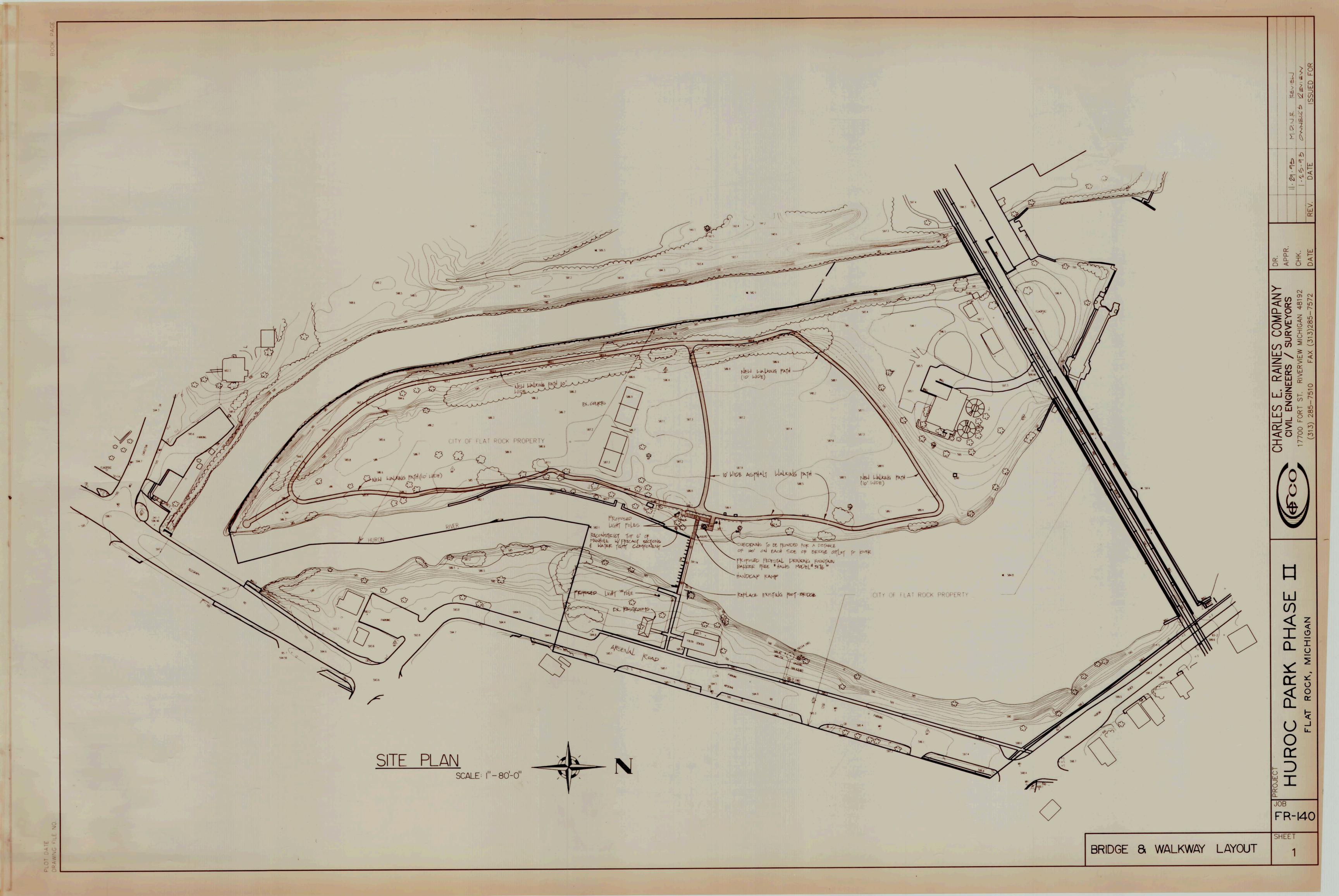














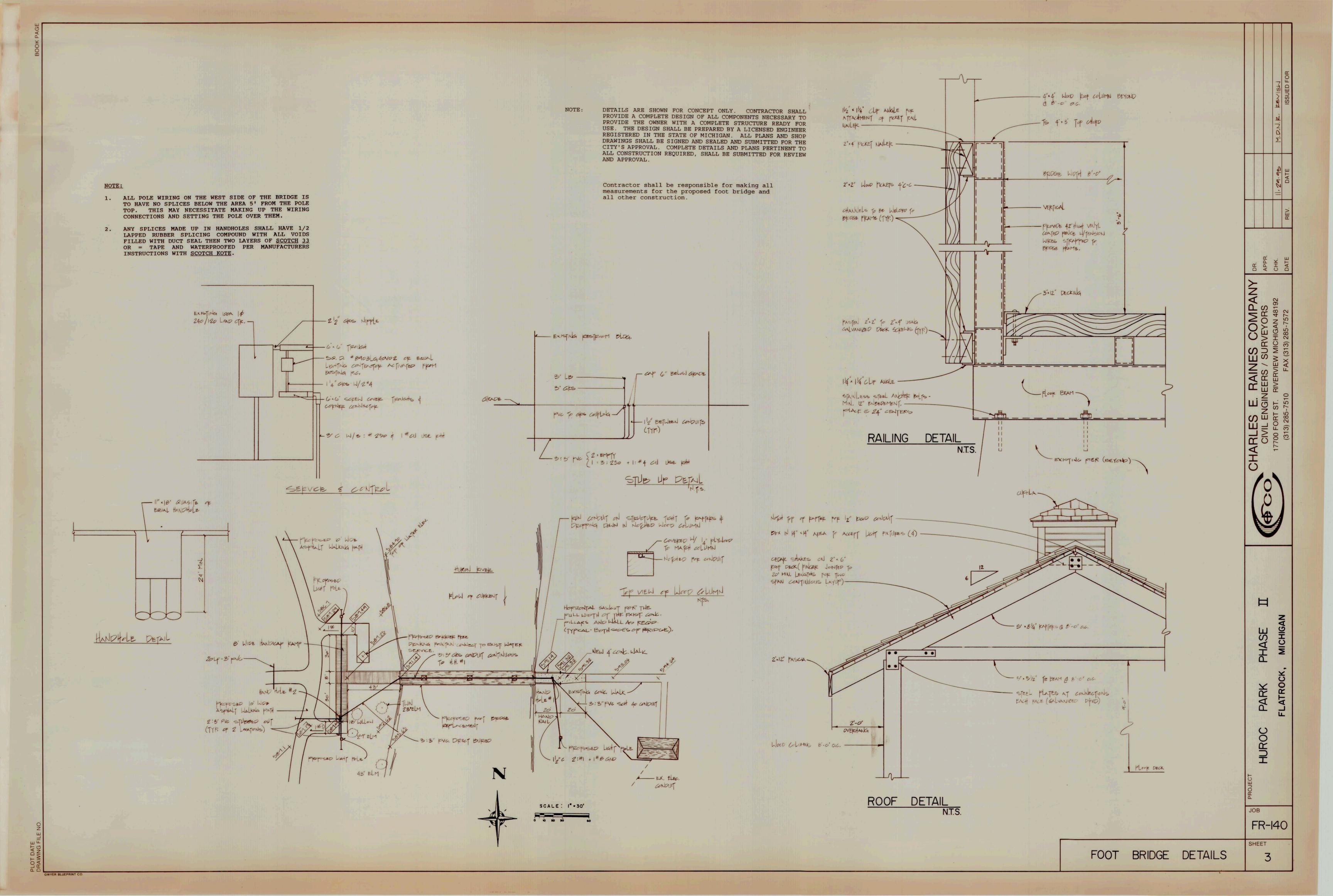
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PHASE PARK

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SHEET 2



Flat Rock Dam Selected Chronology and Highlights

- Early 1800s Wyandotte Chief Splitlog ran a grist mill at the location of the existing Flat Rock Dam. An impoundment has existed at this general location for at least 170 years.
- 1921 Land at and adjacent to the dam acquired by Henry and Clara Ford.
- Ford Motor Co. obtained a lease on 1.936 acres of land from the Detroit, Toledo and Ironton Railroad Company. Lease was for 5 years and renewable thereafter, at \$35 per year.
- c.1929 Ford Motor Company constructs dam, power house and lamp plant. Dam constructed on land leased from DTI. Dam built for Ford by Stone & Webster. Dam is gravity type, approximately 492 feet long (not including abutments and breastworks, which bring the length to about 540 feet), with a continuous ogee-shaped crest. Top crest elevation 590.5; structural height 13.5 feet. Impoundment is approximately 250 acres. A railway/ roadway bridge above the dam constructed concurrently; bridge is structurally separate, but its piers extend through the dam spillway and are involved with the dam's foundation, which is keyed into bedrock. The bridge is locate about 8 feet downstream of the dam, and includes 2 railway tracks and 2 vehicular lanes. The dam was originally intended to provide hydropower for adjacent Ford headlamp plant; the hydropower plant has not been used for many years. A boat lock is located at the dam's southwest end. The lock was constructed by Ford to allow barge traffic to the headlamp plant. (Due to cost of channel construction downstream of the dam, an approach channel was never dug and the lock never used).
- 1946 Major repairs to the bridge and lock by Ford, minor repairs were made to the dam's surfaces using gunite.
- Dam and adjoining land (approx. 349 acres) sold to HCMA by Ford Motor Company on August 16, 1951 for \$25,000. HCMA acquired the dam and land for the purpose of maintaining the impoundment and adjoining natural areas for recreational use. Ford assigned to HCMA its lease with DTI for the land upon which the dam was built. Ford also assigned HCMA its interests in electric, utility and gas pipelines attached to the roadway/ railway bridge, and its interest in ingress/ egress over the bridge. Ford also conveyed to the then-Village of Flat Rock land at each end of the dam, and the area southwest of the river between the river and mill race. Flat Rock's 20.8 acre "Hu-Roc Park" is now located on this land.
- 1951 Ford sold the lamp plant, hydropower plant and associated works to Moynahan Bronze Co. (plant now owned and operated by Flat Rock Metal, Inc.).
- 1951 Legal opinion from Miller Canfield dated September 26, 1951 comprehensively reviewing the Authority's obligations resulting from the 1951 purchase. The Opinion reviews status of Ford's leases assigned to HCMA, including original lease of DTI's land underlying dam to Ford dated June 1, 1926 and extended 07/25/31, 05/12/36 and 05/22/41. The 05/22/41 lease renewal extended lease term to 06/01/42 "and thereafter from year to year until terminated by either party giving the other one year's prior notice in writing of its intention to do so". Opinion concludes that HCMA is responsible to keep the dam in good repair so as not to adversely affect the rights of property owners above and below the dam.
- 1953 Contacts made by HCMA with DTI regarding renewal of the lease. However, apparently no new lease was ever prepared. The last payment of the \$35 rent was made by Ford in 1951. HCMA has never made a rent payment.
- 1956 The Village of Flat Rock and HCMA signed an agreement dated February 15, 1956 to allow Flat Rock to build a water intake in the lock portion of the dam. This agreement made Flat Rock responsible to perform "minor maintenance" of the dam.
- 1975 Boating accident occurred at the bridge and dam, two canoeists drowned.
- 1977 Wrongful death lawsuit filed against City of Flat Rock by plaintiff estate of Buell and Shoemaker, canoeists. Flat Rock implicated due to its (then) operation of water intake and plant at the dam, and its due care responsibilities under their 1956 lease. The Authority was brought into the lawsuit by later subrogation of Flat Rock's insurer, Transamerica.

- 1977 Flat Rock began prohibiting portaging around the dam, partly in response to the canoe accident.
- 1979 Dam inspected by Ayres, Lewis, Norris & May under the U.S. Army Corps of Engineers' National Dam Safety Program. Inspection found some cracking and spalling of the ogee spillway. ALNM recommended that deficiencies be repaired in the near future and to avoid future problems.
- c.1980 City of Flat Rock connects to Detroit City water and abandons their water intake in the lock structure.
- c.1980 Discussions regarding constructing a fish ladder begun between MDNR, Huron River Fishing Association and HCMA.
- 1981 Consent Judgment between Flat Rock's insurer and the Buell and Shoemaker estates, entered April 21, 1981; payments totaling \$450,000 made by Flat Rock.
- 1982 Court of Claims ruling dated October 27, 1982, denied an indemnity claim by Transamerica against the Authority
- 1983 Settlement agreement requiring City of Flat Rock to provide canoe access around dam.
- MDNR Fisheries Division (Ron Spitler, District Fisheries Biologist), by letter to HCMA dated October 18, 1984, request consideration by HCMA that the Flat Rock Dam be removed; by letter dated November 9, 1984, HCMA denied request.
- 1986 Legal opinion from Miller Canfield dated September 5, 1986, affirming HCMA's right to maintain the dam due to its status as lessee. Opinion notes that while the nominal rent to the railroad company (then Grand Trunk, currently Canadian National Railway) of \$35 annually has not been paid by the Authority for years and the lease has not been renewed, "the Authority would probably be considered to be continuing as a tenant at will, unless and until evicted by the Railroad". Restates Authority's obligation to "maintain the dam so as not to adversely affect the rights of nearby owners of river-front property".
- 1987 ALNM retained by HCMA to re-inspect the dam. Inspection found severe horizontal cracking of the crest of half the length of the dam, and severe separation of the gunite from the original concrete mass for about 115 feet of length. Five alternatives presented; recommendation that repairs be made to restore the structure to original shape. HCMA Board approves this recommendation at January, 1988 meeting.
- MDNR Fisheries Division again request that HCMA consider removing the dam. Letter includes an 11 page report entitled "Huron River Management Plan" dated 09/22/87 stating that either the Flat Rock Dam should be removed or a new fish passage should be constructed. HCMA Naturalists Robert Wittersheim and Gerald Wykes prepared report in response on the impoundment which discussed the diversity of wildlife and wetland vegetation that has developed of the years, separate form the fishery. Wittersheim and Wykes concluded that the dam and impoundment are a crucial part of Oakwoods Metropark and its unique natural areas. The Board, at their January 1988 meeting, elected to repair the dam crest to its original condition.
- MDNR Internal memorandum from District Fisheries Biologist to the Regional Fisheries Biologist discussing the improvement of the fishery for anadromous species that dam removal would provide. No discussion on the effects of dam removal on non-fish species and vegetation.
- 1990 HCMA completed a contract to repair the Dam (Saturn Construction) in the amount of \$363,825
- 1990 Michigan's Dam Safety Act, PA 300 of 1989 takes effect on June 1. Flat Rock Dam, ID No. 00556, classified as high hazard potential and required to be inspected every 3 years. HCMA being a local public agency, MDEQ was required to perform inspections upon request at no cost to the local agency.
- 1991 MDEQ waives the 1991 inspection since they had observed the 1990 repairs.

- 1994 Dam Safety Inspection and Report provided by MDEQ Dam Safety Inspection Unit.
- The Huron River Fishing Association completed the construction of the fish ladder, located in the lock, with volunteer labor, some donated materials, and some contracted work. HCMA supplied limestone at a cost of \$5,000. Total cost was approximately \$150,000, secured through private donations and grants (Fish ladder dedicated May 3, 1997).
- ALNM retained to perform an inspection of the dam due to some observed anomalies in flow patterns. The MDEQ was present tat the inspection as part of the scheduled inspection. Varying degrees of delamination of gunite and spalling were observed in the section not rehabilitated in 1990. ALNM's recommendations included regular monitoring of delaminated areas of the spillway to note changes in deterioration; removal of debris from the spillway; and some abutment repairs. A letter was sent to CNR, successor to Grand Trunk and DTI, regarding the observed serious deterioration of the bridge piers.
- 2002 Dam Safety Inspection and Report provided by Mr. Paul Wessel of the MDEQ Dam Safety Inspection Unit. Dam was noted to be in fair overall condition, and required ongoing monitoring of deteriorating areas.
- Dam Safety Inspection and Report prepared by Stantec (formerly ALNM). HCMA had requested MDEQ to perform the inspection, but funding issues related to the MDEQ Dam Safety Inspection Program prevented HCMA from requesting the normal MDEQ inspection. Stantec noted several areas of the dam having deficiencies: cracking and spalling of the right retaining wall and abutment, with areas of erosion; concrete deterioration in the left spillway abutment; deterioration of areas of the spillway crest.
- Stantec retained by HCMA on March 9 to perform a preliminary engineering study of the dam in the amount of \$57,400. Study included a detailed inspection of the dam structure, an evaluation of the extent of deterioration, determination of the scope of a repair project, an estimated cost of construction and a proposed schedule.
- 2007 Stantec submits report dated February 2007 to HCMA and MDEQ highlighting concerns include cracking and spalling of the right (west) retaining wall and abutment (the abandoned lock portion) along with areas of erosion, concrete deterioration in the left (east) spillway abutment, and deterioration of areas of the spillway crest. Construction cost of a repair project estimated at \$1,600,000.
- 2007 Stantec retained by HCMA on February 15 to provide design and construction phase engineering services in the amount of \$145,000.

26 E3, 3 1511,13,14,45

11128 PA614 DEED, made this 1674 day of August A.D. 1951,

between FORD MOTOR COMPANY, a Delaware corporation, duly authorized to do business in Michigan, with offices at 3000 Schaefer Road, Dearborn, Michigan, as Grantor, and HURON-CLINTON METROPOLITAN AUTHORITY, a public body corporate under the laws of Michigan, as Grantee, whose address is 1750 Guardian Building, Detroit 26, Michigan,

WITNESSETH:

That for One Dollar (\$1.00) and other valuable consideration, the receipt of which is hereby acknowledged, Grantor does hereby grant and convey to Grantee all its right, title and interest in and to land in the Townships of Huron and Brownstown, County of Wayne, State of Michigan, described as:

PARCEL 1 (10-G)

Land in the SE 1/4 of Section 26, T4S, R9E, Huron Twp., described as: Commencing at the E 1/4 post of Section 26 and running thence N 89° 01' W, 1030.27 feet; thence S 27° 11' W, 416.76 feet; thence N 7° 19' W, 64.99 feet; thence N 50° 49' W, 166.27 feet; thence N 89° 27' W, 145.18 feet; thence S 26° 23' E, 165.35 feet; thence S 37° 21' E, 213.09 feet; thence S 44° 44' E, 246.44 feet; thence S 60° 44' E, 530.90 feet; thence S 74° 40' E, 669.40 feet; thence N 00° 55' E, 1111.39 feet to the point of commencement, containing 26.23 acres more or less. It being intended to convey the same property deeded by Frank H. and Anna S. Stoflet to Henry and Clara J. Ford on April 2, 1921, and recorded Aug. 22, 1921, in Liber 1519 of Deeds, Page 593.

PARCEL 2 (10-D)

Land in Huron Twp., Section 26, described as follows:
Starting at a point on the north bank of the Huron River, which is S 00° 55! W, 1371.39 feet from the E 1/4 corner of Section 26, running thence N 00° 55! E, 1371.39 feet to E 1/4 corner of Section 26; thence N 39° 01! W, 1030. Feet; thence N 26° 58' 50" E, 31.02 feet; thence N 53° 31' 50" E, 592.19 feet; thence N 71° 29' 50" E, 408.58 feet; thence S 71° 59' 20" E, 179.85 feet; thence S 72° 28' 30" E, 425.04; thence S 40° 04' 30" E, 449.5 feet; thence N 89° 53' W, 358.91 feet; thence S 01° 54' W, 1800.23 feet N 62° 02' W, 131.14 feet to a point on the north bank of the Huron River; thence along said north bank as it winds and turns to place of beginning, containing 25.414 acres, more or less. It being the intent to convey that part of the parcel lying southerly of the 590.00 foot flow line traverse as was conveyed by deed from Kate Carney Bigelow to Henry and Clara J. Ford on July 7, 1920, and recorded A ugust 20, 1921, in Liber 1492 of Deeds on Page 591.

BERNARD J. YOUNGBLOOD, Register of Deeds
WAYNE COUNTY TO CONTRACT TO THE PROPERTY OF THE PROPE

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PARCEL 3 (10-E)

Land in SW 1/4 Section 25 and the NW 1/4 Section 36, T4S, R9E, Twp. of Huron, described as follows: Commencing at a point in the 590.00 foot flow line traverse; said point being 2646.58 feet south and 2678.79 feet east from the E 1/4 corner of Section 26; thence S 88° 46' W, 35.83 feet; thence N 74° 12' W, 622.68 feet; N 51° 58' W, 147.00 feet; thence N 82° 45' W, 290.35 feet; thence N 03° 15' W, 220.60 feet; thence N 08° 37' W, 237.82 feet; thence N 16° 33' W, 163.45 feet; thence N 20° 38' W, 189.59 feet; thence N 33° 42' W, 170.21 feet; thence N 61° 01' W, 459.00 feet; thence N 15° 05' W, 475.48 feet; thence N 01° 59' E, 242.31 feet; thence N 01° 52' W, 208.05 feet; thence N 14° 18' W, 209.64 feet; thence N 39° 40' W, 100.00 feet; thence N 89° 53' W, 358.91 feet; thence S 01° 54' W, 1800.23 feet; thence N 62° 02' W, about 180.00 feet to center of Huron River; thence down stream along the center of said river as it winds and turns to a point bearing S 00° 39' E from the point of commencement; thence N 00° 39' W, about 550.00 feet to point of commencement, containing 63.74 acres more or less. It being intended to convey the same property deeded by William F. and Maud Ernest to Henry and Clara J. Ford on April 9, 1921, and recorded Aug. 15, 1921, in Liber 1493 of Deeds, on Page 544.

Title to this parcel is conveyed subject to so much of an easement for an 8 inch pipeline granted June 1, 1949, to Susquehanna Pipe Line Company as is located on this parcel.

PARCEL 4 (10-F)

Land in SW 1/4 Section 25, and NW 1/4 Section 36, T4S, R9E, Huron Twp., described as follows: Commencing at a point on the 590.00 foot flow line traverse, said point being 731.21 feet south and 2700.87 feet east from the N 1/4 post of Section 35 and running thence S 79° 25' E. 39.24 feet; thence N 61° 30' E, 192.42 feet; thence N 76° 07' E, 415.52 feet; thence N 69° 48' E, 107.30 feet; thence N 68° 13' E, 462.79 feet; thence S 66° 05' E, 146.52 feet; thence 00° 13' E, about 680.00 feet to center of the Huron River; thence upstream along center of said river as it winds and turns to a point bearing N 03° 57' E from the point of commencement; thence S 03° 57' W, about 785.00 feet to point of commencement, containing 26.74 acres, more or less. It being intended to convey the same property deeded by Ida Glass to Henry and Clara J. Ford on May 5, 1921, and recorded on Aug. 20, 1921, in Liber 1493 of Deeds, Page 553.

PARCEL 5 (10-H)

Land in NW 1/4 Section 36 and in the SW 1/4 Section 25, T4S, R9E, Huron Twp., described as: Commencing at a point on the 590.00 foot flow line traverse, said point being 397.75 feet south and 3976.21 feet east from the N 1/4 post of Section 35 and running thence S 66° 05' E 69.38 feet; thence S 43° 36' E, 210.64 feet; thence S 44° 32' E, 74.50 feet; thence S 75° 12' E, 177.50 feet; thence S 62° 30' E, 298.00 feet; thence S 81° 24' E, 102.76 feet; thence N 00° 23' E, about 460.00 feet to center of Huron River; thence upstream along center of said river as it winds and turns to a point bearing N 00° 13' E from point of commencement; thence S 00° 13' W about 680.00 feet to point of commencement, containing 6.17 acres more or less. It being intended to convey the same property deeded by Thomas D. and Emma D. Smith to Henry and Clara J. Ford on April 13, 1921, and recorded July 21, 1921, in Liber 1538 of Deeds on Page 33.

- 3 -

Title to this parcel is conveyed subject to so much of an easement for an 8 inch pipeline granted June 1, 1949 to Susquehanna Pipe Line Company as is located on this parcel.

PARCEL 6 (10-I)

Land in NE 1/4 Section 36, T4S, R9E, Huron Twp. described as follows: Commencing at a point on the 590.00 foot flow line traverse, said point being 2646.58 feet south and 2678.79 feet east from the E 1/4 post of Section 26; thence N 88° 46° E, 467.00 feet; thence S 78° 08° E, 386.53 feet; thence S 60° 22° E, 64.00 feet; thence S 39° 46° E, 139.00 feet; thence S 22° 10° E, 133.54 feet; thence S 33° 07° E, 105.00 feet; thence N 89° 51° E, 218.24 feet; thence S 01° 23° W, about 370.00 feet to center of the Huron River; thence upstream along center of said river as it winds and turns to a point, said point bears S 00° 39° E from point of commencement thence N 00° 39° W about 550.00 feet to point of commencement, containing 8.51 acres more or less. It being intended to convey the same property deeded by Anthony Dame and Frank Dame to Henry and Clara J. Ford on April 14, 1921, and recorded August 15, 1921, in Liber 1537 of Deeds on Page 287.

PARCEL 7 (10-J)

Land in N 1/2 Section 36, T4S, R9E, Huron Twp. described as: Commencing at a point on the 590.00 foot flow line traverse said point being 4772.94 feet east and 829.34 feet south from the N 1/4 post of Section 35 and running thence S 81° 24' E, 105.90 feet; thence N 75° 20' E, 87.13 feet; thence N 40° 22' E, 230.00 feet; thence S 79° 54' E, 389.95 feet; thence S 74° 34' E, 398.48 feet; thence S 64° 40' E, 404.48 feet; thence S 55° 57' E, 420.50 feet; thence N 00° 39' W, about 390.00 feet to center of Huron River; thence upstream along center of said river as it winds and turns to a point bearing N 00° 23' E from point of commencement, thence S 00° 23' W, about 460.00 feet to point of commencement, containing 17.19 acres more or less. It being intended to convey the same property deeded by John C. and Mary L. Near to Henry and Clara J. Ford on August 6, 1921, and recorded August 22, 1921, in Liber 1492 of Deeds on Page 599.

PARCEL 8 (10-K)

Land in NE 1/4 Section 36, T4S, R9E, described as follows: Commencing at a point on the 590.00 flow line traverse, said point being 5962.65 feet south and 23.83 feet east from the NE corner of Section 25; thence N 70° 43' W, 196.35 feet; thence N 74° 12' W, 408.81 feet; thence S 87° 31' W, 138.67 feet; thence S 89° 51' W, 580.00 feet; thence S 01° 23' W, about 370.00 feet to center of the Huron River; thence downstream along the center of said river, as it winds and turns to a point, said point bearing S 00° 41' E from point of commencement; thence N 00° 41' W, about 1030.00 feet to point of commencement, containing 26.70 acres, more or less. It being intended to convey the same property deeded by Horace H. and Susan A. Thompson and Oren Cook Thompson to Henry and Clara J. Ford on April 7, 1921, and recorded April 12, 1921, in Liber 1529 of Deeds on Page 40.

PARCEL 9 (10-L)

Land in the W 1/2 Section 31, T4S, R10E, Brownstown Twp. and the E 1/2 Section 36, T4S, R9E, Huron Twp., described as follows: Commencing at a point that is N 0° 39' W, 1882.74 feet and N 28° 43' 20" W, 139.93 feet and N 79° 51' 35" W,

1262.71 feet from the SE corner of Section 36, Huron Two.; thence S 79° 51' 35" E. 1262.71 feet; thence S 23° 43' 20" E, 139.93 feet; thence S 27° 59' E. 49.41.1 feet to the northerly line of a 100.00 foot Right of Way of the D. T. & T. PR; thence & along said Right of Way line N 62° 01' 20" E, 300.00 feet to the westerly line of the Moynahan Bronze Co.; thence running along the property lines of the said Moynahan Bronze Co. in the following courses; thence N 27° 59' W, 858.00 feet; thence N 62° 01' 20" E, 363.00 feet to a point on the southerly bank of the muron River; thence following the said southerly bank in the following 8 courses: S 59° 54' 40" E, 114.28 feet; thence N 69° 16' 50" E, 53.64 feet; thence N 86° 58' 20" E, 80.21 feet; thence S 67° 02' 20" E, 133.73 feet; thence S 11° 30' 20" E, 147.30 feet; thence S 37° 30' 30" E, 42.82 feet; thence S 72° 26' E, 95.62 feet; thence S 25° 00' 50" W, 14.19 feet to the northeasterly face of wall at the Forebay; thence S 62° 59' 20" E, 20.00 feet, across the forebay to a point on the river side face of the wall; thence S 27° 00' 40" W, 20.00 feet; thence on a line paralleling the northeasterly face of the southwesterly wall of the lock, S 62° 59' 20" E, 170.83 feet to the northerly line of a 10°.00 foot right of way of the D. T. & I. RE; thence along the said northerly line of said right of way N 62° 01' 20" E, about 270.00 feet to the center of the Huron River; thence upstream alons the center of said right of way N 62° 01' 20" E, about 270.00 feet to the center of the Huron River; thence upstream alons the center of said right of way N 62° 01' 20" E, about 270.00 feet to the center of the Huron River; thence upstream alons the center of said right of way N 62° 01' 20" E, about 270.00 feet to the center of the Huron River; thence upstream alons the center of said right of way N 62° 01' 20" E, about 270.00 feet to the center of the Huron River; thence some or less. It being intended to convey part of property deeded by George W. and Nettle Case to Penry and Clara

(10-L) (177)

Land in the SW 1/4 of Section 31, Brownstown Twp., described as follows: Commencing at a point that is N 89° 33' E, 2040.14 feet and N 20° 48' W, 145.19 feet, from the SW corner of Section 31, Brownstown Twp. and running thence N 32° 07' W, 378.39 feet; thence S 89° 33' W, 346.29 feet; thence S 00° 27' E, 458.00 feet; thence S 89° 33' W, 100.00 feet; thence N 00° 27' W, 458.00 feet; thence S 89° 33' W, 550.21 feet; thence N 27° 59' W, 593.62 feet; to the southerly line of a 100.00 foot right of way of the D. T. & I. RR; thence along the said southerly line N 62° 01' 20" E, about 1400.00 feet to the easterly high bank of the mill race; thence southerly along the easterly high bank of said Mill Race, as it winds and turns about 1730 feet to the tip of the island; thence easterly about 60 feet across the westerly half of the Huron River to the center of same and to the northwesterly line of Telegraph Road, as widened; thence along the northwesterly line of said road, S 32° 21' CO" W, 76.00 feet; thence continuing along the northwesterly line of Telegraph Road, S 57° 29' 15" W, 97.32 feet to the most easterly corner of the State Police parcel; thence N 57° 46' 30" W, 277.94 feet to the point of commencement, containing 26.98 acres more or less. It being intended to convey port of the same property deeded by George W. and Mettie Case to denry and Clara J. Ford on March 13, 1921. and recorded on April 15, 1921, in Liber 1470 of Deeds on Page 555.

Title to the two last described parcels is conveyed subject to the following easements.

l. An easement of right-of-way granted to Moynahan

Bronze Company, its successors or assigns, 60 feet in

width running adjacent to and parallel with the northerly
line of the D. T. & I. Railroad right-of-way.

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- 2. An easement granted to Moynahan Bronze Company, its successors or assigns, 20 feet in width for construction, operation, maintenance and replacement of a sanitary sewer and pump chamber as reserved in a Quit Claim Deed to Village of Flat Rock dated September 16, 1949.
- 3. An easement granted to Moynahan Bronze Company, its successors or assigns 20 feet in width for the construction, operation, maintenance and replacement of a sanitary sewer as reserved in a Quit Claim Deed to the Village of Flat Rock, dated January 31, 1950.
- 4. An easement of right-of-way for a drain granted to ✓ County of Monroe by a release of right-of-way dated July 12, 1938.
 - 5. An easement of right-of-way for an electric trans-√ mission line and a telephone line granted to Detroit Edison Company and Michigan Bell Telephone Company jointly across a 10 foot strip of land, by an agreement dated May 31, 1951.
- √ 6. An easement or permit to construct and maintain a √ private sewer granted to Hilda Heier and Hazel Burden by an agreement dated November 28, 1947.
- 7. An easement for placement of poles and construction and maintenance of a radio tower granted to Michigan State Police by an agreement dated January 14, 1942.
- 8. An easement across a strip of land 10 feet wide for √ construction of a pipeline granted to Detroit Southern Pipe Line Company by an agreement dated February 24, 1933.
- 9. An easement across a strip of land 15 feet wide for construction, maintenance and operation of a transmission line granted to Detroit Edison Company by an agreement dated October 9, 1930.
- 10. An easement for construction, maintenance and use of a pipeline and an additional pipeline granted to The Buckeye Pipe Line Company by an original agreement dated June 12, 1929 and a supplement thereto dated September 2nd, 1947.

PARCEL 10 (10-0) Bonte

Land in NW 1/4 Section 31, T4S, R10E, Brownstown Twp., described as follows: Commencing at a point on the 590.00 foot flow line traverse, said point being 5962.65 feet south and 23.83 feet east from the NE corner of Section 25, T4S, R9E, and

running thence S 00° 41' E, 222.35 feet to a 4" iron pipe; thence N 89° 57' E, 256.98 feet to a point in the 590.00 foot flow line traverse; thence N 30° \pm 6' W, 33.70 feet; thence N 52° 31' W, 214.53 feet; thence N 70° \pm 3' W, \pm 6.50 feet to point of commencement containing 0.79 acres, more or less.

Also commencing at a point on the 590.00 foot flow line traverse, said point being 6449.23 feet south and 589.64 feet east from NE corner of Section 25, TAS, R9E, and running thence S 03° 10' W, 322.43 feet; thence N 17° 06' E, 253.48 feet; thence N 25° 09' W, 115.42 feet to point of commencement; containing 0.24 acres more or less.

Also commencing at a point on the 590.00 foot line traverse, said point being 567.19 feet east and 6853.56 feet south from the NE corner of Section 25, TAS, R9E, and running thence S 03° 10' W, 179.38 feet; thence N 84° 46' E, 18.66 feet; thence N 02° 30' W, 90.15 feet; thence N 03° 04' W, 87.46 feet to point of commencement, containing 0.05 acres more or less.

It being intended to convey the same property deeded by Henry J. and Anna Bunte and George W. Bunte to Henry and Clara J. Ford on June 24, 1921, and recorded on July 21, 1921, in Liber 1494 of Deeds on Page 282.

Title to the foregoing parcel is conveyed subject to an easement for a 6 inch drain tile granted to Board of County Park Trustees, Wayne County, Michigan, by an agreement dated October 22, 1926.

PARCEL 11 (10-P) Vreeland

Land in Section 31, T4S, R10E, described as follows:
Commencing at a point on the town line between Huron and Brownstown Twps., said point being 6184.99 feet south and 26.47 feet east from the NE corner of Section 25, T4S, R9E, and running thence N 89° 57' E, 256.98 feet; thence S 30° 46' E, 109.15 feet; thence S 64° 31' E, 243.12 feet; thence S 25° 09' E, 73.00 feet; thence S 03° 10' W, 584.36 feet; thence N 84° 46' E, 18.66 feet; thence S 02° 30' E, 6.00 feet; thence S 44° 50' E, 285.91 feet; thence S 51° 01' E, 519.59 feet; thence S 80° 09" E, 386.60 feet; thence S 64° 17' E, 274.63 feet; thence S 48° 46' E, 307.53 feet; thence S 36° 11' E, 280.20 feet; thence S 42° 34' E, 108.13 feet; thence S 70° 52' E, 179.41 feet; thence S 59° 56' E, 78.93 feet; thence S 40° 25' W, 88.68 feet to the northerly line of the D. T. & I. RR right-of-way; thence S 60° 11' W, along said right-of-way line to the center of the Huron River; thence upstream along center of said river as it winds and turns to the town line between Huron and Brownstown Twps.; thence N 00° 41' W; along said Twp. line about 738.00 feet to point of commencement, containing 32.47 acres, more or less.

It being intended to convey the same property deeded by Sam L. and Grace I. Vreeland to Henry and Clara J. Ford, July 13, 1921, and recorded on Aug. 3, 1921, in Liber 1434 of Deeds on Page 338.

Grantor reserves in the foregoing parcel two easements of sufficient width for the use, maintenance or renewal of

- 1. An intake for water located in the millpond and an intake pipe extending therefrom to a water filtration plant located on the north bank of said millpond.
- 2. A water line extending in a line approximately parallel to the water intake line and beyond the intake to a manufacturing plant now owned by Moynahan Bronze Company.

 Nac. 8-15-51

Lilling Right

2/40









Grantor hereby also releases and conveys to Huron-Clinton Metropolitan Authority, the flowage rights reserved in two deeds as follows:

- 1. In deed dated 12-16-48, by which Ford Motor Company conveyed two parcels of land, one with an area of 8.19 acres, and the other with an area of 42.25 acres to Huron-Clinton Metropolitan Authority.
- 2. In deed dated 3-29-49, by which Grantor conveyed to Grantee a parcel having an area of 5.93 acres.

Together with all the hereditaments and appurtenances thereto belonging or in any wise appertaining; TO HAVE AND TO HOLD the premises as before described, with the appurtenances, to the said Grantee, its successors and assigns, Forever. And the Granter, for itself, its successors and assigns, does covenant and agree to and with the Grantee its successors and assigns that it has not heretofore done, committed or willingly suffered to be done or committed any act or thing whatsoever whereby the title and estate hereby conveyed, or any part thereof, are or shall be charged or encumbered, except as to visible easements and easements and restrictions of record.

Grantor grants, conveys and assigns all rights under agreements granting the easements hereinbefore mentioned, except with respect to the agreements granting easements to The Buckeye Pipe Line Company and the Detroit Edison Company, in and under which agreements it reserves (1) the right to collect annual charges from The Buckeye Pipe Line Company and (b) such rights as it now has under both agreements with respect to lands Grantor will continue to own subsequent to the date of this deed.

IN WITNESS WHEREOF, the said Ford Motor Company has caused this Deed to be signed in its name by its Secretary and sealed with its corporate seal on the day and year stated in the commencement of this Deed.

IN PRESENCE OF:

A. H. Madsen, Jr.

FORD HOTOR COMPANY

F/A. Incmson

Its

SECRETARY

H. D. Newberry

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STATE OF MICHIGAN) SS.

On this /6 th day of lugus A.D. 1951, before me, a Notary Public, appeared F.A. Thomson to me personally known, who being by me sworn, did say that he is the SECRETARY of Ford Motor Company, the corporation named in and which executed this Deed and that the seal affixed hereto is the corporate seal of said corporation and that this Deed was signed and sealed in behalf of said corporation by authority of its Board of Directors; and said F.A. Thomson acknowledged this instrument to be the free act and deed of said corporation.

Andrew H. Madsen, Jr.
Notary Public, Wayne County, Michigan.

My commission expires October 27, 1953.