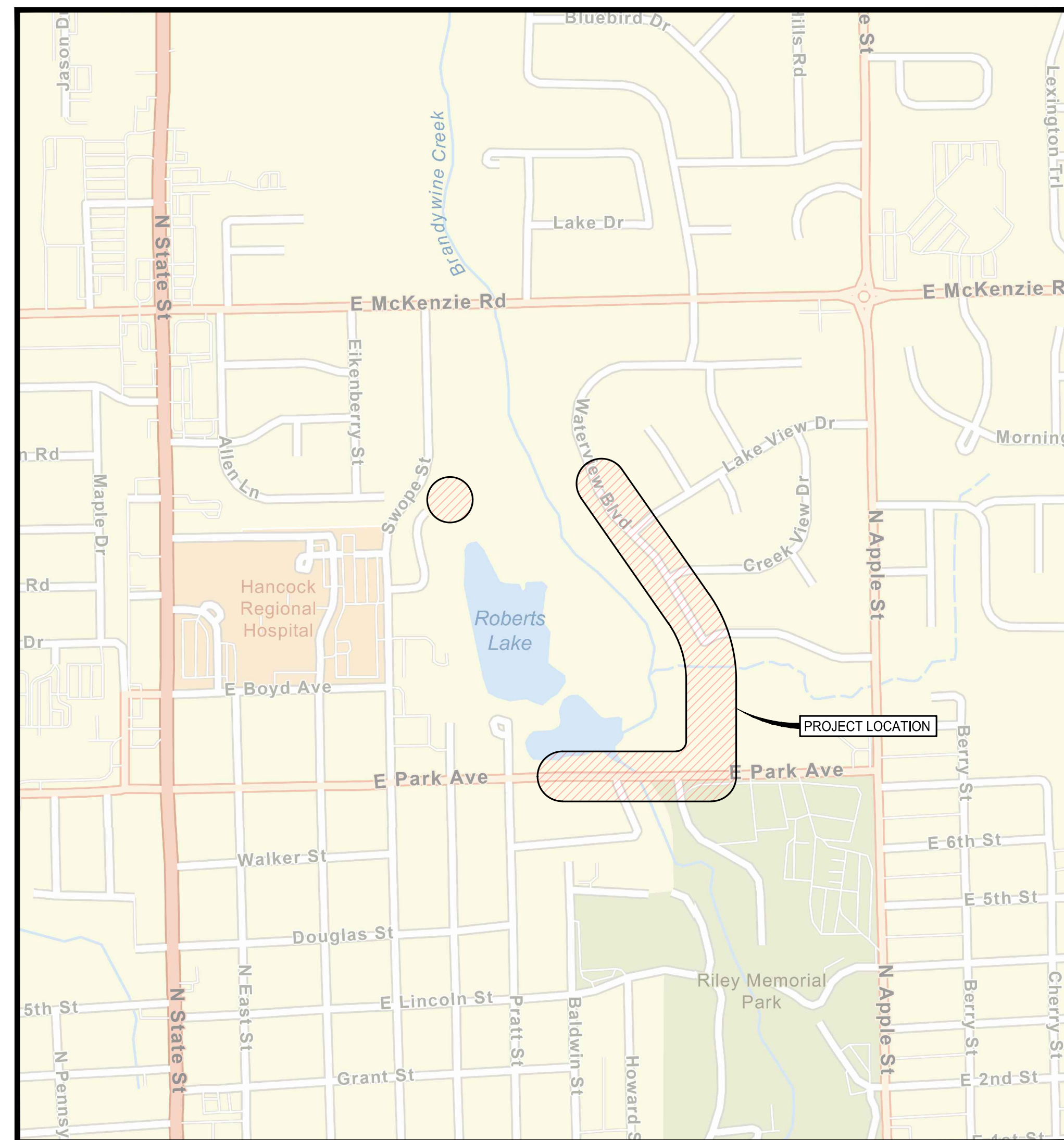
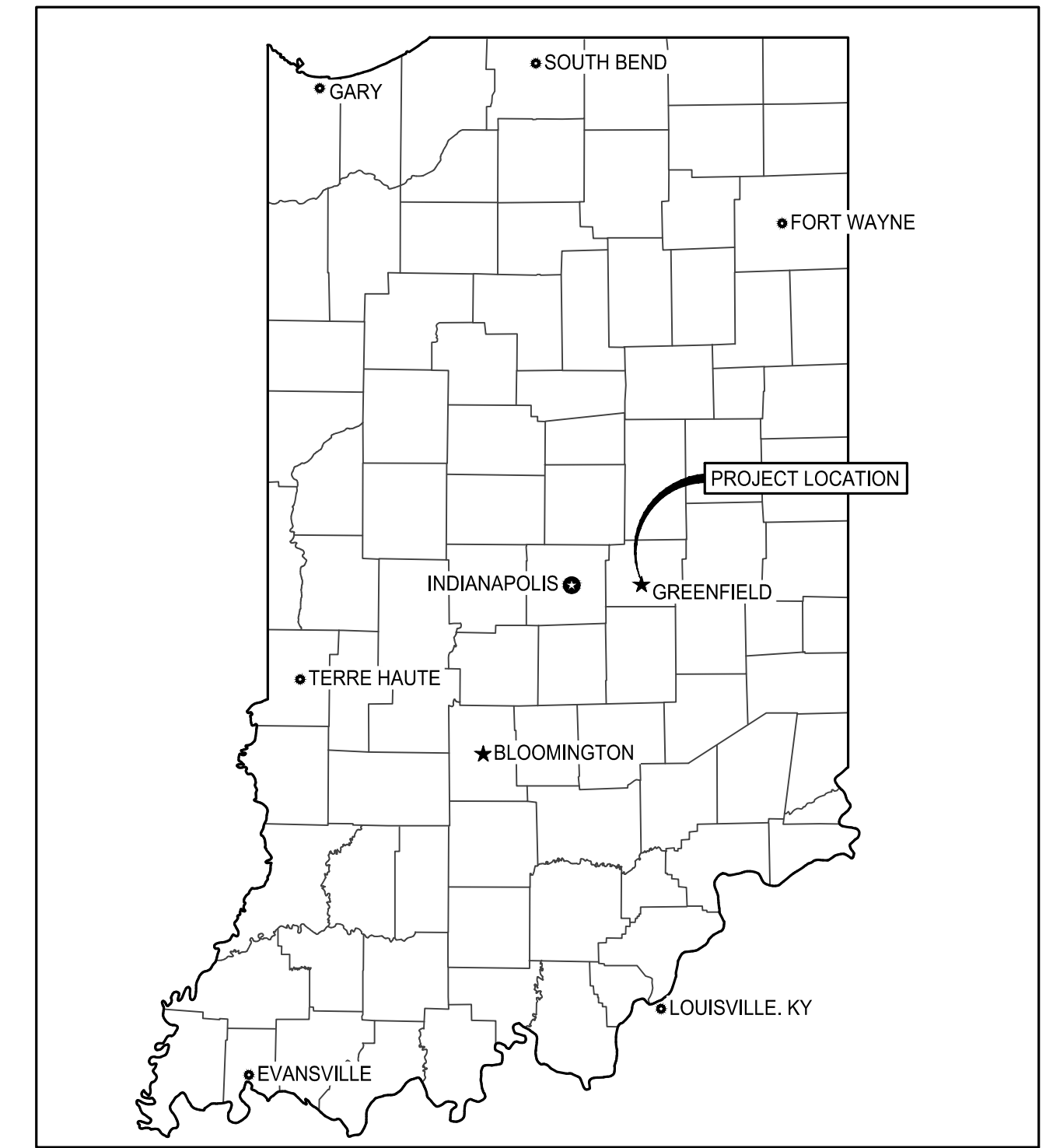


CITY OF GREENFIELD

PLANS FOR WATERVIEW LIFT STATION RELOCATION

PROJECT NO. 2021.02592



PROJECT LOCATION 
NOT TO SCALE

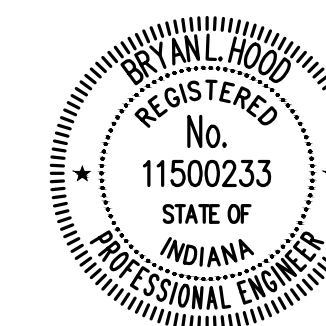
FINAL DESIGN

PLANS PREPARED FOR:
CITY OF GREENFIELD
809 SOUTH STATE STREET
GREENFIELD, IN 46140



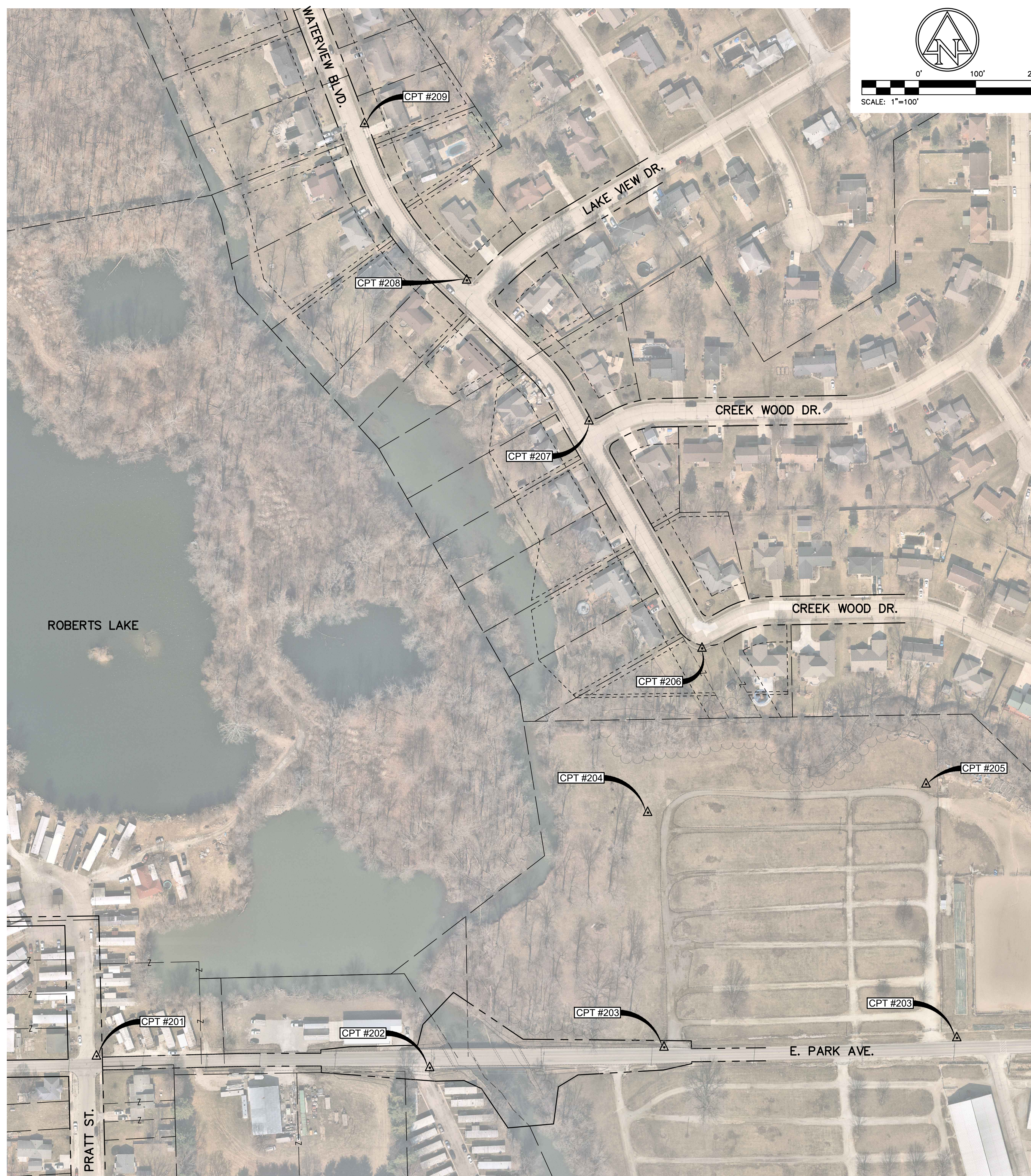
AMERICAN
STRUCTUREPOINT
INC.

9025 RIVER ROAD, SUITE 200
INDIANAPOLIS, IN 46240
TEL 317.547.5580 FAX 317.543.0270
www.structurepoint.com



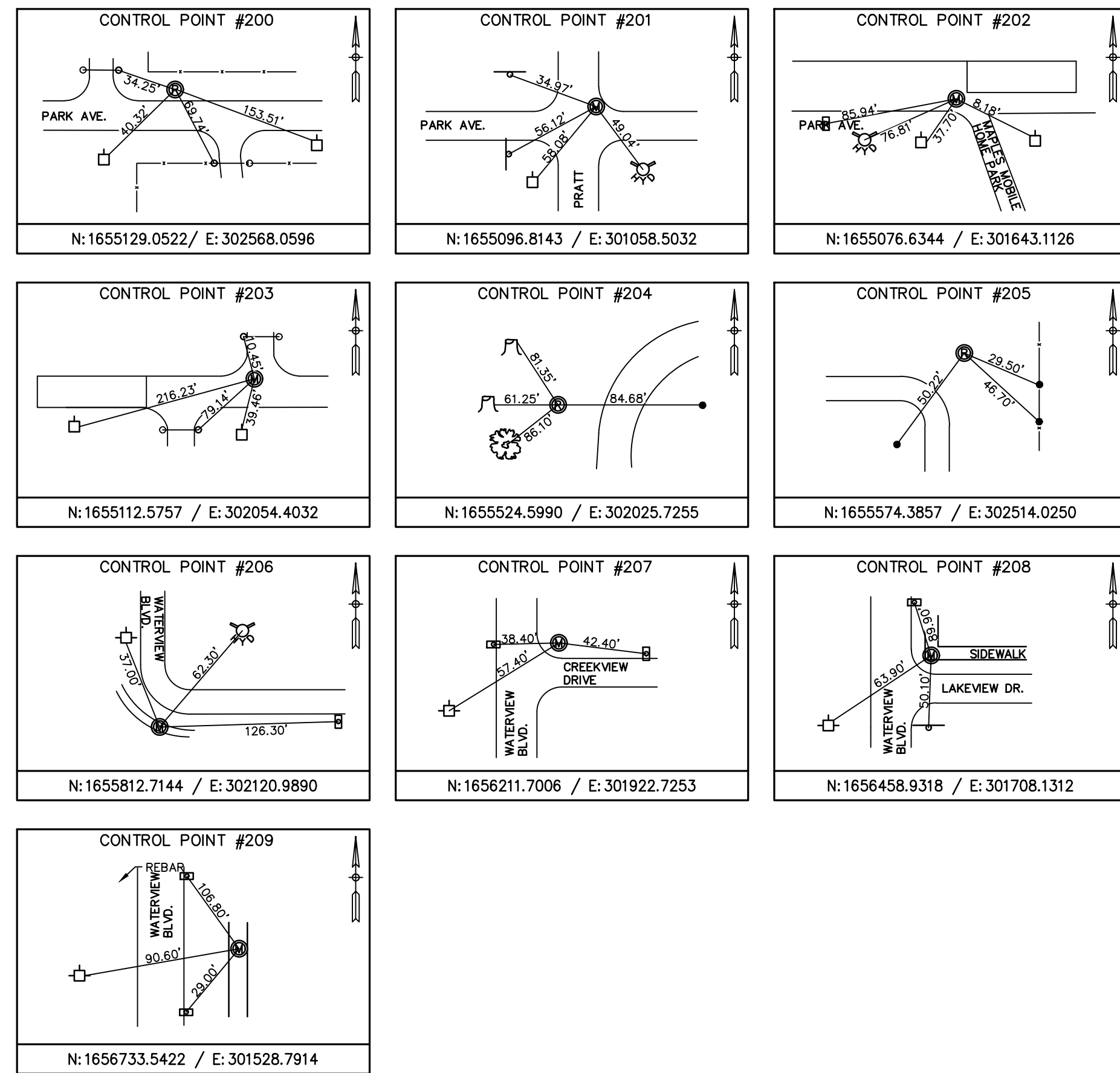
Bryan L. Hood 5/10/2024
BRYAN L. HOOD
PROFESSIONAL ENGINEER No. 11500233
STATE OF INDIANA

PLOT DATE: 5/17/2024 1:10 PM EDITED BY: PTRAMINSKI DRAWING FILE: \\INDY\SNIP\PROJECTS\2021\02592.D DRAWINGS\UTILITY_INFRASTRUCTURE\202102592.U\CP.DWG

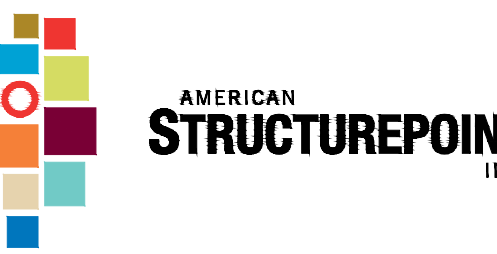


BENCHMARK INFORMATION (NAVD 88 DATUM)
 BENCHMARK ELEVATIONS WERE ESTABLISHED FROM GPS OBSERVATIONS ON THE IDENTIFIED BASE STATION DESCRIBED WITHIN. AN NGS OPUS SOLUTION (FILE #01270840.226 OP1648469132916) WAS OBTAINED AND USED TO CONTROL THE PROJECT'S VERTICAL DATUM. THE ELEVATIONS WERE THEN TRANSFERRED TO THE SITE USING DIFFERENTIAL LEVELING.

BENCHMARK AND CONTROL DATA – 88' DATUM		
TBM NO.	ELEV.	DESCRIPTION
20	871.71	CUT "X" SET ON THE NORTHEAST SIDE OF A FIRE HYDRANT; LOCATED AT THE SE QUADRANT OF PRATT ST. AND PARK AVE.
21	866.23	CHISELED TRIANGLE FOUND ON THE NORTHWEST SIDE OF THE BRIDGE ABUTMENT OF PARK AVE. BRIDGE OVER BRANDYWINE CREEK
22	876.87	MAG SPIKE SET ON THE NORTHWEST SIDE OF A LIGHT POLE LOCATED INSIDE THE 4-H LOT; ±400' NORTH OF THE CL OF PARK AVE.; NORTH-MOST LIGHT POLE
23	870.55	CHISELED "X" ON THE WEST BOLT OF A FIRE HYDRANT; LOCATED @ THE NORTHEAST QUADRANT OF CREEKWOOD DR. AND WATERVIEW BLVD.
24	872.68	CHISELED "X" ON THE WEST BOLT OF A FIRE HYDRANT; LOCATED @ THE NORTHEAST QUADRANT OF WATERVIEW BLVD. & CREEKVIEW DR.
25	871.10	CHISELED SQUARE ON THE SOUTH SIDE OF A LIFT STATION; LOCATED ±40' WEST OF THE CL OF WATERVIEW DR. & BETWEEN RES. 588 & RES. 592



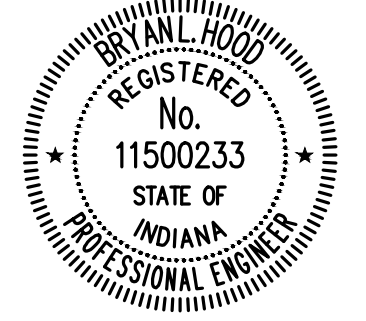
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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



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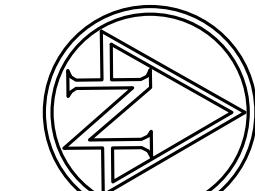
REVISION SCHEDULE		
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BENCHMARK AND CONTROL POINT DATA

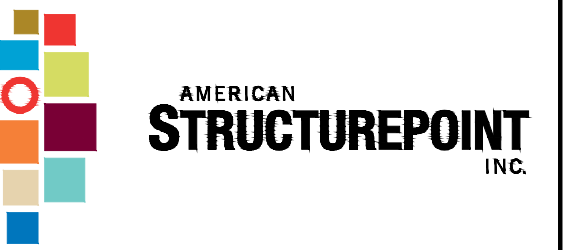
C-103

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0' 80' 160'
SCALE: 1"=80'

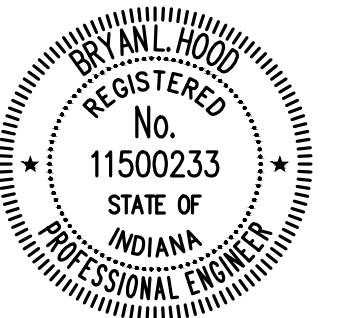
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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



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OVERALL PLAN

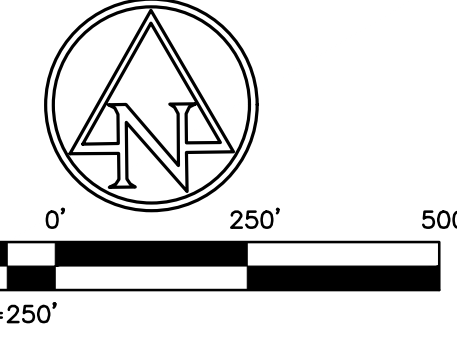
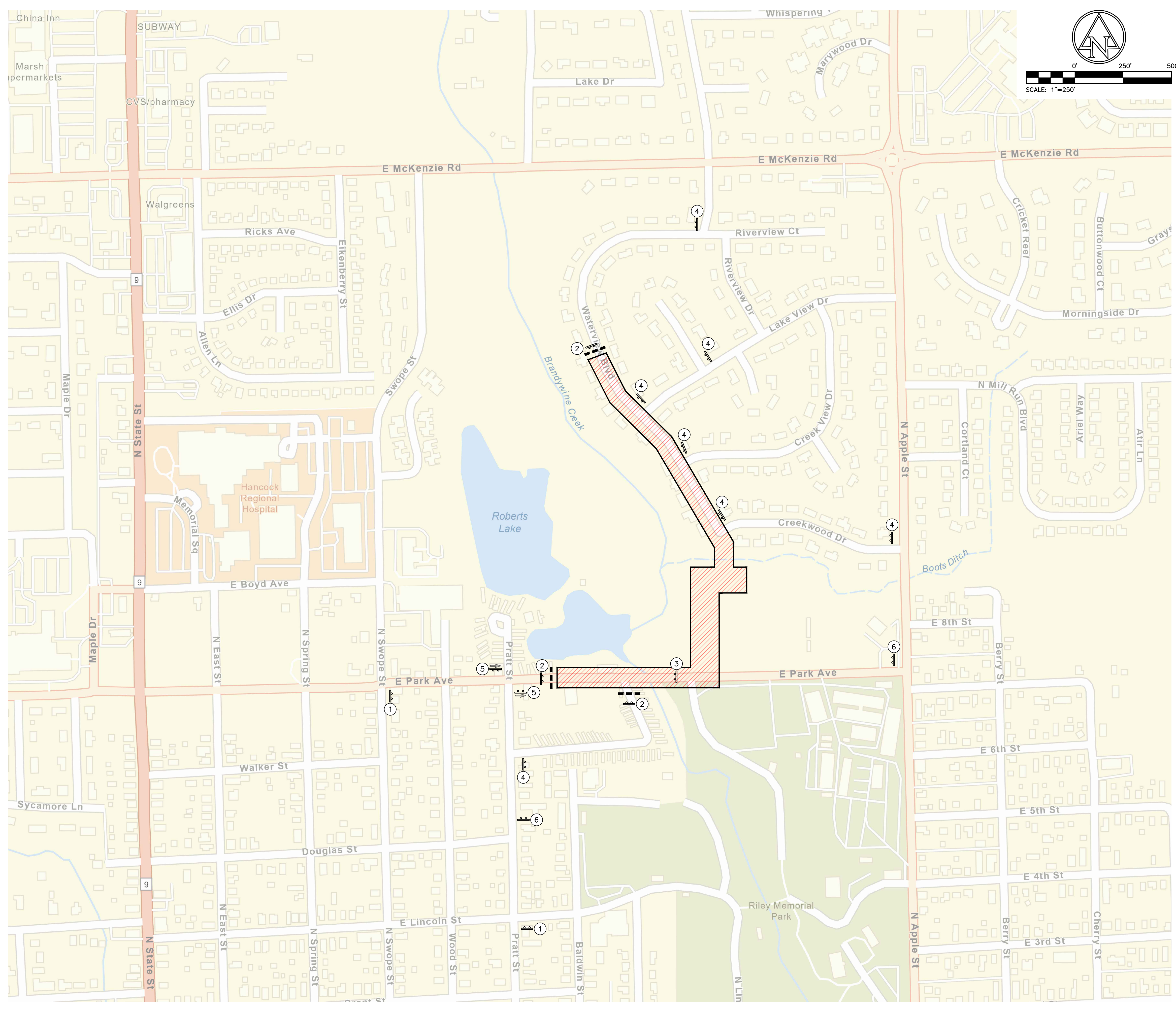
C-104

MAINTENANCE OF TRAFFIC LEGEND

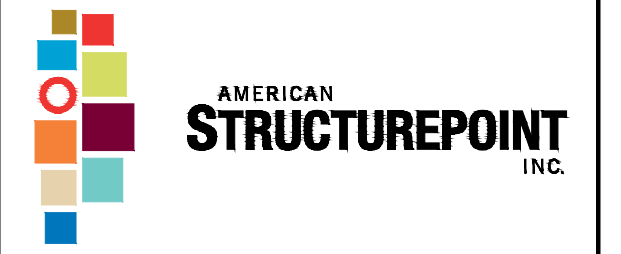
- ① ROAD WORK AHEAD
- ② ROAD CLOSED (WITH TYPE III BARRICADE)
- ③ ROAD CLOSED AHEAD, LOCAL TRAFFIC ONLY (DETOUR LEFT / RIGHT)
- ④ ROAD CLOSED AHEAD, LOCAL TRAFFIC ONLY
- ⑤ NO (LEFT / RIGHT) TURN
- ⑥ ROAD CLOSED AHEAD LOW INTENSITY FLASHING YELLOW LIGHT (TYPE A)
- ☉ SIGN
- BARRICADE
- ☉ DRUM BARRICADE
- ▨ CONSTRUCTION ZONE

GENERAL NOTES

1. CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES DURING ALL STAGES OF CONSTRUCTION.
2. REFER TO MAINTENANCE OF TRAFFIC SPECIFICATIONS FOR ALL RELATED WORK.
3. ALL SIGNS, BARRICADES, AND PAVEMENT MARKINGS SHALL CONFORM TO THE INDIANA MANUAL ON TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 2011 AND ANY CURRENT SUPPLEMENTS THERETO.
4. AT LEAST 2 DAYS BEFORE WORK AFFECTING THE ROADSIDE OR ROADWAY BEGINS, NOTIFICATION SHALL BE GIVEN OF SUCH INTENTION TO POLICE DEPT., CITY OF GREENFIELD FIRE DEPARTMENT, TOWNSHIP SCHOOLS, AND COUNTY HIGHWAY DEPARTMENT.
5. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE PROPERTIES DURING CONSTRUCTION.
6. ANY CONSTRUCTION BEING DONE WITHIN AN INTERSECTION SHALL MAINTAIN FLAGGING OPERATIONS AND TRAFFIC CONTROL PER DETAILS.
7. CONTRACTOR SHALL COORDINATE TRAFFIC CONTROL WITH INDOT AND COMPLY WITH ALL COUNTY STANDARDS, COMMENTS AND REQUIREMENTS FOR MAINTENANCE OF TRAFFIC. ROAD CLOSURE REQUESTS MUST BE MADE TO CITY OF GREENFIELD 15 DAYS IN ADVANCE OF CLOSURE FOR REVIEW AND APPROVAL.
8. PAVEMENT AND SHOULDERS HAVING AN EDGE DROP OF MORE THAN 3 INCHES SHALL BE DELINEATED WITH DRUMS OR PROTECTED BY BARRIER.
9. SPACING OF CHANNELIZING DEVICES ON TANGENTS SHALL BE 110' OR LESS UNLESS OTHERWISE NOTED.
10. SPACING OF CHANNELIZING DEVICES ON TAPERS SHALL BE 55' OR LESS UNLESS OTHERWISE NOTED.
11. A MINIMUM OF 10' LANES SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
12. ALL SIDE STREETS AND DRIVEWAYS SHALL BE CONSTRUCTED USING PARTIAL WIDTH STAGING. ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
13. REMOVE AND REPLACEMENT OF EXISTING PAVEMENT MARKINGS WILL BE REQUIRED WITHIN THE MAINTENANCE OF TRAFFIC INFLUENCE AREA, AS NECESSARY, DURING ALL STAGES OF CONSTRUCTION.
14. THE CONTRACTOR SHALL AT ALL TIMES PROTECT THE PAVEMENT SURFACE AND RIGHT-OF-WAY FROM DAMAGE DUE TO THE USE OF HEAVY EQUIPMENT, AND SHALL PROVIDE AND USE APPROVED PADS, PLANKS OR DIRTY CUSHION TO PROTECT AGAINST OTHER DAMAGE. IMMEDIATELY BEFORE ANY SECTION OF THE ROADWAY IS TO BE PLACED BACK IN USE FOR TRAFFIC, THE CONTRACTOR SHALL REMOVE ALL EXCESS DIRT AND SWEEP THE PAVEMENT SURFACE TO ELIMINATE UNNECESSARY DUST HAZARDS.



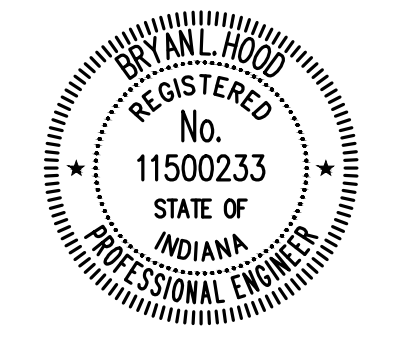
CITY OF GREENFIELD



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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



Bryan L. Hood 5/10/2024
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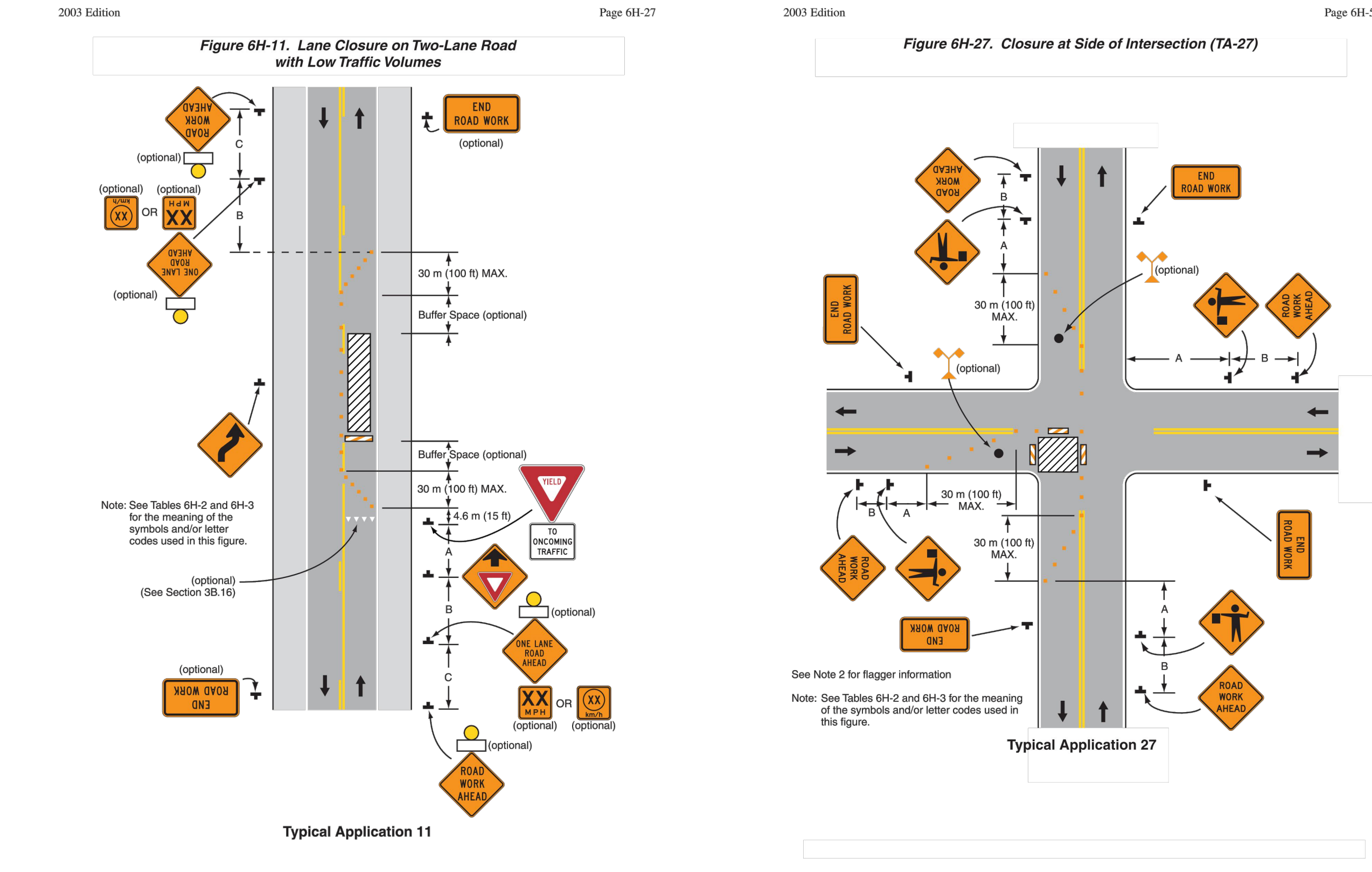
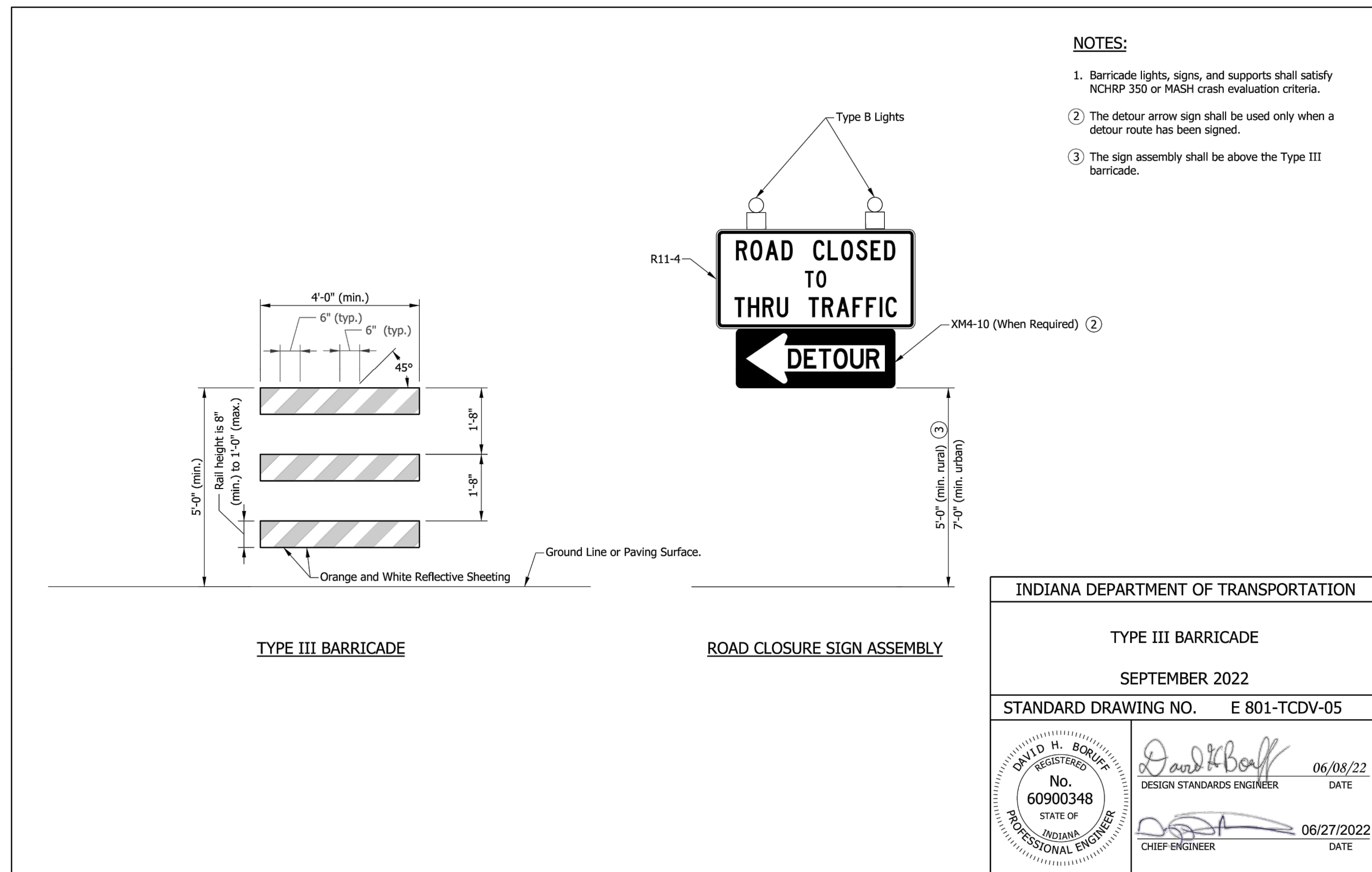
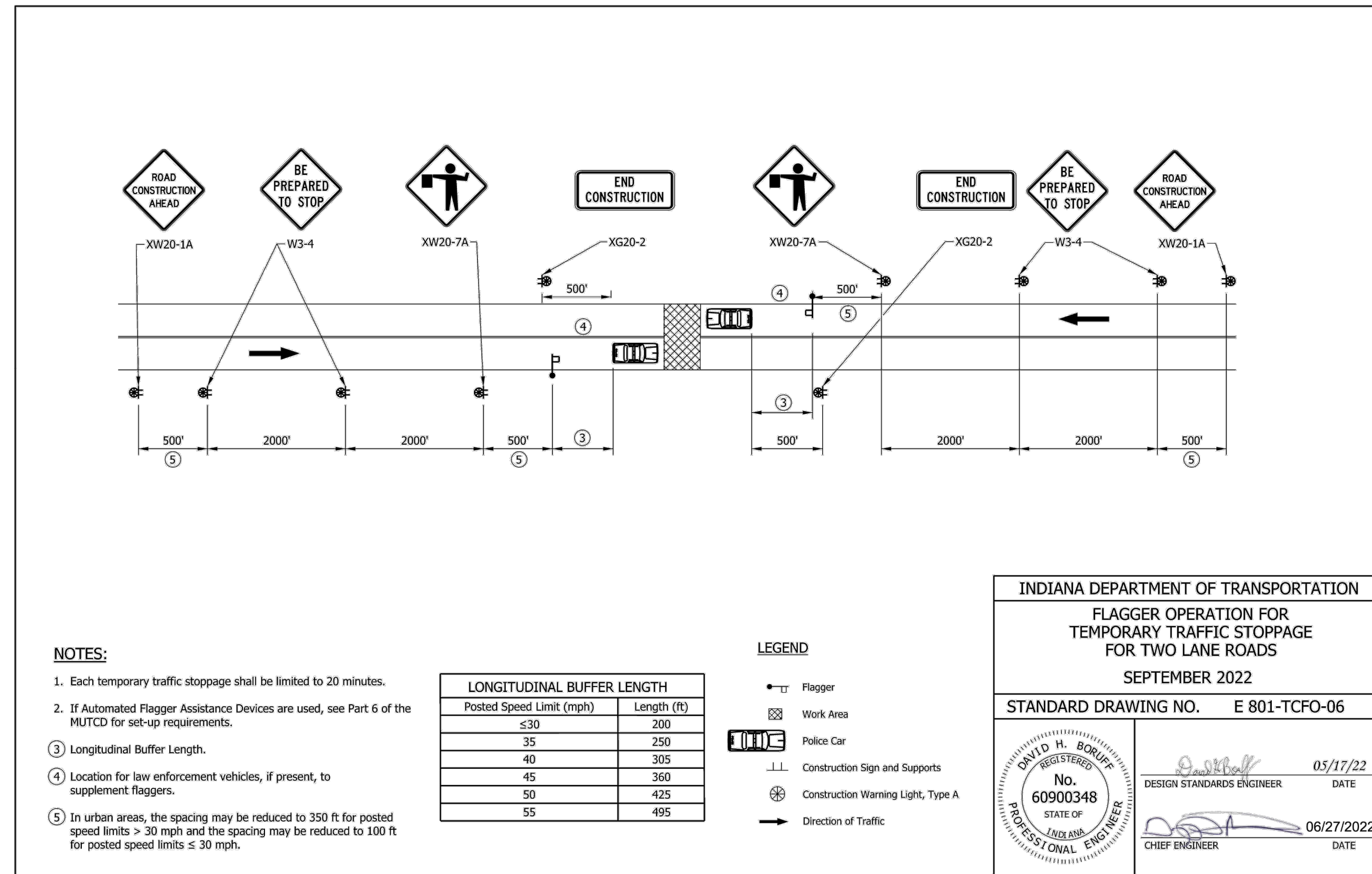
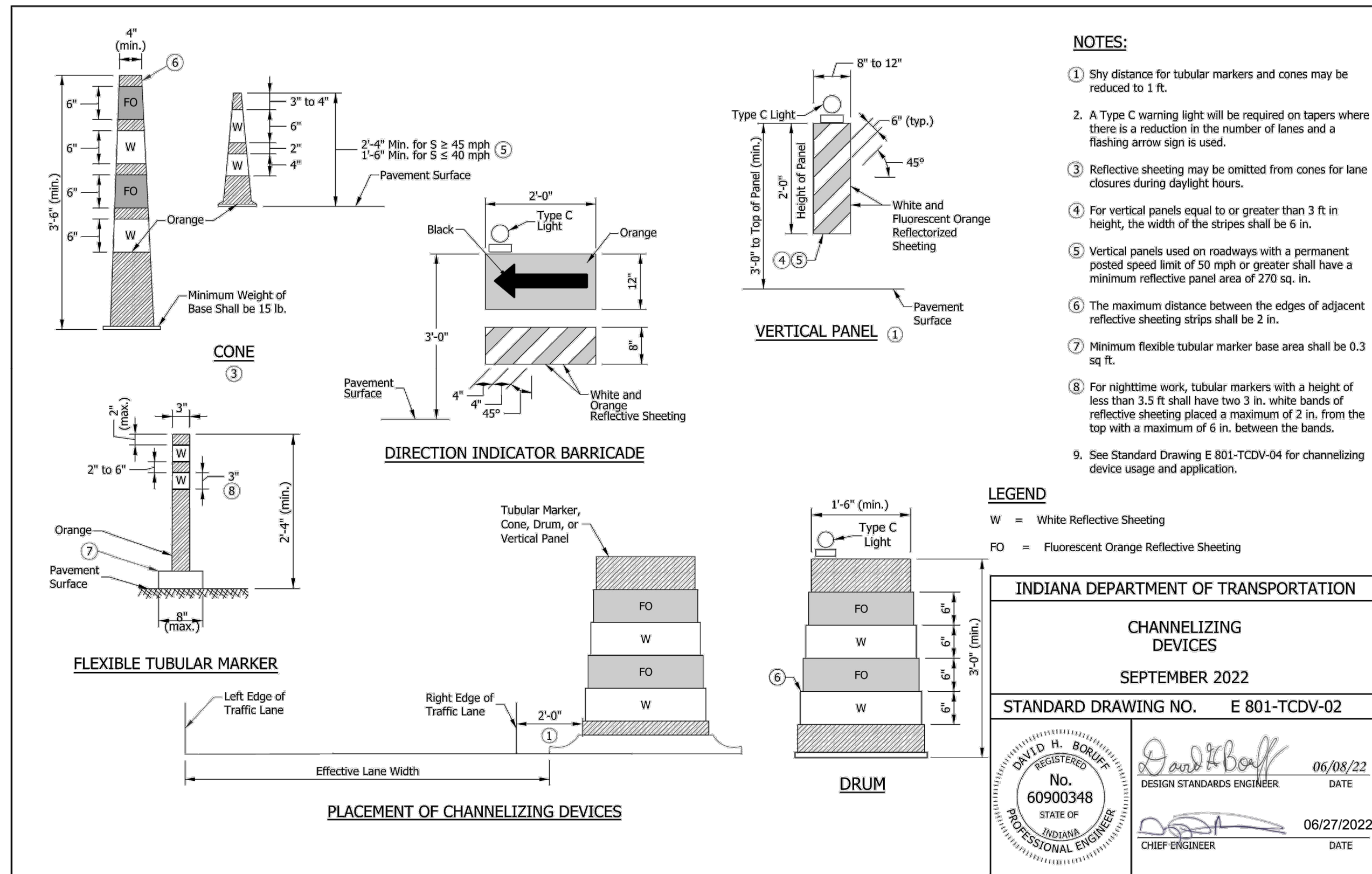
Project Number 2021.02592

TRAFFIC PLAN

C-105

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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



Bryan L. Hood
10/2024
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ISSUANCE INDEX

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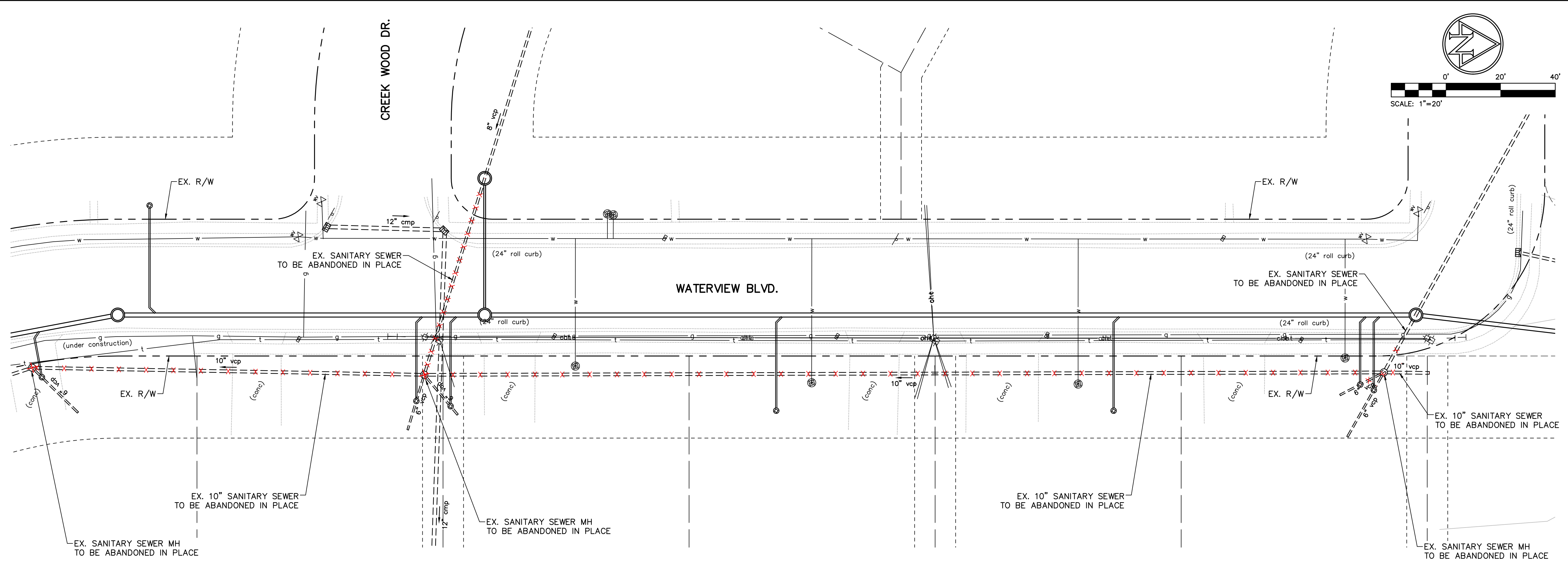
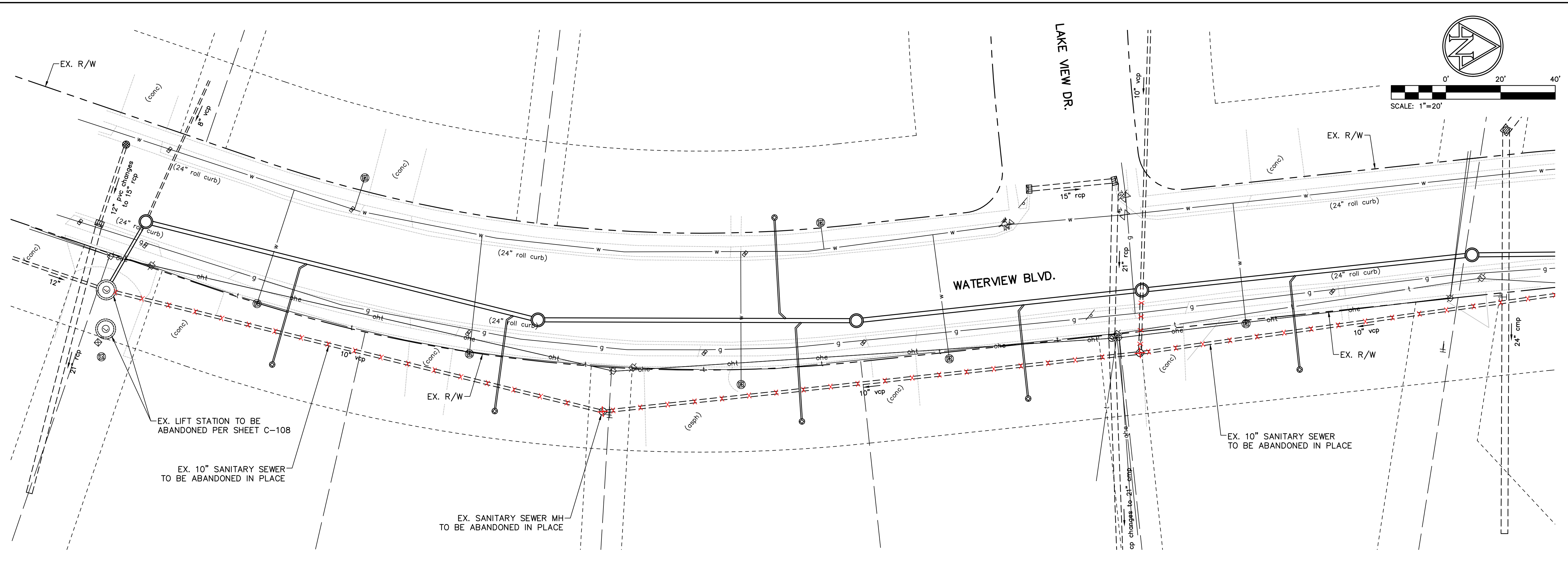
NO.	DESCRIPTION	DATE

Project Number 2021.02592

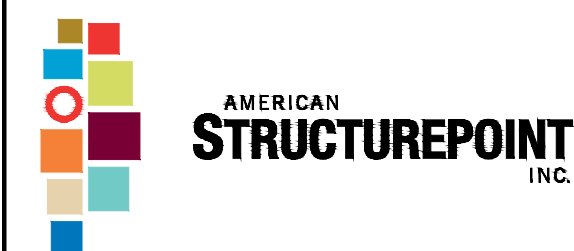
TRAFFIC PLAN

C-106

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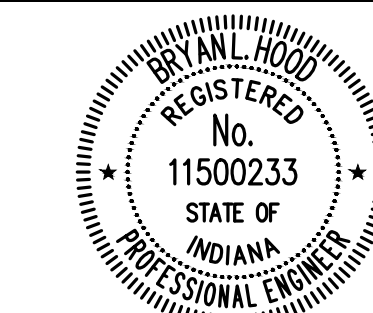
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**WATERVIEW
LIFT STATION
RELOCATION**

Greenfield, Indiana



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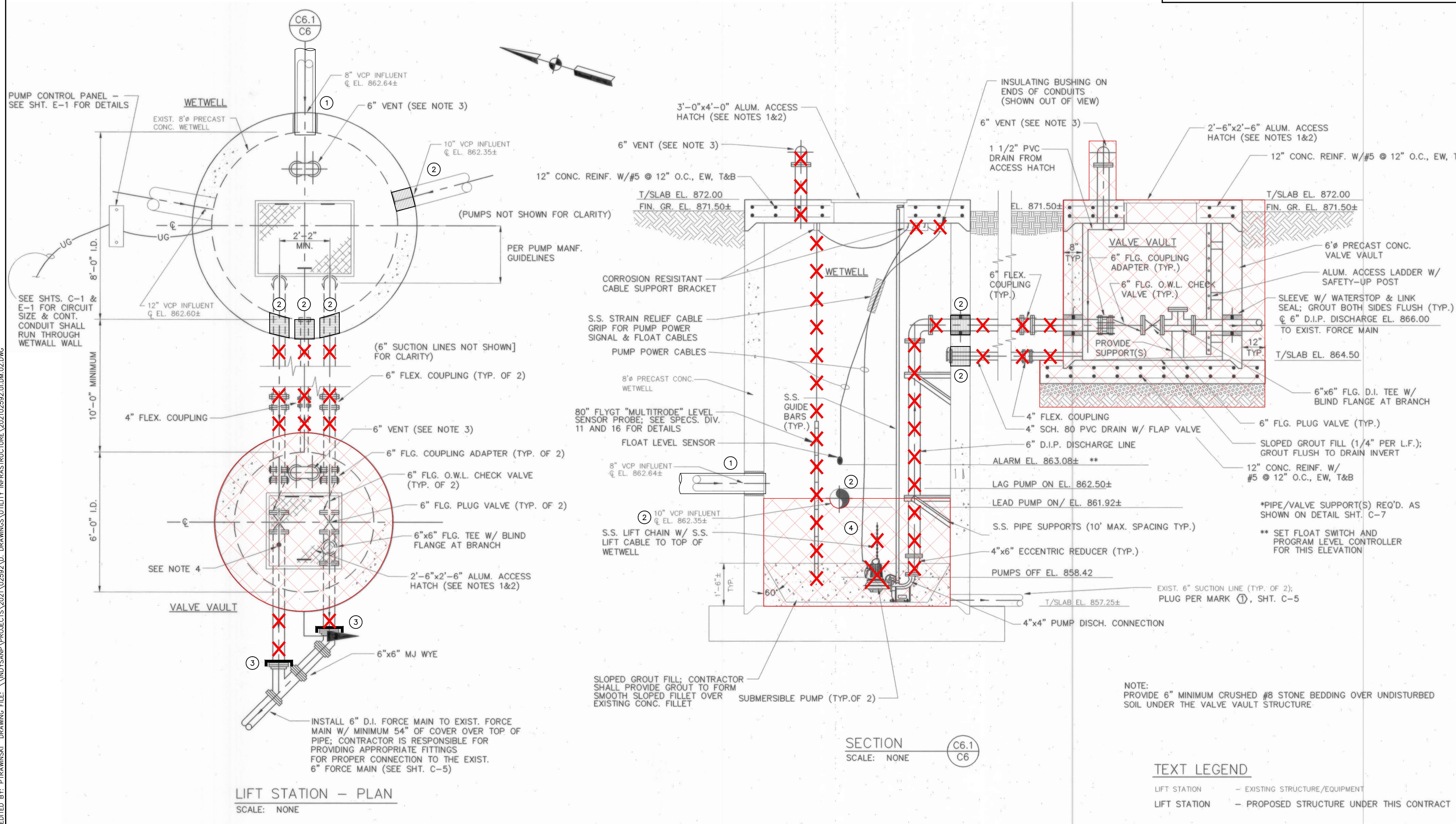
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

Project Number 2021.02592

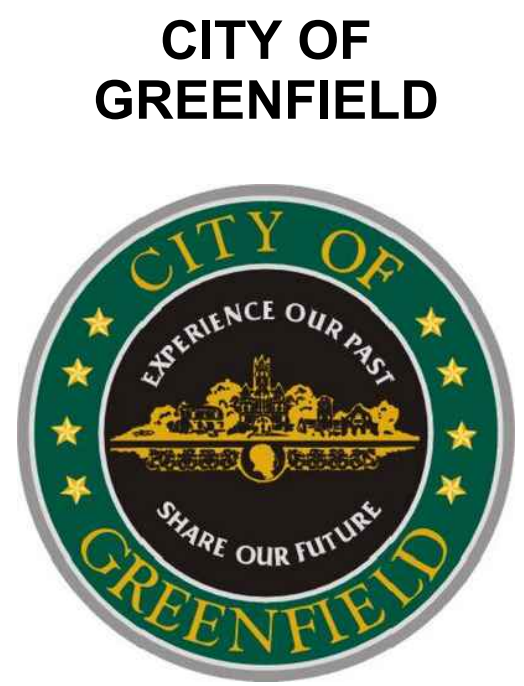
**DEMOLITION PLAN
SANITARY SEWER**

C-107

PLOT DATE: 5/17/2024 1:11 PM EDITED BY: PTRAMINSKI DRAWING FILE: \\INDY\ANP\PROJECTS\2021\02592\DRAWINGS\UTILITY INFRASTRUCTURE\202102592\U.D.M.02.DWG



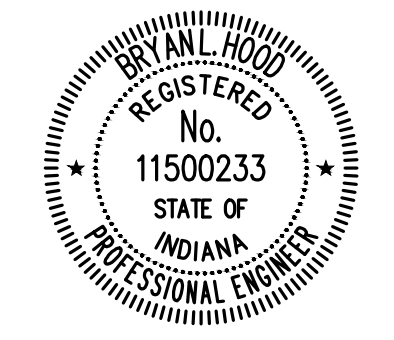
- NOTES**
- ① REMOVE EXISTING 8" PIPE, CORE DRILL HOLE TO ACCEPT NEW 12" SDR 35 PVC PIPE WITH LINK SEAL. INV. 862.40±
 - ② REMOVE PIPE AND PLUG
 - ③ INSTALL CAP AND PLUG
 - ④ GROUT FILL TO INVERTS OF OUTGOING PIPE, FORM FLOW LINE BETWEEN INCOMING/OUTGOING PIPES.



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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



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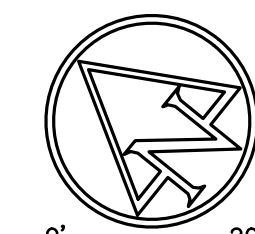
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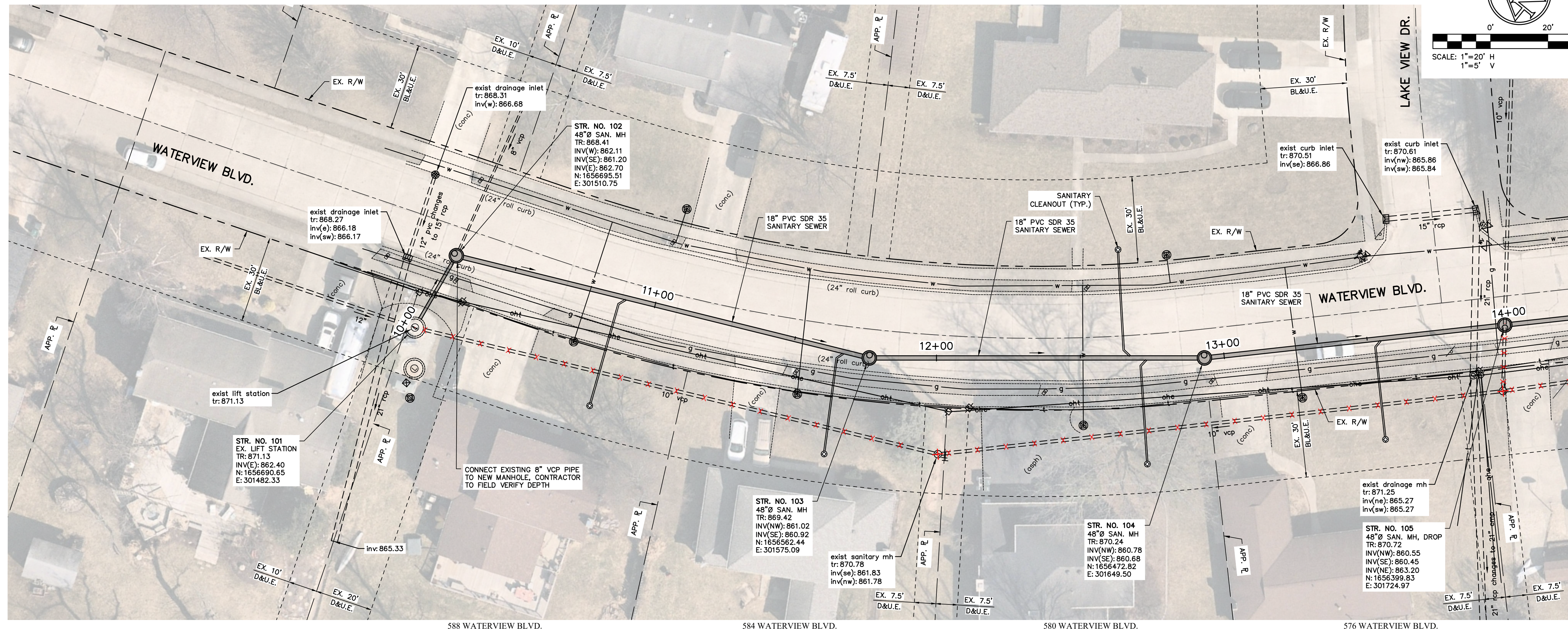
DEMOLITION PLAN LIFT STATION

C-108

100 YEAR FLOOD
PLAIN EL. 869.0



SCALE: 1"=20' H
1"=5' V



588 WATERVIEW BLVD.

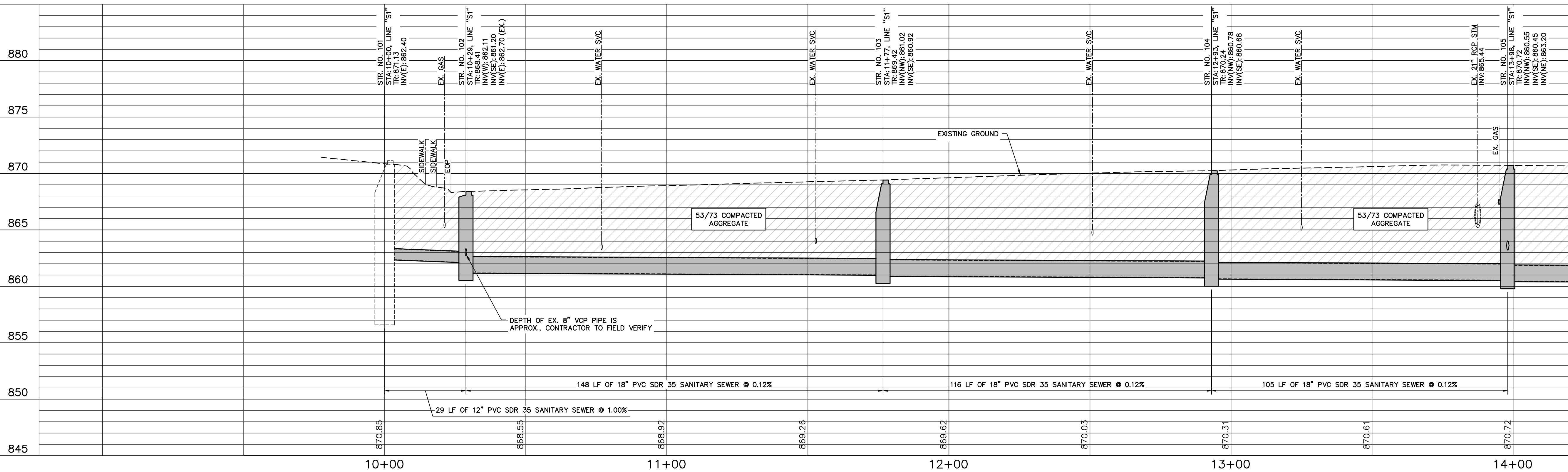
584 WATERVIEW BLVD.

580 WATERVIEW BLVD.

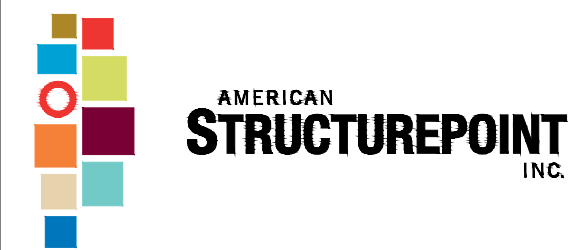
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NOTES:

- SEE DEMOLITION PLANS ON SHEET C-107 FOR REMOVAL AND ABANDONMENT INFORMATION.



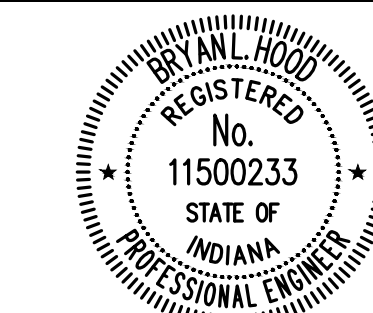
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WATERVIEW
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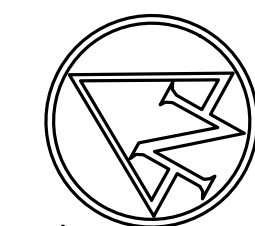
Project Number 2021.02592

PLAN AND PROFILE
SANITARY SEWER

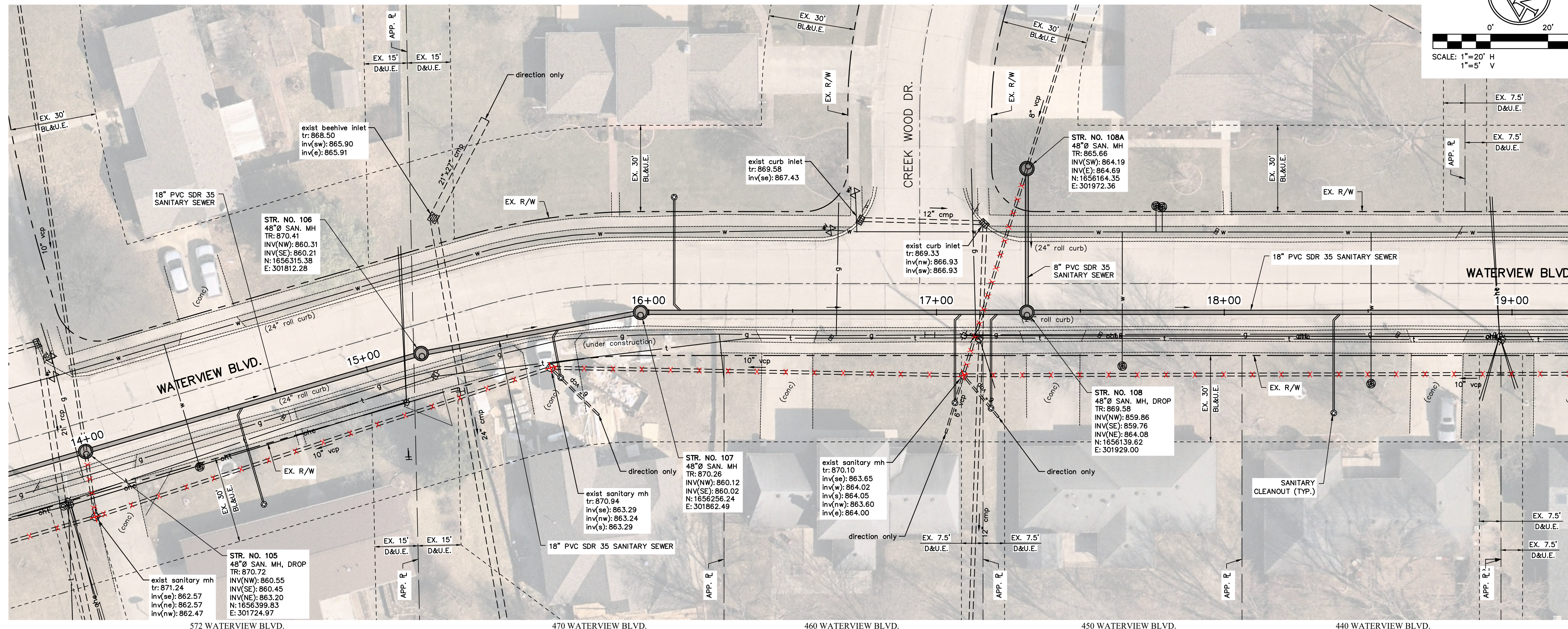
C-109

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100 YEAR FLOOD
PLAIN EL. 869.0

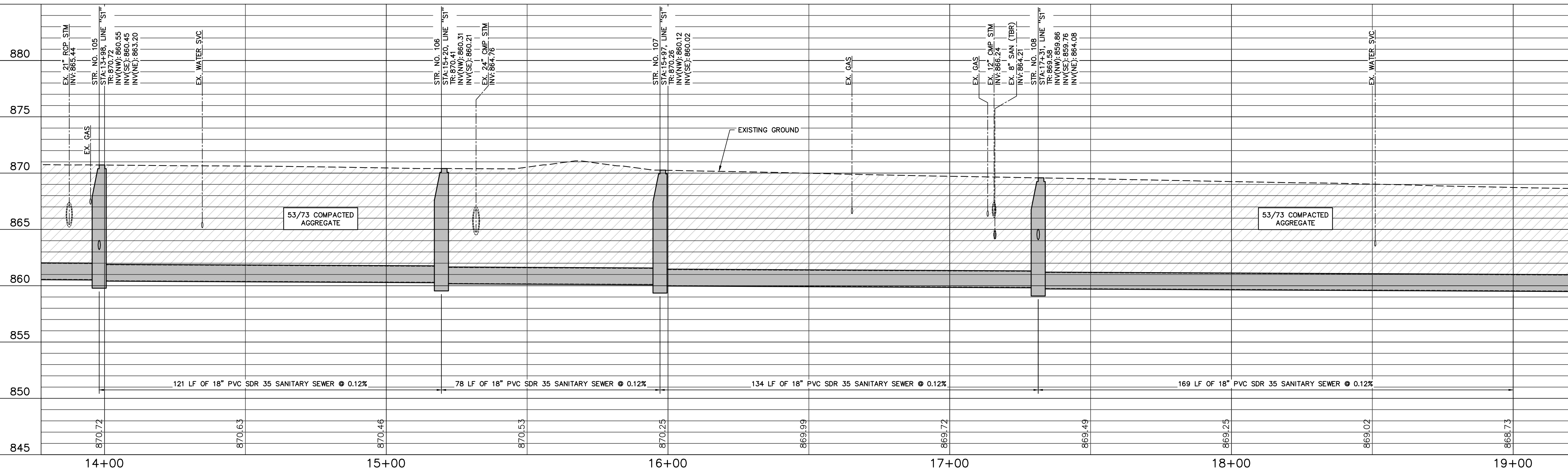


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1"=5' V

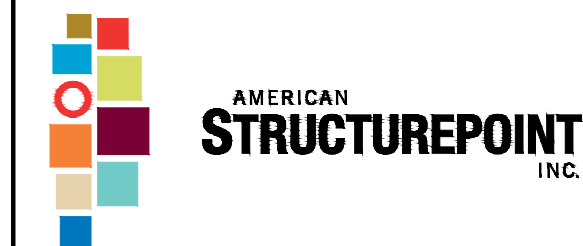


NOTES:

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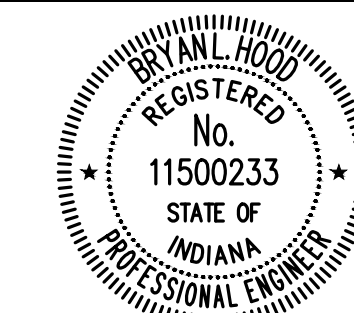
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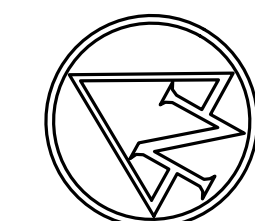
Project Number 2021.02592

PLAN AND PROFILE
SANITARY SEWER

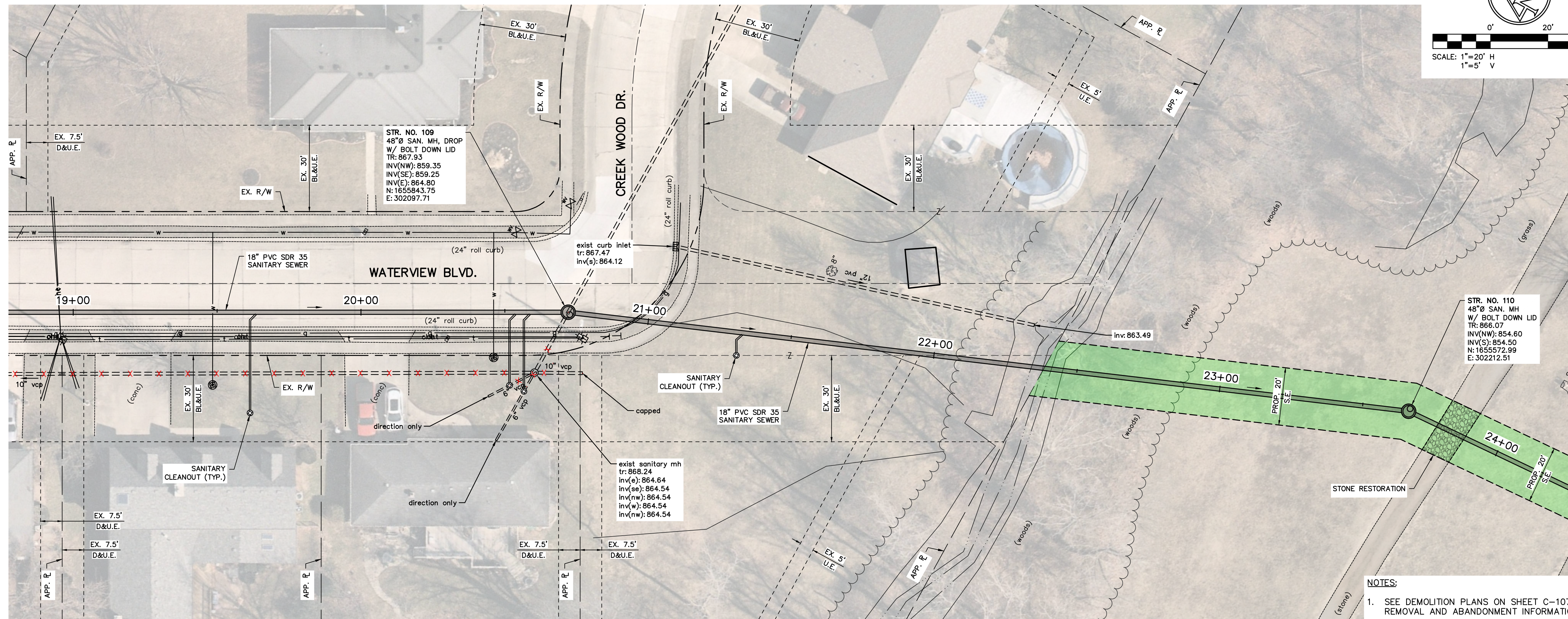
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100 YEAR FLOOD
PLAIN EL. 869.0



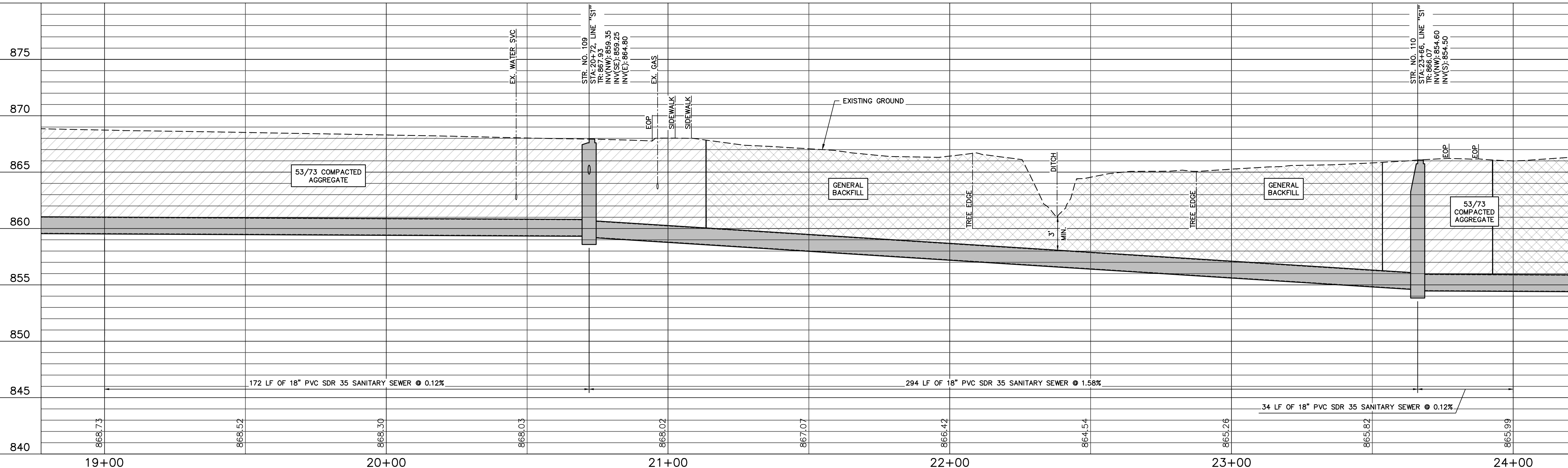
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1"=5' V



NOTES:

1. SEE DEMOLITION PLANS ON SHEET C-107 FOR REMOVAL AND ABANDONMENT INFORMATION.
2. SEE SHEET C-116 FOR SITE PLAN.
3. CONSTRUCTION ACTIVITIES WITHIN THE FAIRGROUNDS PROPERTY SHALL BE LIMITED FROM AUGUST 1ST THRU MARCH 1ST.

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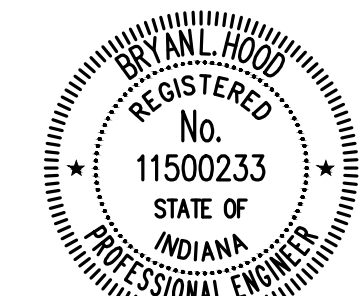
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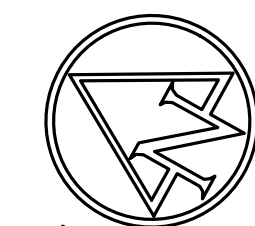
PLAN AND PROFILE
SANITARY SEWER

C-111

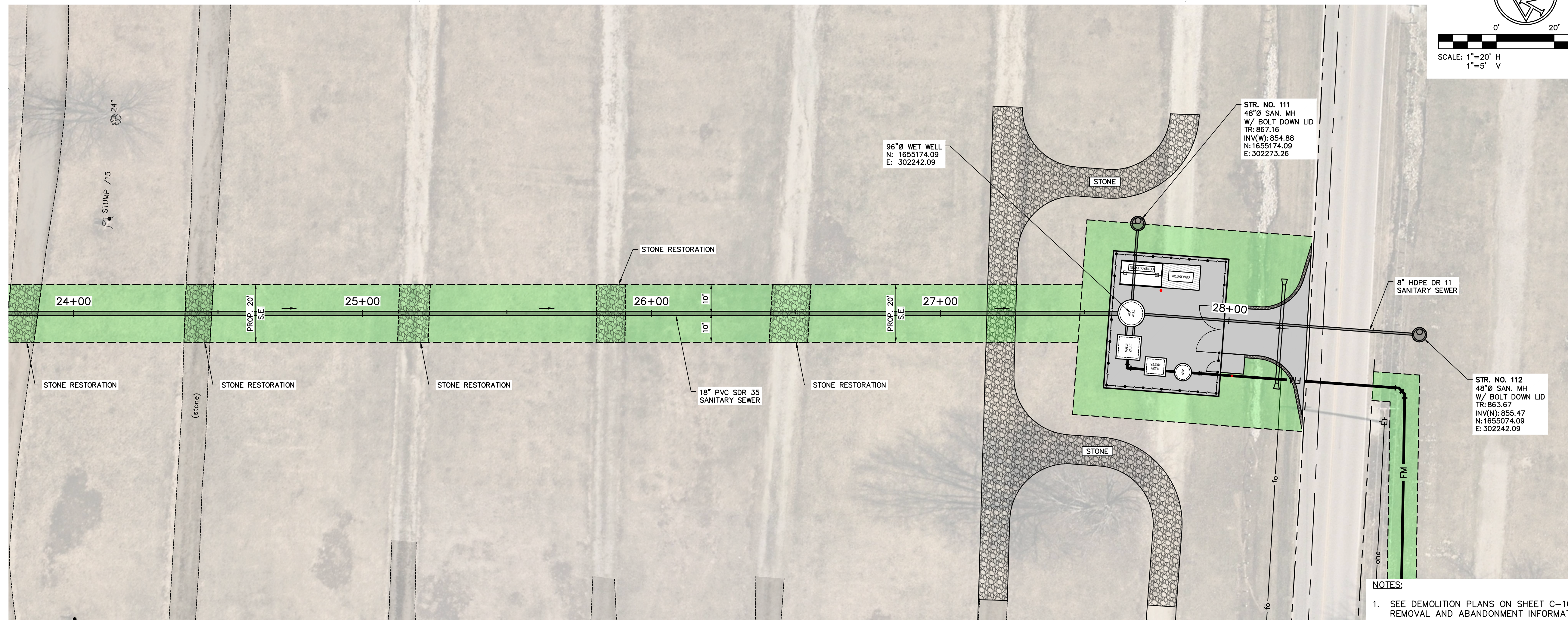
100 YEAR FLOOD
PLAIN EL. 869.0

HANCOCK COUNTY 4-H CLUB
AGRICULTURAL ASSOCIATION, INC.

HANCOCK COUNTY 4-H CLUB
AGRICULTURAL ASSOCIATION, INC.



0' 20' 40'
SCALE: 1"=20' H
1"=5' V



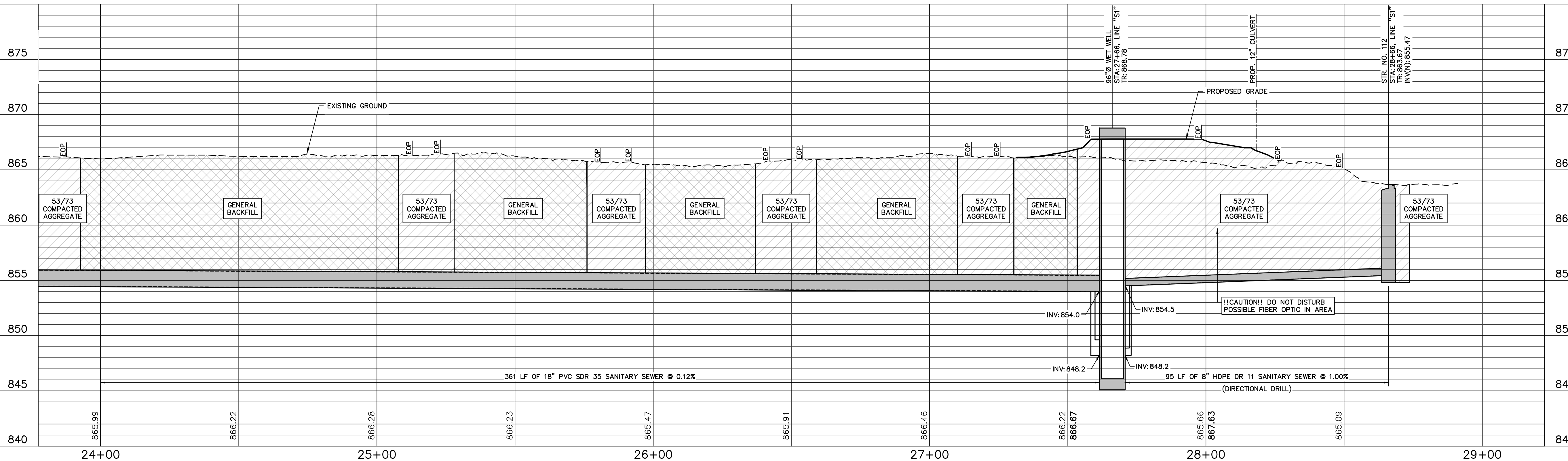
HANCOCK COUNTY 4-H CLUB
AGRICULTURAL ASSOCIATION, INC.

HANCOCK COUNTY 4-H CLUB
AGRICULTURAL ASSOCIATION, INC.

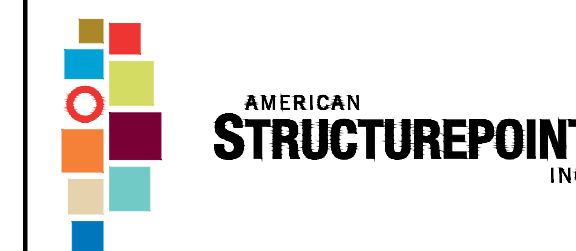
NOTES:

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- CONSTRUCTION ACTIVITIES WITHIN THE FAIRGROUNDS PROPERTY SHALL BE LIMITED FROM AUGUST 1ST THRU MARCH 1ST.

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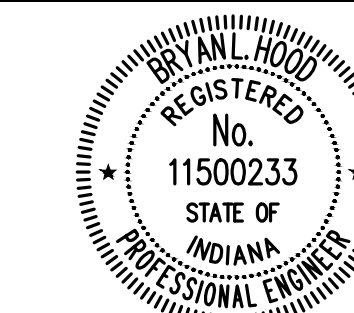
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GREENFIELD



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WATERVIEW
LIFT STATION
RELOCATION

Greenfield, Indiana



Bryan L. Hood 5/10/2024
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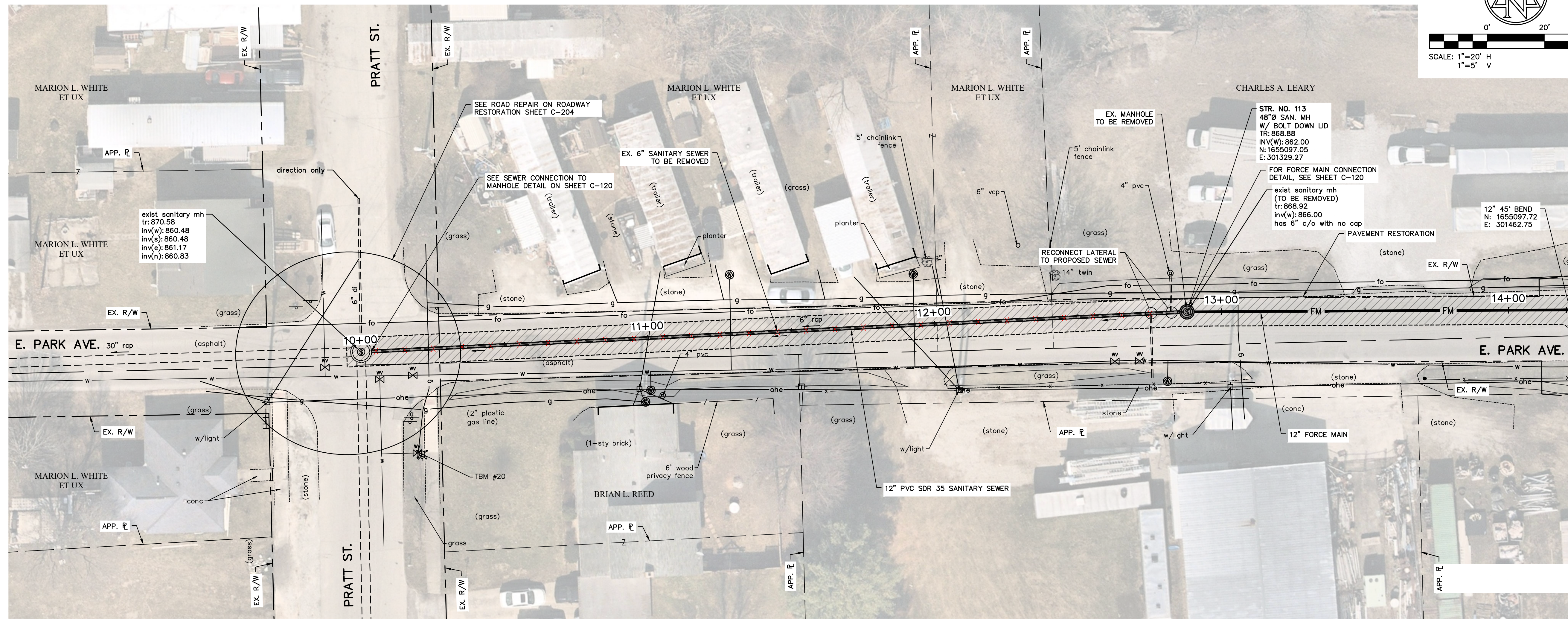
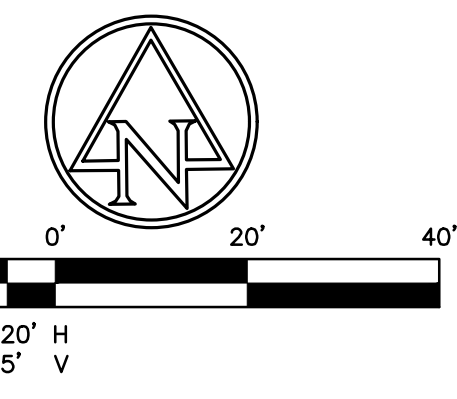
REVISION SCHEDULE		
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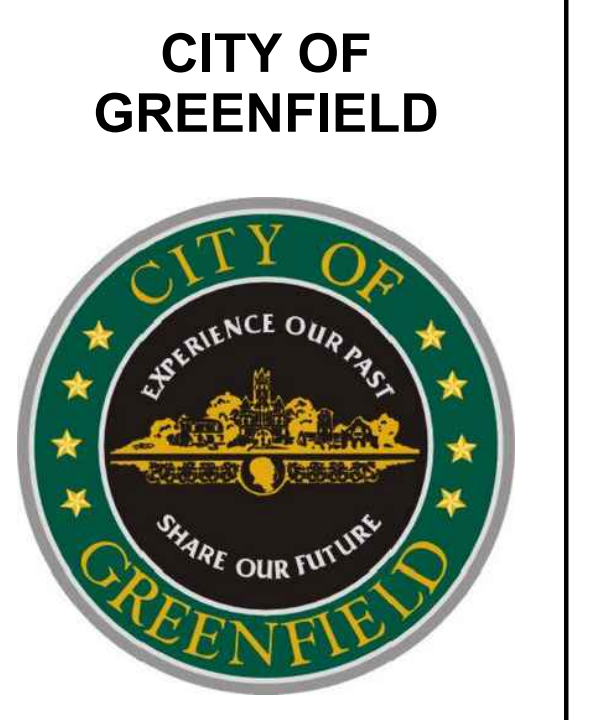
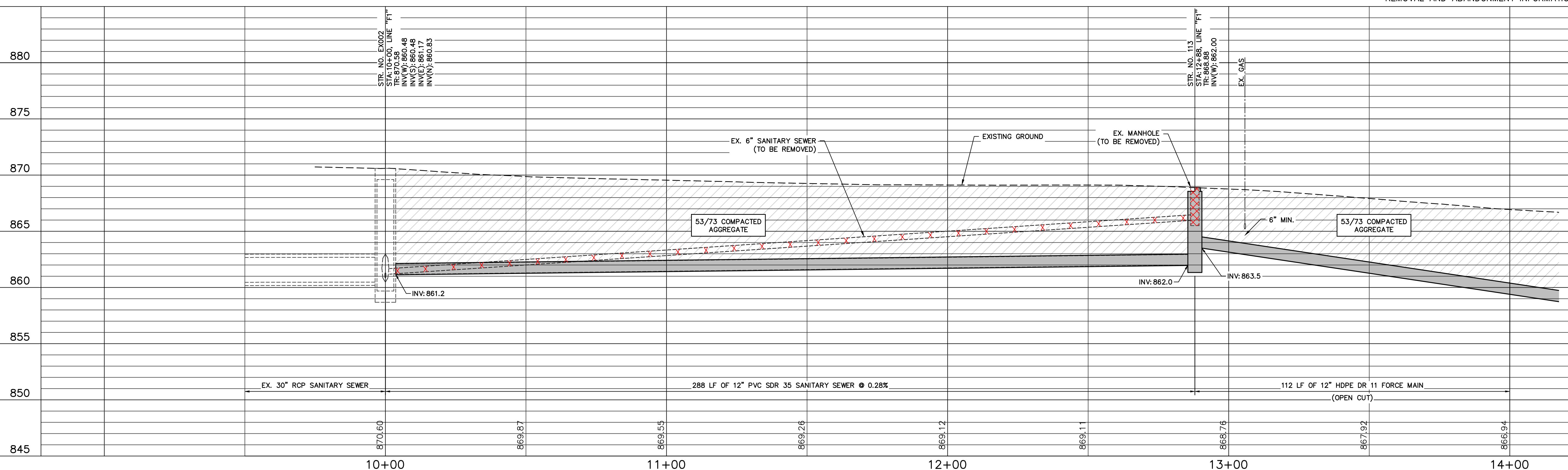
PLAN AND PROFILE
SANITARY SEWER

C-112

100 YEAR FLOOD
PLAIN EL. 869.0



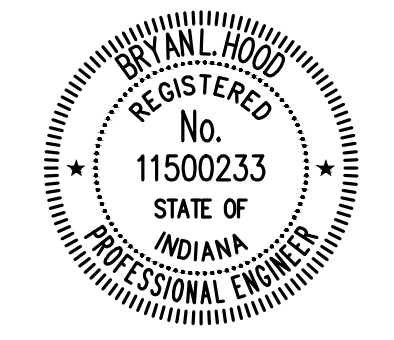
NOTES:
1. SEE DEMOLITION PLANS ON SHEETS C-107 FOR REMOVAL AND ABANDONMENT INFORMATION.



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**WATERVIEW
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RELOCATION**

Greenfield, Indiana



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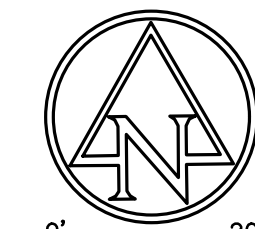
Project Number 2021.02592

**PLAN AND PROFILE
FORCE MAIN**

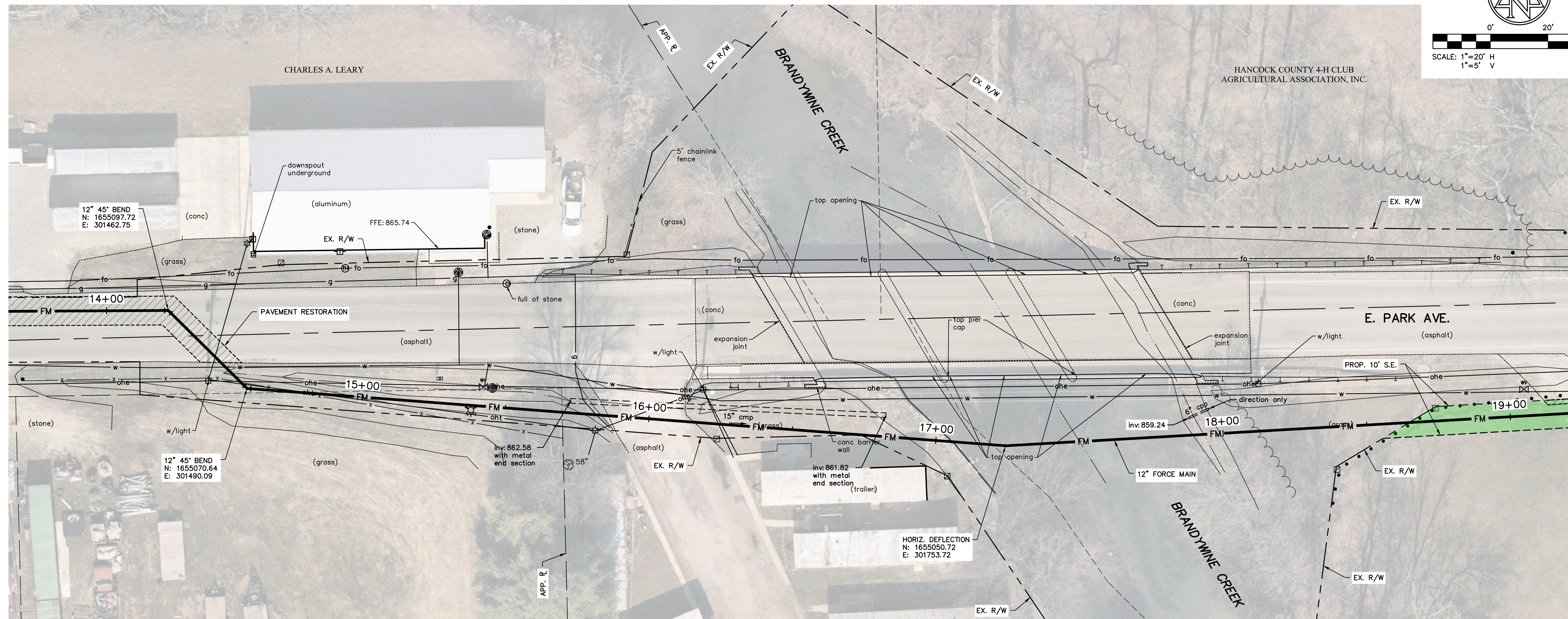
C-113

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100 YEAR FLOOD
PLAIN EL. 869.0

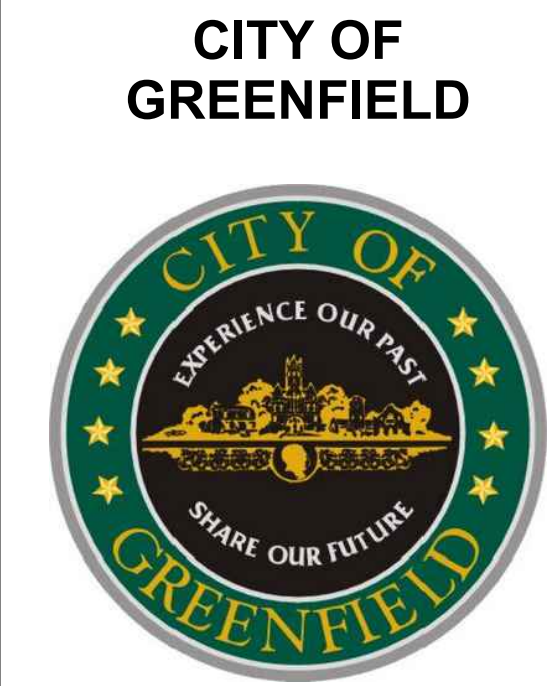
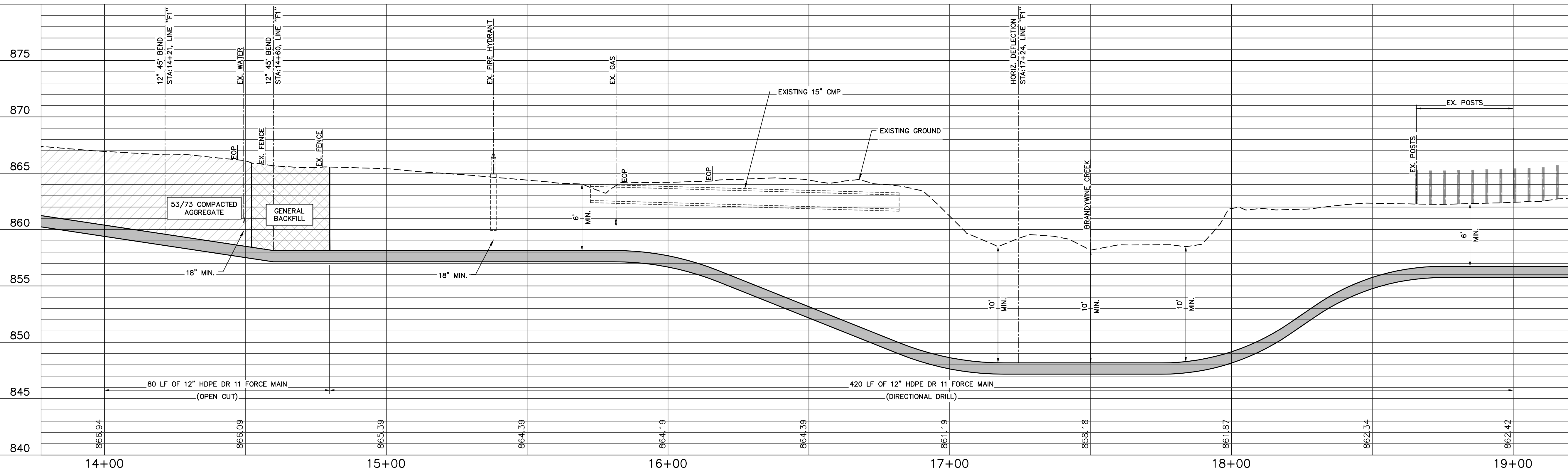


0' 20' 40'
SCALE: 1"=20' H
1"=5' V



NOTES:
1. SEE DEMOLITION PLANS ON SHEETS C-107 FOR
REMOVAL AND ABANDONMENT INFORMATION.

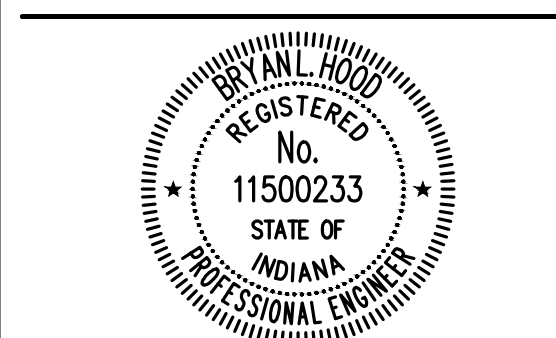
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**WATERVIEW
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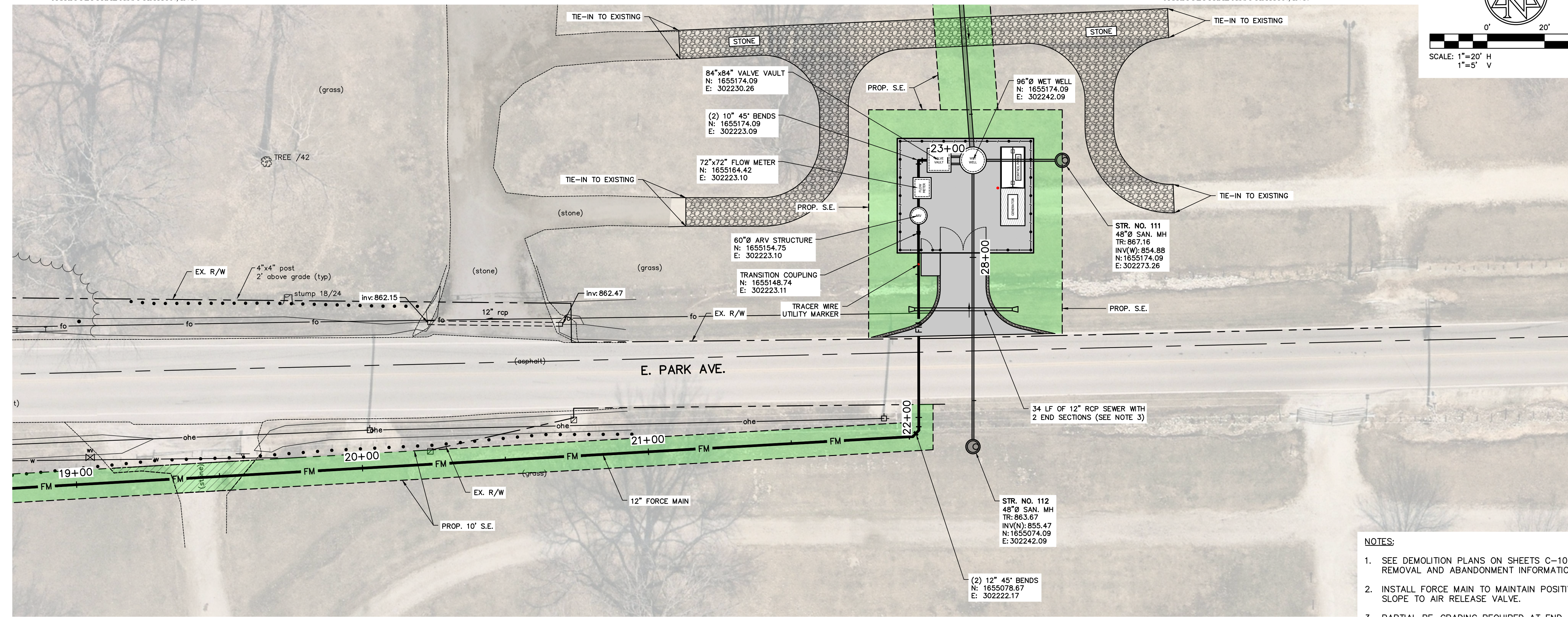
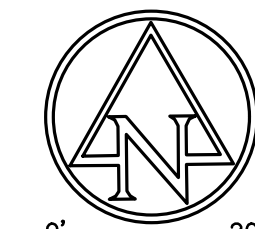
**PLAN AND PROFILE
FORCE MAIN**

C-114

HANCOCK COUNTY 4-H CLUB
AGRICULTURAL ASSOCIATION, INC.

100 YEAR FLOOD
PLAIN EL. 869.0

HANCOCK COUNTY 4-H CLUB
AGRICULTURAL ASSOCIATION, INC.



- NOTES:**
- SEE DEMOLITION PLANS ON SHEETS C-107 FOR REMOVAL AND ABANDONMENT INFORMATION.
 - INSTALL FORCE MAIN TO MAINTAIN POSITIVE SLOPE TO AIR RELEASE VALVE.
 - PARTIAL RE-GRADING REQUIRED AT END SECTIONS TO MAINTAIN FLOW TO WEST.
 - CONSTRUCTION ACTIVITIES WITHIN THE FAIRGROUNDS PROPERTY SHALL BE LIMITED FROM AUGUST 1ST THRU MARCH 1ST.

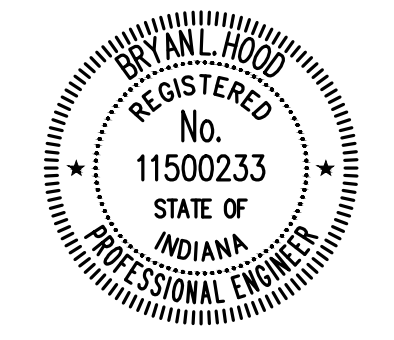


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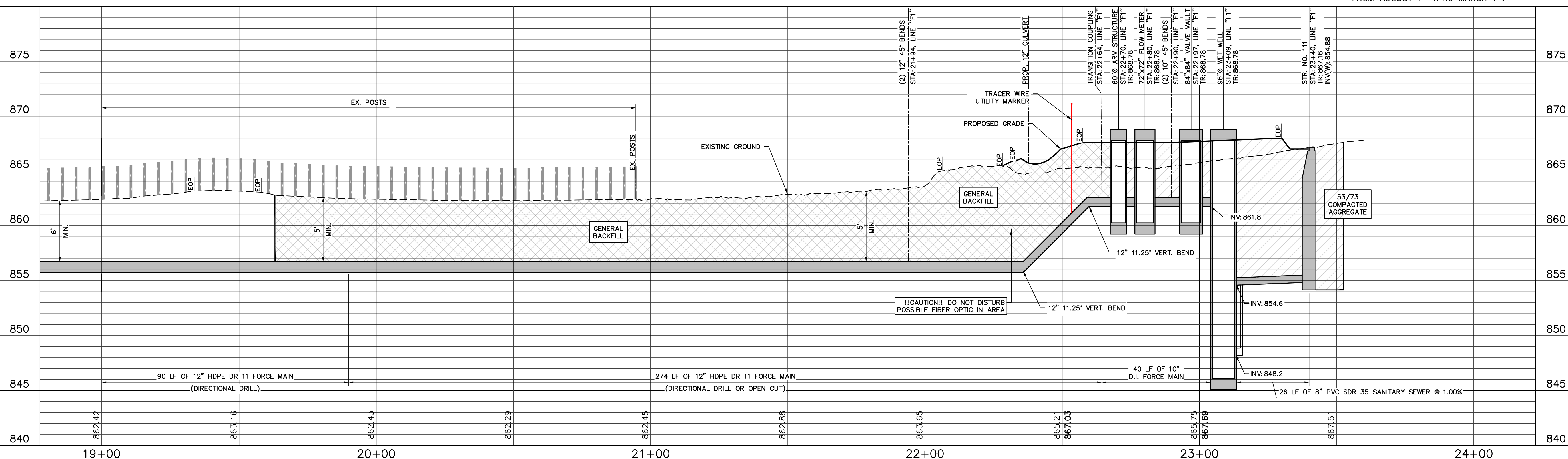
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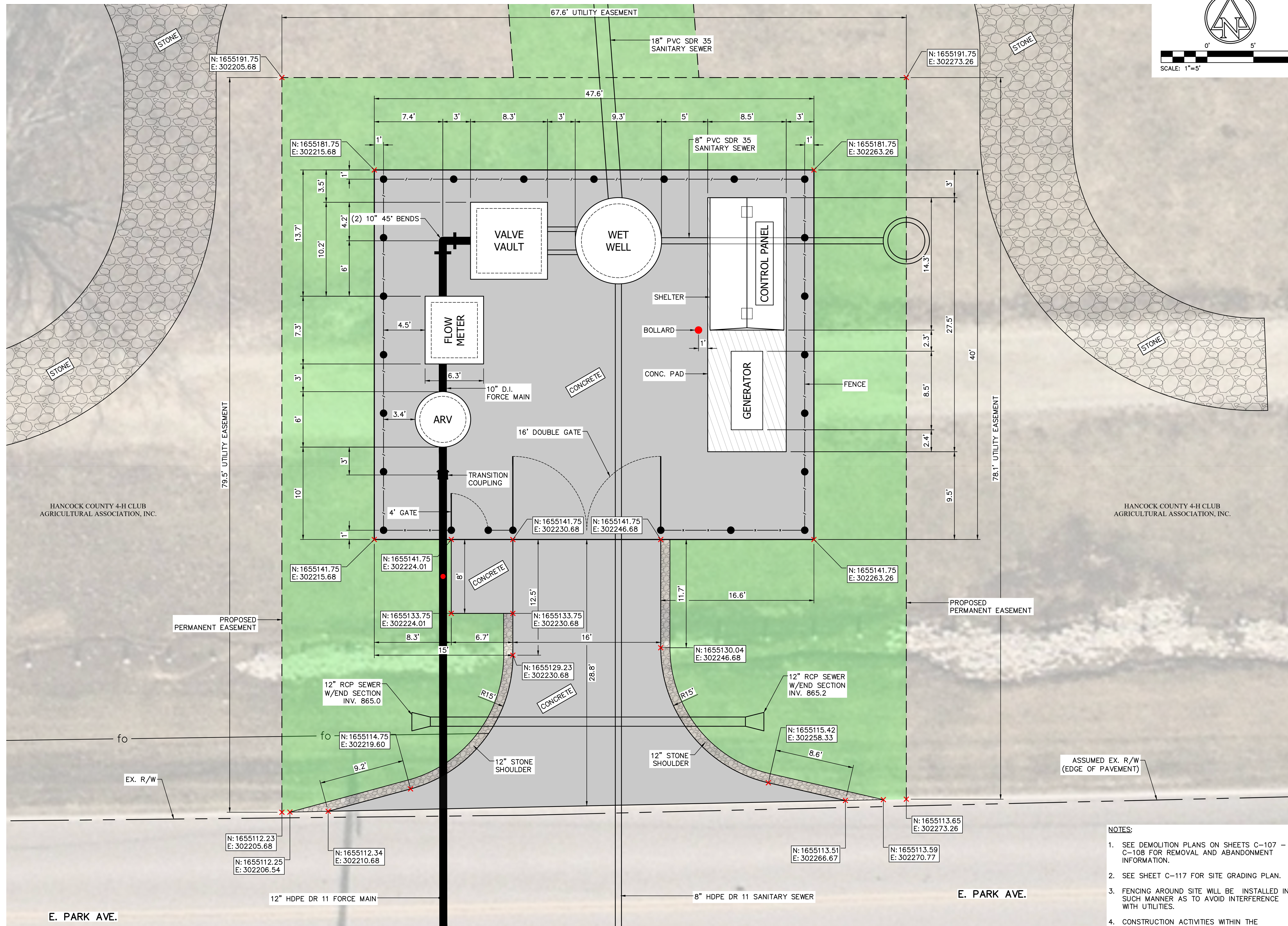
**PLAN AND PROFILE
FORCE MAIN**

C-115

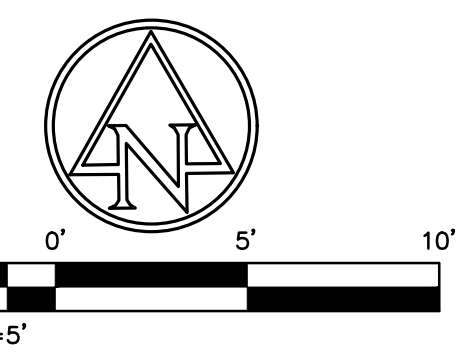
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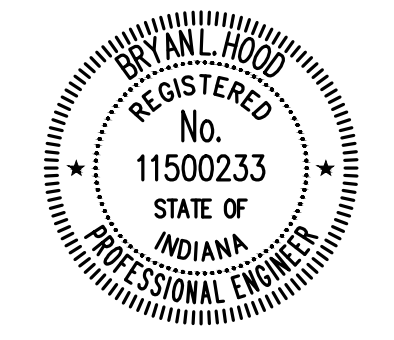
- NOTES:**
- SEE DEMOLITION PLANS ON SHEETS C-107 - C-108 FOR REMOVAL AND ABANDONMENT INFORMATION.
 - SEE SHEET C-117 FOR SITE GRADING PLAN.
 - FENCING AROUND SITE WILL BE INSTALLED IN SUCH MANNER AS TO AVOID INTERFERENCE WITH UTILITIES.
 - CONSTRUCTION ACTIVITIES WITHIN THE FAIRGROUNDS PROPERTY SHALL BE LIMITED FROM AUGUST 1ST THRU MARCH 1ST.



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WATERVIEW LIFT STATION RELOCATION

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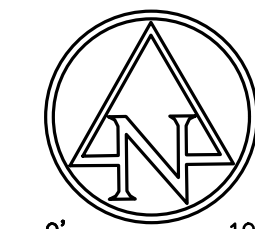
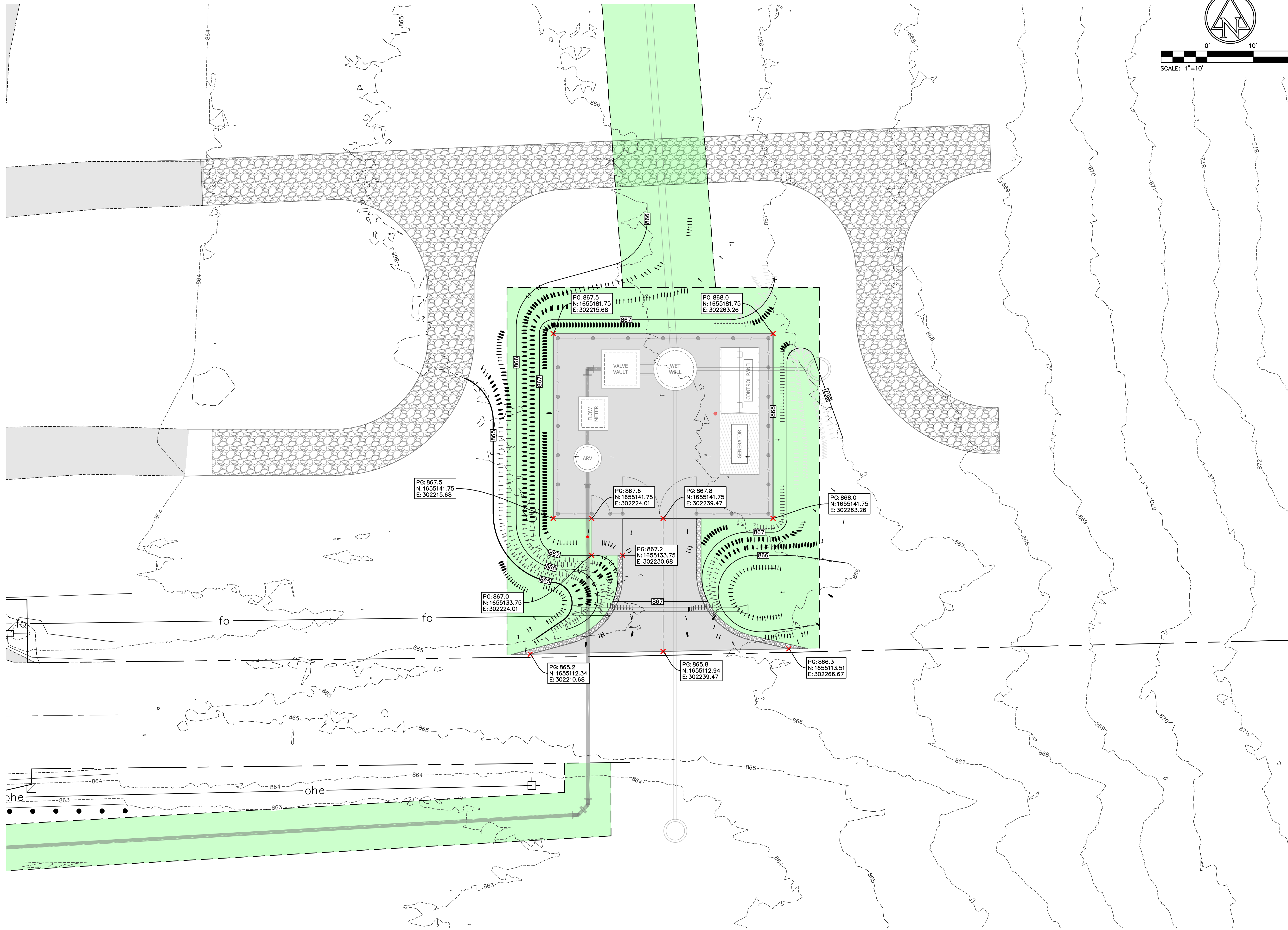
REVISION SCHEDULE		
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SITE PLAN PROPOSED

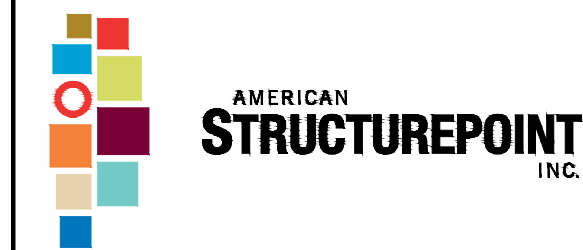
C-116

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0' 10' 20'
SCALE: 1"=10'

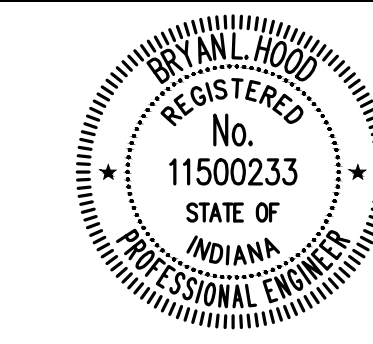
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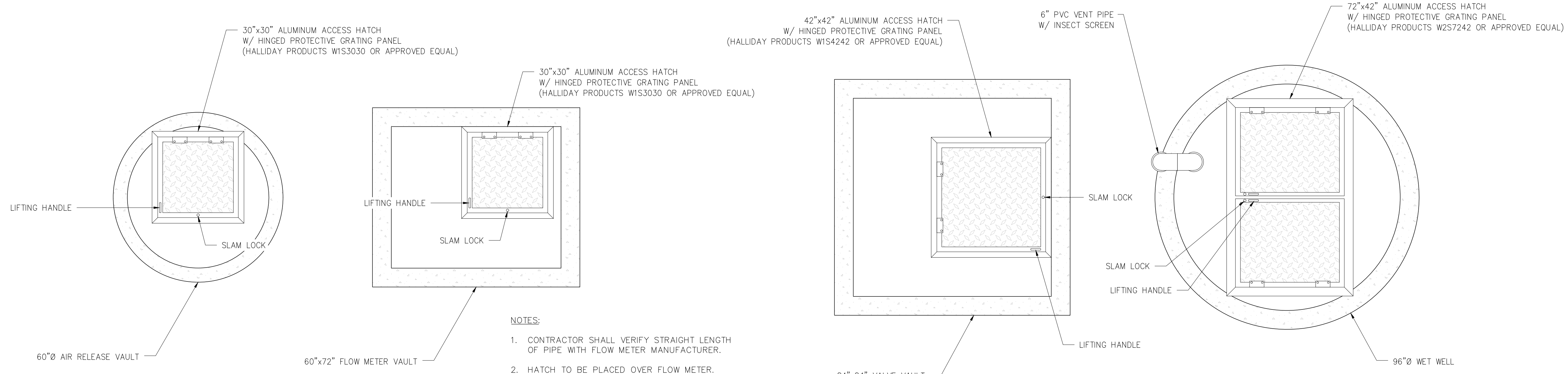
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GRADING PLAN

C-117

PLOT DATE: 5/17/2024 1:12 PM EDITED BY: PIRAMINSKI DRAWING FILE: \\INDYSAMP\PROJECTS\2021\02592\DRAWINGS\UTILITY_INFRASTRUCTURE\202102592.UID.TLS.DWG



AIR RELEASE VAULT

FLOW METER VAULT

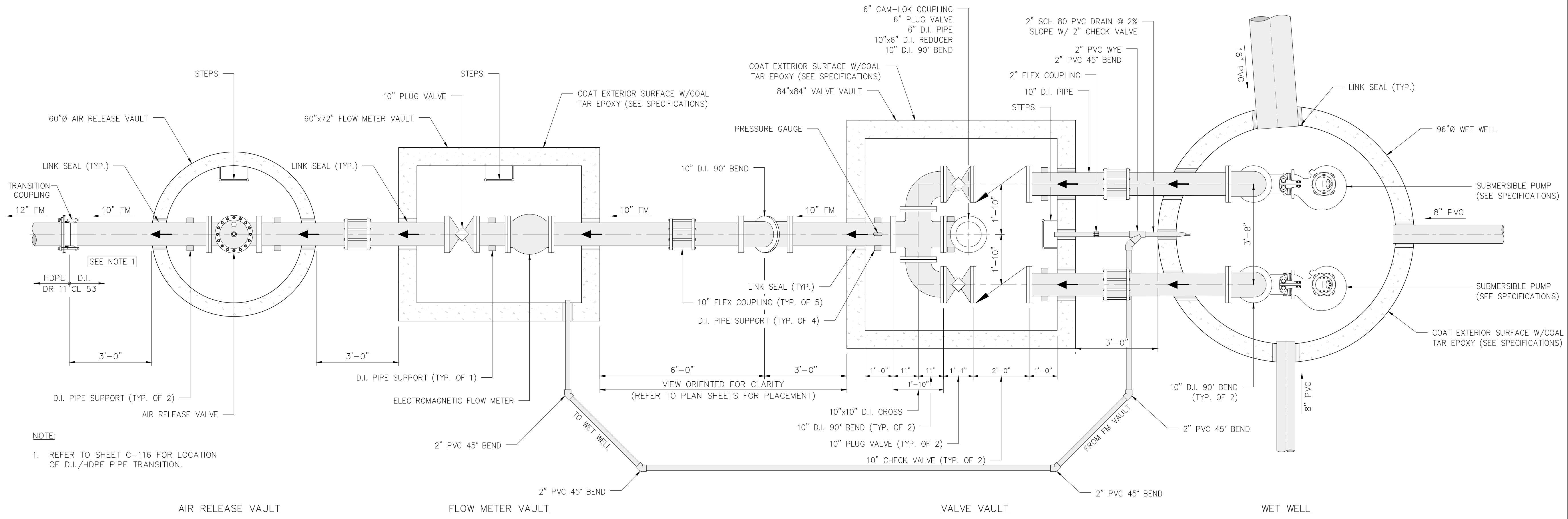
VALVE VAULT

WET WELL

- NOTES:
- CONTRACTOR SHALL VERIFY STRAIGHT LENGTH OF PIPE WITH FLOW METER MANUFACTURER.
 - HATCH TO BE PLACED OVER FLOW METER.

NOTE:
CONTRACTOR TO VERIFY HATCH REQUIREMENTS WITH PUMP MANUFACTURER.

LIFT STATION DETAIL
(ABOVE SLAB)
SCALE: 1/2"=1'-0"



AIR RELEASE VAULT

FLOW METER VAULT

VALVE VAULT

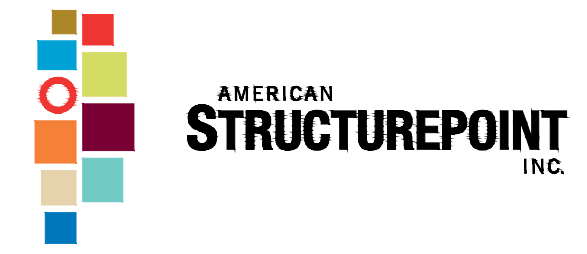
WET WELL

LIFT STATION DETAIL
(BELOW SLAB)
SCALE: 1/2"=1'-0"

- NOTE:
- REFER TO SHEET C-116 FOR LOCATION OF D.I./HDPE PIPE TRANSITION.

NOTE:
REFER TO CITY OF GREENFIELD WASTEWATER UTILITY LIFT STATION SPECIFICATIONS

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**WATERVIEW
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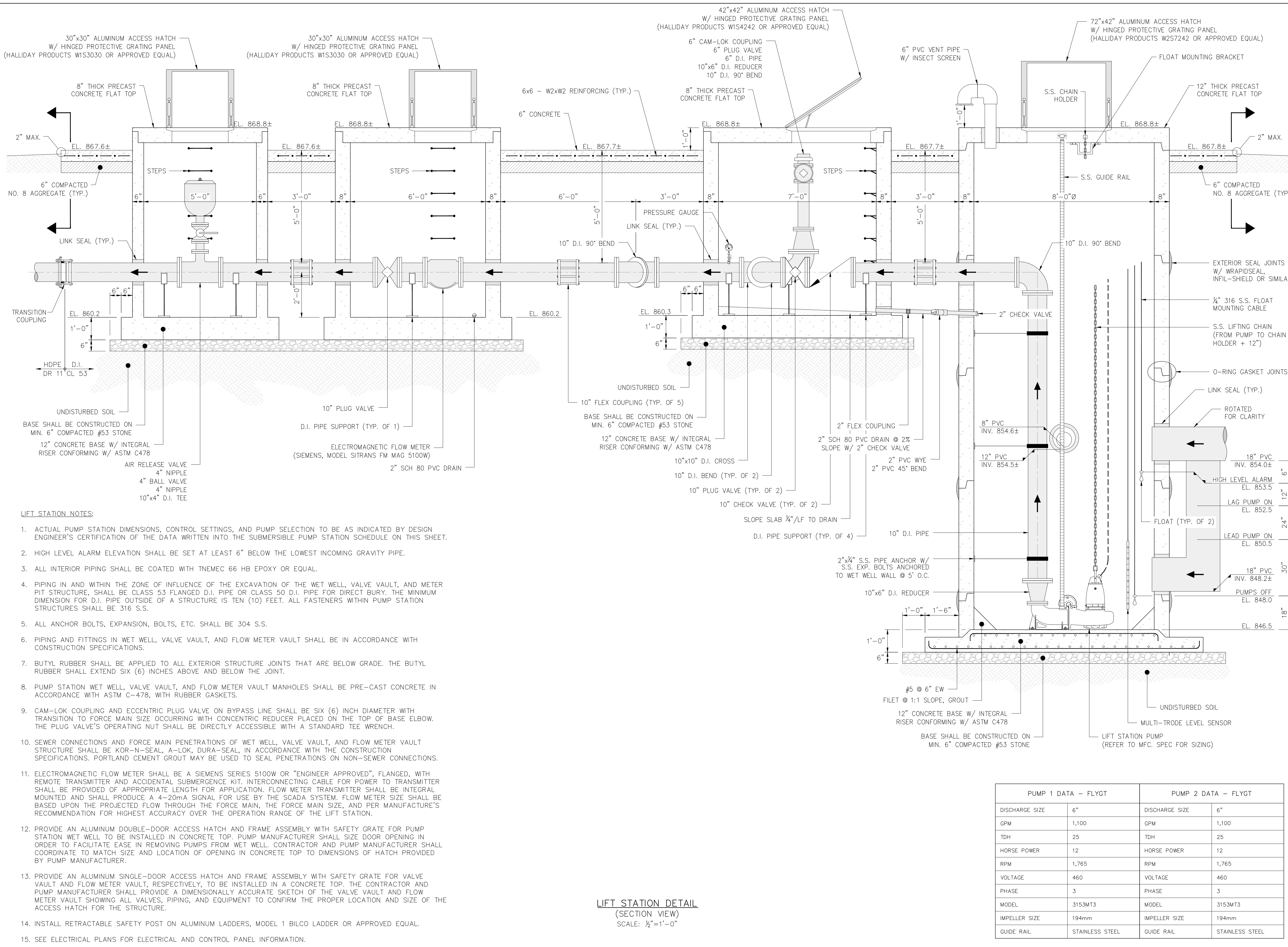
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**STANDARD DETAILS
LIFT STATION**

C-118

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- LIFT STATION NOTES:**
- ACTUAL PUMP STATION DIMENSIONS, CONTROL SETTINGS, AND PUMP SELECTION TO BE AS INDICATED BY DESIGN ENGINEER'S CERTIFICATION OF THE DATA WRITTEN INTO THE SUBMERSIBLE PUMP STATION SCHEDULE ON THIS SHEET.
 - HIGH LEVEL ALARM ELEVATION SHALL BE SET AT LEAST 6" BELOW THE LOWEST INCOMING GRAVITY PIPE.
 - ALL INTERIOR PIPING SHALL BE COATED WITH TNEMEC 66 HB EPOXY OR EQUAL.
 - PIPING IN AND WITHIN THE ZONE OF INFLUENCE OF THE EXCAVATION OF THE WET WELL, VALVE VAULT, AND METER PIT STRUCTURE, SHALL BE CLASS 53 FLANGED D.I. PIPE OR CLASS 50 D.I. PIPE FOR DIRECT BURY. THE MINIMUM DIMENSION FOR D.I. PIPE OUTSIDE OF A STRUCTURE IS TEN (10) FEET. ALL FASTENERS WITHIN PUMP STATION STRUCTURES SHALL BE 316 S.S.
 - ALL ANCHOR BOLTS, EXPANSION, BOLTS, ETC. SHALL BE 304 S.S.
 - PIPING AND FITTINGS IN WET WELL, VALVE VAULT, AND FLOW METER VAULT SHALL BE IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
 - BUTYL RUBBER SHALL BE APPLIED TO ALL EXTERIOR STRUCTURE JOINTS THAT ARE BELOW GRADE. THE BUTYL RUBBER SHALL EXTEND SIX (6) INCHES ABOVE AND BELOW THE JOINT.
 - PUMP STATION WET WELL, VALVE VAULT, AND FLOW METER VAULT MANHOLES SHALL BE PRE-CAST CONCRETE IN ACCORDANCE WITH ASTM C-478, WITH RUBBER GASKETS.
 - CAM-LOK COUPLING AND ECCENTRIC PLUG VALVE ON BYPASS LINE SHALL BE SIX (6) INCH DIAMETER WITH TRANSITION TO FORCE MAIN SIZE OCCURRING WITH CONCENTRIC REDUCER PLACED ON THE TOP OF BASE ELBOW. THE PLUG VALVE'S OPERATING NUT SHALL BE DIRECTLY ACCESSIBLE WITH A STANDARD TEE WRENCH.
 - SEWER CONNECTIONS AND FORCE MAIN PENETRATIONS OF WET WELL, VALVE VAULT, AND FLOW METER VAULT STRUCTURE SHALL BE KOR-N-SEAL, A-LOK, DURA-SEAL, IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. PORTLAND CEMENT GROUT MAY BE USED TO SEAL PENETRATIONS ON NON-SEWER CONNECTIONS.
 - ELECTROMAGNETIC FLOW METER SHALL BE A SIEMENS SERIES 5100W OR "ENGINEER APPROVED", FLANGED, WITH REMOTE TRANSMITTER AND ACCIDENTAL SUBMERSION KIT. INTERCONNECTING CABLE FOR POWER TO TRANSMITTER SHALL BE PROVIDED OF APPROPRIATE LENGTH FOR APPLICATION. FLOW METER TRANSMITTER SHALL BE INTEGRAL MOUNTED AND SHALL PRODUCE A 4-20mA SIGNAL FOR USE BY THE SCADA SYSTEM. FLOW METER SIZE SHALL BE BASED UPON THE PROJECTED FLOW THROUGH THE FORCE MAIN, THE FORCE MAIN SIZE, AND PER MANUFACTURE'S RECOMMENDATION FOR HIGHEST ACCURACY OVER THE OPERATION RANGE OF THE LIFT STATION.
 - PROVIDE AN ALUMINUM DOUBLE-DOOR ACCESS HATCH AND FRAME ASSEMBLY WITH SAFETY GRATE FOR PUMP STATION WET WELL TO BE INSTALLED IN CONCRETE TOP. PUMP MANUFACTURER SHALL SIZE DOOR OPENING IN ORDER TO FACILITATE EASE IN REMOVING PUMPS FROM WET WELL. CONTRACTOR AND PUMP MANUFACTURER SHALL COORDINATE TO MATCH SIZE AND LOCATION OF OPENING IN CONCRETE TOP TO DIMENSIONS OF HATCH PROVIDED BY PUMP MANUFACTURER.
 - PROVIDE AN ALUMINUM SINGLE-DOOR ACCESS HATCH AND FRAME ASSEMBLY WITH SAFETY GRATE FOR VALVE VAULT AND FLOW METER VAULT, RESPECTIVELY, TO BE INSTALLED IN A CONCRETE TOP. THE CONTRACTOR AND PUMP MANUFACTURER SHALL PROVIDE A DIMENSIONALLY ACCURATE SKETCH OF THE VALVE VAULT AND FLOW METER VAULT SHOWING ALL VALVES, PIPING, AND EQUIPMENT TO CONFIRM THE PROPER LOCATION AND SIZE OF THE ACCESS HATCH FOR THE STRUCTURE.
 - INSTALL RETRACTABLE SAFETY POST ON ALUMINUM LADDERS, MODEL 1 BILOO LADDER OR APPROVED EQUAL.
 - SEE ELECTRICAL PLANS FOR ELECTRICAL AND CONTROL PANEL INFORMATION.

LIFT STATION DETAIL
(SECTION VIEW)
SCALE: 1/2"=1'-0"

PUMP 1 DATA - FLYGT		PUMP 2 DATA - FLYGT	
DISCHARGE SIZE	6"	DISCHARGE SIZE	6"
GPM	1,100	GPM	1,100
TDH	25	TDH	25
HORSE POWER	12	HORSE POWER	12
RPM	1,765	RPM	1,765
VOLTAGE	460	VOLTAGE	460
PHASE	3	PHASE	3
MODEL	3153MT3	MODEL	3153MT3
IMPELLER SIZE	194mm	IMPELLER SIZE	194mm
GUIDE RAIL	STAINLESS STEEL	GUIDE RAIL	STAINLESS STEEL

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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana

Bryan L. Hood 10/2024
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ISSUANCE INDEX

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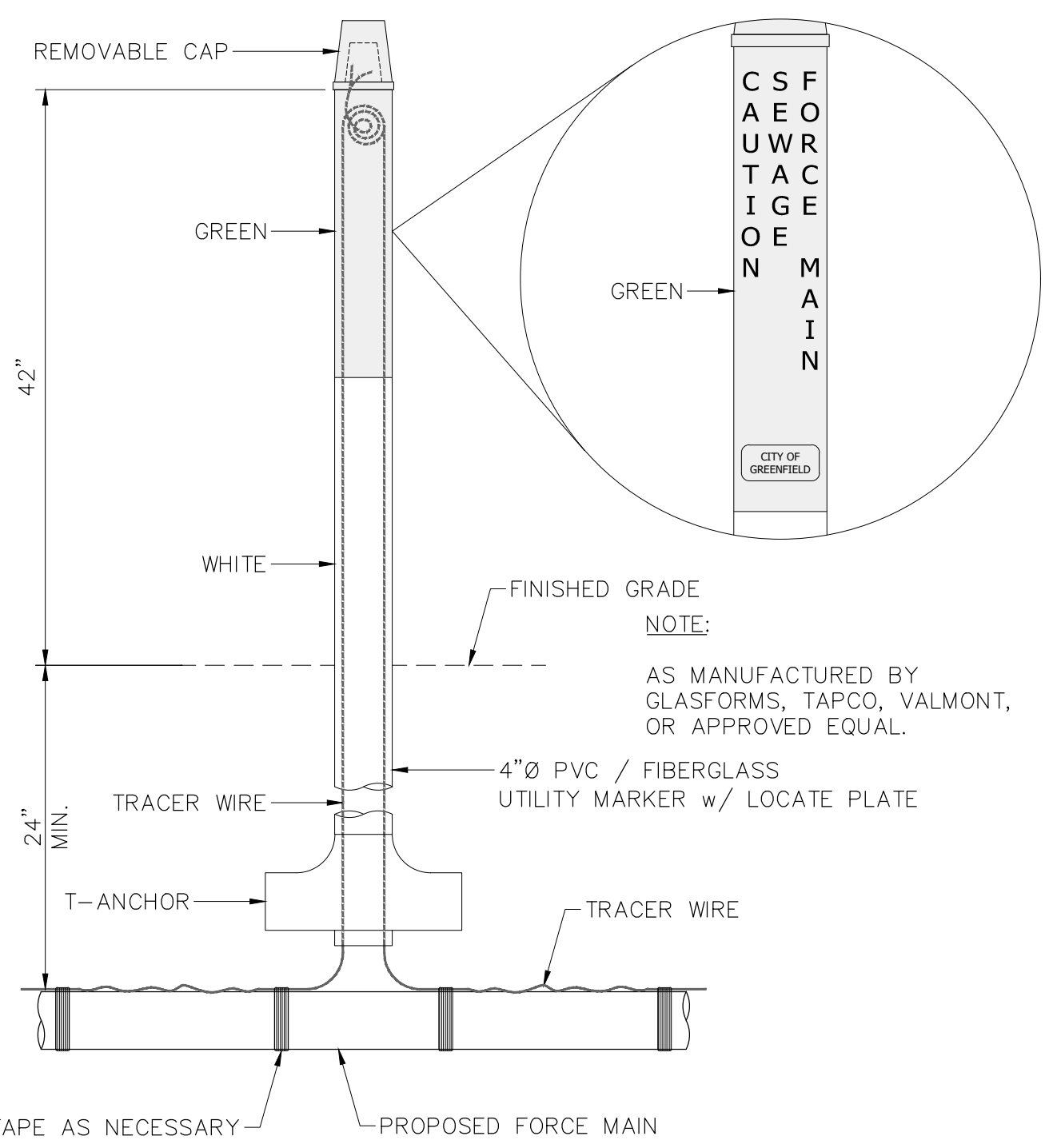
REVISION SCHEDULE

NO.	DESCRIPTION	DATE

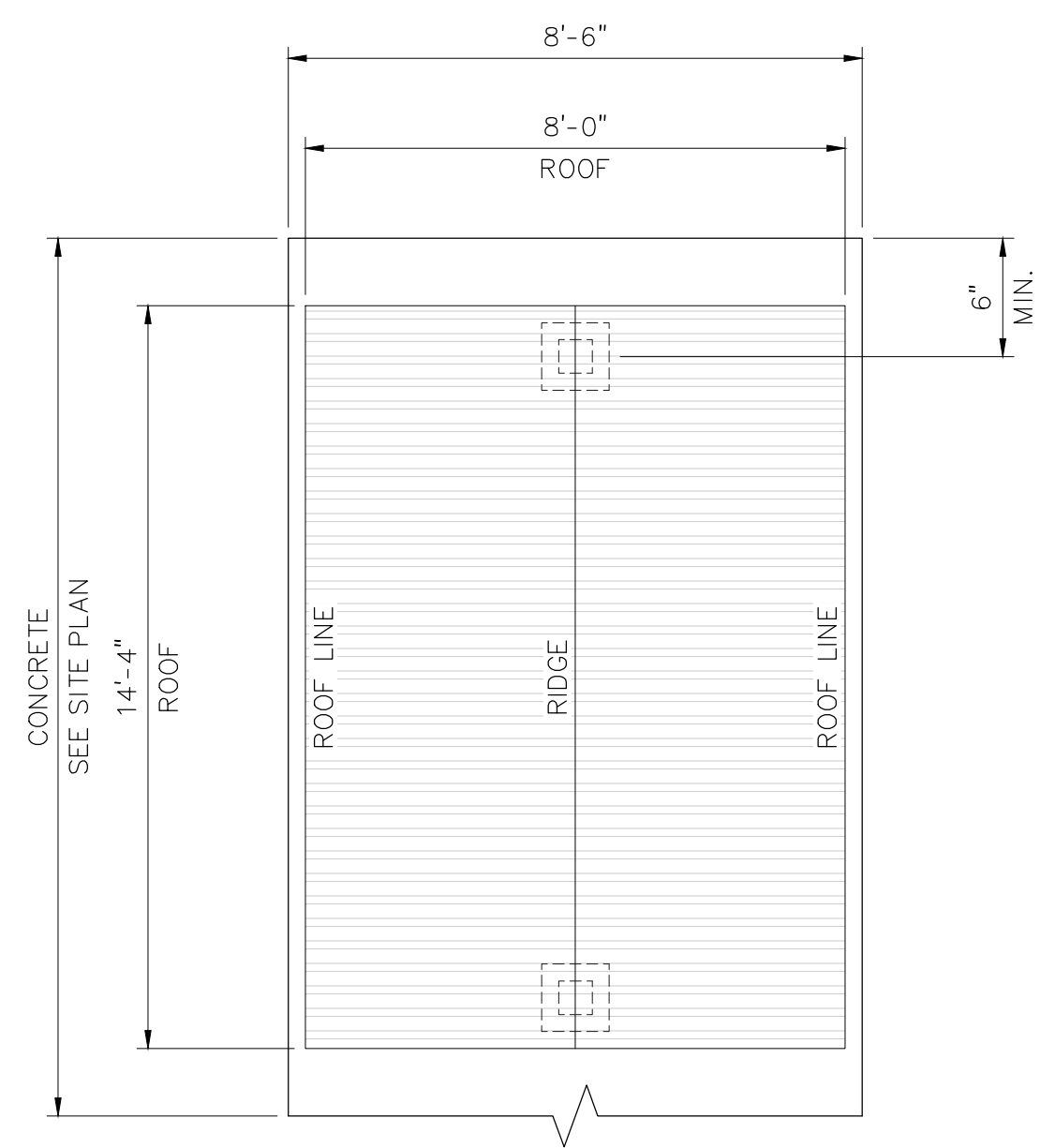
Project Number 2021.02592

STANDARD DETAILS LIFT STATION

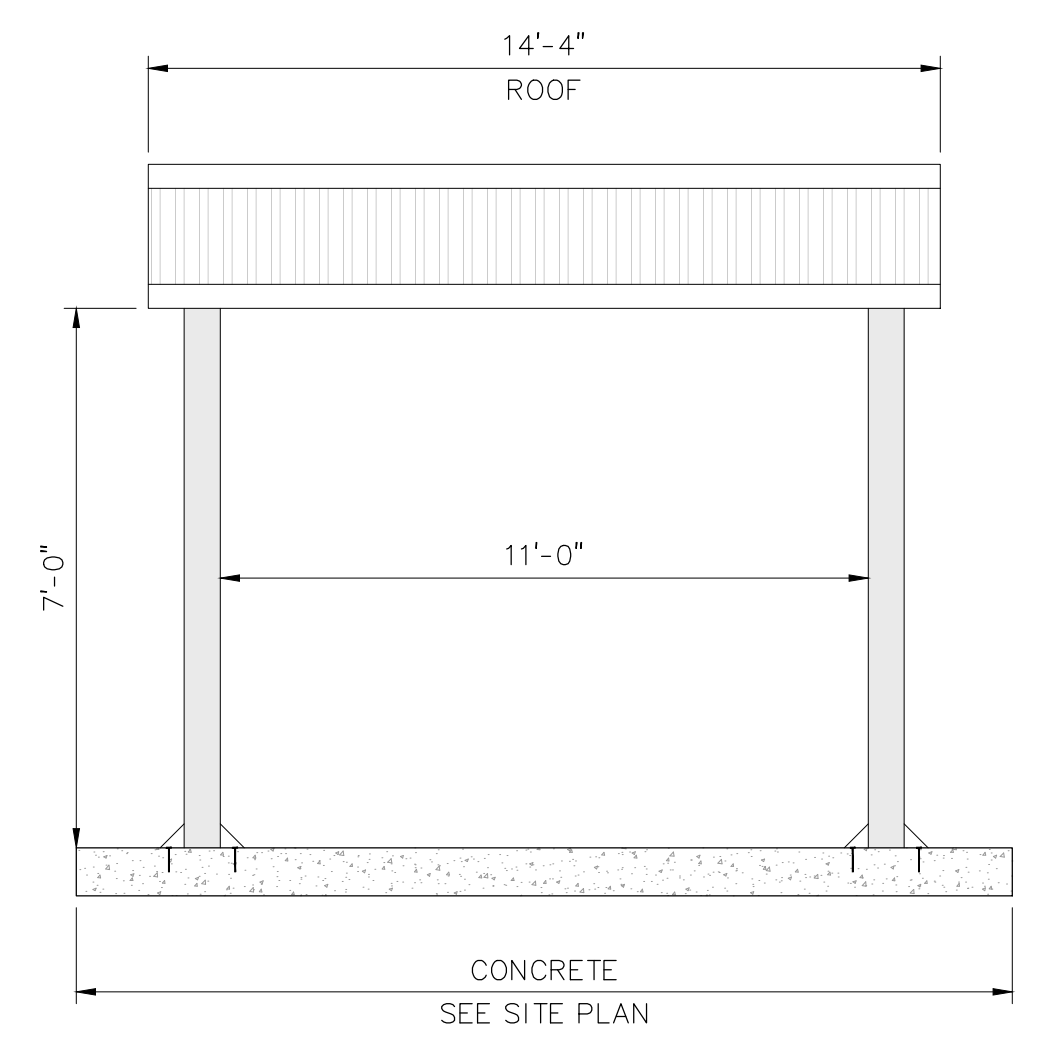
C-119



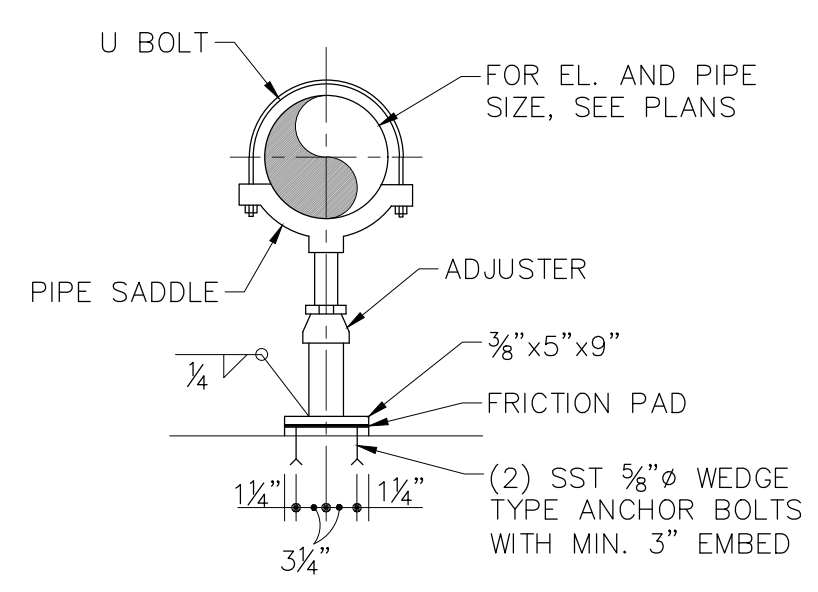
TRACER WIRE UTILITY MARKER DETAIL
NOT TO SCALE



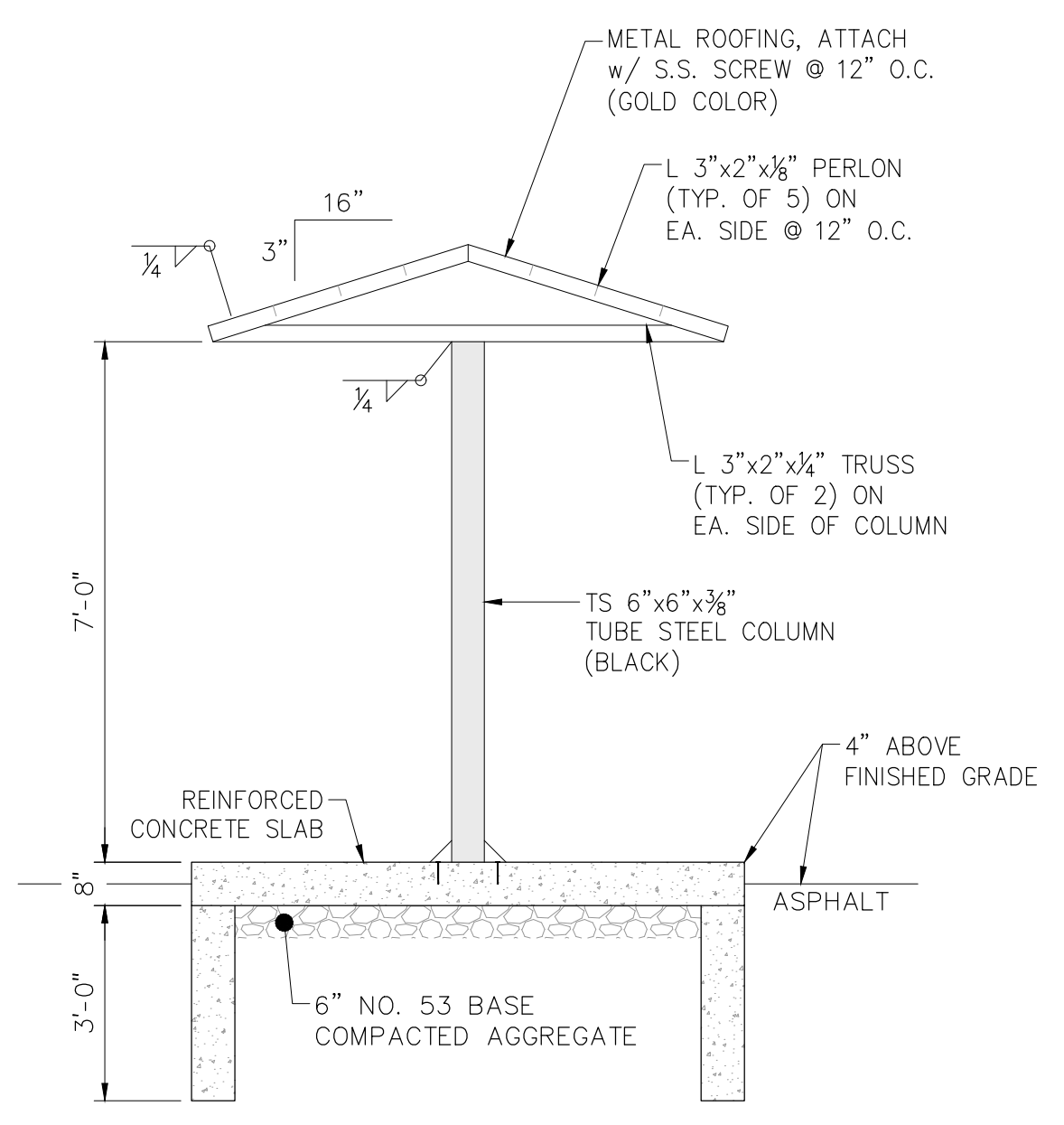
CONTROL SHELTER
(PLAN VIEW)
NOT TO SCALE



CONTROL SHELTER
(SIDE VIEW)
NOT TO SCALE



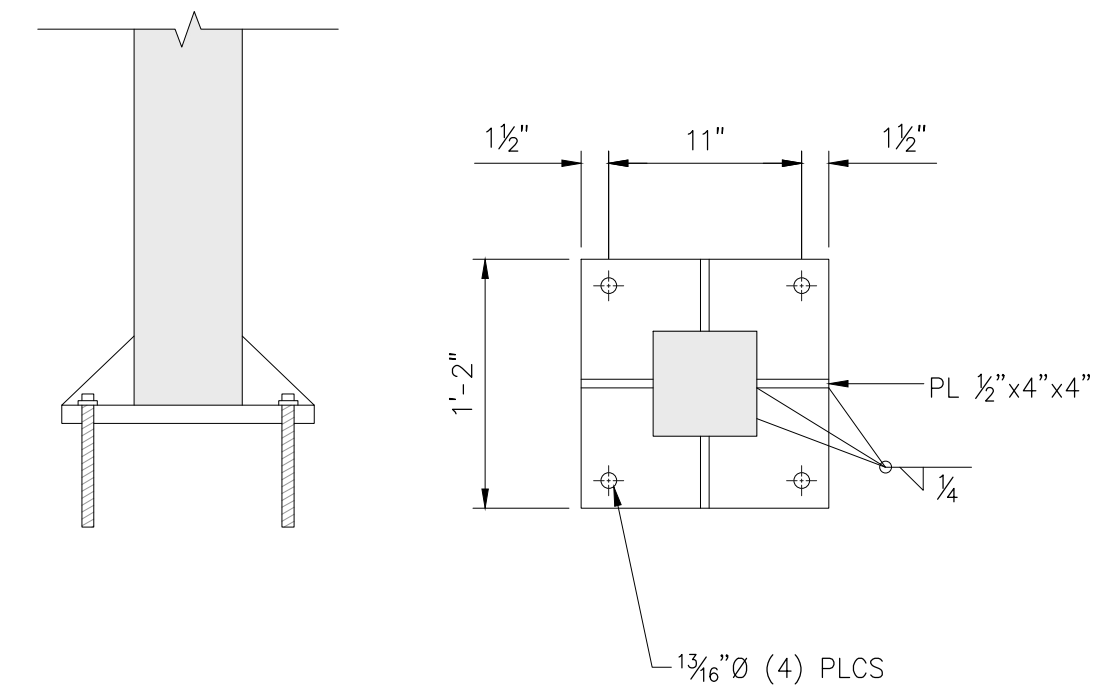
PIPE SUPPORT
NOT TO SCALE



CONTROL SHELTER
(ELEVATION VIEW)
NOT TO SCALE

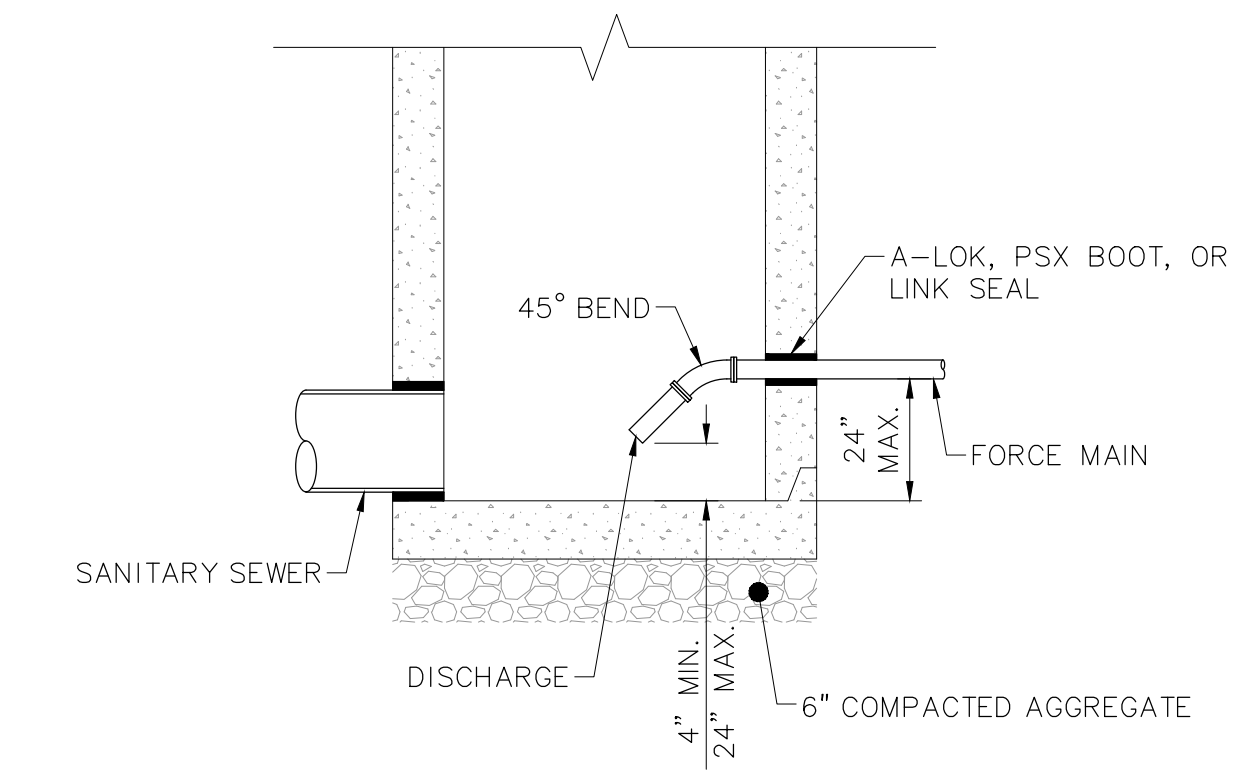
CONTROL SHELTER NOTES:

- CONTROL SHELTER SLAB TO BE 8" THICK WITH TURN-DOWN EDGES 3'-0" BELOW GRADE.
- 8" CLASS "A" CONCRETE PAD WITH #4 REBAR @ 12" O.C. EW @ 3" FROM BOTTOM OF SLAB.
- INSTALL TWO COATS OF SONNEBORN SONOCONCRETE KURE 1315 OR APPROVED EQUAL TO SEAL CONCRETE SLAB.
- ALL STEEL IS POWDER COATED BLACK.
- PROVIDE TYPE 304 S.S.T. ANCHOR BOLTS, NUTS, WASHERS AND FASTENERS.
- CONTROL STRUCTURE TO BE MANUFACTURED BY ROMTEC OR APPROVED EQUAL.
- ALL FOUNDATION DESIGN INFORMATION SHOULD BE CONSIDERED AS PRELIMINARY ONLY. A LOCAL SOILS ENGINEER SHALL BE RETAINED TO DESIGN THE FOUNDATION ACCORDING TO LOCAL CONDITIONS AND CODES. FINAL DESIGN OF THE FOOTING/FOUNDATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- ALL WELDING IS TO BE DONE IN ACCORDANCE WITH LATEST AWS STANDARDS. ALL WELDS ARE TO DEVELOP FULL STRENGTH OF COMPONENT PARTS. (E7081 ELECTRODES).
- CHAMFER CONCRETE EDGES.



CONTROL SHELTER
(ANCHOR)
NOT TO SCALE

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GENERAL CONSTRUCTION REQUIREMENTS:

- END OF PRESSURE SEWER SHALL HAVE A SHORT RADIUS 45° BEND TO DIRECT EFFLUENT DOWNWARD.
- MANHOLE SHALL BE TREATED WITH EPOXY COATING AS MANUFACTURED BY CONCO SPRAY SOLUTIONS (317-428-6543) FOR CORROSION PROTECTION.
- INSTALL COATING PER MANUFACTURER'S RECOMMENDATION.

PRESSURE SEWER CONNECTION TO MANHOLE
(CORE DRILLED)
NOT TO SCALE

CONTROL SHELTER DETAILS
NOT TO SCALE

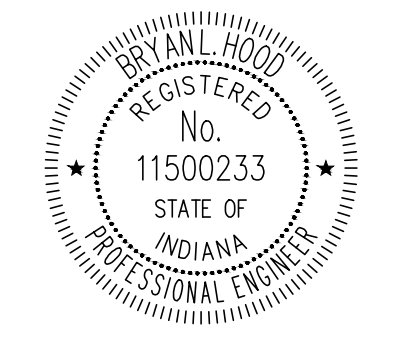
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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



Bryan L. Hood 5/10/2024
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STANDARD DETAILS LIFT STATION

C-120

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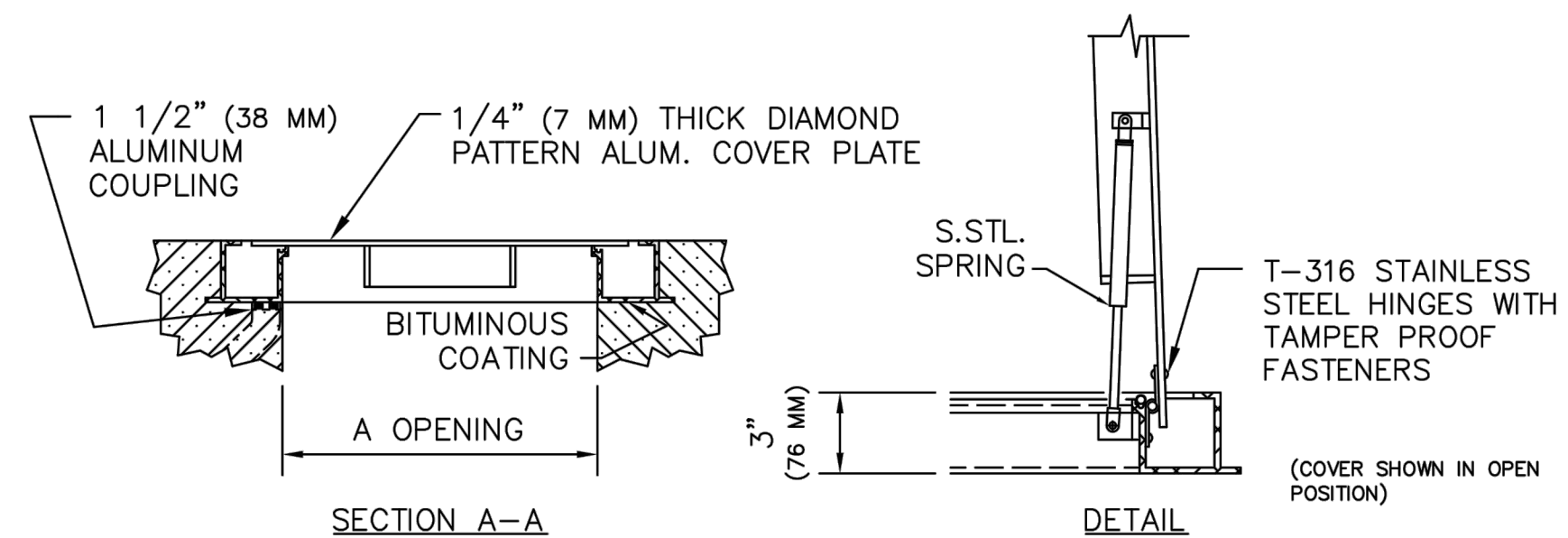
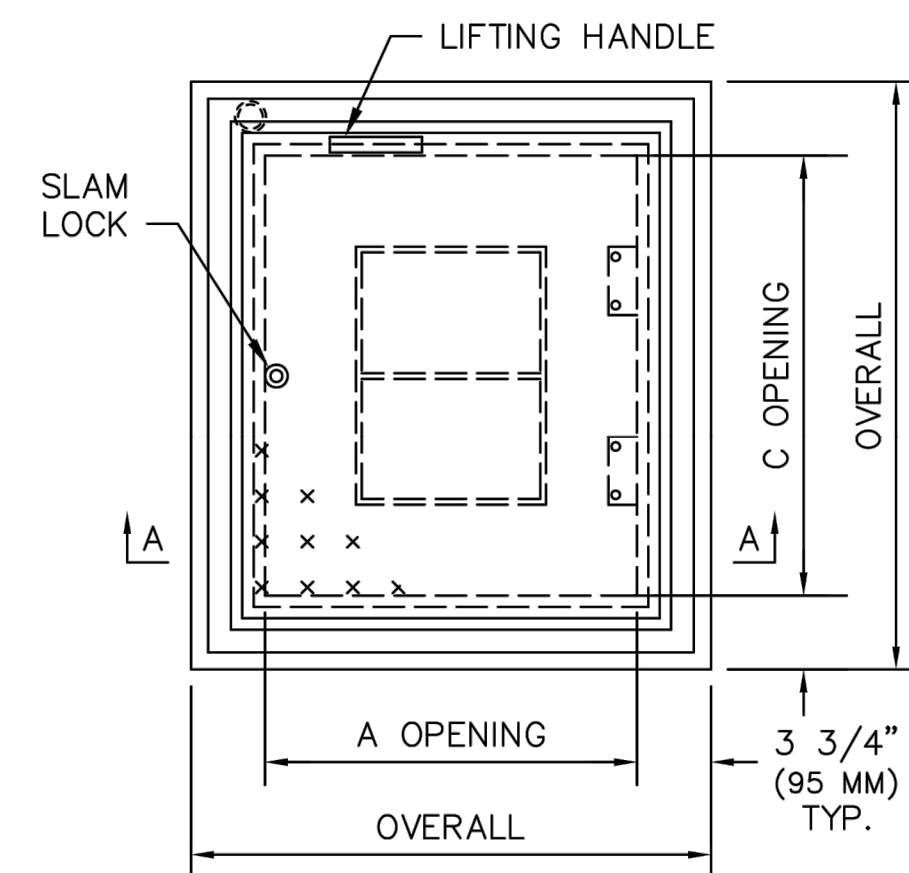
SERIES W1S ACCESS DOOR

STANDARD FEATURES:

- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT-IN NEOPRENE GASKET TO LIMIT THE TRANSMISSION OF ODORS
- NON-OZONE DEPLETING BITUMINOUS COATING
- SINGLE LEAF CONSTRUCTION
- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG. PER SQ. METER LOAD RATING)
- EXTRUDED ALUMINUM CHANNEL FRAME
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE



STANDARD SIZES				
QTY.	MODEL NO.	A DIM. INCHES (MM)	C DIM. INCHES (MM)	UNIT WT. LBS. (KG.)
	W1S2424	24 (610)	24 (610)	46 (20)
	W1S2430	24 (610)	30 (762)	51 (23)
	W1S2436	24 (610)	36 (914)	61 (28)
	W1S2442	24 (610)	42 (1067)	77 (35)
	W1S2448	24 (610)	48 (1219)	85 (39)
	W1S3030	30 (762)	30 (762)	62 (28)
	W1S3036	30 (762)	36 (914)	69 (31)
	W1S3042	30 (762)	42 (1067)	77 (35)
	W1S3048	30 (762)	48 (1219)	85 (39)
	W1S3054	30 (762)	54 (1372)	99 (45)
	W1S3060	30 (762)	60 (1524)	102 (46)
	W1S3636	36 (914)	36 (914)	78 (35)
	W1S3642	36 (914)	42 (1067)	89 (40)
	W1S3648	36 (914)	48 (1219)	97 (44)
	W1S3654	36 (914)	54 (1372)	107 (49)
	W1S3660	36 (914)	60 (1524)	116 (53)
	W1S3666	36 (914)	66 (1676)	126 (57)
	W1S3672	36 (914)	72 (1829)	135 (61)
	W1S4242	42 (1067)	42 (1067)	108 (49)



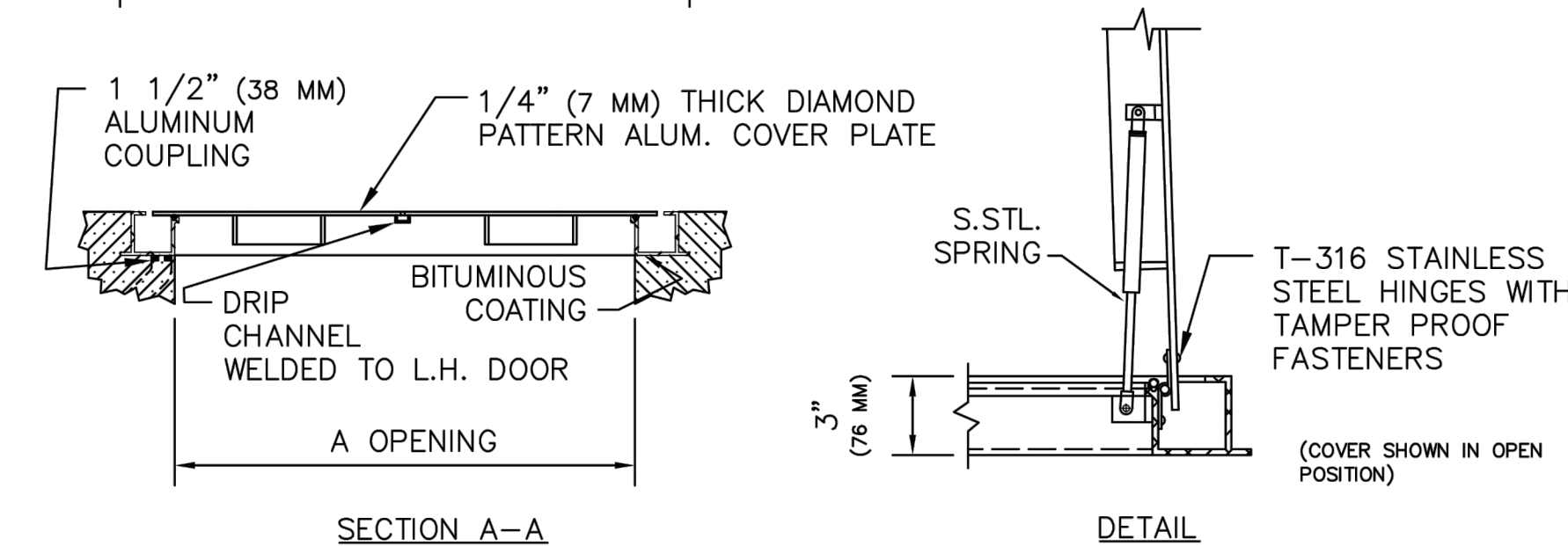
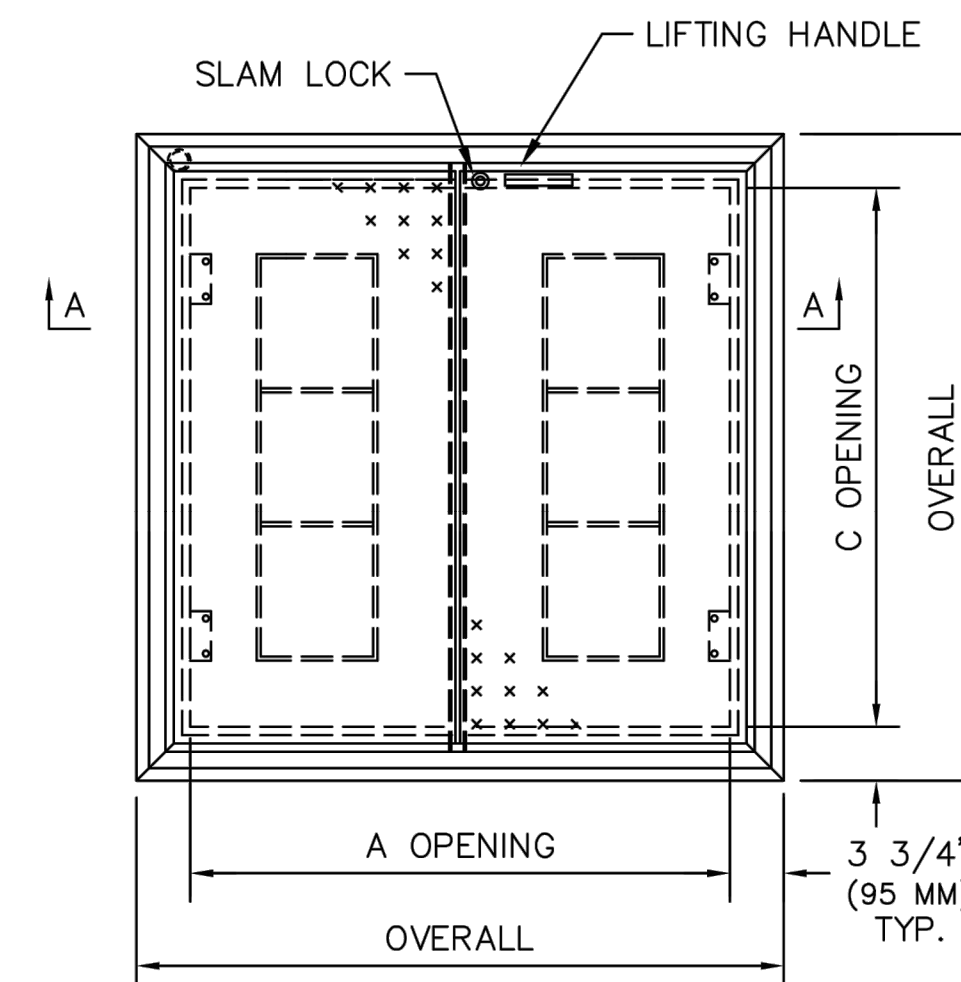
SERIES W2S ACCESS DOOR

STANDARD FEATURES:

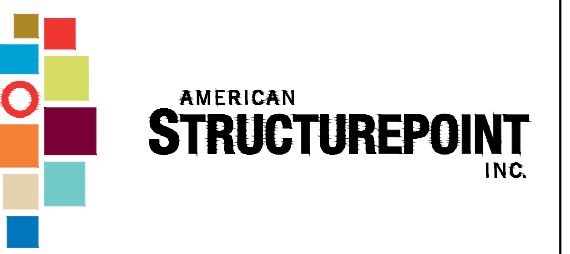
- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT-IN NEOPRENE CUSHION/GASKET
- NON-OZONE DEPLETING BITUMINOUS COATING
- DOUBLE LEAF CONSTRUCTION
- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG. PER SQ. METER LOAD RATING)
- EXTRUDED ALUMINUM CHANNEL FRAME
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE



STANDARD SIZES				
QTY.	MODEL NO.	A DIM. INCHES (MM)	C DIM. INCHES (MM)	UNIT WT. LBS. (KG.)
	W2S4242	42 (1067)	42 (1067)	108 (48)
	W2S4842	48 (1219)	42 (1067)	115 (52)
	W2S4848	48 (1219)	48 (1219)	126 (57)
	W2S5442	54 (1372)	42 (1067)	124 (56)
	W2S5448	54 (1372)	48 (1219)	136 (62)
	W2S5454	54 (1372)	54 (1372)	149 (68)
	W2S6030	60 (1524)	30 (762)	102 (46)
	W2S6036	60 (1524)	36 (914)	116 (53)
	W2S6042	60 (1524)	42 (1067)	132 (60)
	W2S6048	60 (1524)	48 (1219)	148 (67)
	W2S6054	60 (1524)	54 (1372)	162 (73)
	W2S6060	60 (1524)	60 (1524)	177 (80)
	W2S6636	66 (1676)	36 (914)	126 (57)
	W2S6648	66 (1676)	48 (1219)	160 (73)
	W2S7236	72 (1829)	36 (914)	135 (61)
	W2S7242	72 (1829)	42 (1067)	154 (70)
	W2S7248	72 (1829)	48 (1219)	171 (78)
	W2S7254	72 (1829)	54 (1372)	188 (85)
	W2S7260	72 (1829)	60 (1524)	203 (92)



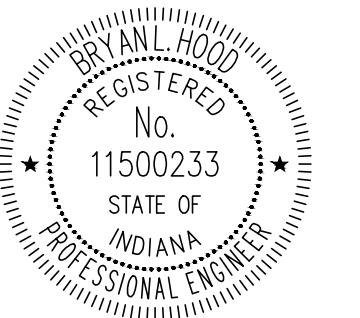
CITY OF GREENFIELD



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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



Bryan L. Hood 5/10/2024
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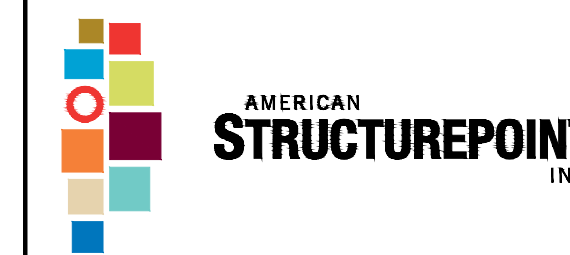
ISSUANCE INDEX	
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Project Number 2021.02592

STANDARD DETAILS
LIFT STATION

C-121



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**WATERVIEW
LIFT STATION
RELOCATION**

Greenfield, Indiana



Bryan L. Hood 10/2024
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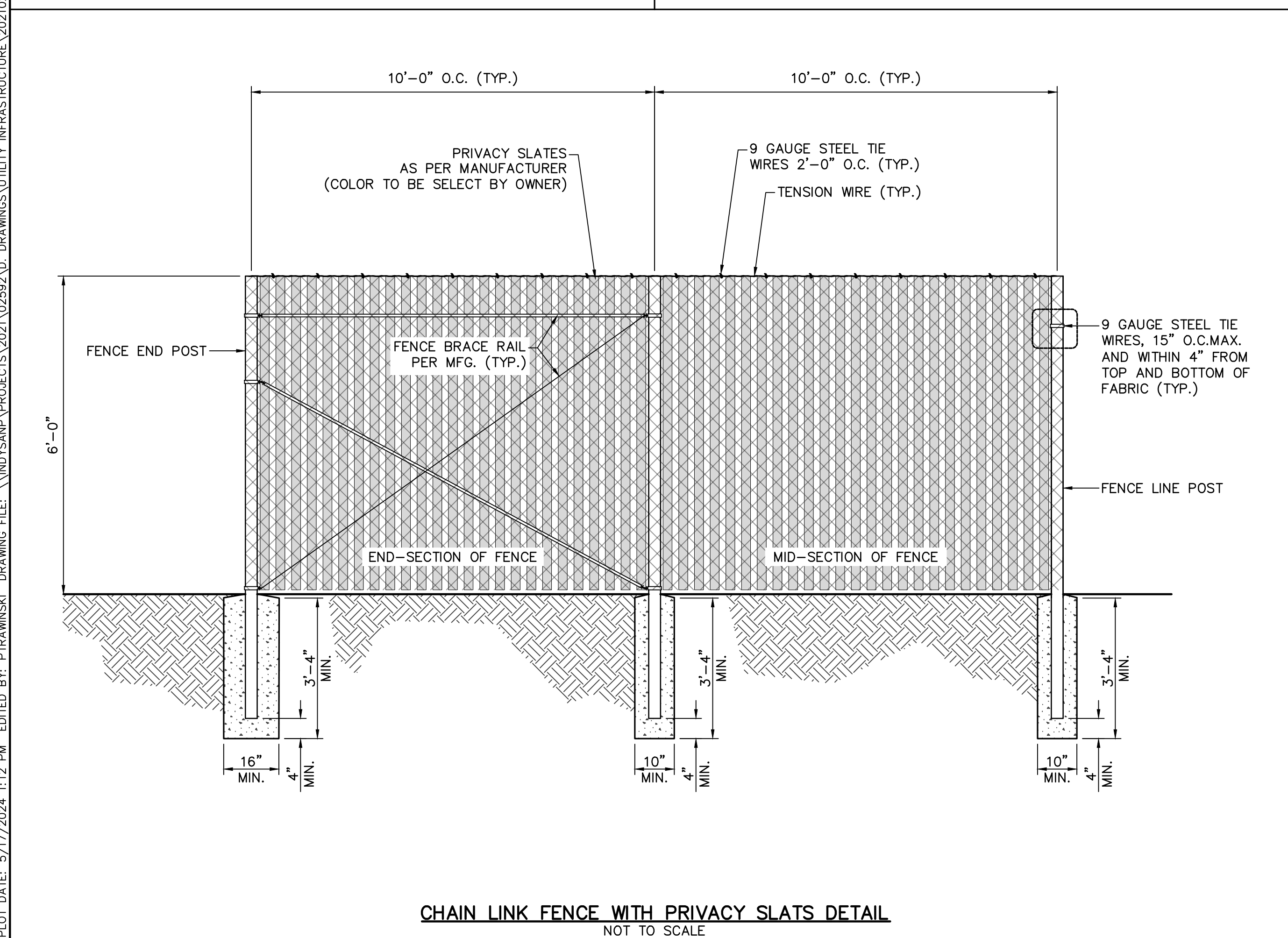
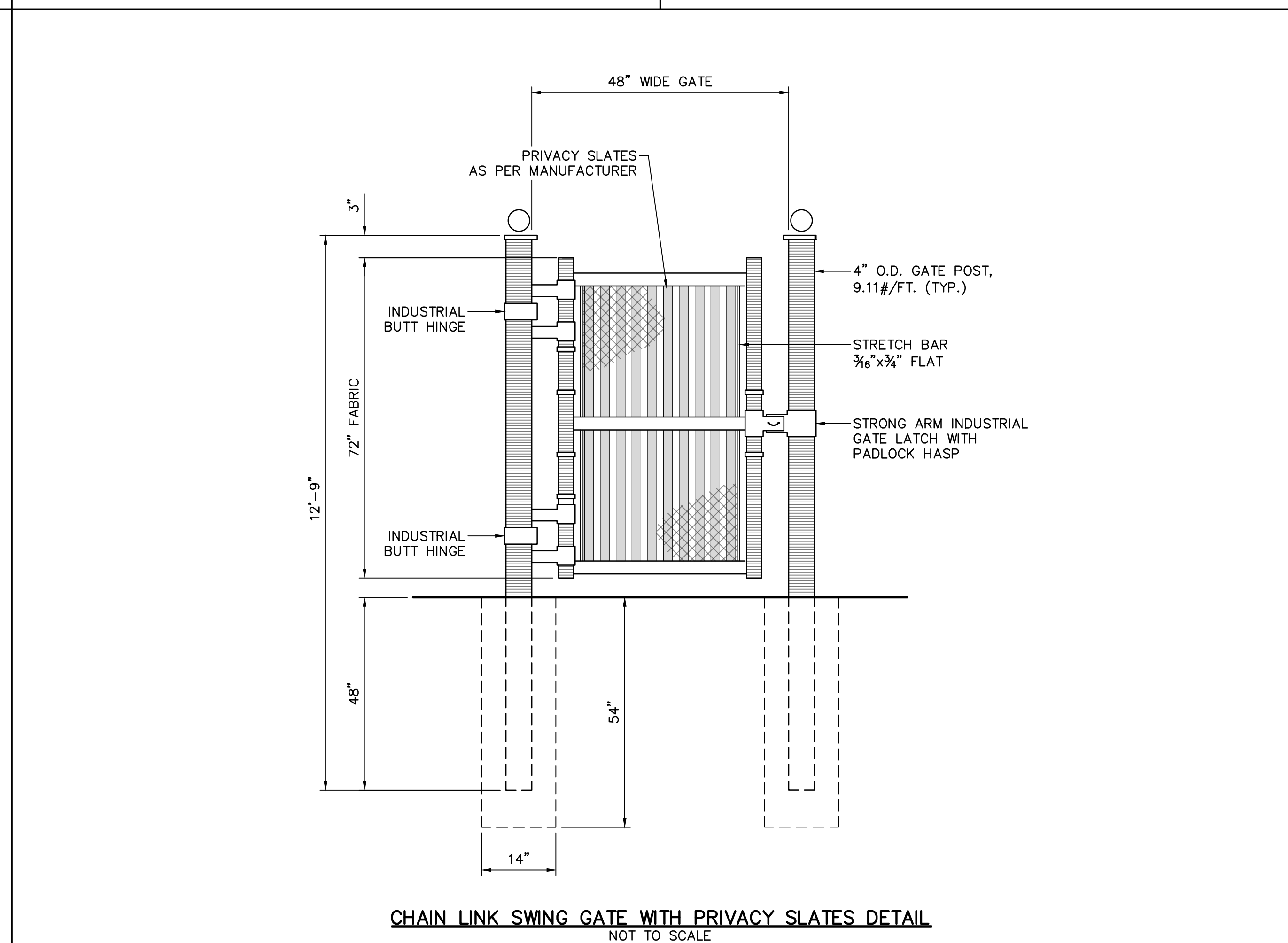
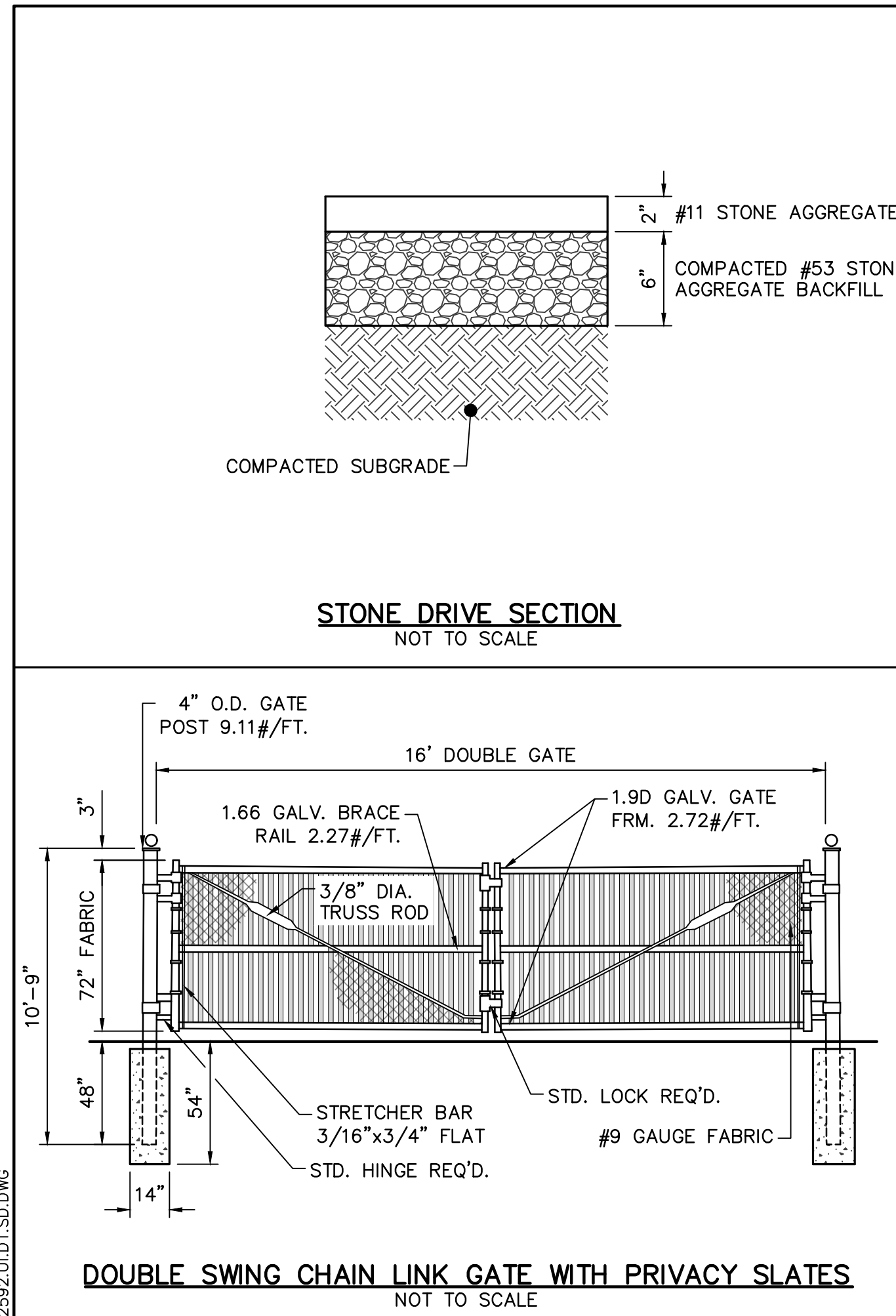
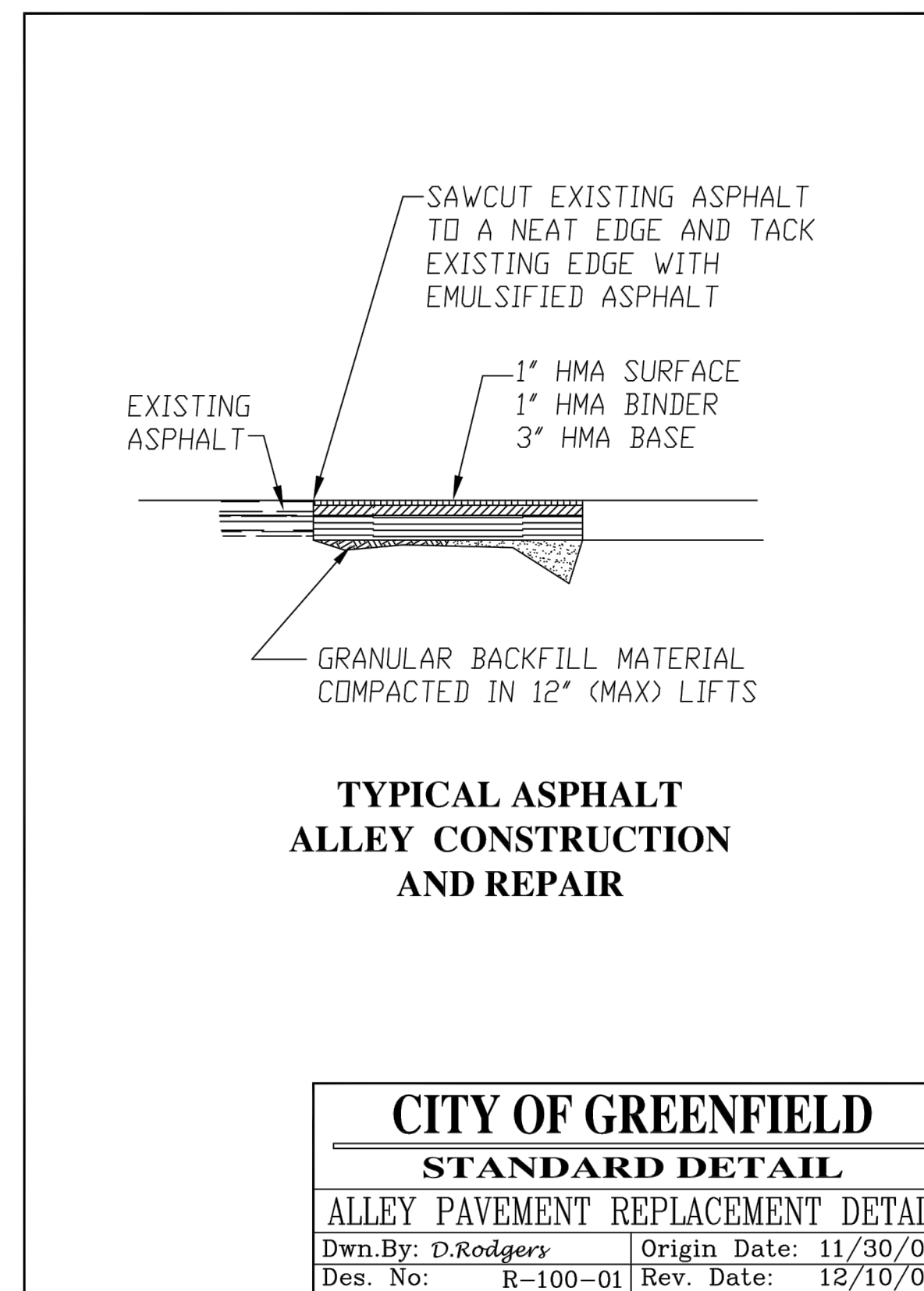
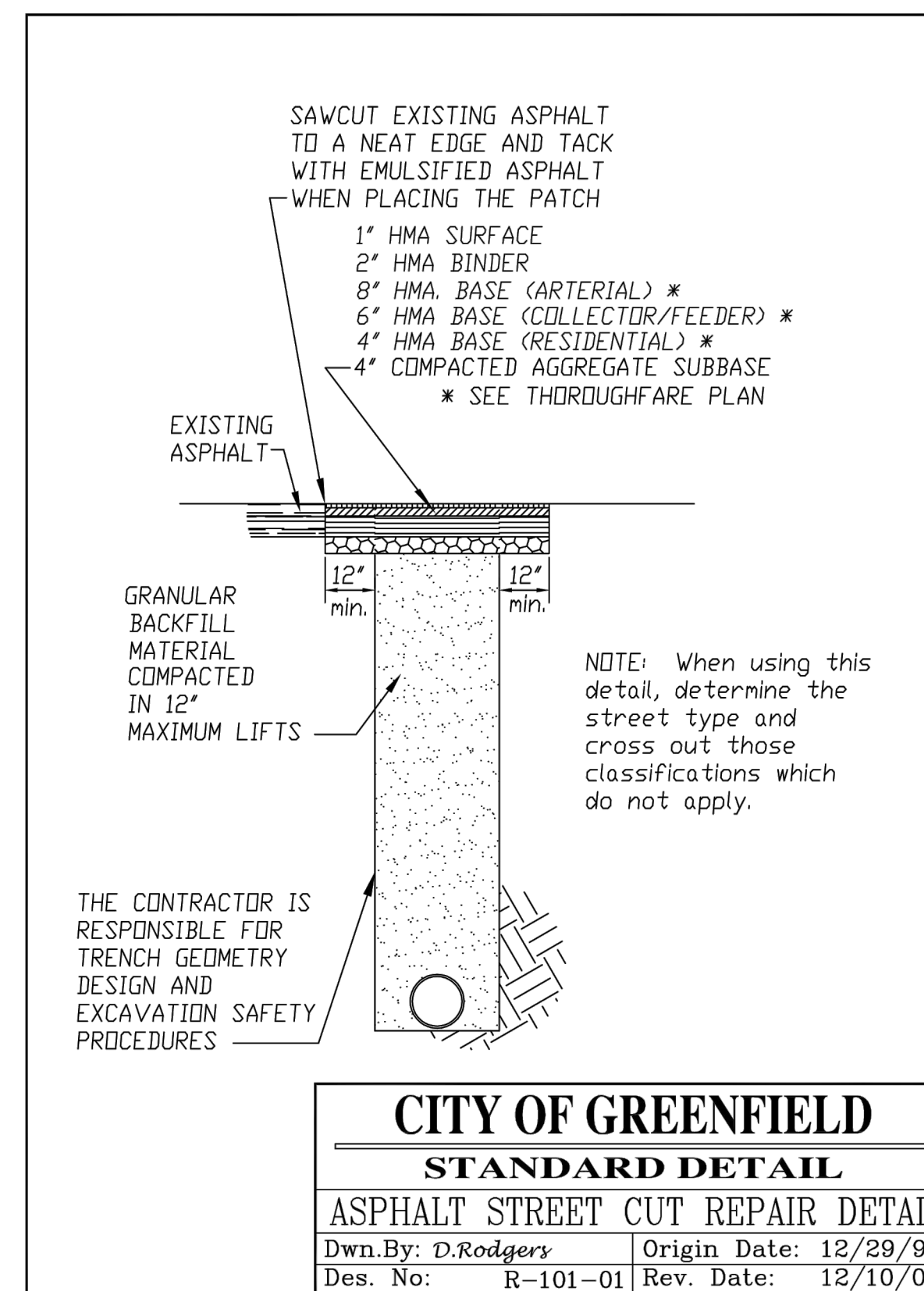
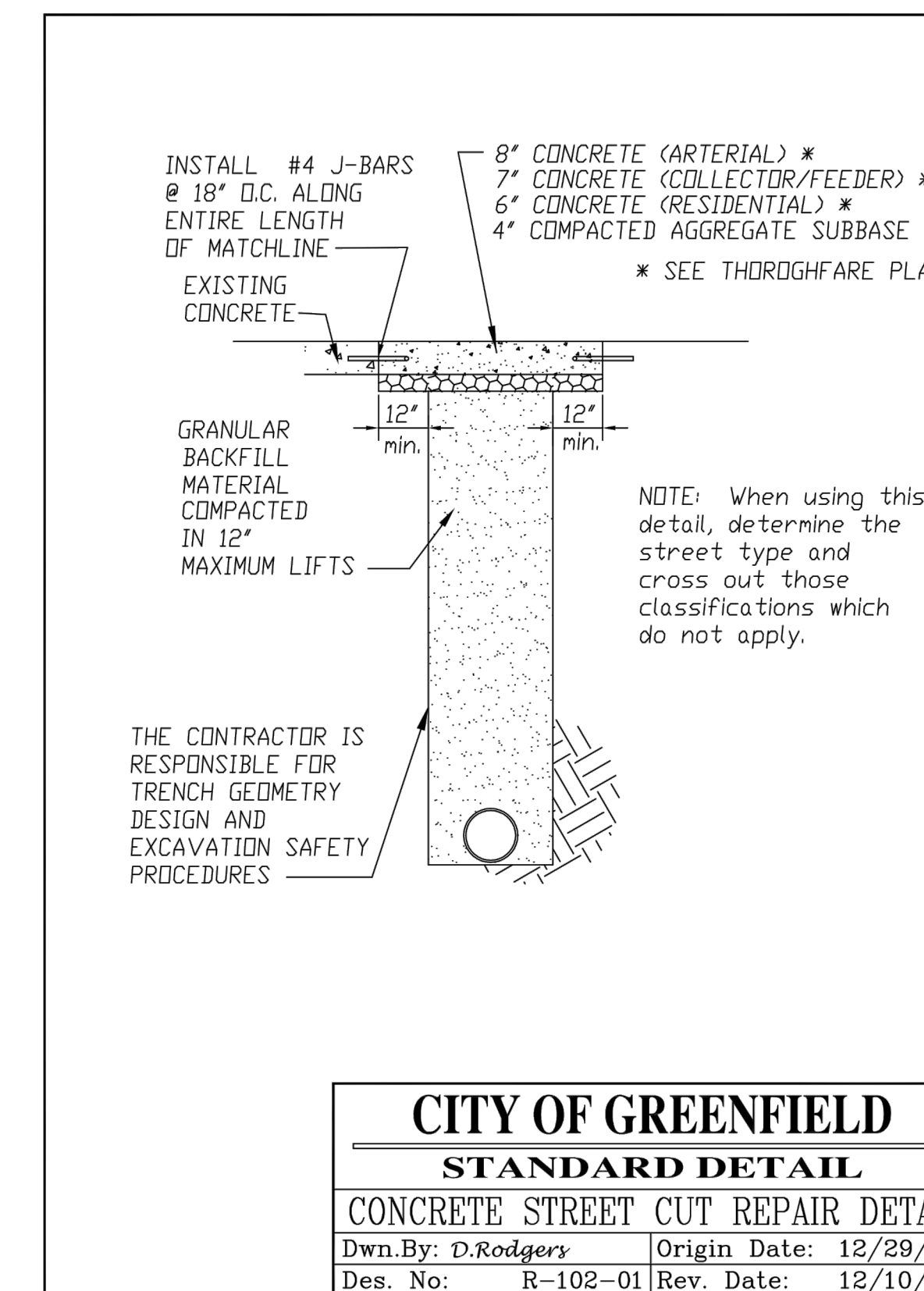
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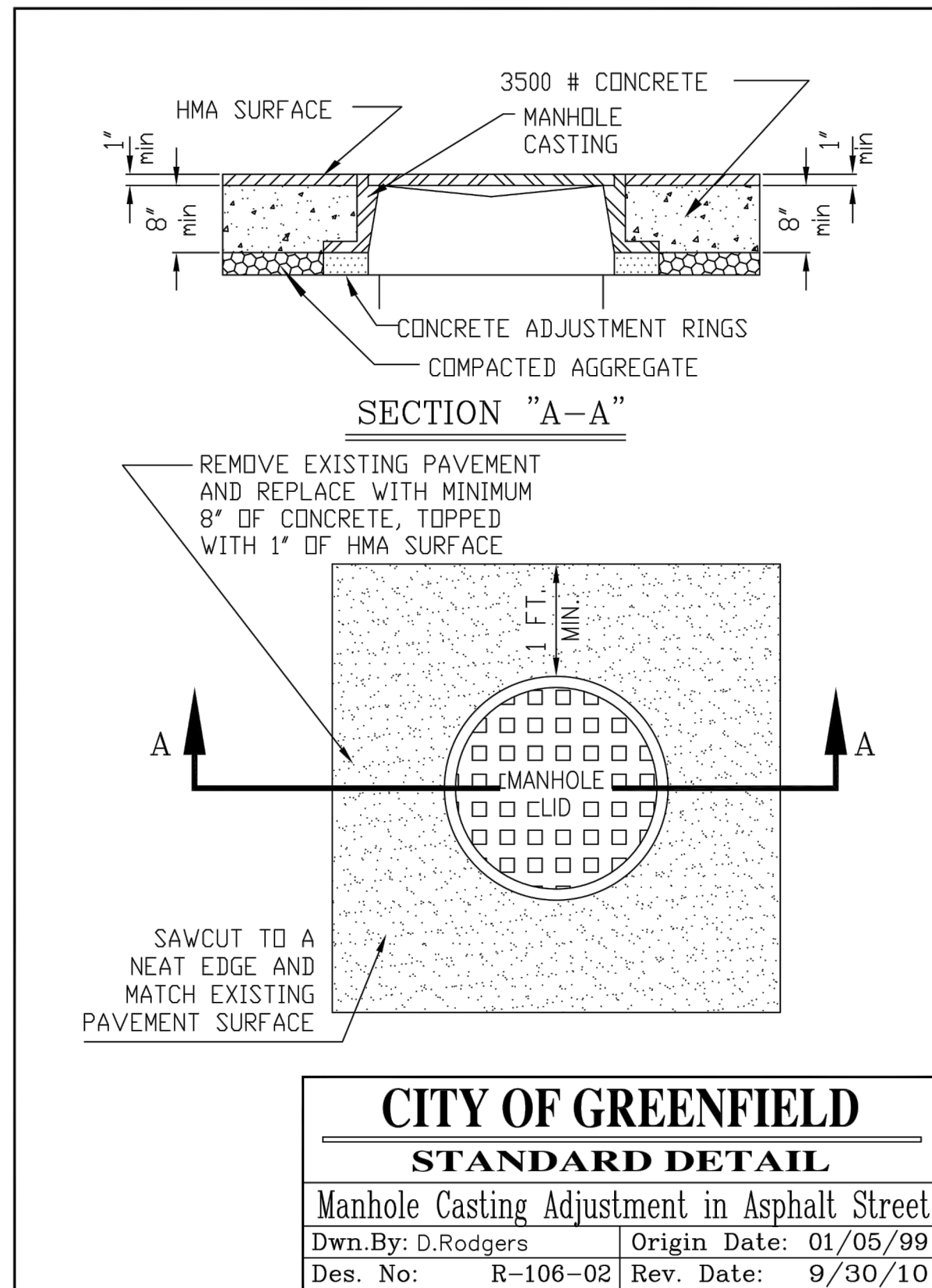
**STANDARD DETAILS
SANITARY SEWER**

C-122

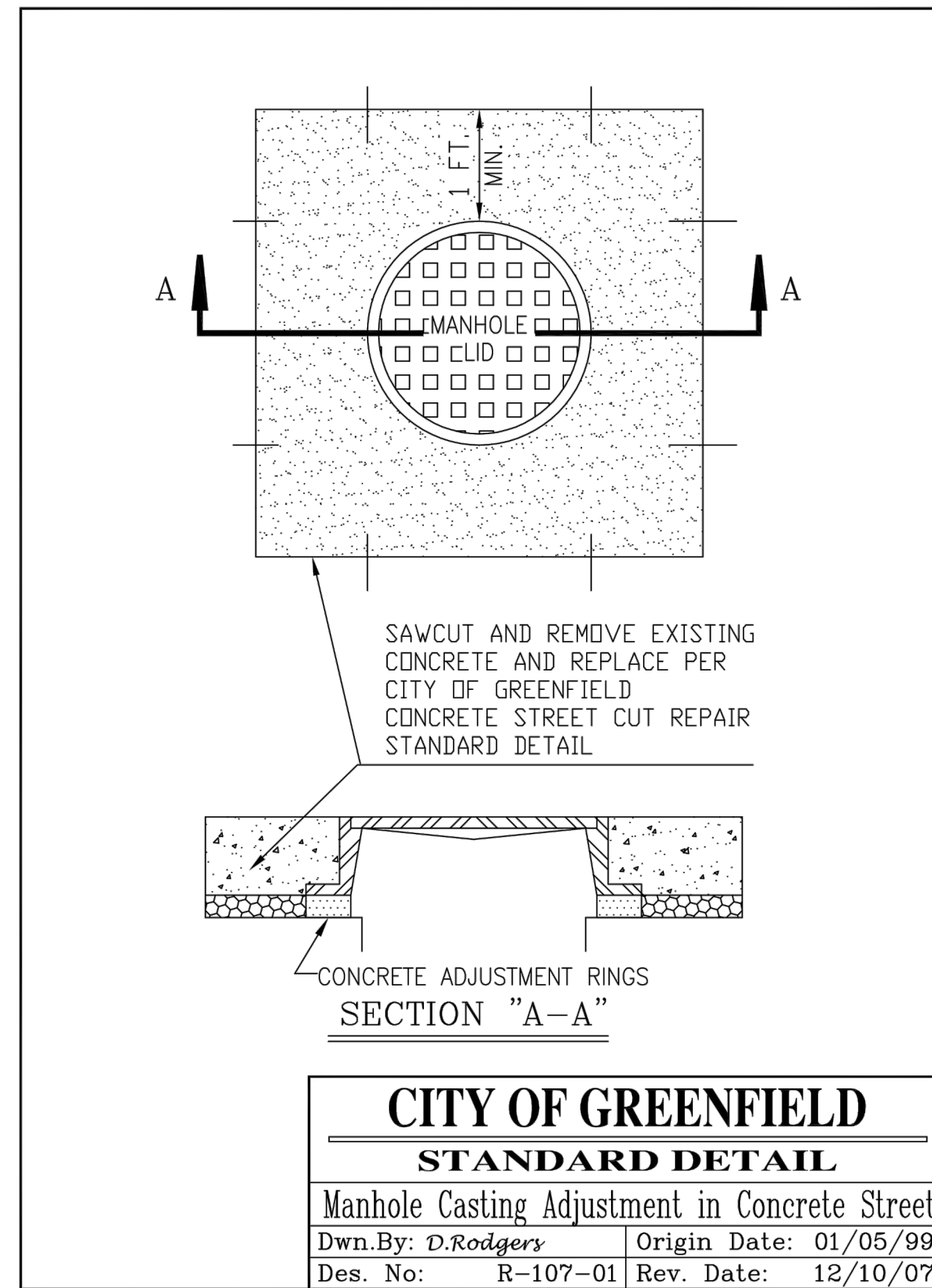


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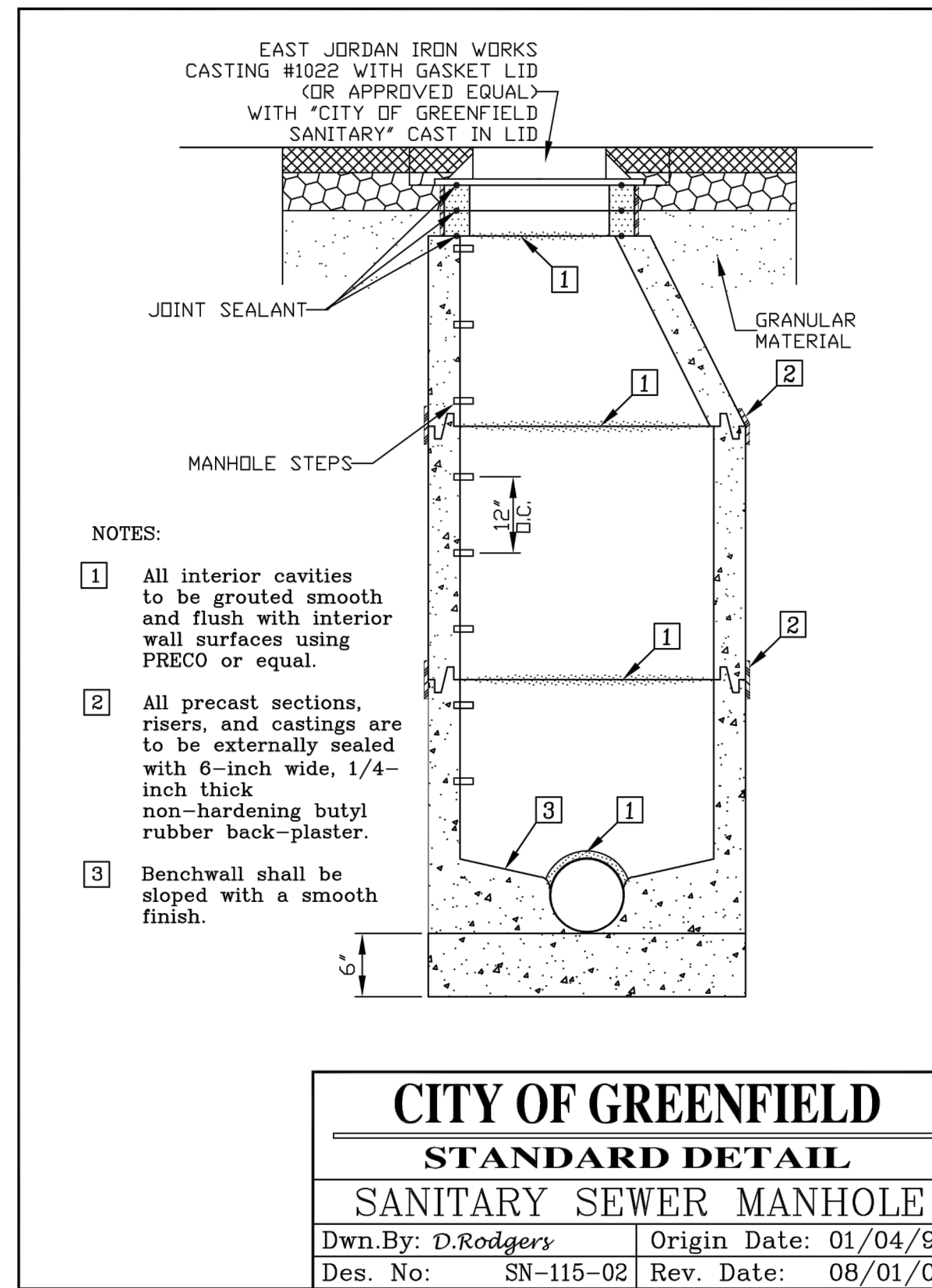
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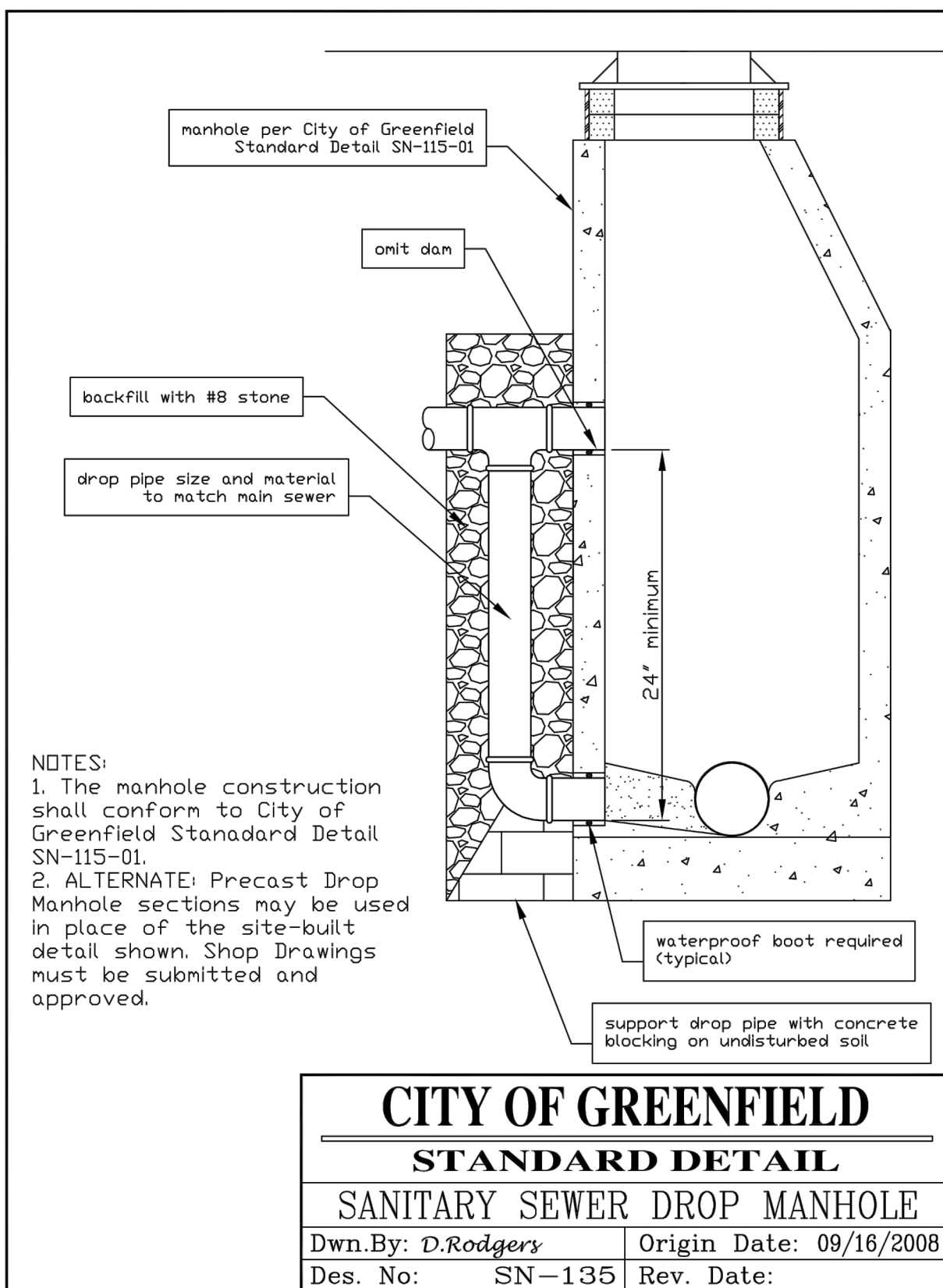
CITY OF GREENFIELD
STANDARD DETAIL
Manhole Casting Adjustment in Asphalt Street
 Dwn.By: D.Rodgers Origin Date: 01/05/99
 Des. No: R-106-02 Rev. Date: 9/30/10



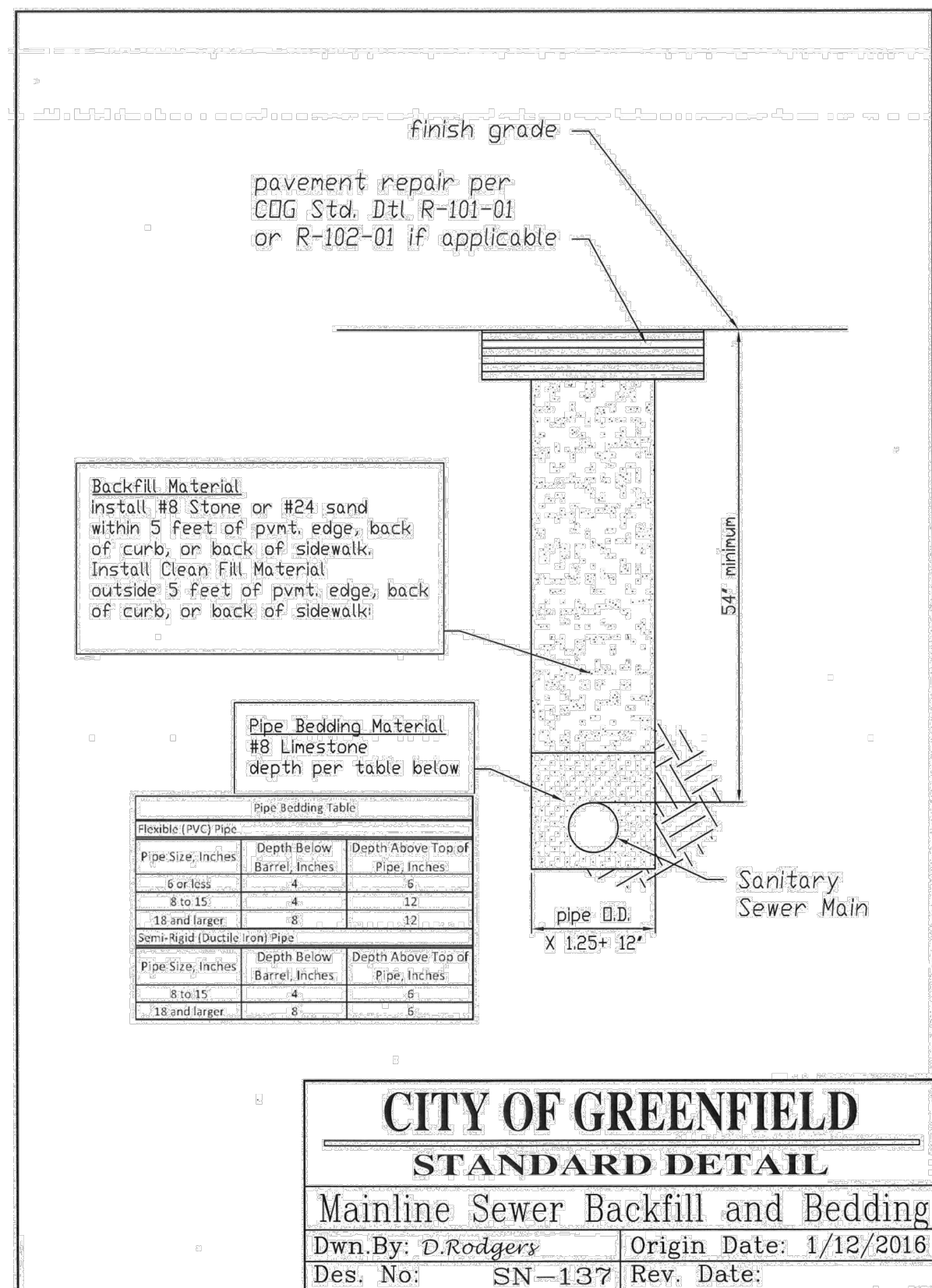
CITY OF GREENFIELD
STANDARD DETAIL
Manhole Casting Adjustment in Concrete Street
 Dwn.By: D.Rodgers Origin Date: 01/05/99
 Des. No: R-107-01 Rev. Date: 12/10/07



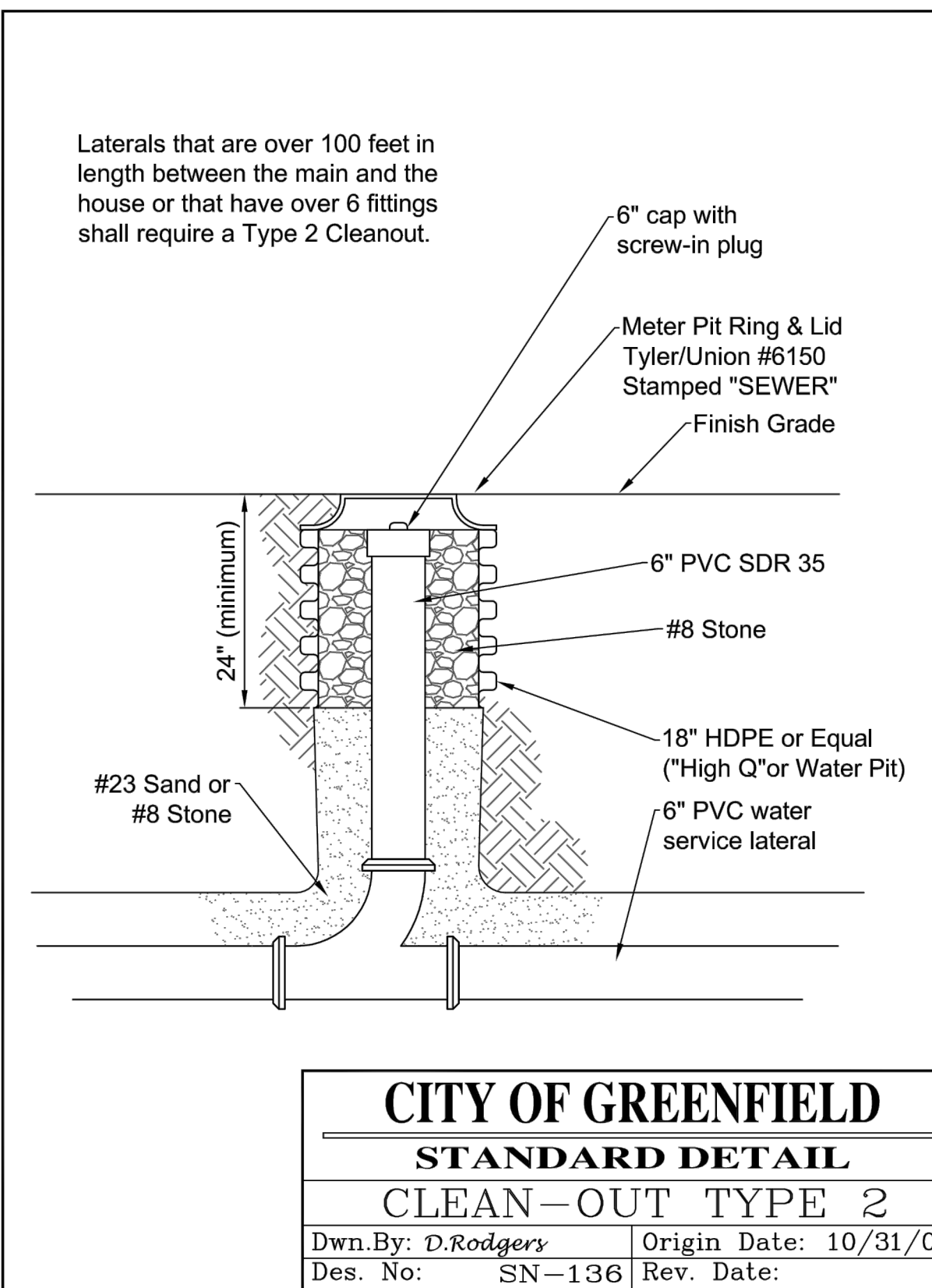
CITY OF GREENFIELD
STANDARD DETAIL
SANITARY SEWER MANHOLE
 Dwn.By: D.Rodgers Origin Date: 01/04/99
 Des. No: SN-115-02 Rev. Date: 08/01/08



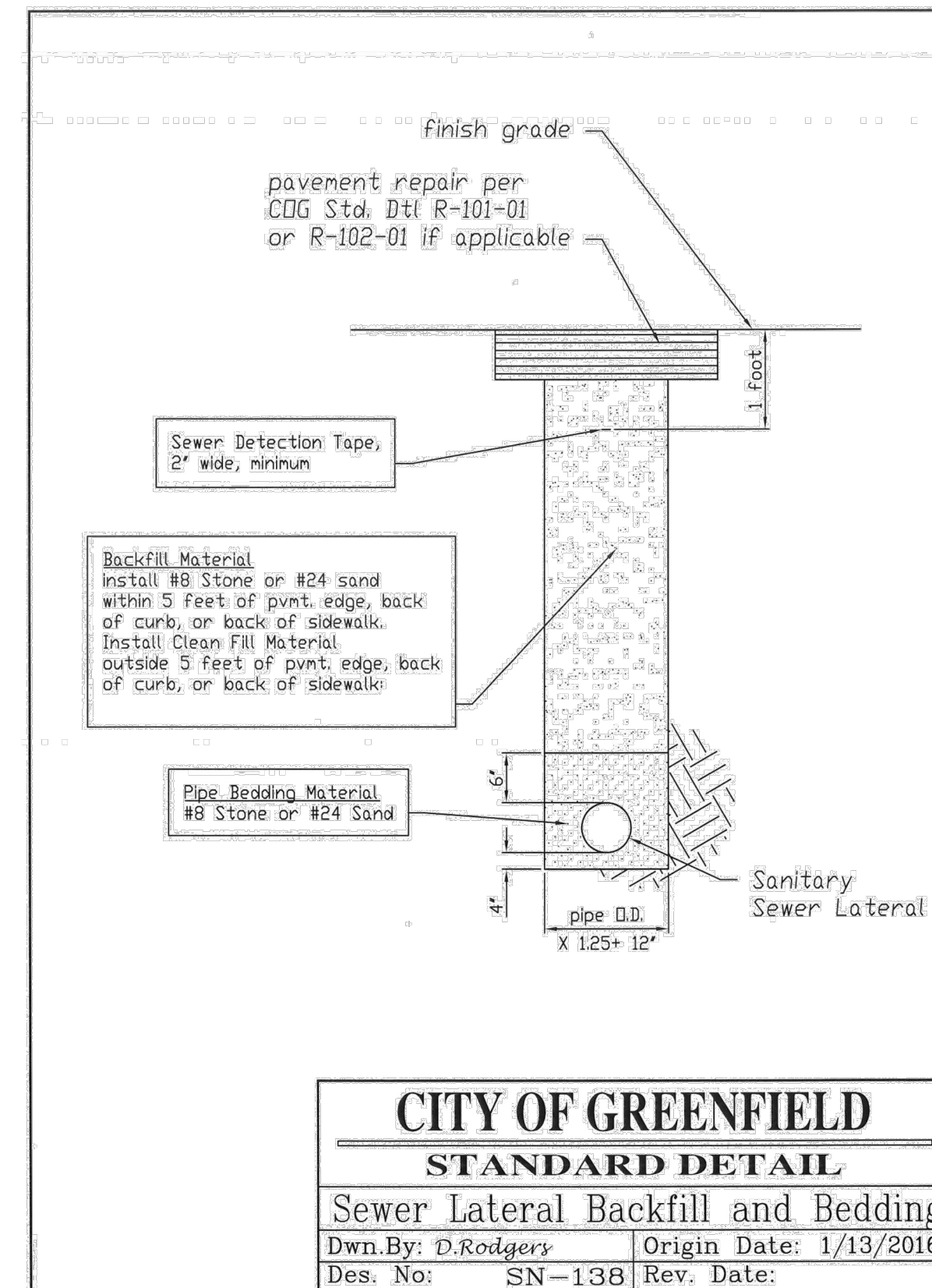
CITY OF GREENFIELD
STANDARD DETAIL
SANITARY SEWER DROP MANHOLE
 Dwn.By: D.Rodgers Origin Date: 09/16/2008
 Des. No: SN-135 Rev. Date:



CITY OF GREENFIELD
STANDARD DETAIL
Mainline Sewer Backfill and Bedding
 Dwn.By: D.Rodgers Origin Date: 1/12/2016
 Des. No: SN-137 Rev. Date:



CITY OF GREENFIELD
STANDARD DETAIL
CLEAN-OUT TYPE 2
 Dwn.By: D.Rodgers Origin Date: 10/31/08
 Des. No: SN-136 Rev. Date:



CITY OF GREENFIELD
STANDARD DETAIL
Sewer Lateral Backfill and Bedding
 Dwn.By: D.Rodgers Origin Date: 1/13/2016
 Des. No: SN-138 Rev. Date:



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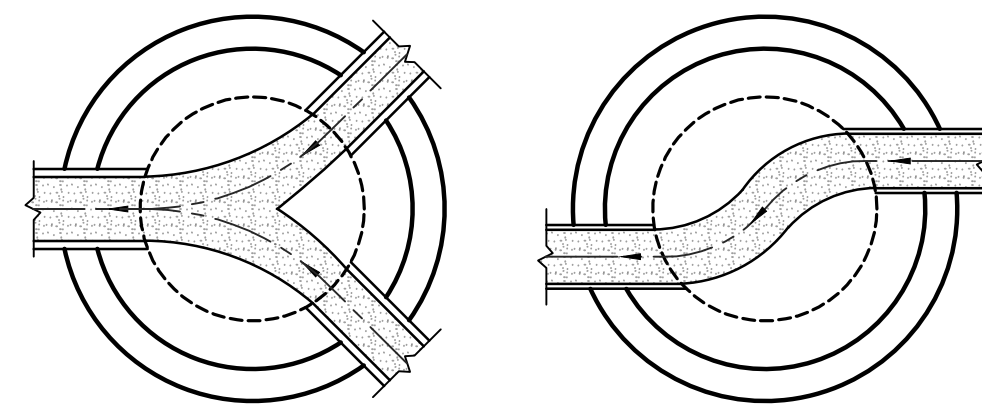
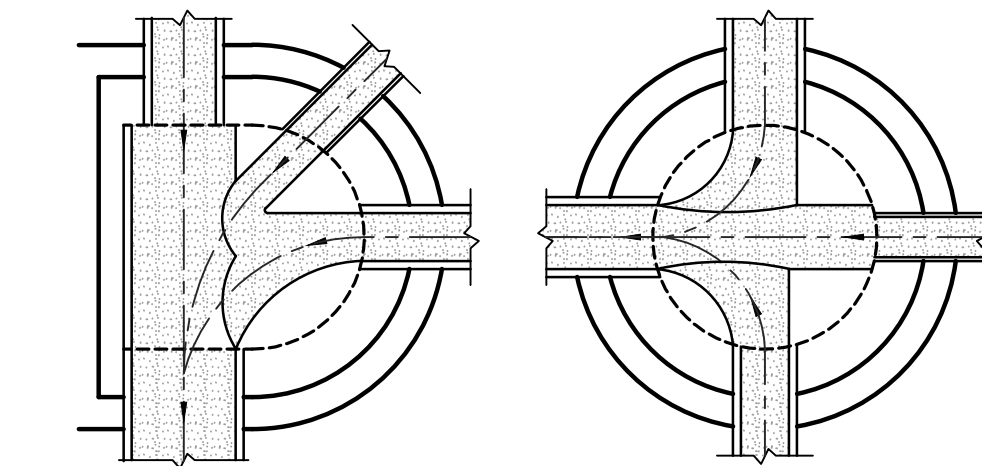
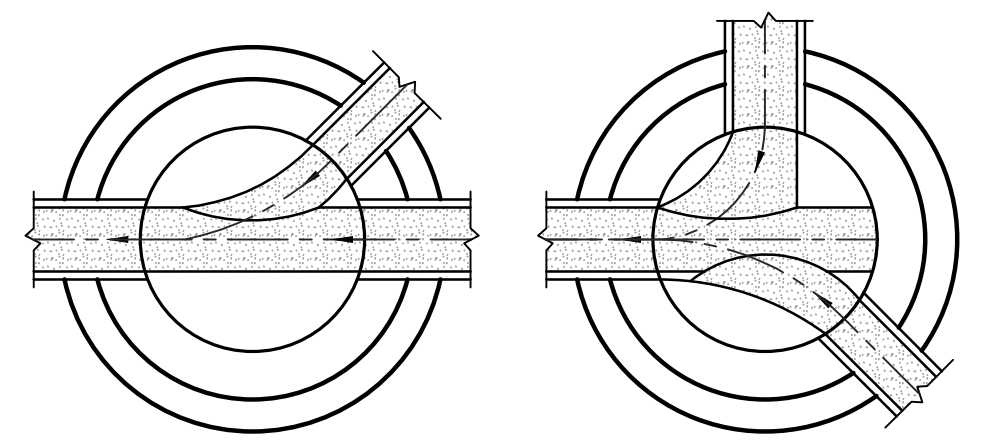


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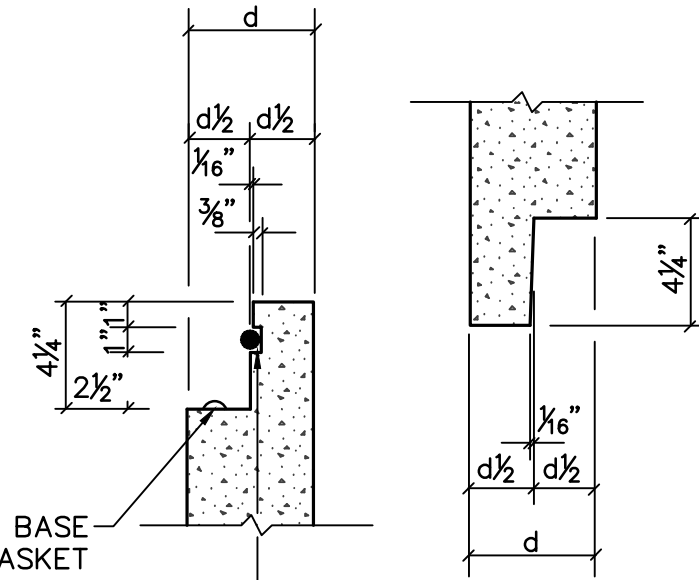
Project Number 2021.02592



SANITARY SEWER
BENCH SLOPE = 1/2" PER FOOT
TROUGH WIDTH = PIPE DIAMETER

STANDARD MANHOLE BENCHES
NOT TO SCALE

NOTE:
1. "d" = WALL THICKNESS



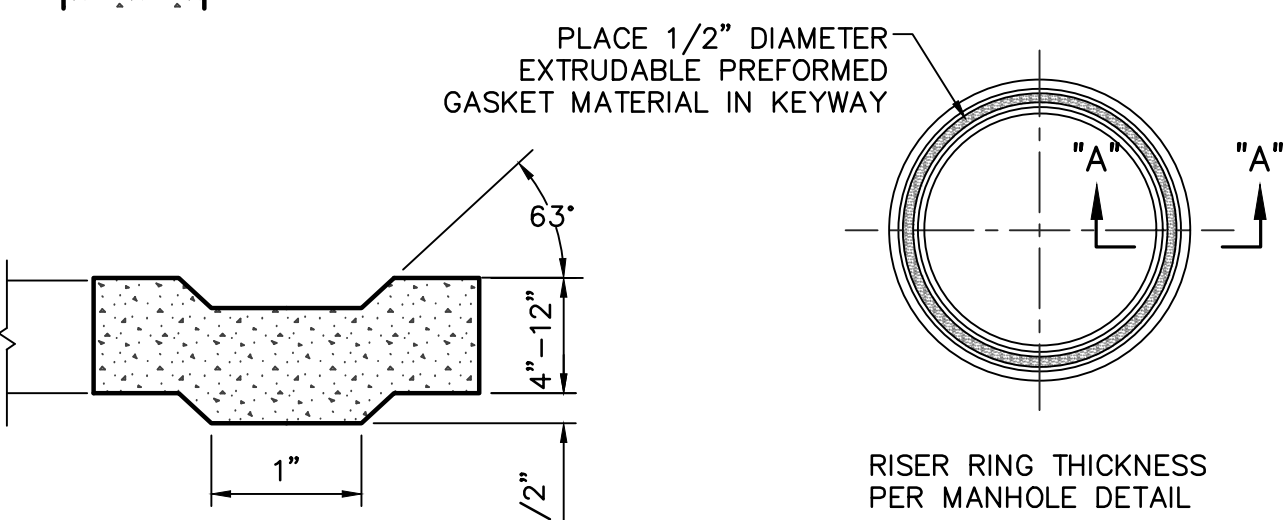
NOMINAL 1/2" BUTYL RUBBER BASE
EXTRUDABLE PREFORMED GASKET
MATERIAL (TYP.) PER ASTM C-990
(KENT SEAL NO. 2 OR APPROVED EQUAL)

RUBBER GASKET E-Z STICK
OR EQUAL PER ASTM C-443

O-RING JOINT FOR MANHOLE SECTIONS
NOT TO SCALE

"O" RING GASKETED JOINT, NOMINAL 1/2" BUTYL RUBBER
BASE EXTRUDABLE PREFORMED GASKET MATERIAL (TYP.)
PER ASTM C-990 (KENT SEAL NO. 2 OR APPROVED EQUAL)

PRECAST CONCRETE ADJUSTING
RING OR FLANGE OF CASTING



PLACE 1/2" DIAMETER
EXTRUDABLE PREFORMED
GASKET MATERIAL IN KEYWAY

RISER RING THICKNESS
PER MANHOLE DETAIL

MANHOLE FRAME ADJUSTING RING AND GASKET DETAIL
NOT TO SCALE

FOR BACKFILL AND REQUIREMENTS
REFER TO SPECIFICATIONS SECTION 02600

TRENCH BOX

#8 CRUSHED STONE
HAND TAMPED OR
WALKED IN 1/2 O.D.,
PER SPECS. TO 12"
OVER TOP OF PIPE

4" MIN. (BELOW
THE BARREL)

O.D.

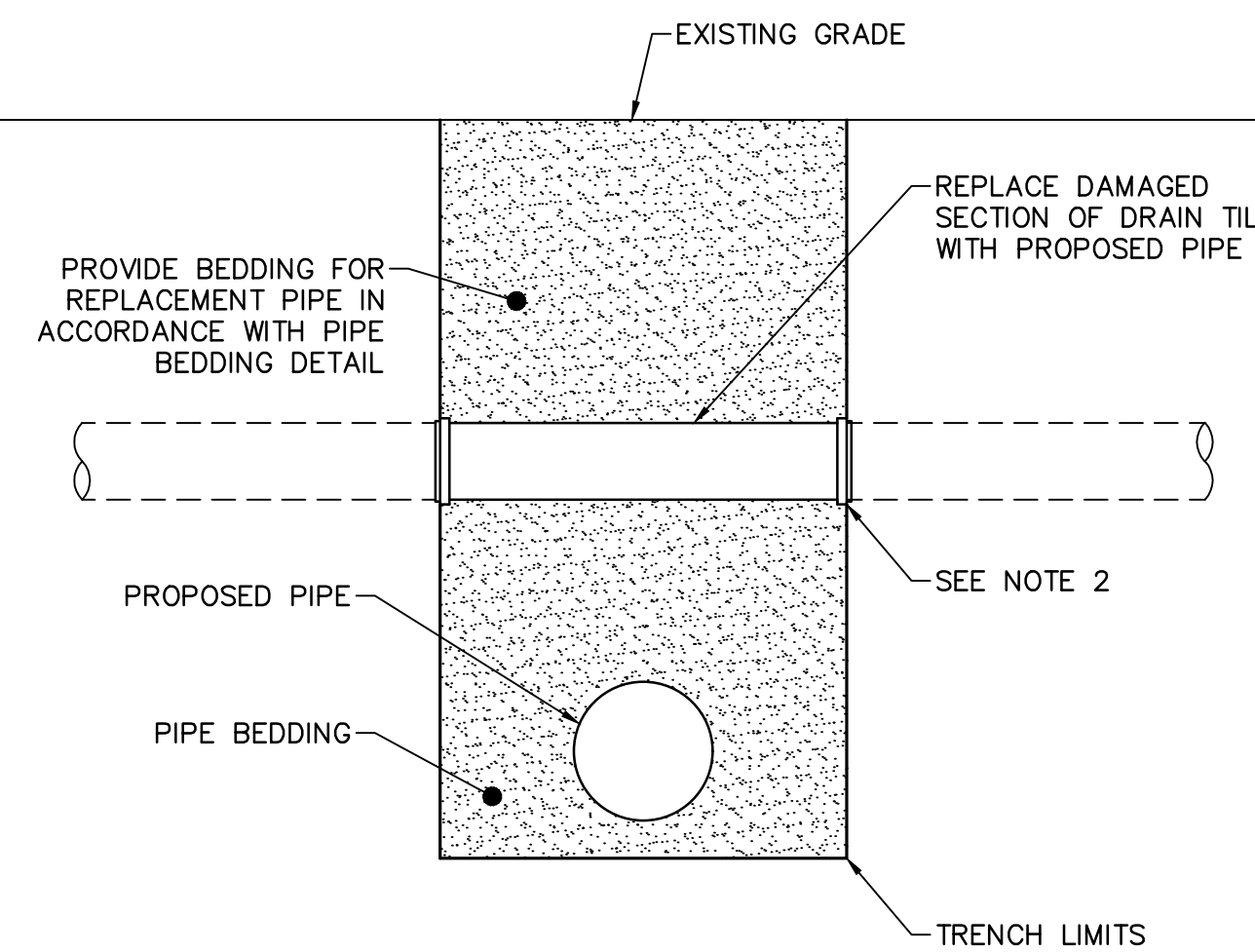
1/2 O.D.

3" MIN.
(BELOW THE BELL)

#8 CRUSHED STONE HAND
TAMPED OR WALKED IN
1/2 O.D., PER SPECS.

#8 CRUSHED STONE BELL
HOLE EXCAVATED

FLEXIBLE PIPE BEDDING DETAIL (PVC & HDPE)
NOT TO SCALE



PROVIDE BEDDING FOR
REPLACEMENT PIPE IN
ACCORDANCE WITH PIPE
BEDDING DETAIL

REPLACE DAMAGED
SECTION OF DRAIN TILE
WITH PROPOSED PIPE

PROPOSED PIPE

PIPE BEDDING

EXISTING GRADE

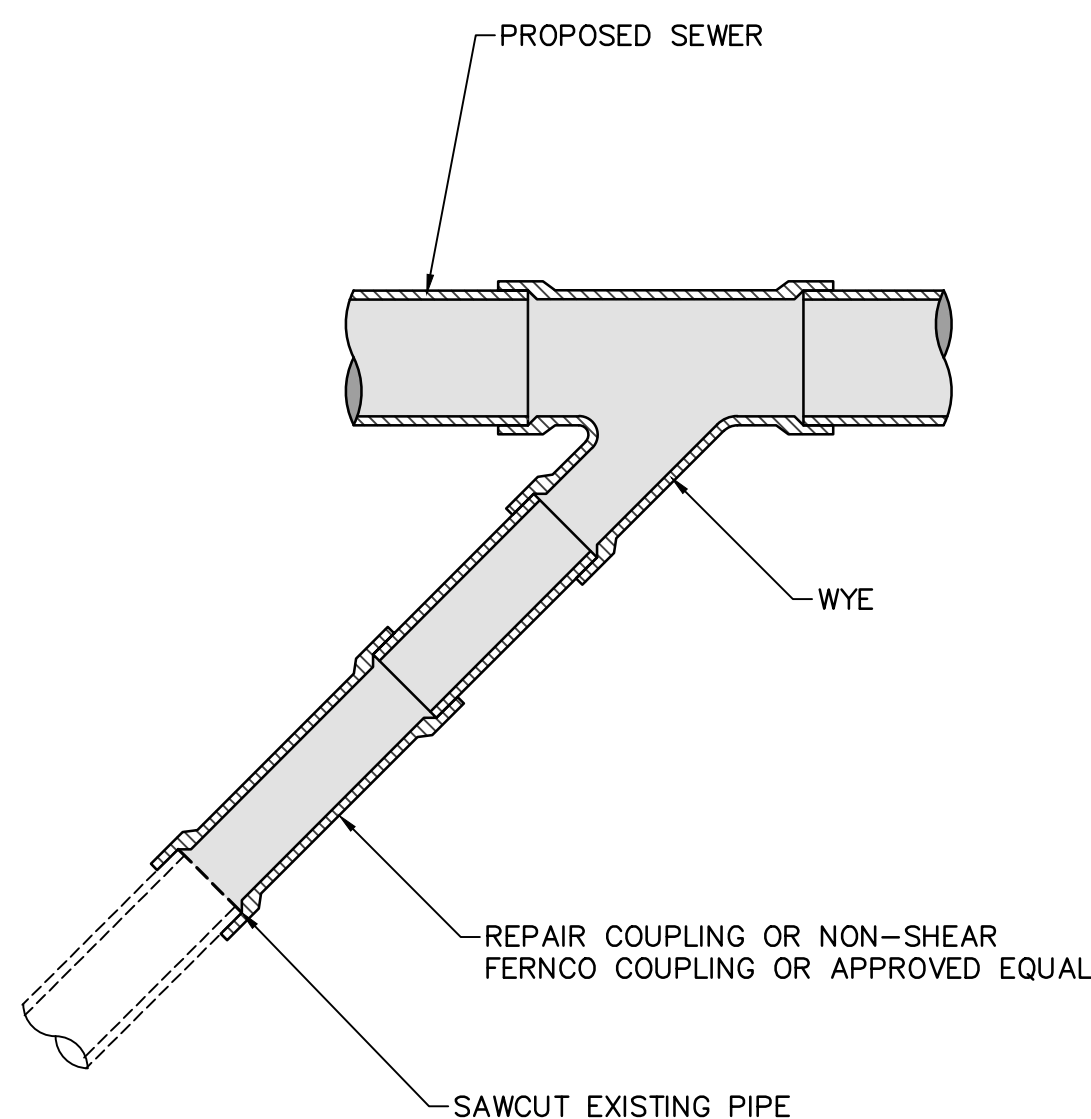
SEE NOTE 2

TRENCH LIMITS

NOTES:

1. RECORD LOCATION OF ALL DRAIN TILES ENCOUNTERED.
2. PROVIDE NON-SHEAR FERNCO (OR EQUAL) FLEXIBLE RUBBER COUPLINGS TO CONNECT REPLACEMENT PIPE TO EXISTING DRAIN TILE.

DRAIN TILE REPAIR DETAIL
NOT TO SCALE



PROPOSED SEWER

WYE

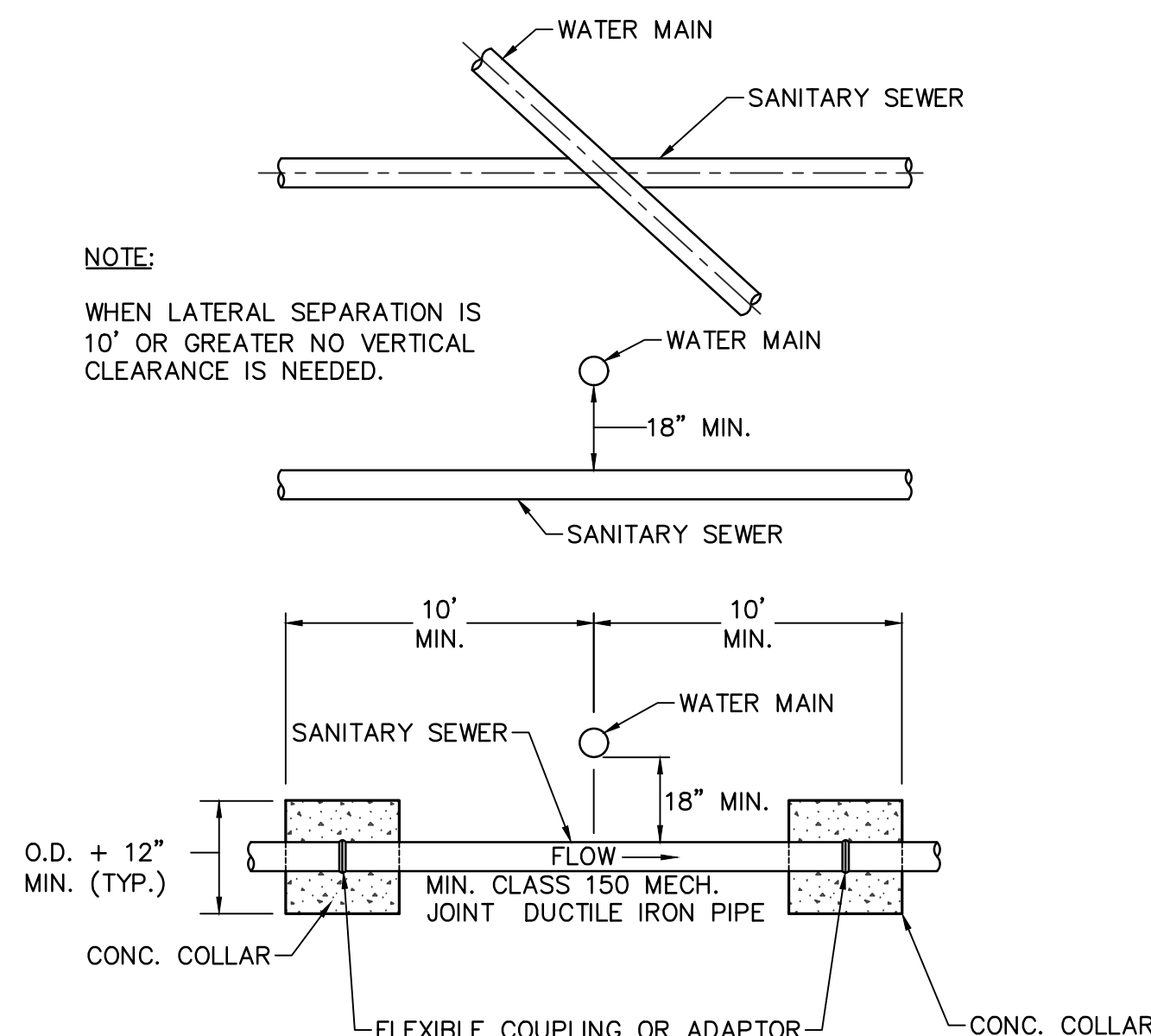
REPAIR COUPLING OR NON-SHEAR
FERNCO COUPLING OR APPROVED EQUAL

SAWCUT EXISTING PIPE

EXISTING LATERAL RECONNECTION DETAIL
NOT TO SCALE

NOTE:

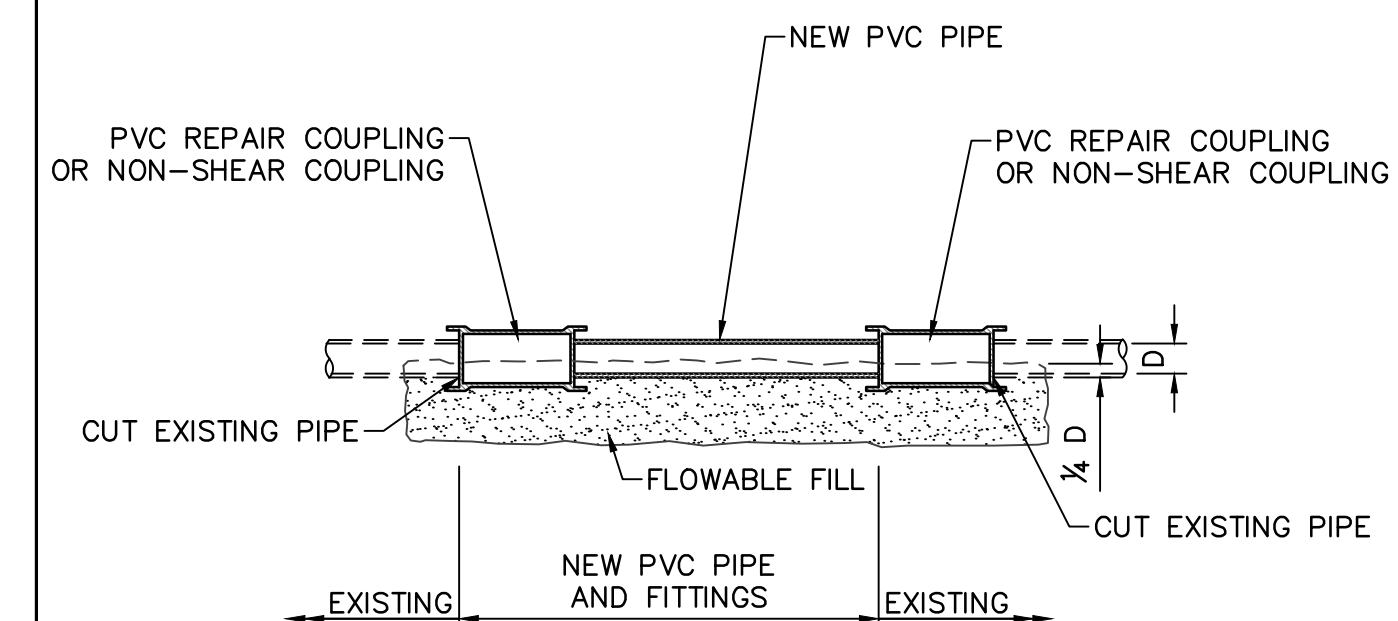
WHEN LATERAL SEPARATION IS
10' OR GREATER NO VERTICAL
CLEARANCE IS NEEDED.



CROSSOVER & SEPARATION NOTES:

1. WHEN LATERAL SEPARATION IS 10' OR GREATER NO VERTICAL CLEARANCE IS NEEDED.
2. WHEN SANITARY SEWER CROSSES WATER MAIN, THE CROSSING MUST BE A MINIMUM OF 45° MEASURED FROM THE CENTERLINES OF THE SEWER AND WATER MAIN WITH A MINIMUM OF 18-INCHES VERTICALLY BETWEEN THE PIPES. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR 10 FEET EACH WAY OF THE CROSSING.
3. IF THE CROSSING ANGLE IS LESS THAN 45° OR THE DISTANCE BETWEEN PARALLEL MAINS IS LESS THAN 10 FEET, THE SANITARY SEWER SHALL BE TESTED AS IF IT IS A WATER MAIN (327 IAC 8-3.2.17(a)), SHALL BE CONSTRUCTED OF WATER MAIN MATERIAL, DUCTILE IRON, OR PVC WITH A SDR OF 21, THE PIPES SHALL NOT TOUCH, SEWER JOINTS SHALL BE A COMPRESSION TYPE JOINT PLACED EQUIDISTANT FROM THE WATER MAIN, WATER AND SEWER SHALL BE ON SEPARATE TRENCH SHELVES.
4. MANHOLES SHALL BE A MINIMUM OF 8 FEET (OUTSIDE TO OUTSIDE) FROM A WATER MAIN.

MIN. CROSSOVER AND SEPERATION REQUIREMENTS FOR WATER MAINS AND SANITARY SEWERS
NOT TO SCALE



PVC REPAIR COUPLING
OR NON-SHEAR COUPLING

PVC REPAIR COUPLING
OR NON-SHEAR COUPLING

CUT EXISTING PIPE

FLOWABLE FILL

CUT EXISTING PIPE

NEW PVC PIPE
AND FITTINGS

NOTE:

BACKFILL PER BEDDING BACKFILL STANDARD DETAIL.

POINT REPAIR DETAIL
NOT TO SCALE

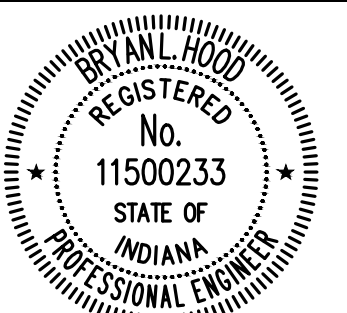
CITY OF
GREENFIELD



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**WATERVIEW
LIFT STATION
RELOCATION**

Greenfield, Indiana



Bryan L. Hood 6/10/2024
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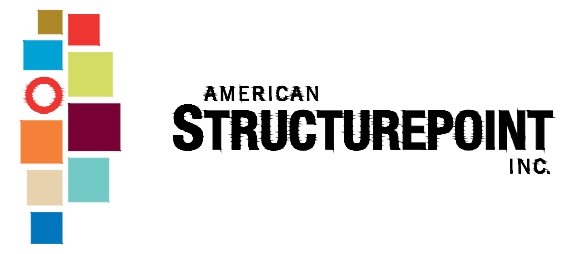
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Project Number 2021.02592

STANDARD DETAILS
SANITARY SEWER

C-124

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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



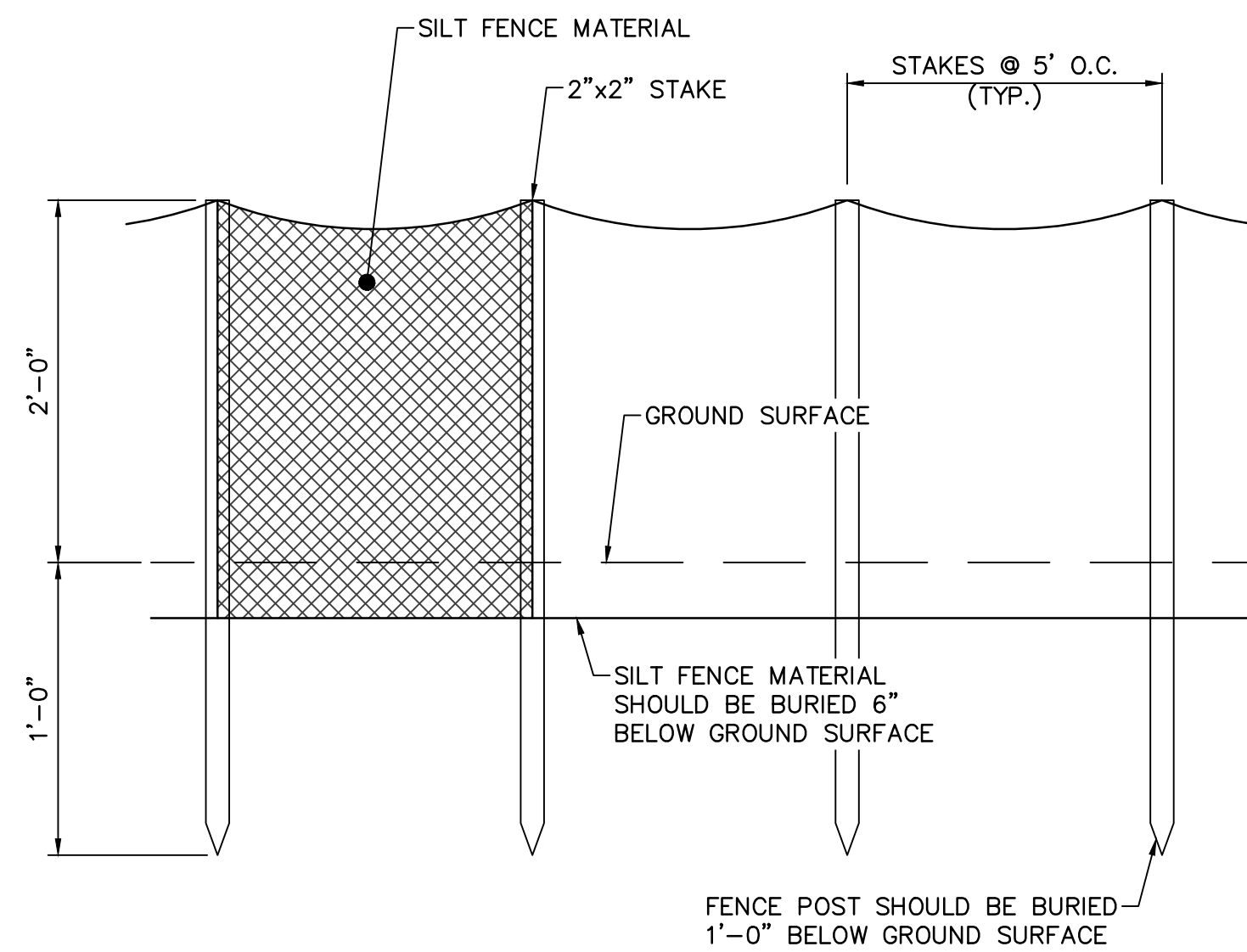
Bryan L. Hurd 5/10/2024
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EROSION CONTROL DETAILS

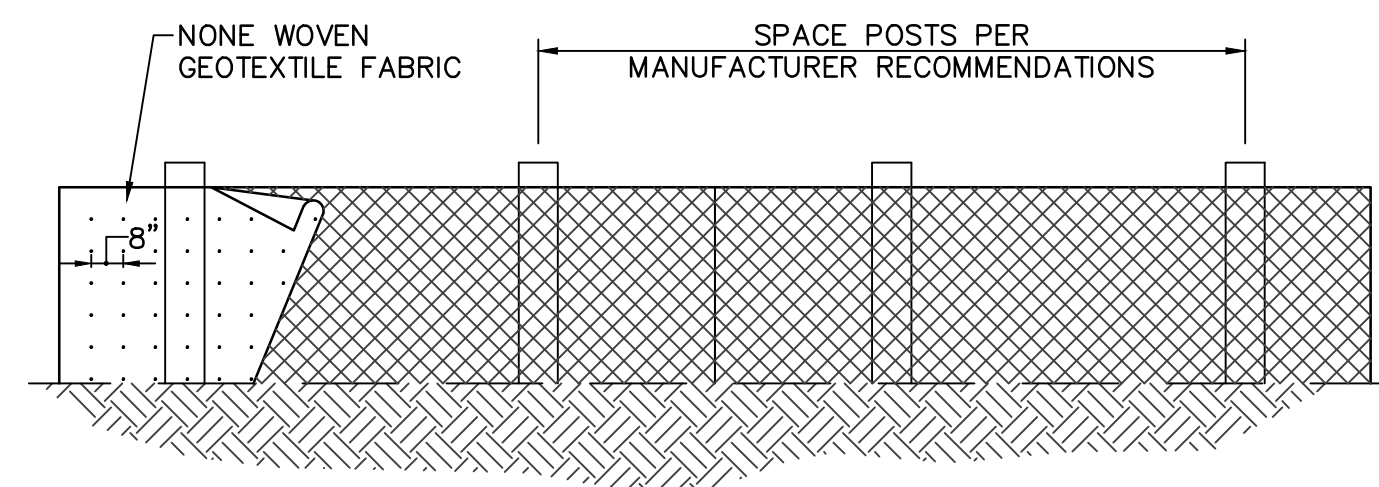
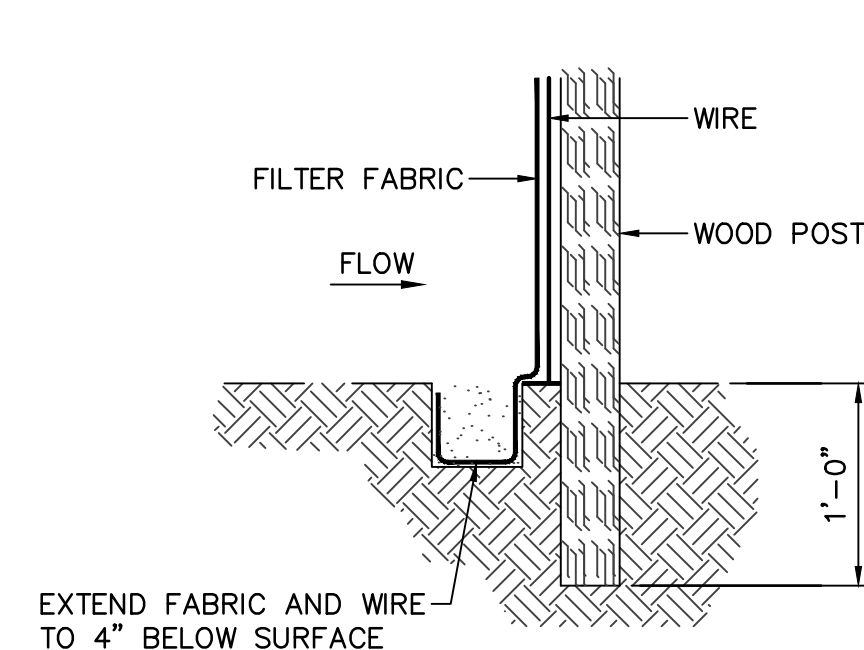


SILT FENCE

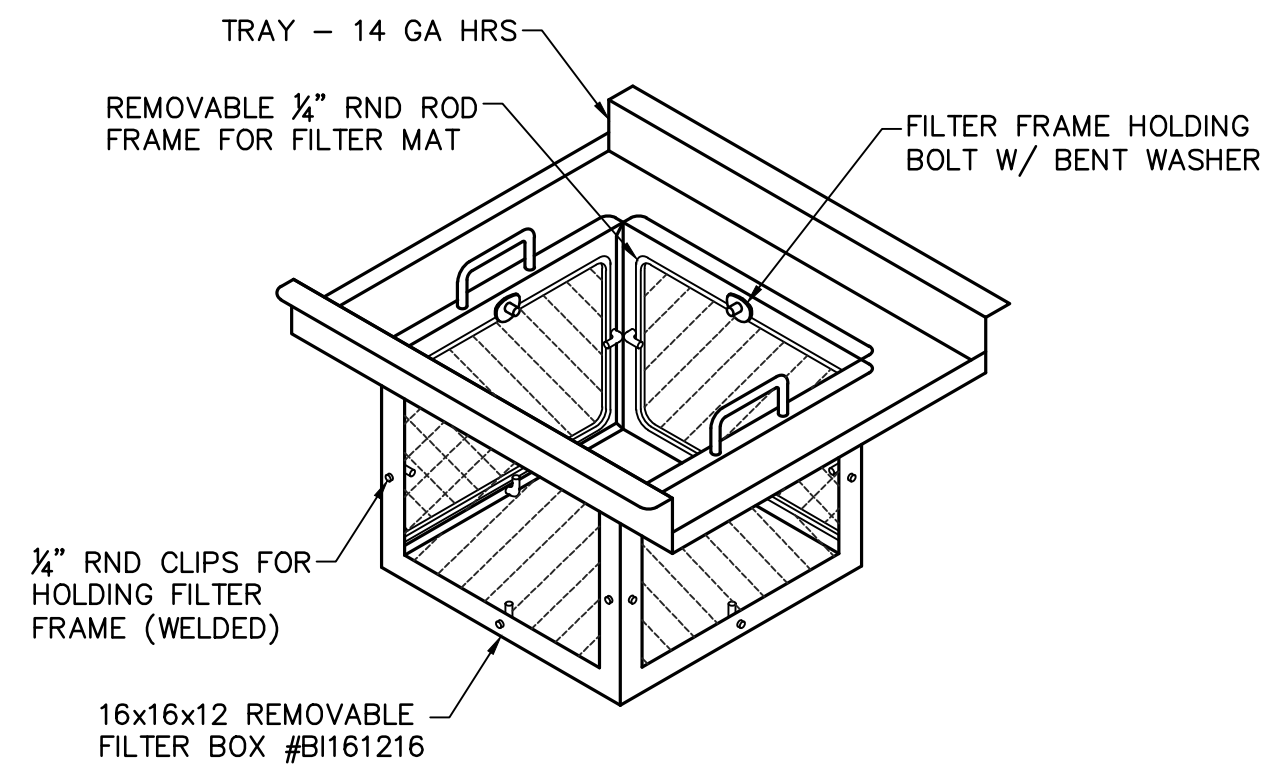
1. SILT FENCE SHALL BE A MACHINE PRODUCED, NON-WOVEN GEOTEXTILE OF 100% POLYPROPYLENE MEETING THE PHYSICAL PROPERTIES BELOW.
2. ALL STAKES SHALL BE 2"x2" HARDWOOD 36" TALL WITH 24" TALL LATH STAPLED TO STAKES OVER FABRIC AS REINFORCEMENT.
3. ALL SILT FENCE SHALL BE PREFABRICATED BY THE SUPPLIER. NO FIELD ASSEMBLY WILL BE ACCEPTED.

FABRIC WEIGHT	4 OZ/SYD.
GRAB STRENGTH	WARP 125 LBS.
ELONGATION	WARP 50%
TRAPEZOIDAL TEAR STRENGTH	50 LBS.
BURST STRENGTH	200 PSI
UV RESISTANCE	> 70%
A.O.S.	50-80
SLURRY FLOW RATE	225 GPM/SQ. FT.
SEDIMENT RETENTION	75%

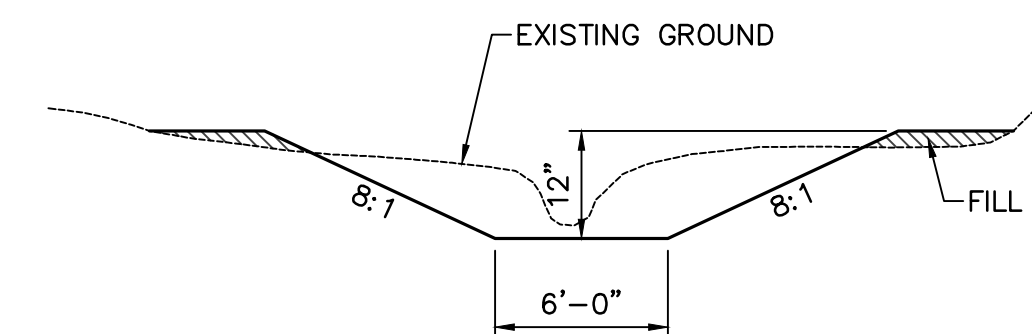
SILT FENCE DETAIL
 NOT TO SCALE



SILT FENCE CONSTRUCTION
 NOT TO SCALE



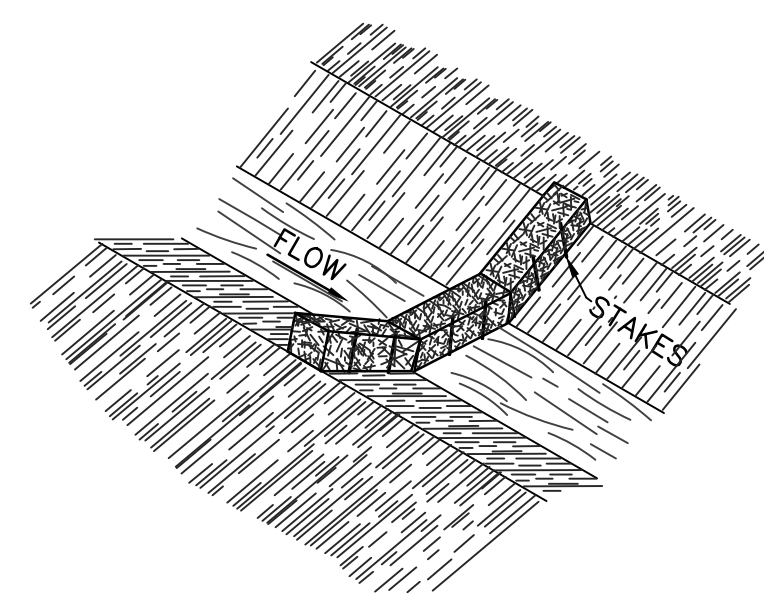
INLET PROTECTION DEVICE
 NOT TO SCALE



NOTES:

1. LINE SWALE WITH NORTH AMERICAN GREEN S-150 EROSION CONTROL BLANKET OR APPROVED EQUAL.
2. SWALE SHALL BE SEEDED WITH 45 LBS/AC. TALL FESCUE.
3. REMOVE SEDIMENT ACCUMULATIONS AND RE-SHAPE AS NEEDED.

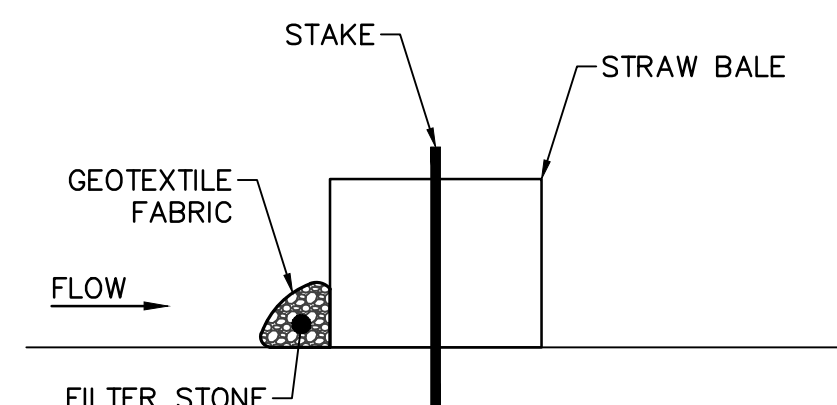
DRAINAGE SWALE RECONSTRUCTION
 NOT TO SCALE



NOTE:

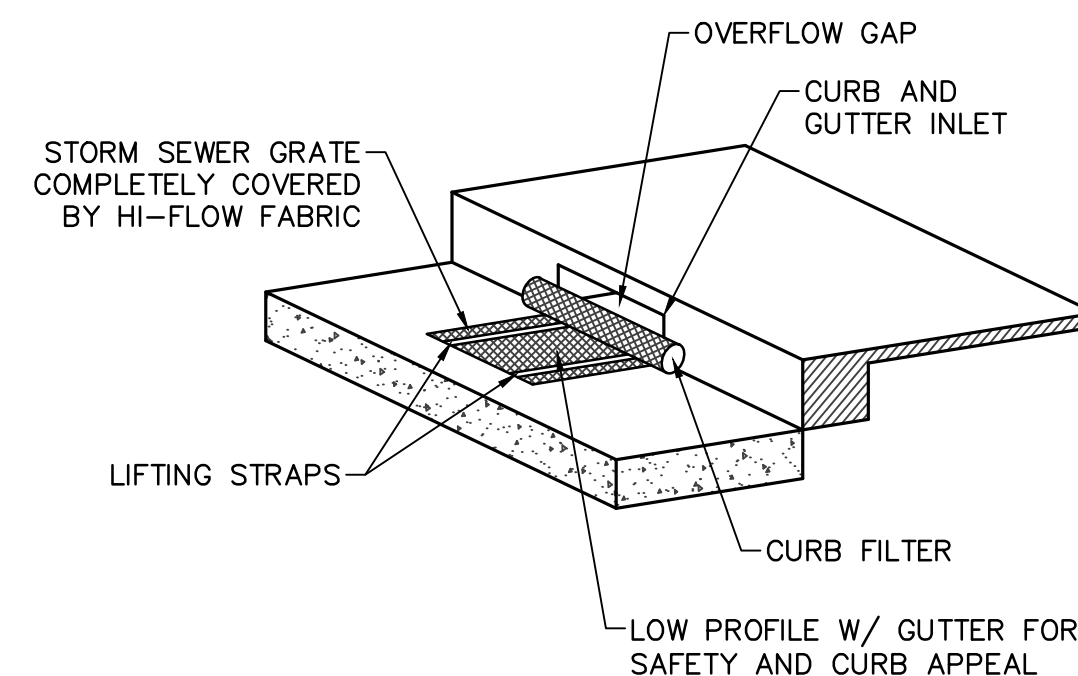
STRAW BALES SHALL BE PLACED AND MAINTAINED IN SWALE TO PREVENT SILT AND DEBRIS FROM ENTERING INTO DOWNSTREAM DRAINAGE FACILITIES DURING ALL CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL ADEQUATE VEGETATION IS ACHIEVED WITHIN THE SITE. SUCH STRAW BALES SHALL BE FIRMLY SECURED THE GROUND WITH FENCING.

DRAINAGE SWALE STRAW BALE CHECK DAM
 NOT TO SCALE

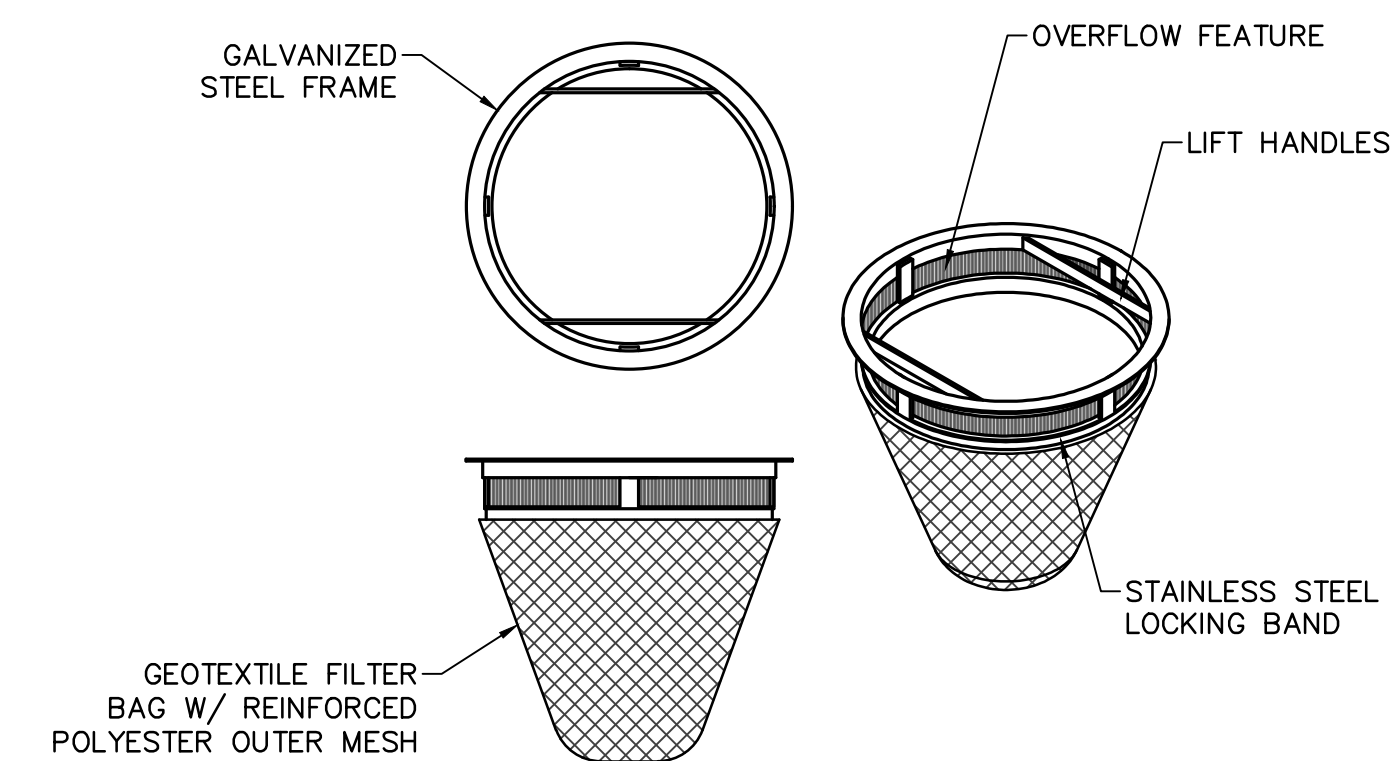


NOTE:

FILTER TUBE/SOCK MAY SUBSTITUTE FOR WRAPPED FILTER STONE AND GEOTEXTILE

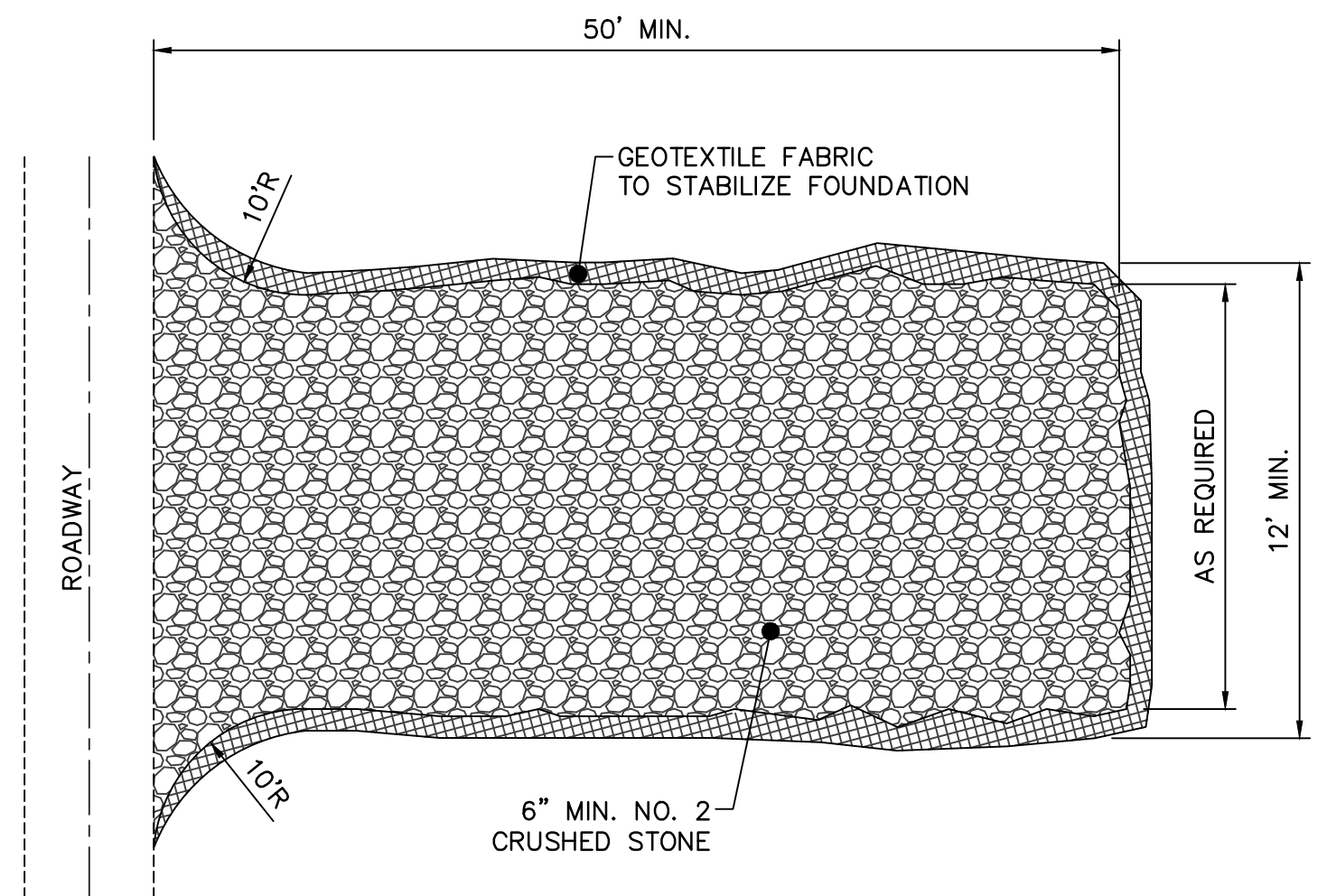


CURB BAG
 (FOR CURB INLETS)
 NOT TO SCALE



SILT FENCE INLET FILTER
 (FOR CIRCULAR INLETS)
 NOT TO SCALE

PLOT DATE: 5/17/2024 1:12 PM EDITED BY: PTRAWNSKI DRAWING FILE: \\INDYSAMP\PROJECTS\2021\02592\DRAWINGS\UTILITY_INFRASTRUCTURE\202102592\UIDT.EC.DWG



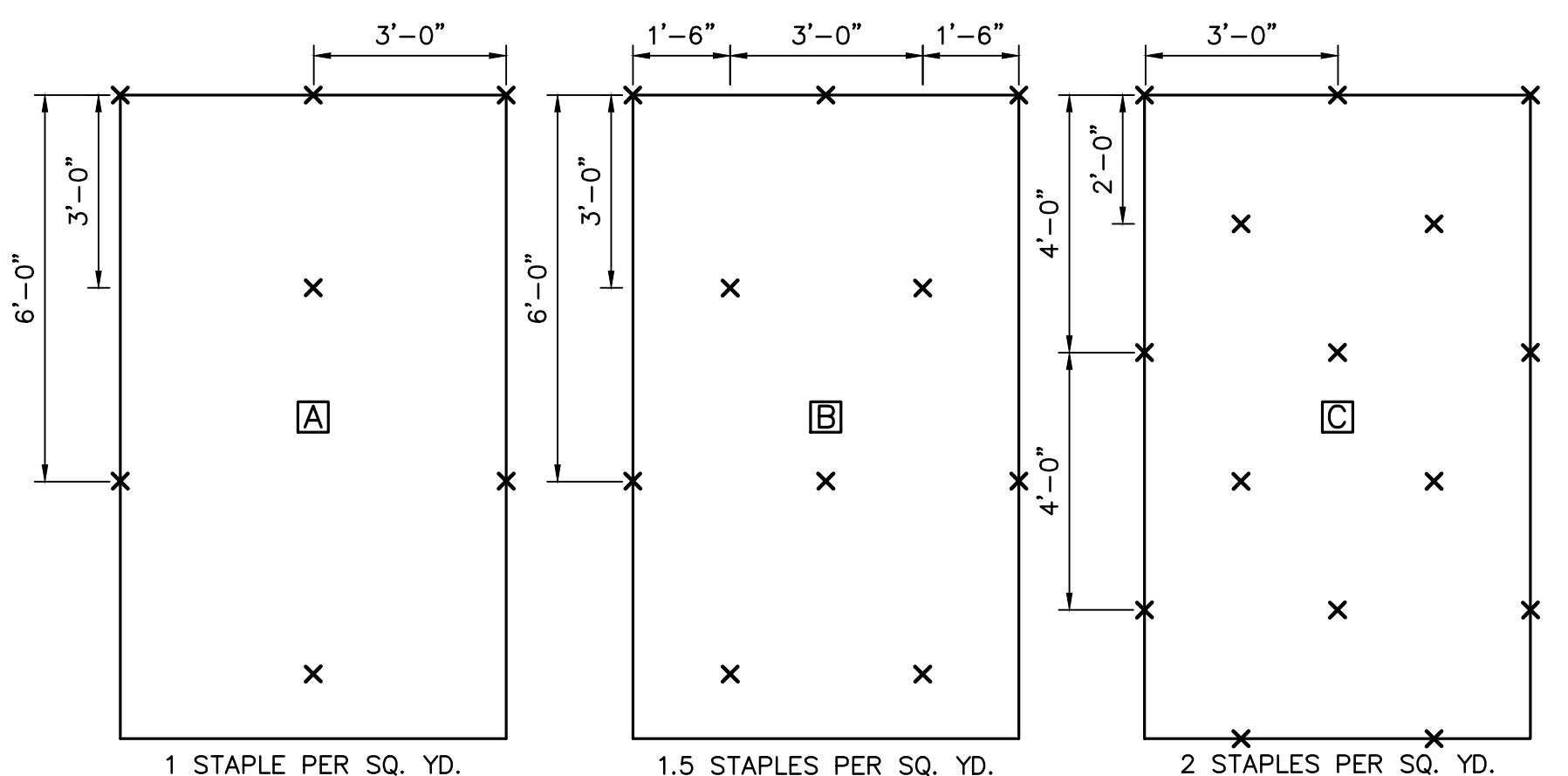
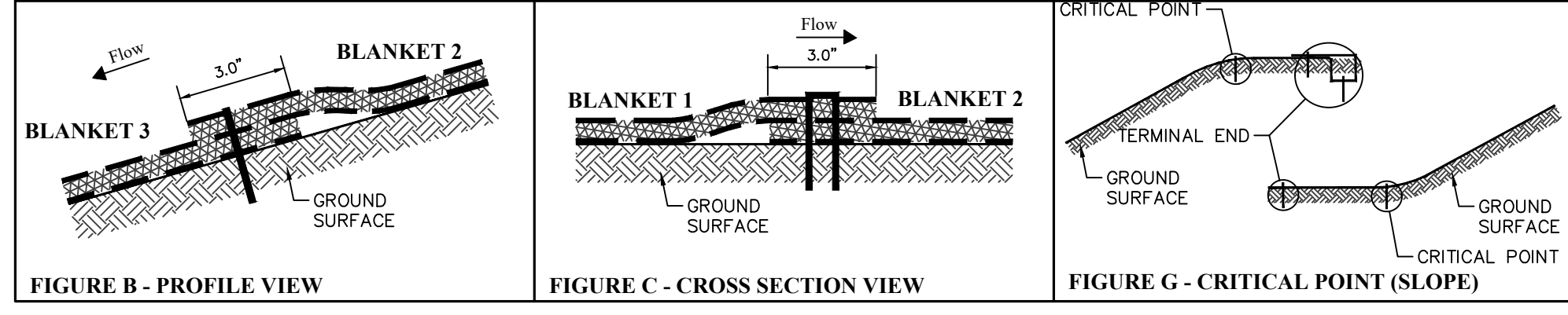
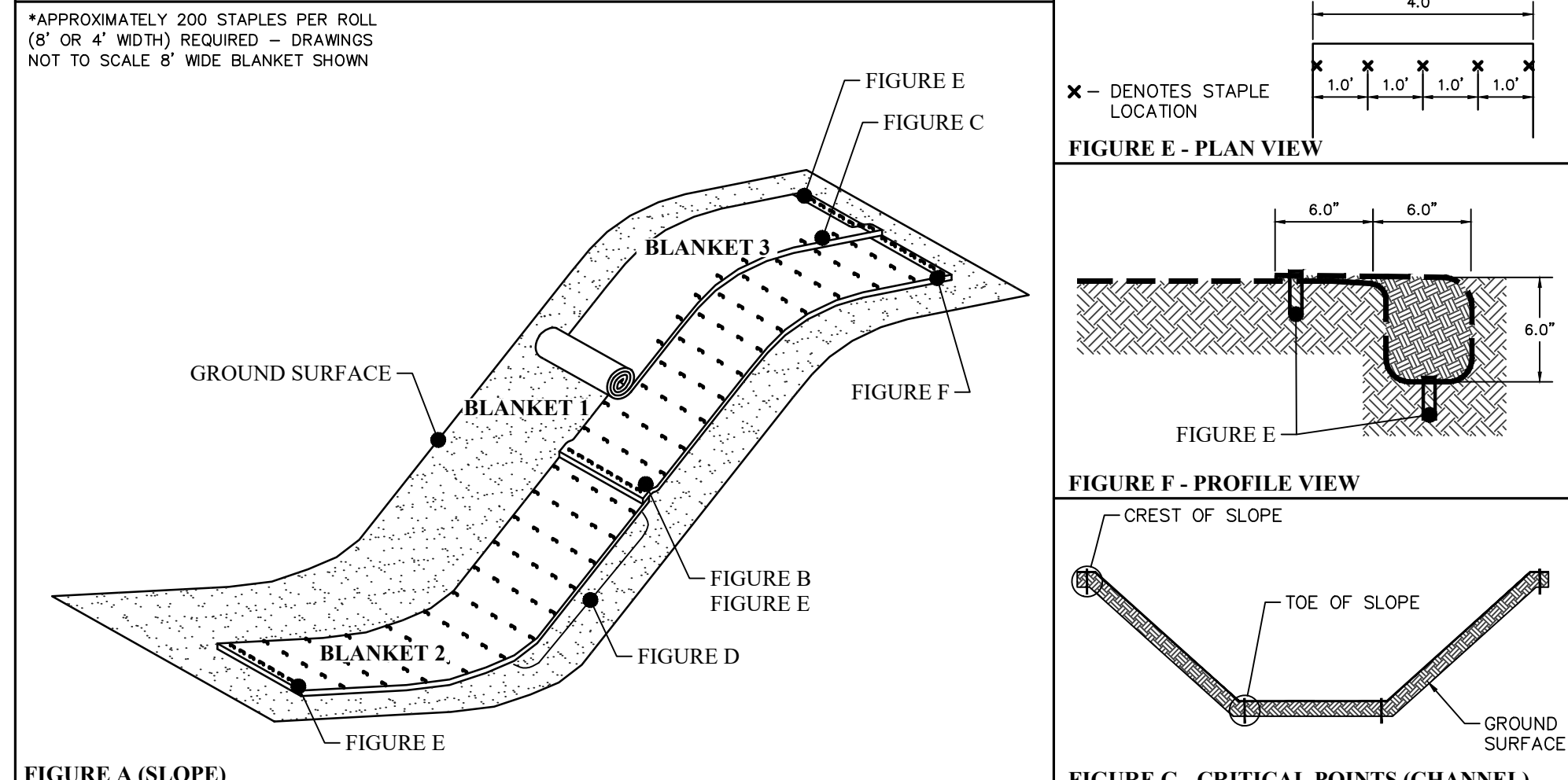
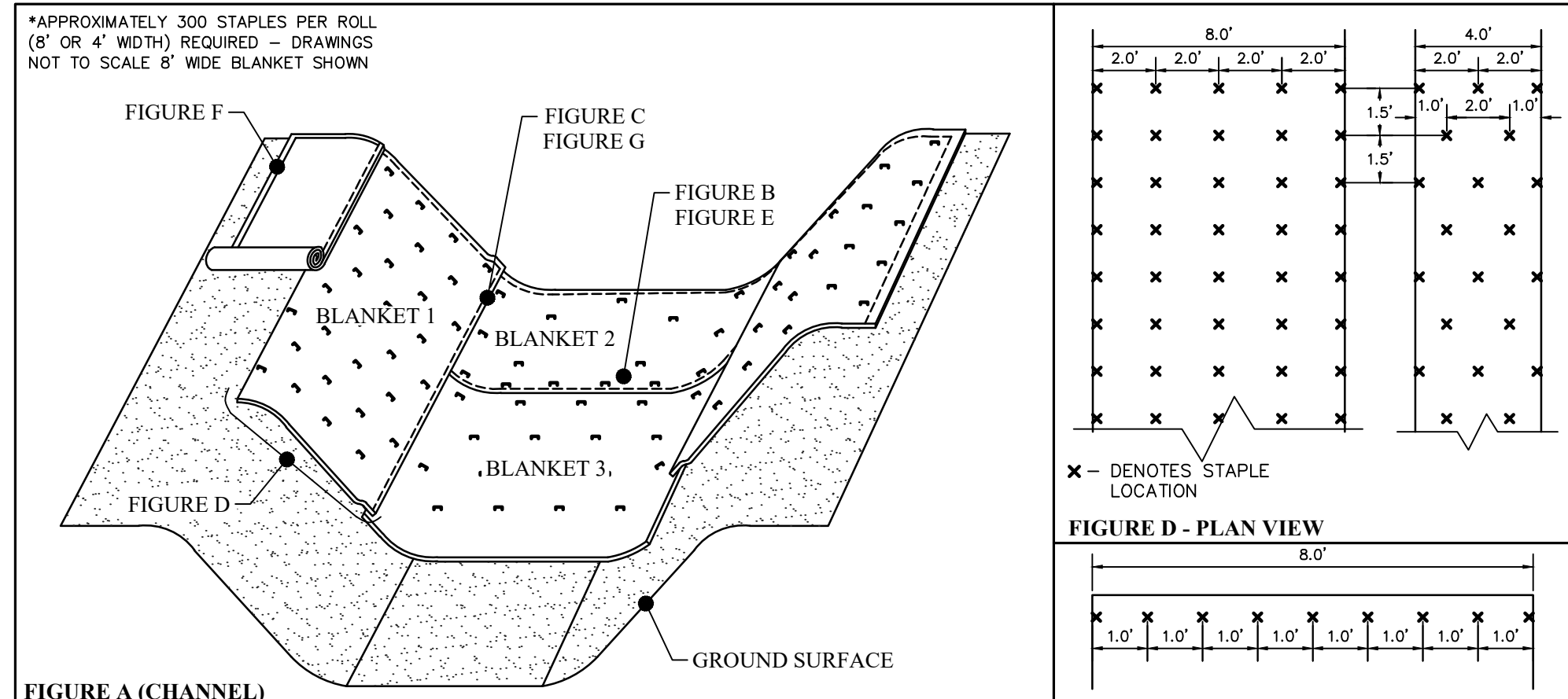
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
NOT TO SCALE

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD INSTALLATION

1. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
2. GRADE THE FOUNDATION AND CROWN FOR POSITIVE DRAINAGE.
3. INSTALL A CULVERT PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
4. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.
5. PLACE AGGREGATE (INDOT CA NO. 2) TO THE DIMENSIONS AND GRADE SHOWN IN THE CONSTRUCTION PLANS, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. TOP-DRESS THE DRIVE WITH WASHED AGGREGATE (INDOT CA NO. 53).
7. WHERE POSSIBLE, DIVERT ALL STORM WATER RUNOFF AND DRAINAGE FROM THE TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD TO A SEDIMENT TRAP OR BASIN.

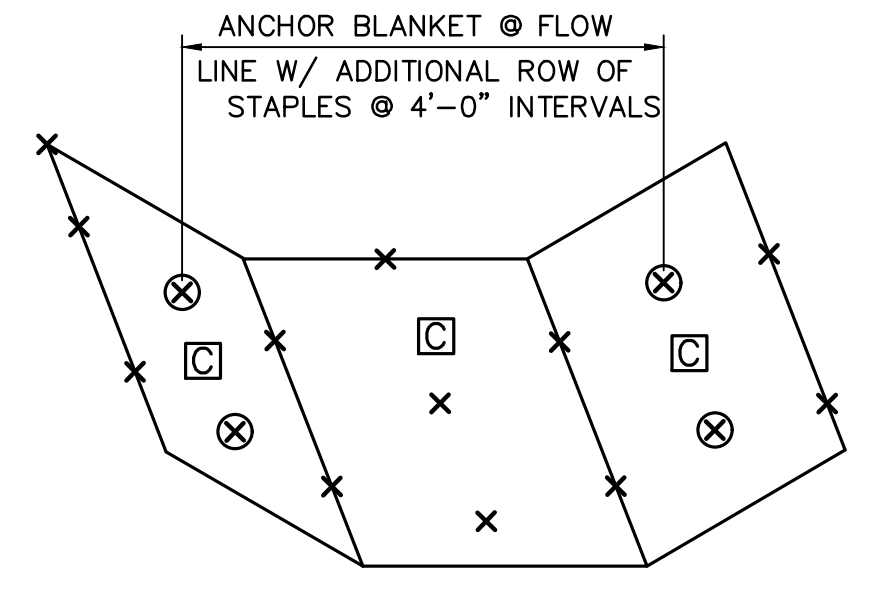
MAINTENANCE

1. INSPECT DAILY.
2. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL
3. TOP-DRESS WITH CLEAN AGGREGATE AS NEEDED.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED INTO PUBLIC ROADS.
5. FLUSHING SHOULD ONLY BE USED IF THE WATER FROM THE CONSTRUCTION DRIVE CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.



SLOPE LENGTH FT.	4:1	3:1	2:1	1:1	CHANNEL LINING
300	[A]	[C]	[C]	[C]	[C]
275	[A]	[C]	[C]	[C]	[C]
250	[A]	[C]	[C]	[C]	[C]
225	[A]	[C]	[C]	[C]	[C]
200	[A]	[C]	[C]	[C]	[C]
175	[A]	[C]	[C]	[C]	[C]
150	[A]	[C]	[C]	[C]	[C]
125	[A]	[C]	[C]	[C]	[C]
100	[A]	[C]	[C]	[C]	[C]
75	[A]	[C]	[C]	[C]	[C]
50	[A]	[C]	[C]	[C]	[C]
25	[A]	[C]	[C]	[C]	[C]

(S-75) NORTH AMERICAN GREEN, SINGLE NET STRAW BLANKET, OR EQUAL
 (S-150) NORTH AMERICAN GREEN, DOUBLE NET STRAW BLANKET, OR EQUAL



EROSION CONTROL MAT ANCHOR
NOT TO SCALE

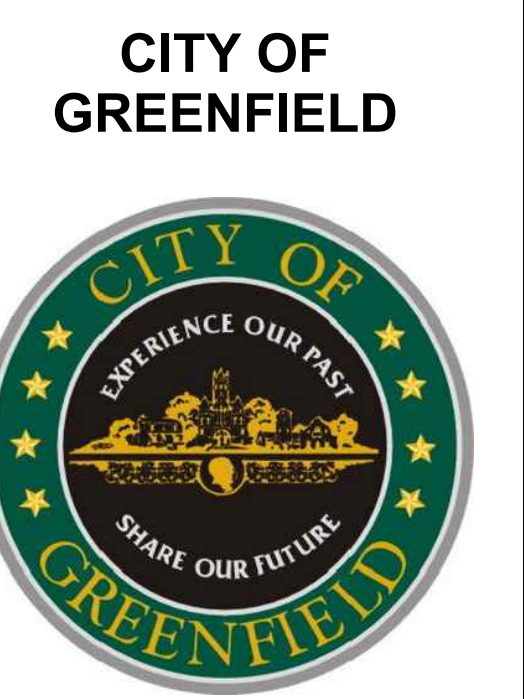
EROSION CONTROL BLANKET
NOT TO SCALE

CHANNEL & SLOPE INSTALLATION

- STEP 1 – SITE PREPARATION**
PREPARE SITE TO DESIGN PROFILE AND GRADE. REMOVE DEBRIS, ROCKS, CLOUDS, ETC.. GROUND SURFACE SHOULD BE SMOOTH PRIOR TO INSTALLATION TO ENSURE BLANKET REMAINS IN CONTACT WITH SLOPE.
- STEP 2 – SEEDING**
SEEDING OF SITE SHOULD BE CONDUCTED TO DESIGN REQUIREMENTS OR TO FOLLOW LOCAL OR STATE SEEDING REQUIREMENTS AS NECESSARY.
- STEP 3 – STAPLE SELECTION**
AT A MINIMUM, 6" LONG BY 1" CROWN, 11 GAUGE STAPLES ARE TO BE USED TO SECURE THE BLANKET TO THE GROUND SURFACE. INSTALLATION IN ROCKY, SANDY OR OTHER LOOSE SOIL MAY REQUIRE LONGER STAPLES.
- STEP 4 – EXCAVATE ANCHOR TRENCH AND SECURE BLANKET**
EXCAVATE A TRENCH ALONG THE TOP OF THE CHANNEL SIDE SLOPES AND THE UPSTREAM TERMINAL END OF THE CHANNEL TO SECURE THE EDGES OF THE BLANKET. THE TRENCH SHOULD RUN ALONG THE LENGTH AND WIDTH OF THE INSTALLATION, BE 6" WIDE AND 6" DEEP. STAPLE BLANKET ALONG BOTTOM OF TRENCH, FILL WITH COMPACTED SOIL, OVERLAP BLANKET TOWARDS TOE OF SLOPE AND SECURE WITH ROW OF STAPLES (SHOWN IN FIGURES A, E AND F).
- STEP 5 – SECURE BODY OF BLANKET**
ROLL BLANKET DOWN SLOPE FROM ANCHOR TRENCH. STAPLE BODY OF BLANKET FOLLOWING THE PATTERN SHOWN IN FIGURE D. LEAVE END OF BLANKET UNSTAPLED TO ALLOW FOR OVERLAP SHOWN IN FIGURE B. PLACE DOWNSTREAM BLANKET UNDERNEATH UPSTREAM BLANKET TO FROM SHINGLE PATTERN. STAPLE SEAM AS SHOWN IN FIGURE E. SECURE DOWNSTREAM BLANKET WITH STAPLING PATTERN SHOWN IN FIGURE D. STAPLING PATTERN SHOWN IN FIGURE D REFLECTS MINIMUM STAPLES TO BE USED. MORE STAPLES MAY BE REQUIRED TO ENSURE BLANKET IS SUFFICIENTLY SECURED TO RESIST MOWERS AND FOOT TRAFFIC AND TO ENSURE BLANKET IS IN CONTACT WITH SOIL SURFACE OVER THE ENTIRE AREA OF BLANKET. FURTHER, CRITICAL POINTS REQUIRE ADDITIONAL STAPLES. CRITICAL POINTS ARE IDENTIFIED IN FIGURE G.
- STEP 6 – CONTINUE ALONG SLOPE – COMPLETE INSTALLATION**
OVERLAP ADJACENT BLANKETS AS SHOWN IN FIGURE C AND REPEAT STEP 5. SECURE TOE OF SLOPE USING STAPLING PATTERN SHOWN IN FIGURE E. SECURE EDGES OF INSTALLATION BY STAPLING AT 1.0' INTERVALS ALONG THE TERMINAL EDGE.

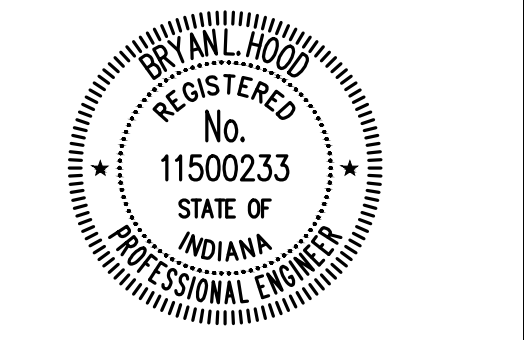
EROSION CONTROL BLANKET (SURFACE APPLIED) MAINTENANCE REQUIREMENTS

1. DURING VEGETATIVE ESTABLISHMENT INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.
2. IF ANY AREA SHOWS EROSION PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET.
3. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA WEEKLY.



WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



Bryan L. Hoads 11/10/2024
CERTIFIED BY

DATE:	5/10/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

NO.	DESCRIPTION	DATE

Project Number 2021.02592

EROSION CONTROL DETAILS

C-126

TEMPORARY SEEDING

TEMPORARY SEEDING SPECIFICATIONS			
SEED SPECIES	RATE PER ACRE	PLANTING DEPTH	OPTIMUM DATES
WHEAT OR RYE		1" TO 1½"	9/15 – 10/30
SPRING OATS	100 LBS	1"	3/1 – 4/15
ANNUAL RYEGRASS	40 LBS	¼"	3/1 – 5/1 8/1 – 9/1
GERMAN MILLET	40 LBS	1" TO 2"	5/1 – 6/1
SUDANGRASS	35 LBS	1" TO 2"	5/1 – 7/30
BUCKWHEAT	60 LBS	1" TO 2"	4/15 – 6/1
CORN (BROADCAST)	300 LBS	1" TO 2"	5/11 – 8/10
SORGHUM	35 LBS	1" TO 2"	5/1 – 7/15

SEEDING NOTES

1. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. PLANT OR COVER SEED TO THE DEPTH SHOWN IN TABLE ABOVE.
2. IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEEDING OPERATIONS.
3. DAILY SEEDING WHEN THE SOIL IS MOIST IS USUALLY MOST EFFECTIVE.
4. APPLY MULCH AND ANCHOR IT IN PLACE.

MAINTENANCE

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80 PERCENT DENSITY); RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
4. IF NITROGEN DEFICIENCY IS APPARENT, TOP-DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.
5. APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST AND WORK INTO THE UPPER TWO TO FOUR INCHES OF SOIL. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.

PERMANENT SEEDING

PERMANENT SEEDING RECOMMENDATIONS OPEN LOW-MAINTENANCE AREAS (REMAINING IDLE MORE THAN SIX MONTHS)		
SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL pH
PERMANENT RYEGRASS (WHITE CLOVER)	70 LBS 2 LBS	5.6 – 7.0
PERENNIAL RYEGRASS (TALL FESCUE)	70 LBS 50 LBS	5.6 – 7.0
TALL FESCUE (WHITE CLOVER)	70 LBS 2 LBS	5.5 – 7.5

PERMANENT SEEDING RECOMMENDATIONS STEEP BANKS AND CUTS, LOW-MAINTENANCE AREAS (NOT MOWED)		
SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL pH
SMOOTH BROME GRASS (RED CLOVER)	35 LBS 20 LBS	5.5 – 7.0
TALL FESCUE (WHITE CLOVER)	50 LBS 2 LBS	5.5 – 7.5
TALL FESCUE (RED CLOVER)	50 LBS 20 LBS	5.5 – 7.5
ORCHARD GRASS (WHITE CLOVER) (RED CLOVER)	30 LBS 20 LBS 2 LBS	5.6 – 7.0

SEEDING NOTES

1. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. PLANT OR COVER SEED TO A DEPTH OF ONE-FOURTH TO ONE-HALF INCH. IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEEDING OPERATIONS. (IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.)
2. MULCH ALL SEEDED AREAS, AND USE APPROPRIATE METHODS TO ANCHOR THE MULCH IN PLACE.
3. FOR BEST RESULTS: (a) LEGUME SEED SHOULD BE INOCULATED; (b) SEEDING MIXTURES CONTAINING LEGUMES SHOULD PREFERABLY BE SPRING-SEEDED, ALTHOUGH THE GRASS MAY BE FALL-SEEDED AND THE LEGUME FROST-SEEDED.
4. AN OAT OR WHEAT COMPANION OR NURSE CROP MAY BE USED WITH ANY OF THE ABOVE PERMANENT SEEDING MIXTURES, AT THE FOLLOWING RATES:
 - a. SPRING OATS-10 TO 24 LBS PURE LIVE SEED PER ACRE.
 - b. WHEAT-NO MORE THAN 30 LBS PURE LIVE SEED PER ACRE.

MAINTENANCE

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS UNTIL THE VEGETATION IS SUCCESSFULLY ESTABLISHED.
2. CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE VIGOROUS DARK GREEN OR BLuish-GREEN SEEDLINGS WITH A UNIFORM VEGETATIVE COVER DENSITY OF 90 PERCENT OR MORE.
3. CHECK FOR EROSION OR MOVEMENT OF MULCH.
4. REPAIR DAMAGED, BARE, GULLIED, OR SPARSELY VEGETATED AREAS AND THEN FERTILIZE, RESEED, AND APPLY AND ANCHOR MULCH.
5. IF PLANT COVER IS SPARSE OR PATCHY, EVALUATE THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCH APPLICATION; REPAIR AFFECTED AREAS EITHER BY OVERSEEDING OR PREPARING A NEW SEEDBED AND RESEEDING. APPLY AND ANCHOR MULCH ON THE NEWLY SEEDED AREAS.
6. IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE SOIL PH OR NUTRIENT DEFICIENCY PROBLEMS. (CONTACT YOUR SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE.)
7. IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.
8. ADD FERTILIZER THE FOLLOWING GROWING SEASON. FERTILIZE ACCORDING TO SOIL TEST RECOMMENDATIONS.
9. FERTILIZE TURF AREAS ANNUALLY. APPLY FERTILIZER IN A SPLIT APPLICATION. FOR COOL-SEASON GRASSES, APPLY ONE-HALF OF THE FERTILIZER IN LATE SPRING AND ONE-HALF IN EARLY FALL. FOR WARM-SEASON GRASSES, APPLY ONE-THIRD IN EARLY SPRING, ONE-THIRD IN LATE SPRING, AND THE REMAINING ONE-THIRD IN MIDDLE SUMMER.

PERMANENT SEEDING RECOMMENDATIONS LAWNS AND HIGH-MAINTAINENCE AREAS		
SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL pH
BLUEGRASS	35 LBS 20 LBS	5.5 – 7.0
PERENNIAL RYEGRASS (TURF TYPE)	50 LBS 2 LBS	5.5 – 7.5
TALL FESCUE (BLUEGRASS-TURF TYPE)	50 LBS 20 LBS	5.5 – 7.5

PERMANENT SEEDING RECOMMENDATIONS CHANNELS AND AREAS OF CONCENTRATED FLOW		
SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL pH
PERENNIAL RYEGRASS (WHITE CLOVER)	35 LBS 20 LBS	5.5 – 7.0
KENTUCKY BLUEGRASS (SMOOTH BROMEGRASS) (SWITCHGRASS) (TIMOTHY) (PERENNIAL RYEGRASS) (WHITE CLOVER)	20 LBS 10 LBS 3 LBS 4 LBS 10 LBS 2 LBS	5.5 – 7.5
TALL FESCUE (WHITE CLOVER)	150 LBS 2 LBS	5.5 – 7.5
TALL FESCUE (PERENNIAL RYEGRASS) (KENTUCKY BLUEGRASS)	150 LBS 20 LBS 20 LBS	5.5 – 7.5

MULCHING

MULCH SPECIFICATIONS		
MATERIAL	RATE PER ACRE	COMMENTS
STRAW OR HAY	2 TONS	SHOULD BE DRY, FREE OF UNDESIREABLE SEED. SPREAD BY HAND OR MACHINE. MUST BE CRIMPED OR ANCHORED (SEE TABLE 2)
WOOD FIBER OR CELLULOSE	1 TON	APPLY WITH A HYDRAULIC MULCH MACHINE AND USE TACKING AGENT.

MULCH ANCHORING METHODS	
ANCHORING METHOD	HOW TO APPLY
MULCH ANCHORING TOOL OR FARM DISK (DULL, SERRATED, AND BLADES SET STRAIGHT)	CRIM OR PUNCH THE STRAW OR HAY TWO TO FOUR INCHES INTO THE SOIL. OPERATE MACHINERY ON THE CONTOUR OF THE SLOPE.
CLEATING WITH DOZER TRACKS	OPERATE THE DOZER UP AND DOWN SLOPE TO PREVENT FORMATION OF RILLS BY DOZER CLEATS.
WOOD HYDROMULCH FIBERS	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
SYNTHETIC TACKIFIERS, BINDERS, OR SOIL STABILIZERS	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
NETTING (SYNTHETIC OR BIODEGRADABLE MATERIAL)	INSTALL NETTING IMMEDIATELY AFTER APPLYING MULCH. ANCHOR NETTING WITH STAPLES. EDGES OF NETTING STRIP SHOULD OVERLAP WITH EACH UP-SLOPE STRIP OVERLAPPING FOUR TO SIX INCHES OVER THE ADJACENT DOWN-SLOPE STRIP. BEST SUITED TO SLOPE APPLICATIONS. IN MOST INSTANCES, INSTALLATION DETAILS ARE SITE SPECIFIC, SO SITE MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED.

MULCHING NOTES

1. SPREAD THE MULCH MATERIAL UNIFORMLY BY HAND, HAYFORK, MULCH BLOWER, OR HYDRAULIC MULCH MACHINE. AFTER SPREADING, NO MORE THAN 25 PERCENT OF THE GROUND SHOULD BE VISIBLE.
2. ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION.

MAINTENANCE

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH AND ANCHOR THE MULCH IN PLACE.
3. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
4. IF EROSION IS SEVERE OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

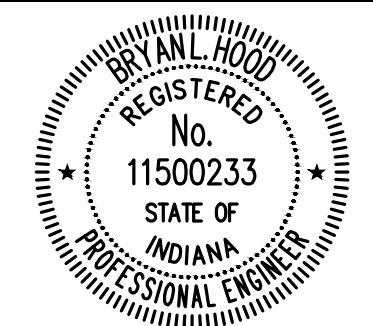
CITY OF GREENFIELD



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TEL 317.547.5580 | FAX 317.543.0270
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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



Bryan L. Hoels 11/10/2024
CERTIFIED BY

ISSUANCE INDEX	
DATE:	5/10/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

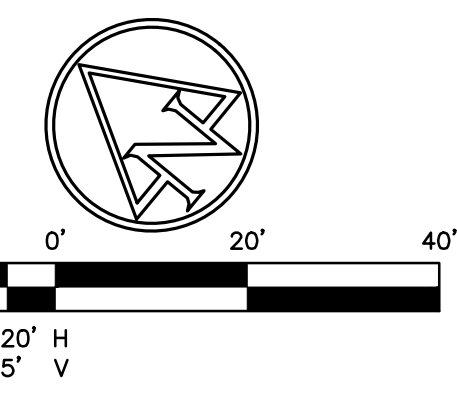
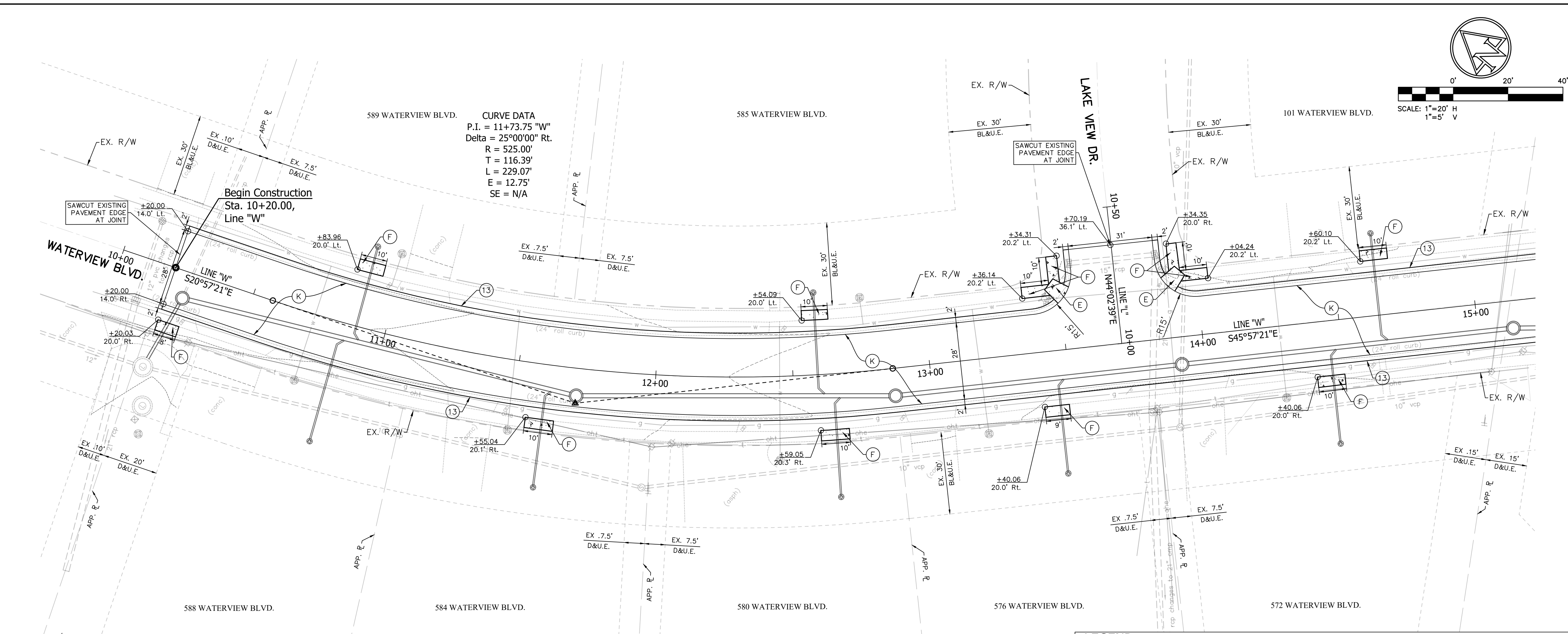
Project Number 2021.02592

EROSION CONTROL DETAILS

C-127

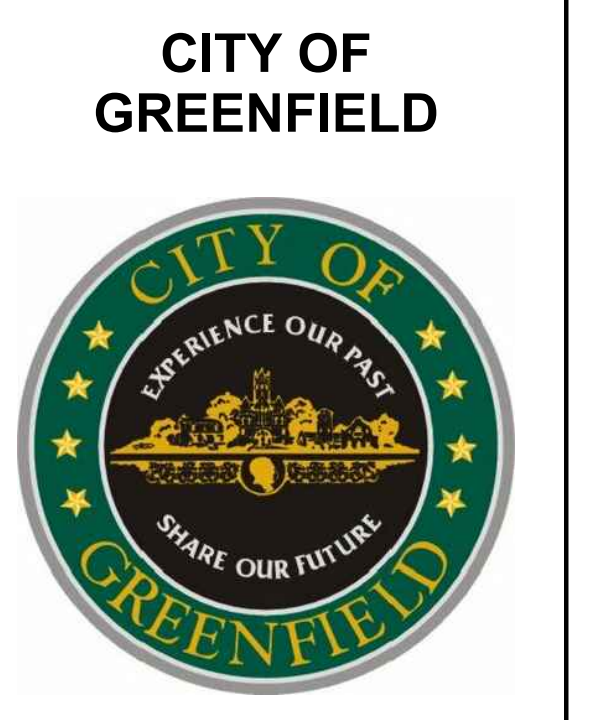
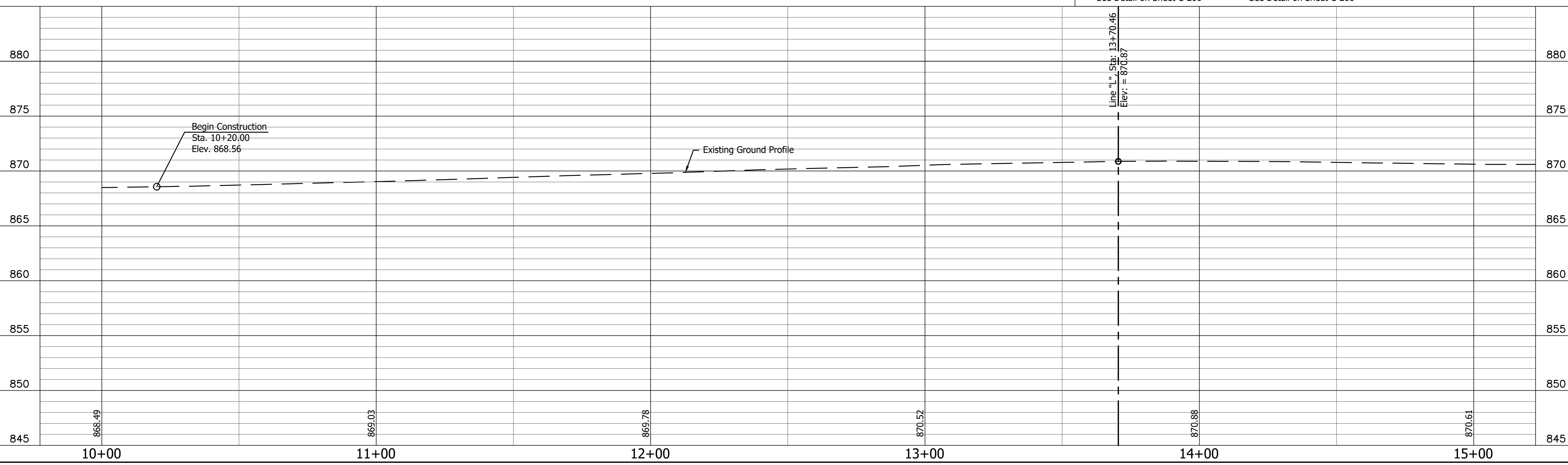
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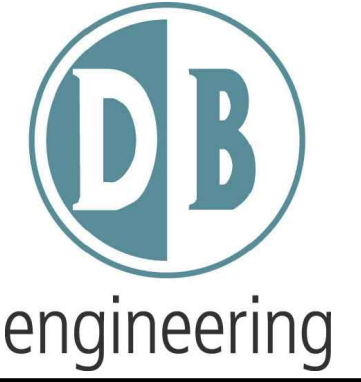


CURVE DATA
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 L = 229.07'
 E = 12.75'
 SE = N/A

- LEGEND**
- (K) Asphalt Pavement Section
See Detail on Sheet C-206
 - (13) Curb, Concrete, 6 in. (Roll Curb)
See Detail on Sheet C-206
 - (F) Sidewalk Concrete, 4 in.
See Detail on Sheet C-206
 - (E) Sidewalk Curb Ramp, Concrete
See Detail on Sheet C-206
 - (R1) 1.5" HMA Milling and Resurface



AMERICAN STRUCTUREPOINT INC.
 9025 River Road | Suite 200 | Indianapolis, Indiana 46240
 TEL 317.547.5580 | FAX 317.543.0270
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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana

WILKINSON D. NELKAM
 REGISTERED PROFESSIONAL ENGINEER
 No. PE10910286
 STATE OF INDIANA
 03/22/2024
 CERTIFIED BY

ISSUANCE INDEX		
DATE:	03/22/2024	
PROJECT PHASE:	CONSTRUCTION DOCUMENTS	

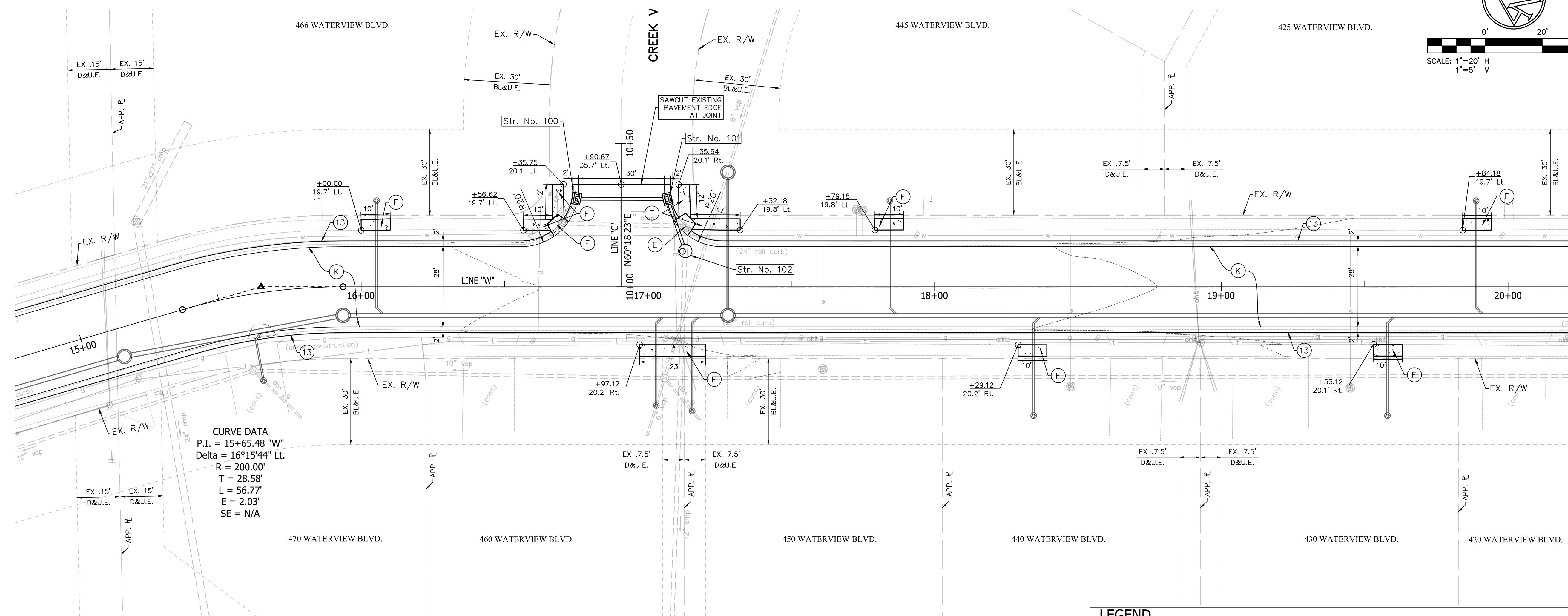
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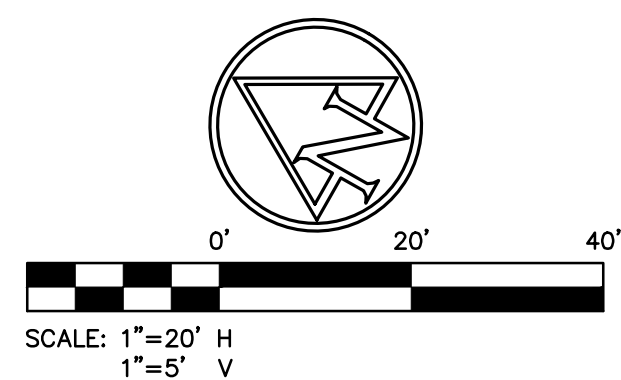
ROADWAY RESTORATION PLAN & PROFILE

C-201

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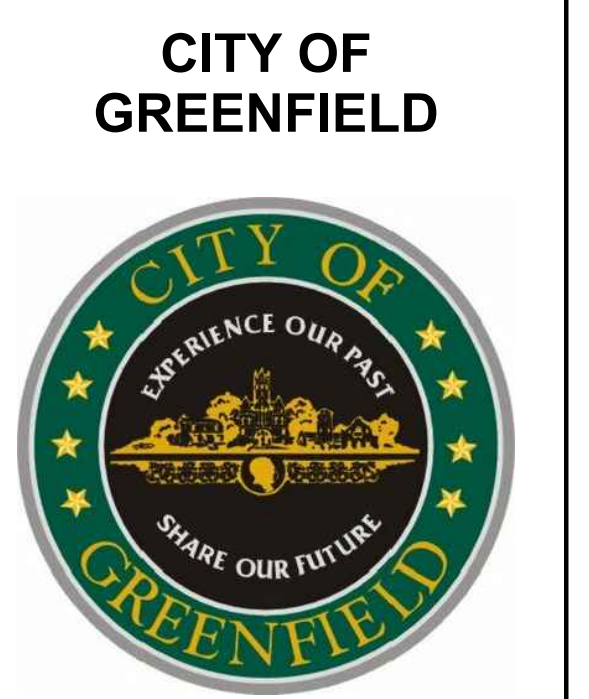
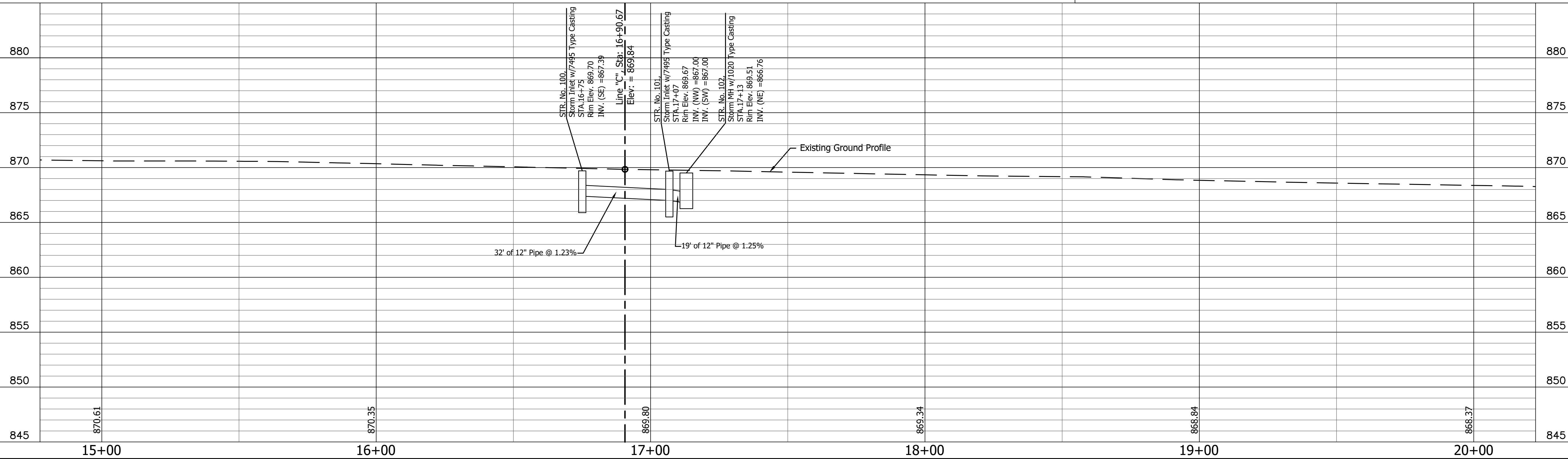


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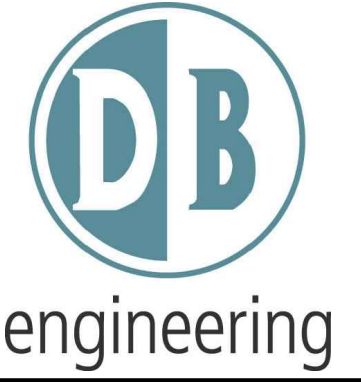


NOTE: SEE SHEET C-204 INTERSECTION DETAILS FOR WATERVIEW BLVD. & CREEKVIEW DR. FOR PROPOSED STORM SEWER DETAILS

- LEGEND**
- (K) Asphalt Pavement Section See Detail on Sheet C-206
 - (13) Curb, Concrete, 6 in. (Roll Curb) See Detail on Sheet C-206
 - (F) Sidewalk Concrete, 4 in. See Detail on Sheet C-206
 - (E) Sidewalk Curb Ramp, Concrete See Detail on Sheet C-206
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Greenfield, Indiana

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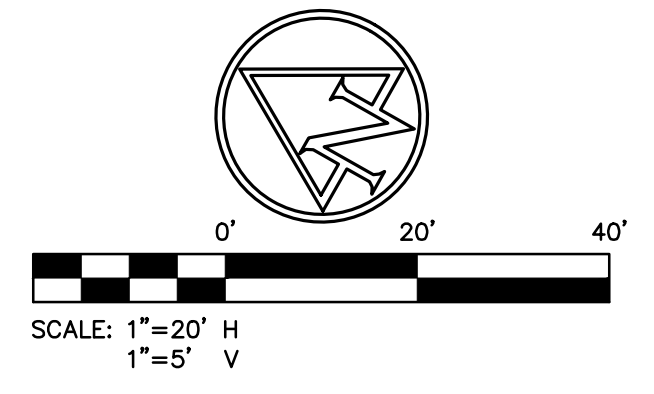
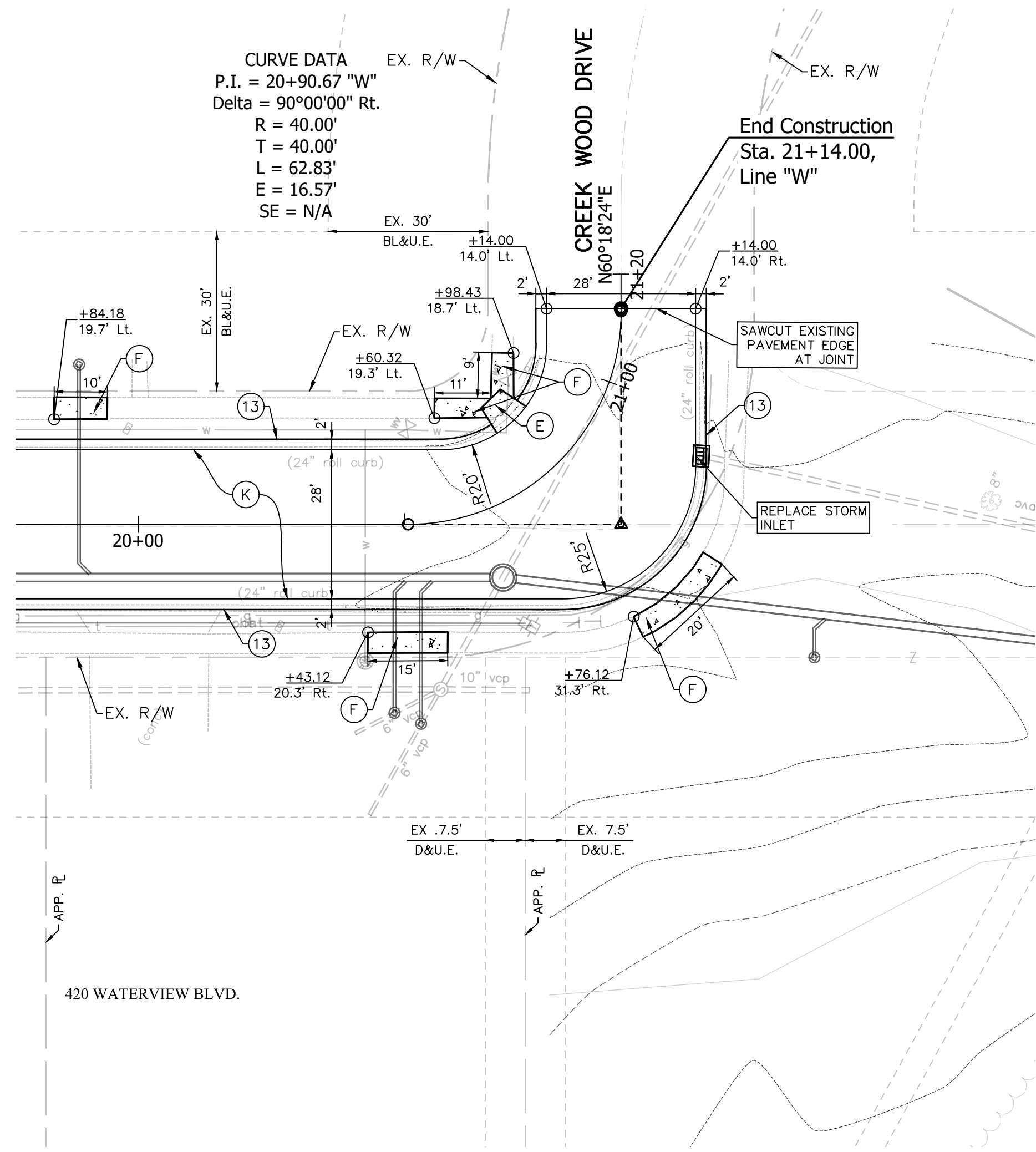
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ROADWAY RESTORATION PLAN & PROFILE

C-202

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CITY OF GREENFIELD



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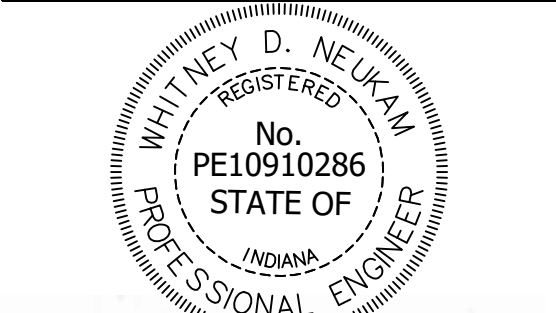
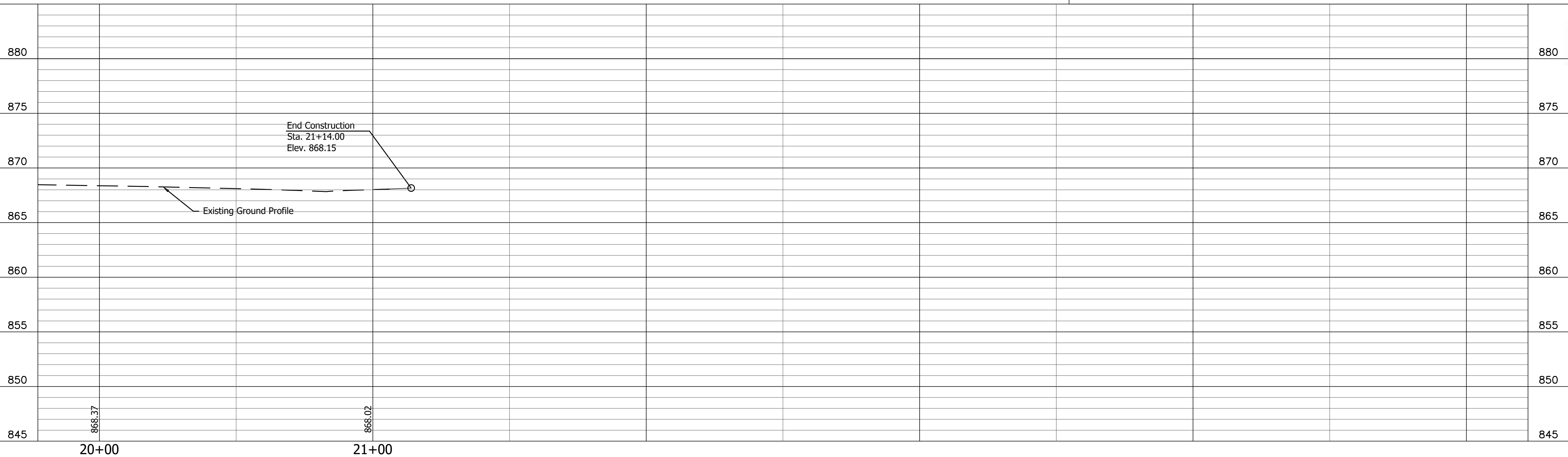
engineering

**WATERVIEW
LIFT STATION
RELOCATION**

Greenfield, Indiana

LEGEND

- (K) Asphalt Pavement Section
See Detail on Sheet C-206
- (13) Curb, Concrete, 6 in. (Roll Curb)
See Detail on Sheet C-206
- (F) Sidewalk Concrete, 4 in.
See Detail on Sheet C-206
- (E) Sidewalk Curb Ramp, Concrete
See Detail on Sheet C-206
- (R1) 1.5" HMA Milling and Resurface



Whitney D. Nelkam
03/22/2024
CERTIFIED BY

ISSUANCE INDEX	
DATE:	03/22/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

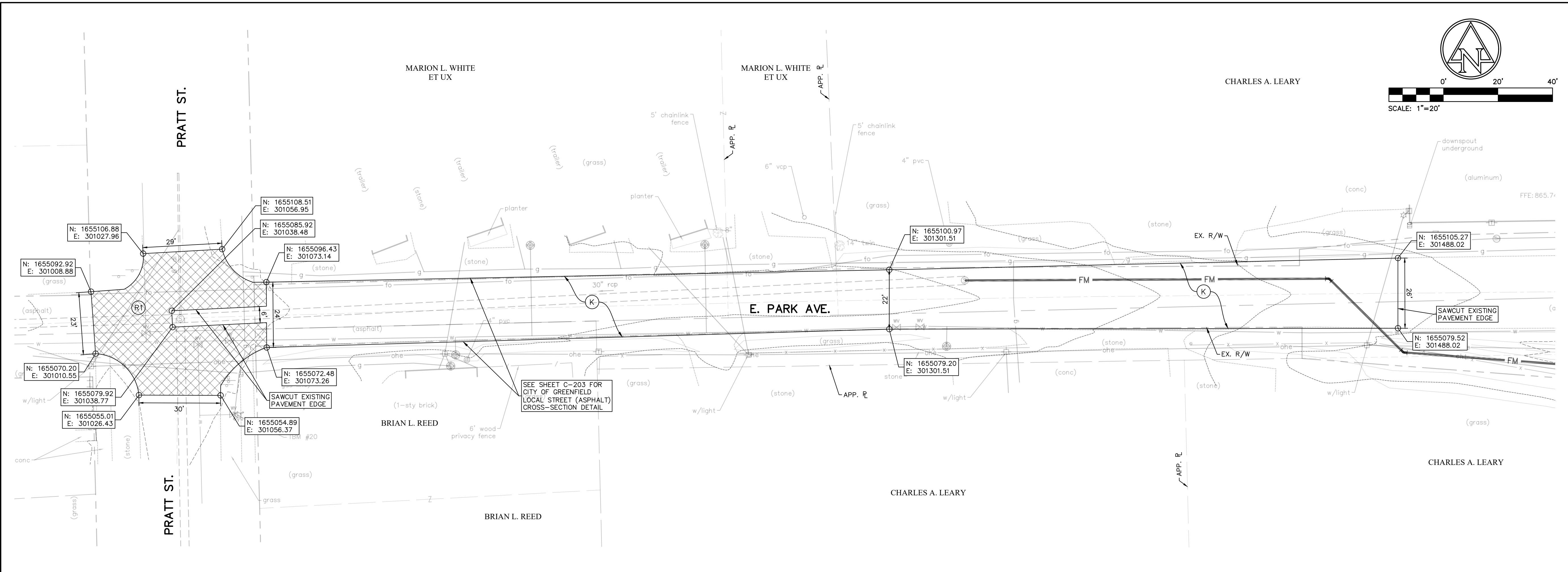
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

Project Number 2021.02592

**ROADWAY
RESTORATION
PLAN & PROFILE**

C-203

PLOT DATE: 3/18/2024 9:19 AM EDITED BY: ECARSON DRAWING FILE: M:\PROJECTS NEW\073_AMS\073_21000\073_21007 CITY OF GREENFIELD - WATERVIEW LIFT STATION V.D. DRAWINGS\SHEETS\20210226\073 - ROAD PLAN_SHEET_DBE.DWG



CITY OF GREENFIELD

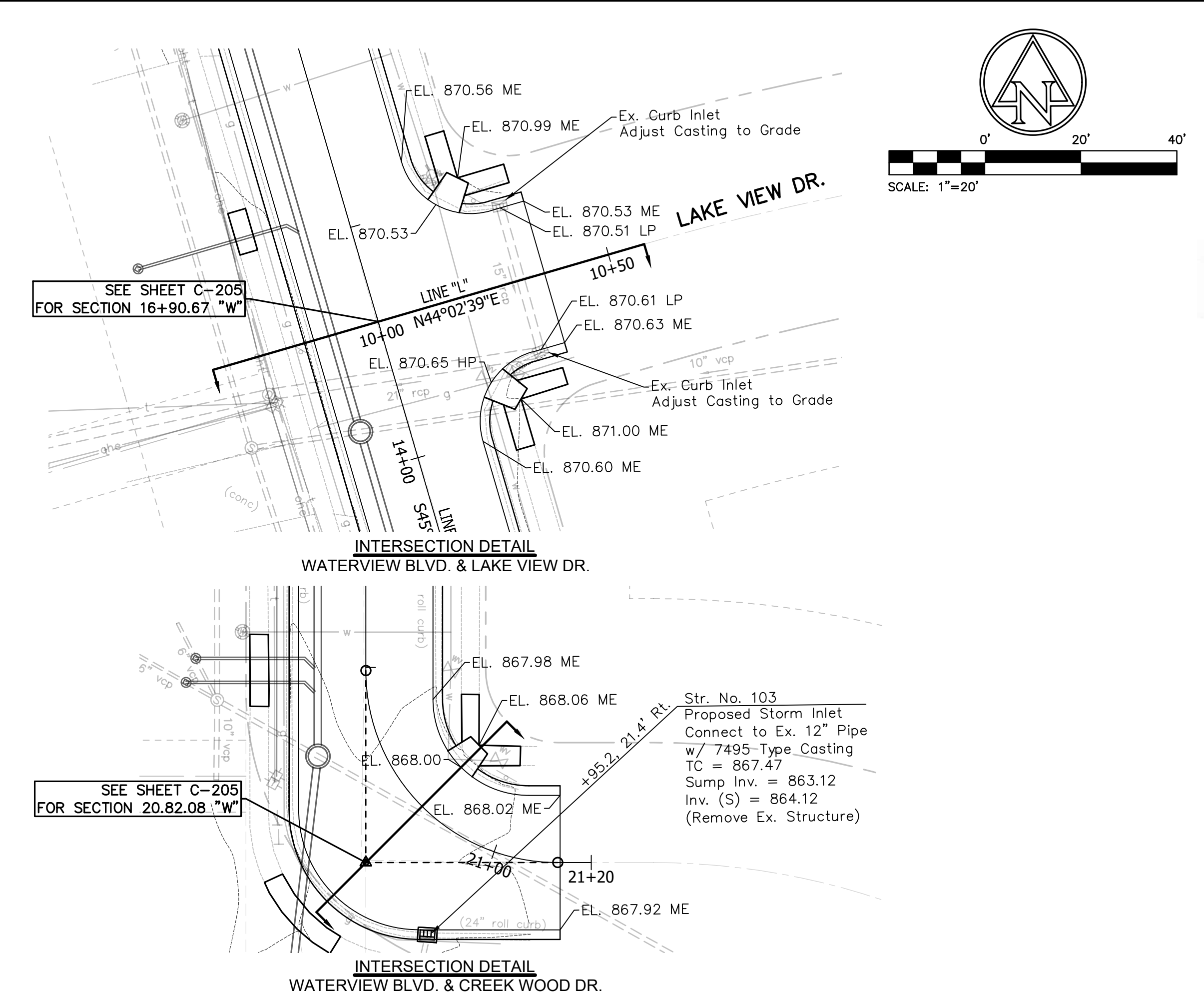
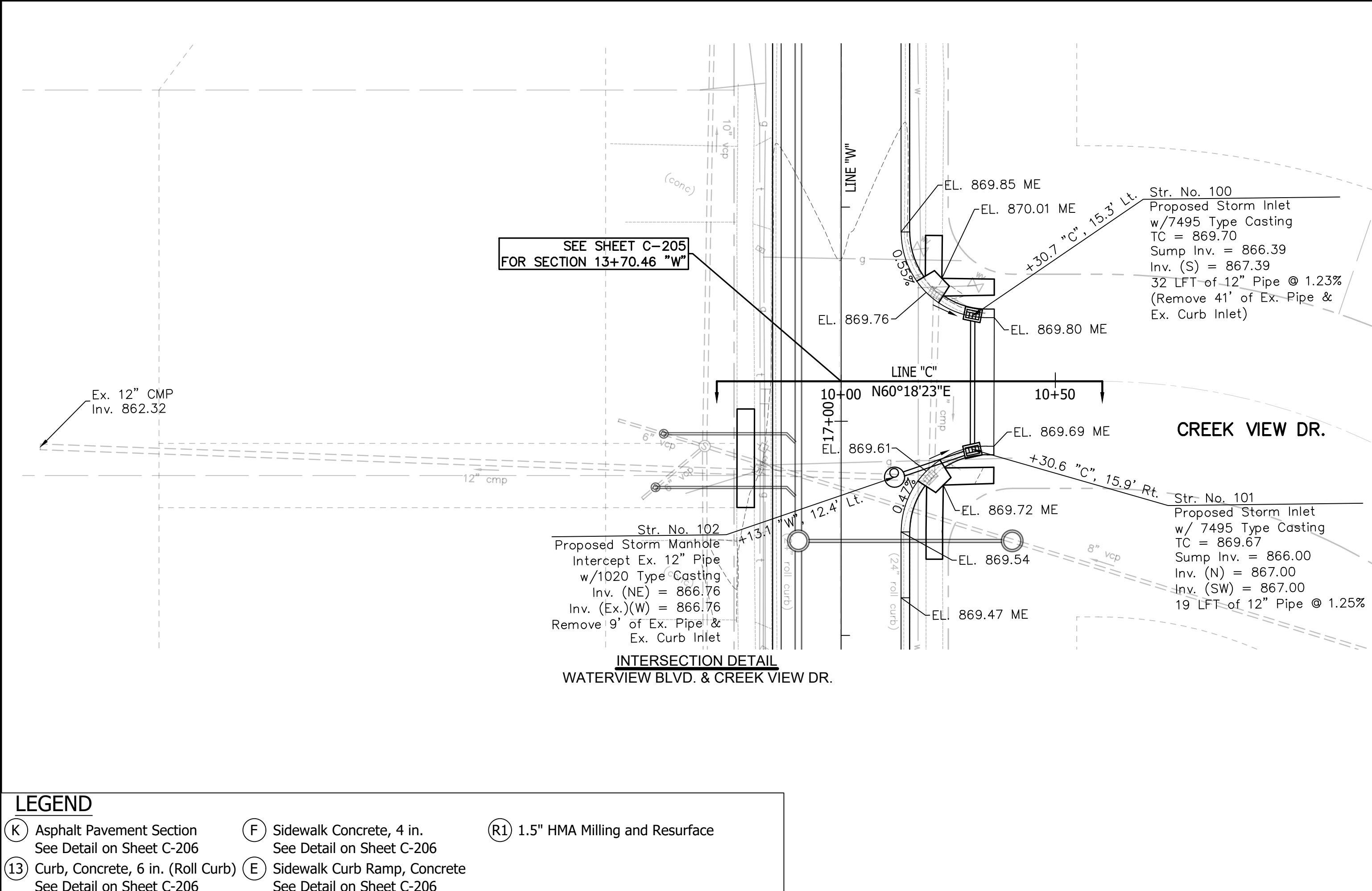
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engineering

WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



WHITNEY D. NELKAM
REGISTERED PROFESSIONAL ENGINEER
INDIANA
No. PE10910286
STATE OF INDIANA
03/22/2024
CERTIFIED BY

ISSUANCE INDEX	
DATE:	03/22/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

Project Number 2021.02592

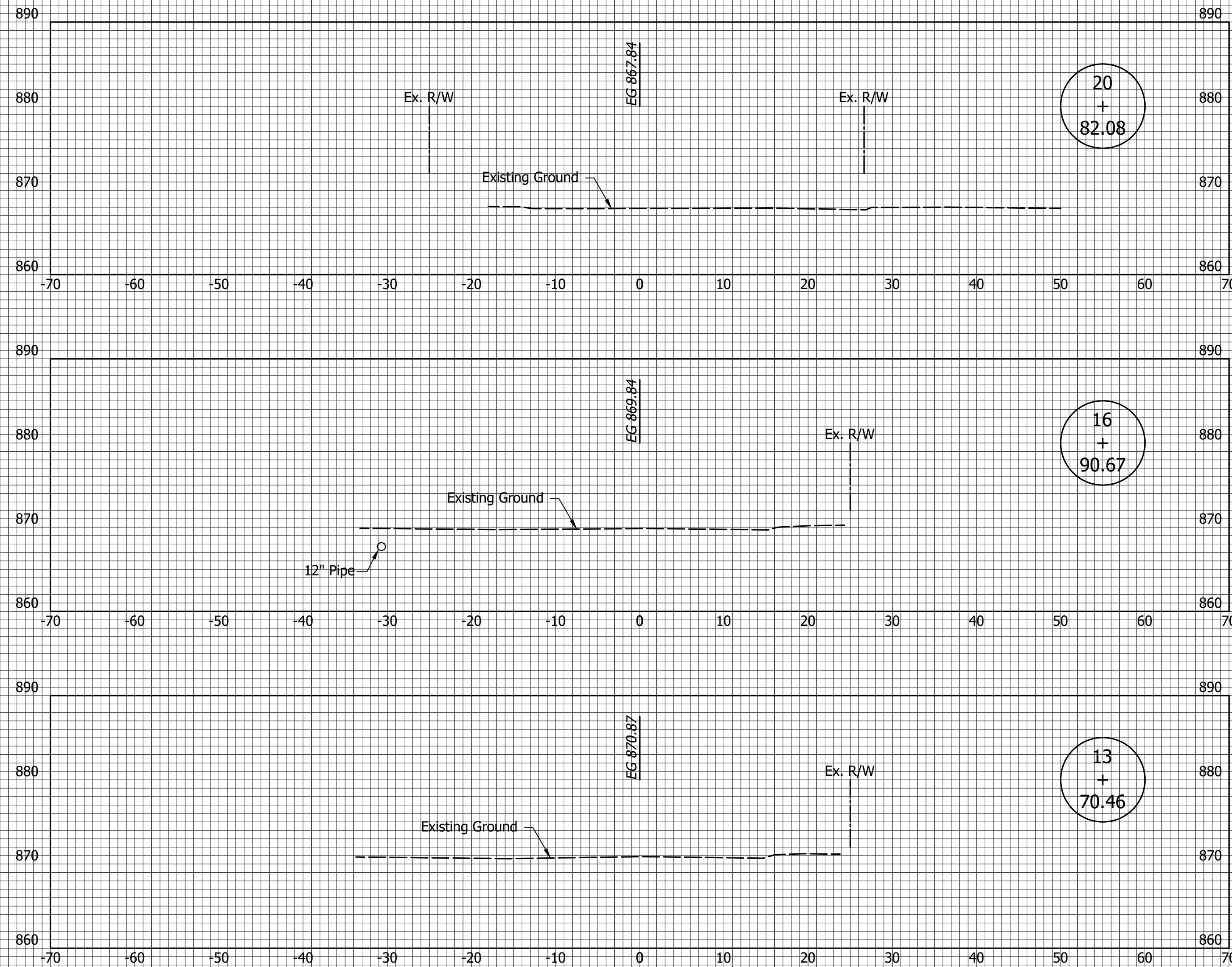
LEGEND

(K) Asphalt Pavement Section See Detail on Sheet C-206	(F) Sidewalk Concrete, 4 in. See Detail on Sheet C-206	(R1) 1.5" HMA Milling and Resurface
(13) Curb, Concrete, 6 in. (Roll Curb) See Detail on Sheet C-206	(E) Sidewalk Curb Ramp, Concrete See Detail on Sheet C-206	

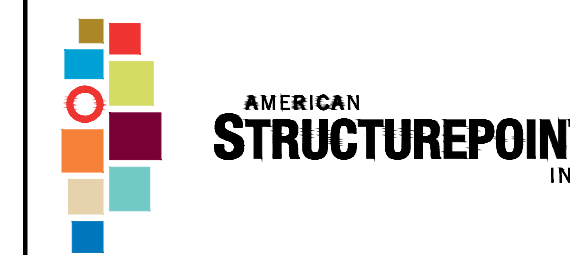
ROADWAY RESTORATION

C-204

PLOT DATE: 3/18/2024 9:19 AM EDITED BY: ECARSON DRAWING FILE: M:\PROJECTS NEW\073 AMS\073_21000\073_21007 CITY OF GREENFIELD -WATERVIEW LIFT STATION\0. DRAWINGS\SHEETS\2021022592.LI.PP - ROAD PLAN_SHEET_DB.DWG



CITY OF GREENFIELD



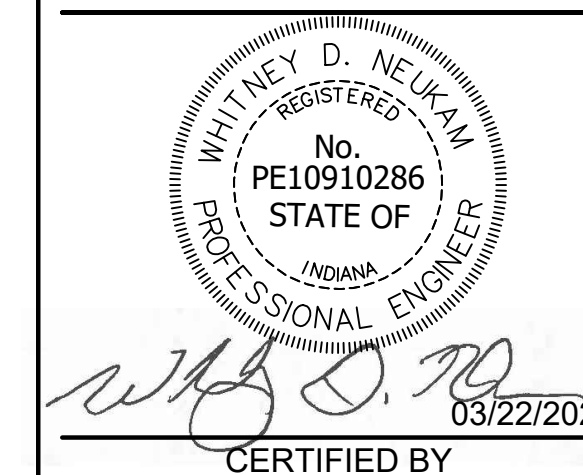
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**WATERVIEW
LIFT STATION
RELOCATION**

Greenfield, Indiana



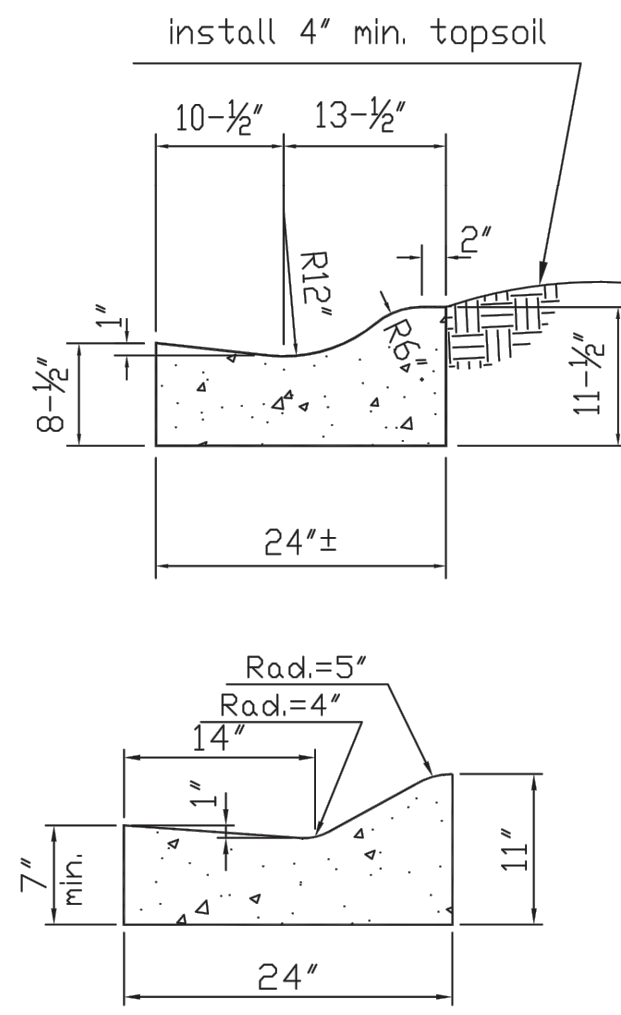
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DATE:	03/22/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

Project Number 2021.02592

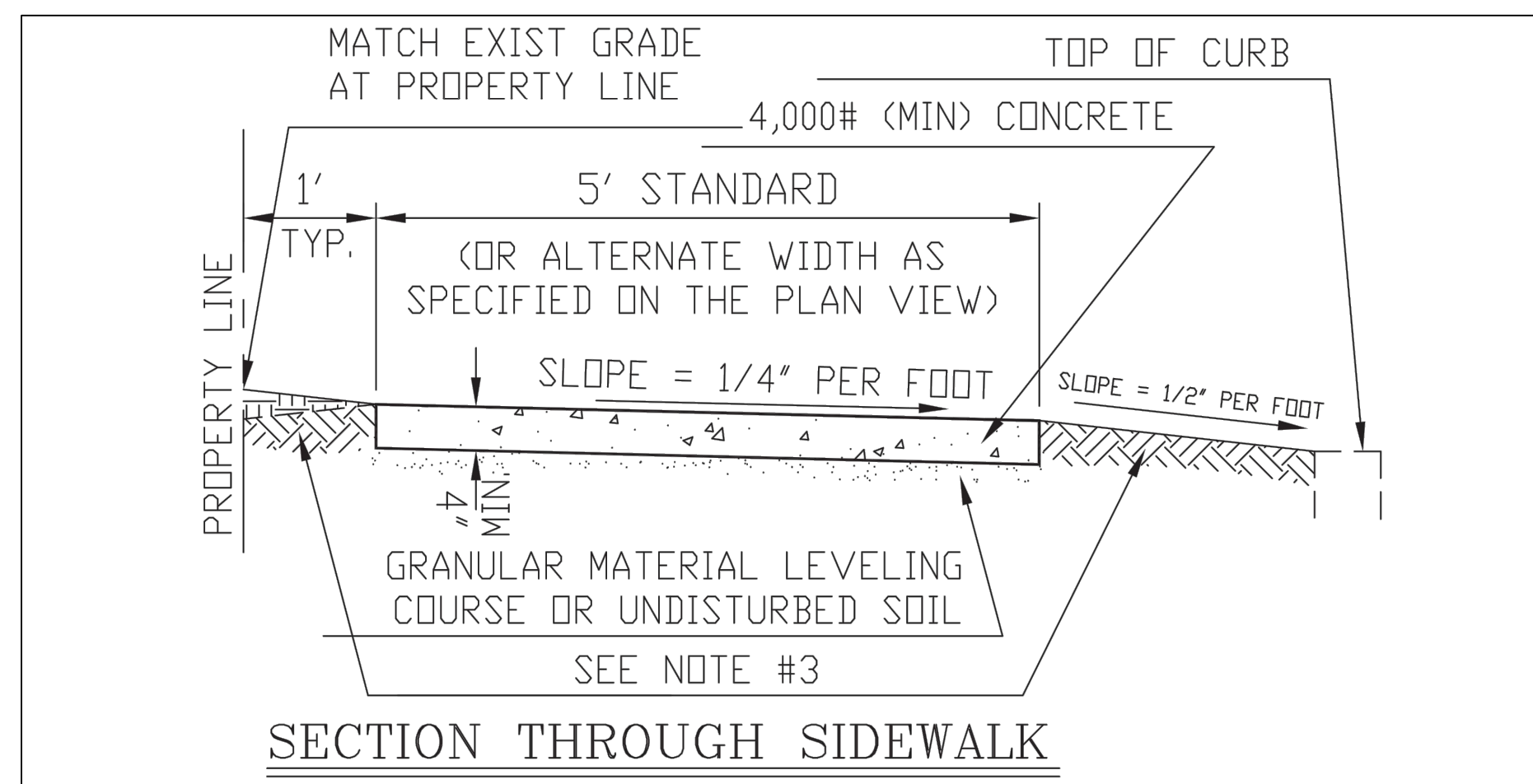
**ROADWAY
RESTORATION
EXISTING
CROSS SECTIONS
C-205**

PLOT DATE: 3/18/2024 9:19 AM EDITED BY: ECARSON DRAWING FILE: M:\PROJECTS NEW\073_AMS\073_21000\073_21007 CITY OF GREENFIELD -WATERVIEW LIFT STATION\0. DRAWINGS\SHEETS\20210229\01.PPP - ROAD PLAN_DTLs_DBE.DWG



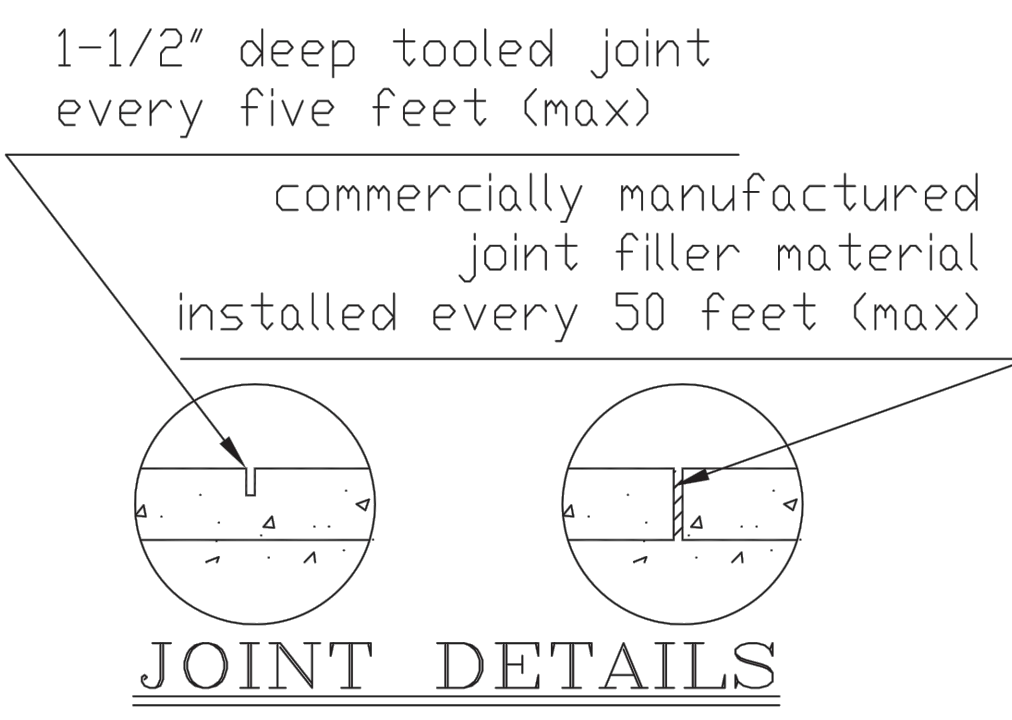
SECTION THROUGH CURB
 Note: Either of the curb profile shown are acceptable, based on the geometry of the approved inlet casting used.

CITY OF GREENFIELD	
STANDARD DETAIL	
ROLL CURB DETAIL	
Dwn.By: <i>D.Rodgers</i>	Origin Date: 11/28/07
Des. No: R-109-01	Rev. Date: 12/10/07



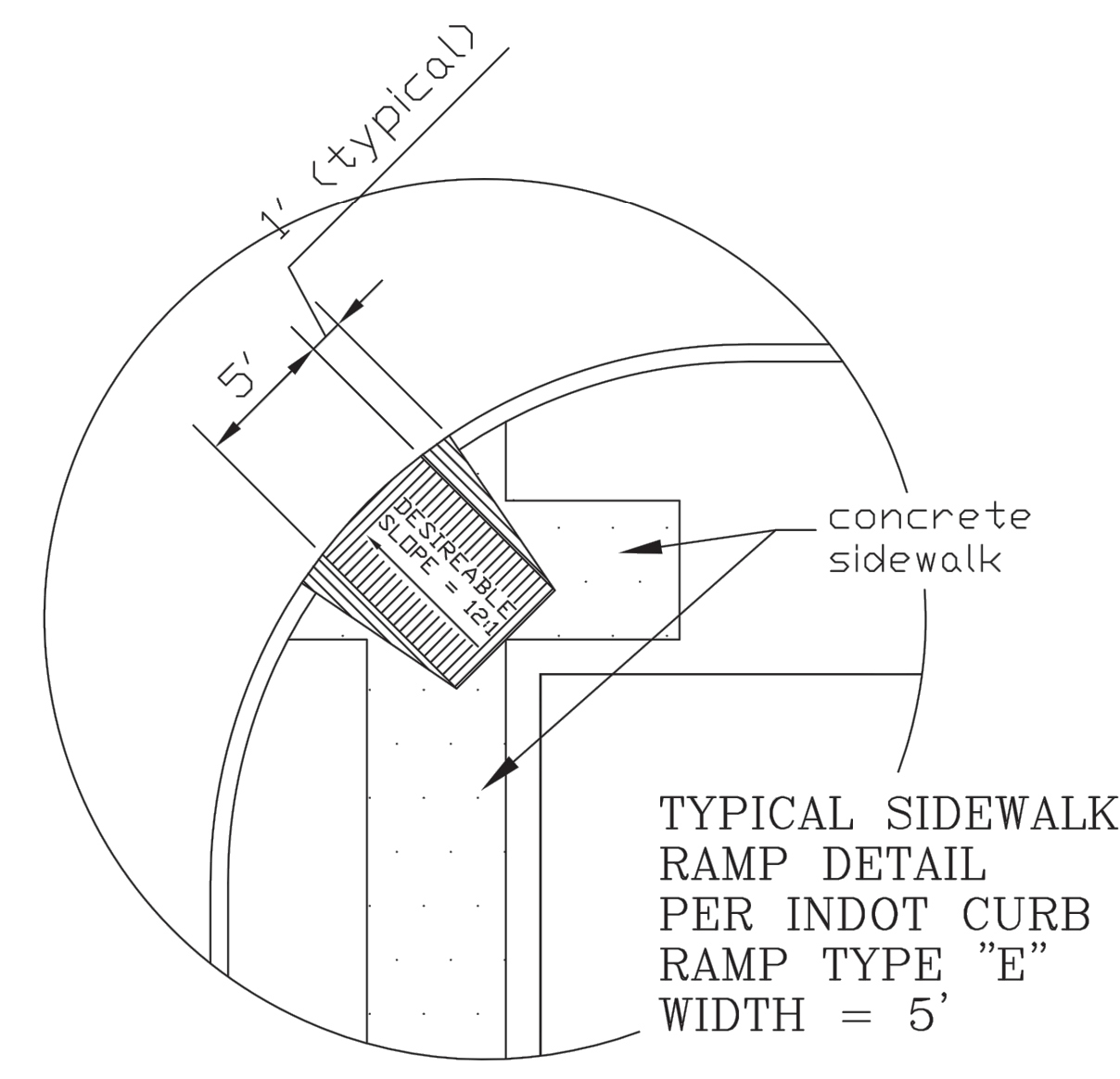
CITY OF GREENFIELD	
STANDARD DETAIL	
STANDARD SIDEWALK DETAIL	
Dwn.By: <i>D.Rodgers</i>	Origin Date: 12/29/98
Des. No: R-111-01	Rev. Date: 12/10/07

- CONSTRUCTION SPECIFICATIONS
- Concrete Material shall meet the requirements of Section 702 of the Indiana Department of Transportation Standard Specifications.
 - INDOT Standard Specifications Section 501.10 Limitations of Mixing shall govern the placement of concrete in cold weather.
 - Install topsoil, grass seed and mulch in all lawn areas disturbed by construction.

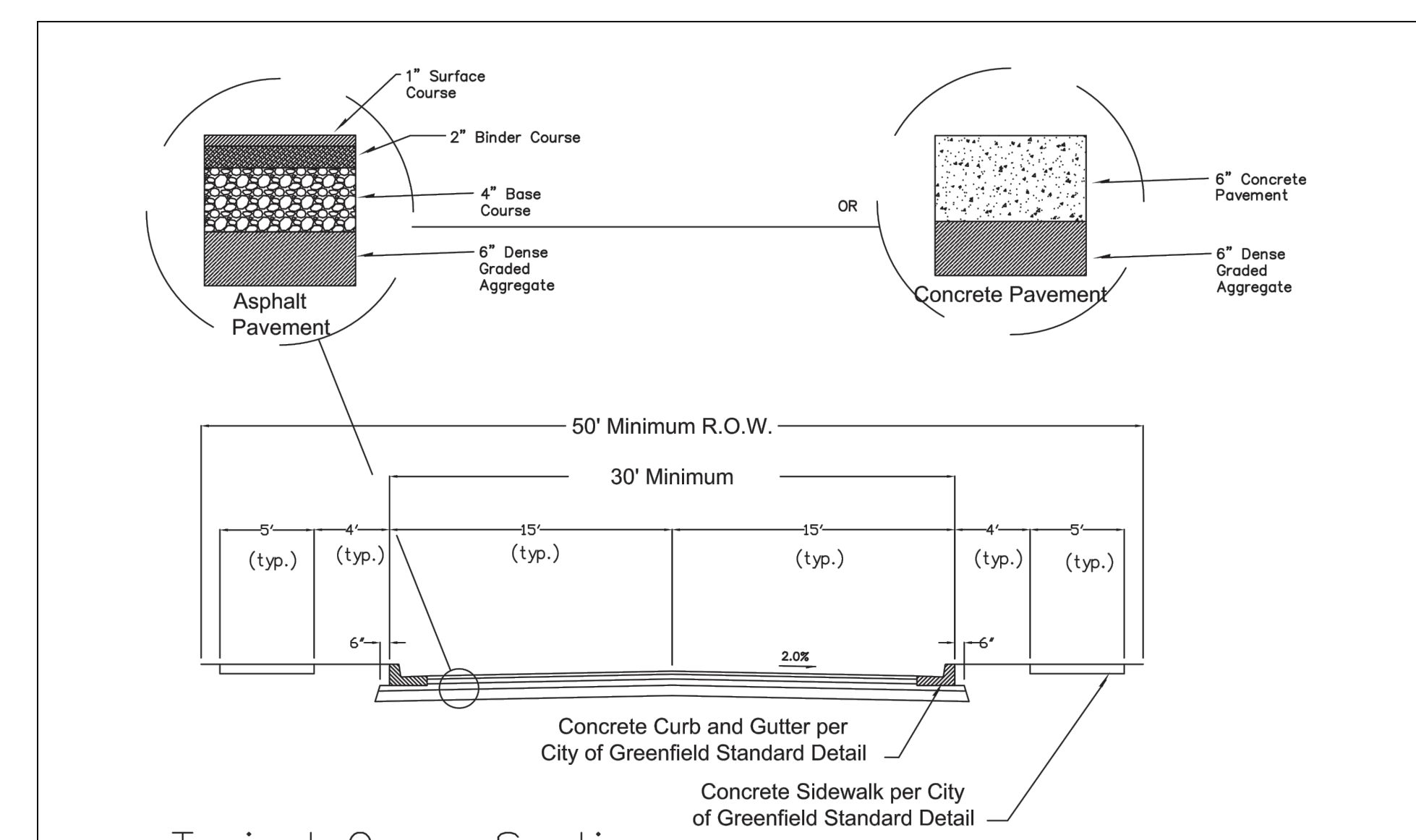


CONSTRUCTION SPECIFICATIONS

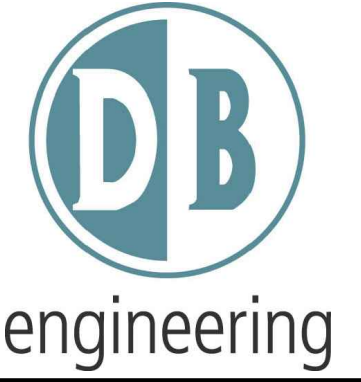
- Concrete Material shall meet the requirements of Section 702 of the Indiana Department of Transportation Standard Specifications.
- INDOT Standard Specifications Section 501.10 Limitations of Mixing shall govern the placement of concrete in cold weather.
- Install topsoil, grass seed and mulch in all lawn areas disturbed by construction.
- Sawcut existing pavement to a neat edge on any line where new construction meets existing pavement.
- Provide tooled or sawn joints in concrete at 10 foot intervals.



CITY OF GREENFIELD	
STANDARD DETAIL	
SIDEWALK RAMP DETAIL	
Dwn.By: <i>D.Rodgers</i>	Origin Date: 11/30/07
Des. No: R-110-01	Rev. Date: 12/10/07

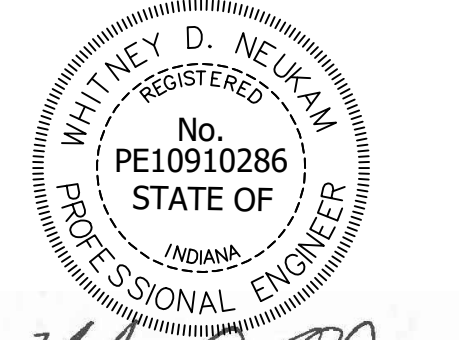


CITY OF GREENFIELD	
STANDARD DETAIL	
Local Street Cross-Section	
Dwn.By: <i>D.Rodgers</i>	Origin Date: 12/29/98
Des. No: P-131-02	Rev. Date: 9/4/14



WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



W.D.N. 03/22/2024
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ISSUANCE INDEX	
DATE:	03/22/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

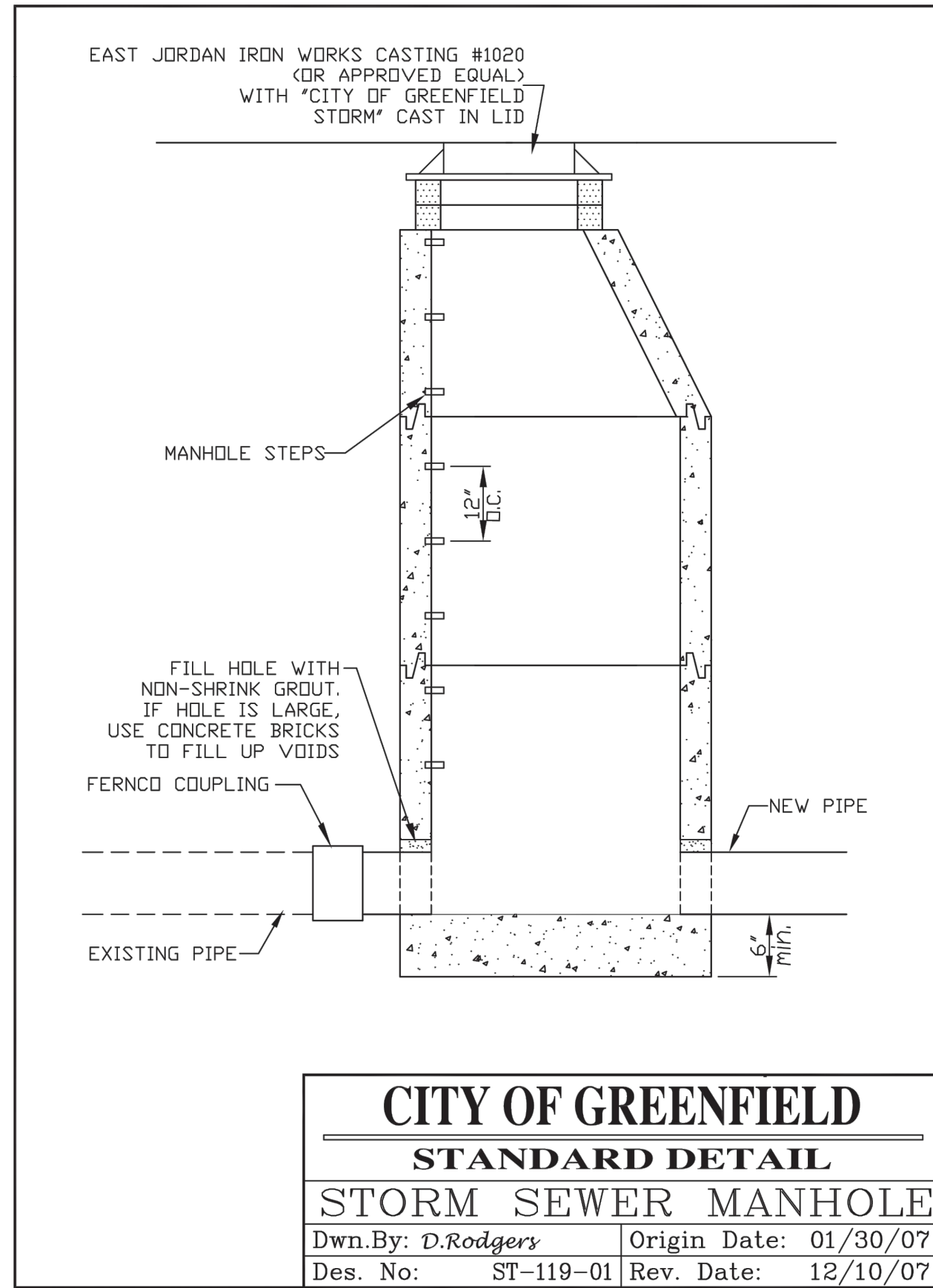
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

Project Number 2021.02592

ROADWAY RESTORATION DETAILS

C-206

PLOT DATE: 3/18/2024 9:19 AM EDITED BY: ECARSON DRAWING FILE: M:\PROJECTS NEW\073_AMS\073_21000\073_21007 CITY OF GREENFIELD -WATERVIEW LIFT STATION\073_21007\073_21007.DWG



CITY OF GREENFIELD
STANDARD DETAIL
STORM SEWER MANHOLE
 Dwn.By: D.Rodgers Origin Date: 01/30/07
 Des. No: ST-119-01 Rev. Date: 12/10/07

STORM SEWER MANHOLE SPECIFICATIONS

I. MATERIALS

A. CASTING

- Casting shall be East Jordan Iron Works casting #1020 or approved equal.
- Lid shall be stamped with the words "CITY OF GREENFIELD - STORM" and an appropriate "clean water" message.
- A minimum of 4" and a maximum of 12" of concrete adjustment rings shall be installed under the casting.
- Joint sealant under the casting, between the adjustment rings and between the adjustment rings and the manhole shall be two rings of non-hardening butyl rubber rope, Conseal or equal. (Kent Seal is not acceptable)

B. CONCRETE MANHOLE

- 48" diameter precast concrete sections shall be used to construct the manhole barrel.
- A flat-top may not be used in place of a cone section unless specifically approved by City Officials before construction begins.
- "O-ring" gaskets must be used in the joints between manhole sections.
- The finished manhole must be watertight.
- The steps shall be made of plastic-coated steel and shall be placed as shown on the drawing.

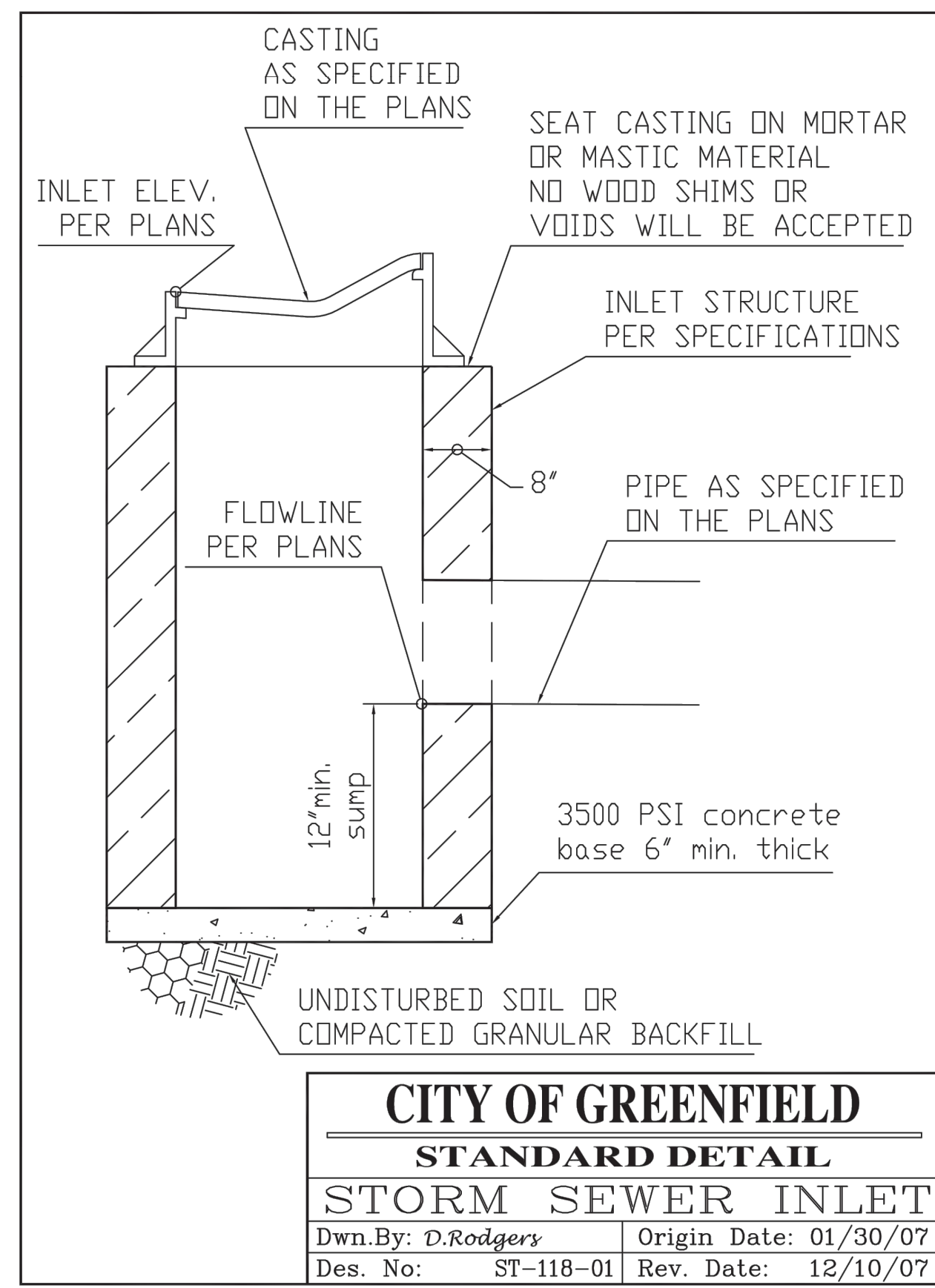
C. BEDDING AND BACKFILL

- The manhole must be constructed directly upon undisturbed soil or a minimum of 6" of compacted crushed stone.
- Granular material must be used to backfill the excavation. The material must be mechanically compacted in lifts not to exceed 12".

II. EXECUTION

A. INSPECTIONS

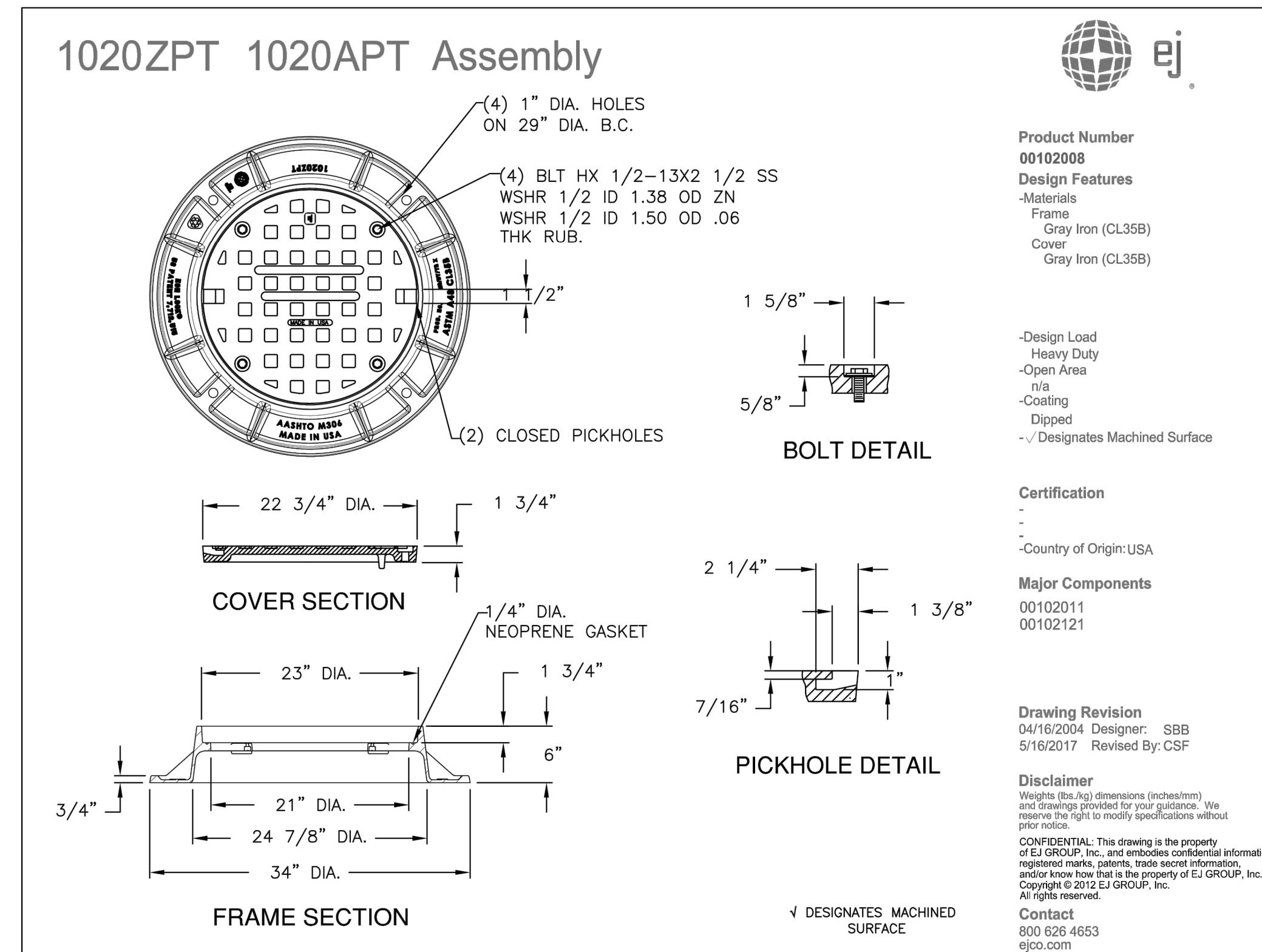
- The manhole must be inspected by the Wastewater Treatment and Collections Department designated Inspector before the excavation is backfilled.



CITY OF GREENFIELD
STANDARD DETAIL
STORM SEWER INLET
 Dwn.By: D.Rodgers Origin Date: 01/30/07
 Des. No: ST-118-01 Rev. Date: 12/10/07

INLET CONSTRUCTION SPECIFICATIONS

- The following materials are acceptable for inlet construction:
 - Precast or Cast-in-place concrete may be used with the following stipulations:
 - Concrete must be at least 6 inches thick
 - Top 6 inches (minimum) of structure must be constructed of solid concrete blocks.
- Construct Poured Concrete Base as shown in the drawing.
- Concrete Material shall meet the requirements of Section 702 of the Indiana Department of Transportation Standard Specifications.
- INDOT Standard Specifications Section 501.10 Limitations of Mixing shall govern the placement of concrete in cold weather.
- The inside dimensions of the structure shall match the opening dimensions of the casting. The entire flange of the casting shall bear upon the top of the structure.
- All voids around the pipe shall be filled with non-shrink grout and shall be smooth and flush with the inside wall surfaces. The construction shall be watertight.
- All inlet castings must be pre-stamped with an appropriate "clean-water" message.



Product Number
 00102008
Design Features
 -Materials
 Frame
 Gray Iron (CL35B)
 Cover
 Gray Iron (CL35B)

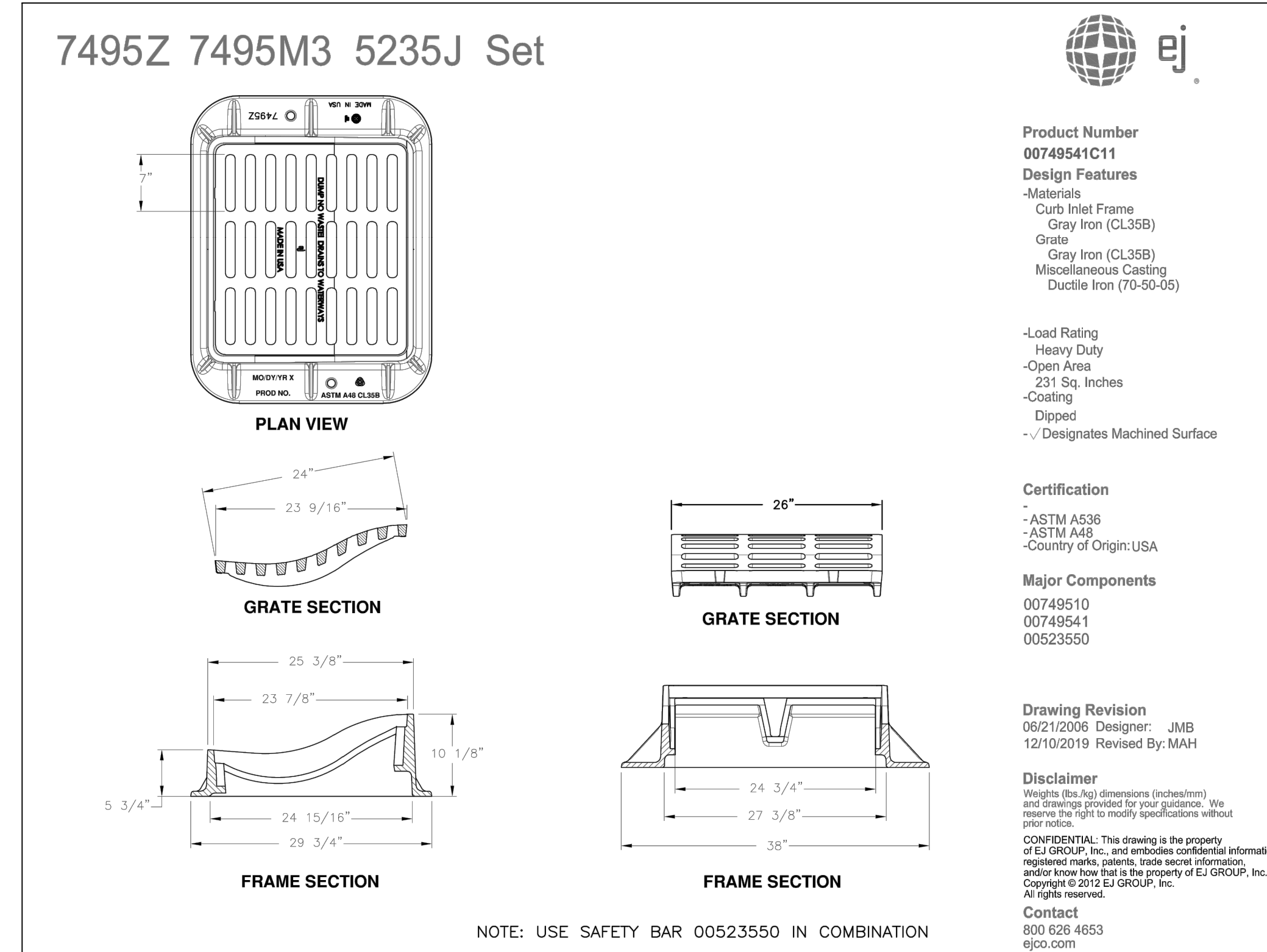
-Design Load
 Heavy Duty
 -Open Area
 n/a
 -Coating
 Dipped
 -/ Designates Machined Surface

Certification
 -
 -Country of Origin: USA

Major Components
 00102011
 00102121

Drawing Revision
 04/16/2004 Designer: SBB
 5/16/2017 Revised By: CSF

Disclaimer
 Weights (lbs./sq.) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.
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Product Number
 00749541C11
Design Features
 -Materials
 Curb Inlet Frame
 Gray Iron (CL35B)
 Grate
 Gray Iron (CL35B)
 Miscellaneous Casting
 Ductile Iron (70-50-05)

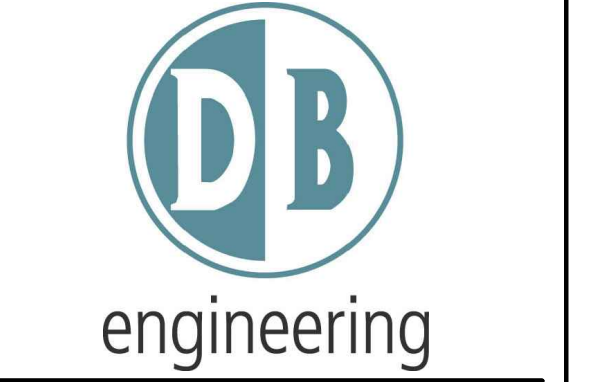
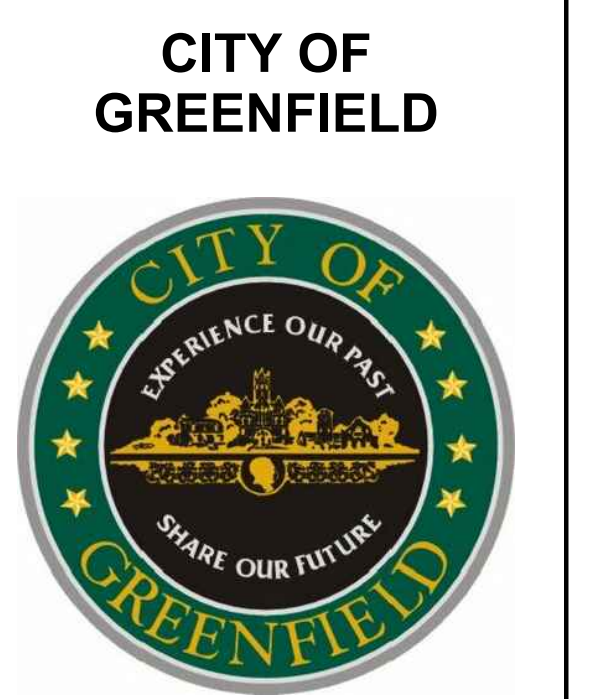
-Load Rating
 Heavy Duty
 -Open Area
 231 Sq. Inches
 -Coating
 Dipped
 -/ Designates Machined Surface

Certification
 -ASTM A536
 -ASTM A48
 -Country of Origin: USA

Major Components
 00749510
 00749541
 00523550

Drawing Revision
 08/21/2008 Designer: JMB
 12/10/2019 Revised By: MAH

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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana

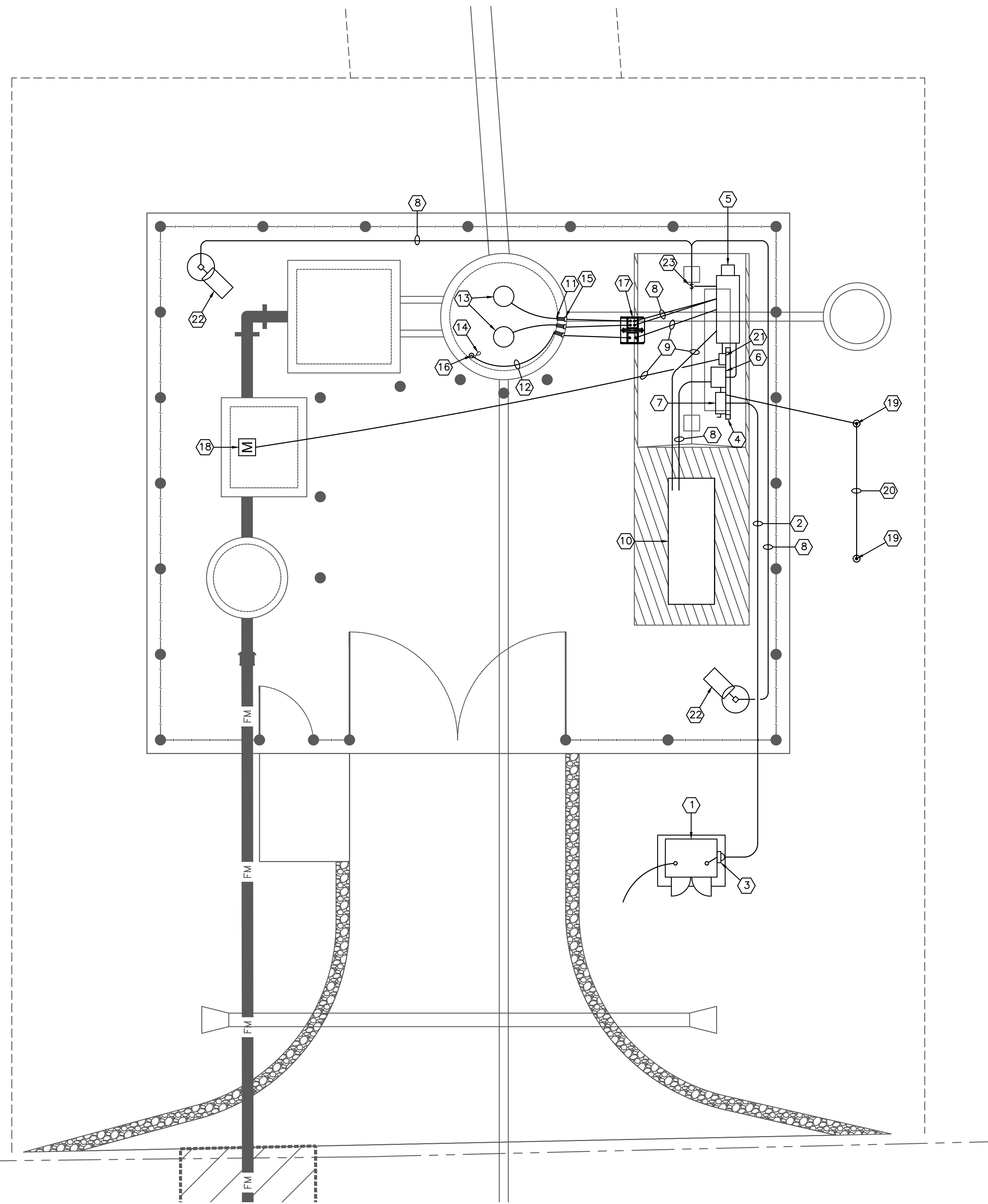


ISSUANCE INDEX	
DATE:	03/22/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

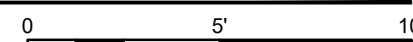
Project Number 2021.02592

ROADWAY RESTORATION DETAILS
C-207



OVERALL ELECTRICAL SITE PLAN

SCALE: 1"=5'-0" WHEN PRINTED AT 22x34



GENERAL ELECTRICAL NOTES:

- A. FOR WIRING DETAILS, SEE ONE-LINE DIAGRAM.
- B. ANTI-CORROSION COATING SHALL BE USED AS A BARRIER BETWEEN ALL DISSIMILAR METALS TO PREVENT CORROSION.
- C. LOCATE ALL EXISTING PIPING AND UTILITIES BEFORE INSTALLING UNDERGROUND CONDUITS; PROTECT ALL EXISTING INSTALLATIONS.
- D. ALL BELOW GRADE CONDUIT SHALL BE SCH. 80 PVC. ALL TRANSITIONS (90 DEGREE ELBOW) FROM BELOW GRADE TO ABOVE GRADE AND WET WELL PENETRATIONS SHALL BE GALVANIZED RIGID STEEL.
- E. PROVIDE PUTTY TYPE DUCT SEAL FOR ALL UNDERGROUND CONDUIT OPENINGS IN OUTDOOR EQUIPMENT.
- F. MAINTAIN 3' SEPARATION BETWEEN 240V POWER CONDUITS AND LOW VOLTAGE (NETWORK, 24V DC CONTROL, OR INTRINSICALLY SAFE CIRCUIT) CONDUITS. MAINTAIN 1' SEPARATION BETWEEN 120V POWER CONDUITS AND LOW VOLTAGE (NETWORK, 24V DC CONTROL, OR INTRINSICALLY SAFE CIRCUIT) CONDUITS.
- G. WHERE CONDUIT CROSSES UNDER EXISTING OR FUTURE PAVEMENT, CONDUIT SHALL BE GALVANIZED RIGID STEEL. SAW CUT AND REPAIR EXISTING PAVEMENT AS NECESSARY.
- H. WIRE AND CONDUIT ROUTES AND ELECTRICAL EQUIPMENT LOCATIONS ARE APPROXIMATE, FIELD VERIFY EXACT INSTALLATIONS.
- I. ALL WIRING, CONDUIT, AND TERMINATIONS FURNISHED AND INSTALLED BY CONTRACTOR.
- J. PROVIDE STAINLESS STEEL HARDWARE FOR ALL EQUIPMENT INSTALLED IN WET WELL; THIS INCLUDES BUT NOT LIMITED TO KELLEM'S CABLE GRIPS, CABLE RACKS, MOUNTING BRACKETS, BOLTS AND NUTS.
- K. WET WELL CLASSIFICATION IS CLASS 1 DIVISION 1 GROUP D; ALL WIRING METHODS SHALL COMPLY.
- L. AREA WITHIN A 5' RADIUS FROM THE WET WELL HATCH AND VENT IS CLASS 1 DIVISION 2 GROUP D RATED.

ELECTRICAL KEYED NOTES: ◻

- 1. PAD MOUNTED TRANSFORMER. PROVIDE 10' OF CLEARANCE IN FRONT OF DOORS, 5' OF CLEARANCE AROUND ALL OTHER SIDES.
- 2. UNDERGROUND SERVICE SECONDARY.
- 3. UTILITY METER MOUNTED ON SIDE OF TRANSFORMER. PROVIDE 4' OF CLEARANCE IN FRONT OF METER.
- 4. STAINLESS STEEL EQUIPMENT RACK.
- 5. PUMP CONTROL PANEL. SEE DETAILS.
- 6. NEMA 4X STAINLESS STEEL ASCO 300 SERIES W/DTS ATS, 120/240V, 3PH, 4W, MINIMUM 35KAIC.
- 7. NEMA 4X STAINLESS STEEL SERVICE ENTRANCE RATED MAIN SERVICE DISCONNECT SWITCH.
- 8. UNDERGROUND POWER WIRING AND CONDUIT. TYPICAL.
- 9. UNDERGROUND I&C WIRING AND CONDUIT. TYPICAL.
- 10. MINIMUM 65kW DIESEL STANDBY GENERATOR, 120/240V, 3PH, 4W, WITH 24-HOUR SUBBASE FUEL TANK. 80kW FOOTPRINT SHOWN FOR DESIGN, CONFIRM FINAL DIMENSIONS WITH SHOP DRAWINGS.
- 11. UTILIZE KELLEMS GRIPS FOR EACH CABLE SUSPENDED FROM BOX.
- 12. MULTITRODE FOG ROD AND FLOAT SWITCH CABLES, MULTITRODE FOG ROD LEVEL SENSOR IN 1-1/2" C. FLOAT SWITCHES IN 1-1/2" C. PVC BELOW GRADE AND GALVANIZED RIGID STEEL ABOVE GRADE. CABLES SHALL BE CONTINUOUS TO VENTED BOX AND NOT SPLICED. PROVIDE ADEQUATE LENGTH FROM MANUFACTURER. FLOAT CABLES GO TO PUMP CONTROL PANEL. FOG ROD CABLES GO DIRECTLY TO FOG ROD CONTROL PANEL.
- 13. (2) 12HP SUBMERSIBLE PUMPS.
- 14. NEW DIRECT ACTING, NON-MERCURY FLOAT SWITCHES ENCASED IN AN ELLIPSE-SHAPED MOLDED PLASTIC FLOAT, CONNECTED TO A FACTORY INSTALLED CABLE. THE FLOATS SHALL BE SUSPENDED BY THEIR CABLES BY A MEANS OF A WEIGHT KIT, AS INDICATED IN THE EQUIPMENT DATA.
- 15. PROVIDE LINK SEAL FOR EACH WET WELL PENETRATION.
- 16. MULTITRODE LEVEL SENSOR IN 8" STILLING TUBE.
- 17. VENTED WIREWAY AND TERMINAL BOX. SEE DETAILS.
- 18. ELECTROMAGNETIC FLOW METER.
- 19. GROUND ROD. TYPICAL OF 2, SPACED 10' APART.
- 20. UNDERGROUND GROUNDING ELECTRODE CONDUCTOR.
- 21. FLOW INDICATOR TRANSMITTER.
- 22. POLE MOUNTED LED AREA LIGHTS.
- 23. H-O-A FOR AREA LIGHTS.

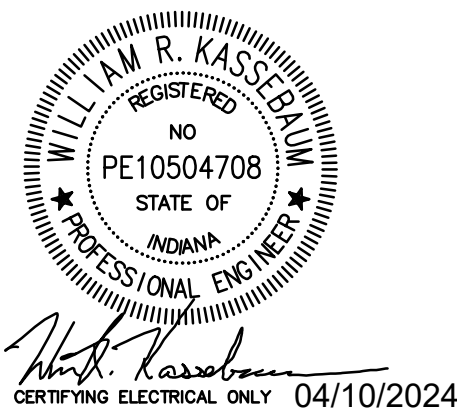


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SIMS-DURKIN ASSOCIATES
ENGINEERING COMPANY
5755 WEST 74TH STREET
INDIANAPOLIS, INDIANA 46278
PHONE: 317-209-4035
FAX: 317-222-4120
WEB: WWW.SIMS-DURKIN.COM
SDA PROJECT NUMBER: 2022151

WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



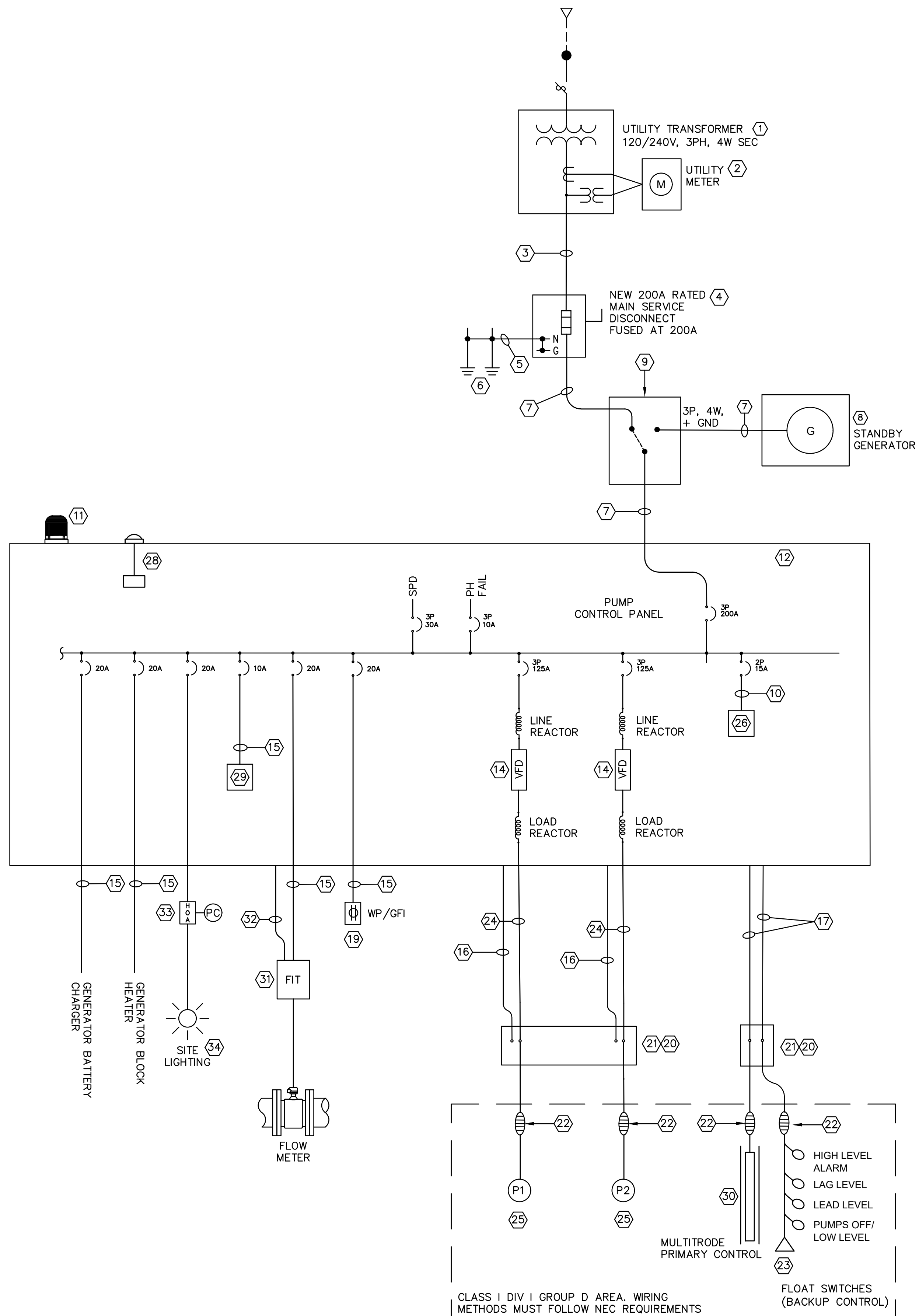
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ISSUANCE INDEX	
DATE:	04/10/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

Project Number 2021.02592

OVERALL ELECTRICAL SITE PLAN



CLASS 1 DIV 1 GROUP D AREA. WIRING METHODS MUST FOLLOW NEC REQUIREMENTS

FLOAT SWITCHES (BACKUP CONTROL)

POWER ONE-LINE DIAGRAM

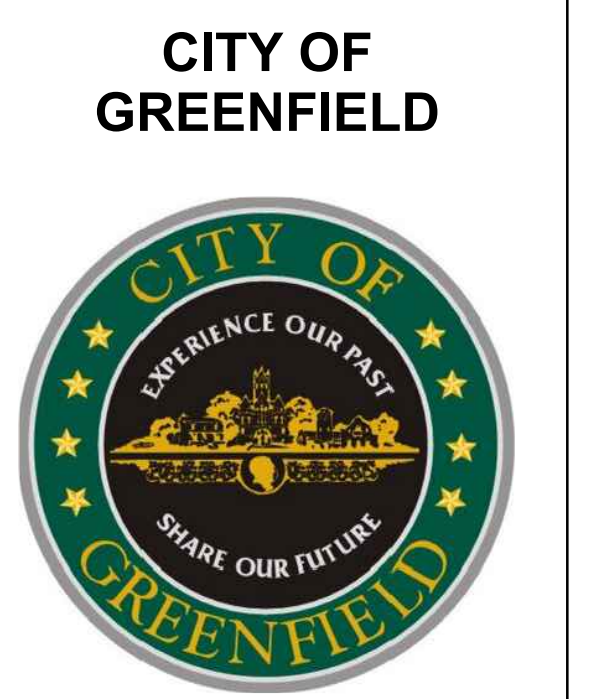
NO SCALE

CONDUIT REQUIREMENT NOTES:

- A. RIGID GALVANIZED STEEL FOR ALL CONDUIT ABOVE GRADE.
- B. ALL MOUNTING, CONDUIT RUNS, CONNECTIONS AND OTHER SHALL BE AESTHETICALLY APPEALING AS THIS IS A RESIDENTIAL AREA. POORLY INSTALLED EQUIPMENT SHALL BE REJECTED AND RE-WORKED.
- C. MEYERS HUBS OR SEALING LOCKNUTS FOR ALL NON-CLASSIFIED CONDUIT INSTALLATION.
- C. PROVIDE LINK SEAL WITH STAINLESS HARDWARE FOR ALL CONDUIT PENETRATIONS INTO LIFT STATION WET WELL.
- D. PROVIDE STAINLESS STEEL HARDWARE FOR ALL EQUIPMENT INSTALLED IN WET WELL; THIS INCLUDES BUT NOT LIMITED TO KELLEM'S CABLE GRIPS, CABLE RACKS, MOUNTING BRACKETS, BOLTS AND NUTS.
- E. WET WELL CLASSIFICATION IS CLASS 1 DIVISION 1 GROUP D; ALL WIRING METHODS SHALL COMPLY.
- F. WITHIN A 5' RADIUS OF ANY VENTED OPENING ATTACHED TO THE WET WELL SHALL BE CLAS 1 DIVISION 2 GROUP D RATED.
- G. ALL BELOW GRADE CONDUIT, EXCEPT FOR THE SERVICE ENTRANCE, SHALL BE GALVANIZED RIGID STEEL. ALL ABOVE GRADE CONDUIT SHALL BE RIGID GALVANIZED STEEL; INCLUDING TRANSITION TO ABOVE GRADE.

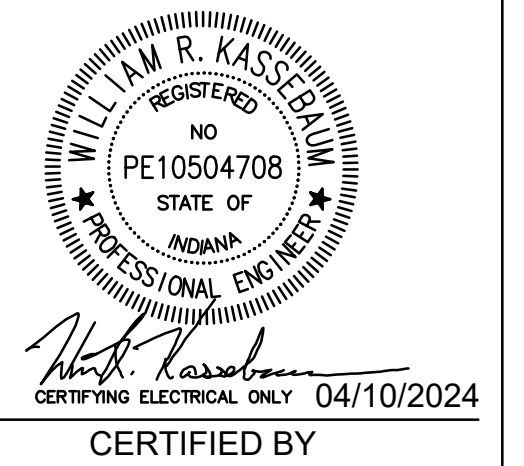
ELECTRICAL KEYED NOTES:

1. PAD MOUNTED TRANSFORMER BY UTILITY.
2. METER FURNISHED AND MOUNTED TO TRANSFORMER BY UTILITY.
3. 4-#3/0 CU, 2-1/2" C, BY CONTRACTOR.
4. 200A ENCLOSED MAIN SERVICE DISCONNECT SWITCH, FUSED AT 200A. 120/240V HIGH-LEG DELTA, 3PH, 4W, WITH GND AND RK5 FUSES, NEMA 4X STAINLESS STEEL (SS), 35KAIC MINIMUM. BOND NEUTRAL TO GROUND AT THIS DEVICE.
5. #4 BARE CU GROUND ELECTRODE CONDUCTOR, 3/4" C.
6. (2) 3/4" X 10' CU CLAD GROUND RODS. BURIED 12" BELOW GRADE. CAD WELD CONNECTIONS 10' APART.
7. 4-#3/0 CU, 1-#6 CU GND, 3" C.
8. MINIMUM 65kW STANDBY DIESEL GENERATOR WITH MINIMUM 24-HOUR SUBBASE FUEL TANK.
9. 200A ASCO 300 AUTOMATIC TRANSFER SWITCH WITH DTTS, 120/240V HIGH-LEG DELTA, 3PH, 4W, WITH GND, SOLID NEUTRAL, 35KAIC MINIMUM.
10. 3-#12 CU, 1-#12 CU GND, 3/4" C.
11. ALARM BEACON, MOUNTED TO PANEL.
12. PUMP CONTROL PANEL, MINIMUM 35KAIC. REFER TO CONTROL PANEL LAYOUT SHEET AND MOTOR CONTROL WIRING DIAGRAM SHEET. FURNISHED AND INSTALLED BY CONTRACTOR.
13. NOT USED.
14. HORSEPOWER RATED VARIABLE FREQUENCY DRIVES (VFD): DRIVES SIMILAR TO ABB MODEL ACQ580-31-026A-4.
15. 2-#12 CU, 1-#12 CU GND, 3/4" C.
16. 4-#14 CU, 3/4" C. SEAL FAIL AND OVERTEMP CABLES FOR EACH PUMP.
17. LEVEL TRANSMITTER AND FLOAT SWITCH CABLES, LEVEL TRANSMITTER IN 1-1/2" C. AND FLOAT SWITCHES IN 1-1/2" C. PVC BELOW GRADE AND GALVANIZED RIGID STEEL ABOVE GRADE. CABLES SHALL BE CONTINUOUS TO VENTED BOX AND NOT SPLICED. PROVIDE ADEQUATE LENGTH FROM MANUFACTURER. FLOAT CABLES GO TO PUMP CONTROL PANEL AND LEVEL TRANSMITTER CABLE GOES DIRECT TO PUMP CONTROL PANEL.
18. CIRCUIT TO PUMP CONTROL PANEL FOR 120VAC LOADS BY CONTRACTOR 3-#8 CU, 1-#10 CU GND, 1" C
19. 20A WEATHERPROOF/GFI RECEPTACLE MOUNTED ON INNER DOOR OF CONTROL PANEL.
20. CONDUIT SEALS.
21. STAINLESS STEEL VENTED WIRE WAY AND TERMINATION BOX. (TYPICAL - SEE DETAIL SHEET.)
22. ALL CABLE SUPPORTS SHALL BE WITH STAINLESS STEEL KELLEMS GRIPS.
23. WEIGHT TO ANCHOR THE FLOATS
24. 3-#3 CU, 1-#8 CU GND, 1-1/2" C.
25. 12HP SUBMERSIBLE PUMPS, FLYGT MODEL NP 3153 MT 3~ 437.
26. AIR CONDITIONING UNIT SIMILAR TO HOFFMAN MODEL N360826G051.
27. NOT USED.
28. CELL MODEM AND ANTENNA. SEE CONTROL PANEL DETAILS.
29. PUMP PANEL HEATER. HOFFMAN D-AH1001A.
30. MULTITRODE LEVEL PROBE.
31. FIT AND FLOW METER, SIEMENS FM MAG 5100W OR EQUALS.
32. 2-#14 CU, 1-#14 CU GND, 3/4" C. FOR FLOW METER SIGNAL.
33. COVERED/WP HOA AND PHOTOCELL FOR SITE LIGHTING. MOUNT PHOTOCELL ABOVE ROOF-LINE.
34. POLE MOUNTED LED SITE LIGHTING SIMILAR TO LITHONIA RSX2-LED-P1-40K-R3-MVOLT-SPA-PE.



WATERVIEW LIFT STATION RELOCATION

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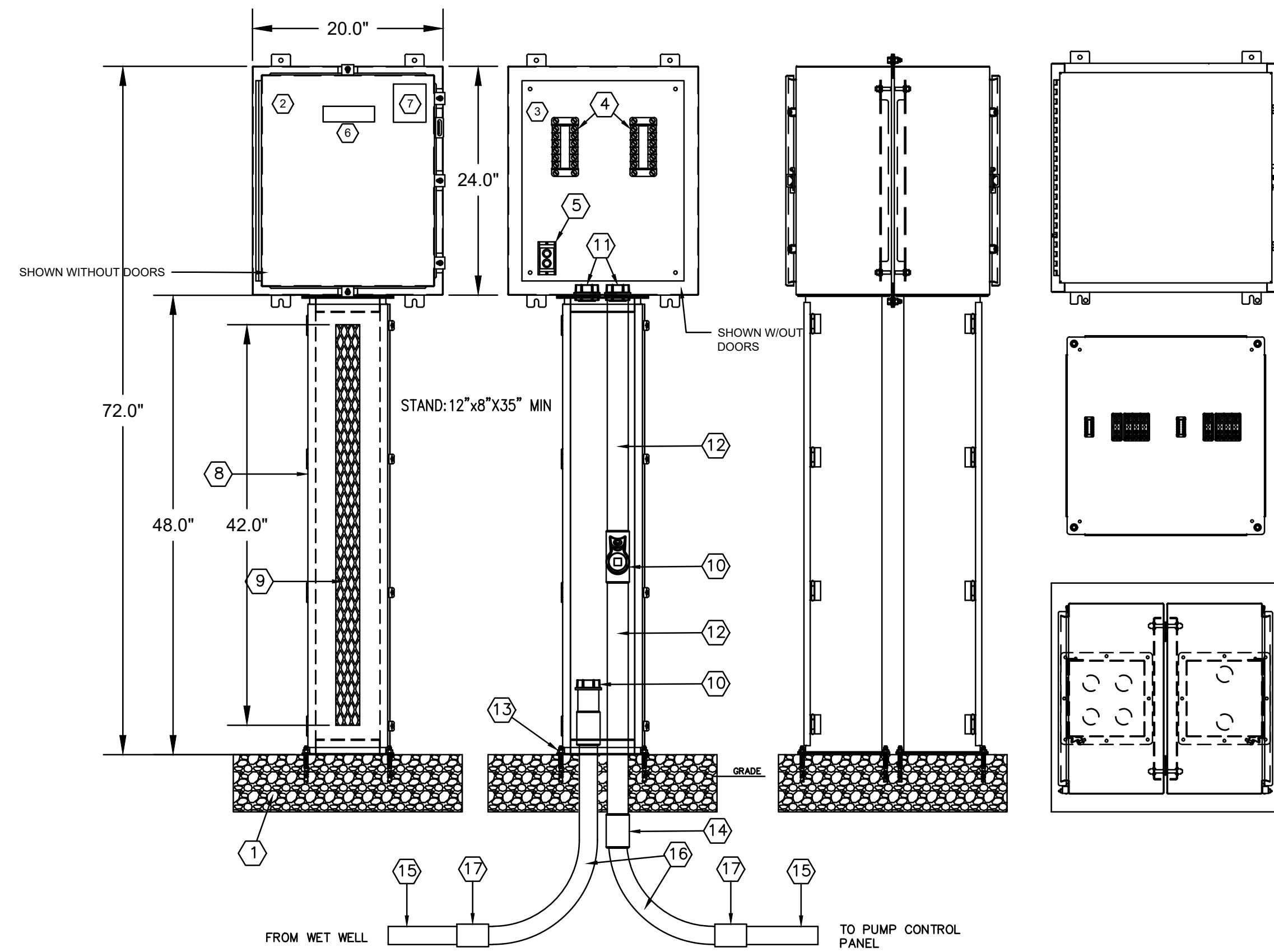


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POWER ONE-LINE DIAGRAM



VENTED TERMINAL BOX DETAIL - TYPICAL

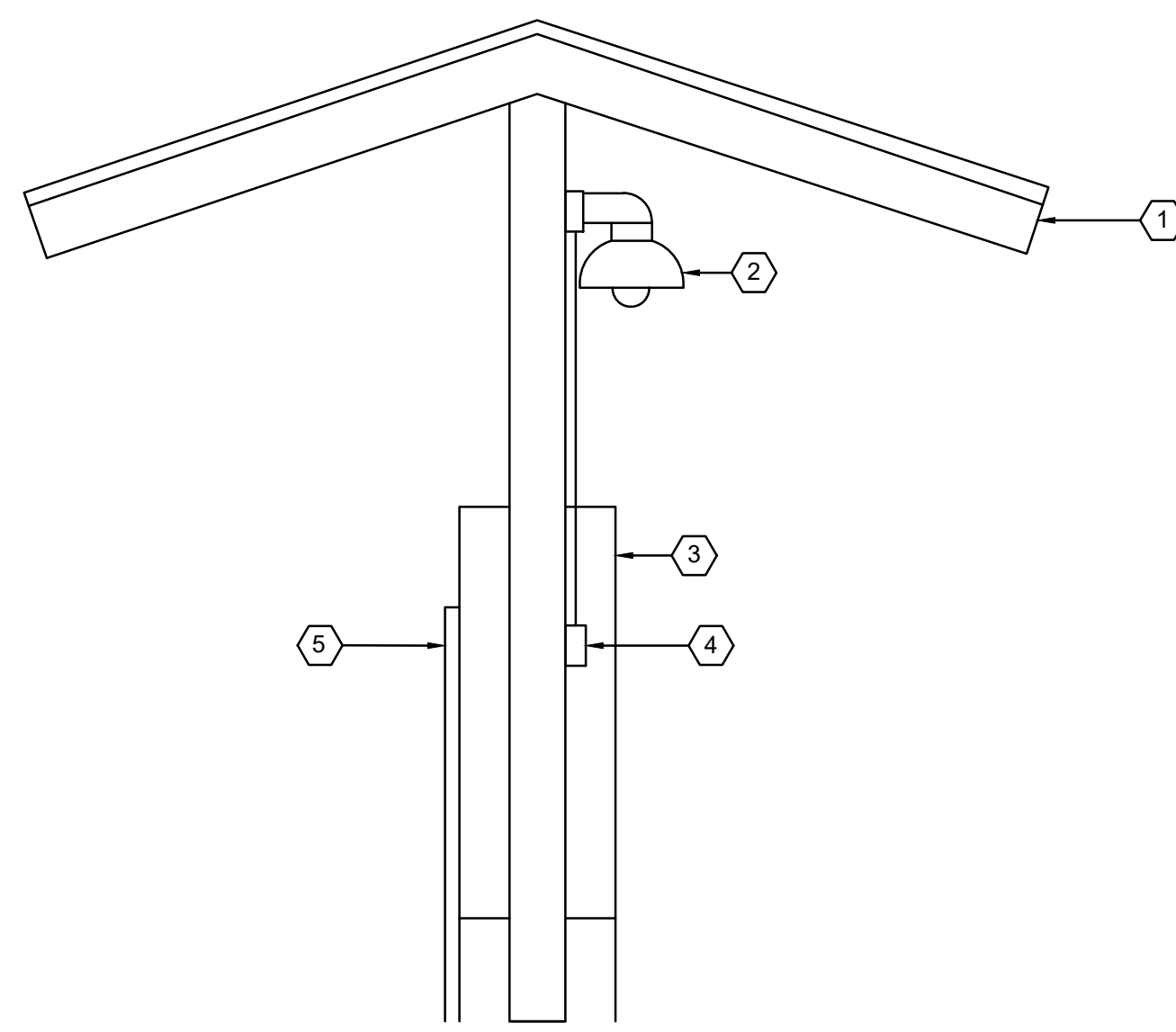
NOT TO SCALE

VENTED TERMINAL BOX KEYED NOTES:

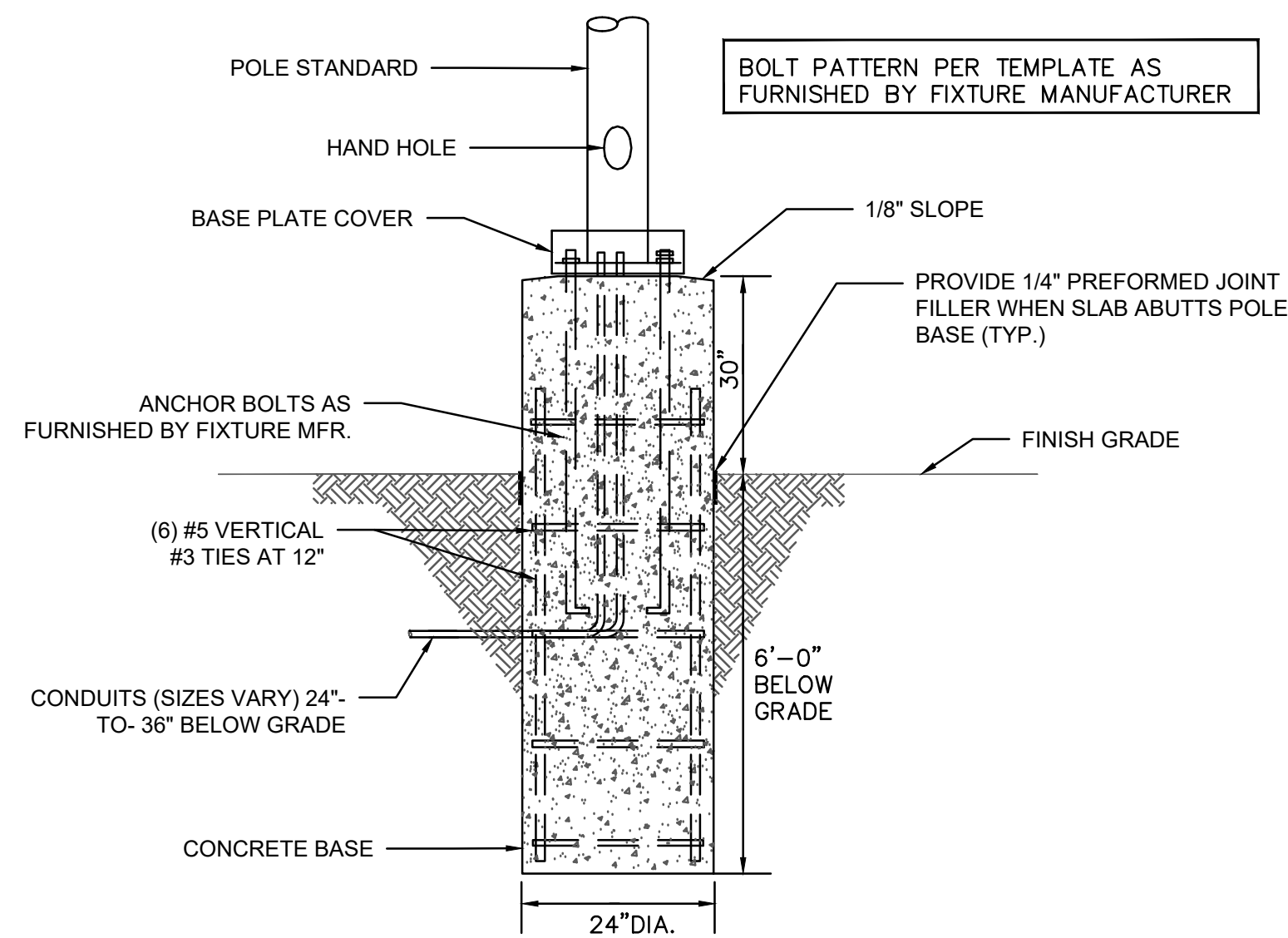
1. 24"x24"x8" RE-ENFORCED CONCRETE BASE FOR WET WELL CONDUIT ENTRIES TO VENTED WIRE WAY.
2. NEMA4X STAINLESS STEEL ENCLOSURE. 30"x24"x12". THIS LAYOUT IS SAME FOR BOTH MOTOR VENTED BOX AND INSTRUMENT VENTED BOX.
3. 30"x24" EQUIPMENT PANEL.
4. TERMINATION BLOCKS: 1 SET PER BOX FOR WIRE ENTRY FROM WET WELL AND 1 SET FOR WIRE DEPARTURE TO PUMP CONTROL PANEL.
 - MOTOR VENT BOX: MOTOR LEADS/SEAL FAIL/OVERTEMP
 - I&C VENT BOX: FLOAT SWITCHES/LEVEL TRANSMITTER
5. GROUND TERMINAL BLOCK.
6. PHENOLIC IDENTIFICATION NAMEPLATE. BLACK LETTERING ON WHITE.
7. VOLTAGE RATING ON BOX.
8. STAINLESS STEEL WIRE TROUGH SIMILAR TO HAMMOND 1487E48SS. CUT-IN OPENING ON TROUGH DOOR TO APPROXIMATE DIMENSIONS SHOWN. ALL CUT EDGES TO BE CLEAR OF BURRS AND SHARP EDGES.
9. STAINLESS STEEL GRATE. .75" TO 1" HOLE 13GA. MINIMUM. WELDED AND FINISHED TO INSIDE OF TROUGH DOOR CUT-OUT.
10. SEAL-OFF. (SIZED PER WIRE REQUIREMENTS)
11. WIRE PROTECTION BUSHING.
12. GALVANIZED RIGID STEEL CONDUIT. (SIZED FOR CONDUIT REQUIREMENTS).
13. STAINLESS STEEL WEDGE ANCHOR: MINIMUM 3/8" X 3" MINIMUM.
14. GALVANIZED RIGID STEEL COUPLER (SIZED PER CONDUIT REQUIREMENTS)
15. PVC CONDUIT.
16. GALVANIZED SWEEP CONTINUES ALL THE WAY INTO STAINLESS STEEL WIRE TROUGH.
17. GALVANIZED COUPLER.

CANOPY ELECTRICAL KEYED NOTES:

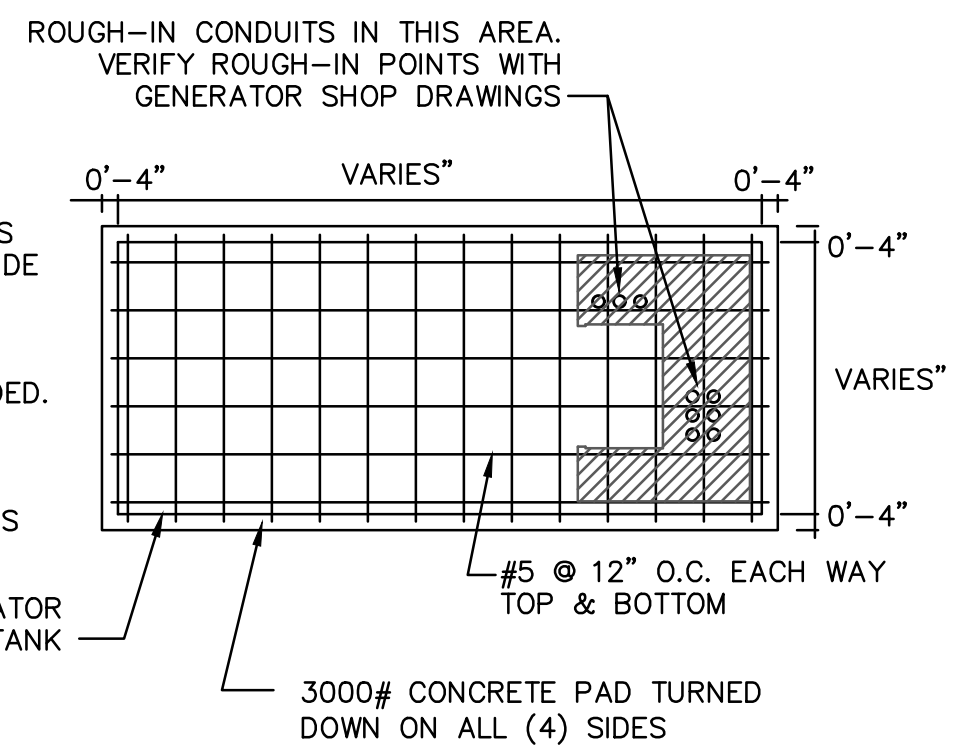
1. GABLE STRUCTURE TO PROTECT ELECTRICAL EQUIPMENT. STRUCTURE BY OTHERS. LOCATION OF STRUCTURE AND ELECTRICAL EQUIPMENT IS APPROXIMATE. CONFIRM EXACT LOCATION OF ELECTRICAL EQUIPMENT AND GABLE BEFORE ROUGH-IN. MINIMUM DISTANCE BETWEEN ELECTRICAL EQUIPMENT AND WET WELL TO BE 3'-0".
2. CANOPY LIGHT CONTROLLED VIA TOGGLE SWITCH. HUBBELL NV2 SERIES ENCLOSED AND GASKETED INDUSTRIAL LIGHT FIXTURE. LED WALL MOUNT W/ EXTENSION, CLEAR GLOBE AND GUARD, AND DOME REFLECTOR. UL LISTED FOR WET LOCATIONS.
3. FREE-STANDING MOTOR CONTROL PANEL. SEE CONTROL PANEL LAYOUT DWG AND ONE-LINE DIAGRAM FOR MORE INFO.
4. 1P-20A TOGGLE SWITCH, WITH WEATHERPROOF NEMA 4X INDUSTRIAL COVER, TO CONTROL CANOPY LIGHT.
5. WELDED HEAVY DUTY ALUMINUM SUPPORT RACK BY E.C. ELECTRICAL EQUIPMENT SHALL BE A MINIMUM OF 5'-0" AWAY FROM WET WELL ACCESS HATCHES. EQUIPMENT SHALL BE A MINIMUM OF 3'-0" AWAY FROM ANY WET WELL VENTILATION PIPE OPENINGS.



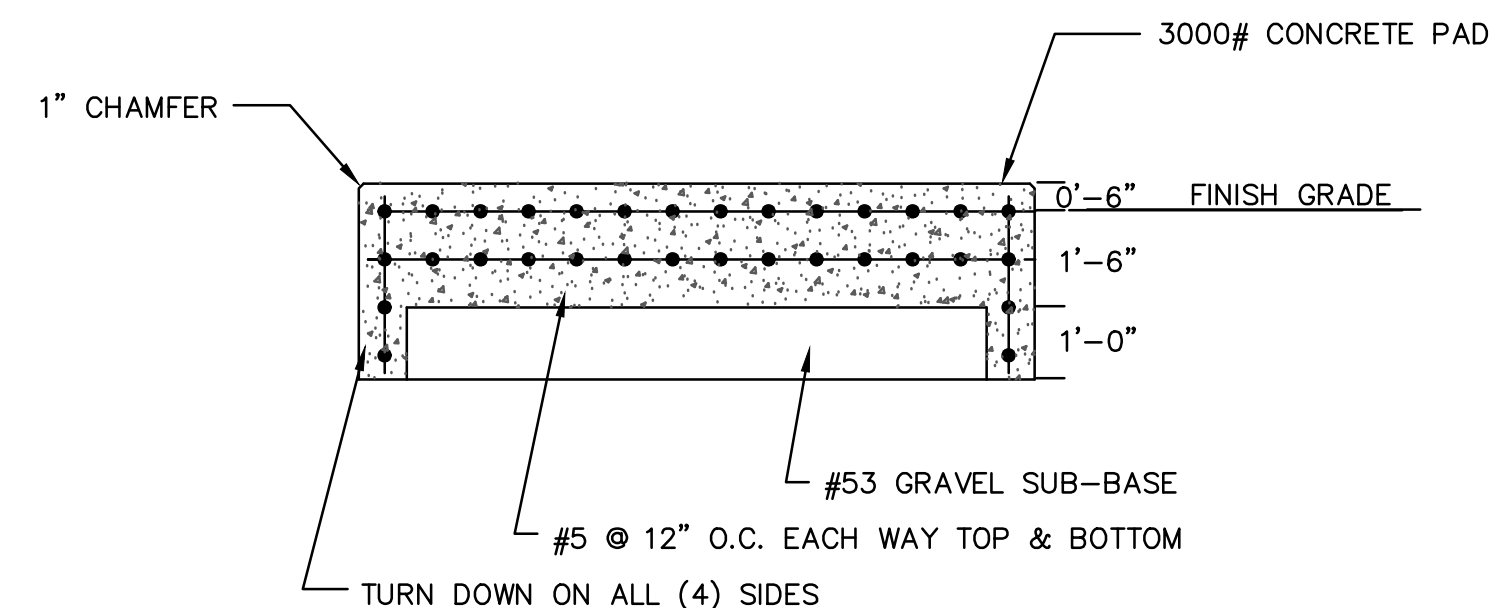
SHELTER DETAIL
SCALE: NONE



LIGHTING POLE BASE DETAIL
SCALE: NONE



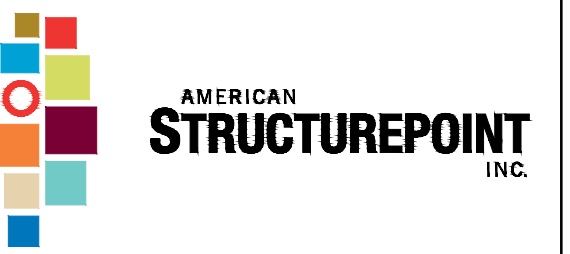
GENERATOR PAD PLAN VIEW
SCALE: NONE



GENERATOR PAD SECTION VIEW
SCALE: NONE

ELECTRICAL DETAILS

NO SCALE

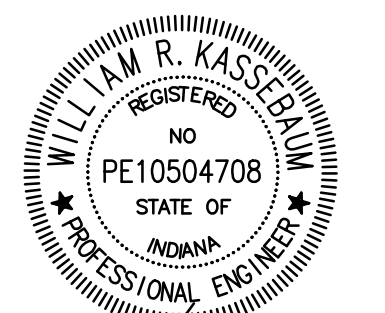


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WATERVIEW LIFT STATION RELOCATION

Greenfield, Indiana



William R. Kass
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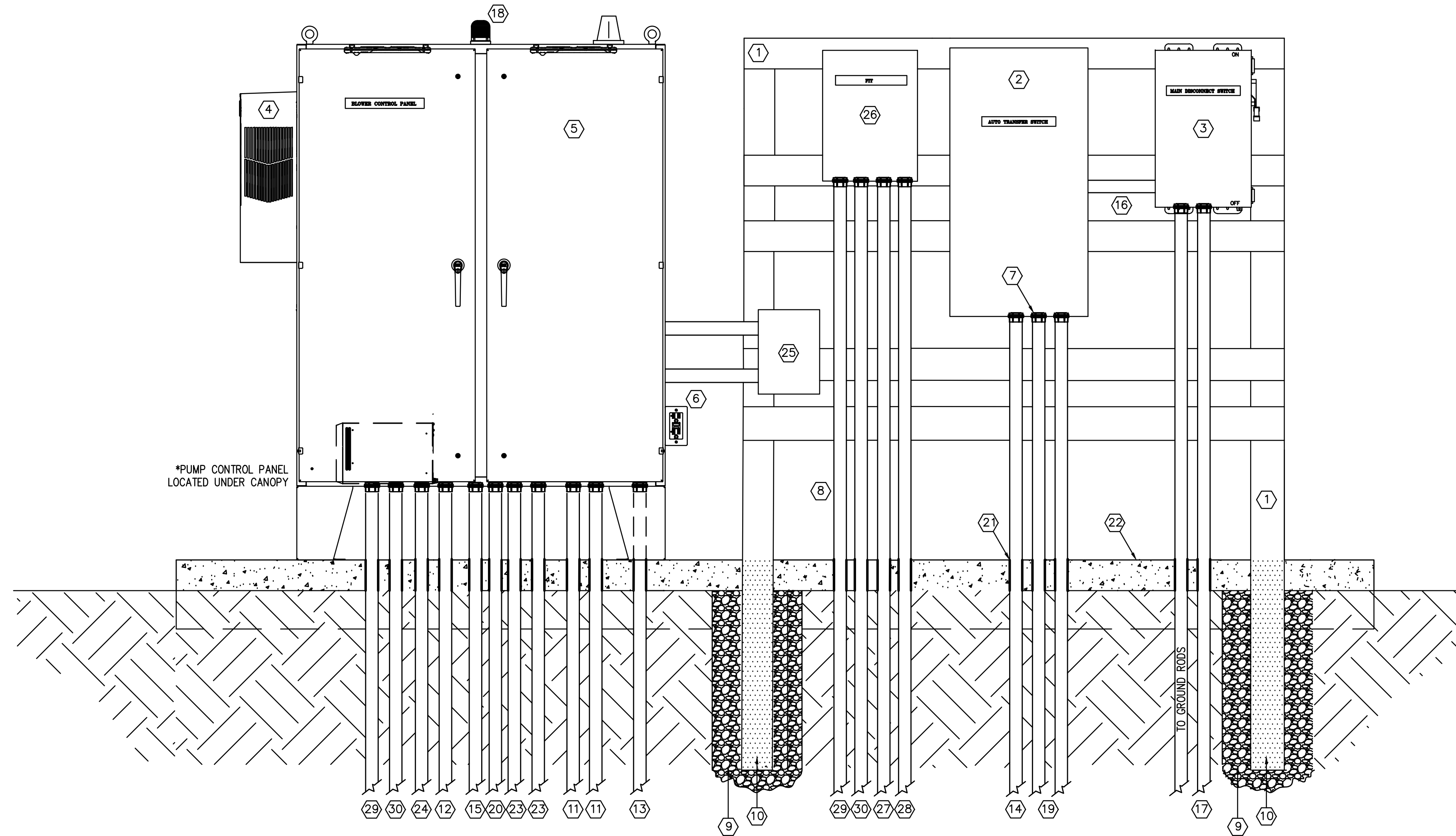
ELECTRICAL DETAILS

ELECTRICAL KEYED NOTES: 

1. HEAVY DUTY GALVANIZED STEEL EQUIPMENT RACK. ALL RISERS TO HAVE CAPS TO PREVENT WATER PENETRATION.
2. AUTOMATIC TRANSFER SWITCH WITH DTTs, 120/240V, 3PH, 4W, WITH GND, SOLID NEUTRAL, NEMA 4X S.S.
3. STAINLESS STEEL DISCONNECT SWITCH AND MAIN CIRCUIT BREAKER, NEMA 4X.
4. PUMP PANEL AIR CONDITIONER, NEMA 4X S.S.
5. DUPLEX PUMP CONTROL PANEL. SEE ONE-LINE DIAGRAM AND PUMP CONTROL PANEL DETAILS DRAWINGS.
6. 20A WEATHERPROOF/GFI COURTESY OUTLET WITH IN-USE COVER.
7. GASKETED LOCKNUTS AND BUSHINGS FOR PANEL ENTRY WIRE TRAY ENTRY. TYPICAL.
8. RIGID GALVANIZED STEEL CONDUIT - ABOVE GRADE. TYPICAL.
9. 36" DEEP X 16" CONCRETE PEDESTAL BASE.
10. POSTS SHALL HAVE A CORROSION PROTECTIVE COATING.
11. UNDERGROUND POWER WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO PUMPS.
12. UNDERGROUND INSTRUMENTATION & CONTROL WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO FLOAT SWITCHES.

13. UNDERGROUND INSTRUMENTATION & CONTROL WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO FOG ROD.
14. UNDERGROUND INSTRUMENTATION & CONTROL WIRING AND CONDUIT FROM ATS TO PUMP CONTROL PANEL.
15. POWER WIRING AND CONDUIT FROM ATS TO PUMP CONTROL PANEL.
16. POWER WIRING AND CONDUIT FROM MAIN SERVICE DISCONNECT TO ATS.
17. POWER WIRING AND CONDUIT FROM UTILITY TRANSFORMER TO MAIN DISCONNECT SWITCH.
18. ALARM BEACON.
19. UNDERGROUND POWER AND CONTROL CONDUITS FROM ATS TO GENERATOR.
20. UNDERGROUND POWER WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO SITE LIGHTING.
21. PVC SLEEVE THROUGH CONCRETE.
22. LIFT STATION CONCRETE PAD.
23. OVERTEMP AND SEAL FAIL WIRING AND CONDUIT TO PUMP CONTROL PANEL.
24. UNDERGROUND POWER WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO GENERATOR ACCESSORIES.

25. LIGHTING TRANSFORMER.
26. FLOW INDICATOR TRANSMITTER.
27. UNDERGROUND POWER WIRING AND CONDUIT FROM FIT TO FLOW METER.
28. UNDERGROUND I&C WIRING AND CONDUIT FROM FIT TO FLOW METER.
29. UNDERGROUND POWER WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO FIT.
30. UNDERGROUND I&C WIRING AND CONDUIT FROM PUMP CONTROL PANEL TO FIT.



ELECTRICAL DETAILS CONT

NO SCALE

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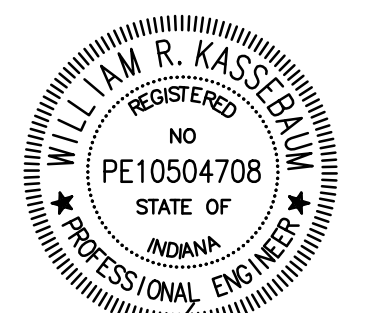


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ELECTRICAL DETAILS CONT

NOTE:

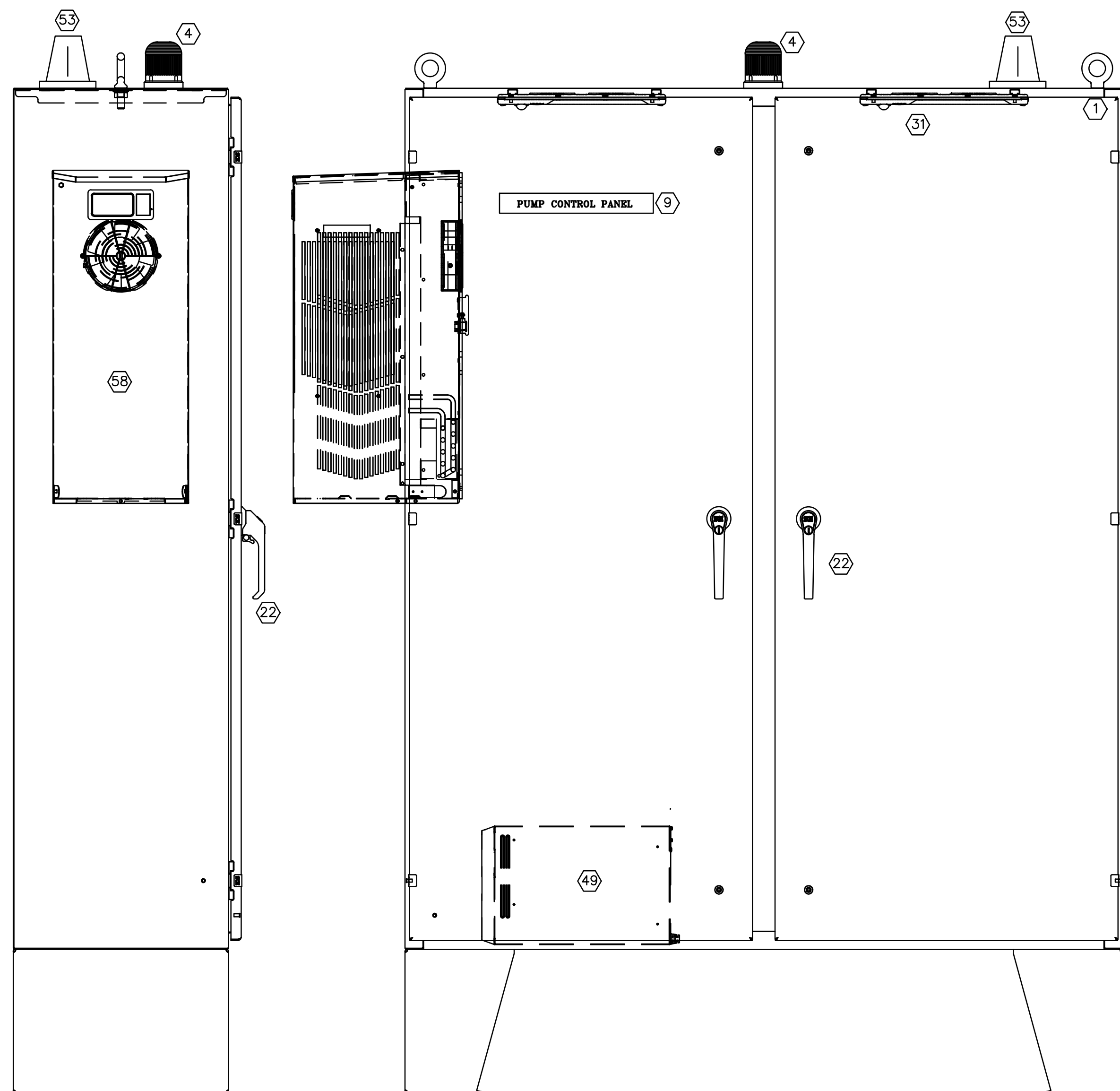
- THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND TESTING; ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.
- SAGINAW CONTROL AND ENGINEERING (SCE): ENCLOSURE, EQUIPMENT PANEL AND DEAD FRONT SWING PANEL SHOWN FOR REFERENCE ONLY.

ELECTRICAL KEYED NOTES:

1. NEMA 4X STAINLESS STEEL ENCLOSURE, 72"H X 60"W X 24"D MINIMUM.
2. 72"H X 60"W INTERIOR EQUIPMENT PANEL.
3. DEAD FRONT SWING PANELS.
4. ALARM STROBE LIGHT.
5. GREEN PUSH-TO-TEST AND AMBER PUSH-TO-TEST PILOT LIGHTS, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
6. 3 POSITION H-O-A SWITCH, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
7. MOTOR PROTECTION RELAYS - FLUSH MOUNT. MATCH PUMP MANUFACTURER SPECIFICATIONS. FLYGT MINICAS II SHOWN.
8. 2 POSITION SELECTOR SWITCH FOR PLC OR FLOAT MODE SELECTION.
9. NAME PLATES. WHITE WITH BLACK LETTERS. TYPICAL.
10. THREE PHASE MAIN POWER ENTRY DISTRIBUTION BLOCK.
11. MAIN POWER GROUND BLOCK.
12. WIRE DUCT - AS REQUIRED.
13. 15A-1P CONTROL POWER CIRCUIT BREAKER.
14. SPARE 15A-1P CIRCUIT BREAKER.
15. 15A-2P POWER TRANSFORMER CIRCUIT BREAKER.
16. PHASE MONITOR RELAY.
17. 3 PHASE MONITOR RELAY CIRCUIT BREAKER.
18. 3 PHASE SURGE PROTECTOR DEVICE (SPD) CIRCUIT BREAKER.
19. 3 PHASE SPD.

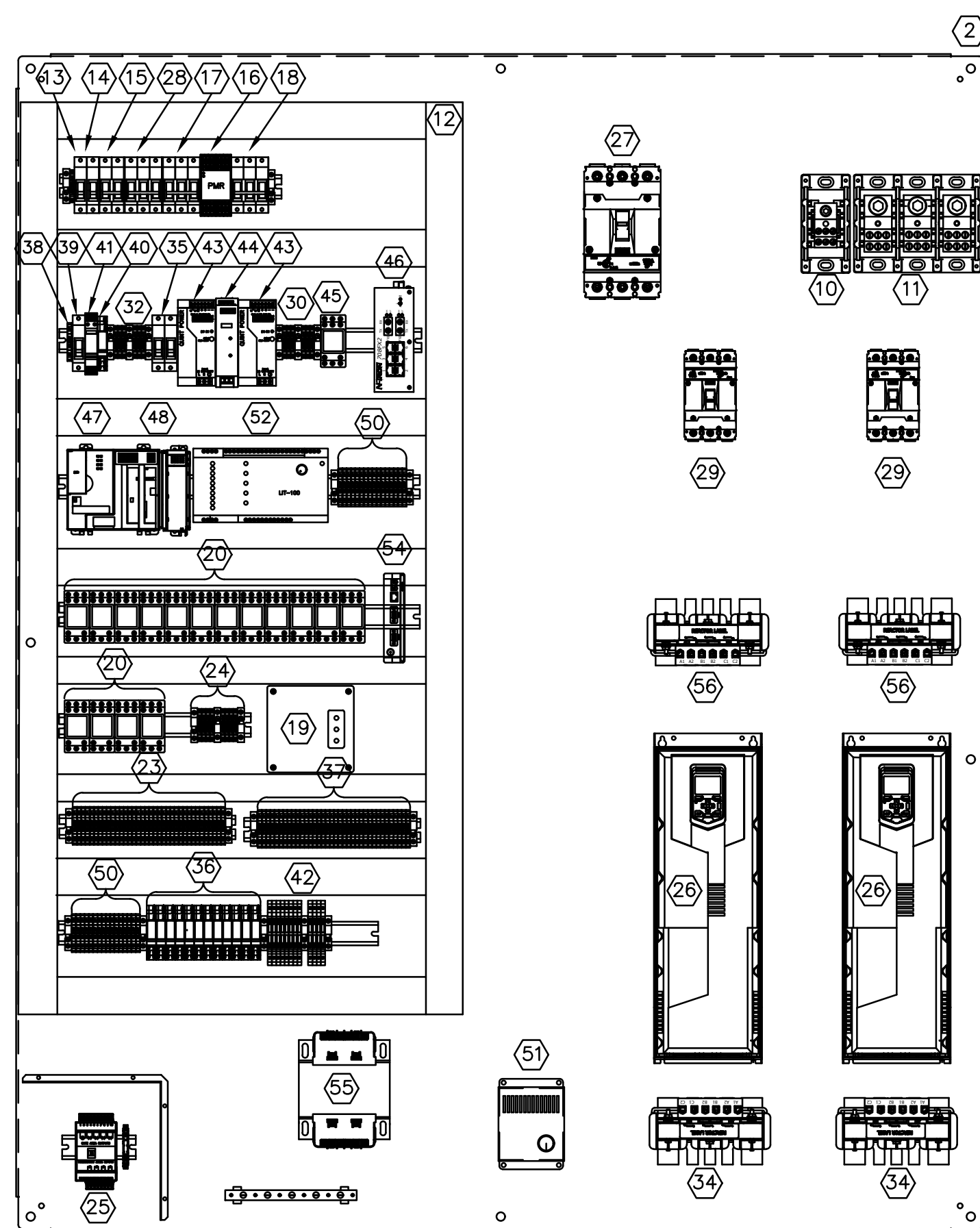
20. CONTROL RELAYS, 120VAC COIL AND 10A MIN. CONTACT RATING. DPDT TYPICAL.
21. RUNTIME HOUR METER. TYPICAL.
22. LOCKABLE HANDLE.
23. FIELD WIRING AND SWING PANEL COMPONENT INTERFACE WIRING TERMINAL BLOCKS.
24. SEAL FAIL MODULE FIELD WIRING TERMINAL BLOCKS.
25. INTRINSICALLY SAFE BARRIER (ISB) BOX WITH 4-CHANNEL DIGITAL ISB FOR FLOAT SWITCHES AND ANALOG ISB FOR LEVEL SENSOR.
26. HORSE POWER RATED VFD SIMILAR TO ABB-ACQ580-31 VFD. TYPICAL FOR EACH PUMP.
27. 200A-3P MAIN CIRCUIT BREAKER.
28. 15A-2P CIRCUIT BREAKER FOR HEATER.
29. THERMAL MAGNETIC MOTOR PROTECTION CIRCUIT BREAKER WITH LOCKOUT/TAGOUT.
30. 24VDC BUS TERMINAL BLOCKS.
31. ENCLOSURE LED PANEL LIGHTING.
32. 120V BUS TERMINAL BLOCKS.
33. 7" COLOR/TOUCH HMI. SIMILAR TO MAPLE SYSTEMS HMI5070P.
34. LOAD REACTOR SIMILAR TO TCI MODEL KDRD1P.
35. 3A POWER SUPPLY CIRCUIT BREAKERS.
36. DIGITAL OUTPUT ISOLATION RELAYS.
37. ANALOG OUTPUT FIELD TERMINAL BLOCKS.
38. GROUND BLOCK.

39. MAIN 120VAC 15A POWER CIRCUIT BREAKER.
40. POWER FAIL RELAY. RELAY TO REPORT TO SCADA UPON LOSS OF POWER.
41. PHOENIX CONTACT PLUGTRAB SURGE PROTECTION DEVICE.
42. ANALOG INPUT FIELD TERMINAL BLOCKS.
43. 5A REDUNDANT 24VDC POWER SUPPLY.
44. POWER SUPPLY REDUNDANCY MODULE.
45. UPS BYPASS CONTACTOR.
46. FIBER TO ETHERNET SWITCH - REDLION 708FX2 OR EQUIVALENT.
47. COMPACTLOGIX PLC L24ER WITH EMBEDDED IO.
48. COMPACTLOGIX PLC MIX ANALOG INPUT/OUTPUT MODULE.
49. 1000VA UPS - DUAL CONVERSION.
50. DIGITAL INPUT FIELD TERMINAL BLOCKS.
51. 100W PANEL HEATER WITH INTEGRAL THERMOSTAT. ALLOW PROPER SPACING PER MANUFACTURER REQUIREMENTS.
52. FOG ROD CONTROL PANEL.
53. VANDAL RESISTANT MIMO LOW PROFILE 4G/LTE OMNI-DIRECTIONAL SCREW MOUNTED WATERPROOF ANTENNA. PREXEVT MODEL ANT-121-M22 OR EQUIVALENT.
54. SIERRA WIRELESS AIRLINK RV50X OR EQUIVALENT.
55. INTERNAL CONTROL POWER 1.5KVA TRANSFORMER.
56. LINE REACTOR, SIMILAR TO TCI MODEL KDRB2H.
57. 20A WEATHERPROOF/GFI RECEPTACLE.
58. AIR CONDITIONING UNIT SIMILAR TO HOFFMAN MODEL N360846G051.

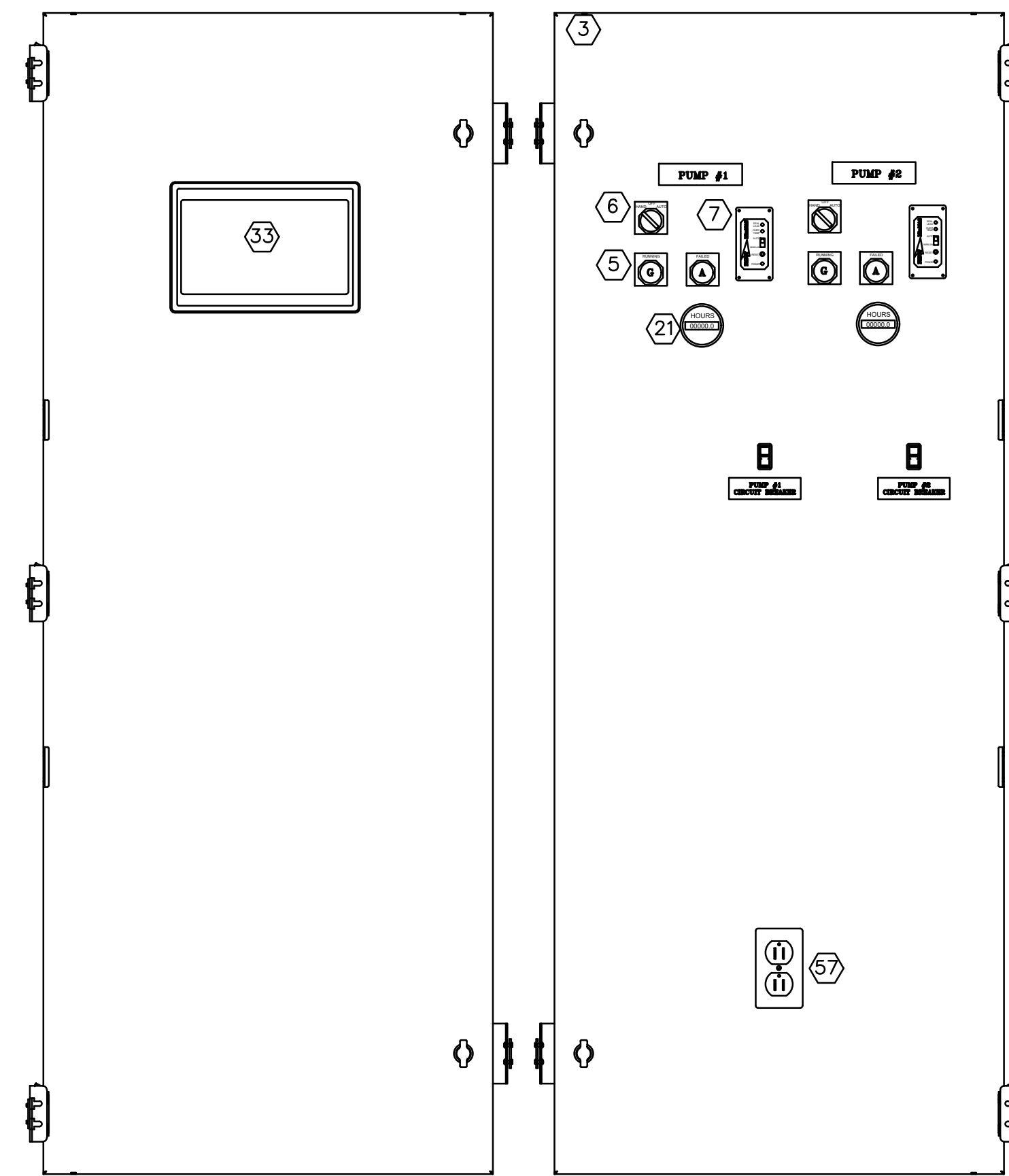


PUMP CONTROL PANEL SIDE VIEW

PUMP CONTROL PANEL OUTER DOOR VIEW



PUMP CONTROL PANEL EQUIPMENT PANEL VIEW

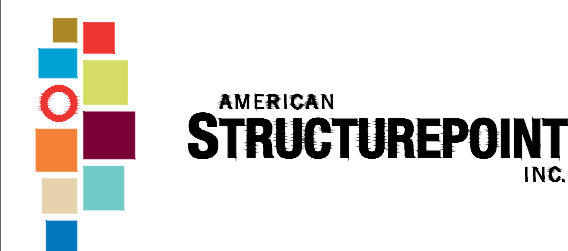


PUMP CONTROL PANEL SWING DOOR VIEW

PUMP CONTROL PANEL LAYOUT

NO SCALE

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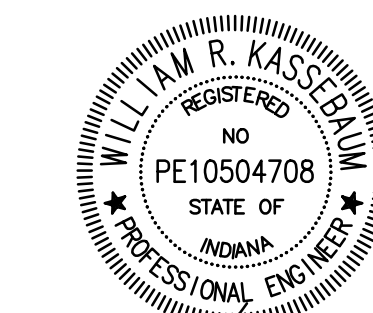


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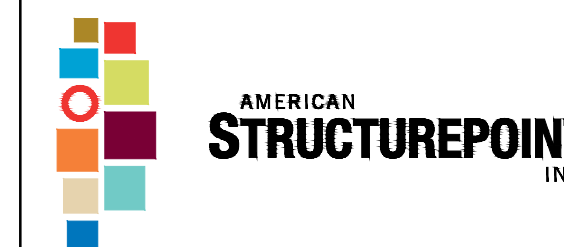
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PUMP CONTROL PANEL LAYOUT

E-105

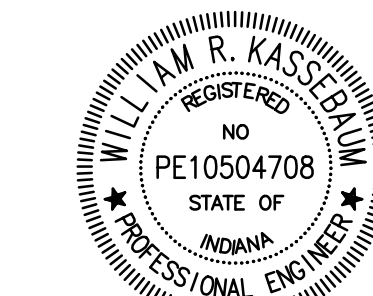


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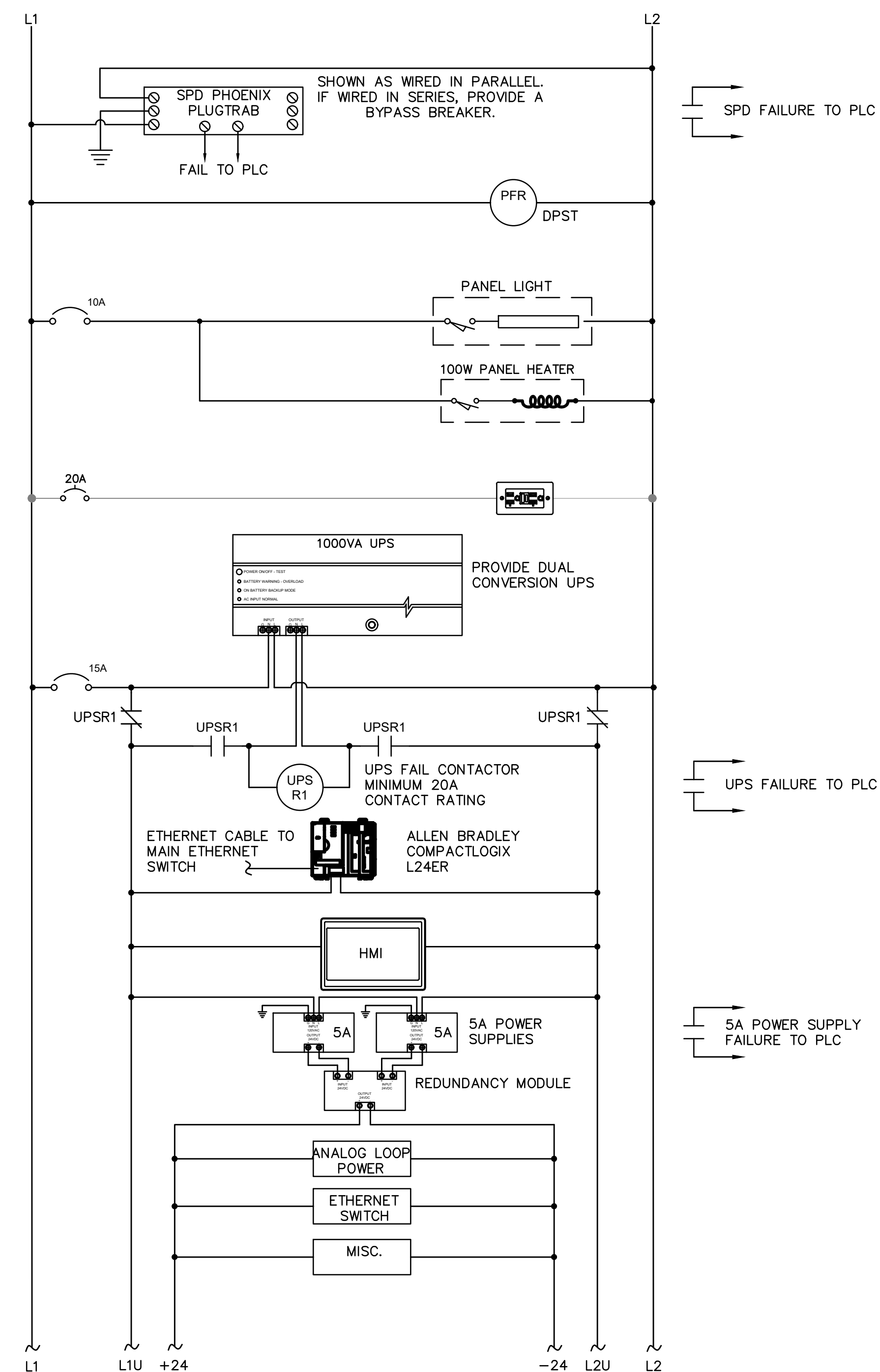
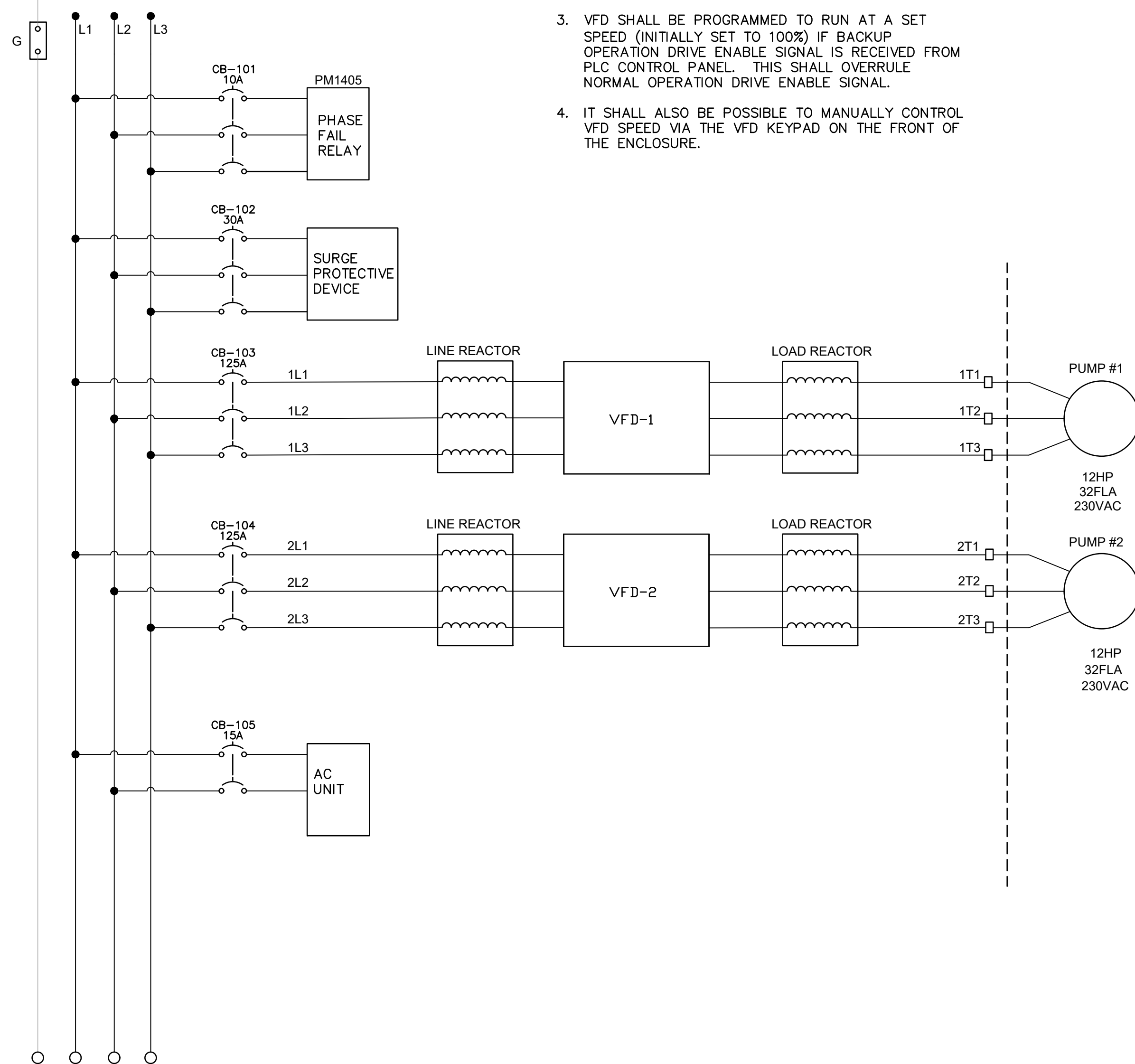
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PUMP CONTROL PANEL WIRING

VFD GENERAL NOTES:

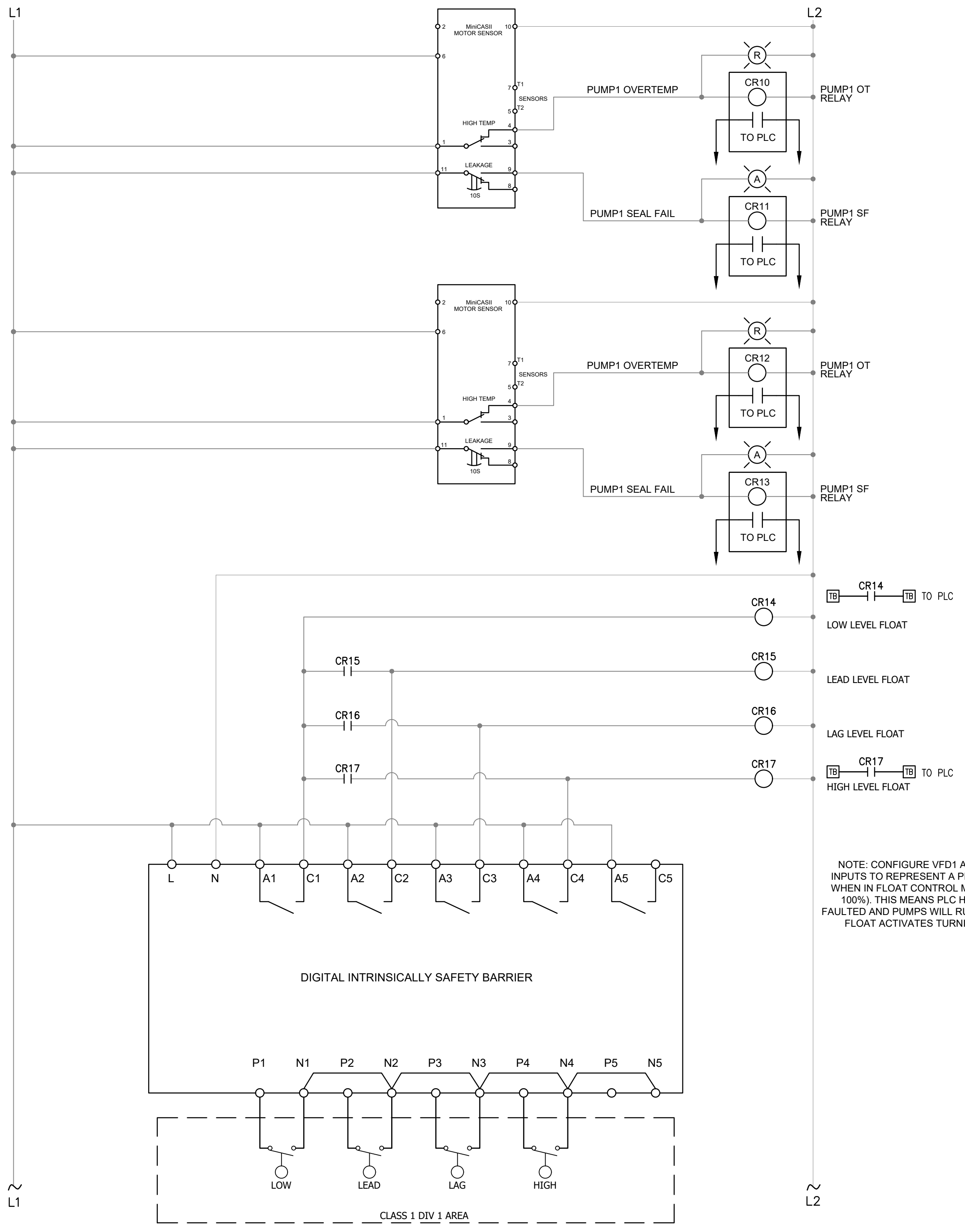
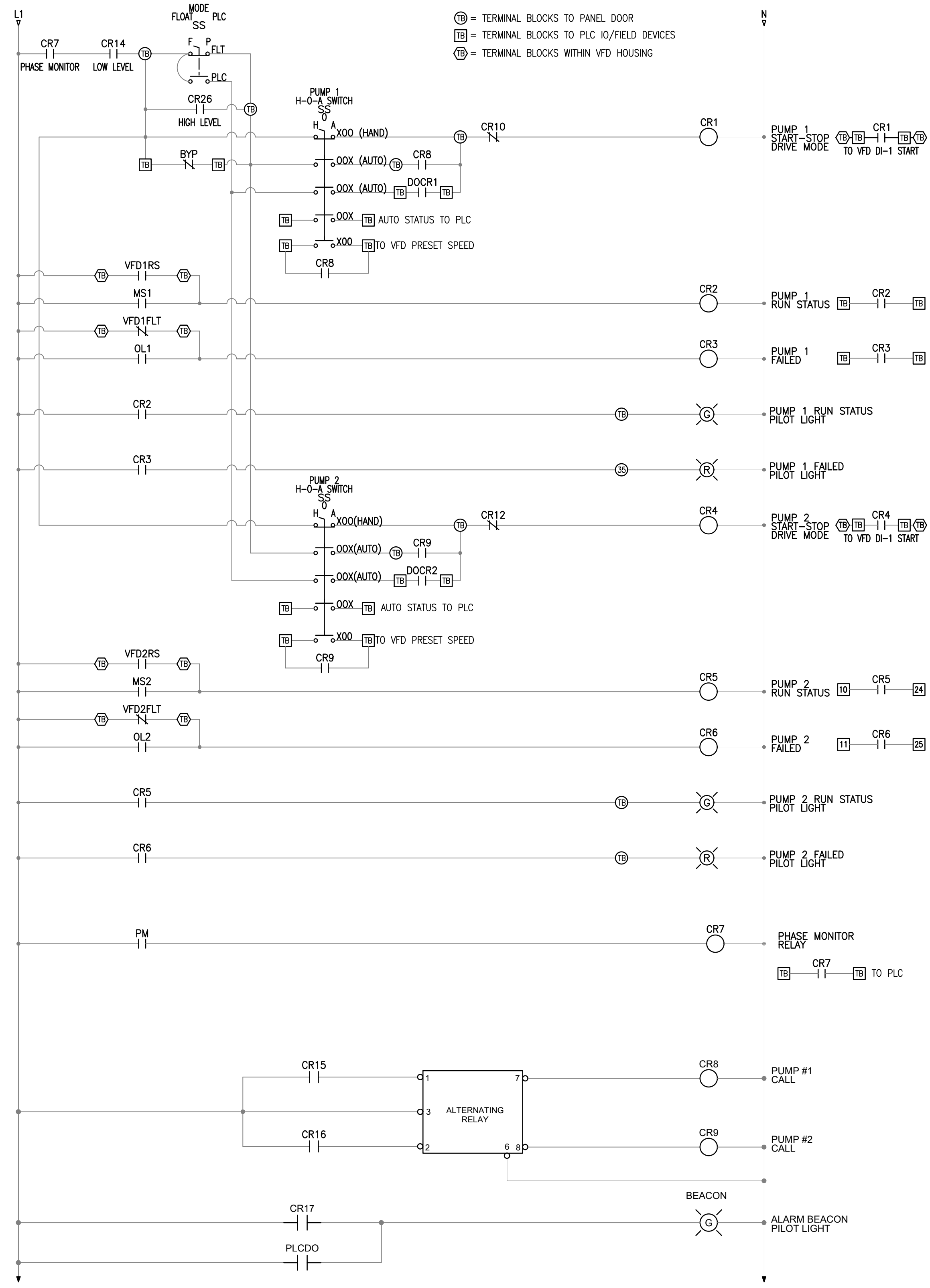
1. TERMINAL BLOCK ID MAY VARY. CONSULT DRIVE MANUFACTURER LITERATURE FOR ALL TERMINATION REQUIREMENTS.
2. VFD SHALL BE PROGRAMMED TO RUN BASED ON SPEED INPUT IF NORMAL OPERATION DRIVE ENABLE SIGNAL IS RECEIVED FROM PLC CONTROL PANEL.
3. VFD SHALL BE PROGRAMMED TO RUN AT A SET SPEED (INITIALLY SET TO 100%) IF BACKUP OPERATION DRIVE ENABLE SIGNAL IS RECEIVED FROM PLC CONTROL PANEL. THIS SHALL OVERRULE NORMAL OPERATION DRIVE ENABLE SIGNAL.
4. IT SHALL ALSO BE POSSIBLE TO MANUALLY CONTROL VFD SPEED VIA THE VFD KEYPAD ON THE FRONT OF THE ENCLOSURE.

240V, 3PH, 3W W/ GND, 60Hz

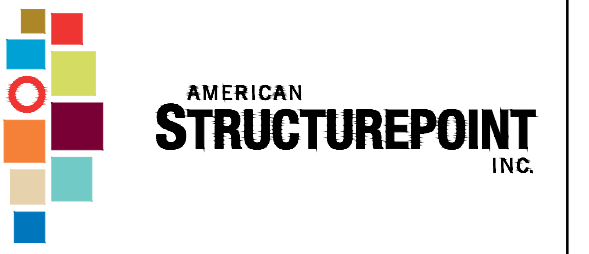


PUMP CONTROL PANEL WIRING

NO SCALE



PUMP CONTROL PANEL WIRING CONT
NO SCALE

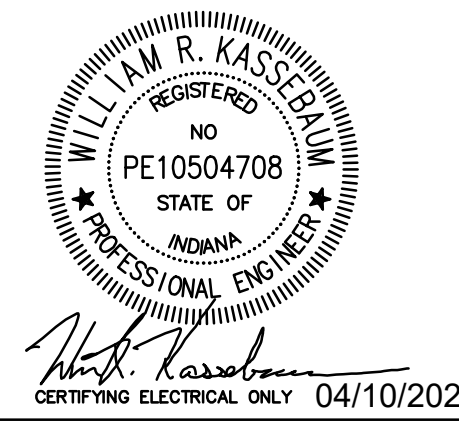


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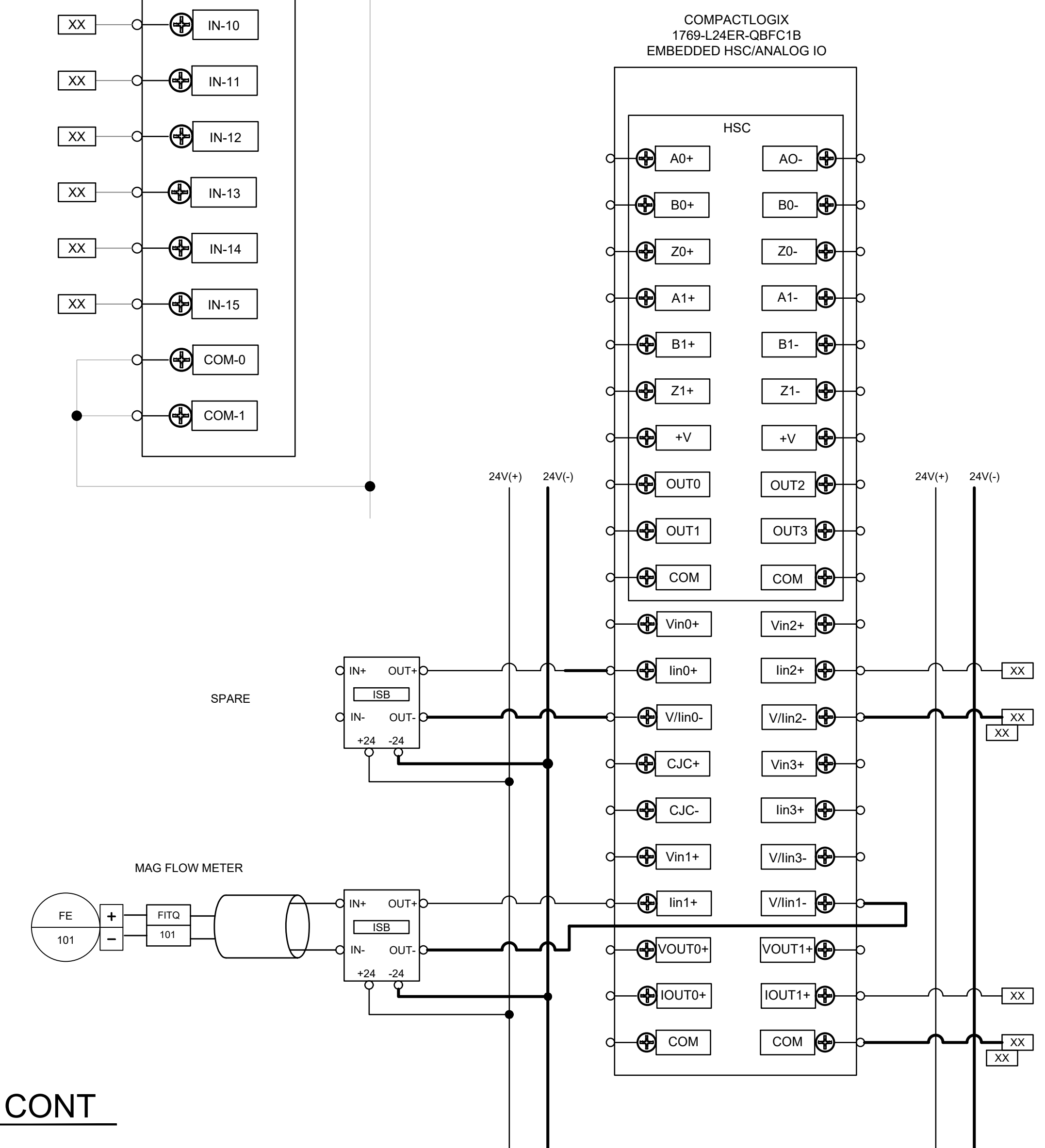
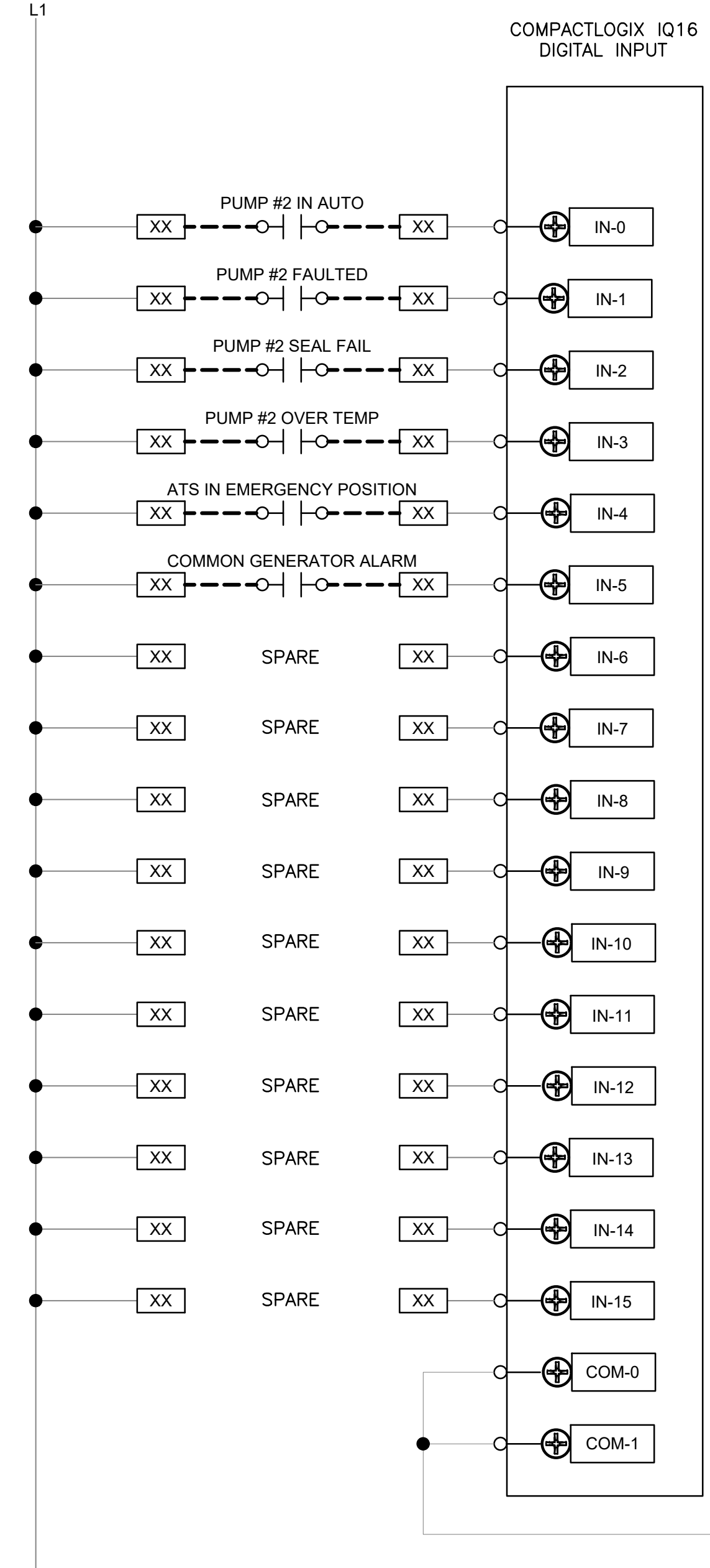
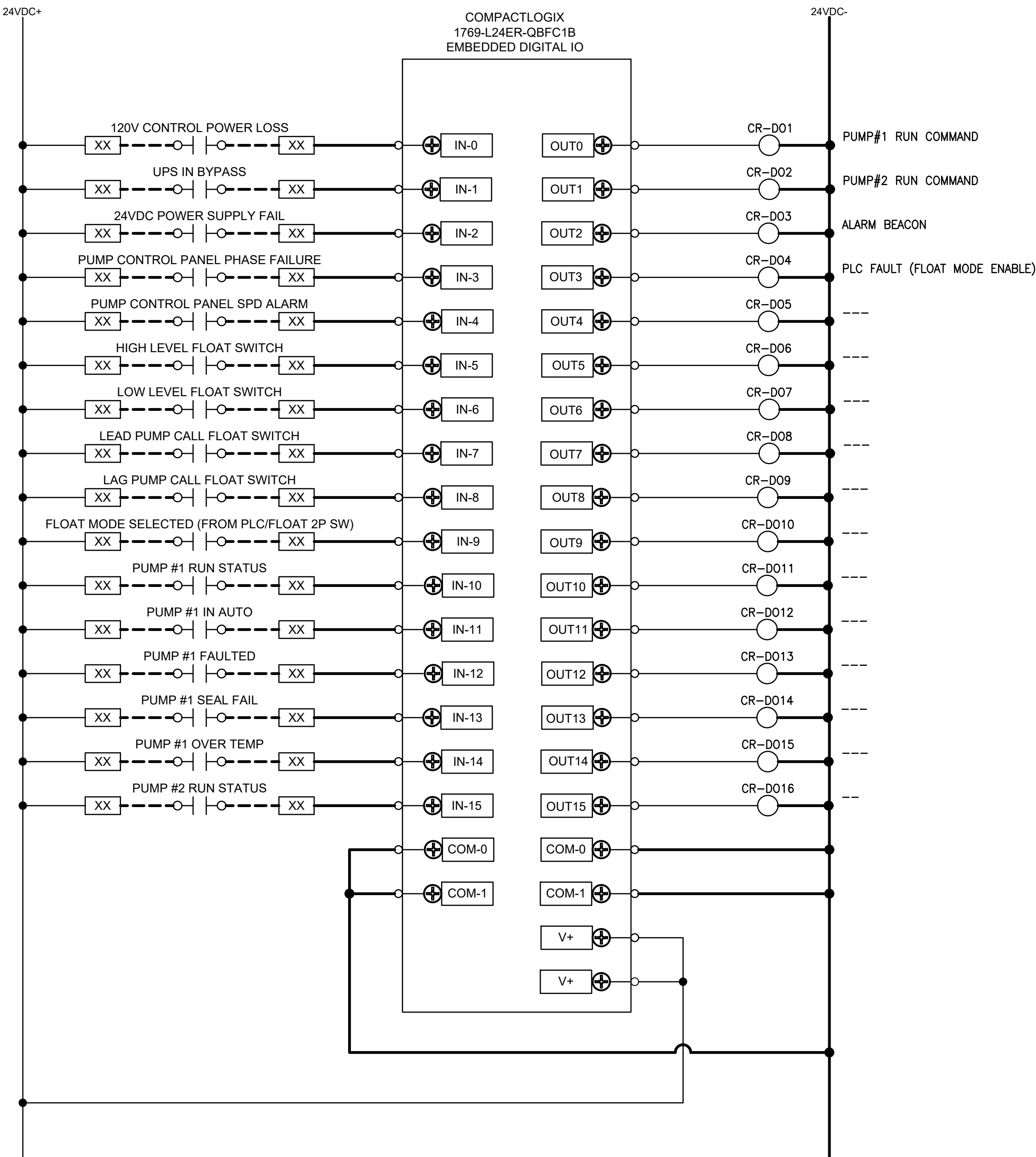


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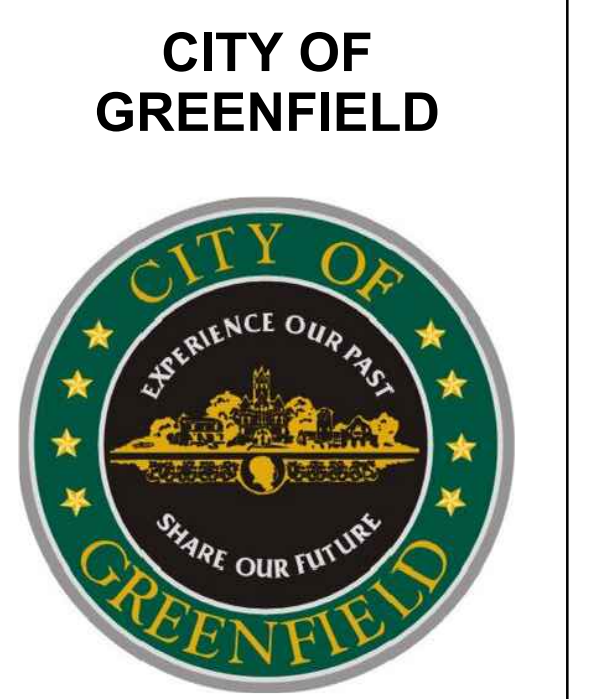
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PUMP CONTROL PANEL WIRING CONT



PUMP CONTROL PANEL WIRING CONT
NO SCALE

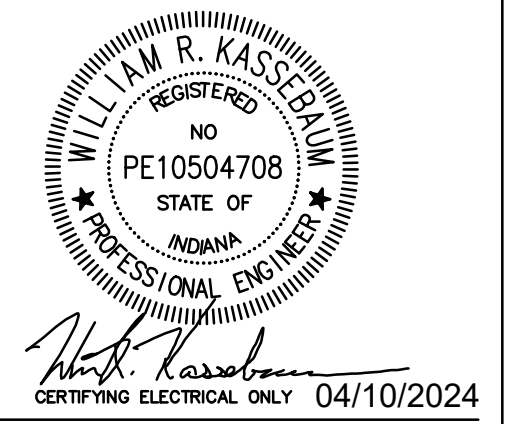


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